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Contents

1.1 annotations 13.0
1.1.1 Available under license
1.2 listenablefuture 9999.0-empty-to-avoid-conflict-with-guava
1.3 failureaccess 1.0.1
1.4 xerces-j 2.12.2
1.4.1 Available under license
1.5 httpcomponents-client 4.5.13
1.5.1 Available under license
1.6 lcms 1.19-r8
1.6.1 Available under license
1.7 httpcomponents-core 4.4.13
1.7.1 Available under license
1.8 httpcore-nio 4.4.13
1.8.1 Available under license
1.9 httpclient-cache 4.5.13
1.9.1 Available under license
1.10 commons-codec 1.14
1.10.1 Available under license
1.11 commons-math 2.1
1.11.1 Available under license
1.12 commons-codec 1.15
1.12.1 Available under license
1.13 zeromq 4.3.4
1.13.1 Available under license
1.14 kotlin 1.3.31
1.14.1 Available under license

1.15 alpine-keys 2.4-r1
1.15.1 Available under license
1.16 log4j-api 2.17.1
1.16.1 Available under license
1.17 apache-log4j 2.17.1
1.17.1 Available under license
1.18 log4j-jcl 2.17.1
1.18.1 Available under license
1.19 dagger 2.4
1.19.1 Available under license
1.20 protobuf-java-format 1.2
1.20.1 Available under license
1.21 annotations 4.1.1.4
1.21.1 Available under license
1.22 error_prone_annotations 2.3.3
1.22.1 Available under license
1.23 jzmq-jni 3.1.1-SNAPSHOT
1.23.1 Available under license
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1.24.1 Available under license
1.25 jzmq 3.1.1-SNAPSHOT
1.25.1 Available under license
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1.26.1 Available under license
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1.27.1 Available under license
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1.28.1 Available under license
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1.29.1 Available under license
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1.30.1 Available under license
1.31 commons-fileupload 1.5
1.31.1 Available under license
1.32 error_prone_annotations 2.18.0
1.32.1 Available under license
1.33 opentelemetry-proto 0.11.0
1.33.1 Available under license
1.34 bridgeutils 1.7.1-r2

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1.35 okhttp 4.11.0
1.35.1 Available under license
1.36 free-type 2.13.0
1.36.1 Available under license
1.37 animal-sniffer-annotation 1.23
1.37.1 Available under license
1.38 j2objc-annotations 2.8
1.38.1 Available under license
1.39 tre 0.8.0-r2
1.39.1 Available under license
1.40 guava 32.0.1-jre
1.40.1 Available under license
1.41 pax-utils 1.3.7-r2
1.41.1 Available under license
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1.49.1 Available under license
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1.53.1 Available under license

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1.58.1 Available under license
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1.59.1 Available under license
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1.60.1 Available under license
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1.72.1 Available under license
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1.74 jackson-annotations 2.17.3
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1.75 jackson-dataformat-yaml 2.17.3
1.75.1 Available under license
1.76 appdynamics-alpine-without-jre 24.11.0.7212
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1.77 appdynamics-without-jre 24.11.0.7212
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1.78 appdynamics 24.11.0.7212
1.78.1 Available under license
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1.2 listenablefuture 9999.0-empty-to-avoid-conflict-with-guava

1.3 failureaccess 1.0.1

1.4 xerces-j 2.12.2

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1.6 lcms 1.19-r8

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1.9 httpclient-cache 4.5.13

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1.10 commons-codec 1.14

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request #1138](https://github.com/zeromq/libzmq/pull/1138), and
[GitHub Pull request #1139](https://github.com/zeromq/libzmq/pull/1139))
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{"version":3,"file":"kotlin.js","sources":["wrapper.js","arrayUtils.js","callableReferenceUtils.js","conversions.js","core.js","long.js","markerFunctions.js","misc.js","polyfills.js","rtti.js","runtime/arrayUtils.kt","runtime/Enum.kt","runtime/primitiveCompanionObjects.kt","generated/_Arrays.kt","generated/_Ranges.kt","kotlin/UByte.kt","kotlin/UInt.kt","kotlin/UShort.kt","Ranges.kt","collections/Collections.kt","collections/Maps.kt","collections/Sets.kt","text/StringNumberConversions.kt","kotlin/UnsignedUtils.kt","collections/Iterables.kt","collections/Sequences.kt","kotlin/UByteArray.kt","kotlin/UIntArray.kt","kotlin/ULongArray.kt","kotlin/ULong.kt","kotlin/UShortArray.kt","kotlin/Comparator.kt","coroutines/Continuation.kt","util/Preconditions.kt","generated/_ArraysJs.kt","comparisons/Comparisons.kt","util/Standard.kt","generated/_ComparisonsJs.kt","generated/_Collections.kt","kotlin/collections.kt","collections/Iterators.kt","generated/_Comparisons.kt","generated/_Maps.kt","kotlin/ranges.kt","generated/_Sequences.kt","dummy.kt","generated/_Sets.kt","generated/_Strings.kt","text/Strings.kt","kotlin/string.kt","generated/_UArrays.kt","generated/_UCollections.kt","generated/_UComparisons.kt","generated/_URanges.kt","generated/_USequences.kt","Collections.kt","Iterators.kt","ProgressionIterators.kt","Progressions.kt","Range.kt","Unit.kt","annotation/Annotations.kt","internal/InternalAnnotations.kt","internal/progressionUtil.kt","reflect/KParameter.kt","reflect/KType.kt","reflect/KVariance.kt","reflect/KVisibility.kt","kotlin/builtins.kt","generated/_CollectionsJs.kt","generated/_StringsJs.kt","generated/_UArraysJs.kt","jquery/ui.kt","kotlin/annotations.kt","kotlin/annotationsJVM.kt","kotlin/jsTypeOf.kt","kotlin/kotlin.kt","kotlin/char.kt","kotlin/collections/AbstractMutableCollection.kt","kotlin/collections/AbstractMutableList.kt","kotlin/collections/AbstractMutableMap.kt","kotlin/collections/AbstractMutableSet.kt","kotlin/collections/ArrayList.kt","kotlin/collections/ArraySorting.kt","kotlin/collections/ArraysJs.kt","kotlin/collections/EqualityComparator.kt","kotlin/collections/HashMap.kt","kotlin/collections/HashSet.kt","kotlin/collections/InternalHashCodeMap.kt","kotlin/collections/utils.kt","kotlin/collections/InternalMap.kt","kotlin/collections/InternalStringMap.kt","kotlin/collections/LinkedHashMap.kt","kotlin/collections/LinkedHashSet.kt","kotlin/concurrent.kt","kotlin/console.kt","kotlin/coroutines/CoroutineImpl.kt","util/Result.kt","kotlin/coroutines/SafeContinuationJs.kt","kotlin/coroutines/intrinsics/IntrinsicsJs.kt","kotlin/coroutines/js/internal/EmptyContinuation.kt","kotlin/date.kt","kotlin/dom/Builders.kt","kotlin/dom/Classes.kt","text/regex/RegexExtensions.kt","text/StringBuilder.kt","kotlin/dom/Dom.kt","kotlin/dom/EventListener.kt","kotlin/dom/ItemArrayLike.kt","kotlin/dom/Mutations.kt","kotlin/dynamic.kt","kotlin/exceptionUtils.kt","kotlin/exceptions.kt","collections/Grouping.kt","kotlin/grouping.kt","kotlin/js.math.kt","kotlin/json.kt","kotlin/math.kt","kotlin/numbers.kt","kotlin/numberConversions.kt","kotlin/promise.kt","kotlin/random/PlatformRandom.kt","kotlin/reflect/JsClass.kt","kotlin/reflect/KClassImpl.kt","kotlin/reflect/primitives.kt","kotlin/reflect/reflection.kt","kotlin/regex.kt","kotlin/regexp.kt","kotlin/sequence.kt","kotlin/stringsCode.kt","kotlin/text.kt","org.w3c/org.khronos.webgl.kt","org.w3c/org.w3c.dom.clipboard.kt","org.w3c/org.w3c.dom.css.kt","org.w3c/org.w3c.dom.event

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(root, factory) {\n if (typeof define === 'function' && define.amd) {\n   define('kotlin', ['exports'], factory);\n }\n else if (typeof exports === 'object') {\n   factory(module.exports);\n }\n else {\n   root.kotlin = {};\n   factory(root.kotlin);\n }\n}(this, function (Kotlin) {\n var _ = Kotlin;\n\n insertContent();\n}));\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\nKotlin.isBooleanArray = function (a) {\n return (Array.isArray(a) || a instanceof Int8Array)
 && a.$type$ === \"BooleanArray\"\n};\n\nKotlin.isByteArray = function (a) {\n return a instanceof Int8Array && a.$type$!== \"BooleanArray\"\n};\n\nKotlin.isShortArray = function (a) {\n return a instanceof Int16Array\n};\n\nKotlin.isCharArray = function (a) {\n return a instanceof Uint16Array && a.$type$ === \"CharArray\"\n};\n\nKotlin.isIntArray = function (a) {\n return a instanceof Int32Array\n};\n\nKotlin.isFloatArray = function (a) {\n return a instanceof Float32Array\n};\n\nKotlin.isDoubleArray = function (a) {\n return a instanceof Float64Array\n};\n\nKotlin.isLongArray = function (a) {\n return Array.isArray(a) && a.$type$ === \"LongArray\"\n};\n\nKotlin.isArray = function (a) {\n return Array.isArray(a) && !a.$type$;\n};\n\nKotlin.isArrayish = function (a) {\n return Array.isArray(a) || ArrayBuffer.isView(a)\n};\n\nKotlin.arrayToString = function (a) {\n var toString = Kotlin.isCharArray(a) ? String.fromCharCode : Kotlin.toString;\n return
 \"[\" + Array.prototype.map.call(a, function(e) { return toString(e); }).join(\", \") +
\"]\";\n};\n\nKotlin.arrayDeepToString = function (arr) {\n return Kotlin.kotlin.collections.contentDeepToStringImpl(arr);\n};\n\nKotlin.arrayEquals = function (a, b) {\n if (a === b) {\n   return true;\n }\n if (!Kotlin.isArrayish(b) || a.length !== b.length) {\n   return false;\n }\n\n for (var i = 0, n = a.length; i < n; i++) {\n   if (!Kotlin.equals(a[i], b[i])) {\n   return false;\n   }\n }\n return true;\n};\n\nKotlin.arrayDeepEquals = function (a, b) {\n return Kotlin.kotlin.collections.contentDeepEqualsImpl(a, b);\n};\n\nKotlin.arrayHashCode = function (arr) {\n var result = 1;\n for (var i = 0, n = arr.length; i < n; i++) {\n   result = ((31 * result | 0) + Kotlin.hashCode(arr[i])) | 0;\n }\n return result;\n};\n\nKotlin.arrayDeepHashCode = function (arr) {\n return Kotlin.kotlin.collections.contentDeepHashCodeImpl(arr);\n};\n\nKotlin.primitiveArraySort
 = function (array) {\n array.sort(Kotlin.doubleCompareTo)\n};\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\nKotlin.getCallableRef = function(name, f) {\n f.callableName = name;\n return f;\n};\n\nKotlin.getPropertyCallableRef = function(name, paramCount, getter, setter) {\n getter.get = getter;\n

getter.set = setter;\n   getter.callableName = name;\n   return getPropertyRefClass(getter, setter, propertyRefClassMetadataCache[paramCount]);\n};\n\nfunction getPropertyRefClass(obj, setter, cache) {\n obj.$metadata$ = getPropertyRefMetadata(typeof setter === \"function\" ? cache.mutable : cache.immutable);\n obj.constructor = obj;\n   return obj;\n}\n\nvar propertyRefClassMetadataCache = [\n   {\n   mutable: { value: null, implementedInterface: function () {\n   return Kotlin.kotlin.reflect.KMutableProperty0\n   }\n   },\n   immutable: { value: null, implementedInterface: function () {\n   return Kotlin.kotlin.reflect.KProperty0 }\n   }\n   },\n   {\n   mutable: { value: null, implementedInterface: function () {\n   return Kotlin.kotlin.reflect.KMutableProperty1 }\n   },\n   immutable: { value: null, implementedInterface: function () {\n   return Kotlin.kotlin.reflect.KProperty1 }\n   }\n   }];\n\nfunction getPropertyRefMetadata(cache) {\n   if (cache.value === null) {\n   cache.value = {\n   interfaces: [cache.implementedInterface()],\n   baseClass: null,\n   functions: {},\n   properties: {},\n   types: {},\n   staticMembers: {}\n   };\n   }\n   return cache.value;\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\nKotlin.toShort
 = function (a) {\n   return (a & 0xFFFF) << 16 >> 16;\n};\n\nKotlin.toByte = function (a) {\n   return (a & 0xFF) << 24 >> 24;\n};\n\nKotlin.toChar = function (a) {\n   return a & 0xFFFF;\n};\n\nKotlin.numberToLong = function (a) {\n   return a instanceof Kotlin.Long ? a : Kotlin.Long.fromNumber(a);\n};\n\nKotlin.numberToInt = function (a) {\n   return a instanceof Kotlin.Long ? a.toInt() : Kotlin.doubleToInt(a);\n};\n\nKotlin.numberToShort = function (a) {\n   return Kotlin.toShort(Kotlin.numberToInt(a));\n};\n\nKotlin.numberToByte = function (a) {\n return Kotlin.toByte(Kotlin.numberToInt(a));\n};\n\nKotlin.numberToDouble = function (a) {\n   return +a;\n};\n\nKotlin.numberToChar = function (a) {\n   return Kotlin.toChar(Kotlin.numberToInt(a));\n};\n\nKotlin.doubleToInt = function(a) {\n   if (a > 2147483647) return 2147483647;\n   if (a < -2147483648) return -2147483648;\n   return a | 0;\n};\n\nKotlin.toBoxedChar = function (a) {\n   if (a == null)
 return a;\n   if (a instanceof Kotlin.BoxedChar) return a;\n   return new Kotlin.BoxedChar(a);\n};\n\nKotlin.unboxChar = function(a) {\n   if (a == null) return a;\n   return Kotlin.toChar(a);\n};\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\nKotlin.equals = function (obj1, obj2) {\n   if (obj1 == null) {\n   return obj2 == null;\n   }\n\n   if (obj2 == null) {\n   return false;\n   }\n\n   if (obj1 !== obj1) {\n   return obj2 !== obj2;\n   }\n\n   if (typeof obj1 === \"object\" && typeof obj1.equals === \"function\") {\n   return obj1.equals(obj2);\n   }\n\n   if (typeof obj1 === \"number\" && typeof obj2 === \"number\") {\n   return obj1 === obj2 && (obj1 !== 0 || 1 / obj1 === 1 / obj2)\n   }\n\n   return obj1 === obj2;\n};\n\nKotlin.hashCode = function (obj) {\n   if (obj == null) {\n   return 0;\n   }\n   var objType = typeof obj;\n   if (\"object\" === objType) {\n   return \"function\" === typeof obj.hashCode ? obj.hashCode() : getObjectHashCode(obj);\n   }\n   if (\"function\" === objType) {\n   return getObjectHashCode(obj);\n   }\n   if (\"number\" === objType) {\n   return Kotlin.numberHashCode(obj);\n   }\n   if (\"boolean\" === objType) {\n   return Number(obj)\n   }\n\n   var str = String(obj);\n   return getStringHashCode(str);\n};\n\n\nKotlin.toString = function (o) {\n   if (o == null) {\n   return \"null\";\n   }\n   else if (Kotlin.isArrayish(o)) {\n   return \"[...]\";\n   }\n   else {\n   return o.toString();\n   }\n};\n\n/**\n @const */\nvar POW_2_32 = 4294967296;\n// TODO: consider switching to Symbol type once we are on ES6.\n/**\n @const */\nvar OBJECT_HASH_CODE_PROPERTY_NAME = \"kotlinHashCodeValue$\";\n\nfunction getObjectHashCode(obj) {\n   if (!(OBJECT_HASH_CODE_PROPERTY_NAME in obj)) {\n   var hash = (Math.random()
 * POW_2_32) | 0; // Make 32-bit singed integer.\n   Object.defineProperty(obj, OBJECT_HASH_CODE_PROPERTY_NAME, { value: hash, enumerable: false });\n   }\n   return obj[OBJECT_HASH_CODE_PROPERTY_NAME];\n}\n\nfunction getStringHashCode(str) {\n   var hash = 0;\n   for (var i = 0; i < str.length; i++) {\n   var code = str.charCodeAt(i);\n   hash = (hash * 31 + code) | 0; // Keep it 32-bit.\n   }\n   return hash;\n}\n\nKotlin.identityHashCode = getObjectHashCode;\n","/*\n * Copyright 2010-

2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n// Copyright 2009 The Closure Library Authors. All Rights Reserved.\n//\n// Licensed under the Apache License, Version 2.0 (the \"License\");\n// you may not use this file except in compliance with the License.\n// You may obtain a copy of the License at\n//\n// http://www.apache.org/licenses/LICENSE-2.0\n//\n// Unless required by
applicable law or agreed to in writing, software\n// distributed under the License is distributed on an \"AS-IS\" BASIS,\n// WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.\n\n/**\n * Constructs a 64-bit two's-complement integer, given its low and high 32-bit\n * values as *signed* integers. See the from* functions below for more\n * convenient ways of constructing Longs.\n *\n * The internal representation of a long is the two given signed, 32-bit values.\n * We use 32-bit pieces because these are the size of integers on which\n * Javascript performs bit-operations. For operations like addition and\n * multiplication, we split each number into 16-bit pieces, which can easily be\n * multiplied within Javascript's floating-point representation without overflow\n * or change in sign.\n *\n * In the algorithms below, we frequently reduce the negative case to the\n * positive case by negating the input(s) and then post-processing the result.\n * Note that we must
ALWAYS check specially whether those values are MIN_VALUE\n * (-2^63) because -MIN_VALUE == MIN_VALUE (since 2^63 cannot be represented as\n * a positive number, it overflows back into a negative). Not handling this\n * case would often result in infinite recursion.\n *\n * @param {number} low The low (signed) 32 bits of the long.\n * @param {number} high The high (signed) 32 bits of the long.\n * @constructor\n * @final\n */\nKotlin.Long = function(low, high) {\n /**\n * @type {number}\n * @private\n */\n this.low_ = low | 0; // force into 32 signed bits.\n\n /**\n * @type {number}\n * @private\n */\n this.high_ = high | 0; // force into 32 signed bits.\n};\n\nKotlin.Long.$metadata$ = {\n kind: \"class\",\n simpleName: \"Long\",\n interfaces:[]\n};\n\n\n// NOTE: Common constant values ZERO, ONE, NEG_ONE, etc. are defined below the\n// from* methods on which they depend.\n\n\n/**\n * A cache of the Long representations of small integer values.\n * @type
{!Object}\n * @private\n */\nKotlin.Long.IntCache_ = {};\n\n\n/**\n * Returns a Long representing the given (32-bit) integer value.\n * @param {number} value The 32-bit integer in question.\n * @return {!Kotlin.Long} The corresponding Long value.\n */\nKotlin.Long.fromInt = function(value) {\n if (-128 <= value && value < 128) {\n var cachedObj = Kotlin.Long.IntCache_[value];\n if (cachedObj) {\n return cachedObj;\n }\n }\n\n var obj = new Kotlin.Long(value | 0, value < 0 ? -1 : 0);\n if (-128 <= value && value < 128) {\n Kotlin.Long.IntCache_[value] = obj;\n }\n return obj;\n};\n\n\n/**\n * Returns a Long representing the given value, provided that it is a finite\n * number. Otherwise, zero is returned.\n * @param {number} value The number in question.\n * @return {!Kotlin.Long} The corresponding Long value.\n */\nKotlin.Long.fromNumber = function(value) {\n if (isNaN(value) || !isFinite(value)) {\n return Kotlin.Long.ZERO;\n } else if (value <= -Kotlin.Long.TWO_PWR_63_DBL_)
{\n return Kotlin.Long.MIN_VALUE;\n } else if (value + 1 >= Kotlin.Long.TWO_PWR_63_DBL_) {\n return Kotlin.Long.MAX_VALUE;\n } else if (value < 0) {\n return Kotlin.Long.fromNumber(-value).negate();\n } else {\n return new Kotlin.Long(\n (value % Kotlin.Long.TWO_PWR_32_DBL_) | 0,\n (value / Kotlin.Long.TWO_PWR_32_DBL_) | 0);\n }\n};\n\n\n/**\n * Returns a Long representing the 64-bit integer that comes by concatenating\n * the given high and low bits. Each is assumed to use 32 bits.\n * @param {number} lowBits The low 32-bits.\n * @param {number} highBits The high 32-bits.\n * @return {!Kotlin.Long} The corresponding Long value.\n */\nKotlin.Long.fromBits = function(lowBits, highBits) {\n return new Kotlin.Long(lowBits, highBits);\n};\n\n\n/**\n * Returns a Long representation of the given string, written using the given\n * radix.\n * @param {string} str The textual representation of the Long.\n * @param {number=} opt_radix The radix
in which the text is written.\n * @return {!Kotlin.Long} The corresponding Long value.\n */\nKotlin.Long.fromString = function(str, opt_radix) {\n if (str.length == 0) {\n throw Error('number format error: empty string');\n }\n\n var radix = opt_radix || 10;\n if (radix < 2 || 36 < radix) {\n throw Error('radix out of range: ' + radix);\n }\n\n if (str.charAt(0) == '-') {\n return Kotlin.Long.fromString(str.substring(1),

radix).negate();\n } else if (str.indexOf('-') >= 0) {\n   throw Error('number format error: interior \"-\" character: ' + str);\n }\n\n // Do several (8) digits each time through the loop, so as to\n // minimize the calls to the very expensive emulated div.\n var radixToPower = Kotlin.Long.fromNumber(Math.pow(radix, 8));\n\n var result = Kotlin.Long.ZERO;\n for (var i = 0; i < str.length; i += 8) {\n   var size = Math.min(8, str.length - i);\n   var value = parseInt(str.substring(i, i + size), radix);\n   if (size < 8) {\n   var power = Kotlin.Long.fromNumber(Math.pow(radix, size));\n   result = result.multiply(power).add(Kotlin.Long.fromNumber(value));\n   } else {\n   result = result.multiply(radixToPower);\n   result = result.add(Kotlin.Long.fromNumber(value));\n   }\n }\n return result;\n};\n\n\n// NOTE: the compiler should inline these constant values below and then remove\n// these variables, so there should be no runtime penalty for these.\n\n\n/**\n * Number used repeated below in calculations. This must appear before the\n * first call to any from* function below.\n * @type {number}\n * @private\n */\nKotlin.Long.TWO_PWR_16_DBL_ = 1 << 16;\n\n\n/**\n * @type {number}\n * @private\n */\nKotlin.Long.TWO_PWR_24_DBL_ = 1 << 24;\n\n\n/**\n * @type {number}\n * @private\n */\nKotlin.Long.TWO_PWR_32_DBL_ =\n   Kotlin.Long.TWO_PWR_16_DBL_ * Kotlin.Long.TWO_PWR_16_DBL_;\n\n\n/**\n * @type {number}\n * @private\n */\nKotlin.Long.TWO_PWR_31_DBL_ =\n   Kotlin.Long.TWO_PWR_32_DBL_ / 2;\n\n\n/**\n * @type {number}\n * @private\n */\nKotlin.Long.TWO_PWR_48_DBL_ =\n   Kotlin.Long.TWO_PWR_32_DBL_ * Kotlin.Long.TWO_PWR_16_DBL_;\n\n\n/**\n * @type {number}\n * @private\n */\nKotlin.Long.TWO_PWR_64_DBL_ =\n   Kotlin.Long.TWO_PWR_32_DBL_ * Kotlin.Long.TWO_PWR_32_DBL_;\n\n\n/**\n * @type {number}\n * @private\n */\nKotlin.Long.TWO_PWR_63_DBL_ =\n   Kotlin.Long.TWO_PWR_64_DBL_ / 2;\n\n\n/** @type {!Kotlin.Long} */\nKotlin.Long.ZERO = Kotlin.Long.fromInt(0);\n\n\n/** @type {!Kotlin.Long} */\nKotlin.Long.ONE = Kotlin.Long.fromInt(1);\n\n\n/** @type {!Kotlin.Long} */\nKotlin.Long.NEG_ONE = Kotlin.Long.fromInt(-1);\n\n\n/** @type {!Kotlin.Long} */\nKotlin.Long.MAX_VALUE =\n   Kotlin.Long.fromBits(0xFFFFFFFF | 0, 0x7FFFFFFF | 0);\n\n\n/** @type {!Kotlin.Long} */\nKotlin.Long.MIN_VALUE = Kotlin.Long.fromBits(0, 0x80000000 | 0);\n\n\n/**\n * @type {!Kotlin.Long}\n * @private\n */\nKotlin.Long.TWO_PWR_24_ = Kotlin.Long.fromInt(1 << 24);\n\n\n/** @return {number} The value, assuming it is a 32-bit integer.\n */\nKotlin.Long.prototype.toInt = function() {\n return this.low_;\n};\n\n\n/** @return {number} The closest floating-point representation to this value. */\nKotlin.Long.prototype.toNumber = function() {\n return this.high_ * Kotlin.Long.TWO_PWR_32_DBL_ +\n   this.getLowBitsUnsigned();\n};\n\n/** @return {number} The 32-bit hashCode of this value. */\nKotlin.Long.prototype.hashCode = function() {\n return this.high_ ^ this.low_;\n};\n\n/**\n * @param {number=} opt_radix The radix in which the text should be written.\n * @return {string} The textual representation of this value.\n * @override\n */\nKotlin.Long.prototype.toString =\n   function(opt_radix) {\n var radix = opt_radix || 10;\n if (radix < 2 || 36 < radix) {\n   throw Error('radix out of range: ' + radix);\n }\n\n if (this.isZero()) {\n   return '0';\n }\n\n if (this.isNegative()) {\n   if (this.equalsLong(Kotlin.Long.MIN_VALUE)) {\n   // We need to change the Long value before it can be negated, so we\n   // remove\n   // the bottom-most digit in this base and then recurse to do the rest.\n   var radixLong = Kotlin.Long.fromNumber(radix);\n   var div = this.div(radixLong);\n   var rem = div.multiply(radixLong).subtract(this);\n   return div.toString(radix) + rem.toInt().toString(radix);\n   } else {\n   return '-' + this.negate().toString(radix);\n   }\n }\n\n // Do several (6) digits each time through the loop, so as to\n // minimize the calls to the very expensive emulated div.\n var radixToPower = Kotlin.Long.fromNumber(Math.pow(radix, 6));\n\n var rem = this;\n var result = '';\n while (true) {\n   var remDiv = rem.div(radixToPower);\n   var intval = rem.subtract(remDiv.multiply(radixToPower)).toInt();\n   var digits = intval.toString(radix);\n\n   rem = remDiv;\n   if (rem.isZero()) {\n   return digits + result;\n   } else {\n   while (digits.length < 6) {\n   digits = '0' + digits;\n   }\n   result = '' + digits + result;\n   }\n }\n};\n\n\n/**

@return {number} The high 32-bits as a signed value. */\nKotlin.Long.prototype.getHighBits = function() {\n return this.high_;\n};\n\n\n/** @return {number} The low 32-bits as a signed value. */\nKotlin.Long.prototype.getLowBits = function() {\n return this.low_;\n};\n\n\n/** @return {number} The low 32-bits as an unsigned value. */\nKotlin.Long.prototype.getLowBitsUnsigned = function() {\n return (this.low_ >= 0) ?\n this.low_ : Kotlin.Long.TWO_PWR_32_DBL_ + this.low_;\n};\n\n\n/**\n * @return {number} Returns the number of bits needed to represent the absolute\n * value of this Long.\n */\nKotlin.Long.prototype.getNumBitsAbs = function() {\n if (this.isNegative()) {\n if (this.equalsLong(Kotlin.Long.MIN_VALUE)) {\n return 64;\n } else {\n return this.negate().getNumBitsAbs();\n }\n } else {\n var val = this.high_ != 0 ? this.high_ : this.low_;\n for (var bit = 31; bit > 0; bit--) {\n if ((val & (1 << bit)) != 0) {\n break;\n }\n }\n return this.high_ != 0 ? bit + 33 : bit + 1;\n }\n};\n\n\n/** @return {boolean} Whether this value is zero. */\nKotlin.Long.prototype.isZero = function() {\n return this.high_ == 0 && this.low_ == 0;\n};\n\n\n/** @return {boolean} Whether this value is negative. */\nKotlin.Long.prototype.isNegative = function() {\n return this.high_ < 0;\n};\n\n\n/** @return {boolean} Whether this value is odd. */\nKotlin.Long.prototype.isOdd = function() {\n return (this.low_ & 1) == 1;\n};\n\n\n/**\n * @param {Kotlin.Long} other Long to compare against.\n * @return {boolean} Whether this Long equals the other.\n */\nKotlin.Long.prototype.equalsLong = function(other) {\n return (this.high_ == other.high_) && (this.low_ == other.low_);\n};\n\n\n/**\n * @param {Kotlin.Long} other Long to compare against.\n * @return {boolean} Whether this Long does not equal the other.\n */\nKotlin.Long.prototype.notEqualsLong = function(other) {\n return (this.high_ != other.high_) || (this.low_ != other.low_);\n};\n\n\n/**\n * @param {Kotlin.Long} other Long to compare against.\n * @return {boolean} Whether this Long is less than the other.\n */\nKotlin.Long.prototype.lessThan = function(other) {\n return this.compare(other) < 0;\n};\n\n\n/**\n * @param {Kotlin.Long} other Long to compare against.\n * @return {boolean} Whether this Long is less than or equal to the other.\n */\nKotlin.Long.prototype.lessThanOrEqual = function(other) {\n return this.compare(other) <= 0;\n};\n\n\n/**\n * @param {Kotlin.Long} other Long to compare against.\n * @return {boolean} Whether this Long is greater than the other.\n */\nKotlin.Long.prototype.greaterThan = function(other) {\n return this.compare(other) > 0;\n};\n\n\n/**\n * @param {Kotlin.Long} other Long to compare against.\n * @return {boolean} Whether this Long is greater than or equal to the other.\n */\nKotlin.Long.prototype.greaterThanOrEqual = function(other) {\n return this.compare(other) >= 0;\n};\n\n\n/**\n * Compares this Long with the given one.\n * @param {Kotlin.Long} other Long to compare against.\n * @return {number} 0 if they are the same, 1 if the this is greater, and -1\n * if the given one is greater.\n */\nKotlin.Long.prototype.compare = function(other) {\n if (this.equalsLong(other)) {\n return 0;\n }\n\n var thisNeg = this.isNegative();\n var otherNeg = other.isNegative();\n if (thisNeg && !otherNeg) {\n return -1;\n }\n if (!thisNeg && otherNeg) {\n return 1;\n }\n\n // at this point, the signs are the same, so subtraction will not overflow\n if (this.subtract(other).isNegative()) {\n return -1;\n } else {\n return 1;\n }\n};\n\n\n/** @return {!Kotlin.Long} The negation of this value. */\nKotlin.Long.prototype.negate = function() {\n if (this.equalsLong(Kotlin.Long.MIN_VALUE)) {\n return Kotlin.Long.MIN_VALUE;\n } else {\n return this.not().add(Kotlin.Long.ONE);\n }\n};\n\n\n/**\n * Returns the sum of this and the given Long.\n * @param {Kotlin.Long} other Long to add to this one.\n * @return {!Kotlin.Long} The sum of this and the given Long.\n */\nKotlin.Long.prototype.add = function(other) {\n // Divide each number into 4 chunks of 16 bits, and then sum the chunks.\n\n var a48 = this.high_ >>> 16;\n var a32 = this.high_ & 0xFFFF;\n var a16 = this.low_ >>> 16;\n var a00 = this.low_ & 0xFFFF;\n\n var b48 = other.high_ >>> 16;\n var b32 = other.high_ & 0xFFFF;\n var b16 = other.low_ >>> 16;\n var b00 = other.low_ & 0xFFFF;\n\n var c48 = 0, c32 = 0, c16 = 0, c00 = 0;\n c00 += a00 + b00;\n c16 += c00 >>> 16;\n c00 &= 0xFFFF;\n c16 += a16 + b16;\n c32 += c16 >>> 16;\n c16 &= 0xFFFF;\n c32 += a32 + b32;\n c48 += c32 >>> 16;\n c32 &= 0xFFFF;\n c48 += a48 + b48;\n c48 &= 0xFFFF;\n return Kotlin.Long.fromBits((c16 << 16) | c00, (c48 << 16) | c32);\n};\n\n\n/**\n * Returns the difference of this and the given Long.\n * @param {Kotlin.Long} other Long to subtract from this.\n * @return {!Kotlin.Long} The

difference
of this and the given Long.\n */\nKotlin.Long.prototype.subtract = function(other) {\n return this.add(other.negate());\n};\n\n\n/**\n * Returns the product of this and the given long.\n * @param {Kotlin.Long} other Long to multiply with this.\n * @return {!Kotlin.Long} The product of this and the other.\n */\nKotlin.Long.prototype.multiply = function(other) {\n if (this.isZero()) {\n return Kotlin.Long.ZERO;\n } else if (other.isZero()) {\n return Kotlin.Long.ZERO;\n }\n\n if (this.equalsLong(Kotlin.Long.MIN_VALUE)) {\n return other.isOdd() ? Kotlin.Long.MIN_VALUE : Kotlin.Long.ZERO;\n } else if (other.equalsLong(Kotlin.Long.MIN_VALUE)) {\n return this.isOdd() ? Kotlin.Long.MIN_VALUE : Kotlin.Long.ZERO;\n }\n\n if (this.isNegative()) {\n if (other.isNegative()) {\n return this.negate().multiply(other.negate());\n } else {\n return this.negate().multiply(other).negate();\n }\n } else if (other.isNegative()) {\n return this.multiply(other.negate()).negate();\n }\n\n // If both longs are small, use float multiplication\n if (this.lessThan(Kotlin.Long.TWO_PWR_24_) &&\n other.lessThan(Kotlin.Long.TWO_PWR_24_)) {\n return Kotlin.Long.fromNumber(this.toNumber() * other.toNumber());\n }\n\n // Divide each long into 4 chunks of 16 bits, and then add up 4x4 products.\n // We can skip products that would overflow.\n\n var a48 = this.high_ >>> 16;\n var a32 = this.high_ & 0xFFFF;\n var a16 = this.low_ >>> 16;\n var a00 = this.low_ & 0xFFFF;\n\n var b48 = other.high_ >>> 16;\n var b32 = other.high_ & 0xFFFF;\n var b16 = other.low_ >>> 16;\n var b00 = other.low_ & 0xFFFF;\n\n var c48 = 0, c32 = 0, c16 = 0, c00 = 0;\n c00 += a00 * b00;\n c16 += c00 >>> 16;\n c00 &= 0xFFFF;\n c16 += a16 * b00;\n c32 += c16 >>> 16;\n c16 &= 0xFFFF;\n c16 += a00 * b16;\n c32 += c16 >>> 16;\n c16 &= 0xFFFF;\n c32 += a32 * b00;\n c48 += c32 >>> 16;\n c32 &= 0xFFFF;\n c32 += a16 * b16;\n c48 += c32 >>> 16;\n c32 &= 0xFFFF;\n c32 += a00 * b32;\n c48 += c32 >>> 16;\n c32 &= 0xFFFF;\n c48 += a48 * b00 + a32 * b16 + a16 * b32 + a00 * b48;\n c48 &= 0xFFFF;\n return Kotlin.Long.fromBits((c16 << 16) | c00, (c48 << 16) | c32);\n};\n\n\n/**\n * Returns this Long divided by the given one.\n * @param {Kotlin.Long} other Long by which to divide.\n * @return {!Kotlin.Long} This Long divided by the given one.\n */\nKotlin.Long.prototype.div = function(other) {\n if (other.isZero()) {\n throw Error('division by zero');\n } else if (this.isZero()) {\n return Kotlin.Long.ZERO;\n }\n\n if (this.equalsLong(Kotlin.Long.MIN_VALUE)) {\n if (other.equalsLong(Kotlin.Long.ONE) ||\n other.equalsLong(Kotlin.Long.NEG_ONE)) {\n return Kotlin.Long.MIN_VALUE; // recall that -MIN_VALUE == MIN_VALUE\n } else if (other.equalsLong(Kotlin.Long.MIN_VALUE)) {\n return Kotlin.Long.ONE;\n } else {\n // At this point, we have |other| >= 2, so |this/other| < |MIN_VALUE|.\n var halfThis = this.shiftRight(1);\n
var approx = halfThis.div(other).shiftLeft(1);\n if (approx.equalsLong(Kotlin.Long.ZERO)) {\n return other.isNegative() ? Kotlin.Long.ONE : Kotlin.Long.NEG_ONE;\n } else {\n var rem = this.subtract(other.multiply(approx));\n var result = approx.add(rem.div(other));\n return result;\n }\n }\n } else if (other.equalsLong(Kotlin.Long.MIN_VALUE)) {\n return Kotlin.Long.ZERO;\n }\n\n if (this.isNegative()) {\n if (other.isNegative()) {\n return this.negate().div(other.negate());\n } else {\n return this.negate().div(other).negate();\n }\n } else if (other.isNegative()) {\n return this.div(other.negate()).negate();\n }\n\n // Repeat the following until the remainder is less than other: find a\n // floating-point that approximates remainder / other *from below*, add this\n // into the result, and subtract it from the remainder. It is critical that\n // the approximate value is less than
or equal to the real value so that the\n // remainder never becomes negative.\n var res = Kotlin.Long.ZERO;\n var rem = this;\n while (rem.greaterThanOrEqual(other)) {\n // Approximate the result of division. This may be a little greater or\n // smaller than the actual value.\n var approx = Math.max(1, Math.floor(rem.toNumber() / other.toNumber()));\n\n // We will tweak the approximate result by changing it in the 48-th digit or\n // the smallest non-fractional digit, whichever is larger.\n var log2 = Math.ceil(Math.log(approx) / Math.LN2);\n var delta = (log2 <= 48) ? 1 : Math.pow(2, log2 - 48);\n\n // Decrease the approximation until it is smaller than the remainder. Note\n // that if it is too large, the product overflows and is negative.\n var approxRes = Kotlin.Long.fromNumber(approx);\n var approxRem = approxRes.multiply(other);\n while (approxRem.isNegative() || approxRem.greaterThan(rem)) {\n approx -= delta;\n approxRes =

Kotlin.Long.fromNumber(approx);\n
approxRem = approxRes.multiply(other);\n }\n\n // We know the answer can't be zero... and actually, zero would cause\n // infinite recursion since we would make no progress.\n if (approxRes.isZero()) {\n approxRes = Kotlin.Long.ONE;\n }\n\n res = res.add(approxRes);\n rem = rem.subtract(approxRem);\n }\n return res;\n};\n\n\n/**\n * Returns this Long modulo the given one.\n * @param {Kotlin.Long} other Long by which to mod.\n * @return {!Kotlin.Long} This Long modulo the given one.\n */\nKotlin.Long.prototype.modulo = function(other) {\n return this.subtract(this.div(other).multiply(other));\n};\n\n\n/** @return {!Kotlin.Long} The bitwise-NOT of this value. */\nKotlin.Long.prototype.not = function() {\n return Kotlin.Long.fromBits(~this.low_, ~this.high_);\n};\n\n\n/**\n * Returns the bitwise-AND of this Long and the given one.\n * @param {Kotlin.Long} other The Long with which to AND.\n * @return {!Kotlin.Long} The bitwise-AND
of this and the other.\n */\nKotlin.Long.prototype.and = function(other) {\n return Kotlin.Long.fromBits(this.low_ & other.low_,\n this.high_ & other.high_);\n};\n\n\n/**\n * Returns the bitwise-OR of this Long and the given one.\n * @param {Kotlin.Long} other The Long with which to OR.\n * @return {!Kotlin.Long} The bitwise-OR of this and the other.\n */\nKotlin.Long.prototype.or = function(other) {\n return Kotlin.Long.fromBits(this.low_ | other.low_,\n this.high_ | other.high_);\n};\n\n\n/**\n * Returns the bitwise-XOR of this Long and the given one.\n * @param {Kotlin.Long} other The Long with which to XOR.\n * @return {!Kotlin.Long} The bitwise-XOR of this and the other.\n */\nKotlin.Long.prototype.xor = function(other) {\n return Kotlin.Long.fromBits(this.low_ ^ other.low_,\n this.high_ ^ other.high_);\n};\n\n\n/**\n * Returns this Long with bits shifted to the left by the given
amount.\n * @param {number} numBits The number of bits by which to shift.\n * @return {!Kotlin.Long} This shifted to the left by the given amount.\n */\nKotlin.Long.prototype.shiftLeft = function(numBits) {\n numBits &= 63;\n if (numBits == 0) {\n return this;\n } else {\n var low = this.low_;\n if (numBits < 32) {\n var high = this.high_;\n return Kotlin.Long.fromBits(\n low << numBits,\n (high << numBits) | (low >>> (32 - numBits)));\n } else {\n return Kotlin.Long.fromBits(0, low << (numBits - 32));\n }\n }\n};\n\n\n/**\n * Returns this Long with bits shifted to the right by the given amount.\n * @param {number} numBits The number of bits by which to shift.\n * @return {!Kotlin.Long} This shifted to the right by the given amount.\n */\nKotlin.Long.prototype.shiftRight = function(numBits) {\n numBits &= 63;\n if (numBits == 0) {\n return this;\n } else {\n var high = this.high_;\n if (numBits < 32) {\n var low =
this.low_;\n return Kotlin.Long.fromBits(\n (low >>> numBits) | (high << (32 - numBits)),\n high >> numBits);\n } else {\n return Kotlin.Long.fromBits(\n high >> (numBits - 32),\n high >= 0 ? 0 : -1);\n }\n }\n};\n\n\n/**\n * Returns this Long with bits shifted to the right by the given amount, with\n * zeros placed into the new leading bits.\n * @param {number} numBits The number of bits by which to shift.\n * @return {!Kotlin.Long} This shifted to the right by the given amount, with\n * zeros placed into the new leading bits.\n */\nKotlin.Long.prototype.shiftRightUnsigned = function(numBits) {\n numBits &= 63;\n if (numBits == 0) {\n return this;\n } else {\n var high = this.high_;\n if (numBits < 32) {\n var low = this.low_;\n return Kotlin.Long.fromBits(\n (low >>> numBits) | (high << (32 - numBits)),\n high >>> numBits);\n } else if (numBits == 32) {\n return Kotlin.Long.fromBits(high,
0);\n } else {\n return Kotlin.Long.fromBits(high >>> (numBits - 32), 0);\n }\n }\n};\n\n// Support for Kotlin\nKotlin.Long.prototype.equals = function (other) {\n return other instanceof Kotlin.Long &&
this.equalsLong(other);\n};\n\nKotlin.Long.prototype.compareTo_11rb$ =
Kotlin.Long.prototype.compare;\n\nKotlin.Long.prototype.inc = function() {\n return
this.add(Kotlin.Long.ONE);\n};\n\nKotlin.Long.prototype.dec = function() {\n return
this.add(Kotlin.Long.NEG_ONE);\n};\n\nKotlin.Long.prototype.valueOf = function() {\n return
this.toNumber();\n};\n\nKotlin.Long.prototype.unaryPlus = function() {\n return
this;\n};\n\nKotlin.Long.prototype.unaryMinus = Kotlin.Long.prototype.negate;\nKotlin.Long.prototype.inv =
Kotlin.Long.prototype.not;\n\nKotlin.Long.prototype.rangeTo = function (other) {\n return new
Kotlin.kotlin.ranges.LongRange(this, other);\n};","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache

2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n/**\n * @param {string} id\n * @param {Object} declaration\n */\nKotlin.defineModule = function (id, declaration) {\n};\n\nKotlin.defineInlineFunction = function(tag, fun) {\n return fun;\n};\n\nKotlin.wrapFunction = function(fun) {\n var f = function() {\n   f = fun();\n   return f.apply(this, arguments);\n };\n return function() {\n   return f.apply(this, arguments);\n };\n};\n\nKotlin.isTypeOf = function(type) {\n return function (object) {\n   return typeof object === type;\n }\n};\n\nKotlin.isInstanceOf = function (klass) {\n return function (object) {\n   return Kotlin.isType(object, klass);\n }\n};\n\nKotlin.orNull = function (fn) {\n return function (object) {\n   return object == null || fn(object);\n }\n};\n\nKotlin.andPredicate = function (a, b) {\n return function (object) {\n   return a(object) && b(object);\n }\n};\n\nKotlin.kotlinModuleMetadata = function (abiVersion, moduleName, data) {\n};\n\nKotlin.suspendCall = function(value) {\n return value;\n};\n\nKotlin.coroutineResult = function(qualifier) {\n throwMarkerError();\n};\n\nKotlin.coroutineController = function(qualifier) {\n throwMarkerError();\n};\n\nKotlin.coroutineReceiver = function(qualifier) {\n throwMarkerError();\n};\n\nKotlin.setCoroutineResult = function(value, qualifier) {\n throwMarkerError();\n};\n\nfunction throwMarkerError() {\n throw new Error(\n   \"This marker function should never been called. \" +\n   \"Looks like compiler did not eliminate it properly. \" +\n   \"Please, report an issue if you caught this exception.\");\n}\n\nKotlin.getFunctionById = function(id, defaultValue) {\n return function() {\n   return defaultValue;\n }\n};","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\nKotlin.compareTo = function (a, b) {\n var typeA = typeof a;\n if (typeA === \"number\") {\n   if (typeof b === \"number\") {\n   return Kotlin.doubleCompareTo(a, b);\n   }\n   return Kotlin.primitiveCompareTo(a, b);\n }\n if (typeA === \"string\" || typeA === \"boolean\") {\n   return Kotlin.primitiveCompareTo(a, b);\n }\n return a.compareTo_11rb$(b);\n};\n\nKotlin.primitiveCompareTo = function (a, b) {\n return a < b ? -1 : a > b ? 1 : 0;\n};\n\nKotlin.doubleCompareTo = function (a, b) {\n if (a < b) return -1;\n if (a > b) return 1;\n\n if (a === b) {\n   if (a !== 0) return 0;\n\n   var ia = 1 / a;\n   return ia === 1 / b ? 0 : (ia < 0 ? -1 : 1);\n }\n\n return a !== a ? (b !== b ? 0 : 1) : -1\n};\n\nKotlin.charInc = function (value) {\n return Kotlin.toChar(value+1);\n};\n\nKotlin.charDec = function (value) {\n return Kotlin.toChar(value-1);\n};\n\nKotlin.imul = Math.imul || imul;\n\nKotlin.imulEmulated = imul;\n\nfunction imul(a, b) {\n return ((a & 0xffff0000) * (b & 0xffff) + (a & 0xffff) * (b | 0)) | 0;\n}\n\n(function() {\n var buf = new ArrayBuffer(8);\n var bufFloat64 = new Float64Array(buf);\n var bufFloat32 = new Float32Array(buf);\n var bufInt32 = new Int32Array(buf);\n var lowIndex = 0;\n var highIndex = 1;\n\n bufFloat64[0] = -1; // bff00000_00000000\n if (bufInt32[lowIndex] !== 0) {\n   lowIndex = 1;\n   highIndex = 0;\n }\n\n Kotlin.doubleToBits = function(value) {\n   return Kotlin.doubleToRawBits(isNaN(value) ? NaN : value);\n };\n\n Kotlin.doubleToRawBits = function(value) {\n   bufFloat64[0] = value;\n   return Kotlin.Long.fromBits(bufInt32[lowIndex], bufInt32[highIndex]);\n };\n\n Kotlin.doubleFromBits = function(value) {\n   bufInt32[lowIndex] = value.low_;\n   bufInt32[highIndex] = value.high_;\n   return bufFloat64[0];\n };\n\n Kotlin.floatToBits = function(value) {\n   return Kotlin.floatToRawBits(isNaN(value) ? NaN : value);\n };\n\n Kotlin.floatToRawBits = function(value) {\n   bufFloat32[0] = value;\n   return bufInt32[0];\n };\n\n Kotlin.floatFromBits = function(value) {\n   bufInt32[0] = value;\n   return bufFloat32[0];\n };\n\n // returns zero value for number with positive sign bit and non-zero value for number with negative sign bit.\n Kotlin.doubleSignBit = function(value) {\n   bufFloat64[0] = value;\n   return bufInt32[highIndex] & 0x80000000;\n };\n\n Kotlin.numberHashCode = function(obj) {\n   if ((obj | 0) === obj) {\n   return obj | 0;\n   }\n   else {\n   bufFloat64[0] = obj;\n   return (bufInt32[highIndex] * 31 | 0) + bufInt32[lowIndex] | 0;\n   }\n }\n})();\n\nKotlin.ensureNotNull = function(x) {\n return x != null ? x : Kotlin.throwNPE();\n};\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\nif (typeof String.prototype.startsWith === \"undefined\") {\n String.prototype.startsWith =

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function(searchString, position) {\n        position = position || 0;\n        return this.lastIndexOf(searchString, position) === position;\n    };\n}\nif (typeof String.prototype.endsWith === \"undefined\") {\n    String.prototype.endsWith = function(searchString, position) {\n        var subjectString = this.toString();\n        if (position === undefined || position > subjectString.length) {\n            position = subjectString.length;\n        }\n        position -= searchString.length;\n        var lastIndex = subjectString.indexOf(searchString, position);\n        return lastIndex !== -1 && lastIndex === position;\n    };\n}\n// ES6 Math polyfills\nif (typeof Math.sign === \"undefined\") {\n    Math.sign = function(x) {\n        x = +x; // convert to a number\n        if (x === 0 || isNaN(x)) {\n            return Number(x);\n        }\n        return x > 0 ? 1 : -1;\n    };\n}\nif (typeof Math.trunc === \"undefined\") {\n    Math.trunc = function(x) {\n        if (isNaN(x)) {\n            return NaN;\n        }\n        if (x > 0) {\n            return Math.floor(x);\n        }\n        return Math.ceil(x);\n    };\n}\n\n(function() {\n    var epsilon = 2.220446049250313E-16;\n    var taylor_2_bound = Math.sqrt(epsilon);\n    var taylor_n_bound = Math.sqrt(taylor_2_bound);\n    var upper_taylor_2_bound = 1/taylor_2_bound;\n    var upper_taylor_n_bound = 1/taylor_n_bound;\n\n    if (typeof Math.sinh === \"undefined\") {\n        Math.sinh = function(x) {\n            if (Math.abs(x) < taylor_n_bound) {\n                var result = x;\n                if (Math.abs(x) > taylor_2_bound) {\n                    result += (x * x * x) / 6;\n                }\n                return result;\n            } else {\n                var y = Math.exp(x);\n                var y1 = 1 / y;\n                if (!isFinite(y)) return Math.exp(x - Math.LN2);\n                if (!isFinite(y1)) return -Math.exp(-x - Math.LN2);\n                return (y - y1) / 2;\n            }\n        };\n    }\n    if (typeof Math.cosh === \"undefined\") {\n        Math.cosh = function(x) {\n            var y = Math.exp(x);\n            var y1 = 1 / y;\n            if (!isFinite(y) || !isFinite(y1)) return Math.exp(Math.abs(x) - Math.LN2);\n            return (y + y1) / 2;\n        };\n    }\n\n    if (typeof Math.tanh === \"undefined\") {\n        Math.tanh = function(x){\n            if (Math.abs(x) < taylor_n_bound) {\n                var result = x;\n                if (Math.abs(x) > taylor_2_bound) {\n                    result -= (x * x * x) / 3;\n                }\n                return result;\n            }\n            else {\n                var a = Math.exp(+x), b = Math.exp(-x);\n                return a === Infinity ? 1 : b === Infinity ? -1 : (a - b) / (a + b);\n            }\n        };\n    }\n\n    // Inverse hyperbolic function implementations derived from boost special math functions,\n    // Copyright Eric Ford & Hubert Holin 2001.\n\n    if (typeof Math.asinh === \"undefined\") {\n        var asinh = function(x) {\n            if (x >= +taylor_n_bound)\n            {\n                if (x > upper_taylor_n_bound)\n                {\n                    if (x > upper_taylor_2_bound)\n                    {\n                        // approximation by laurent series in 1/x at 0+ order from -1 to 0\n                        return Math.log(x) + Math.LN2;\n                    }\n                    else\n                    {\n                        // approximation by laurent series in 1/x at 0+ order from -1 to 1\n                        return Math.log(x * 2 + (1 / (x * 2)));\n                    }\n                }\n                else\n                {\n                    return Math.log(x + Math.sqrt(x * x + 1));\n                }\n            }\n            else if (x <= -taylor_n_bound)\n            {\n                return -asinh(-x);\n            }\n            else\n            {\n                // approximation by taylor series in x at 0 up to order 2\n                var result = x;\n                if (Math.abs(x) >= taylor_2_bound)\n                {\n                    var x3 = x * x * x;\n                    // approximation by taylor series in x at 0 up to order 4\n                    result -= x3 / 6;\n                }\n                return result;\n            }\n        };\n        Math.asinh = asinh;\n    }\n    if (typeof Math.acosh === \"undefined\") {\n        Math.acosh = function(x) {\n            if (x < 1)\n            {\n                return NaN;\n            }\n            else if (x - 1 >= taylor_n_bound)\n            {\n                if (x > upper_taylor_2_bound)\n                {\n                    // approximation by laurent series in 1/x at 0+ order from -1 to 0\n                    return Math.log(x) + Math.LN2;\n                }\n                else\n                {\n                    return Math.log(x + Math.sqrt(x * x - 1));\n                }\n            }\n            else\n            {\n                var y = Math.sqrt(x - 1);\n                // approximation by taylor series in y at 0 up to order 2\n                var result = y;\n                if (y >= taylor_2_bound)\n                {\n                    var y3 = y * y * y;\n                    // approximation by taylor series in y at 0 up to order 4\n                    result -= y3 / 12;\n                }\n\n                return Math.sqrt(2) * result;\n            }\n        };\n    }\n    if (typeof Math.atanh === \"undefined\") {\n        Math.atanh = function(x) {\n            if (Math.abs(x) < taylor_n_bound) {\n                var result = x;\n                if (Math.abs(x) > taylor_2_bound) {\n                    result += (x * x * x) / 3;\n
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}\n return result;\n }\n return Math.log((1 + x) / (1 - x)) / 2;\n };\n }\n if (typeof Math.log1p === \"undefined\") {\n Math.log1p = function(x) {\n if (Math.abs(x) < taylor_n_bound) {\n var x2 = x * x;\n var x3 = x2 * x;\n var x4 = x3 * x;\n // approximation by taylor series in x at 0 up to order 4\n return (-x4 / 4 + x3 / 3 - x2 / 2 + x);\n }\n return Math.log(x + 1);\n };\n }\n if (typeof Math.expm1 === \"undefined\") {\n Math.expm1 = function(x) {\n if (Math.abs(x) < taylor_n_bound) {\n var x2 = x * x;\n var x3 = x2 * x;\n var x4 = x3 * x;\n // approximation by taylor series in x at 0 up to order 4\n return (x4 / 24 + x3 / 6 + x2 / 2 + x);\n }\n return Math.exp(x) - 1;\n };\n }\n})();\nif (typeof Math.hypot === \"undefined\") {\n Math.hypot = function() {\n var y = 0;\n var length = arguments.length;\n\n for (var i = 0; i < length; i++) {\n if (arguments[i] === Infinity || arguments[i] === -Infinity) {\n return Infinity;\n }\n y += arguments[i] * arguments[i];\n }\n return Math.sqrt(y);\n };\n}\nif (typeof Math.log10 === \"undefined\") {\n Math.log10 = function(x) {\n return Math.log(x) * Math.LOG10E;\n };\n}\nif (typeof Math.log2 === \"undefined\") {\n Math.log2 = function(x) {\n return Math.log(x) * Math.LOG2E;\n };\n}\n\n// For HtmlUnit and PhantomJs\nif (typeof ArrayBuffer.isView === \"undefined\") {\n ArrayBuffer.isView = function(a) {\n return a != null && a.__proto__ != null && a.__proto__.__proto__ === Int8Array.prototype.__proto__;\n };\n}\n\n(function() {\n function normalizeOffset(offset, length) {\n if (offset < 0) return Math.max(0, offset + length);\n return Math.min(offset, length);\n }\n function typedArraySlice(begin, end) {\n if (typeof end === \"undefined\") {\n end = this.length;\n }\n begin = normalizeOffset(begin || 0, this.length);\n end = Math.max(begin, normalizeOffset(end, this.length));\n return new this.constructor(this.subarray(begin, end));\n }\n\n var arrays = [Int8Array, Int16Array, Uint16Array, Int32Array, Float32Array, Float64Array];\n for (var i = 0; i < arrays.length; ++i) {\n var TypedArray = arrays[i];\n if (typeof TypedArray.prototype.slice === \"undefined\") {\n Object.defineProperty(TypedArray.prototype, 'slice', {\n value: typedArraySlice\n });\n }\n }\n\n // Patch apply to work with TypedArrays if needed.\n try {\n (function() {}).apply(null, new Int32Array(0))\n } catch (e) {\n var apply = Function.prototype.apply;\n Object.defineProperty(Function.prototype, 'apply', {\n value: function(self, array) {\n return apply.call(this, self, [].slice.call(array));\n }\n });\n }\n\n // Patch map to work with TypedArrays if needed.\n for (var i = 0; i < arrays.length; ++i) {\n var TypedArray = arrays[i];\n if (typeof TypedArray.prototype.map === \"undefined\") {\n Object.defineProperty(TypedArray.prototype, 'map', {\n value: function(callback, self) {\n return [].slice.call(this).map(callback, self);\n }\n });\n }\n }\n\n // Patch sort to work with TypedArrays if needed.\n // TODO: consider to remove following function and replace it with `Kotlin.doubleCompareTo` (see misc.js)\n var totalOrderComparator = function (a, b) {\n if (a < b) return -1;\n if (a > b) return 1;\n\n if (a === b) {\n if (a !== 0) return 0;\n\n var ia = 1 / a;\n return ia === 1 / b ? 0 : (ia < 0 ? -1 : 1);\n }\n\n return a !== a ? (b !== b ? 0 : 1) : -1\n };\n\n for (var i = 0; i < arrays.length; ++i) {\n var TypedArray = arrays[i];\n if (typeof TypedArray.prototype.sort === \"undefined\") {\n Object.defineProperty(TypedArray.prototype, 'sort', {\n value: function(compareFunction) {\n return Array.prototype.sort.call(this, compareFunction || totalOrderComparator);\n }\n });\n }\n }\n})();\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\nKotlin.Kind = {\n CLASS: \"class\",\n INTERFACE: \"interface\",\n OBJECT: \"object\"\n};\n\nKotlin.callGetter = function (thisObject, klass, propertyName) {\n var propertyDescriptor = Object.getOwnPropertyDescriptor(klass, propertyName);\n if (propertyDescriptor != null && propertyDescriptor.get != null) {\n return propertyDescriptor.get.call(thisObject);\n }\n\n propertyDescriptor = Object.getOwnPropertyDescriptor(thisObject, propertyName);\n if (propertyDescriptor != null && \"value\" in propertyDescriptor) {\n return thisObject[propertyName];\n }\n\n return Kotlin.callGetter(thisObject, Object.getPrototypeOf(klass), propertyName);\n};\n\nKotlin.callSetter = function (thisObject, klass, propertyName,

value) {\n   var propertyDescriptor = Object.getOwnPropertyDescriptor(klass, propertyName);\n   if (propertyDescriptor != null && propertyDescriptor.set != null) {\n   propertyDescriptor.set.call(thisObject, value);\n   return;\n   }\n\n   propertyDescriptor = Object.getOwnPropertyDescriptor(thisObject, propertyName);\n   if (propertyDescriptor != null && \"value\" in propertyDescriptor) {\n thisObject[propertyName] = value;\n   return\n   }\n\n   Kotlin.callSetter(thisObject, Object.getPrototypeOf(klass), propertyName, value);\n};\n\nfunction isInheritanceFromInterface(ctor, iface) {\n   if (ctor === iface) return true;\n\n   var metadata = ctor.$metadata$;\n if (metadata != null) {\n   var interfaces = metadata.interfaces;\n   for (var i = 0; i < interfaces.length; i++) {\n   if (isInheritanceFromInterface(interfaces[i], iface)) {\n   return true;\n   }\n   }\n   }\n\n   var superPrototype = ctor.prototype != null ? Object.getPrototypeOf(ctor.prototype) : null;\n   var superConstructor = superPrototype != null ? superPrototype.constructor : null;\n   return superConstructor != null && isInheritanceFromInterface(superConstructor, iface);\n}\n\n/**\n *\n * @param {*} object\n * @param {Function|Object} klass\n * @returns {Boolean}\n */\nKotlin.isType = function (object, klass) {\n   if (klass === Object) {\n   switch (typeof object) {\n   case \"string\":\n   case \"number\":\n   case \"boolean\":\n   case \"function\":\n   return true;\n   default:\n   return object instanceof Object;\n   }\n   }\n\n   if (object == null || klass == null || (typeof object !== 'object' && typeof object !== 'function')) {\n   return false;\n   }\n\n   if (typeof klass === \"function\" && object instanceof klass) {\n   return true;\n   }\n\n   var proto = Object.getPrototypeOf(klass);\n var constructor = proto != null ? proto.constructor : null;\n   if (constructor != null && \"$metadata$\" in constructor) {\n   var metadata = constructor.$metadata$;\n   if (metadata.kind === Kotlin.Kind.OBJECT) {\n   return object === klass;\n   }\n   }\n\n   var klassMetadata = klass.$metadata$;\n\n   // In WebKit (JavaScriptCore) for some interfaces from DOM typeof returns \"object\", nevertheless they can be used in RHS of instanceof\n   if (klassMetadata == null) {\n   return object instanceof klass;\n   }\n\n   if (klassMetadata.kind === Kotlin.Kind.INTERFACE && object.constructor != null) {\n   return isInheritanceFromInterface(object.constructor, klass);\n   }\n\n   return false;\n};\n\nKotlin.isNumber = function (a) {\n   return typeof a == \"number\" || a instanceof Kotlin.Long;\n};\n\nKotlin.isChar = function (value) {\n   return value instanceof Kotlin.BoxedChar\n};\n\nKotlin.isComparable = function (value) {\n   var type = typeof value;\n\n   return type === \"string\" ||\n   type === \"boolean\" ||\n   Kotlin.isNumber(value) ||\n   Kotlin.isType(value, Kotlin.kotlin.Comparable);\n};\n\nKotlin.isCharSequence = function (value) {\n   return typeof value === \"string\" || Kotlin.isType(value, Kotlin.kotlin.CharSequence);\n};","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n// a package is omitted to get declarations directly under the module\n\n@PublishedApi\nexternal internal fun <T> Array(size: Int): Array<T>\n\n@JsName(\"newArray\")\nfun <T> newArray(size: Int, initValue: T) = fillArrayVal(Array<T>(size), initValue)\n\n@JsName(\"newArrayF\")\ninline fun <T> arrayWithFun(size: Int, init: (Int) -> T) = fillArrayFun(Array<T>(size), init)\n\n@JsName(\"fillArray\")\ninline fun <T> fillArrayFun(array: Array<T>, init: (Int) -> T): Array<T> {\n   for (i in 0..array.size - 1) {\n   array[i] = init(i)\n   }\n   return array\n}\n\n@JsName(\"booleanArray\")\nfun booleanArray(size: Int, init: dynamic): Array<Boolean> {\n   val result: dynamic = Array<Boolean>(size)\n   result.`$type$` = \"BooleanArray\"\n   return when (init) {\n   null, true -> fillArrayVal(result, false)\n   false -> result\n   else -> fillArrayFun<Boolean>(result, init)\n   }\n}\n\n@JsName(\"booleanArrayF\")\ninline fun booleanArrayWithFun(size: Int, init: (Int) -> Boolean): Array<Boolean> = fillArrayFun(booleanArray(size, false), init)\n\n@JsName(\"charArray\")\n@Suppress(\"UNUSED_PARAMETER\")\nfun charArray(size: Int, init: dynamic): Array<Char> {\n   val result = js(\"new Uint16Array(size)\")\n   result.`$type$` = \"CharArray\"\n   return when (init) {\n   null, true, false -> result // For consistency\n   else -> fillArrayFun<Char>(result, init)\n   }\n}\n\n@JsName(\"charArrayF\")\ninline fun charArrayWithFun(size: Int, init: (Int) -> Char): Array<Char> {\n   val array = charArray(size, null)\n   for (i in 0..array.size - 1) {\n   @Suppress(\"UNUSED_VARIABLE\") // used in js block\n   val value = init(i)\n   js(\"array[i] = value;\")\n

}\n   return array\n}\n\n@JsName(\"untypedCharArrayF\")\ninline fun untypedCharArrayWithFun(size: Int, init: (Int) -> Char): Array<Char> {\n   val array = Array<Char>(size)\n   for (i in 0..array.size - 1) {\n @Suppress(\"UNUSED_VARIABLE\") // used in
 js block\n   val value = init(i)\n   js(\"array[i] = value;\")\n   }\n   return array\n}\n\n@JsName(\"longArray\")\nfun longArray(size: Int, init: dynamic): Array<Long> {\n   val result: dynamic = Array<Long>(size)\n   result.`$type$` = \"LongArray\"\n   return when (init) {\n   null, true -> fillArrayVal(result, 0L)\n   false -> result\n   else -> fillArrayFun<Long>(result, init)\n   }\n}\n\n@JsName(\"longArrayF\")\ninline fun longArrayWithFun(size: Int, init: (Int) -> Long): Array<Long> = fillArrayFun(longArray(size, false), init)\n\nprivate fun <T> fillArrayVal(array: Array<T>, initValue: T): Array<T> {\n   for (i in 0..array.size - 1) {\n   array[i] = initValue\n   }\n   return array\n}","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin\n\npublic class Enum<T : Enum<T>> : Comparable<Enum<T>> {\n   @JsName(\"name$\")
 private var _name: String = \"\"\n   @JsName(\"ordinal$\") private var _ordinal: Int = 0\n\n   val name: String\n get() = _name\n\n   val ordinal: Int\n   get() = _ordinal\n\n   override fun compareTo(other: Enum<T>) = ordinal.compareTo(other.ordinal)\n\n   override fun equals(other: Any?) = this === other\n\n   override fun hashCode(): Int = js(\"Kotlin.identityHashCode\")(this)\n\n   override fun toString() = name\n\n   companion object\n}","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.js.internal\n\n@JsName(\"DoubleCompanionObject\")\nprivate object DoubleCompanionObject {\n @JsName(\"MIN_VALUE\")\n   val MIN_VALUE: Double = js(\"Number.MIN_VALUE\")\n\n @JsName(\"MAX_VALUE\")\n   val MAX_VALUE: Double = js(\"Number.MAX_VALUE\")\n\n @JsName(\"POSITIVE_INFINITY\")\n   val POSITIVE_INFINITY: Double = js(\"Number.POSITIVE_INFINITY\")\n\n
    @JsName(\"NEGATIVE_INFINITY\")\n   val NEGATIVE_INFINITY: Double = js(\"Number.NEGATIVE_INFINITY\")\n\n   @JsName(\"NaN\")\n   val NaN: Double = js(\"Number.NaN\")\n}\n\n@JsName(\"FloatCompanionObject\")\nprivate object FloatCompanionObject {\n @JsName(\"MIN_VALUE\")\n   val MIN_VALUE: Float = js(\"Number.MIN_VALUE\")\n\n @JsName(\"MAX_VALUE\")\n   val MAX_VALUE: Float = js(\"Number.MAX_VALUE\")\n\n @JsName(\"POSITIVE_INFINITY\")\n   val POSITIVE_INFINITY: Float = js(\"Number.POSITIVE_INFINITY\")\n\n   @JsName(\"NEGATIVE_INFINITY\")\n   val NEGATIVE_INFINITY: Float = js(\"Number.NEGATIVE_INFINITY\")\n\n   @JsName(\"NaN\")\n   val NaN: Float = js(\"Number.NaN\")\n}\n\n@JsName(\"IntCompanionObject\")\nprivate object IntCompanionObject {\n @JsName(\"MIN_VALUE\")\n   val MIN_VALUE: Int = -2147483647 - 1\n\n   @JsName(\"MAX_VALUE\")\n val MAX_VALUE: Int = 2147483647\n\n   @JsName(\"SIZE_BYTES\")\n   const val SIZE_BYTES = 4\n\n @JsName(\"SIZE_BITS\")\n
    const val SIZE_BITS = 32\n}\n\n@JsName(\"LongCompanionObject\")\nprivate object LongCompanionObject {\n   @JsName(\"MIN_VALUE\")\n   val MIN_VALUE: Long = js(\"Kotlin.Long.MIN_VALUE\")\n\n @JsName(\"MAX_VALUE\")\n   val MAX_VALUE: Long = js(\"Kotlin.Long.MAX_VALUE\")\n\n @JsName(\"SIZE_BYTES\")\n   const val SIZE_BYTES = 8\n\n   @JsName(\"SIZE_BITS\")\n   const val SIZE_BITS = 64\n}\n\n@JsName(\"ShortCompanionObject\")\nprivate object ShortCompanionObject {\n @JsName(\"MIN_VALUE\")\n   val MIN_VALUE: Short = -32768\n\n   @JsName(\"MAX_VALUE\")\n   val MAX_VALUE: Short = 32767\n\n   @JsName(\"SIZE_BYTES\")\n   const val SIZE_BYTES = 2\n\n @JsName(\"SIZE_BITS\")\n   const val SIZE_BITS = 16\n}\n\n@JsName(\"ByteCompanionObject\")\nprivate object ByteCompanionObject {\n   @JsName(\"MIN_VALUE\")\n   val MIN_VALUE: Byte = -128\n\n @JsName(\"MAX_VALUE\")\n   val MAX_VALUE: Byte = 127\n\n   @JsName(\"SIZE_BYTES\")\n   const val SIZE_BYTES

= 1\n\n   @JsName(\"SIZE_BITS\")\n   const val SIZE_BITS =
8\n}\n\n@JsName(\"CharCompanionObject\")\nprivate object CharCompanionObject {\n
@JsName(\"MIN_VALUE\")\n   public const val MIN_VALUE: Char = '\\u0000'\n\n
@JsName(\"MAX_VALUE\")\n   public const val MAX_VALUE: Char = '\\uFFFF'\n\n
@JsName(\"MIN_HIGH_SURROGATE\")\n   public const val MIN_HIGH_SURROGATE: Char = '\\uD800'\n\n
@JsName(\"MAX_HIGH_SURROGATE\")\n   public const val MAX_HIGH_SURROGATE: Char =
'\\uDBFF'\n\n   @JsName(\"MIN_LOW_SURROGATE\")\n   public const val MIN_LOW_SURROGATE: Char =
'\\uDC00'\n\n   @JsName(\"MAX_LOW_SURROGATE\")\n   public const val MAX_LOW_SURROGATE: Char
= '\\uDFFF'\n\n   @JsName(\"MIN_SURROGATE\")\n   public const val MIN_SURROGATE: Char =
MIN_HIGH_SURROGATE\n\n   @JsName(\"MAX_SURROGATE\")\n   public const val MAX_SURROGATE:
Char = MAX_LOW_SURROGATE\n\n   @JsName(\"SIZE_BYTES\")\n   const val SIZE_BYTES = 2\n\n
@JsName(\"SIZE_BITS\")\n   const val SIZE_BITS =
16\n}\n\nprivate object StringCcompanionObject {}\n\nprivate object BooleanCompanionObject {}\n\n","/*\n *
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found in the license/LICENSE.txt file.\n
*/\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"ArraysKt\")\n\npackage
kotlin.collections\n\n//\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See:
https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n//\n\nimport kotlin.random.*\n\n/**\n * Returns 1st
element from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> Array<out
T>.component1(): T {\n   return get(0)\n}\n\n/**\n * Returns 1st *element* from the collection.\n
*/\n@kotlin.internal.InlineOnly\npublic inline operator fun ByteArray.component1(): Byte {\n   return
get(0)\n}\n\n/**\n * Returns 1st *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline
operator
fun ShortArray.component1(): Short {\n   return get(0)\n}\n\n/**\n * Returns 1st *element* from the collection.\n
*/\n@kotlin.internal.InlineOnly\npublic inline operator fun IntArray.component1(): Int {\n   return
get(0)\n}\n\n/**\n * Returns 1st *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline
operator fun LongArray.component1(): Long {\n   return get(0)\n}\n\n/**\n * Returns 1st *element* from the
collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun FloatArray.component1(): Float {\n
return get(0)\n}\n\n/**\n * Returns 1st *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic
inline operator fun DoubleArray.component1(): Double {\n   return get(0)\n}\n\n/**\n * Returns 1st *element*
from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun BooleanArray.component1():
Boolean {\n   return get(0)\n}\n\n/**\n * Returns 1st *element* from the collection.\n
*/\n@kotlin.internal.InlineOnly\npublic
inline operator fun CharArray.component1(): Char {\n   return get(0)\n}\n\n/**\n * Returns 2nd *element* from
the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> Array<out T>.component2(): T {\n
return get(1)\n}\n\n/**\n * Returns 2nd *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic
inline operator fun ByteArray.component2(): Byte {\n   return get(1)\n}\n\n/**\n * Returns 2nd *element* from the
collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun ShortArray.component2(): Short {\n
return get(1)\n}\n\n/**\n * Returns 2nd *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic
inline operator fun IntArray.component2(): Int {\n   return get(1)\n}\n\n/**\n * Returns 2nd *element* from the
collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun LongArray.component2(): Long {\n
return get(1)\n}\n\n/**\n * Returns 2nd *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic
inline operator fun FloatArray.component2(): Float {\n   return get(1)\n}\n\n/**\n * Returns 2nd *element* from
the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun DoubleArray.component2(): Double {\n
return get(1)\n}\n\n/**\n * Returns 2nd *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic
inline operator fun BooleanArray.component2(): Boolean {\n   return get(1)\n}\n\n/**\n * Returns 2nd *element*
from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun CharArray.component2(): Char
{\n   return get(1)\n}\n\n/**\n * Returns 3rd *element* from the collection.\n

*/\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> Array<out T>.component3(): T {\n   return get(2)\n}\n\n/**\n * Returns 3rd *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun ByteArray.component3(): Byte {\n   return get(2)\n}\n\n/**\n * Returns 3rd *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun ShortArray.component3(): Short {\n   return get(2)\n}\n\n/**\n * Returns 3rd *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun IntArray.component3(): Int {\n   return get(2)\n}\n\n/**\n * Returns 3rd *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun LongArray.component3(): Long {\n   return get(2)\n}\n\n/**\n * Returns 3rd *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun FloatArray.component3(): Float {\n   return get(2)\n}\n\n/**\n * Returns 3rd *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun DoubleArray.component3(): Double {\n   return get(2)\n}\n\n/**\n * Returns 3rd *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun BooleanArray.component3(): Boolean {\n   return get(2)\n}\n\n/**\n * Returns 3rd *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun CharArray.component3(): Char {\n   return get(2)\n}\n\n/**\n * Returns 4th *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> Array<out T>.component4(): T {\n   return get(3)\n}\n\n/**\n * Returns 4th *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun ByteArray.component4(): Byte {\n   return get(3)\n}\n\n/**\n * Returns 4th *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun ShortArray.component4(): Short {\n   return get(3)\n}\n\n/**\n * Returns 4th *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun IntArray.component4(): Int {\n   return get(3)\n}\n\n/**\n * Returns 4th *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun LongArray.component4(): Long {\n   return get(3)\n}\n\n/**\n * Returns 4th *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun FloatArray.component4(): Float {\n   return get(3)\n}\n\n/**\n * Returns 4th *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun DoubleArray.component4(): Double {\n   return get(3)\n}\n\n/**\n * Returns 4th *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun BooleanArray.component4(): Boolean {\n   return get(3)\n}\n\n/**\n * Returns 4th *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun CharArray.component4(): Char {\n   return get(3)\n}\n\n/**\n * Returns 5th *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> Array<out T>.component5(): T {\n   return get(4)\n}\n\n/**\n * Returns 5th *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun ByteArray.component5(): Byte {\n   return get(4)\n}\n\n/**\n * Returns 5th *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun ShortArray.component5(): Short {\n   return get(4)\n}\n\n/**\n * Returns 5th *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun IntArray.component5(): Int {\n   return get(4)\n}\n\n/**\n * Returns 5th *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun LongArray.component5(): Long {\n   return get(4)\n}\n\n/**\n * Returns 5th *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun FloatArray.component5(): Float {\n   return get(4)\n}\n\n/**\n * Returns 5th *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun DoubleArray.component5(): Double {\n   return get(4)\n}\n\n/**\n * Returns 5th *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun BooleanArray.component5(): Boolean {\n   return get(4)\n}\n\n/**\n * Returns 5th *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun CharArray.component5(): Char {\n   return get(4)\n}\n\n/**\n * Returns `true` if [element] is found in the array.\n */\npublic operator fun <@kotlin.internal.OnlyInputTypes T> Array<out T>.contains(element: T): Boolean {\n   return indexOf(element) >= 0\n}\n\n/**\n * Returns `true` if [element] is found in the array.\n */\npublic operator fun

ByteArray.contains(element: Byte): Boolean {\n   return indexOf(element) >= 0\n}\n\n/**\n * Returns `true` if [element] is found in the array.\n */\npublic operator fun ShortArray.contains(element: Short): Boolean {\n   return indexOf(element) >= 0\n}\n\n/**\n * Returns `true` if [element] is found in the array.\n */\npublic operator fun IntArray.contains(element: Int): Boolean {\n   return indexOf(element) >= 0\n}\n\n/**\n * Returns `true` if [element] is found
in the array.\n */\npublic operator fun LongArray.contains(element: Long): Boolean {\n   return indexOf(element) >= 0\n}\n\n/**\n * Returns `true` if [element] is found in the array.\n */\npublic operator fun FloatArray.contains(element: Float): Boolean {\n   return indexOf(element) >= 0\n}\n\n/**\n * Returns `true` if [element] is found in the array.\n */\npublic operator fun DoubleArray.contains(element: Double): Boolean {\n return indexOf(element) >= 0\n}\n\n/**\n * Returns `true` if [element] is found in the array.\n */\npublic operator fun BooleanArray.contains(element: Boolean): Boolean {\n   return indexOf(element) >= 0\n}\n\n/**\n * Returns `true` if [element] is found in the array.\n */\npublic operator fun CharArray.contains(element: Char): Boolean {\n return indexOf(element) >= 0\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n
*/\npublic expect fun <T> Array<out T>.elementAt(index: Int): T\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic expect fun ByteArray.elementAt(index: Int): Byte\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic expect fun ShortArray.elementAt(index: Int): Short\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic expect fun IntArray.elementAt(index: Int): Int\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index]
is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic expect fun LongArray.elementAt(index: Int): Long\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic expect fun FloatArray.elementAt(index: Int): Float\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic expect fun DoubleArray.elementAt(index: Int): Double\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic expect fun BooleanArray.elementAt(index: Int): Boolean\n\n/**\n * Returns
an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic expect fun CharArray.elementAt(index: Int): Char\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrElse\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.elementAtOrElse(index: Int, defaultValue: (Int) -> T): T {\n   return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrElse\n */\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.elementAtOrElse(index:
Int, defaultValue: (Int) -> Byte): Byte {\n   return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrElse\n */\n@kotlin.internal.InlineOnly\npublic inline fun

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ShortArray.elementAtOrElse(index: Int, defaultValue: (Int) -> Short): Short {\n    return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrElse\n */\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.elementAtOrElse(index: Int, defaultValue: (Int) -> Int): Int {\n    return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrElse\n */\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.elementAtOrElse(index: Int, defaultValue: (Int) -> Long): Long {\n    return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrElse\n */\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.elementAtOrElse(index: Int, defaultValue: (Int) -> Float): Float {\n    return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue]
 function if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrElse\n */\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.elementAtOrElse(index: Int, defaultValue: (Int) -> Double): Double {\n    return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrElse\n */\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.elementAtOrElse(index: Int, defaultValue: (Int) -> Boolean): Boolean {\n    return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrElse\n
 */\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.elementAtOrElse(index: Int, defaultValue: (Int) -> Char): Char {\n    return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.elementAtOrNull(index: Int): T? {\n    return this.getOrNull(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n */\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.elementAtOrNull(index: Int): Byte? {\n    return this.getOrNull(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n
 * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n
*/\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.elementAtOrNull(index: Int): Short? {\n    return this.getOrNull(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n */\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.elementAtOrNull(index: Int): Int? {\n    return this.getOrNull(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n */\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.elementAtOrNull(index: Int): Long? {\n    return this.getOrNull(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n
 */\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.elementAtOrNull(index: Int): Float? {\n    return this.getOrNull(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n */\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.elementAtOrNull(index: Int): Double? {\n    return
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this.getOrNull(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n */\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.elementAtOrNull(index: Int): Boolean? {\n return this.getOrNull(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.elementAtOrNull(index: Int): Char? {\n return this.getOrNull(index)\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such element was found.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.find(predicate: (T) -> Boolean): T? {\n return firstOrNull(predicate)\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such element was found.\n */\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.find(predicate: (Byte) -> Boolean): Byte? {\n return firstOrNull(predicate)\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such element was found.\n */\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.find(predicate: (Short) -> Boolean): Short? {\n return firstOrNull(predicate)\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such element
was found.\n */\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.find(predicate: (Int) -> Boolean): Int? {\n return firstOrNull(predicate)\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such element was found.\n */\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.find(predicate: (Long) -> Boolean): Long? {\n return firstOrNull(predicate)\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such element was found.\n */\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.find(predicate: (Float) -> Boolean): Float? {\n return firstOrNull(predicate)\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such element was found.\n */\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.find(predicate: (Double) -> Boolean): Double? {\n return firstOrNull(predicate)\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null`
if no such element was found.\n */\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.find(predicate: (Boolean) -> Boolean): Boolean? {\n return firstOrNull(predicate)\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such element was found.\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.find(predicate: (Char) -> Boolean): Char? {\n return firstOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.findLast(predicate: (T) -> Boolean): T? {\n return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n */\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.findLast(predicate: (Byte) -> Boolean): Byte? {\n return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching
the given [predicate], or `null` if no such element was found.\n */\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.findLast(predicate: (Short) -> Boolean): Short? {\n return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n */\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.findLast(predicate: (Int) -> Boolean): Int? {\n return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n */\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.findLast(predicate: (Long) -> Boolean): Long? {\n return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n */\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.findLast(predicate: (Float) -> Boolean): Float? {\n return lastOrNull(predicate)\n}\n\n/**\n * Returns
the last element matching the given [predicate], or `null` if no such element was found.\n */\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.findLast(predicate: (Double) -> Boolean): Double? {\n return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n */\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.findLast(predicate: (Boolean) -> Boolean): Boolean? {\n return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n */\n@kotlin.internal.InlineOnly\npublic inline fun

CharArray.findLast(predicate: (Char) -> Boolean): Char? {\n return lastOrNull(predicate)\n}\n\n/**\n * Returns first element.\n * @throws [NoSuchElementException] if the array is empty.\n */\npublic fun <T> Array<out T>.first(): T {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return this[0]\n}\n\n/**\n
 * Returns first element.\n * @throws [NoSuchElementException] if the array is empty.\n */\npublic fun ByteArray.first(): Byte {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return this[0]\n}\n\n/**\n * Returns first element.\n * @throws [NoSuchElementException] if the array is empty.\n */\npublic fun ShortArray.first(): Short {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return this[0]\n}\n\n/**\n * Returns first element.\n * @throws [NoSuchElementException] if the array is empty.\n */\npublic fun IntArray.first(): Int {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return this[0]\n}\n\n/**\n * Returns first element.\n * @throws [NoSuchElementException] if the array is empty.\n */\npublic fun LongArray.first(): Long {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return this[0]\n}\n\n/**\n * Returns first element.\n
 * @throws [NoSuchElementException] if the array is empty.\n */\npublic fun FloatArray.first(): Float {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return this[0]\n}\n\n/**\n * Returns first element.\n * @throws [NoSuchElementException] if the array is empty.\n */\npublic fun DoubleArray.first(): Double {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return this[0]\n}\n\n/**\n * Returns first element.\n * @throws [NoSuchElementException] if the array is empty.\n */\npublic fun BooleanArray.first(): Boolean {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return this[0]\n}\n\n/**\n * Returns first element.\n * @throws [NoSuchElementException] if the array is empty.\n */\npublic fun CharArray.first(): Char {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return this[0]\n}\n\n/**\n * Returns the first element matching the given [predicate].\n
 * @throws [NoSuchElementException] if no such element is found.\n */\npublic inline fun <T> Array<out T>.first(predicate: (T) -> Boolean): T {\n for (element in this) if (predicate(element)) return element\n throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n}\n\n/**\n * Returns the first element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\npublic inline fun ByteArray.first(predicate: (Byte) -> Boolean): Byte {\n for (element in this) if (predicate(element)) return element\n throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n}\n\n/**\n * Returns the first element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\npublic inline fun ShortArray.first(predicate: (Short) -> Boolean): Short {\n for (element in this) if (predicate(element)) return element\n throw NoSuchElementException(\"Array contains
 no element matching the predicate.\")\n}\n\n/**\n * Returns the first element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\npublic inline fun IntArray.first(predicate: (Int) -> Boolean): Int {\n for (element in this) if (predicate(element)) return element\n throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n}\n\n/**\n * Returns the first element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\npublic inline fun LongArray.first(predicate: (Long) -> Boolean): Long {\n for (element in this) if (predicate(element)) return element\n throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n}\n\n/**\n * Returns the first element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\npublic inline fun FloatArray.first(predicate: (Float) -> Boolean): Float
 {\n for (element in this) if (predicate(element)) return element\n throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n}\n\n/**\n * Returns the first element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\npublic inline fun DoubleArray.first(predicate: (Double) -> Boolean): Double {\n for (element in this) if (predicate(element)) return element\n throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n}\n\n/**\n *

Returns the first element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\npublic inline fun BooleanArray.first(predicate: (Boolean) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return element\n throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n}\n\n/**\n * Returns the first element matching the given [predicate].\n * @throws
[NoSuchElementException] if no such element is found.\n */\npublic inline fun CharArray.first(predicate: (Char) -> Boolean): Char {\n for (element in this) if (predicate(element)) return element\n throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n}\n\n/**\n * Returns the first element, or `null` if the array is empty.\n */\npublic fun <T> Array<out T>.firstOrNull(): T? {\n return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element, or `null` if the array is empty.\n */\npublic fun ByteArray.firstOrNull(): Byte? {\n return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element, or `null` if the array is empty.\n */\npublic fun ShortArray.firstOrNull(): Short? {\n return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element, or `null` if the array is empty.\n */\npublic fun IntArray.firstOrNull(): Int? {\n return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element,
or `null` if the array is empty.\n */\npublic fun LongArray.firstOrNull(): Long? {\n return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element, or `null` if the array is empty.\n */\npublic fun FloatArray.firstOrNull(): Float? {\n return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element, or `null` if the array is empty.\n */\npublic fun DoubleArray.firstOrNull(): Double? {\n return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element, or `null` if the array is empty.\n */\npublic fun BooleanArray.firstOrNull(): Boolean? {\n return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element, or `null` if the array is empty.\n */\npublic fun CharArray.firstOrNull(): Char? {\n return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if element was not found.\n */\npublic inline fun <T> Array<out T>.firstOrNull(predicate: (T)
-> Boolean): T? {\n for (element in this) if (predicate(element)) return element\n return null\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if element was not found.\n */\npublic inline fun ByteArray.firstOrNull(predicate: (Byte) -> Boolean): Byte? {\n for (element in this) if (predicate(element)) return element\n return null\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if element was not found.\n */\npublic inline fun ShortArray.firstOrNull(predicate: (Short) -> Boolean): Short? {\n for (element in this) if (predicate(element)) return element\n return null\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if element was not found.\n */\npublic inline fun IntArray.firstOrNull(predicate: (Int) -> Boolean): Int? {\n for (element in this) if (predicate(element)) return element\n return null\n}\n\n/**\n * Returns the first element matching the given [predicate],
or `null` if element was not found.\n */\npublic inline fun LongArray.firstOrNull(predicate: (Long) -> Boolean): Long? {\n for (element in this) if (predicate(element)) return element\n return null\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if element was not found.\n */\npublic inline fun FloatArray.firstOrNull(predicate: (Float) -> Boolean): Float? {\n for (element in this) if (predicate(element)) return element\n return null\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if element was not found.\n */\npublic inline fun DoubleArray.firstOrNull(predicate: (Double) -> Boolean): Double? {\n for (element in this) if (predicate(element)) return element\n return null\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if element was not found.\n */\npublic inline fun BooleanArray.firstOrNull(predicate: (Boolean) -> Boolean): Boolean? {\n for (element in this) if (predicate(element))
return element\n return null\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if element was not found.\n */\npublic inline fun CharArray.firstOrNull(predicate: (Char) -> Boolean): Char? {\n for (element in this) if (predicate(element)) return element\n return null\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.getOrElse(index: Int, defaultValue: (Int) -> T): T {\n return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns

an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n */\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.getOrElse(index: Int, defaultValue: (Int) -> Byte): Byte {\n   return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n */\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.getOrElse(index: Int, defaultValue: (Int) -> Short): Short {\n   return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n */\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.getOrElse(index: Int, defaultValue: (Int) -> Int): Int {\n   return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n */\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.getOrElse(index: Int, defaultValue: (Int) -> Long): Long {\n   return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n */\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.getOrElse(index: Int, defaultValue: (Int) -> Float): Float {\n   return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n */\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.getOrElse(index: Int, defaultValue: (Int) -> Double): Double {\n   return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n */\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.getOrElse(index: Int, defaultValue: (Int) -> Boolean): Boolean {\n   return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.getOrElse(index: Int, defaultValue: (Int) -> Char): Char {\n   return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n */\npublic fun <T> Array<out T>.getOrNull(index: Int): T? {\n   return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n */\npublic fun ByteArray.getOrNull(index: Int): Byte? {\n   return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n */\npublic fun ShortArray.getOrNull(index: Int): Short? {\n   return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n */\npublic fun IntArray.getOrNull(index: Int): Int? {\n   return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n */\npublic fun LongArray.getOrNull(index: Int): Long? {\n   return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n */\npublic fun FloatArray.getOrNull(index: Int): Float? {\n   return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n */\npublic fun DoubleArray.getOrNull(index: Int): Double? {\n   return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n */\npublic fun BooleanArray.getOrNull(index: Int): Boolean? {\n   return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n */\npublic fun CharArray.getOrNull(index: Int): Char? {\n   return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns first index of [element], or -1 if the array does not contain element.\n */\npublic fun <@kotlin.internal.OnlyInputTypes T> Array<out T>.indexOf(element: T): Int {\n   if (element == null) {\n

for (index in indices) {\n if (this[index] == null) {\n return index\n }\n }\n } else {\n for (index in indices) {\n if (element == this[index]) {\n return index\n }\n }\n }\n return -1\n}\n\n/**\n * Returns first index of [element], or -1 if the array does not contain element.\n */\npublic fun ByteArray.indexOf(element: Byte): Int {\n for (index in indices) {\n if (element == this[index]) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns first index of [element], or -1 if the array does not contain element.\n */\npublic fun ShortArray.indexOf(element: Short): Int {\n for (index in indices) {\n if (element == this[index]) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns first index of [element], or -1 if the array does not contain element.\n */\npublic fun IntArray.indexOf(element: Int): Int {\n for (index in indices) {\n if (element == this[index]) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns first index of [element], or -1 if the array does not contain element.\n */\npublic fun LongArray.indexOf(element: Long): Int {\n for (index in indices) {\n if (element == this[index]) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns first index of [element], or -1 if the array does not contain element.\n */\npublic fun FloatArray.indexOf(element: Float): Int {\n for (index in indices) {\n if (element == this[index]) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns first index of [element], or -1 if the array does not contain element.\n */\npublic fun DoubleArray.indexOf(element: Double): Int {\n for (index in indices) {\n if (element == this[index]) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns first index
of [element], or -1 if the array does not contain element.\n */\npublic fun BooleanArray.indexOf(element: Boolean): Int {\n for (index in indices) {\n if (element == this[index]) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns first index of [element], or -1 if the array does not contain element.\n */\npublic fun CharArray.indexOf(element: Char): Int {\n for (index in indices) {\n if (element == this[index]) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun <T> Array<out T>.indexOfFirst(predicate: (T) -> Boolean): Int {\n for (index in indices) {\n if (predicate(this[index])) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the array does not contain such element.\n
*/\npublic inline fun ByteArray.indexOfFirst(predicate: (Byte) -> Boolean): Int {\n for (index in indices) {\n if (predicate(this[index])) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun ShortArray.indexOfFirst(predicate: (Short) -> Boolean): Int {\n for (index in indices) {\n if (predicate(this[index])) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun IntArray.indexOfFirst(predicate: (Int) -> Boolean): Int {\n for (index in indices) {\n if (predicate(this[index])) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the array
does not contain such element.\n */\npublic inline fun LongArray.indexOfFirst(predicate: (Long) -> Boolean): Int {\n for (index in indices) {\n if (predicate(this[index])) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun FloatArray.indexOfFirst(predicate: (Float) -> Boolean): Int {\n for (index in indices) {\n if (predicate(this[index])) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun DoubleArray.indexOfFirst(predicate: (Double) -> Boolean): Int {\n for (index in indices) {\n if (predicate(this[index])) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns index of the first element matching the
given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun BooleanArray.indexOfFirst(predicate: (Boolean) -> Boolean): Int {\n for (index in indices) {\n if (predicate(this[index])) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun

CharArray.indexOfFirst(predicate: (Char) -> Boolean): Int {\n for (index in indices) {\n if (predicate(this[index])) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun <T> Array<out T>.indexOfLast(predicate: (T) -> Boolean): Int {\n for (index in indices.reversed()) {\n if (predicate(this[index])) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun ByteArray.indexOfLast(predicate: (Byte) -> Boolean): Int {\n for (index in indices.reversed()) {\n if (predicate(this[index])) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun ShortArray.indexOfLast(predicate: (Short) -> Boolean): Int {\n for (index in indices.reversed()) {\n if (predicate(this[index])) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun IntArray.indexOfLast(predicate: (Int) -> Boolean): Int {\n for (index in indices.reversed()) {\n if (predicate(this[index])) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun LongArray.indexOfLast(predicate: (Long) -> Boolean): Int {\n for (index in indices.reversed()) {\n if (predicate(this[index])) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun FloatArray.indexOfLast(predicate: (Float) -> Boolean): Int {\n for (index in indices.reversed()) {\n if (predicate(this[index])) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun DoubleArray.indexOfLast(predicate: (Double) -> Boolean): Int {\n for (index in indices.reversed())
{\n if (predicate(this[index])) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun BooleanArray.indexOfLast(predicate: (Boolean) -> Boolean): Int {\n for (index in indices.reversed()) {\n if (predicate(this[index])) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun CharArray.indexOfLast(predicate: (Char) -> Boolean): Int {\n for (index in indices.reversed()) {\n if (predicate(this[index])) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns the last element.\n * @throws [NoSuchElementException] if the array is empty.\n */\npublic fun <T> Array<out T>.last(): T {\n if (isEmpty())\n throw NoSuchElementException(\"Array
is empty.\")\n return this[lastIndex]\n}\n\n/**\n * Returns the last element.\n * @throws [NoSuchElementException] if the array is empty.\n */\npublic fun ByteArray.last(): Byte {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return this[lastIndex]\n}\n\n/**\n * Returns the last element.\n * @throws [NoSuchElementException] if the array is empty.\n */\npublic fun ShortArray.last(): Short {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return this[lastIndex]\n}\n\n/**\n * Returns the last element.\n * @throws [NoSuchElementException] if the array is empty.\n */\npublic fun IntArray.last(): Int {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return this[lastIndex]\n}\n\n/**\n * Returns the last element.\n * @throws [NoSuchElementException] if the array is empty.\n */\npublic fun LongArray.last(): Long {\n if (isEmpty())\n throw NoSuchElementException(\"Array
is empty.\")\n return this[lastIndex]\n}\n\n/**\n * Returns the last element.\n * @throws [NoSuchElementException] if the array is empty.\n */\npublic fun FloatArray.last(): Float {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return this[lastIndex]\n}\n\n/**\n * Returns the last element.\n * @throws [NoSuchElementException] if the array is empty.\n */\npublic fun DoubleArray.last(): Double {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return this[lastIndex]\n}\n\n/**\n * Returns the last element.\n * @throws [NoSuchElementException] if the array is

empty.\n */\npublic fun BooleanArray.last(): Boolean {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return this[lastIndex]\n}\n\n/**\n * Returns the last element.\n * @throws [NoSuchElementException] if the array is empty.\n */\npublic fun CharArray.last(): Char {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return this[lastIndex]\n}\n\n/**\n * Returns the last element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\npublic inline fun <T> Array<out T>.last(predicate: (T) -> Boolean): T {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n}\n\n/**\n * Returns the last element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\npublic inline fun ByteArray.last(predicate: (Byte) -> Boolean): Byte {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n}\n\n/**\n * Returns the last element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\npublic inline fun ShortArray.last(predicate: (Short) -> Boolean): Short {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n}\n\n/**\n * Returns the last element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\npublic inline fun IntArray.last(predicate: (Int) -> Boolean): Int {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n}\n\n/**\n * Returns the last element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\npublic inline fun LongArray.last(predicate: (Long) -> Boolean): Long {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n}\n\n/**\n * Returns the last element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\npublic inline fun FloatArray.last(predicate: (Float) -> Boolean): Float {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n}\n\n/**\n * Returns the last element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\npublic inline fun DoubleArray.last(predicate: (Double) -> Boolean): Double {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n}\n\n/**\n * Returns the last element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\npublic inline fun BooleanArray.last(predicate: (Boolean) -> Boolean): Boolean {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n}\n\n/**\n * Returns the last element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\npublic inline fun CharArray.last(predicate: (Char) -> Boolean): Char {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n}\n\n/**\n * Returns last index of [element], or -1 if the array does not contain element.\n */\npublic fun <@kotlin.internal.OnlyInputTypes T> Array<out T>.lastIndexOf(element: T): Int {\n if (element == null) {\n for (index in indices.reversed()) {\n if (this[index] == null) {\n return index\n }\n }\n } else {\n for (index in indices.reversed()) {\n if (element == this[index]) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns last index of [element], or -1 if the array does not contain element.\n */\npublic fun ByteArray.lastIndexOf(element: Byte): Int

{\n for (index in indices.reversed()) {\n if (element == this[index]) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns last index of [element], or -1 if the array does not contain element.\n */\npublic fun ShortArray.lastIndexOf(element:
Short): Int {\n for (index in indices.reversed()) {\n if (element == this[index]) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns last index of [element], or -1 if the array does not contain element.\n */\npublic fun IntArray.lastIndexOf(element: Int): Int {\n for (index in indices.reversed()) {\n if (element == this[index]) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns last index of [element], or -1 if the array does not contain element.\n */\npublic fun LongArray.lastIndexOf(element: Long): Int {\n for (index in indices.reversed()) {\n if (element == this[index]) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns last index of [element], or -1 if the array does not contain element.\n */\npublic fun FloatArray.lastIndexOf(element: Float): Int {\n for (index in indices.reversed()) {\n if (element == this[index]) {\n return
index\n }\n }\n return -1\n}\n\n/**\n * Returns last index of [element], or -1 if the array does not contain element.\n */\npublic fun DoubleArray.lastIndexOf(element: Double): Int {\n for (index in indices.reversed()) {\n if (element == this[index]) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns last index of [element], or -1 if the array does not contain element.\n */\npublic fun BooleanArray.lastIndexOf(element:
Boolean): Int {\n for (index in indices.reversed()) {\n if (element == this[index]) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns last index of [element], or -1 if the array does not contain element.\n */\npublic fun CharArray.lastIndexOf(element: Char): Int {\n for (index in indices.reversed()) {\n if (element == this[index]) {\n return index\n }\n }\n return -1\n}\n\n/**\n * Returns the last element, or `null` if the array is empty.\n
*/\npublic fun <T> Array<out T>.lastOrNull(): T? {\n return if (isEmpty()) null else this[size - 1]\n}\n\n/**\n * Returns the last element, or `null` if the array is empty.\n */\npublic fun ByteArray.lastOrNull(): Byte? {\n return if (isEmpty()) null else this[size - 1]\n}\n\n/**\n * Returns the last element, or `null` if the array is empty.\n */\npublic fun ShortArray.lastOrNull(): Short? {\n return if (isEmpty()) null else this[size - 1]\n}\n\n/**\n * Returns the last element, or `null` if the array is empty.\n */\npublic fun IntArray.lastOrNull(): Int? {\n return if (isEmpty()) null else this[size - 1]\n}\n\n/**\n * Returns the last element, or `null` if the array is empty.\n */\npublic fun LongArray.lastOrNull(): Long? {\n return if (isEmpty()) null else this[size - 1]\n}\n\n/**\n * Returns the last element, or `null` if the array is empty.\n */\npublic fun FloatArray.lastOrNull(): Float? {\n return if (isEmpty()) null else this[size - 1]\n}\n\n/**\n * Returns
the last element, or `null` if the array is empty.\n */\npublic fun DoubleArray.lastOrNull(): Double? {\n return if (isEmpty()) null else this[size - 1]\n}\n\n/**\n * Returns the last element, or `null` if the array is empty.\n */\npublic fun BooleanArray.lastOrNull(): Boolean? {\n return if (isEmpty()) null else this[size - 1]\n}\n\n/**\n * Returns the last element, or `null` if the array is empty.\n */\npublic fun CharArray.lastOrNull(): Char? {\n return if (isEmpty()) null else this[size - 1]\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n */\npublic inline fun <T> Array<out T>.lastOrNull(predicate: (T) -> Boolean): T? {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n return null\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n */\npublic inline fun ByteArray.lastOrNull(predicate:
(Byte) -> Boolean): Byte? {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n return null\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n */\npublic inline fun ShortArray.lastOrNull(predicate: (Short) -> Boolean): Short? {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n return null\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n */\npublic inline fun IntArray.lastOrNull(predicate: (Int) -> Boolean): Int? {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n return null\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element

was found.\n */\npublic inline fun LongArray.lastOrNull(predicate: (Long) -> Boolean): Long? {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n return null\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n */\npublic inline fun FloatArray.lastOrNull(predicate: (Float) -> Boolean): Float? {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n return null\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n */\npublic inline fun DoubleArray.lastOrNull(predicate: (Double) -> Boolean): Double? {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n return null\n}\n\n/**\n * Returns the last element matching
the given [predicate], or `null` if no such element was found.\n */\npublic inline fun BooleanArray.lastOrNull(predicate: (Boolean) -> Boolean): Boolean? {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n return null\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n */\npublic inline fun CharArray.lastOrNull(predicate: (Char) -> Boolean): Char? {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n return null\n}\n\n/**\n * Returns a random element from this array.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.random(): T {\n return random(Random)\n}\n\n/**\n * Returns a random element from this array.\n * \n * @throws NoSuchElementException
if this array is empty.\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.random(): Byte {\n return random(Random)\n}\n\n/**\n * Returns a random element from this array.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.random(): Short {\n return random(Random)\n}\n\n/**\n * Returns a random element from this array.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.random(): Int {\n return random(Random)\n}\n\n/**\n * Returns a random element from this array.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.random(): Long {\n return random(Random)\n}\n\n/**\n * Returns a random element from this array.\n * \n * @throws NoSuchElementException
if this array is empty.\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.random(): Float {\n return random(Random)\n}\n\n/**\n * Returns a random element from this array.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.random(): Double {\n return random(Random)\n}\n\n/**\n * Returns a random element from this array.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.random(): Boolean {\n return random(Random)\n}\n\n/**\n * Returns a random element from this array.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.random(): Char {\n return random(Random)\n}\n\n/**\n * Returns a random element from this array using the specified
source of randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n@SinceKotlin(\"1.3\")\npublic fun <T> Array<out T>.random(random: Random): T {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n@SinceKotlin(\"1.3\")\npublic fun ByteArray.random(random: Random): Byte {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n

*/\n@SinceKotlin(\"1.3\")\npublic fun ShortArray.random(random: Random): Short {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n@SinceKotlin(\"1.3\")\npublic fun IntArray.random(random: Random): Int {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n@SinceKotlin(\"1.3\")\npublic fun LongArray.random(random: Random): Long {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n@SinceKotlin(\"1.3\")\npublic fun FloatArray.random(random: Random): Float {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n@SinceKotlin(\"1.3\")\npublic fun DoubleArray.random(random: Random): Double {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n@SinceKotlin(\"1.3\")\npublic fun BooleanArray.random(random: Random): Boolean {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n@SinceKotlin(\"1.3\")\npublic fun CharArray.random(random: Random): Char {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return get(random.nextInt(size))\n}\n\n/**\n * Returns the single element, or throws an exception if the array is empty or has more than one element.\n */\npublic fun <T> Array<out T>.single(): T {\n return when (size) {\n 0 -> throw NoSuchElementException(\"Array is empty.\")\n 1 -> this[0]\n else -> throw IllegalArgumentException(\"Array has more than one element.\")\n }\n}\n\n/**\n * Returns the single element, or throws an exception if the array is empty or has more than one element.\n */\npublic fun ByteArray.single(): Byte {\n return when (size) {\n 0 -> throw NoSuchElementException(\"Array is empty.\")\n 1 -> this[0]\n else -> throw IllegalArgumentException(\"Array has more than one element.\")\n }\n}\n\n/**\n * Returns the single element, or throws an exception if the array is empty or has more than one element.\n */\npublic fun ShortArray.single(): Short {\n return when (size) {\n 0 -> throw NoSuchElementException(\"Array is empty.\")\n 1 -> this[0]\n else -> throw IllegalArgumentException(\"Array has more than one element.\")\n }\n}\n\n/**\n * Returns the single element, or throws an exception if the array is empty or has more than one element.\n */\npublic fun IntArray.single(): Int {\n return when (size) {\n 0 -> throw NoSuchElementException(\"Array is empty.\")\n 1 -> this[0]\n else -> throw IllegalArgumentException(\"Array has more than one element.\")\n }\n}\n\n/**\n * Returns the single element, or throws an exception if the array is empty or has more than one element.\n */\npublic fun LongArray.single(): Long {\n return when (size) {\n 0 -> throw NoSuchElementException(\"Array is empty.\")\n 1 -> this[0]\n else -> throw IllegalArgumentException(\"Array has more than one element.\")\n }\n}\n\n/**\n * Returns the single element, or throws an exception if the array is empty or has more than one element.\n */\npublic fun FloatArray.single(): Float {\n return when (size) {\n 0 -> throw NoSuchElementException(\"Array is empty.\")\n 1 -> this[0]\n else -> throw IllegalArgumentException(\"Array has more than one element.\")\n }\n}\n\n/**\n * Returns the single element, or throws an exception if the array is empty or has more than one element.\n */\npublic fun DoubleArray.single(): Double {\n return when (size) {\n 0 -> throw NoSuchElementException(\"Array is empty.\")\n 1 -> this[0]\n else -> throw IllegalArgumentException(\"Array has more than one element.\")\n }\n}\n\n/**\n * Returns the single element, or throws an exception if the array is empty or has more than one element.\n */\npublic

fun BooleanArray.single(): Boolean {\n return when (size) {\n 0 -> throw NoSuchElementException(\"Array is empty.\")\n 1 -> this[0]\n else -> throw IllegalArgumentException(\"Array has more than one element.\")\n }\n}\n\n/**\n * Returns the single element, or throws an exception if the array is empty or has more than one element.\n */\npublic fun CharArray.single(): Char {\n return when (size) {\n 0 -> throw NoSuchElementException(\"Array is empty.\")\n 1 -> this[0]\n else -> throw IllegalArgumentException(\"Array has more than one element.\")\n }\n}\n\n/**\n * Returns the single element matching the given [predicate], or throws exception if there is no or more than one matching element.\n */\npublic inline fun <T> Array<out T>.single(predicate: (T) -> Boolean): T {\n var single: T? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if (found) throw IllegalArgumentException(\"Array contains more than one matching element.\")\n single = element\n found = true\n }\n }\n if (!found) throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n @Suppress(\"UNCHECKED_CAST\")\n return single as T\n}\n\n/**\n * Returns the single element matching the given [predicate], or throws exception if there is no or more than one matching element.\n */\npublic inline fun ByteArray.single(predicate: (Byte) -> Boolean): Byte {\n var single: Byte? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if (found) throw IllegalArgumentException(\"Array contains more than one matching element.\")\n single = element\n found = true\n }\n }\n if (!found) throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n @Suppress(\"UNCHECKED_CAST\")\n return single as Byte\n}\n\n/**\n * Returns the single element matching the given [predicate], or throws exception if there is no or more than one matching element.\n */\npublic inline fun ShortArray.single(predicate: (Short) -> Boolean): Short {\n var single: Short? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if (found) throw IllegalArgumentException(\"Array contains more than one matching element.\")\n single = element\n found = true\n }\n }\n if (!found) throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n @Suppress(\"UNCHECKED_CAST\")\n return single as Short\n}\n\n/**\n * Returns the single element matching the given [predicate], or throws exception if there is no or more than one matching element.\n */\npublic inline fun IntArray.single(predicate: (Int) -> Boolean): Int {\n var single: Int? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if (found) throw IllegalArgumentException(\"Array contains more than one matching element.\")\n single = element\n found = true\n }\n }\n if (!found) throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n @Suppress(\"UNCHECKED_CAST\")\n return single as Int\n}\n\n/**\n * Returns the single element matching the given [predicate], or throws exception if there is no or more than one matching element.\n */\npublic inline fun LongArray.single(predicate: (Long) -> Boolean): Long {\n var single: Long? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if (found) throw IllegalArgumentException(\"Array contains more than one matching element.\")\n single = element\n found = true\n }\n }\n if (!found) throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n @Suppress(\"UNCHECKED_CAST\")\n return single as Long\n}\n\n/**\n * Returns the single element matching the given [predicate], or throws exception if there is no or more than one matching element.\n */\npublic inline fun FloatArray.single(predicate: (Float) -> Boolean): Float {\n var single: Float? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if (found) throw IllegalArgumentException(\"Array contains more than one matching element.\")\n single = element\n found = true\n }\n }\n if (!found) throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n @Suppress(\"UNCHECKED_CAST\")\n return single as Float\n}\n\n/**\n * Returns the single element matching the given [predicate], or throws exception if there is no or more than one matching element.\n */\npublic inline fun DoubleArray.single(predicate: (Double) -> Boolean): Double {\n var single: Double? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if (found) throw IllegalArgumentException(\"Array contains

more than one matching element.\")\n single = element\n found = true\n }\n }\n if (!found) throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n @Suppress(\"UNCHECKED_CAST\")\n return single as Double\n}\n\n/**\n * Returns the single element matching the given [predicate], or throws exception if there is no or more than one matching element.\n */\npublic inline fun BooleanArray.single(predicate: (Boolean) -> Boolean): Boolean {\n var single: Boolean? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if (found) throw IllegalArgumentException(\"Array contains more than one matching element.\")\n single = element\n found = true\n }\n }\n if (!found) throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n @Suppress(\"UNCHECKED_CAST\")\n return single as Boolean\n}\n\n/**\n * Returns the single element matching the given [predicate], or throws exception if there is no or more than one matching element.\n */\npublic inline fun CharArray.single(predicate: (Char) -> Boolean): Char {\n var single: Char? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if (found) throw IllegalArgumentException(\"Array contains more than one matching element.\")\n single = element\n found = true\n }\n }\n if (!found) throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n @Suppress(\"UNCHECKED_CAST\")\n return single as Char\n}\n\n/**\n * Returns single element, or `null` if the array is empty or has more than one element.\n */\npublic fun <T> Array<out T>.singleOrNull(): T? {\n return if (size == 1) this[0] else null\n}\n\n/**\n * Returns single element, or `null` if the array is empty or has more than one element.\n */\npublic fun ByteArray.singleOrNull(): Byte? {\n return if (size == 1) this[0] else null\n}\n\n/**\n * Returns single element, or `null` if the array is empty or has more than one element.\n */\npublic fun ShortArray.singleOrNull(): Short? {\n return if (size == 1) this[0] else null\n}\n\n/**\n * Returns single element, or `null` if the array is empty or has more than one element.\n */\npublic fun IntArray.singleOrNull(): Int? {\n return if (size == 1) this[0] else null\n}\n\n/**\n * Returns single element, or `null` if the array is empty or has more than one element.\n */\npublic fun LongArray.singleOrNull(): Long? {\n return if (size == 1) this[0] else null\n}\n\n/**\n * Returns single element, or `null` if the array is empty or has more than one element.\n */\npublic fun FloatArray.singleOrNull(): Float? {\n return if (size == 1) this[0] else null\n}\n\n/**\n * Returns single element, or `null` if the array is empty or has more than one element.\n */\npublic fun DoubleArray.singleOrNull(): Double? {\n return if (size == 1) this[0] else null\n}\n\n/**\n * Returns single element, or `null` if the array is empty or has more than one element.\n */\npublic fun BooleanArray.singleOrNull(): Boolean? {\n return if (size == 1) this[0] else null\n}\n\n/**\n * Returns single element, or `null` if the array is empty or has more than one element.\n */\npublic fun CharArray.singleOrNull(): Char? {\n return if (size == 1) this[0] else null\n}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element was not found or more than one element was found.\n */\npublic inline fun <T> Array<out T>.singleOrNull(predicate: (T) -> Boolean): T? {\n var single: T? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if (found) return null\n single = element\n found = true\n }\n }\n if (!found) return null\n return single\n}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element was not found or more than one element was found.\n */\npublic inline fun ByteArray.singleOrNull(predicate: (Byte) -> Boolean): Byte? {\n var single: Byte? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if (found) return null\n single = element\n found = true\n }\n }\n if (!found) return null\n return single\n}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element was not found or more than one element was found.\n */\npublic inline fun ShortArray.singleOrNull(predicate: (Short) -> Boolean): Short? {\n var single: Short? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if (found) return null\n single = element\n found = true\n }\n }\n if (!found) return null\n return single\n}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element was not found or more than one element was found.\n */\npublic inline fun IntArray.singleOrNull(predicate: (Int) -> Boolean): Int? {\n var single: Int? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if (found) return null\n single = element\n

found = true\n }\n }\n if (!found) return null\n return single\n}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element was not found or more than one element was found.\n */\npublic inline fun LongArray.singleOrNull(predicate: (Long) -> Boolean): Long? {\n var single: Long? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if (found) return null\n single = element\n found = true\n }\n }\n if (!found) return null\n return single\n}\n\n/**\n * Returns the single element
matching the given [predicate], or `null` if element was not found or more than one element was found.\n */\npublic inline fun FloatArray.singleOrNull(predicate: (Float) -> Boolean): Float? {\n var single: Float? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if (found) return null\n single = element\n found = true\n }\n }\n if (!found) return null\n return single\n}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element was not found or more than one element was found.\n */\npublic inline fun DoubleArray.singleOrNull(predicate: (Double) -> Boolean): Double? {\n var single: Double? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if (found) return null\n single = element\n found = true\n }\n }\n if (!found) return null\n return single\n}\n\n/**\n * Returns
the single element matching the given [predicate], or `null` if element was not found or more than one element was found.\n */\npublic inline fun BooleanArray.singleOrNull(predicate: (Boolean) -> Boolean): Boolean? {\n var single: Boolean? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if (found) return null\n single = element\n found = true\n }\n }\n if (!found) return null\n return single\n}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element was not found or more than one element was found.\n */\npublic inline fun CharArray.singleOrNull(predicate: (Char) -> Boolean): Char? {\n var single: Char? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if (found) return null\n single = element\n found = true\n }\n }\n if (!found) return null\n return single\n}\n\n/**\n
* Returns a list containing all elements except first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic fun <T> Array<out T>.drop(n: Int): List<T> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return takeLast((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic fun ByteArray.drop(n: Int): List<Byte> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return takeLast((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n
*/\npublic fun ShortArray.drop(n: Int): List<Short> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return takeLast((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic fun IntArray.drop(n: Int): List<Int> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return takeLast((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic fun LongArray.drop(n: Int): List<Long> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return takeLast((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing
all elements except first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic fun FloatArray.drop(n: Int): List<Float> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return takeLast((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws

IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic fun DoubleArray.drop(n: Int): List<Double> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return takeLast((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic fun BooleanArray.drop(n: Int): List<Boolean> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return takeLast((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic fun CharArray.drop(n: Int): List<Char> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return takeLast((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic fun <T> Array<out T>.dropLast(n: Int): List<T> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return take((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic fun ByteArray.dropLast(n: Int): List<Byte> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return take((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic fun ShortArray.dropLast(n: Int): List<Short> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return take((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic fun IntArray.dropLast(n: Int): List<Int> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return take((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic fun LongArray.dropLast(n: Int): List<Long> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return take((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic fun FloatArray.dropLast(n: Int): List<Float> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return take((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic fun DoubleArray.dropLast(n: Int): List<Double> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return take((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic fun BooleanArray.dropLast(n: Int): List<Boolean> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return take((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic fun CharArray.dropLast(n: Int): List<Char> {\n require(n >= 0) { \"Requested element count $n is less

than zero.\" }\n return take((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic inline fun <T> Array<out T>.dropLastWhile(predicate: (T) -> Boolean): List<T> {\n for (index in lastIndex downTo 0) {\n if (!predicate(this[index])) {\n return take(index + 1)\n }\n }\n return emptyList()\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic inline fun ByteArray.dropLastWhile(predicate: (Byte) -> Boolean): List<Byte> {\n for (index in lastIndex downTo 0) {\n if (!predicate(this[index])) {\n return take(index + 1)\n }\n }\n return emptyList()\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic inline fun ShortArray.dropLastWhile(predicate: (Short) -> Boolean): List<Short> {\n for (index in lastIndex downTo 0) {\n if (!predicate(this[index])) {\n return take(index + 1)\n }\n }\n return emptyList()\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic inline fun IntArray.dropLastWhile(predicate: (Int) -> Boolean): List<Int> {\n for (index in lastIndex downTo 0) {\n if (!predicate(this[index])) {\n return take(index + 1)\n }\n }\n return emptyList()\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic inline fun LongArray.dropLastWhile(predicate: (Long) -> Boolean): List<Long> {\n for (index in lastIndex downTo 0) {\n if (!predicate(this[index])) {\n return take(index + 1)\n }\n }\n return emptyList()\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic inline fun FloatArray.dropLastWhile(predicate: (Float) -> Boolean): List<Float> {\n for (index in lastIndex downTo 0) {\n if (!predicate(this[index])) {\n return take(index + 1)\n }\n }\n return emptyList()\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic inline fun DoubleArray.dropLastWhile(predicate: (Double) -> Boolean): List<Double> {\n for (index in lastIndex downTo 0) {\n if (!predicate(this[index])) {\n return take(index + 1)\n }\n }\n return emptyList()\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic inline fun BooleanArray.dropLastWhile(predicate: (Boolean) -> Boolean): List<Boolean> {\n for (index in lastIndex downTo 0) {\n if (!predicate(this[index])) {\n return take(index + 1)\n }\n }\n return emptyList()\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic inline fun CharArray.dropLastWhile(predicate: (Char) -> Boolean): List<Char> {\n for (index in lastIndex downTo 0) {\n if (!predicate(this[index])) {\n return take(index + 1)\n }\n }\n return emptyList()\n}\n\n/**\n * Returns a list containing all elements except first elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic inline fun <T> Array<out T>.dropWhile(predicate: (T) -> Boolean): List<T> {\n var yielding = false\n val list = ArrayList<T>()\n for (item in this)\n if (yielding)\n list.add(item)\n else if (!predicate(item)) {\n list.add(item)\n yielding = true\n }\n return list\n}\n\n/**\n * Returns a list containing all elements except first elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic inline fun ByteArray.dropWhile(predicate: (Byte) -> Boolean): List<Byte> {\n var yielding = false\n val list = ArrayList<Byte>()\n for (item in this)\n if (yielding)\n list.add(item)\n else if (!predicate(item)) {\n list.add(item)\n yielding = true\n }\n

return list\n}\n\n/**\n * Returns a list containing all elements except first elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic inline fun ShortArray.dropWhile(predicate: (Short) -> Boolean): List<Short> {\n var yielding = false\n val list = ArrayList<Short>()\n for (item in this)\n if (yielding)\n list.add(item)\n else if (!predicate(item)) {\n list.add(item)\n yielding = true\n }\n return list\n}\n\n/**\n * Returns a list containing all elements except first elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic inline fun IntArray.dropWhile(predicate: (Int) -> Boolean): List<Int> {\n var yielding = false\n val list = ArrayList<Int>()\n for (item in this)\n if (yielding)\n list.add(item)\n else if (!predicate(item)) {\n list.add(item)\n yielding = true\n }\n return list\n}\n\n/**\n * Returns a list containing all elements except first elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic inline fun LongArray.dropWhile(predicate: (Long) -> Boolean): List<Long> {\n var yielding = false\n val list = ArrayList<Long>()\n for (item in this)\n if (yielding)\n list.add(item)\n else if (!predicate(item)) {\n list.add(item)\n yielding = true\n }\n return list\n}\n\n/**\n * Returns a list containing all elements except first elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic inline fun FloatArray.dropWhile(predicate: (Float) -> Boolean): List<Float> {\n var yielding = false\n val list = ArrayList<Float>()\n for (item in this)\n if (yielding)\n list.add(item)\n else if (!predicate(item)) {\n list.add(item)\n yielding = true\n }\n return list\n}\n\n/**\n * Returns a list containing all elements except first elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic inline fun DoubleArray.dropWhile(predicate: (Double) -> Boolean): List<Double> {\n var yielding = false\n val list = ArrayList<Double>()\n for (item in this)\n if (yielding)\n list.add(item)\n else if (!predicate(item)) {\n list.add(item)\n yielding = true\n }\n return list\n}\n\n/**\n * Returns a list containing all elements except first elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic inline fun BooleanArray.dropWhile(predicate: (Boolean) -> Boolean): List<Boolean> {\n var yielding = false\n val list = ArrayList<Boolean>()\n for (item in this)\n if (yielding)\n list.add(item)\n else if (!predicate(item)) {\n list.add(item)\n yielding = true\n }\n return list\n}\n\n/**\n * Returns a list containing all elements except first elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic inline fun CharArray.dropWhile(predicate: (Char) -> Boolean): List<Char> {\n var yielding = false\n val list = ArrayList<Char>()\n for (item in this)\n if (yielding)\n list.add(item)\n else if (!predicate(item)) {\n list.add(item)\n yielding = true\n }\n return list\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n */\npublic inline fun <T> Array<out T>.filter(predicate: (T) -> Boolean): List<T> {\n return filterTo(ArrayList<T>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n */\npublic inline fun ByteArray.filter(predicate: (Byte) -> Boolean): List<Byte> {\n return filterTo(ArrayList<Byte>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n */\npublic inline fun ShortArray.filter(predicate: (Short) -> Boolean): List<Short> {\n return filterTo(ArrayList<Short>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n */\npublic inline fun IntArray.filter(predicate: (Int) -> Boolean): List<Int> {\n return filterTo(ArrayList<Int>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n */\npublic inline fun LongArray.filter(predicate: (Long) -> Boolean): List<Long> {\n return filterTo(ArrayList<Long>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n */\npublic inline fun FloatArray.filter(predicate: (Float) -> Boolean): List<Float> {\n return filterTo(ArrayList<Float>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n */\npublic inline fun DoubleArray.filter(predicate: (Double) -> Boolean): List<Double> {\n return filterTo(ArrayList<Double>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the

given [predicate].\n */\npublic inline fun BooleanArray.filter(predicate: (Boolean) -> Boolean): List<Boolean> {\n return filterTo(ArrayList<Boolean>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n */\npublic inline fun CharArray.filter(predicate: (Char) -> Boolean): List<Char> {\n return filterTo(ArrayList<Char>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\npublic inline fun <T> Array<out T>.filterIndexed(predicate: (index: Int, T) -> Boolean): List<T> {\n return filterIndexedTo(ArrayList<T>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\npublic inline fun ByteArray.filterIndexed(predicate: (index: Int, Byte) -> Boolean): List<Byte> {\n return filterIndexedTo(ArrayList<Byte>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\npublic inline fun ShortArray.filterIndexed(predicate: (index: Int, Short) -> Boolean): List<Short> {\n return filterIndexedTo(ArrayList<Short>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\npublic inline fun IntArray.filterIndexed(predicate: (index: Int, Int) -> Boolean): List<Int> {\n return filterIndexedTo(ArrayList<Int>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\npublic inline fun LongArray.filterIndexed(predicate: (index: Int, Long) -> Boolean): List<Long> {\n return filterIndexedTo(ArrayList<Long>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\npublic inline fun FloatArray.filterIndexed(predicate: (index: Int, Float) -> Boolean): List<Float> {\n return filterIndexedTo(ArrayList<Float>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\npublic inline fun DoubleArray.filterIndexed(predicate: (index: Int, Double) -> Boolean): List<Double> {\n return filterIndexedTo(ArrayList<Double>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\npublic inline fun BooleanArray.filterIndexed(predicate: (index: Int, Boolean) -> Boolean): List<Boolean> {\n return filterIndexedTo(ArrayList<Boolean>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\npublic inline fun CharArray.filterIndexed(predicate: (index: Int, Char) -> Boolean): List<Char> {\n return filterIndexedTo(ArrayList<Char>(), predicate)\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\npublic inline fun <T, C : MutableCollection<in T>> Array<out T>.filterIndexedTo(destination: C, predicate: (index: Int, T) -> Boolean): C {\n forEachIndexed { index, element ->\n if (predicate(index, element)) destination.add(element)\n }\n return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\npublic inline fun <C : MutableCollection<in Byte>> ByteArray.filterIndexedTo(destination: C, predicate: (index: Int, Byte) -> Boolean): C {\n forEachIndexed { index, element ->\n if (predicate(index, element)) destination.add(element)\n }\n return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n *

@param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\npublic inline fun <C : MutableCollection<in Short>> ShortArray.filterIndexedTo(destination: C, predicate: (index: Int, Short) -> Boolean): C {\n forEachIndexed { index, element ->\n if (predicate(index, element)) destination.add(element)\n }\n return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\npublic inline fun <C : MutableCollection<in Int>> IntArray.filterIndexedTo(destination: C, predicate: (index: Int, Int) -> Boolean): C {\n forEachIndexed { index, element ->\n if (predicate(index, element)) destination.add(element)\n }\n return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\npublic inline fun <C : MutableCollection<in Long>> LongArray.filterIndexedTo(destination: C, predicate: (index: Int, Long) -> Boolean): C {\n forEachIndexed { index, element ->\n if (predicate(index, element)) destination.add(element)\n }\n return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\npublic inline fun <C : MutableCollection<in Float>> FloatArray.filterIndexedTo(destination: C, predicate: (index: Int, Float) -> Boolean): C {\n forEachIndexed { index, element ->\n if (predicate(index, element)) destination.add(element)\n }\n return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\npublic inline fun <C : MutableCollection<in Double>> DoubleArray.filterIndexedTo(destination: C, predicate: (index: Int, Double) -> Boolean): C {\n forEachIndexed { index, element ->\n if (predicate(index, element)) destination.add(element)\n }\n return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\npublic inline fun <C : MutableCollection<in Boolean>> BooleanArray.filterIndexedTo(destination: C, predicate: (index: Int, Boolean) -> Boolean): C {\n forEachIndexed { index, element ->\n if (predicate(index, element)) destination.add(element)\n }\n return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\npublic inline fun <C : MutableCollection<in Char>> CharArray.filterIndexedTo(destination: C, predicate: (index: Int, Char) -> Boolean): C {\n forEachIndexed { index, element ->\n if (predicate(index, element)) destination.add(element)\n }\n return destination\n}\n\n/**\n * Returns a list containing all elements that are instances of specified type parameter R.\n */\npublic inline fun <reified R> Array<*>.filterIsInstance(): List<@kotlin.internal.NoInfer R> {\n return filterIsInstanceTo(ArrayList<R>())\n}\n\n/**\n * Appends all elements that are instances of specified type parameter R to the given [destination].\n */\npublic inline fun <reified R, C : MutableCollection<in R>> Array<*>.filterIsInstanceTo(destination: C): C {\n for (element in this) if (element is R) destination.add(element)\n return destination\n}\n\n/**\n * Returns a list containing all elements not matching the given [predicate].\n */\npublic inline fun <T> Array<out T>.filterNot(predicate: (T) -> Boolean): List<T> {\n return filterNotTo(ArrayList<T>(), predicate)\n}\n\n/**\n * Returns a list containing all elements not matching the given [predicate].\n */\npublic inline fun ByteArray.filterNot(predicate: (Byte) -> Boolean): List<Byte> {\n return filterNotTo(ArrayList<Byte>(), predicate)\n}\n\n/**\n * Returns a list containing all elements not matching the given [predicate].\n */\npublic inline fun ShortArray.filterNot(predicate: (Short) -> Boolean): List<Short> {\n return filterNotTo(ArrayList<Short>(), predicate)\n}\n\n/**\n * Returns a list containing all elements not matching the given [predicate].\n */\npublic inline fun IntArray.filterNot(predicate: (Int) -> Boolean): List<Int> {\n return

filterNotTo(ArrayList<Int>(), predicate)\n}\n\n/**\n * Returns a list containing all elements not matching the given [predicate].\n */\npublic inline fun LongArray.filterNot(predicate: (Long) -> Boolean): List<Long> {\n return filterNotTo(ArrayList<Long>(), predicate)\n}\n\n/**\n * Returns a list containing all elements not matching the given [predicate].\n */\npublic inline fun FloatArray.filterNot(predicate: (Float) -> Boolean): List<Float> {\n return filterNotTo(ArrayList<Float>(), predicate)\n}\n\n/**\n * Returns a list containing all elements not matching the given [predicate].\n */\npublic inline fun DoubleArray.filterNot(predicate: (Double) -> Boolean): List<Double> {\n return filterNotTo(ArrayList<Double>(), predicate)\n}\n\n/**\n * Returns a list containing all elements not matching the given [predicate].\n */\npublic inline fun BooleanArray.filterNot(predicate: (Boolean) -> Boolean): List<Boolean> {\n return filterNotTo(ArrayList<Boolean>(), predicate)\n}\n\n/**\n * Returns a list containing all elements not matching the given [predicate].\n */\npublic inline fun CharArray.filterNot(predicate: (Char) -> Boolean): List<Char> {\n return filterNotTo(ArrayList<Char>(), predicate)\n}\n\n/**\n * Returns a list containing all elements that are not `null`.\n */\npublic fun <T : Any> Array<out T?>.filterNotNull(): List<T> {\n return filterNotNullTo(ArrayList<T>())\n}\n\n/**\n * Appends all elements that are not `null` to the given [destination].\n */\npublic fun <C : MutableCollection<in T>, T : Any> Array<out T?>.filterNotNullTo(destination: C): C {\n for (element in this) if (element != null) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements not matching the given [predicate] to the given [destination].\n */\npublic inline fun <T, C : MutableCollection<in T>> Array<out T>.filterNotTo(destination: C, predicate: (T) -> Boolean): C {\n for (element in this) if (!predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements not matching the given [predicate] to the given [destination].\n */\npublic inline fun <C : MutableCollection<in Byte>> ByteArray.filterNotTo(destination: C, predicate: (Byte) -> Boolean): C {\n for (element in this) if (!predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements not matching the given [predicate] to the given [destination].\n */\npublic inline fun <C : MutableCollection<in Short>> ShortArray.filterNotTo(destination: C, predicate: (Short) -> Boolean): C {\n for (element in this) if (!predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements not matching the given [predicate] to the given [destination].\n */\npublic inline fun <C : MutableCollection<in Int>> IntArray.filterNotTo(destination: C, predicate: (Int) -> Boolean): C {\n for (element in this) if (!predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements not matching the given [predicate] to the given [destination].\n */\npublic inline fun <C : MutableCollection<in Long>> LongArray.filterNotTo(destination: C, predicate: (Long) -> Boolean): C {\n for (element in this) if (!predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements not matching the given [predicate] to the given [destination].\n */\npublic inline fun <C : MutableCollection<in Float>> FloatArray.filterNotTo(destination: C, predicate: (Float) -> Boolean): C {\n for (element in this) if (!predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements not matching the given [predicate] to the given [destination].\n */\npublic inline fun <C : MutableCollection<in Double>> DoubleArray.filterNotTo(destination: C, predicate: (Double) -> Boolean): C {\n for (element in this) if (!predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements not matching the given [predicate] to the given [destination].\n */\npublic inline fun <C : MutableCollection<in Boolean>> BooleanArray.filterNotTo(destination: C, predicate: (Boolean) -> Boolean): C {\n for (element in this) if (!predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements not matching the given [predicate] to the given [destination].\n */\npublic inline fun <C : MutableCollection<in Char>> CharArray.filterNotTo(destination: C, predicate: (Char) -> Boolean): C {\n for (element in this) if (!predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n */\npublic inline fun <T, C : MutableCollection<in T>> Array<out T>.filterTo(destination: C, predicate: (T) -> Boolean): C {\n for (element in this) if (predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n */\npublic inline fun <C : MutableCollection<in Byte>> ByteArray.filterTo(destination: C, predicate: (Byte) ->

Boolean): C {\n for (element in this) if (predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n
* Appends all elements matching the given [predicate] to the given [destination].\n */\npublic inline fun <C : MutableCollection<in Short>> ShortArray.filterTo(destination: C, predicate: (Short) -> Boolean): C {\n for (element in this) if (predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n */\npublic inline fun <C : MutableCollection<in Int>> IntArray.filterTo(destination: C, predicate: (Int) -> Boolean): C {\n for (element in this) if (predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n */\npublic inline fun <C : MutableCollection<in Long>> LongArray.filterTo(destination: C, predicate: (Long) -> Boolean): C {\n for (element in this) if (predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n */\npublic inline fun <C : MutableCollection<in Float>> FloatArray.filterTo(destination: C, predicate: (Float) -> Boolean): C {\n for (element in this) if (predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n */\npublic inline fun <C : MutableCollection<in Double>> DoubleArray.filterTo(destination: C, predicate: (Double) -> Boolean): C {\n for (element in this) if (predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n */\npublic inline fun <C : MutableCollection<in Boolean>> BooleanArray.filterTo(destination: C, predicate: (Boolean) -> Boolean): C {\n for (element in this) if (predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements matching the given [predicate]
to the given [destination].\n */\npublic inline fun <C : MutableCollection<in Char>> CharArray.filterTo(destination: C, predicate: (Char) -> Boolean): C {\n for (element in this) if (predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Returns a list containing elements at indices in the specified [indices] range.\n */\npublic fun <T> Array<out T>.slice(indices: IntRange): List<T> {\n if (indices.isEmpty()) return listOf()\n return copyOfRange(indices.start, indices.endInclusive + 1).asList()\n}\n\n/**\n * Returns a list containing elements at indices in the specified [indices] range.\n */\npublic fun ByteArray.slice(indices: IntRange): List<Byte> {\n if (indices.isEmpty()) return listOf()\n return copyOfRange(indices.start, indices.endInclusive + 1).asList()\n}\n\n/**\n * Returns a list containing elements at indices in the specified [indices] range.\n */\npublic fun ShortArray.slice(indices: IntRange): List<Short> {\n if (indices.isEmpty())
return listOf()\n return copyOfRange(indices.start, indices.endInclusive + 1).asList()\n}\n\n/**\n * Returns a list containing elements at indices in the specified [indices] range.\n */\npublic fun IntArray.slice(indices: IntRange): List<Int> {\n if (indices.isEmpty()) return listOf()\n return copyOfRange(indices.start, indices.endInclusive + 1).asList()\n}\n\n/**\n * Returns a list containing elements at indices in the specified [indices] range.\n */\npublic fun LongArray.slice(indices: IntRange): List<Long> {\n if (indices.isEmpty()) return listOf()\n return copyOfRange(indices.start, indices.endInclusive + 1).asList()\n}\n\n/**\n * Returns a list containing elements at indices in the specified [indices] range.\n */\npublic fun FloatArray.slice(indices: IntRange): List<Float> {\n if (indices.isEmpty()) return listOf()\n return copyOfRange(indices.start, indices.endInclusive + 1).asList()\n}\n\n/**\n * Returns a list containing elements at indices in the
specified [indices] range.\n */\npublic fun DoubleArray.slice(indices: IntRange): List<Double> {\n if (indices.isEmpty()) return listOf()\n return copyOfRange(indices.start, indices.endInclusive + 1).asList()\n}\n\n/**\n * Returns a list containing elements at indices in the specified [indices] range.\n */\npublic fun BooleanArray.slice(indices: IntRange): List<Boolean> {\n if (indices.isEmpty()) return listOf()\n return copyOfRange(indices.start, indices.endInclusive + 1).asList()\n}\n\n/**\n * Returns a list containing elements at indices in the specified [indices] range.\n */\npublic fun CharArray.slice(indices: IntRange): List<Char> {\n if (indices.isEmpty()) return listOf()\n return copyOfRange(indices.start, indices.endInclusive + 1).asList()\n}\n\n/**\n * Returns a list containing elements at specified [indices].\n */\npublic fun <T> Array<out

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T>.slice(indices: Iterable<Int>): List<T> {\n    val size = indices.collectionSizeOrDefault(10)\n    if (size == 0) return
 emptyList()\n    val list = ArrayList<T>(size)\n    for (index in indices) {\n        list.add(get(index))\n    }\n    return list\n}\n\n/**\n * Returns a list containing elements at specified [indices].\n */\npublic fun ByteArray.slice(indices: Iterable<Int>): List<Byte> {\n    val size = indices.collectionSizeOrDefault(10)\n    if (size == 0) return emptyList()\n    val list = ArrayList<Byte>(size)\n    for (index in indices) {\n        list.add(get(index))\n    }\n    return list\n}\n\n/**\n * Returns a list containing elements at specified [indices].\n */\npublic fun ShortArray.slice(indices: Iterable<Int>): List<Short> {\n    val size = indices.collectionSizeOrDefault(10)\n    if (size == 0) return emptyList()\n    val list = ArrayList<Short>(size)\n    for (index in indices) {\n        list.add(get(index))\n    }\n    return list\n}\n\n/**\n * Returns a list containing elements at specified [indices].\n */\npublic fun IntArray.slice(indices: Iterable<Int>): List<Int> {\n    val size = indices.collectionSizeOrDefault(10)\n    if (size == 0) return emptyList()\n    val list = ArrayList<Int>(size)\n    for (index in indices) {\n        list.add(get(index))\n    }\n    return list\n}\n\n/**\n * Returns a list containing elements at specified [indices].\n */\npublic fun LongArray.slice(indices: Iterable<Int>): List<Long> {\n    val size = indices.collectionSizeOrDefault(10)\n    if (size == 0) return emptyList()\n    val list = ArrayList<Long>(size)\n    for (index in indices) {\n        list.add(get(index))\n    }\n    return list\n}\n\n/**\n * Returns a list containing elements at specified [indices].\n */\npublic fun FloatArray.slice(indices: Iterable<Int>): List<Float> {\n    val size = indices.collectionSizeOrDefault(10)\n    if (size == 0) return emptyList()\n    val list = ArrayList<Float>(size)\n    for (index in indices) {\n        list.add(get(index))\n    }\n    return list\n}\n\n/**\n * Returns a list containing elements at specified [indices].\n */\npublic
 fun DoubleArray.slice(indices: Iterable<Int>): List<Double> {\n    val size = indices.collectionSizeOrDefault(10)\n    if (size == 0) return emptyList()\n    val list = ArrayList<Double>(size)\n    for (index in indices) {\n        list.add(get(index))\n    }\n    return list\n}\n\n/**\n * Returns a list containing elements at specified [indices].\n */\npublic fun BooleanArray.slice(indices: Iterable<Int>): List<Boolean> {\n    val size = indices.collectionSizeOrDefault(10)\n    if (size == 0) return emptyList()\n    val list = ArrayList<Boolean>(size)\n    for (index in indices) {\n        list.add(get(index))\n    }\n    return list\n}\n\n/**\n * Returns a list containing elements at specified [indices].\n */\npublic fun CharArray.slice(indices: Iterable<Int>): List<Char> {\n    val size = indices.collectionSizeOrDefault(10)\n    if (size == 0) return emptyList()\n    val list = ArrayList<Char>(size)\n    for (index in indices) {\n        list.add(get(index))\n    }\n    return
 list\n}\n\n/**\n * Returns an array containing elements of this array at specified [indices].\n */\npublic fun <T> Array<T>.sliceArray(indices: Collection<Int>): Array<T> {\n    val result = arrayOfNulls(this, indices.size)\n    var targetIndex = 0\n    for (sourceIndex in indices) {\n        result[targetIndex++] = this[sourceIndex]\n    }\n    return result\n}\n\n/**\n * Returns an array containing elements of this array at specified [indices].\n */\npublic fun ByteArray.sliceArray(indices: Collection<Int>): ByteArray {\n    val result = ByteArray(indices.size)\n    var targetIndex = 0\n    for (sourceIndex in indices) {\n        result[targetIndex++] = this[sourceIndex]\n    }\n    return result\n}\n\n/**\n * Returns an array containing elements of this array at specified [indices].\n */\npublic fun ShortArray.sliceArray(indices: Collection<Int>): ShortArray {\n    val result = ShortArray(indices.size)\n    var targetIndex = 0\n    for (sourceIndex in indices) {\n        result[targetIndex++]
 = this[sourceIndex]\n    }\n    return result\n}\n\n/**\n * Returns an array containing elements of this array at specified [indices].\n */\npublic fun IntArray.sliceArray(indices: Collection<Int>): IntArray {\n    val result = IntArray(indices.size)\n    var targetIndex = 0\n    for (sourceIndex in indices) {\n        result[targetIndex++] = this[sourceIndex]\n    }\n    return result\n}\n\n/**\n * Returns an array containing elements of this array at specified [indices].\n */\npublic fun LongArray.sliceArray(indices: Collection<Int>): LongArray {\n    val result = LongArray(indices.size)\n    var targetIndex = 0\n    for (sourceIndex in indices) {\n        result[targetIndex++] = this[sourceIndex]\n    }\n    return result\n}\n\n/**\n * Returns an array containing elements of this array at specified [indices].\n */\npublic fun FloatArray.sliceArray(indices: Collection<Int>): FloatArray {\n    val result = FloatArray(indices.size)\n    var targetIndex = 0\n    for (sourceIndex
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in indices) {\n result[targetIndex++] = this[sourceIndex]\n }\n return result\n}\n\n/**\n * Returns an array containing elements of this array at specified [indices].\n */\npublic fun DoubleArray.sliceArray(indices: Collection<Int>): DoubleArray {\n val result = DoubleArray(indices.size)\n var targetIndex = 0\n for (sourceIndex in indices) {\n result[targetIndex++] = this[sourceIndex]\n }\n return result\n}\n\n/**\n * Returns an array containing elements of this array at specified [indices].\n */\npublic fun BooleanArray.sliceArray(indices: Collection<Int>): BooleanArray {\n val result = BooleanArray(indices.size)\n var targetIndex = 0\n for (sourceIndex in indices) {\n result[targetIndex++] = this[sourceIndex]\n }\n return result\n}\n\n/**\n * Returns an array containing elements of this array at specified [indices].\n */\npublic fun CharArray.sliceArray(indices: Collection<Int>): CharArray {\n val result = CharArray(indices.size)\n var targetIndex = 0\n for (sourceIndex in indices) {\n result[targetIndex++] = this[sourceIndex]\n }\n return result\n}\n\n/**\n * Returns an array containing elements at indices in the specified [indices] range.\n */\npublic fun <T> Array<T>.sliceArray(indices: IntRange): Array<T> {\n if (indices.isEmpty()) return copyOfRange(0, 0)\n return copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n * Returns an array containing elements at indices in the specified [indices] range.\n */\npublic fun ByteArray.sliceArray(indices: IntRange): ByteArray {\n if (indices.isEmpty()) return ByteArray(0)\n return copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n * Returns an array containing elements at indices in the specified [indices] range.\n */\npublic fun ShortArray.sliceArray(indices: IntRange): ShortArray {\n if (indices.isEmpty()) return ShortArray(0)\n return copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n * Returns an array containing elements at indices in the specified [indices] range.\n */\npublic fun IntArray.sliceArray(indices: IntRange): IntArray {\n if (indices.isEmpty()) return IntArray(0)\n return copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n * Returns an array containing elements at indices in the specified [indices] range.\n */\npublic fun LongArray.sliceArray(indices: IntRange): LongArray {\n if (indices.isEmpty()) return LongArray(0)\n return copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n * Returns an array containing elements at indices in the specified [indices] range.\n */\npublic fun FloatArray.sliceArray(indices: IntRange): FloatArray {\n if (indices.isEmpty()) return FloatArray(0)\n return copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n * Returns an array containing elements at indices in the specified [indices] range.\n */\npublic fun DoubleArray.sliceArray(indices: IntRange): DoubleArray {\n if (indices.isEmpty()) return DoubleArray(0)\n return copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n * Returns an array containing elements at indices in the specified [indices] range.\n */\npublic fun BooleanArray.sliceArray(indices: IntRange): BooleanArray {\n if (indices.isEmpty()) return BooleanArray(0)\n return copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n * Returns an array containing elements at indices in the specified [indices] range.\n */\npublic fun CharArray.sliceArray(indices: IntRange): CharArray {\n if (indices.isEmpty()) return CharArray(0)\n return copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n * Returns a list containing first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic fun <T> Array<out T>.take(n: Int): List<T> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n if (n == 0) return emptyList()\n if (n >= size) return toList()\n if (n == 1) return listOf(this[0])\n var count = 0\n val list = ArrayList<T>(n)\n for (item in this) {\n if (count++ == n)\n break\n list.add(item)\n }\n return list\n}\n\n/**\n * Returns a list containing first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic fun ByteArray.take(n: Int): List<Byte> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n if (n == 0) return emptyList()\n if (n >= size) return toList()\n if (n == 1) return listOf(this[0])\n var count = 0\n val list = ArrayList<Byte>(n)\n for (item in this) {\n if (count++ == n)\n break\n list.add(item)\n }\n return list\n}\n\n/**\n * Returns a list containing first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic fun ShortArray.take(n: Int): List<Short> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n if (n == 0) return emptyList()\n if (n >= size) return toList()\n if (n == 1) return listOf(this[0])\n var count =

0\n   val list = ArrayList<Short>(n)\n   for (item in this) {\n   if (count++ == n)\n   break\n   list.add(item)\n   }\n   return list\n}\n\n/**\n * Returns a list containing first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic fun IntArray.take(n: Int): List<Int> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n   if (n == 0) return emptyList()\n   if (n >= size) return toList()\n   if (n == 1) return listOf(this[0])\n   var count = 0\n   val list = ArrayList<Int>(n)\n   for (item in this) {\n   if (count++ == n)\n   break\n   list.add(item)\n   }\n   return list\n}\n\n/**\n * Returns a list containing first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic fun LongArray.take(n: Int): List<Long> {\n   require(n >= 0) { \"Requested element count $n is less than zero.\" }\n   if (n == 0) return emptyList()\n   if (n >= size) return toList()\n   if (n == 1) return listOf(this[0])\n   var count = 0\n   val list = ArrayList<Long>(n)\n   for (item in this) {\n   if (count++ == n)\n   break\n   list.add(item)\n   }\n   return list\n}\n\n/**\n * Returns a list containing first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic fun FloatArray.take(n: Int): List<Float> {\n   require(n >= 0) { \"Requested
 element count $n is less than zero.\" }\n   if (n == 0) return emptyList()\n   if (n >= size) return toList()\n   if (n == 1) return listOf(this[0])\n   var count = 0\n   val list = ArrayList<Float>(n)\n   for (item in this) {\n   if (count++ == n)\n   break\n   list.add(item)\n   }\n   return list\n}\n\n/**\n * Returns a list containing first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic fun DoubleArray.take(n: Int): List<Double> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n   if (n == 0) return emptyList()\n   if (n >= size) return toList()\n   if (n == 1) return listOf(this[0])\n   var count = 0\n   val list = ArrayList<Double>(n)\n   for (item in this) {\n   if (count++ == n)\n   break\n   list.add(item)\n   }\n   return list\n}\n\n/**\n * Returns a list containing first [n] elements.\n
 * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic fun BooleanArray.take(n: Int): List<Boolean> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n   if (n == 0) return emptyList()\n   if (n >= size) return toList()\n   if (n == 1) return listOf(this[0])\n   var count = 0\n   val list = ArrayList<Boolean>(n)\n   for (item in this) {\n   if (count++ == n)\n   break\n   list.add(item)\n   }\n   return list\n}\n\n/**\n * Returns a list containing first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic fun CharArray.take(n: Int): List<Char> {\n   require(n >= 0) { \"Requested element count $n is less than zero.\" }\n   if (n == 0) return emptyList()\n   if (n >= size) return toList()\n   if (n == 1) return listOf(this[0])\n
   var count = 0\n   val list = ArrayList<Char>(n)\n   for (item in this) {\n   if (count++ == n)\n   break\n   list.add(item)\n   }\n   return list\n}\n\n/**\n * Returns a list containing last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic fun <T> Array<out T>.takeLast(n: Int): List<T> {\n   require(n >= 0) { \"Requested element count $n is less than zero.\" }\n   if (n == 0) return emptyList()\n   val size = size\n   if (n >= size) return toList()\n   if (n == 1) return listOf(this[size - 1])\n   val list = ArrayList<T>(n)\n   for (index in size - n until size)\n   list.add(this[index])\n   return list\n}\n\n/**\n * Returns a list containing last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic fun ByteArray.takeLast(n: Int): List<Byte>
 {\n   require(n >= 0) { \"Requested element count $n is less than zero.\" }\n   if (n == 0) return emptyList()\n   val size = size\n   if (n >= size) return toList()\n   if (n == 1) return listOf(this[size - 1])\n   val list = ArrayList<Byte>(n)\n   for (index in size - n until size)\n   list.add(this[index])\n   return list\n}\n\n/**\n * Returns a list containing last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic fun ShortArray.takeLast(n: Int): List<Short> {\n   require(n >= 0) { \"Requested element count $n is less than zero.\" }\n   if (n == 0) return

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emptyList()\n    val size = size\n    if (n >= size) return toList()\n    if (n == 1) return listOf(this[size - 1])\n    val list = ArrayList<Short>(n)\n    for (index in size - n until size)\n        list.add(this[index])\n    return list\n}\n\n/**\n * Returns a list containing last [n] elements.\n * \n
 * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic fun IntArray.takeLast(n: Int): List<Int> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    if (n == 0) return emptyList()\n    val size = size\n    if (n >= size) return toList()\n    if (n == 1) return listOf(this[size - 1])\n    val list = ArrayList<Int>(n)\n    for (index in size - n until size)\n        list.add(this[index])\n    return list\n}\n\n/**\n * Returns a list containing last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic fun LongArray.takeLast(n: Int): List<Long> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    if (n == 0) return emptyList()\n    val size = size\n    if (n >= size) return toList()\n    if (n == 1) return listOf(this[size - 1])\n    val list = ArrayList<Long>(n)\n    for (index in size - n until size)\n        list.add(this[index])\n    return list\n}\n\n/**\n * Returns a list containing last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic fun FloatArray.takeLast(n: Int): List<Float> {\n    require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    if (n == 0) return emptyList()\n    val size = size\n    if (n >= size) return toList()\n    if (n == 1) return listOf(this[size - 1])\n    val list = ArrayList<Float>(n)\n    for (index in size - n until size)\n        list.add(this[index])\n    return list\n}\n\n/**\n * Returns a list containing last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic fun DoubleArray.takeLast(n: Int): List<Double> {\n    require(n >= 0) { \"Requested element count $n
 is less than zero.\" }\n    if (n == 0) return emptyList()\n    val size = size\n    if (n >= size) return toList()\n    if (n == 1) return listOf(this[size - 1])\n    val list = ArrayList<Double>(n)\n    for (index in size - n until size)\n        list.add(this[index])\n    return list\n}\n\n/**\n * Returns a list containing last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic fun BooleanArray.takeLast(n: Int): List<Boolean> {\n    require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    if (n == 0) return emptyList()\n    val size = size\n    if (n >= size) return toList()\n    if (n == 1) return listOf(this[size - 1])\n    val list = ArrayList<Boolean>(n)\n    for (index in size - n until size)\n        list.add(this[index])\n    return list\n}\n\n/**\n * Returns a list containing last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n
 * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic fun CharArray.takeLast(n: Int): List<Char> {\n    require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    if (n == 0) return emptyList()\n    val size = size\n    if (n >= size) return toList()\n    if (n == 1) return listOf(this[size - 1])\n    val list = ArrayList<Char>(n)\n    for (index in size - n until size)\n        list.add(this[index])\n    return list\n}\n\n/**\n * Returns a list containing last elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic inline fun <T> Array<out T>.takeLastWhile(predicate: (T) -> Boolean): List<T> {\n    for (index in lastIndex downTo 0) {\n        if (!predicate(this[index])) {\n            return drop(index + 1)\n        }\n    }\n    return toList()\n}\n\n/**\n * Returns a list containing last elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n
 */\npublic inline fun ByteArray.takeLastWhile(predicate: (Byte) -> Boolean): List<Byte> {\n    for (index in lastIndex downTo 0) {\n        if (!predicate(this[index])) {\n            return drop(index + 1)\n        }\n    }\n    return toList()\n}\n\n/**\n * Returns a list containing last elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic inline fun ShortArray.takeLastWhile(predicate: (Short) -> Boolean): List<Short> {\n    for (index in lastIndex downTo 0) {\n        if (!predicate(this[index])) {\n            return drop(index + 1)\n        }\n    }\n    return toList()\n}\n\n/**\n * Returns a list containing last elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic inline fun IntArray.takeLastWhile(predicate: (Int) -> Boolean): List<Int> {\n    for (index in lastIndex downTo 0)
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{\n if (!predicate(this[index]))
{\n return drop(index + 1)\n }\n }\n return toList()\n}\n\n/**\n * Returns a list containing last elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic inline fun LongArray.takeLastWhile(predicate: (Long) -> Boolean): List<Long> {\n for (index in lastIndex downTo 0) {\n if (!predicate(this[index])) {\n return drop(index + 1)\n }\n }\n return toList()\n}\n\n/**\n * Returns a list containing last elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic inline fun FloatArray.takeLastWhile(predicate: (Float) -> Boolean): List<Float> {\n for (index in lastIndex downTo 0) {\n if (!predicate(this[index])) {\n return drop(index + 1)\n }\n }\n return toList()\n}\n\n/**\n * Returns a list containing last elements satisfying the given [predicate].\n
* \n * @sample samples.collections.Collections.Transformations.take\n */\npublic inline fun DoubleArray.takeLastWhile(predicate: (Double) -> Boolean): List<Double> {\n for (index in lastIndex downTo 0) {\n if (!predicate(this[index])) {\n return drop(index + 1)\n }\n }\n return toList()\n}\n\n/**\n * Returns a list containing last elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic inline fun BooleanArray.takeLastWhile(predicate: (Boolean) -> Boolean): List<Boolean> {\n for (index in lastIndex downTo 0) {\n if (!predicate(this[index])) {\n return drop(index + 1)\n }\n }\n return toList()\n}\n\n/**\n * Returns a list containing last elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic inline fun CharArray.takeLastWhile(predicate: (Char) -> Boolean): List<Char> {\n for (index
in lastIndex downTo 0) {\n if (!predicate(this[index])) {\n return drop(index + 1)\n }\n }\n return toList()\n}\n\n/**\n * Returns a list containing first elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic inline fun <T> Array<out T>.takeWhile(predicate: (T) -> Boolean): List<T> {\n val list = ArrayList<T>()\n for (item in this) {\n if (!predicate(item))\n break\n list.add(item)\n }\n return list\n}\n\n/**\n * Returns a list containing first elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic inline fun ByteArray.takeWhile(predicate: (Byte) -> Boolean): List<Byte> {\n val list = ArrayList<Byte>()\n for (item in this) {\n if (!predicate(item))\n break\n list.add(item)\n }\n return list\n}\n\n/**\n * Returns a list containing first
elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic inline fun ShortArray.takeWhile(predicate: (Short) -> Boolean): List<Short> {\n val list = ArrayList<Short>()\n for (item in this) {\n if (!predicate(item))\n break\n list.add(item)\n }\n return list\n}\n\n/**\n * Returns a list containing first elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic inline fun IntArray.takeWhile(predicate: (Int) -> Boolean): List<Int> {\n val list = ArrayList<Int>()\n for (item in this) {\n if (!predicate(item))\n break\n list.add(item)\n }\n return list\n}\n\n/**\n * Returns a list containing first elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic inline fun LongArray.takeWhile(predicate: (Long) -> Boolean): List<Long>
{\n val list = ArrayList<Long>()\n for (item in this) {\n if (!predicate(item))\n break\n list.add(item)\n }\n return list\n}\n\n/**\n * Returns a list containing first elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic inline fun FloatArray.takeWhile(predicate: (Float) -> Boolean): List<Float> {\n val list = ArrayList<Float>()\n for (item in this) {\n if (!predicate(item))\n break\n list.add(item)\n }\n return list\n}\n\n/**\n * Returns a list containing first elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic inline fun DoubleArray.takeWhile(predicate: (Double) -> Boolean): List<Double> {\n val list = ArrayList<Double>()\n for (item in this) {\n if (!predicate(item))\n break\n list.add(item)\n }\n return list\n}\n\n/**\n

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 * Returns a list containing first elements satisfying the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.take\n */\npublic inline fun BooleanArray.takeWhile(predicate:
(Boolean) -> Boolean): List<Boolean> {\n    val list = ArrayList<Boolean>()\n    for (item in this) {\n        if
(!predicate(item))\n            break\n        list.add(item)\n    }\n    return list\n}\n\n/**\n * Returns a list containing first
elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n
*/\npublic inline fun CharArray.takeWhile(predicate: (Char) -> Boolean): List<Char> {\n    val list =
ArrayList<Char>()\n    for (item in this) {\n        if (!predicate(item))\n            break\n        list.add(item)\n    }\n
return list\n}\n\n/**\n * Reverses elements in the array in-place.\n */\npublic fun <T> Array<T>.reverse(): Unit {\n
val midPoint = (size / 2) - 1\n    if (midPoint < 0) return\n    var reverseIndex
 = lastIndex\n    for (index in 0..midPoint) {\n        val tmp = this[index]\n        this[index] = this[reverseIndex]\n
this[reverseIndex] = tmp\n        reverseIndex--\n    }\n}\n\n/**\n * Reverses elements in the array in-place.\n
*/\npublic fun ByteArray.reverse(): Unit {\n    val midPoint = (size / 2) - 1\n    if (midPoint < 0) return\n    var
reverseIndex = lastIndex\n    for (index in 0..midPoint) {\n        val tmp = this[index]\n        this[index] =
this[reverseIndex]\n        this[reverseIndex] = tmp\n        reverseIndex--\n    }\n}\n\n/**\n * Reverses elements in the
array in-place.\n */\npublic fun ShortArray.reverse(): Unit {\n    val midPoint = (size / 2) - 1\n    if (midPoint < 0)
return\n    var reverseIndex = lastIndex\n    for (index in 0..midPoint) {\n        val tmp = this[index]\n        this[index]
= this[reverseIndex]\n        this[reverseIndex] = tmp\n        reverseIndex--\n    }\n}\n\n/**\n * Reverses elements in
the array in-place.\n */\npublic fun
 IntArray.reverse(): Unit {\n    val midPoint = (size / 2) - 1\n    if (midPoint < 0) return\n    var reverseIndex =
lastIndex\n    for (index in 0..midPoint) {\n        val tmp = this[index]\n        this[index] = this[reverseIndex]\n
this[reverseIndex] = tmp\n        reverseIndex--\n    }\n}\n\n/**\n * Reverses elements in the array in-place.\n
*/\npublic fun LongArray.reverse(): Unit {\n    val midPoint = (size / 2) - 1\n    if (midPoint < 0) return\n    var
reverseIndex = lastIndex\n    for (index in 0..midPoint) {\n        val tmp = this[index]\n        this[index] =
this[reverseIndex]\n        this[reverseIndex] = tmp\n        reverseIndex--\n    }\n}\n\n/**\n * Reverses elements in the
array in-place.\n */\npublic fun FloatArray.reverse(): Unit {\n    val midPoint = (size / 2) - 1\n    if (midPoint < 0)
return\n    var reverseIndex = lastIndex\n    for (index in 0..midPoint) {\n        val tmp = this[index]\n        this[index]
= this[reverseIndex]\n        this[reverseIndex]
 = tmp\n        reverseIndex--\n    }\n}\n\n/**\n * Reverses elements in the array in-place.\n */\npublic fun
DoubleArray.reverse(): Unit {\n    val midPoint = (size / 2) - 1\n    if (midPoint < 0) return\n    var reverseIndex =
lastIndex\n    for (index in 0..midPoint) {\n        val tmp = this[index]\n        this[index] = this[reverseIndex]\n
this[reverseIndex] = tmp\n        reverseIndex--\n    }\n}\n\n/**\n * Reverses elements in the array in-place.\n
*/\npublic fun BooleanArray.reverse(): Unit {\n    val midPoint = (size / 2) - 1\n    if (midPoint < 0) return\n    var
reverseIndex = lastIndex\n    for (index in 0..midPoint) {\n        val tmp = this[index]\n        this[index] =
this[reverseIndex]\n        this[reverseIndex] = tmp\n        reverseIndex--\n    }\n}\n\n/**\n * Reverses elements in the
array in-place.\n */\npublic fun CharArray.reverse(): Unit {\n    val midPoint = (size / 2) - 1\n    if (midPoint < 0)
return\n    var reverseIndex = lastIndex\n    for (index
 in 0..midPoint) {\n        val tmp = this[index]\n        this[index] = this[reverseIndex]\n        this[reverseIndex] =
tmp\n        reverseIndex--\n    }\n}\n\n/**\n * Returns a list with elements in reversed order.\n */\npublic fun <T>
Array<out T>.reversed(): List<T> {\n    if (isEmpty()) return emptyList()\n    val list = toMutableList()\n
list.reverse()\n    return list\n}\n\n/**\n * Returns a list with elements in reversed order.\n */\npublic fun
ByteArray.reversed(): List<Byte> {\n    if (isEmpty()) return emptyList()\n    val list = toMutableList()\n
list.reverse()\n    return list\n}\n\n/**\n * Returns a list with elements in reversed order.\n */\npublic fun
ShortArray.reversed(): List<Short> {\n    if (isEmpty()) return emptyList()\n    val list = toMutableList()\n
list.reverse()\n    return list\n}\n\n/**\n * Returns a list with elements in reversed order.\n */\npublic fun
IntArray.reversed(): List<Int> {\n    if (isEmpty()) return emptyList()\n    val list =
 toMutableList()\n    list.reverse()\n    return list\n}\n\n/**\n * Returns a list with elements in reversed order.\n
*/\npublic fun LongArray.reversed(): List<Long> {\n    if (isEmpty()) return emptyList()\n    val list =
toMutableList()\n    list.reverse()\n    return list\n}\n\n/**\n * Returns a list with elements in reversed order.\n
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*/\npublic fun FloatArray.reversed(): List<Float> {\n   if (isEmpty()) return emptyList()\n   val list = toMutableList()\n   list.reverse()\n   return list\n}\n\n/**\n * Returns a list with elements in reversed order.\n */\npublic fun DoubleArray.reversed(): List<Double> {\n   if (isEmpty()) return emptyList()\n   val list = toMutableList()\n   list.reverse()\n   return list\n}\n\n/**\n * Returns a list with elements in reversed order.\n */\npublic fun BooleanArray.reversed(): List<Boolean> {\n   if (isEmpty()) return emptyList()\n   val list = toMutableList()\n   list.reverse()\n   return list\n}\n\n/**\n * Returns a list with elements in reversed order.\n */\npublic fun CharArray.reversed(): List<Char> {\n   if (isEmpty()) return emptyList()\n   val list = toMutableList()\n   list.reverse()\n   return list\n}\n\n/**\n * Returns an array with elements of this array in reversed order.\n */\npublic fun <T> Array<T>.reversedArray(): Array<T> {\n   if (isEmpty()) return this\n   val result = arrayOfNulls(this, size)\n   val lastIndex = lastIndex\n   for (i in 0..lastIndex)\n   result[lastIndex - i] = this[i]\n   return result\n}\n\n/**\n * Returns an array with elements of this array in reversed order.\n */\npublic fun ByteArray.reversedArray(): ByteArray {\n   if (isEmpty()) return this\n   val result = ByteArray(size)\n   val lastIndex = lastIndex\n   for (i in 0..lastIndex)\n   result[lastIndex - i] = this[i]\n   return result\n}\n\n/**\n * Returns an array with elements of this array in reversed order.\n */\npublic fun ShortArray.reversedArray(): ShortArray {\n   if (isEmpty()) return this\n   val result = ShortArray(size)\n   val lastIndex = lastIndex\n   for (i in 0..lastIndex)\n   result[lastIndex - i] = this[i]\n   return result\n}\n\n/**\n * Returns an array with elements of this array in reversed order.\n */\npublic fun IntArray.reversedArray(): IntArray {\n   if (isEmpty()) return this\n   val result = IntArray(size)\n   val lastIndex = lastIndex\n   for (i in 0..lastIndex)\n   result[lastIndex - i] = this[i]\n   return result\n}\n\n/**\n * Returns an array with elements of this array in reversed order.\n */\npublic fun LongArray.reversedArray(): LongArray {\n   if (isEmpty()) return this\n   val result = LongArray(size)\n   val lastIndex = lastIndex\n   for (i in 0..lastIndex)\n   result[lastIndex - i] = this[i]\n   return result\n}\n\n/**\n * Returns an array with elements of this array in reversed order.\n */\npublic fun FloatArray.reversedArray(): FloatArray {\n   if (isEmpty()) return this\n   val result = FloatArray(size)\n   val lastIndex = lastIndex\n   for (i in 0..lastIndex)\n   result[lastIndex - i] = this[i]\n   return result\n}\n\n/**\n * Returns an array with elements of this array in reversed order.\n */\npublic fun DoubleArray.reversedArray(): DoubleArray {\n   if (isEmpty()) return this\n   val result = DoubleArray(size)\n   val lastIndex = lastIndex\n   for (i in 0..lastIndex)\n   result[lastIndex - i] = this[i]\n   return result\n}\n\n/**\n * Returns an array with elements of this array in reversed order.\n */\npublic fun BooleanArray.reversedArray(): BooleanArray {\n   if (isEmpty()) return this\n   val result = BooleanArray(size)\n   val lastIndex = lastIndex\n   for (i in 0..lastIndex)\n   result[lastIndex - i] = this[i]\n   return result\n}\n\n/**\n * Returns an array with elements of this array in reversed order.\n */\npublic fun CharArray.reversedArray(): CharArray {\n   if (isEmpty()) return this\n   val result = CharArray(size)\n   val lastIndex = lastIndex\n   for (i in 0..lastIndex)\n   result[lastIndex - i] = this[i]\n   return result\n}\n\n/**\n * Sorts elements in the array in-place according to natural sort order of the value returned by specified [selector] function.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\npublic inline fun <T, R : Comparable<R>> Array<out T>.sortBy(crossinline selector: (T) -> R?): Unit {\n   if (size > 1) sortWith(compareBy(selector))\n}\n\n/**\n * Sorts elements in the array in-place descending according to natural sort order of the value returned by specified [selector] function.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\npublic inline fun <T, R : Comparable<R>> Array<out T>.sortByDescending(crossinline selector: (T) -> R?): Unit {\n   if (size > 1) sortWith(compareByDescending(selector))\n}\n\n/**\n * Sorts elements in the array in-place descending according to their natural sort order.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\npublic fun <T : Comparable<T>> Array<out T>.sortDescending(): Unit {\n   sortWith(reverseOrder())\n}\n\n/**\n * Sorts elements in the array in-place descending according to their natural sort order.\n */\npublic fun ByteArray.sortDescending(): Unit {\n   if (size > 1) {\n   sort()\n   reverse()\n   }\n}\n\n/**\n * Sorts elements in the array in-place descending according to their natural sort order.\n */\npublic fun ShortArray.sortDescending(): Unit {\n   if (size > 1) {\n   sort()\n   reverse()\n   }\n}\n\n/**\n * Sorts

elements in the array in-place descending according to their natural sort order.\n */\npublic fun IntArray.sortDescending(): Unit {\n if (size > 1) {\n sort()\n reverse()\n }\n}\n\n/**\n * Sorts elements in the array in-place descending according to their natural sort order.\n */\npublic fun LongArray.sortDescending(): Unit {\n if (size > 1) {\n sort()\n reverse()\n }\n}\n\n/**\n * Sorts elements in the array in-place descending according to their natural sort order.\n */\npublic fun FloatArray.sortDescending(): Unit {\n if (size > 1) {\n sort()\n reverse()\n }\n}\n\n/**\n * Sorts elements in the array in-place descending according to their natural sort order.\n */\npublic fun DoubleArray.sortDescending(): Unit {\n if (size > 1) {\n sort()\n reverse()\n }\n}\n\n/**\n * Sorts elements in the array in-place descending according to their natural sort order.\n */\npublic fun CharArray.sortDescending(): Unit {\n if (size > 1) {\n sort()\n reverse()\n }\n}\n\n/**\n * Returns a list of all elements sorted according to their natural sort order.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\npublic fun <T : Comparable<T>> Array<out T>.sorted(): List<T> {\n return sortedArray().asList()\n}\n\n/**\n * Returns a list of all elements sorted according to their natural sort order.\n */\npublic fun ByteArray.sorted(): List<Byte> {\n return toTypedArray().apply { sort() }.asList()\n}\n\n/**\n * Returns a list of all elements sorted according to their natural sort order.\n */\npublic fun ShortArray.sorted(): List<Short> {\n return toTypedArray().apply { sort() }.asList()\n}\n\n/**\n * Returns a list of all elements sorted according to their natural sort order.\n */\npublic fun IntArray.sorted(): List<Int> {\n return toTypedArray().apply { sort() }.asList()\n}\n\n/**\n * Returns a list of all elements sorted according to their natural sort order.\n */\npublic fun LongArray.sorted(): List<Long> {\n return toTypedArray().apply { sort() }.asList()\n}\n\n/**\n * Returns a list of all elements sorted according to their natural sort order.\n */\npublic fun FloatArray.sorted(): List<Float> {\n return toTypedArray().apply { sort() }.asList()\n}\n\n/**\n * Returns a list of all elements sorted according to their natural sort order.\n */\npublic fun DoubleArray.sorted(): List<Double> {\n return toTypedArray().apply { sort() }.asList()\n}\n\n/**\n * Returns a list of all elements sorted according to their natural sort order.\n */\npublic fun CharArray.sorted(): List<Char> {\n return toTypedArray().apply { sort() }.asList()\n}\n\n/**\n * Returns an array with all elements of this array sorted according to their natural sort order.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\npublic fun <T : Comparable<T>> Array<T>.sortedArray(): Array<T> {\n if (isEmpty()) return this\n return this.copyOf().apply { sort() }\n}\n\n/**\n * Returns an array with all elements of this array sorted according to their natural sort order.\n */\npublic fun ByteArray.sortedArray(): ByteArray {\n if (isEmpty()) return this\n return this.copyOf().apply { sort() }\n}\n\n/**\n * Returns an array with all elements of this array sorted according to their natural sort order.\n */\npublic fun ShortArray.sortedArray(): ShortArray {\n if (isEmpty()) return this\n return this.copyOf().apply { sort() }\n}\n\n/**\n * Returns an array with all elements of this array sorted according to their natural sort order.\n */\npublic fun IntArray.sortedArray(): IntArray {\n if (isEmpty()) return this\n return this.copyOf().apply { sort() }\n}\n\n/**\n * Returns an array with all elements of this array sorted according to their natural sort order.\n */\npublic fun LongArray.sortedArray(): LongArray {\n if (isEmpty()) return this\n return this.copyOf().apply { sort() }\n}\n\n/**\n * Returns an array with all elements of this array sorted according to their natural sort order.\n */\npublic fun FloatArray.sortedArray(): FloatArray {\n if (isEmpty()) return this\n return this.copyOf().apply { sort() }\n}\n\n/**\n * Returns an array with all elements of this array sorted according to their natural sort order.\n */\npublic fun DoubleArray.sortedArray(): DoubleArray {\n if (isEmpty()) return this\n return this.copyOf().apply { sort() }\n}\n\n/**\n * Returns an array with all elements of this array sorted according to their natural sort order.\n */\npublic fun CharArray.sortedArray(): CharArray {\n if (isEmpty()) return this\n return this.copyOf().apply { sort() }\n}\n\n/**\n * Returns an array with all elements of this array sorted descending according to their natural sort order.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\npublic fun <T : Comparable<T>> Array<T>.sortedArrayDescending(): Array<T> {\n if (isEmpty()) return this\n return this.copyOf().apply { sortWith(reverseOrder()) }\n}\n\n/**\n * Returns an array with all elements of this array sorted descending

according to their natural sort order.\n */\npublic fun ByteArray.sortedArrayDescending(): ByteArray {\n if (isEmpty()) return this\n return this.copyOf().apply { sortDescending() }\n}\n\n/**\n * Returns an array with all elements of this array sorted descending according to their natural sort order.\n */\npublic fun ShortArray.sortedArrayDescending(): ShortArray {\n if (isEmpty()) return this\n return this.copyOf().apply { sortDescending() }\n}\n\n/**\n * Returns an array with all elements of this array sorted descending according to their natural sort order.\n */\npublic fun IntArray.sortedArrayDescending(): IntArray {\n if (isEmpty()) return this\n return this.copyOf().apply { sortDescending() }\n}\n\n/**\n * Returns an array with all elements of this array sorted descending according to their natural sort order.\n */\npublic fun LongArray.sortedArrayDescending(): LongArray {\n if (isEmpty()) return this\n return this.copyOf().apply { sortDescending() }\n}\n\n/**\n * Returns an array with all elements of this array sorted descending according to their natural sort order.\n */\npublic fun FloatArray.sortedArrayDescending(): FloatArray {\n if (isEmpty()) return this\n return this.copyOf().apply { sortDescending() }\n}\n\n/**\n * Returns an array with all elements of this array sorted descending according to their natural sort order.\n */\npublic fun DoubleArray.sortedArrayDescending(): DoubleArray {\n if (isEmpty()) return this\n return this.copyOf().apply { sortDescending() }\n}\n\n/**\n * Returns an array with all elements of this array sorted descending according to their natural sort order.\n */\npublic fun CharArray.sortedArrayDescending(): CharArray {\n if (isEmpty()) return this\n return this.copyOf().apply { sortDescending() }\n}\n\n/**\n * Returns an array with all elements of this array sorted according the specified [comparator].\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\npublic fun <T> Array<out T>.sortedArrayWith(comparator: Comparator<in T>): Array<out T> {\n if (isEmpty()) return this\n return this.copyOf().apply { sortWith(comparator) }\n}\n\n/**\n * Returns a list of all elements sorted according to natural sort order of the value returned by specified [selector] function.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\npublic inline fun <T, R : Comparable<R>> Array<out T>.sortedBy(crossinline selector: (T) -> R?): List<T> {\n return sortedWith(compareBy(selector))\n}\n\n/**\n * Returns a list of all elements sorted according to natural sort order of the value returned by specified [selector] function.\n */\npublic inline fun <R : Comparable<R>> ByteArray.sortedBy(crossinline selector: (Byte) -> R?): List<Byte> {\n return sortedWith(compareBy(selector))\n}\n\n/**\n * Returns a list of all elements sorted according to natural sort order of the value returned by specified [selector] function.\n */\npublic inline fun <R : Comparable<R>> ShortArray.sortedBy(crossinline selector: (Short) -> R?): List<Short> {\n return sortedWith(compareBy(selector))\n}\n\n/**\n * Returns a list of all elements sorted according to natural sort order of the value returned by specified [selector] function.\n */\npublic inline fun <R : Comparable<R>> IntArray.sortedBy(crossinline selector: (Int) -> R?): List<Int> {\n return sortedWith(compareBy(selector))\n}\n\n/**\n * Returns a list of all elements sorted according to natural sort order of the value returned by specified [selector] function.\n */\npublic inline fun <R : Comparable<R>> LongArray.sortedBy(crossinline selector: (Long) -> R?): List<Long> {\n return sortedWith(compareBy(selector))\n}\n\n/**\n * Returns a list of all elements sorted according to natural sort order of the value returned by specified [selector] function.\n */\npublic inline fun <R : Comparable<R>> FloatArray.sortedBy(crossinline selector: (Float) -> R?): List<Float> {\n return sortedWith(compareBy(selector))\n}\n\n/**\n * Returns a list of all elements sorted according to natural sort order of the value returned by specified [selector] function.\n */\npublic inline fun <R : Comparable<R>> DoubleArray.sortedBy(crossinline selector: (Double) -> R?): List<Double> {\n return sortedWith(compareBy(selector))\n}\n\n/**\n * Returns a list of all elements sorted according to natural sort order of the value returned by specified [selector] function.\n */\npublic inline fun <R : Comparable<R>> BooleanArray.sortedBy(crossinline selector: (Boolean) -> R?): List<Boolean> {\n return sortedWith(compareBy(selector))\n}\n\n/**\n * Returns a list of all elements sorted according to natural sort order of the value returned by specified [selector] function.\n */\npublic inline fun <R : Comparable<R>> CharArray.sortedBy(crossinline selector: (Char) -> R?): List<Char> {\n return

sortedWith(compareBy(selector))\n}\n\n/**\n * Returns a list of all elements sorted descending according to natural sort order of the value returned by specified [selector] function.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\npublic inline fun <T, R : Comparable<R>> Array<out T>.sortedByDescending(crossinline selector: (T) -> R?): List<T> {\n return sortedWith(compareByDescending(selector))\n}\n\n/**\n * Returns a list of all elements sorted descending according to natural sort order of the value returned by specified [selector] function.\n */\npublic inline fun <R : Comparable<R>> ByteArray.sortedByDescending(crossinline selector: (Byte) -> R?): List<Byte> {\n return sortedWith(compareByDescending(selector))\n}\n\n/**\n * Returns a list of all elements sorted descending according to natural sort order of the value returned by specified [selector] function.\n */\npublic inline fun <R : Comparable<R>>
ShortArray.sortedByDescending(crossinline selector: (Short) -> R?): List<Short> {\n return sortedWith(compareByDescending(selector))\n}\n\n/**\n * Returns a list of all elements sorted descending according to natural sort order of the value returned by specified [selector] function.\n */\npublic inline fun <R : Comparable<R>> IntArray.sortedByDescending(crossinline selector: (Int) -> R?): List<Int> {\n return sortedWith(compareByDescending(selector))\n}\n\n/**\n * Returns a list of all elements sorted descending according to natural sort order of the value returned by specified [selector] function.\n */\npublic inline fun <R : Comparable<R>> LongArray.sortedByDescending(crossinline selector: (Long) -> R?): List<Long> {\n return sortedWith(compareByDescending(selector))\n}\n\n/**\n * Returns a list of all elements sorted descending according to natural sort order of the value returned by specified [selector] function.\n */\npublic inline fun <R : Comparable<R>> FloatArray.sortedByDescending(crossinline
selector: (Float) -> R?): List<Float> {\n return sortedWith(compareByDescending(selector))\n}\n\n/**\n * Returns a list of all elements sorted descending according to natural sort order of the value returned by specified [selector] function.\n */\npublic inline fun <R : Comparable<R>> DoubleArray.sortedByDescending(crossinline selector: (Double) -> R?): List<Double> {\n return sortedWith(compareByDescending(selector))\n}\n\n/**\n * Returns a list of all elements sorted descending according to natural sort order of the value returned by specified [selector] function.\n */\npublic inline fun <R : Comparable<R>> BooleanArray.sortedByDescending(crossinline selector: (Boolean) -> R?): List<Boolean> {\n return sortedWith(compareByDescending(selector))\n}\n\n/**\n * Returns a list of all elements sorted descending according to natural sort order of the value returned by specified [selector] function.\n */\npublic inline fun <R : Comparable<R>> CharArray.sortedByDescending(crossinline
selector: (Char) -> R?): List<Char> {\n return sortedWith(compareByDescending(selector))\n}\n\n/**\n * Returns a list of all elements sorted descending according to their natural sort order.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\npublic fun <T : Comparable<T>> Array<out T>.sortedDescending(): List<T> {\n return sortedWith(reverseOrder())\n}\n\n/**\n * Returns a list of all elements sorted descending according to their natural sort order.\n */\npublic fun ByteArray.sortedDescending(): List<Byte> {\n return copyOf().apply { sort() }.reversed()\n}\n\n/**\n * Returns a list of all elements sorted descending according to their natural sort order.\n */\npublic fun ShortArray.sortedDescending(): List<Short> {\n return copyOf().apply { sort() }.reversed()\n}\n\n/**\n * Returns a list of all elements sorted descending according to their natural sort order.\n */\npublic
fun IntArray.sortedDescending(): List<Int> {\n return copyOf().apply { sort() }.reversed()\n}\n\n/**\n * Returns a list of all elements sorted descending according to their natural sort order.\n */\npublic fun LongArray.sortedDescending(): List<Long> {\n return copyOf().apply { sort() }.reversed()\n}\n\n/**\n * Returns a list of all elements sorted descending according to their natural sort order.\n */\npublic fun FloatArray.sortedDescending(): List<Float> {\n return copyOf().apply { sort() }.reversed()\n}\n\n/**\n * Returns a list of all elements sorted descending according to their natural sort order.\n */\npublic fun DoubleArray.sortedDescending(): List<Double> {\n return copyOf().apply { sort() }.reversed()\n}\n\n/**\n * Returns a list of all elements sorted descending according to their natural sort order.\n */\npublic fun CharArray.sortedDescending(): List<Char> {\n return copyOf().apply { sort() }.reversed()\n}\n\n/**\n * Returns a list of all elements sorted

according to the specified [comparator].\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\npublic fun <T> Array<out T>.sortedWith(comparator: Comparator<in T>): List<T> {\n   return sortedArrayWith(comparator).asList()\n}\n\n/**\n * Returns a list of all elements sorted according to the specified [comparator].\n */\npublic fun ByteArray.sortedWith(comparator: Comparator<in Byte>): List<Byte> {\n   return toTypedArray().apply { sortWith(comparator) }.asList()\n}\n\n/**\n * Returns a list of all elements sorted according to the specified [comparator].\n */\npublic fun ShortArray.sortedWith(comparator: Comparator<in Short>): List<Short> {\n   return toTypedArray().apply { sortWith(comparator) }.asList()\n}\n\n/**\n * Returns a list of all elements sorted according to the specified [comparator].\n */\npublic fun IntArray.sortedWith(comparator: Comparator<in Int>): List<Int> {\n   return toTypedArray().apply { sortWith(comparator) }.asList()\n}\n\n/**\n * Returns a list of all elements sorted according to the specified [comparator].\n */\npublic fun LongArray.sortedWith(comparator: Comparator<in Long>): List<Long> {\n   return toTypedArray().apply { sortWith(comparator) }.asList()\n}\n\n/**\n * Returns a list of all elements sorted according to the specified [comparator].\n */\npublic fun FloatArray.sortedWith(comparator: Comparator<in Float>): List<Float> {\n   return toTypedArray().apply { sortWith(comparator) }.asList()\n}\n\n/**\n * Returns a list of all elements sorted according to the specified [comparator].\n */\npublic fun DoubleArray.sortedWith(comparator: Comparator<in Double>): List<Double> {\n   return toTypedArray().apply { sortWith(comparator) }.asList()\n}\n\n/**\n * Returns a list of all elements sorted according to the specified [comparator].\n */\npublic fun BooleanArray.sortedWith(comparator: Comparator<in Boolean>): List<Boolean> {\n   return toTypedArray().apply { sortWith(comparator) }.asList()\n}\n\n/**\n * Returns a list of all elements sorted according to the specified [comparator].\n */\npublic fun CharArray.sortedWith(comparator: Comparator<in Char>): List<Char> {\n   return toTypedArray().apply { sortWith(comparator) }.asList()\n}\n\n/**\n * Returns a [List] that wraps the original array.\n */\npublic expect fun <T> Array<out T>.asList(): List<T>\n\n/**\n * Returns a [List] that wraps the original array.\n */\npublic expect fun ByteArray.asList(): List<Byte>\n\n/**\n * Returns a [List] that wraps the original array.\n */\npublic expect fun ShortArray.asList(): List<Short>\n\n/**\n * Returns a [List] that wraps the original array.\n */\npublic expect fun IntArray.asList(): List<Int>\n\n/**\n * Returns a [List] that wraps the original array.\n */\npublic expect fun LongArray.asList(): List<Long>\n\n/**\n * Returns a [List] that wraps the original array.\n */\npublic expect fun FloatArray.asList(): List<Float>\n\n/**\n * Returns a [List] that wraps
the original array.\n */\npublic expect fun DoubleArray.asList(): List<Double>\n\n/**\n * Returns a [List] that wraps the original array.\n */\npublic expect fun BooleanArray.asList(): List<Boolean>\n\n/**\n * Returns a [List] that wraps the original array.\n */\npublic expect fun CharArray.asList(): List<Char>\n\n/**\n * Returns `true` if the two specified arrays are *deeply* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * If two corresponding elements are nested arrays, they are also compared deeply.\n * If any of arrays contains itself on any nesting level the behavior is undefined.\n * \n * The elements of other types are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@SinceKotlin(\"1.1\")\npublic expect infix fun <T> Array<out T>.contentDeepEquals(other: Array<out T>): Boolean\n\n/**\n * Returns a
hash code based on the contents of this array as if it is [List].\n * Nested arrays are treated as lists too.\n * \n * If any of arrays contains itself on any nesting level the behavior is undefined.\n */\n@SinceKotlin(\"1.1\")\npublic expect fun <T> Array<out T>.contentDeepHashCode(): Int\n\n/**\n * Returns a string representation of the contents of this array as if it is a [List].\n * Nested arrays are treated as lists too.\n * \n * If any of arrays contains itself on any nesting level that reference\n * is rendered as `\"[...]\"` to prevent recursion.\n * \n * @sample samples.collections.Arrays.ContentOperations.contentDeepToString\n */\n@SinceKotlin(\"1.1\")\npublic expect fun <T> Array<out T>.contentDeepToString(): String\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For
floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@SinceKotlin(\"1.1\")\npublic expect infix fun <T> Array<out T>.contentEquals(other: Array<out T>):

Boolean\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@SinceKotlin(\"1.1\")\npublic expect infix fun ByteArray.contentEquals(other: ByteArray): Boolean\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@SinceKotlin(\"1.1\")\npublic expect infix fun ShortArray.contentEquals(other: ShortArray): Boolean\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@SinceKotlin(\"1.1\")\npublic expect infix fun IntArray.contentEquals(other: IntArray): Boolean\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@SinceKotlin(\"1.1\")\npublic expect infix fun LongArray.contentEquals(other: LongArray): Boolean\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@SinceKotlin(\"1.1\")\npublic expect infix fun FloatArray.contentEquals(other: FloatArray): Boolean\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@SinceKotlin(\"1.1\")\npublic expect infix fun DoubleArray.contentEquals(other: DoubleArray): Boolean\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@SinceKotlin(\"1.1\")\npublic expect infix fun BooleanArray.contentEquals(other: BooleanArray): Boolean\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@SinceKotlin(\"1.1\")\npublic expect infix fun CharArray.contentEquals(other: CharArray): Boolean\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n@SinceKotlin(\"1.1\")\npublic expect fun <T> Array<out T>.contentHashCode(): Int\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n@SinceKotlin(\"1.1\")\npublic expect fun ByteArray.contentHashCode(): Int\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n@SinceKotlin(\"1.1\")\npublic expect fun ShortArray.contentHashCode(): Int\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n@SinceKotlin(\"1.1\")\npublic expect fun IntArray.contentHashCode(): Int\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n@SinceKotlin(\"1.1\")\npublic expect fun LongArray.contentHashCode(): Int\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n@SinceKotlin(\"1.1\")\npublic expect fun FloatArray.contentHashCode(): Int\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n@SinceKotlin(\"1.1\")\npublic expect fun DoubleArray.contentHashCode(): Int\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n@SinceKotlin(\"1.1\")\npublic expect fun BooleanArray.contentHashCode(): Int\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n@SinceKotlin(\"1.1\")\npublic expect fun

CharArray.contentHashCode(): Int\n\n/**\n * Returns a string representation of the contents of the specified array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n */\n@SinceKotlin(\"1.1\")\npublic expect fun <T> Array<out T>.contentToString(): String\n\n/**\n * Returns a string representation of the contents of the specified array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n */\n@SinceKotlin(\"1.1\")\npublic expect fun ByteArray.contentToString(): String\n\n/**\n * Returns
a string representation of the contents of the specified array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n */\n@SinceKotlin(\"1.1\")\npublic expect fun ShortArray.contentToString(): String\n\n/**\n * Returns a string representation of the contents of the specified array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n */\n@SinceKotlin(\"1.1\")\npublic expect fun IntArray.contentToString(): String\n\n/**\n * Returns a string representation of the contents of the specified array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n */\n@SinceKotlin(\"1.1\")\npublic expect fun LongArray.contentToString(): String\n\n/**\n * Returns a string representation of the contents of the specified array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n */\n@SinceKotlin(\"1.1\")\npublic expect fun
FloatArray.contentToString(): String\n\n/**\n * Returns a string representation of the contents of the specified array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n */\n@SinceKotlin(\"1.1\")\npublic expect fun DoubleArray.contentToString(): String\n\n/**\n * Returns a string representation of the contents of the specified array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n */\n@SinceKotlin(\"1.1\")\npublic expect fun BooleanArray.contentToString(): String\n\n/**\n * Returns a string representation of the contents of the specified array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n */\n@SinceKotlin(\"1.1\")\npublic expect fun CharArray.contentToString(): String\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even
specify the subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n */\n@SinceKotlin(\"1.3\")\npublic expect fun <T> Array<out T>.copyInto(destination: Array<T>, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): Array<T>\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination]
array.\n */\n@SinceKotlin(\"1.3\")\npublic expect fun ByteArray.copyInto(destination: ByteArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): ByteArray\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n * \n * @param

destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit
into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n */\n@SinceKotlin(\"1.3\")\npublic expect fun ShortArray.copyInto(destination: ShortArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): ShortArray\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException]
when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n */\n@SinceKotlin(\"1.3\")\npublic expect fun IntArray.copyInto(destination: IntArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): IntArray\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy,
0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n */\n@SinceKotlin(\"1.3\")\npublic expect fun LongArray.copyInto(destination: LongArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): LongArray\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy
to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n */\n@SinceKotlin(\"1.3\")\npublic expect fun FloatArray.copyInto(destination: FloatArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): FloatArray\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n
* It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the

subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n */\n@SinceKotlin(\"1.3\")\npublic expect fun DoubleArray.copyInto(destination: DoubleArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): DoubleArray\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n */\n@SinceKotlin(\"1.3\")\npublic expect fun BooleanArray.copyInto(destination: BooleanArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): BooleanArray\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n
* @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n */\n@SinceKotlin(\"1.3\")\npublic expect fun CharArray.copyInto(destination: CharArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): CharArray\n\n/**\n * Returns new array which is a copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOf\n */\n@Suppress(\"NO_ACTUAL_FOR_EXPECT\")\npublic expect fun <T> Array<T>.copyOf(): Array<T>\n\n/**\n * Returns new array which is a copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOf\n */\npublic expect fun ByteArray.copyOf(): ByteArray\n\n/**\n * Returns new array which is a copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOf\n */\npublic
expect fun ShortArray.copyOf(): ShortArray\n\n/**\n * Returns new array which is a copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOf\n */\npublic expect fun IntArray.copyOf(): IntArray\n\n/**\n * Returns new array which is a copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOf\n */\npublic expect fun LongArray.copyOf(): LongArray\n\n/**\n * Returns new array which is a copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOf\n */\npublic expect fun FloatArray.copyOf(): FloatArray\n\n/**\n * Returns new array which is a copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOf\n */\npublic expect fun DoubleArray.copyOf(): DoubleArray\n\n/**\n * Returns new array which is a copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOf\n */\npublic expect fun BooleanArray.copyOf(): BooleanArray\n\n/**\n
* Returns new array which is a copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOf\n */\npublic expect fun CharArray.copyOf(): CharArray\n\n/**\n * Returns new array which is a copy of the original array, resized to the given [newSize].\n * The copy is either truncated or padded at the end with zero values if necessary.\n * \n * - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].\n * - If [newSize] is greater than the size of

the original array, the extra elements in the copy array are filled with zero values.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n */\npublic expect fun ByteArray.copyOf(newSize: Int): ByteArray\n\n/**\n * Returns new array which is a copy of the original array, resized to the given [newSize].\n * The copy is either truncated or padded at the end with zero values if necessary.\n * \n * - If [newSize] is less than
the size of the original array, the copy array is truncated to the [newSize].\n * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with zero values.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n */\npublic expect fun ShortArray.copyOf(newSize: Int): ShortArray\n\n/**\n * Returns new array which is a copy of the original array, resized to the given [newSize].\n * The copy is either truncated or padded at the end with zero values if necessary.\n * \n * - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].\n * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with zero values.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n */\npublic expect fun IntArray.copyOf(newSize: Int): IntArray\n\n/**\n * Returns new array which is a copy of the
original array, resized to the given [newSize].\n * The copy is either truncated or padded at the end with zero values if necessary.\n * \n * - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].\n * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with zero values.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n */\npublic expect fun LongArray.copyOf(newSize: Int): LongArray\n\n/**\n * Returns new array which is a copy of the original array, resized to the given [newSize].\n * The copy is either truncated or padded at the end with zero values if necessary.\n * \n * - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].\n * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with zero values.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n */\npublic expect fun FloatArray.copyOf(newSize: Int): FloatArray\n\n/**\n * Returns new array which is a copy of the original array, resized to the given [newSize].\n * The copy is either truncated or padded at the end with zero values if necessary.\n * \n * - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].\n * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with zero values.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n */\npublic expect fun DoubleArray.copyOf(newSize: Int): DoubleArray\n\n/**\n * Returns new array which is a copy of the original array, resized to the given [newSize].\n * The copy is either truncated or padded at the end with `false` values if necessary.\n * \n * - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].\n
* - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with `false` values.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n */\npublic expect fun BooleanArray.copyOf(newSize: Int): BooleanArray\n\n/**\n * Returns new array which is a copy of the original array, resized to the given [newSize].\n * The copy is either truncated or padded at the end with null char (`\\u0000`) values if necessary.\n * \n * - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].\n * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with null char (`\\u0000`) values.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n */\npublic expect fun CharArray.copyOf(newSize: Int): CharArray\n\n/**\n * Returns new array which is a copy of the original array, resized to the given
[newSize].\n * The copy is either truncated or padded at the end with `null` values if necessary.\n * \n * - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].\n * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with `null` values.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.resizingCopyOf\n */\n@Suppress(\"NO_ACTUAL_FOR_EXPECT\")\npublic expect fun <T> Array<T>.copyOf(newSize: Int): Array<T?>\n\n/**\n * Returns a new array which is a copy of the specified range of the original array.\n * \n *

@param fromIndex the start of the range (inclusive), must be in `0..array.size`\n * @param toIndex the end of the range (exclusive), must be in `fromIndex..array.size`\n */\n@Suppress(\"NO_ACTUAL_FOR_EXPECT\")\npublic expect fun <T> Array<T>.copyOfRange(fromIndex: Int, toIndex: Int): Array<T>\n\n/**\n * Returns a new array which is a copy of the specified range
of the original array.\n * \n * @param fromIndex the start of the range (inclusive), must be in `0..array.size`\n * @param toIndex the end of the range (exclusive), must be in `fromIndex..array.size`\n */\npublic expect fun ByteArray.copyOfRange(fromIndex: Int, toIndex: Int): ByteArray\n\n/**\n * Returns a new array which is a copy of the specified range of the original array.\n * \n * @param fromIndex the start of the range (inclusive), must be in `0..array.size`\n * @param toIndex the end of the range (exclusive), must be in `fromIndex..array.size`\n */\npublic expect fun ShortArray.copyOfRange(fromIndex: Int, toIndex: Int): ShortArray\n\n/**\n * Returns a new array which is a copy of the specified range of the original array.\n * \n * @param fromIndex the start of the range (inclusive), must be in `0..array.size`\n * @param toIndex the end of the range (exclusive), must be in `fromIndex..array.size`\n */\npublic expect fun IntArray.copyOfRange(fromIndex: Int, toIndex: Int): IntArray\n\n/**\n
* Returns a new array which is a copy of the specified range of the original array.\n * \n * @param fromIndex the start of the range (inclusive), must be in `0..array.size`\n * @param toIndex the end of the range (exclusive), must be in `fromIndex..array.size`\n */\npublic expect fun LongArray.copyOfRange(fromIndex: Int, toIndex: Int): LongArray\n\n/**\n * Returns a new array which is a copy of the specified range of the original array.\n * \n * @param fromIndex the start of the range (inclusive), must be in `0..array.size`\n * @param toIndex the end of the range (exclusive), must be in `fromIndex..array.size`\n */\npublic expect fun FloatArray.copyOfRange(fromIndex: Int, toIndex: Int): FloatArray\n\n/**\n * Returns a new array which is a copy of the specified range of the original array.\n * \n * @param fromIndex the start of the range (inclusive), must be in `0..array.size`\n * @param toIndex the end of the range (exclusive), must be in `fromIndex..array.size`\n */\npublic
expect fun DoubleArray.copyOfRange(fromIndex: Int, toIndex: Int): DoubleArray\n\n/**\n * Returns a new array which is a copy of the specified range of the original array.\n * \n * @param fromIndex the start of the range (inclusive), must be in `0..array.size`\n * @param toIndex the end of the range (exclusive), must be in `fromIndex..array.size`\n */\npublic expect fun BooleanArray.copyOfRange(fromIndex: Int, toIndex: Int): BooleanArray\n\n/**\n * Returns a new array which is a copy of the specified range of the original array.\n * \n * @param fromIndex the start of the range (inclusive), must be in `0..array.size`\n * @param toIndex the end of the range (exclusive), must be in `fromIndex..array.size`\n */\npublic expect fun CharArray.copyOfRange(fromIndex: Int, toIndex: Int): CharArray\n\n/**\n * Returns the range of valid indices for the array.\n */\npublic val <T> Array<out T>.indices: IntRange\n   get() = IntRange(0, lastIndex)\n\n/**\n * Returns the range of valid indices for
the
array.\n */\npublic val ByteArray.indices: IntRange\n   get() = IntRange(0, lastIndex)\n\n/**\n * Returns the range of valid indices for the array.\n */\npublic val ShortArray.indices: IntRange\n   get() = IntRange(0, lastIndex)\n\n/**\n * Returns the range of valid indices for the array.\n */\npublic val IntArray.indices: IntRange\n   get() = IntRange(0, lastIndex)\n\n/**\n * Returns the range of valid indices for the array.\n */\npublic val LongArray.indices: IntRange\n   get() = IntRange(0, lastIndex)\n\n/**\n * Returns the range of valid indices for the array.\n */\npublic val FloatArray.indices: IntRange\n   get() = IntRange(0, lastIndex)\n\n/**\n * Returns the range of valid indices for the array.\n */\npublic val DoubleArray.indices: IntRange\n   get() = IntRange(0, lastIndex)\n\n/**\n * Returns the range of valid indices for the array.\n */\npublic val BooleanArray.indices: IntRange\n   get() = IntRange(0, lastIndex)\n\n/**\n * Returns the range of valid indices for the
array.\n */\npublic val CharArray.indices: IntRange\n   get() = IntRange(0, lastIndex)\n\n/**\n * Returns `true` if the array is empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.isEmpty(): Boolean {\n   return size == 0\n}\n\n/**\n * Returns `true` if the array is empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.isEmpty(): Boolean {\n   return size == 0\n}\n\n/**\n * Returns `true` if the array is empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.isEmpty(): Boolean {\n   return size == 0\n}\n\n/**\n * Returns `true` if the array is empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.isEmpty():

Boolean {\n   return size == 0\n}\n\n/**\n * Returns `true` if the array is empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.isEmpty(): Boolean {\n   return size == 0\n}\n\n/**\n * Returns `true` if the array is empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.isEmpty(): Boolean {\n   return size == 0\n}\n\n/**\n * Returns `true` if the array is empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.isEmpty(): Boolean {\n   return size == 0\n}\n\n/**\n * Returns `true` if the array is empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.isEmpty(): Boolean {\n   return size == 0\n}\n\n/**\n * Returns `true` if the array is empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.isEmpty(): Boolean {\n   return size == 0\n}\n\n/**\n * Returns `true` if the array is not empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.isNotEmpty(): Boolean {\n   return !isEmpty()\n}\n\n/**\n * Returns `true` if the array is not empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.isNotEmpty(): Boolean {\n   return !isEmpty()\n}\n\n/**\n * Returns `true` if the array is not empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.isNotEmpty(): Boolean
{\n   return !isEmpty()\n}\n\n/**\n * Returns `true` if the array is not empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.isNotEmpty(): Boolean {\n   return !isEmpty()\n}\n\n/**\n * Returns `true` if the array is not empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.isNotEmpty(): Boolean {\n   return !isEmpty()\n}\n\n/**\n * Returns `true` if the array is not empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.isNotEmpty(): Boolean {\n   return !isEmpty()\n}\n\n/**\n * Returns `true` if the array is not empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.isNotEmpty(): Boolean {\n   return !isEmpty()\n}\n\n/**\n * Returns `true` if the array is not empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.isNotEmpty(): Boolean {\n   return !isEmpty()\n}\n\n/**\n * Returns `true` if the array is not empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.isNotEmpty(): Boolean
{\n   return !isEmpty()\n}\n\n/**\n * Returns the last valid index for the array.\n */\npublic val <T> Array<out T>.lastIndex: Int\n   get() = size - 1\n\n/**\n * Returns the last valid index for the array.\n */\npublic val ByteArray.lastIndex: Int\n   get() = size - 1\n\n/**\n * Returns the last valid index for the array.\n */\npublic val ShortArray.lastIndex: Int\n   get() = size - 1\n\n/**\n * Returns the last valid index for the array.\n */\npublic val IntArray.lastIndex: Int\n   get() = size - 1\n\n/**\n * Returns the last valid index for the array.\n */\npublic val LongArray.lastIndex: Int\n   get() = size - 1\n\n/**\n * Returns the last valid index for the array.\n */\npublic val FloatArray.lastIndex: Int\n   get() = size - 1\n\n/**\n * Returns the last valid index for the array.\n */\npublic val DoubleArray.lastIndex: Int\n   get() = size - 1\n\n/**\n * Returns the last valid index for the array.\n */\npublic val BooleanArray.lastIndex: Int\n   get() = size - 1\n\n/**
 * Returns the last valid index for the array.\n */\npublic val CharArray.lastIndex: Int\n   get() = size - 1\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n */\n@Suppress(\"NO_ACTUAL_FOR_EXPECT\")\npublic expect operator fun <T> Array<T>.plus(element: T): Array<T>\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n */\npublic expect operator fun ByteArray.plus(element: Byte): ByteArray\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n */\npublic expect operator fun ShortArray.plus(element: Short): ShortArray\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n */\npublic expect operator fun IntArray.plus(element: Int): IntArray\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n */\npublic expect operator fun
LongArray.plus(element: Long): LongArray\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n */\npublic expect operator fun FloatArray.plus(element: Float): FloatArray\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n */\npublic expect operator fun DoubleArray.plus(element: Double): DoubleArray\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n */\npublic expect operator fun BooleanArray.plus(element: Boolean): BooleanArray\n\n/**\n * Returns an array containing all elements of the

original array and then the given [element].\n */\npublic expect operator fun CharArray.plus(element: Char): CharArray\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n */\n@Suppress(\"NO_ACTUAL_FOR_EXPECT\")\npublic expect operator fun <T> Array<T>.plus(elements:
Collection<T>): Array<T>\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n */\npublic expect operator fun ByteArray.plus(elements: Collection<Byte>): ByteArray\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n */\npublic expect operator fun ShortArray.plus(elements: Collection<Short>): ShortArray\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n */\npublic expect operator fun IntArray.plus(elements: Collection<Int>): IntArray\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n */\npublic expect operator fun LongArray.plus(elements: Collection<Long>): LongArray\n\n/**\n * Returns an array containing all elements of the original array and then all elements of
the given [elements] collection.\n */\npublic expect operator fun FloatArray.plus(elements: Collection<Float>): FloatArray\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n */\npublic expect operator fun DoubleArray.plus(elements: Collection<Double>): DoubleArray\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n */\npublic expect operator fun BooleanArray.plus(elements: Collection<Boolean>): BooleanArray\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n */\npublic expect operator fun CharArray.plus(elements: Collection<Char>): CharArray\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n */\n@Suppress(\"NO_ACTUAL_FOR_EXPECT\")\npublic expect operator fun <T> Array<T>.plus(elements:
Array<out T>): Array<T>\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n */\npublic expect operator fun ByteArray.plus(elements: ByteArray): ByteArray\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n */\npublic expect operator fun ShortArray.plus(elements: ShortArray): ShortArray\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n */\npublic expect operator fun IntArray.plus(elements: IntArray): IntArray\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n */\npublic expect operator fun LongArray.plus(elements: LongArray): LongArray\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n
*/\npublic expect operator fun FloatArray.plus(elements: FloatArray): FloatArray\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n */\npublic expect operator fun DoubleArray.plus(elements: DoubleArray): DoubleArray\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n */\npublic expect operator fun BooleanArray.plus(elements: BooleanArray): BooleanArray\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n */\npublic expect operator fun CharArray.plus(elements: CharArray): CharArray\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n */\n@Suppress(\"NO_ACTUAL_FOR_EXPECT\")\npublic expect fun <T> Array<T>.plusElement(element: T): Array<T>\n\n/**\n * Sorts the array in-place.\n */\npublic expect fun IntArray.sort():
Unit\n\n/**\n * Sorts the array in-place.\n */\npublic expect fun LongArray.sort(): Unit\n\n/**\n * Sorts the array in-place.\n */\npublic expect fun ByteArray.sort(): Unit\n\n/**\n * Sorts the array in-place.\n */\npublic expect fun ShortArray.sort(): Unit\n\n/**\n * Sorts the array in-place.\n */\npublic expect fun DoubleArray.sort(): Unit\n\n/**\n * Sorts the array in-place.\n */\npublic expect fun FloatArray.sort(): Unit\n\n/**\n * Sorts the array in-place.\n */\npublic expect fun CharArray.sort(): Unit\n\n/**\n * Sorts the array in-place according to the natural order of its

elements.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\npublic expect fun <T : Comparable<T>> Array<out T>.sort(): Unit\n\n/**\n * Sorts the array in-place according to the order specified by the given [comparator].\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after
sorting.\n */\npublic expect fun <T> Array<out T>.sortWith(comparator: Comparator<in T>): Unit\n\n/**\n * Returns an array of Boolean containing all of the elements of this generic array.\n */\npublic fun Array<out Boolean>.toBooleanArray(): BooleanArray {\n   return BooleanArray(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of Byte containing all of the elements of this generic array.\n */\npublic fun Array<out Byte>.toByteArray(): ByteArray {\n   return ByteArray(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of Char containing all of the elements of this generic array.\n */\npublic fun Array<out Char>.toCharArray(): CharArray {\n   return CharArray(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of Double containing all of the elements of this generic array.\n */\npublic fun Array<out Double>.toDoubleArray(): DoubleArray {\n   return DoubleArray(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of Float containing all of
the elements of this generic array.\n */\npublic fun Array<out Float>.toFloatArray(): FloatArray {\n   return FloatArray(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of Int containing all of the elements of this generic array.\n */\npublic fun Array<out Int>.toIntArray(): IntArray {\n   return IntArray(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of Long containing all of the elements of this generic array.\n */\npublic fun Array<out Long>.toLongArray(): LongArray {\n   return LongArray(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of Short containing all of the elements of this generic array.\n */\npublic fun Array<out Short>.toShortArray(): ShortArray {\n   return ShortArray(size) { index -> this[index] }\n}\n\n/**\n * Returns a *typed* object array containing all of the elements of this primitive array.\n */\npublic expect fun ByteArray.toTypedArray(): Array<Byte>\n\n/**\n * Returns a *typed* object array containing all of the elements
of this primitive array.\n */\npublic expect fun ShortArray.toTypedArray(): Array<Short>\n\n/**\n * Returns a *typed* object array containing all of the elements of this primitive array.\n */\npublic expect fun IntArray.toTypedArray(): Array<Int>\n\n/**\n * Returns a *typed* object array containing all of the elements of this primitive array.\n */\npublic expect fun LongArray.toTypedArray(): Array<Long>\n\n/**\n * Returns a *typed* object array containing all of the elements of this primitive array.\n */\npublic expect fun FloatArray.toTypedArray(): Array<Float>\n\n/**\n * Returns a *typed* object array containing all of the elements of this primitive array.\n */\npublic expect fun DoubleArray.toTypedArray(): Array<Double>\n\n/**\n * Returns a *typed* object array containing all of the elements of this primitive array.\n */\npublic expect fun BooleanArray.toTypedArray(): Array<Boolean>\n\n/**\n * Returns a *typed* object array containing all of the elements of this primitive array.\n
*/\npublic expect fun CharArray.toTypedArray(): Array<Char>\n\n/**\n * Returns a [Map] containing key-value pairs provided by [transform] function\n * applied to elements of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n */\npublic inline fun <T, K, V> Array<out T>.associate(transform: (T) -> Pair<K, V>): Map<K, V> {\n   val capacity = mapCapacity(size).coerceAtLeast(16)\n   return associateTo(LinkedHashMap<K, V>(capacity), transform)\n}\n\n/**\n * Returns a [Map] containing key-value pairs provided by [transform] function\n * applied to elements of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n */\npublic inline fun <K, V> ByteArray.associate(transform: (Byte) -> Pair<K, V>): Map<K, V> {\n
    val capacity = mapCapacity(size).coerceAtLeast(16)\n   return associateTo(LinkedHashMap<K, V>(capacity), transform)\n}\n\n/**\n * Returns a [Map] containing key-value pairs provided by [transform] function\n * applied to elements of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n */\npublic inline fun <K, V> ShortArray.associate(transform: (Short) -> Pair<K, V>): Map<K, V> {\n   val capacity = mapCapacity(size).coerceAtLeast(16)\n   return associateTo(LinkedHashMap<K, V>(capacity),

transform)\n}\n\n/**\n * Returns a [Map] containing key-value pairs provided by [transform] function\n * applied to elements of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n */\npublic inline fun <K, V> IntArray.associate(transform:
(Int) -> Pair<K, V>): Map<K, V> {\n val capacity = mapCapacity(size).coerceAtLeast(16)\n return associateTo(LinkedHashMap<K, V>(capacity), transform)\n}\n\n/**\n * Returns a [Map] containing key-value pairs provided by [transform] function\n * applied to elements of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n */\npublic inline fun <K, V> LongArray.associate(transform: (Long) -> Pair<K, V>): Map<K, V> {\n val capacity = mapCapacity(size).coerceAtLeast(16)\n return associateTo(LinkedHashMap<K, V>(capacity), transform)\n}\n\n/**\n * Returns a [Map] containing key-value pairs provided by [transform] function\n * applied to elements of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original
array.\n */\npublic inline fun <K, V> FloatArray.associate(transform: (Float) -> Pair<K, V>): Map<K, V> {\n val capacity = mapCapacity(size).coerceAtLeast(16)\n return associateTo(LinkedHashMap<K, V>(capacity), transform)\n}\n\n/**\n * Returns a [Map] containing key-value pairs provided by [transform] function\n * applied to elements of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n */\npublic inline fun <K, V> DoubleArray.associate(transform: (Double) -> Pair<K, V>): Map<K, V> {\n val capacity = mapCapacity(size).coerceAtLeast(16)\n return associateTo(LinkedHashMap<K, V>(capacity), transform)\n}\n\n/**\n * Returns a [Map] containing key-value pairs provided by [transform] function\n * applied to elements of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * The returned
map preserves the entry iteration order of the original array.\n */\npublic inline fun <K, V> BooleanArray.associate(transform: (Boolean) -> Pair<K, V>): Map<K, V> {\n val capacity = mapCapacity(size).coerceAtLeast(16)\n return associateTo(LinkedHashMap<K, V>(capacity), transform)\n}\n\n/**\n * Returns a [Map] containing key-value pairs provided by [transform] function\n * applied to elements of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n */\npublic inline fun <K, V> CharArray.associate(transform: (Char) -> Pair<K, V>): Map<K, V> {\n val capacity = mapCapacity(size).coerceAtLeast(16)\n return associateTo(LinkedHashMap<K, V>(capacity), transform)\n}\n\n/**\n * Returns a [Map] containing the elements from the given array indexed by the key\n * returned from [keySelector] function applied to each element.\n * \n * If any two
elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n */\npublic inline fun <T, K> Array<out T>.associateBy(keySelector: (T) -> K): Map<K, T> {\n val capacity = mapCapacity(size).coerceAtLeast(16)\n return associateByTo(LinkedHashMap<K, T>(capacity), keySelector)\n}\n\n/**\n * Returns a [Map] containing the elements from the given array indexed by the key\n * returned from [keySelector] function applied to each element.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n */\npublic inline fun <K> ByteArray.associateBy(keySelector: (Byte) -> K): Map<K, Byte> {\n val capacity = mapCapacity(size).coerceAtLeast(16)\n return associateByTo(LinkedHashMap<K, Byte>(capacity), keySelector)\n}\n\n/**\n * Returns
a [Map] containing the elements from the given array indexed by the key\n * returned from [keySelector] function applied to each element.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n */\npublic inline fun <K> ShortArray.associateBy(keySelector: (Short) -> K): Map<K, Short> {\n val capacity = mapCapacity(size).coerceAtLeast(16)\n return associateByTo(LinkedHashMap<K, Short>(capacity),

keySelector)\n}\n\n/**\n * Returns a [Map] containing the elements from the given array indexed by the key\n * returned from [keySelector] function applied to each element.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n */\npublic inline fun <K> IntArray.associateBy(keySelector: (Int) -> K): Map<K, Int> {\n val capacity = mapCapacity(size).coerceAtLeast(16)\n return associateByTo(LinkedHashMap<K, Int>(capacity), keySelector)\n}\n\n/**\n * Returns a [Map] containing the elements from the given array indexed by the key\n * returned from [keySelector] function applied to each element.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n */\npublic inline fun <K> LongArray.associateBy(keySelector: (Long) -> K): Map<K, Long> {\n val capacity = mapCapacity(size).coerceAtLeast(16)\n return associateByTo(LinkedHashMap<K, Long>(capacity), keySelector)\n}\n\n/**\n * Returns a [Map] containing the elements from the given array indexed by the key\n * returned from [keySelector] function applied to each element.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n
 * \n * The returned map preserves the entry iteration order of the original array.\n */\npublic inline fun <K> FloatArray.associateBy(keySelector: (Float) -> K): Map<K, Float> {\n val capacity = mapCapacity(size).coerceAtLeast(16)\n return associateByTo(LinkedHashMap<K, Float>(capacity), keySelector)\n}\n\n/**\n * Returns a [Map] containing the elements from the given array indexed by the key\n * returned from [keySelector] function applied to each element.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n */\npublic inline fun <K> DoubleArray.associateBy(keySelector: (Double) -> K): Map<K, Double> {\n val capacity = mapCapacity(size).coerceAtLeast(16)\n return associateByTo(LinkedHashMap<K, Double>(capacity), keySelector)\n}\n\n/**\n * Returns a [Map] containing the elements from the given array indexed by the key\n * returned
 from [keySelector] function applied to each element.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n */\npublic inline fun <K> BooleanArray.associateBy(keySelector: (Boolean) -> K): Map<K, Boolean> {\n val capacity = mapCapacity(size).coerceAtLeast(16)\n return associateByTo(LinkedHashMap<K, Boolean>(capacity), keySelector)\n}\n\n/**\n * Returns a [Map] containing the elements from the given array indexed by the key\n * returned from [keySelector] function applied to each element.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n */\npublic inline fun <K> CharArray.associateBy(keySelector: (Char) -> K): Map<K, Char> {\n val capacity = mapCapacity(size).coerceAtLeast(16)\n
 return associateByTo(LinkedHashMap<K, Char>(capacity), keySelector)\n}\n\n/**\n * Returns a [Map] containing the values provided by [valueTransform] and indexed by [keySelector] functions applied to elements of the given array.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n */\npublic inline fun <T, K, V> Array<out T>.associateBy(keySelector: (T) -> K, valueTransform: (T) -> V): Map<K, V> {\n val capacity = mapCapacity(size).coerceAtLeast(16)\n return associateByTo(LinkedHashMap<K, V>(capacity), keySelector, valueTransform)\n}\n\n/**\n * Returns a [Map] containing the values provided by [valueTransform] and indexed by [keySelector] functions applied to elements of the given array.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves
 the entry iteration order of the original array.\n */\npublic inline fun <K, V> ByteArray.associateBy(keySelector: (Byte) -> K, valueTransform: (Byte) -> V): Map<K, V> {\n val capacity = mapCapacity(size).coerceAtLeast(16)\n return associateByTo(LinkedHashMap<K, V>(capacity), keySelector, valueTransform)\n}\n\n/**\n * Returns a [Map] containing the values provided by [valueTransform] and indexed by [keySelector] functions applied to elements of the given array.\n * \n * If any two elements would have the same key

returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n */\npublic inline fun <K, V> ShortArray.associateBy(keySelector: (Short) -> K, valueTransform: (Short) -> V): Map<K, V> {\n   val capacity = mapCapacity(size).coerceAtLeast(16)\n   return associateByTo(LinkedHashMap<K, V>(capacity), keySelector, valueTransform)\n}\n\n/**\n * Returns a [Map] containing the values provided
 by [valueTransform] and indexed by [keySelector] functions applied to elements of the given array.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n */\npublic inline fun <K, V> IntArray.associateBy(keySelector: (Int) -> K, valueTransform: (Int) -> V): Map<K, V> {\n   val capacity = mapCapacity(size).coerceAtLeast(16)\n   return associateByTo(LinkedHashMap<K, V>(capacity), keySelector, valueTransform)\n}\n\n/**\n * Returns a [Map] containing the values provided by [valueTransform] and indexed by [keySelector] functions applied to elements of the given array.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n */\npublic inline fun <K, V> LongArray.associateBy(keySelector: (Long) -> K,
 valueTransform: (Long) -> V): Map<K, V> {\n   val capacity = mapCapacity(size).coerceAtLeast(16)\n   return associateByTo(LinkedHashMap<K, V>(capacity), keySelector, valueTransform)\n}\n\n/**\n * Returns a [Map] containing the values provided by [valueTransform] and indexed by [keySelector] functions applied to elements of the given array.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n */\npublic inline fun <K, V> FloatArray.associateBy(keySelector: (Float) -> K, valueTransform: (Float) -> V): Map<K, V> {\n   val capacity = mapCapacity(size).coerceAtLeast(16)\n   return associateByTo(LinkedHashMap<K, V>(capacity), keySelector, valueTransform)\n}\n\n/**\n * Returns a [Map] containing the values provided by [valueTransform] and indexed by [keySelector] functions applied to elements of the given array.\n * \n * If any two elements
 would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n */\npublic inline fun <K, V> DoubleArray.associateBy(keySelector: (Double) -> K, valueTransform: (Double) -> V): Map<K, V> {\n   val capacity = mapCapacity(size).coerceAtLeast(16)\n   return associateByTo(LinkedHashMap<K, V>(capacity), keySelector, valueTransform)\n}\n\n/**\n * Returns a [Map] containing the values provided by [valueTransform] and indexed by [keySelector] functions applied to elements of the given array.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n */\npublic inline fun <K, V> BooleanArray.associateBy(keySelector: (Boolean) -> K, valueTransform: (Boolean) -> V): Map<K, V> {\n   val capacity = mapCapacity(size).coerceAtLeast(16)\n   return associateByTo(LinkedHashMap<K,
 V>(capacity), keySelector, valueTransform)\n}\n\n/**\n * Returns a [Map] containing the values provided by [valueTransform] and indexed by [keySelector] functions applied to elements of the given array.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n */\npublic inline fun <K, V> CharArray.associateBy(keySelector: (Char) -> K, valueTransform: (Char) -> V): Map<K, V> {\n   val capacity = mapCapacity(size).coerceAtLeast(16)\n   return associateByTo(LinkedHashMap<K, V>(capacity), keySelector, valueTransform)\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector] function applied to each element of the given array\n * and value is the element itself.\n * \n * If any two elements would have the same key returned by [keySelector] the
 last one gets added to the map.\n */\npublic inline fun <T, K, M : MutableMap<in K, in T>> Array<out T>.associateByTo(destination: M, keySelector: (T) -> K): M {\n   for (element in this) {\n   destination.put(keySelector(element), element)\n   }\n   return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector] function applied to each element of the given array\n * and value is the element itself.\n * \n * If any two elements would have the same

key returned by [keySelector] the last one gets added to the map.\n */\npublic inline fun <K, M : MutableMap<in K, in Byte>> ByteArray.associateByTo(destination: M, keySelector: (Byte) -> K): M {\n for (element in this) {\n destination.put(keySelector(element), element)\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector] function applied to each element of the given array\n * and value is the element itself.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n */\npublic inline fun <K, M : MutableMap<in K, in Short>> ShortArray.associateByTo(destination: M, keySelector: (Short) -> K): M {\n for (element in this) {\n destination.put(keySelector(element), element)\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector] function applied to each element of the given array\n * and value is the element itself.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n */\npublic inline fun <K, M : MutableMap<in K, in Int>> IntArray.associateByTo(destination: M, keySelector: (Int) -> K): M {\n for (element in this) {\n destination.put(keySelector(element), element)\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector] function applied to each element of the given array\n * and value is the element itself.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n */\npublic inline fun <K, M : MutableMap<in K, in Long>> LongArray.associateByTo(destination: M, keySelector: (Long) -> K): M {\n for (element in this) {\n destination.put(keySelector(element), element)\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector] function applied to each element of the given array\n * and value is the element itself.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n */\npublic inline fun <K, M : MutableMap<in K, in Float>> FloatArray.associateByTo(destination: M, keySelector: (Float) -> K): M {\n for (element in this) {\n destination.put(keySelector(element), element)\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector] function applied to each element of the given array\n * and value is the element itself.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n */\npublic inline fun <K, M : MutableMap<in K, in Double>> DoubleArray.associateByTo(destination: M, keySelector: (Double) -> K): M {\n for (element in this) {\n destination.put(keySelector(element), element)\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector] function applied to each element of the given array\n * and value is the element itself.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n */\npublic inline fun <K, M : MutableMap<in K, in Boolean>> BooleanArray.associateByTo(destination: M, keySelector: (Boolean) -> K): M {\n for (element in this) {\n destination.put(keySelector(element), element)\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector] function applied to each element of the given array\n * and value is the element itself.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n */\npublic inline fun <K, M : MutableMap<in K, in Char>> CharArray.associateByTo(destination: M, keySelector: (Char) -> K): M {\n for (element in this) {\n destination.put(keySelector(element), element)\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector] function and\n * and value is provided by the [valueTransform] function applied to elements of the given array.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n */\npublic inline fun <T, K, V, M : MutableMap<in K, in V>> Array<out T>.associateByTo(destination: M, keySelector: (T) -> K, valueTransform: (T) -> V): M {\n for (element in this) {\n destination.put(keySelector(element), valueTransform(element))\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector] function and\n * and value is provided by the [valueTransform] function applied to elements of the given array.\n *

\n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n */\npublic inline fun <K, V, M : MutableMap<in K, in V>> ByteArray.associateByTo(destination: M, keySelector: (Byte) -> K, valueTransform: (Byte) -> V): M {\n for (element in this) {\n destination.put(keySelector(element), valueTransform(element))\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector] function and\n * and value is provided by the [valueTransform] function applied to elements of the given array.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n */\npublic inline fun <K, V, M : MutableMap<in K, in V>> ShortArray.associateByTo(destination: M, keySelector: (Short) -> K, valueTransform: (Short) -> V): M {\n for (element in this) {\n destination.put(keySelector(element), valueTransform(element))\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector] function and\n * and value is provided by the [valueTransform] function applied to elements of the given array.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n */\npublic inline fun <K, V, M : MutableMap<in K, in V>> IntArray.associateByTo(destination: M, keySelector: (Int) -> K, valueTransform: (Int) -> V): M {\n for (element in this) {\n destination.put(keySelector(element), valueTransform(element))\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector] function and\n * and value is provided by the [valueTransform] function applied to elements of the given array.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n */\npublic inline fun <K, V, M : MutableMap<in K, in V>> LongArray.associateByTo(destination: M, keySelector: (Long) -> K, valueTransform: (Long) -> V): M {\n for (element in this) {\n destination.put(keySelector(element), valueTransform(element))\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector] function and\n * and value is provided by the [valueTransform] function applied to elements of the given array.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n */\npublic inline fun <K, V, M : MutableMap<in K, in V>> FloatArray.associateByTo(destination: M, keySelector: (Float) -> K, valueTransform: (Float) -> V): M {\n for (element in this) {\n destination.put(keySelector(element), valueTransform(element))\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector] function and\n * and value is provided by the [valueTransform] function applied to elements of the given array.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n */\npublic inline fun <K, V, M : MutableMap<in K, in V>> DoubleArray.associateByTo(destination: M, keySelector: (Double) -> K, valueTransform: (Double) -> V): M {\n for (element in this) {\n destination.put(keySelector(element), valueTransform(element))\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector] function and\n * and value is provided by the [valueTransform] function applied to elements of the given array.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n */\npublic inline fun <K, V, M : MutableMap<in K, in V>> BooleanArray.associateByTo(destination:
M, keySelector: (Boolean) -> K, valueTransform: (Boolean) -> V): M {\n for (element in this) {\n destination.put(keySelector(element), valueTransform(element))\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector] function and\n * and value is provided by the [valueTransform] function applied to elements of the given array.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n */\npublic inline fun <K, V, M : MutableMap<in K, in V>> CharArray.associateByTo(destination: M, keySelector: (Char) -> K, valueTransform: (Char) -> V): M {\n for (element in this) {\n destination.put(keySelector(element), valueTransform(element))\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs\n * provided by [transform] function applied

to each element of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n */\npublic inline fun <T, K, V, M : MutableMap<in K, in V>> Array<out T>.associateTo(destination: M, transform: (T) -> Pair<K, V>): M {\n for (element in this) {\n destination += transform(element)\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs\n * provided by [transform] function applied to each element of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n */\npublic inline fun <K, V, M : MutableMap<in K, in V>> ByteArray.associateTo(destination: M, transform: (Byte) -> Pair<K, V>): M {\n for (element in this) {\n destination += transform(element)\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs\n * provided by [transform] function applied to each element of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n */\npublic inline fun <K, V, M : MutableMap<in K, in V>> ShortArray.associateTo(destination: M, transform: (Short) -> Pair<K, V>): M {\n for (element in this) {\n destination += transform(element)\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs\n * provided by [transform] function applied to each element of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n */\npublic inline fun <K, V, M : MutableMap<in K, in V>> IntArray.associateTo(destination: M, transform: (Int) -> Pair<K, V>): M {\n for (element in this) {\n destination += transform(element)\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs\n * provided by [transform] function applied to each element
of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n */\npublic inline fun <K, V, M : MutableMap<in K, in V>> LongArray.associateTo(destination: M, transform: (Long) -> Pair<K, V>): M {\n for (element in this) {\n destination += transform(element)\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs\n * provided by [transform] function applied to each element of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n */\npublic inline fun <K, V, M : MutableMap<in K, in V>> FloatArray.associateTo(destination: M, transform: (Float) -> Pair<K, V>): M {\n for (element in this) {\n destination += transform(element)\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs\n * provided by [transform] function applied to each element of
the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n */\npublic inline fun <K, V, M : MutableMap<in K, in V>> DoubleArray.associateTo(destination: M, transform: (Double) -> Pair<K, V>): M {\n for (element in this) {\n destination += transform(element)\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs\n * provided by [transform] function applied to each element of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n */\npublic inline fun <K, V, M : MutableMap<in K, in V>> BooleanArray.associateTo(destination: M, transform: (Boolean) -> Pair<K, V>): M {\n for (element in this) {\n destination += transform(element)\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs\n * provided by [transform] function applied to each element of
the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n */\npublic inline fun <K, V, M : MutableMap<in K, in V>> CharArray.associateTo(destination: M, transform: (Char) -> Pair<K, V>): M {\n for (element in this) {\n destination += transform(element)\n }\n return destination\n}\n\n/**\n * Appends all elements to the given [destination] collection.\n */\npublic fun <T, C : MutableCollection<in T>> Array<out T>.toCollection(destination: C): C {\n for (item in this) {\n destination.add(item)\n }\n return destination\n}\n\n/**\n * Appends all elements to the given [destination] collection.\n */\npublic fun <C : MutableCollection<in Byte>> ByteArray.toCollection(destination: C): C {\n for (item in this) {\n destination.add(item)\n }\n return destination\n}\n\n/**\n * Appends all elements to the given [destination] collection.\n */\npublic fun <C : MutableCollection<in Short>> ShortArray.toCollection(destination:
C): C {\n for (item in this) {\n destination.add(item)\n }\n return destination\n}\n\n/**\n * Appends all elements to the given [destination] collection.\n */\npublic fun <C : MutableCollection<in Int>>

IntArray.toCollection(destination: C): C {\n for (item in this) {\n destination.add(item)\n }\n return destination\n}\n\n/**\n * Appends all elements to the given [destination] collection.\n */\npublic fun <C : MutableCollection<in Long>> LongArray.toCollection(destination: C): C {\n for (item in this) {\n destination.add(item)\n }\n return destination\n}\n\n/**\n * Appends all elements to the given [destination] collection.\n */\npublic fun <C : MutableCollection<in Float>> FloatArray.toCollection(destination: C): C {\n for (item in this) {\n destination.add(item)\n }\n return destination\n}\n\n/**\n * Appends all elements to the given [destination] collection.\n */\npublic fun <C : MutableCollection<in Double>> DoubleArray.toCollection(destination: C): C {\n for (item in this) {\n destination.add(item)\n }\n return destination\n}\n\n/**\n * Appends all elements to the given [destination] collection.\n */\npublic fun <C : MutableCollection<in Boolean>> BooleanArray.toCollection(destination: C): C {\n for (item in this) {\n destination.add(item)\n }\n return destination\n}\n\n/**\n * Appends all elements to the given [destination] collection.\n */\npublic fun <C : MutableCollection<in Char>> CharArray.toCollection(destination: C): C {\n for (item in this) {\n destination.add(item)\n }\n return destination\n}\n\n/**\n * Returns a [HashSet] of all elements.\n */\npublic fun <T> Array<out T>.toHashSet(): HashSet<T> {\n return toCollection(HashSet<T>(mapCapacity(size)))\n}\n\n/**\n * Returns a [HashSet] of all elements.\n */\npublic fun ByteArray.toHashSet(): HashSet<Byte> {\n return toCollection(HashSet<Byte>(mapCapacity(size)))\n}\n\n/**\n * Returns a [HashSet] of all elements.\n */\npublic fun ShortArray.toHashSet(): HashSet<Short> {\n return toCollection(HashSet<Short>(mapCapacity(size)))\n}\n\n/**\n * Returns a [HashSet] of all elements.\n */\npublic fun IntArray.toHashSet(): HashSet<Int> {\n return toCollection(HashSet<Int>(mapCapacity(size)))\n}\n\n/**\n * Returns a [HashSet] of all elements.\n */\npublic fun LongArray.toHashSet(): HashSet<Long> {\n return toCollection(HashSet<Long>(mapCapacity(size)))\n}\n\n/**\n * Returns a [HashSet] of all elements.\n */\npublic fun FloatArray.toHashSet(): HashSet<Float> {\n return toCollection(HashSet<Float>(mapCapacity(size)))\n}\n\n/**\n * Returns a [HashSet] of all elements.\n */\npublic fun DoubleArray.toHashSet(): HashSet<Double> {\n return toCollection(HashSet<Double>(mapCapacity(size)))\n}\n\n/**\n * Returns a [HashSet] of all elements.\n */\npublic fun BooleanArray.toHashSet(): HashSet<Boolean> {\n return toCollection(HashSet<Boolean>(mapCapacity(size)))\n}\n\n/**\n * Returns a [HashSet] of all elements.\n */\npublic fun CharArray.toHashSet(): HashSet<Char> {\n return toCollection(HashSet<Char>(mapCapacity(size)))\n}\n\n/**\n * Returns a [List] containing all elements.\n */\npublic fun <T> Array<out T>.toList(): List<T> {\n return when (size) {\n 0 -> emptyList()\n 1 -> listOf(this[0])\n else -> this.toMutableList()\n }\n}\n\n/**\n * Returns a [List] containing all elements.\n */\npublic fun ByteArray.toList(): List<Byte> {\n return when (size) {\n 0 -> emptyList()\n 1 -> listOf(this[0])\n else -> this.toMutableList()\n }\n}\n\n/**\n * Returns a [List] containing all elements.\n */\npublic fun ShortArray.toList(): List<Short> {\n return when (size) {\n 0 -> emptyList()\n 1 -> listOf(this[0])\n else -> this.toMutableList()\n }\n}\n\n/**\n * Returns a [List] containing all elements.\n */\npublic fun IntArray.toList(): List<Int> {\n return when (size) {\n 0 -> emptyList()\n 1 -> listOf(this[0])\n else -> this.toMutableList()\n }\n}\n\n/**\n * Returns a [List] containing all elements.\n */\npublic fun LongArray.toList(): List<Long> {\n return when (size) {\n 0 -> emptyList()\n 1 -> listOf(this[0])\n else -> this.toMutableList()\n }\n}\n\n/**\n * Returns a [List] containing all elements.\n */\npublic fun FloatArray.toList(): List<Float> {\n return when (size) {\n 0 -> emptyList()\n 1 -> listOf(this[0])\n else -> this.toMutableList()\n }\n}\n\n/**\n * Returns a [List] containing all elements.\n */\npublic fun DoubleArray.toList(): List<Double> {\n return when (size) {\n 0 -> emptyList()\n 1 -> listOf(this[0])\n else -> this.toMutableList()\n }\n}\n\n/**\n * Returns a [List] containing all elements.\n */\npublic fun BooleanArray.toList(): List<Boolean> {\n return when (size) {\n 0 -> emptyList()\n 1 -> listOf(this[0])\n else -> this.toMutableList()\n }\n}\n\n/**\n * Returns a [List] containing all elements.\n */\npublic fun CharArray.toList(): List<Char> {\n return when (size) {\n 0 -> emptyList()\n 1 -> listOf(this[0])\n else -> this.toMutableList()\n }\n}\n\n/**\n * Returns a [MutableList] filled with all elements of this array.\n

*/\npublic fun <T> Array<out T>.toMutableList(): MutableList<T> {\n   return ArrayList(this.asCollection())\n}\n\n/**\n * Returns a [MutableList] filled with all elements of this array.\n */\npublic fun ByteArray.toMutableList(): MutableList<Byte> {\n   val list = ArrayList<Byte>(size)\n   for (item in this) list.add(item)\n   return list\n}\n\n/**\n * Returns a [MutableList] filled with all elements of this array.\n */\npublic fun ShortArray.toMutableList(): MutableList<Short> {\n   val list = ArrayList<Short>(size)\n   for (item in this) list.add(item)\n   return list\n}\n\n/**\n * Returns a [MutableList] filled with all elements of this array.\n */\npublic fun IntArray.toMutableList(): MutableList<Int> {\n   val list = ArrayList<Int>(size)\n   for (item in this) list.add(item)\n   return list\n}\n\n/**\n * Returns a [MutableList] filled with all elements of this array.\n */\npublic fun LongArray.toMutableList(): MutableList<Long> {\n   val list = ArrayList<Long>(size)\n   for (item in this) list.add(item)\n   return list\n}\n\n/**\n * Returns a [MutableList] filled with all elements of this array.\n */\npublic fun FloatArray.toMutableList(): MutableList<Float> {\n   val list = ArrayList<Float>(size)\n   for (item in this) list.add(item)\n   return list\n}\n\n/**\n * Returns a [MutableList] filled with all elements of this array.\n */\npublic fun DoubleArray.toMutableList(): MutableList<Double> {\n   val list = ArrayList<Double>(size)\n   for (item in this) list.add(item)\n   return list\n}\n\n/**\n * Returns a [MutableList] filled with all elements of this array.\n */\npublic fun BooleanArray.toMutableList(): MutableList<Boolean> {\n   val list = ArrayList<Boolean>(size)\n   for (item in this) list.add(item)\n   return list\n}\n\n/**\n * Returns a [MutableList] filled with all elements of this array.\n */\npublic fun CharArray.toMutableList(): MutableList<Char> {\n   val list = ArrayList<Char>(size)\n   for (item in this) list.add(item)\n   return list\n}\n\n/**\n * Returns a [Set] of all elements.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun <T> Array<out T>.toSet(): Set<T> {\n   return when (size) {\n   0 -> emptySet()\n   1 -> setOf(this[0])\n   else -> toCollection(LinkedHashSet<T>(mapCapacity(size)))\n   }\n}\n\n/**\n * Returns a [Set] of all elements.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun ByteArray.toSet(): Set<Byte> {\n   return when (size) {\n   0 -> emptySet()\n   1 -> setOf(this[0])\n   else -> toCollection(LinkedHashSet<Byte>(mapCapacity(size)))\n   }\n}\n\n/**\n * Returns a [Set] of all elements.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun ShortArray.toSet(): Set<Short> {\n   return when (size) {\n   0 -> emptySet()\n   1 -> setOf(this[0])\n   else -> toCollection(LinkedHashSet<Short>(mapCapacity(size)))\n   }\n}\n\n/**\n * Returns a [Set] of all elements.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun IntArray.toSet(): Set<Int> {\n   return when (size) {\n   0 -> emptySet()\n   1 -> setOf(this[0])\n   else -> toCollection(LinkedHashSet<Int>(mapCapacity(size)))\n   }\n}\n\n/**\n * Returns a [Set] of all elements.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun LongArray.toSet(): Set<Long> {\n   return when (size) {\n   0 -> emptySet()\n   1 -> setOf(this[0])\n   else -> toCollection(LinkedHashSet<Long>(mapCapacity(size)))\n   }\n}\n\n/**\n * Returns a [Set] of all elements.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun FloatArray.toSet(): Set<Float> {\n   return when (size) {\n   0 -> emptySet()\n   1 -> setOf(this[0])\n   else -> toCollection(LinkedHashSet<Float>(mapCapacity(size)))\n   }\n}\n\n/**\n * Returns a [Set] of all elements.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun DoubleArray.toSet(): Set<Double> {\n   return when (size) {\n   0 -> emptySet()\n   1 -> setOf(this[0])\n   else -> toCollection(LinkedHashSet<Double>(mapCapacity(size)))\n   }\n}\n\n/**\n * Returns a [Set] of all elements.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun BooleanArray.toSet(): Set<Boolean> {\n   return when (size) {\n   0 -> emptySet()\n   1 -> setOf(this[0])\n   else -> toCollection(LinkedHashSet<Boolean>(mapCapacity(size)))\n   }\n}\n\n/**\n * Returns a [Set] of all elements.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun CharArray.toSet(): Set<Char> {\n   return when (size) {\n   0 -> emptySet()\n   1 -> setOf(this[0])\n   else -> toCollection(LinkedHashSet<Char>(mapCapacity(size)))\n   }\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being invoked on each element of original array.\n */\npublic inline fun <T, R> Array<out T>.flatMap(transform: (T) -> Iterable<R>): List<R> {\n   return

flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being invoked on each element of original array.\n */\npublic inline fun <R> ByteArray.flatMap(transform: (Byte) -> Iterable<R>): List<R> {\n return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being invoked on each element of original array.\n */\npublic inline fun <R> ShortArray.flatMap(transform: (Short) -> Iterable<R>): List<R> {\n return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being invoked on each element of original array.\n */\npublic inline fun <R> IntArray.flatMap(transform: (Int) -> Iterable<R>): List<R> {\n return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being invoked on each element of original array.\n */\npublic inline fun <R> LongArray.flatMap(transform: (Long) -> Iterable<R>): List<R> {\n return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being invoked on each element of original array.\n */\npublic inline fun <R> FloatArray.flatMap(transform: (Float) -> Iterable<R>): List<R> {\n return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being invoked on each element of original array.\n */\npublic inline fun <R> DoubleArray.flatMap(transform: (Double) -> Iterable<R>): List<R> {\n return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being invoked on each element of original array.\n */\npublic inline fun <R> BooleanArray.flatMap(transform: (Boolean) -> Iterable<R>): List<R> {\n return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being invoked on each element of original array.\n */\npublic inline fun <R> CharArray.flatMap(transform: (Char) -> Iterable<R>): List<R> {\n return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being invoked on each element of original array, to the given [destination].\n */\npublic inline fun <T, R, C : MutableCollection<in R>> Array<out T>.flatMapTo(destination: C, transform: (T) -> Iterable<R>): C {\n for (element in this) {\n val list = transform(element)\n destination.addAll(list)\n }\n return destination\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being invoked on each element of original array, to the given [destination].\n */\npublic inline fun <R, C : MutableCollection<in R>> ByteArray.flatMapTo(destination: C, transform: (Byte) -> Iterable<R>): C {\n for (element in this) {\n val list = transform(element)\n destination.addAll(list)\n }\n return destination\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being invoked on each element of original array, to the given [destination].\n */\npublic inline fun <R, C : MutableCollection<in R>> ShortArray.flatMapTo(destination: C, transform: (Short) -> Iterable<R>): C {\n for (element in this) {\n val list = transform(element)\n destination.addAll(list)\n }\n return destination\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being invoked on each element of original array, to the given [destination].\n */\npublic inline fun <R, C : MutableCollection<in R>> IntArray.flatMapTo(destination: C, transform: (Int) -> Iterable<R>): C {\n for (element in this) {\n val list = transform(element)\n destination.addAll(list)\n }\n return destination\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being invoked on each element of original array, to the given [destination].\n */\npublic inline fun <R, C : MutableCollection<in R>> LongArray.flatMapTo(destination: C, transform: (Long) -> Iterable<R>): C {\n for (element in this) {\n val list = transform(element)\n destination.addAll(list)\n }\n return destination\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being invoked on each element of original array, to the given [destination].\n */\npublic inline fun <R, C : MutableCollection<in R>> FloatArray.flatMapTo(destination: C, transform: (Float) -> Iterable<R>): C {\n for (element in this) {\n val list = transform(element)\n destination.addAll(list)\n }\n return destination\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being invoked on each element of original array, to the given [destination].\n */\npublic inline fun <R, C : MutableCollection<in R>> DoubleArray.flatMapTo(destination: C, transform: (Double) -> Iterable<R>): C {\n for (element in this) {\n val list = transform(element)\n destination.addAll(list)\n }\n return destination\n}\n\n/**\n

* Appends all elements yielded from results of [transform] function being invoked on each element of original array, to the given [destination].\n */\npublic inline fun <R, C : MutableCollection<in R>> BooleanArray.flatMapTo(destination: C, transform: (Boolean) -> Iterable<R>): C {\n for (element in this) {\n val list = transform(element)\n destination.addAll(list)\n }\n return destination\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being invoked on each element of original array, to the given [destination].\n */\npublic inline fun <R, C : MutableCollection<in R>> CharArray.flatMapTo(destination: C, transform: (Char) -> Iterable<R>): C {\n for (element in this) {\n val list = transform(element)\n destination.addAll(list)\n }\n return destination\n}\n\n/**\n * Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each element and returns
a map where each group key is associated with a list of corresponding elements.\n * \n * The returned map preserves the entry iteration order of the keys produced from the original array.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\npublic inline fun <T, K> Array<out T>.groupBy(keySelector: (T) -> K): Map<K, List<T>> {\n return groupByTo(LinkedHashMap<K, MutableList<T>>(), keySelector)\n}\n\n/**\n * Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each element and returns a map where each group key is associated with a list of corresponding elements.\n * \n * The returned map preserves the entry iteration order of the keys produced from the original array.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\npublic inline fun <K> ByteArray.groupBy(keySelector: (Byte) -> K): Map<K, List<Byte>> {\n return groupByTo(LinkedHashMap<K, MutableList<Byte>>(), keySelector)\n}\n\n/**\n
* Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each element and returns a map where each group key is associated with a list of corresponding elements.\n * \n * The returned map preserves the entry iteration order of the keys produced from the original array.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\npublic inline fun <K> ShortArray.groupBy(keySelector: (Short) -> K): Map<K, List<Short>> {\n return groupByTo(LinkedHashMap<K, MutableList<Short>>(), keySelector)\n}\n\n/**\n * Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each element and returns a map where each group key is associated with a list of corresponding elements.\n * \n * The returned map preserves the entry iteration order of the keys produced from the original array.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\npublic
inline fun <K> IntArray.groupBy(keySelector: (Int) -> K): Map<K, List<Int>> {\n return groupByTo(LinkedHashMap<K, MutableList<Int>>(), keySelector)\n}\n\n/**\n * Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each element and returns a map where each group key is associated with a list of corresponding elements.\n * \n * The returned map preserves the entry iteration order of the keys produced from the original array.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\npublic inline fun <K> LongArray.groupBy(keySelector: (Long) -> K): Map<K, List<Long>> {\n return groupByTo(LinkedHashMap<K, MutableList<Long>>(), keySelector)\n}\n\n/**\n * Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each element and returns a map where each group key is associated with a list of corresponding elements.\n * \n * The returned map preserves
the entry iteration order of the keys produced from the original array.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\npublic inline fun <K> FloatArray.groupBy(keySelector: (Float) -> K): Map<K, List<Float>> {\n return groupByTo(LinkedHashMap<K, MutableList<Float>>(), keySelector)\n}\n\n/**\n * Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each element and returns a map where each group key is associated with a list of corresponding elements.\n * \n * The returned map preserves the entry iteration order of the keys produced from the original array.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\npublic inline fun <K> DoubleArray.groupBy(keySelector: (Double) -> K): Map<K, List<Double>> {\n return groupByTo(LinkedHashMap<K, MutableList<Double>>(), keySelector)\n}\n\n/**\n * Groups elements of the

original array by the key returned by the given [keySelector]
function\n * applied to each element and returns a map where each group key is associated with a list of corresponding elements.\n * \n * The returned map preserves the entry iteration order of the keys produced from the original array.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\npublic inline fun <K> BooleanArray.groupBy(keySelector: (Boolean) -> K): Map<K, List<Boolean>> {\n return groupByTo(LinkedHashMap<K, MutableList<Boolean>>(), keySelector)\n}\n\n/**\n * Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each element and returns a map where each group key is associated with a list of corresponding elements.\n * \n * The returned map preserves the entry iteration order of the keys produced from the original array.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\npublic inline fun <K> CharArray.groupBy(keySelector: (Char) -> K): Map<K, List<Char>> {\n
return groupByTo(LinkedHashMap<K, MutableList<Char>>(), keySelector)\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by the given [keySelector] function applied to the element\n * and returns a map where each group key is associated with a list of corresponding values.\n * \n * The returned map preserves the entry iteration order of the keys produced from the original array.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <T, K, V> Array<out T>.groupBy(keySelector: (T) -> K, valueTransform: (T) -> V): Map<K, List<V>> {\n return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by the given [keySelector] function applied to the element\n * and returns a map where each group
key is associated with a list of corresponding values.\n * \n * The returned map preserves the entry iteration order of the keys produced from the original array.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <K, V> ByteArray.groupBy(keySelector: (Byte) -> K, valueTransform: (Byte) -> V): Map<K, List<V>> {\n return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by the given [keySelector] function applied to the element\n * and returns a map where each group key is associated with a list of corresponding values.\n * \n * The returned map preserves the entry iteration order of the keys produced from the original array.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <K, V> ShortArray.groupBy(keySelector:
(Short) -> K, valueTransform: (Short) -> V): Map<K, List<V>> {\n return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by the given [keySelector] function applied to the element\n * and returns a map where each group key is associated with a list of corresponding values.\n * \n * The returned map preserves the entry iteration order of the keys produced from the original array.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <K, V> IntArray.groupBy(keySelector: (Int) -> K, valueTransform: (Int) -> V): Map<K, List<V>> {\n return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by
the given [keySelector] function applied to the element\n * and returns a map where each group key is associated with a list of corresponding values.\n * \n * The returned map preserves the entry iteration order of the keys produced from the original array.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <K, V> LongArray.groupBy(keySelector: (Long) -> K, valueTransform: (Long) -> V): Map<K, List<V>> {\n return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by

the given [keySelector] function applied to the element\n * and returns a map where each group key is associated with a list of corresponding values.\n * \n * The returned map preserves the entry iteration order of the keys produced from the original array.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <K, V> FloatArray.groupBy(keySelector: (Float) -> K, valueTransform: (Float) -> V): Map<K, List<V>> {\n return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by the given [keySelector] function applied to the element\n * and returns a map where each group key is associated with a list of corresponding values.\n * \n * The returned map preserves the entry iteration order of the keys produced from the original array.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <K, V> DoubleArray.groupBy(keySelector: (Double) -> K, valueTransform: (Double) -> V): Map<K, List<V>> {\n return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups values returned by the
[valueTransform] function applied to each element of the original array\n * by the key returned by the given [keySelector] function applied to the element\n * and returns a map where each group key is associated with a list of corresponding values.\n * \n * The returned map preserves the entry iteration order of the keys produced from the original array.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <K, V> BooleanArray.groupBy(keySelector: (Boolean) -> K, valueTransform: (Boolean) -> V): Map<K, List<V>> {\n return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by the given [keySelector] function applied to the element\n * and returns a map where each group key is associated with a list of corresponding values.\n * \n * The returned map preserves the entry
iteration order of the keys produced from the original array.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <K, V> CharArray.groupBy(keySelector: (Char) -> K, valueTransform: (Char) -> V): Map<K, List<V>> {\n return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.\n * \n * @return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\npublic inline fun <T, K, M : MutableMap<in K, MutableList<T>>> Array<out T>.groupByTo(destination: M, keySelector: (T) -> K): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<T>() }\n list.add(element)\n
}\n return destination\n}\n\n/**\n * Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.\n * \n * @return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\npublic inline fun <K, M : MutableMap<in K, MutableList<Byte>>> ByteArray.groupByTo(destination: M, keySelector: (Byte) -> K): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<Byte>() }\n list.add(element)\n }\n return destination\n}\n\n/**\n * Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.\n * \n * @return The [destination] map.\n * \n *
@sample samples.collections.Collections.Transformations.groupBy\n */\npublic inline fun <K, M : MutableMap<in K, MutableList<Short>>> ShortArray.groupByTo(destination: M, keySelector: (Short) -> K): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<Short>() }\n list.add(element)\n }\n return destination\n}\n\n/**\n * Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each element and puts to the

[destination] map each group key associated with a list of corresponding elements.\n * \n * @return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\npublic inline fun <K, M : MutableMap<in K, MutableList<Int>>> IntArray.groupByTo(destination: M, keySelector: (Int) -> K): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<Int>()
}\n list.add(element)\n }\n return destination\n}\n\n/**\n * Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.\n * \n * @return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\npublic inline fun <K, M : MutableMap<in K, MutableList<Long>>> LongArray.groupByTo(destination: M, keySelector: (Long) -> K): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<Long>() }\n list.add(element)\n }\n return destination\n}\n\n/**\n * Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.\n * \n * @return
The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\npublic inline fun <K, M : MutableMap<in K, MutableList<Float>>> FloatArray.groupByTo(destination: M, keySelector: (Float) -> K): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<Float>() }\n list.add(element)\n }\n return destination\n}\n\n/**\n * Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.\n * \n * @return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\npublic inline fun <K, M : MutableMap<in K, MutableList<Double>>> DoubleArray.groupByTo(destination: M, keySelector: (Double) -> K): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<Double>() }\n list.add(element)\n }\n return destination\n}\n\n/**\n * Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.\n * \n * @return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\npublic inline fun <K, M : MutableMap<in K, MutableList<Boolean>>> BooleanArray.groupByTo(destination: M, keySelector: (Boolean) -> K): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<Boolean>() }\n list.add(element)\n }\n return destination\n}\n\n/**\n * Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each element and puts to the [destination] map each group key associated
with a list of corresponding elements.\n * \n * @return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\npublic inline fun <K, M : MutableMap<in K, MutableList<Char>>> CharArray.groupByTo(destination: M, keySelector: (Char) -> K): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<Char>() }\n list.add(element)\n }\n return destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by the given [keySelector] function applied to the element\n * and puts to the [destination] map each group key associated with a list of corresponding values.\n * \n * @return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <T, K, V, M : MutableMap<in K, MutableList<V>>> Array<out
T>.groupByTo(destination: M, keySelector: (T) -> K, valueTransform: (T) -> V): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<V>() }\n list.add(valueTransform(element))\n }\n return destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by the given [keySelector] function applied to the element\n * and puts to the [destination] map each group key associated with a

list of corresponding values.\n * \n * @return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <K, V, M : MutableMap<in K, MutableList<V>>> ByteArray.groupByTo(destination: M, keySelector: (Byte) -> K, valueTransform: (Byte) -> V): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) {
ArrayList<V>() }\n list.add(valueTransform(element))\n }\n return destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by the given [keySelector] function applied to the element\n * and puts to the [destination] map each group key associated with a list of corresponding values.\n * \n * @return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <K, V, M : MutableMap<in K, MutableList<V>>> ShortArray.groupByTo(destination: M, keySelector: (Short) -> K, valueTransform: (Short) -> V): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<V>() }\n list.add(valueTransform(element))\n }\n return destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the original
array\n * by the key returned by the given [keySelector] function applied to the element\n * and puts to the [destination] map each group key associated with a list of corresponding values.\n * \n * @return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <K, V, M : MutableMap<in K, MutableList<V>>> IntArray.groupByTo(destination: M, keySelector: (Int) -> K, valueTransform: (Int) -> V): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<V>() }\n list.add(valueTransform(element))\n }\n return destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by the given [keySelector] function applied to the element\n * and puts to the [destination] map each group key associated with a list of corresponding values.\n * \n * @return
The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <K, V, M : MutableMap<in K, MutableList<V>>> LongArray.groupByTo(destination: M, keySelector: (Long) -> K, valueTransform: (Long) -> V): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<V>() }\n list.add(valueTransform(element))\n }\n return destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by the given [keySelector] function applied to the element\n * and puts to the [destination] map each group key associated with a list of corresponding values.\n * \n * @return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <K, V, M : MutableMap<in K, MutableList<V>>> FloatArray.groupByTo(destination:
M, keySelector: (Float) -> K, valueTransform: (Float) -> V): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<V>() }\n list.add(valueTransform(element))\n }\n return destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by the given [keySelector] function applied to the element\n * and puts to the [destination] map each group key associated with a list of corresponding values.\n * \n * @return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <K, V, M : MutableMap<in K, MutableList<V>>> DoubleArray.groupByTo(destination: M, keySelector: (Double) -> K, valueTransform: (Double) -> V): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key)
{ ArrayList<V>() }\n list.add(valueTransform(element))\n }\n return destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by the given [keySelector] function applied to the element\n * and puts to the [destination] map each group key associated with a list of corresponding values.\n * \n * @return The [destination] map.\n * \n * @sample

samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <K, V, M : MutableMap<in K, MutableList<V>>> BooleanArray.groupByTo(destination: M, keySelector: (Boolean) -> K, valueTransform: (Boolean) -> V): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<V>() }\n list.add(valueTransform(element))\n }\n return destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by the given [keySelector] function applied to the element\n * and puts to the [destination] map each group key associated with a list of corresponding values.\n * \n * @return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <K, V, M : MutableMap<in K, MutableList<V>>> CharArray.groupByTo(destination: M, keySelector: (Char) -> K, valueTransform: (Char) -> V): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<V>() }\n list.add(valueTransform(element))\n }\n return destination\n}\n\n/**\n * Creates a [Grouping] source from an array to be used later with one of group-and-fold operations\n * using the specified [keySelector] function to extract a key from each element.\n * \n * @sample samples.collections.Grouping.groupingByEachCount\n */\n@SinceKotlin(\"1.1\")\npublic inline fun <T, K> Array<out T>.groupingBy(crossinline keySelector: (T) -> K): Grouping<T, K> {\n return object : Grouping<T, K> {\n override fun sourceIterator(): Iterator<T> = this@groupingBy.iterator()\n override fun keyOf(element: T): K = keySelector(element)\n }\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element in the original array.\n */\npublic inline fun <T, R> Array<out T>.map(transform: (T) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element in the original array.\n */\npublic inline fun <R> ByteArray.map(transform: (Byte) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element in the original array.\n */\npublic inline fun <R> ShortArray.map(transform: (Short) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element in the original array.\n */\npublic inline fun <R> IntArray.map(transform: (Int) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element in the original array.\n */\npublic inline fun <R> LongArray.map(transform: (Long) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element in the original array.\n */\npublic inline fun <R> FloatArray.map(transform: (Float) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element in the original array.\n */\npublic inline fun <R> DoubleArray.map(transform: (Double) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element in the original array.\n */\npublic inline fun <R> BooleanArray.map(transform: (Boolean) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element in the original array.\n */\npublic inline fun <R> CharArray.map(transform: (Char) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element and its index in the original array.\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\npublic inline fun <T, R> Array<out T>.mapIndexed(transform: (index: Int, T) -> R): List<R> {\n return mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element and its index in the original array.\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\npublic inline fun <R> ByteArray.mapIndexed(transform: (index: Int, Byte) -> R): List<R> {\n

return mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element and its index in the original array.\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\npublic inline fun <R> ShortArray.mapIndexed(transform: (index: Int, Short) -> R): List<R> {\n return mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element and its index in the original array.\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\npublic inline fun <R> IntArray.mapIndexed(transform: (index: Int, Int) -> R): List<R> {\n return mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element and its index in the original array.\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\npublic inline fun <R> LongArray.mapIndexed(transform: (index: Int, Long) -> R): List<R> {\n return mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element and its index in the original array.\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\npublic inline fun <R> FloatArray.mapIndexed(transform: (index: Int, Float) -> R): List<R> {\n return mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element and its index in the original array.\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\npublic inline fun <R> DoubleArray.mapIndexed(transform: (index: Int, Double) -> R): List<R> {\n return mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform]
function\n * to each element and its index in the original array.\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\npublic inline fun <R> BooleanArray.mapIndexed(transform: (index: Int, Boolean) -> R): List<R> {\n return mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element and its index in the original array.\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\npublic inline fun <R> CharArray.mapIndexed(transform: (index: Int, Char) -> R): List<R> {\n return mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing only the non-null results of applying the given [transform] function\n * to each element and its index in the original
array.\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\npublic inline fun <T, R : Any> Array<out T>.mapIndexedNotNull(transform: (index: Int, T) -> R?): List<R> {\n return mapIndexedNotNullTo(ArrayList<R>(), transform)\n}\n\n/**\n * Applies the given [transform] function to each element and its index in the original array\n * and appends only the non-null results to the given [destination].\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\npublic inline fun <T, R : Any, C : MutableCollection<in R>> Array<out T>.mapIndexedNotNullTo(destination: C, transform: (index: Int, T) -> R?): C {\n forEachIndexed { index, element -> transform(index, element)?.let { destination.add(it) } }\n return destination\n}\n\n/**\n * Applies the given [transform] function
to each element and its index in the original array\n * and appends the results to the given [destination].\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\npublic inline fun <T, R, C : MutableCollection<in R>> Array<out T>.mapIndexedTo(destination: C, transform: (index: Int, T) -> R): C {\n var index = 0\n for (item in this)\n destination.add(transform(index++, item))\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element and its index in the original array\n * and appends the results to the given [destination].\n *

@param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\npublic inline fun <R, C : MutableCollection<in R>> ByteArray.mapIndexedTo(destination: C, transform: (index: Int, Byte) -> R): C {\n var index = 0\n for (item in this)\n destination.add(transform(index++, item))\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element and its index in the original array\n * and appends the results to the given [destination].\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\npublic inline fun <R, C : MutableCollection<in R>> ShortArray.mapIndexedTo(destination: C, transform: (index: Int, Short) -> R): C {\n var index = 0\n for (item in this)\n destination.add(transform(index++, item))\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element and its index in the original array\n * and appends the results to the given [destination].\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\npublic inline fun <R, C : MutableCollection<in R>> IntArray.mapIndexedTo(destination: C, transform: (index: Int, Int) -> R): C {\n var index = 0\n for (item in this)\n destination.add(transform(index++, item))\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element and its index in the original array\n * and appends the results to the given [destination].\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\npublic inline fun <R, C : MutableCollection<in R>> LongArray.mapIndexedTo(destination: C, transform: (index: Int, Long) -> R): C {\n var index = 0\n for (item in this)\n destination.add(transform(index++, item))\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element and its index in the original array\n * and appends the results to the given [destination].\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\npublic inline fun <R, C : MutableCollection<in R>> FloatArray.mapIndexedTo(destination: C, transform: (index: Int, Float) -> R): C {\n var index = 0\n for (item in this)\n destination.add(transform(index++, item))\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element and its index in the original array\n * and appends the results to the given [destination].\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\npublic inline fun <R, C : MutableCollection<in R>> DoubleArray.mapIndexedTo(destination: C, transform: (index: Int, Double) -> R): C {\n var index = 0\n for (item in this)\n destination.add(transform(index++, item))\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element and its index in the original array\n * and appends the results to the given [destination].\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\npublic inline fun <R, C : MutableCollection<in R>> BooleanArray.mapIndexedTo(destination: C, transform: (index: Int, Boolean) -> R): C {\n var index = 0\n for (item in this)\n destination.add(transform(index++, item))\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element and its index in the original array\n * and appends the results to the given [destination].\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\npublic inline fun <R, C : MutableCollection<in R>> CharArray.mapIndexedTo(destination: C, transform: (index: Int, Char) -> R): C {\n var index = 0\n for (item in this)\n destination.add(transform(index++, item))\n return destination\n}\n\n/**\n * Returns a list containing only the non-null results of applying the given [transform] function\n * to each element in the original array.\n */\npublic inline fun <T, R : Any> Array<out T>.mapNotNull(transform: (T) -> R?): List<R> {\n return mapNotNullTo(ArrayList<R>(), transform)\n}\n\n/**\n * Applies the given [transform] function to each element in the original array\n * and appends only the non-null results to the given [destination].\n */\npublic inline fun <T, R : Any, C : MutableCollection<in R>> Array<out T>.mapNotNullTo(destination: C, transform: (T) -> R?): C {\n forEach { element -> transform(element)?.let { destination.add(it) } }\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element of the original array\n * and appends the results to the given [destination].\n */\npublic inline fun <T,

R, C : MutableCollection<in R>> Array<out T>.mapTo(destination: C, transform: (T) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element of the original array\n * and appends the results to the given [destination].\n */\npublic inline fun <R, C : MutableCollection<in R>> ByteArray.mapTo(destination: C, transform: (Byte) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element of the original array\n * and appends the results to the given [destination].\n */\npublic inline fun <R, C : MutableCollection<in R>> ShortArray.mapTo(destination: C, transform: (Short) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element of the original array\n * and appends the results to the given [destination].\n */\npublic inline fun <R, C : MutableCollection<in R>> IntArray.mapTo(destination: C, transform: (Int) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element of the original array\n * and appends the results to the given [destination].\n */\npublic inline fun <R, C : MutableCollection<in R>> LongArray.mapTo(destination: C, transform: (Long) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element of the original array\n * and appends the results to the given [destination].\n */\npublic inline fun <R, C : MutableCollection<in R>> FloatArray.mapTo(destination: C, transform: (Float) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element of the original array\n * and appends the results to the given [destination].\n */\npublic inline fun <R, C : MutableCollection<in R>> DoubleArray.mapTo(destination: C, transform: (Double) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element of the original array\n * and appends the results to the given [destination].\n */\npublic inline fun <R, C : MutableCollection<in R>> BooleanArray.mapTo(destination: C, transform: (Boolean) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element of the original array\n * and appends the results to the given [destination].\n */\npublic inline fun <R, C : MutableCollection<in R>> CharArray.mapTo(destination: C, transform: (Char) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return destination\n}\n\n/**\n * Returns a lazy [Iterable] of [IndexedValue] for each element of the original array.\n */\npublic fun <T> Array<out T>.withIndex(): Iterable<IndexedValue<T>> {\n return IndexingIterable { iterator() }\n}\n\n/**\n * Returns a lazy [Iterable] of [IndexedValue] for each element of the original array.\n */\npublic fun ByteArray.withIndex(): Iterable<IndexedValue<Byte>> {\n return IndexingIterable { iterator() }\n}\n\n/**\n * Returns a lazy [Iterable] of [IndexedValue] for each element of the original array.\n */\npublic fun ShortArray.withIndex(): Iterable<IndexedValue<Short>> {\n return IndexingIterable { iterator() }\n}\n\n/**\n * Returns a lazy [Iterable] of [IndexedValue] for each element of the original array.\n */\npublic fun IntArray.withIndex(): Iterable<IndexedValue<Int>> {\n return IndexingIterable { iterator() }\n}\n\n/**\n * Returns a lazy [Iterable] of [IndexedValue] for each element of the original array.\n */\npublic fun LongArray.withIndex(): Iterable<IndexedValue<Long>> {\n return IndexingIterable { iterator() }\n}\n\n/**\n * Returns a lazy [Iterable] of [IndexedValue] for each element of the original array.\n */\npublic fun FloatArray.withIndex(): Iterable<IndexedValue<Float>> {\n return IndexingIterable { iterator() }\n}\n\n/**\n * Returns a lazy [Iterable] of [IndexedValue] for each element of the original array.\n */\npublic fun DoubleArray.withIndex(): Iterable<IndexedValue<Double>> {\n return IndexingIterable { iterator() }\n}\n\n/**\n * Returns a lazy [Iterable] of [IndexedValue] for each element of the original array.\n */\npublic fun BooleanArray.withIndex(): Iterable<IndexedValue<Boolean>> {\n return IndexingIterable { iterator() }\n}\n\n/**\n * Returns a lazy [Iterable] of [IndexedValue] for each element of the original array.\n */\npublic fun CharArray.withIndex(): Iterable<IndexedValue<Char>> {\n return IndexingIterable { iterator() }\n}\n\n/**\n * Returns a list
containing only distinct elements from the given array.\n * \n * The elements in the resulting list are in the same order as they were in the source array.\n */\npublic fun <T> Array<out T>.distinct(): List<T> {\n return

this.toMutableSet().toList()\n}\n\n/**\n * Returns a list containing only distinct elements from the given array.\n * \n * The elements in the resulting list are in the same order as they were in the source array.\n */\npublic fun ByteArray.distinct(): List<Byte> {\n   return this.toMutableSet().toList()\n}\n\n/**\n * Returns a list containing only distinct elements from the given array.\n * \n * The elements in the resulting list are in the same order as they were in the source array.\n */\npublic fun ShortArray.distinct(): List<Short> {\n   return this.toMutableSet().toList()\n}\n\n/**\n * Returns a list containing only distinct elements from the given array.\n * \n * The elements in the resulting list are in the same order as they were in the source array.\n */\npublic fun IntArray.distinct(): List<Int> {\n   return this.toMutableSet().toList()\n}\n\n/**\n * Returns a list containing only distinct elements from the given array.\n * \n * The elements in the resulting list are in the same order as they were in the source array.\n */\npublic fun LongArray.distinct(): List<Long> {\n   return this.toMutableSet().toList()\n}\n\n/**\n * Returns a list containing only distinct elements from the given array.\n * \n * The elements in the resulting list are in the same order as they were in the source array.\n */\npublic fun FloatArray.distinct(): List<Float> {\n   return this.toMutableSet().toList()\n}\n\n/**\n * Returns a list containing only distinct elements from the given array.\n * \n * The elements in the resulting list are in the same order as they were in the source array.\n */\npublic fun DoubleArray.distinct(): List<Double> {\n   return this.toMutableSet().toList()\n}\n\n/**\n * Returns a list containing only distinct elements from the given array.\n * \n * The elements in the resulting list are in the same order as they were in the source array.\n */\npublic fun BooleanArray.distinct(): List<Boolean> {\n   return this.toMutableSet().toList()\n}\n\n/**\n * Returns a list containing only distinct elements from the given array.\n * \n * The elements in the resulting list are in the same order as they were in the source array.\n */\npublic fun CharArray.distinct(): List<Char> {\n   return this.toMutableSet().toList()\n}\n\n/**\n * Returns a list containing only elements from the given array\n * having distinct keys returned by the given [selector] function.\n * \n * The elements in the resulting list are in the same order as they were in the source array.\n */\npublic inline fun <T, K> Array<out T>.distinctBy(selector: (T) -> K): List<T> {\n   val set = HashSet<K>()\n   val list = ArrayList<T>()\n   for (e in this) {\n   val key = selector(e)\n   if (set.add(key))\n   list.add(e)\n   }\n   return list\n}\n\n/**\n * Returns a list containing only elements from the given array\n * having distinct keys returned by the given [selector] function.\n * \n * The elements in the resulting list are in the same order as they were in the source array.\n */\npublic inline fun <K> ByteArray.distinctBy(selector: (Byte) -> K): List<Byte> {\n   val set = HashSet<K>()\n   val list = ArrayList<Byte>()\n   for (e in this) {\n   val key = selector(e)\n   if (set.add(key))\n   list.add(e)\n   }\n   return list\n}\n\n/**\n * Returns a list containing only elements from the given array\n * having distinct keys returned by the given [selector] function.\n * \n * The elements in the resulting list are in the same order as they were in the source array.\n */\npublic inline fun <K> ShortArray.distinctBy(selector: (Short) -> K): List<Short> {\n   val set = HashSet<K>()\n   val list = ArrayList<Short>()\n   for (e in this) {\n   val key = selector(e)\n   if (set.add(key))\n   list.add(e)\n   }\n   return list\n}\n\n/**\n * Returns a list containing only elements from the given array\n * having distinct keys returned by the given [selector] function.\n * \n * The elements in the resulting list are in the same order as they were in the source array.\n */\npublic inline fun <K> IntArray.distinctBy(selector: (Int) -> K): List<Int> {\n   val set = HashSet<K>()\n   val list = ArrayList<Int>()\n   for (e in this) {\n   val key = selector(e)\n   if (set.add(key))\n   list.add(e)\n   }\n   return list\n}\n\n/**\n * Returns a list containing only elements from the given array\n * having distinct keys returned by the given [selector] function.\n * \n * The elements in the resulting list are in the same order as they were in the source array.\n */\npublic inline fun <K> LongArray.distinctBy(selector: (Long) -> K): List<Long> {\n   val set = HashSet<K>()\n   val list = ArrayList<Long>()\n   for (e in this) {\n   val key\n = selector(e)\n   if (set.add(key))\n   list.add(e)\n   }\n   return list\n}\n\n/**\n * Returns a list containing only elements from the given array\n * having distinct keys returned by the given [selector] function.\n * \n * The elements in the resulting list are in the same order as they were in the source array.\n */\npublic inline fun <K> FloatArray.distinctBy(selector: (Float) -> K): List<Float> {\n   val set = HashSet<K>()\n   val list = ArrayList<Float>()\n   for (e in this) {\n   val key = selector(e)\n   if (set.add(key))\n   list.add(e)\n   }\n

return list\n}\n\n/**\n * Returns a list containing only elements from the given array\n * having distinct keys returned by the given [selector] function.\n * \n * The elements in the resulting list are in the same order as they were in the source array.\n */\npublic inline fun <K> DoubleArray.distinctBy(selector: (Double) -> K): List<Double> {\n val set = HashSet<K>()\n val list = ArrayList<Double>()\n for (e in this) {\n val key = selector(e)\n if (set.add(key))\n list.add(e)\n }\n return list\n}\n\n/**\n * Returns a list containing only elements from the given array\n * having distinct keys returned by the given [selector] function.\n * \n * The elements in the resulting list are in the same order as they were in the source array.\n */\npublic inline fun <K> BooleanArray.distinctBy(selector: (Boolean) -> K): List<Boolean> {\n val set = HashSet<K>()\n val list = ArrayList<Boolean>()\n for (e in this) {\n val key = selector(e)\n if (set.add(key))\n list.add(e)\n }\n return list\n}\n\n/**\n * Returns a list containing only elements from the given array\n * having distinct keys returned by the given [selector] function.\n * \n * The elements in the resulting list are in the same order as they were in the source array.\n */\npublic inline fun <K> CharArray.distinctBy(selector: (Char) -> K): List<Char> {\n val set = HashSet<K>()\n val list = ArrayList<Char>()\n for (e in this) {\n val key = selector(e)\n if (set.add(key))\n list.add(e)\n }\n return list\n}\n\n/**\n * Returns a set containing all elements that are contained by both this set and the specified collection.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic infix fun <T> Array<out T>.intersect(other: Iterable<T>): Set<T> {\n val set = this.toMutableSet()\n set.retainAll(other)\n return set\n}\n\n/**\n * Returns a set containing all elements that are contained by both this set and the specified collection.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic infix fun ByteArray.intersect(other: Iterable<Byte>): Set<Byte> {\n val set = this.toMutableSet()\n set.retainAll(other)\n return set\n}\n\n/**\n * Returns a set containing all elements that are contained by both this set and the specified collection.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic infix fun ShortArray.intersect(other: Iterable<Short>): Set<Short> {\n val set = this.toMutableSet()\n set.retainAll(other)\n return set\n}\n\n/**\n * Returns a set containing all elements that are contained by both this set and the specified collection.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic infix fun IntArray.intersect(other: Iterable<Int>): Set<Int> {\n val set = this.toMutableSet()\n set.retainAll(other)\n return set\n}\n\n/**\n * Returns a set containing all elements that are contained by both this set and the specified collection.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic infix fun LongArray.intersect(other: Iterable<Long>): Set<Long> {\n val set = this.toMutableSet()\n set.retainAll(other)\n return set\n}\n\n/**\n * Returns a set containing all elements that are contained by both this set and the specified collection.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic infix fun FloatArray.intersect(other: Iterable<Float>): Set<Float> {\n val set = this.toMutableSet()\n set.retainAll(other)\n return set\n}\n\n/**\n * Returns a set containing all elements that are contained by both this set and the specified collection.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic infix fun DoubleArray.intersect(other: Iterable<Double>): Set<Double> {\n val set = this.toMutableSet()\n set.retainAll(other)\n return set\n}\n\n/**\n * Returns a set containing all elements that are contained by both this set and the specified collection.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic infix fun BooleanArray.intersect(other: Iterable<Boolean>): Set<Boolean> {\n val set = this.toMutableSet()\n set.retainAll(other)\n return set\n}\n\n/**\n * Returns a set containing all elements that are contained by both this set and the specified collection.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic infix fun CharArray.intersect(other: Iterable<Char>): Set<Char> {\n val set = this.toMutableSet()\n set.retainAll(other)\n return set\n}\n\n/**\n * Returns a set containing all elements that are contained by this array and not contained by the specified collection.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic infix fun <T> Array<out T>.subtract(other: Iterable<T>): Set<T> {\n val set = this.toMutableSet()\n set.removeAll(other)\n return set\n}\n\n/**\n * Returns a set containing all elements that are contained by this array and not contained by

the specified collection.\n * \n * The returned set
preserves the element iteration order of the original array.\n */\npublic infix fun ByteArray.subtract(other: Iterable<Byte>): Set<Byte> {\n val set = this.toMutableSet()\n set.removeAll(other)\n return set\n}\n\n/**\n * Returns a set containing all elements that are contained by this array and not contained by the specified collection.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic infix fun ShortArray.subtract(other: Iterable<Short>): Set<Short> {\n val set = this.toMutableSet()\n set.removeAll(other)\n return set\n}\n\n/**\n * Returns a set containing all elements that are contained by this array and not contained by the specified collection.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic infix fun IntArray.subtract(other: Iterable<Int>): Set<Int> {\n val set = this.toMutableSet()\n set.removeAll(other)\n return set\n}\n\n/**\n * Returns a set containing
all elements that are contained by this array and not contained by the specified collection.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic infix fun LongArray.subtract(other: Iterable<Long>): Set<Long> {\n val set = this.toMutableSet()\n set.removeAll(other)\n return set\n}\n\n/**\n * Returns a set containing all elements that are contained by this array and not contained by the specified collection.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic infix fun FloatArray.subtract(other: Iterable<Float>): Set<Float> {\n val set = this.toMutableSet()\n set.removeAll(other)\n return set\n}\n\n/**\n * Returns a set containing all elements that are contained by this array and not contained by the specified collection.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic infix fun DoubleArray.subtract(other: Iterable<Double>):
Set<Double> {\n val set = this.toMutableSet()\n set.removeAll(other)\n return set\n}\n\n/**\n * Returns a set containing all elements that are contained by this array and not contained by the specified collection.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic infix fun BooleanArray.subtract(other: Iterable<Boolean>): Set<Boolean> {\n val set = this.toMutableSet()\n set.removeAll(other)\n return set\n}\n\n/**\n * Returns a set containing all elements that are contained by this array and not contained by the specified collection.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic infix fun CharArray.subtract(other: Iterable<Char>): Set<Char> {\n val set = this.toMutableSet()\n set.removeAll(other)\n return set\n}\n\n/**\n * Returns a mutable set containing all distinct elements from the given array.\n * \n * The returned set preserves the element iteration
order of the original array.\n */\npublic fun <T> Array<out T>.toMutableSet(): MutableSet<T> {\n val set = LinkedHashSet<T>(mapCapacity(size))\n for (item in this) set.add(item)\n return set\n}\n\n/**\n * Returns a mutable set containing all distinct elements from the given array.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun ByteArray.toMutableSet(): MutableSet<Byte> {\n val set = LinkedHashSet<Byte>(mapCapacity(size))\n for (item in this) set.add(item)\n return set\n}\n\n/**\n * Returns a mutable set containing all distinct elements from the given array.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun ShortArray.toMutableSet(): MutableSet<Short> {\n val set = LinkedHashSet<Short>(mapCapacity(size))\n for (item in this) set.add(item)\n return set\n}\n\n/**\n * Returns a mutable set containing all distinct elements from the given array.\n * \n *
The returned set preserves the element iteration order of the original array.\n */\npublic fun IntArray.toMutableSet(): MutableSet<Int> {\n val set = LinkedHashSet<Int>(mapCapacity(size))\n for (item in this) set.add(item)\n return set\n}\n\n/**\n * Returns a mutable set containing all distinct elements from the given array.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun LongArray.toMutableSet(): MutableSet<Long> {\n val set = LinkedHashSet<Long>(mapCapacity(size))\n for (item in this) set.add(item)\n return set\n}\n\n/**\n * Returns a mutable set containing all distinct elements from the given array.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun FloatArray.toMutableSet(): MutableSet<Float> {\n val set = LinkedHashSet<Float>(mapCapacity(size))\n for (item in this) set.add(item)\n return set\n}\n\n/**\n * Returns a mutable set containing all distinct
elements from the given array.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun DoubleArray.toMutableSet(): MutableSet<Double> {\n val set =

LinkedHashSet<Double>(mapCapacity(size))\n   for (item in this) set.add(item)\n   return set\n}\n\n/**\n * Returns a mutable set containing all distinct elements from the given array.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun BooleanArray.toMutableSet(): MutableSet<Boolean> {\n   val set = LinkedHashSet<Boolean>(mapCapacity(size))\n   for (item in this) set.add(item)\n   return set\n}\n\n/**\n * Returns a mutable set containing all distinct elements from the given array.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun CharArray.toMutableSet(): MutableSet<Char> {\n   val set = LinkedHashSet<Char>(mapCapacity(size))\n   for (item in this) set.add(item)\n   return set\n}\n\n/**\n * Returns a set containing all distinct elements from both collections.\n * \n * The returned set preserves the element iteration order of the original array.\n * Those elements of the [other] collection that are unique are iterated in the end\n * in the order of the [other] collection.\n */\npublic infix fun <T> Array<out T>.union(other: Iterable<T>): Set<T> {\n   val set = this.toMutableSet()\n   set.addAll(other)\n   return set\n}\n\n/**\n * Returns a set containing all distinct elements from both collections.\n * \n * The returned set preserves the element iteration order of the original array.\n * Those elements of the [other] collection that are unique are iterated in the end\n * in the order of the [other] collection.\n */\npublic infix fun ByteArray.union(other: Iterable<Byte>): Set<Byte> {\n   val set = this.toMutableSet()\n   set.addAll(other)\n   return set\n}\n\n/**\n * Returns a set containing all distinct elements from both collections.\n * \n * The returned
set preserves the element iteration order of the original array.\n * Those elements of the [other] collection that are unique are iterated in the end\n * in the order of the [other] collection.\n */\npublic infix fun ShortArray.union(other: Iterable<Short>): Set<Short> {\n   val set = this.toMutableSet()\n   set.addAll(other)\n   return set\n}\n\n/**\n * Returns a set containing all distinct elements from both collections.\n * \n * The returned set preserves the element iteration order of the original array.\n * Those elements of the [other] collection that are unique are iterated in the end\n * in the order of the [other] collection.\n */\npublic infix fun IntArray.union(other: Iterable<Int>): Set<Int> {\n   val set = this.toMutableSet()\n   set.addAll(other)\n   return set\n}\n\n/**\n * Returns a set containing all distinct elements from both collections.\n * \n * The returned set preserves the element iteration order of the original array.\n * Those elements of the [other]
collection that are unique are iterated in the end\n * in the order of the [other] collection.\n */\npublic infix fun LongArray.union(other: Iterable<Long>): Set<Long> {\n   val set = this.toMutableSet()\n   set.addAll(other)\n   return set\n}\n\n/**\n * Returns a set containing all distinct elements from both collections.\n * \n * The returned set preserves the element iteration order of the original array.\n * Those elements of the [other] collection that are unique are iterated in the end\n * in the order of the [other] collection.\n */\npublic infix fun FloatArray.union(other: Iterable<Float>): Set<Float> {\n   val set = this.toMutableSet()\n   set.addAll(other)\n   return set\n}\n\n/**\n * Returns a set containing all distinct elements from both collections.\n * \n * The returned set preserves the element iteration order of the original array.\n * Those elements of the [other] collection that are unique are iterated in the end\n * in the order of the [other] collection.\n
*/\npublic infix fun DoubleArray.union(other: Iterable<Double>): Set<Double> {\n   val set = this.toMutableSet()\n   set.addAll(other)\n   return set\n}\n\n/**\n * Returns a set containing all distinct elements from both collections.\n * \n * The returned set preserves the element iteration order of the original array.\n * Those elements of the [other] collection that are unique are iterated in the end\n * in the order of the [other] collection.\n */\npublic infix fun BooleanArray.union(other: Iterable<Boolean>): Set<Boolean> {\n   val set = this.toMutableSet()\n   set.addAll(other)\n   return set\n}\n\n/**\n * Returns a set containing all distinct elements from both collections.\n * \n * The returned set preserves the element iteration order of the original array.\n * Those elements of the [other] collection that are unique are iterated in the end\n * in the order of the [other] collection.\n */\npublic infix fun CharArray.union(other: Iterable<Char>): Set<Char> {\n   val set
= this.toMutableSet()\n   set.addAll(other)\n   return set\n}\n\n/**\n * Returns `true` if all elements match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.all\n */\npublic inline fun <T> Array<out T>.all(predicate: (T) -> Boolean): Boolean {\n   for (element in this) if (!predicate(element)) return false\n   return true\n}\n\n/**\n * Returns `true` if all elements match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.all\n */\npublic inline fun ByteArray.all(predicate: (Byte) -> Boolean):

Boolean {\n for (element in this) if (!predicate(element)) return false\n return true\n}\n\n/**\n * Returns `true` if all elements match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.all\n */\npublic inline fun ShortArray.all(predicate: (Short) -> Boolean): Boolean {\n for (element in this) if (!predicate(element)) return false\n return true\n}\n\n/**\n * Returns `true` if all elements match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.all\n */\npublic inline fun IntArray.all(predicate: (Int) -> Boolean): Boolean {\n for (element in this) if (!predicate(element)) return false\n return true\n}\n\n/**\n * Returns `true` if all elements match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.all\n */\npublic inline fun LongArray.all(predicate: (Long) -> Boolean): Boolean {\n for (element in this) if (!predicate(element)) return false\n return true\n}\n\n/**\n * Returns `true` if all elements match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.all\n */\npublic inline fun FloatArray.all(predicate: (Float) -> Boolean): Boolean {\n for (element in this) if (!predicate(element)) return false\n return true\n}\n\n/**\n * Returns `true` if all elements match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.all\n */\npublic inline fun DoubleArray.all(predicate: (Double) -> Boolean): Boolean {\n for (element in this) if (!predicate(element)) return false\n return true\n}\n\n/**\n * Returns `true` if all elements match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.all\n */\npublic inline fun BooleanArray.all(predicate: (Boolean) -> Boolean): Boolean {\n for (element in this) if (!predicate(element)) return false\n return true\n}\n\n/**\n * Returns `true` if all elements match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.all\n */\npublic inline fun CharArray.all(predicate: (Char) -> Boolean): Boolean {\n for (element in this) if (!predicate(element)) return false\n return true\n}\n\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample samples.collections.Collections.Aggregates.any\n */\npublic fun <T> Array<out T>.any(): Boolean {\n return !isEmpty()\n}\n\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample samples.collections.Collections.Aggregates.any\n */\npublic fun ByteArray.any(): Boolean {\n return !isEmpty()\n}\n\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample samples.collections.Collections.Aggregates.any\n */\npublic fun ShortArray.any(): Boolean {\n return !isEmpty()\n}\n\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample samples.collections.Collections.Aggregates.any\n */\npublic fun IntArray.any(): Boolean {\n return !isEmpty()\n}\n\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample samples.collections.Collections.Aggregates.any\n */\npublic fun LongArray.any(): Boolean {\n return !isEmpty()\n}\n\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample samples.collections.Collections.Aggregates.any\n */\npublic fun FloatArray.any(): Boolean {\n return !isEmpty()\n}\n\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample samples.collections.Collections.Aggregates.any\n */\npublic fun DoubleArray.any(): Boolean {\n return !isEmpty()\n}\n\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample samples.collections.Collections.Aggregates.any\n */\npublic fun BooleanArray.any(): Boolean {\n return !isEmpty()\n}\n\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample samples.collections.Collections.Aggregates.any\n */\npublic fun CharArray.any(): Boolean {\n return !isEmpty()\n}\n\n/**\n * Returns `true` if at least one element matches the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.anyWithPredicate\n */\npublic inline fun <T> Array<out T>.any(predicate: (T) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return true\n return false\n}\n\n/**\n * Returns `true` if at least one element matches the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.anyWithPredicate\n */\npublic inline fun ByteArray.any(predicate: (Byte) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return true\n return false\n}\n\n/**\n * Returns `true` if at least one element matches the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.anyWithPredicate\n */\npublic inline fun ShortArray.any(predicate: (Short) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return true\n return false\n}\n\n/**\n * Returns `true` if at least one element matches the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.anyWithPredicate\n */\npublic inline fun

IntArray.any(predicate: (Int) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return true\n return false\n}\n\n/**\n * Returns `true` if at least one element matches the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.anyWithPredicate\n */\npublic
inline fun LongArray.any(predicate: (Long) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return true\n return false\n}\n\n/**\n * Returns `true` if at least one element matches the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.anyWithPredicate\n */\npublic inline fun FloatArray.any(predicate: (Float) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return true\n return false\n}\n\n/**\n * Returns `true` if at least one element matches the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.anyWithPredicate\n */\npublic inline fun DoubleArray.any(predicate: (Double) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return true\n return false\n}\n\n/**\n * Returns `true` if at least one element matches the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.anyWithPredicate\n */\npublic inline fun BooleanArray.any(predicate:
(Boolean) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return true\n return false\n}\n\n/**\n * Returns `true` if at least one element matches the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.anyWithPredicate\n */\npublic inline fun CharArray.any(predicate: (Char) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return true\n return false\n}\n\n/**\n * Returns the number of elements in this array.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.count(): Int {\n return size\n}\n\n/**\n * Returns the number of elements in this array.\n */\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.count(): Int {\n return size\n}\n\n/**\n * Returns the number of elements in this array.\n */\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.count(): Int {\n return size\n}\n\n/**\n * Returns the number of elements in this array.\n */\n@kotlin.internal.InlineOnly\npublic
inline fun IntArray.count(): Int {\n return size\n}\n\n/**\n * Returns the number of elements in this array.\n */\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.count(): Int {\n return size\n}\n\n/**\n * Returns the number of elements in this array.\n */\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.count(): Int {\n return size\n}\n\n/**\n * Returns the number of elements in this array.\n */\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.count(): Int {\n return size\n}\n\n/**\n * Returns the number of elements in this array.\n */\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.count(): Int {\n return size\n}\n\n/**\n * Returns the number of elements in this array.\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.count(): Int {\n return size\n}\n\n/**\n * Returns the number of elements matching the given [predicate].\n */\npublic inline fun <T> Array<out T>.count(predicate: (T) -> Boolean):
Int {\n var count = 0\n for (element in this) if (predicate(element)) ++count\n return count\n}\n\n/**\n * Returns the number of elements matching the given [predicate].\n */\npublic inline fun ByteArray.count(predicate: (Byte) -> Boolean): Int {\n var count = 0\n for (element in this) if (predicate(element)) ++count\n return count\n}\n\n/**\n * Returns the number of elements matching the given [predicate].\n */\npublic inline fun ShortArray.count(predicate: (Short) -> Boolean): Int {\n var count = 0\n for (element in this) if (predicate(element)) ++count\n return count\n}\n\n/**\n * Returns the number of elements matching the given [predicate].\n */\npublic inline fun IntArray.count(predicate: (Int) -> Boolean): Int {\n var count = 0\n for (element in this) if (predicate(element)) ++count\n return count\n}\n\n/**\n * Returns the number of elements matching the given [predicate].\n */\npublic inline fun LongArray.count(predicate: (Long) -> Boolean):
Int {\n var count = 0\n for (element in this) if (predicate(element)) ++count\n return count\n}\n\n/**\n * Returns the number of elements matching the given [predicate].\n */\npublic inline fun FloatArray.count(predicate: (Float) -> Boolean): Int {\n var count = 0\n for (element in this) if (predicate(element)) ++count\n return count\n}\n\n/**\n * Returns the number of elements matching the given [predicate].\n */\npublic inline fun DoubleArray.count(predicate: (Double) -> Boolean): Int {\n var count = 0\n for (element in this) if (predicate(element)) ++count\n return count\n}\n\n/**\n * Returns the number of elements matching the given [predicate].\n */\npublic inline fun BooleanArray.count(predicate: (Boolean) -> Boolean): Int {\n var count = 0\n for (element in this) if (predicate(element)) ++count\n return count\n}\n\n/**\n * Returns the number of elements

matching the given [predicate].\n */\npublic inline fun CharArray.count(predicate: (Char) -> Boolean): Int {\n var count = 0\n for (element in this) if (predicate(element)) ++count\n return count\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element.\n */\npublic inline fun <T, R> Array<out T>.fold(initial: R, operation: (acc: R, T) -> R): R {\n var accumulator = initial\n for (element in this) accumulator = operation(accumulator, element)\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element.\n */\npublic inline fun <R> ByteArray.fold(initial: R, operation: (acc: R, Byte) -> R): R {\n var accumulator = initial\n for (element in this) accumulator = operation(accumulator, element)\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element.\n */\npublic inline fun <R> ShortArray.fold(initial: R, operation: (acc: R, Short) -> R): R {\n var accumulator = initial\n for (element in this) accumulator = operation(accumulator, element)\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element.\n */\npublic inline fun <R> IntArray.fold(initial: R, operation: (acc: R, Int) -> R): R {\n var accumulator = initial\n for (element in this) accumulator = operation(accumulator, element)\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element.\n */\npublic inline fun <R> LongArray.fold(initial: R, operation: (acc: R, Long) -> R): R {\n var accumulator = initial\n for (element in this) accumulator = operation(accumulator, element)\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element.\n */\npublic inline fun <R> FloatArray.fold(initial: R, operation: (acc: R, Float) -> R): R {\n var accumulator = initial\n for (element in this) accumulator = operation(accumulator, element)\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element.\n */\npublic inline fun <R> DoubleArray.fold(initial: R, operation: (acc: R, Double) -> R): R {\n var accumulator = initial\n for (element in this) accumulator = operation(accumulator, element)\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element.\n */\npublic inline fun <R> BooleanArray.fold(initial: R, operation: (acc: R, Boolean) -> R): R {\n var accumulator = initial\n for (element in this) accumulator = operation(accumulator, element)\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element.\n */\npublic inline fun <R> CharArray.fold(initial: R, operation: (acc: R, Char) -> R): R {\n var accumulator = initial\n for (element in this) accumulator = operation(accumulator, element)\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n */\npublic inline fun <T, R> Array<out T>.foldIndexed(initial: R, operation: (index: Int, acc: R, T) -> R): R {\n var index = 0\n var accumulator = initial\n for (element in this) accumulator = operation(index++, accumulator, element)\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n */\npublic inline fun <R> ByteArray.foldIndexed(initial: R, operation: (index: Int, acc: R, Byte) -> R): R {\n var index = 0\n var accumulator = initial\n for (element in this) accumulator = operation(index++, accumulator, element)\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n */\npublic inline fun <R> ShortArray.foldIndexed(initial: R, operation: (index: Int, acc: R, Short) -> R): R {\n var index = 0\n var

accumulator = initial\n   for (element in this) accumulator = operation(index++, accumulator, element)\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n */\npublic inline fun <R> IntArray.foldIndexed(initial: R, operation: (index: Int, acc: R, Int) -> R): R {\n   var index = 0\n   var accumulator = initial\n   for (element in this) accumulator = operation(index++, accumulator, element)\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n */\npublic inline fun <R> LongArray.foldIndexed(initial: R, operation: (index: Int, acc: R, Long) -> R): R {\n   var index = 0\n   var accumulator = initial\n   for (element in this) accumulator = operation(index++, accumulator, element)\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n */\npublic inline fun <R> FloatArray.foldIndexed(initial: R, operation: (index: Int, acc: R, Float) -> R): R {\n   var index = 0\n   var accumulator = initial\n   for (element in this) accumulator = operation(index++, accumulator, element)\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n */\npublic inline fun <R> DoubleArray.foldIndexed(initial: R, operation: (index: Int, acc: R, Double) -> R): R {\n   var index = 0\n   var accumulator = initial\n   for (element in this) accumulator = operation(index++, accumulator, element)\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n */\npublic inline fun <R> BooleanArray.foldIndexed(initial: R, operation: (index: Int, acc: R, Boolean) -> R): R {\n   var index = 0\n   var accumulator = initial\n   for (element in this) accumulator = operation(index++, accumulator, element)\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n */\npublic inline fun <R> CharArray.foldIndexed(initial: R, operation: (index: Int, acc: R, Char) -> R): R {\n   var index = 0\n   var accumulator = initial\n   for (element in this) accumulator = operation(index++, accumulator, element)\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left to each element and current accumulator value.\n */\npublic inline fun <T, R> Array<out T>.foldRight(initial: R, operation: (T, acc: R) -> R): R {\n   var index = lastIndex\n   var accumulator = initial\n   while (index >= 0) {\n   accumulator = operation(get(index--), accumulator)\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left to each element and current accumulator value.\n */\npublic inline fun <R> ByteArray.foldRight(initial: R, operation: (Byte, acc: R) -> R): R {\n   var index = lastIndex\n   var accumulator = initial\n   while (index >= 0) {\n   accumulator = operation(get(index--), accumulator)\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left to each element and current accumulator value.\n */\npublic inline fun <R> ShortArray.foldRight(initial: R, operation: (Short, acc: R) -> R): R {\n   var index = lastIndex\n   var accumulator = initial\n   while (index >= 0) {\n   accumulator = operation(get(index--), accumulator)\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left to each element and current accumulator value.\n */\npublic

inline fun <R> IntArray.foldRight(initial: R, operation: (Int, acc: R) -> R): R {\n   var index = lastIndex\n   var accumulator = initial\n   while (index >= 0) {\n   accumulator = operation(get(index--), accumulator)\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left to each element and current accumulator value.\n */\npublic
inline fun <R> LongArray.foldRight(initial: R, operation: (Long, acc: R) -> R): R {\n   var index = lastIndex\n   var accumulator = initial\n   while (index >= 0) {\n   accumulator = operation(get(index--), accumulator)\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left to each element and current accumulator value.\n */\npublic inline fun <R> FloatArray.foldRight(initial: R, operation: (Float, acc: R) -> R): R {\n   var index = lastIndex\n   var accumulator = initial\n   while (index >= 0) {\n   accumulator = operation(get(index--), accumulator)\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left to each element and current accumulator value.\n */\npublic inline fun <R> DoubleArray.foldRight(initial: R, operation: (Double, acc: R) -> R): R {\n   var index = lastIndex\n   var accumulator = initial\n
    while (index >= 0) {\n   accumulator = operation(get(index--), accumulator)\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left to each element and current accumulator value.\n */\npublic inline fun <R> BooleanArray.foldRight(initial: R, operation: (Boolean, acc: R) -> R): R {\n   var index = lastIndex\n   var accumulator = initial\n   while (index >= 0) {\n   accumulator = operation(get(index--), accumulator)\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left to each element and current accumulator value.\n */\npublic inline fun <R> CharArray.foldRight(initial: R, operation: (Char, acc: R) -> R): R {\n   var index = lastIndex\n   var accumulator = initial\n   while (index >= 0) {\n   accumulator = operation(get(index--), accumulator)\n   }\n   return accumulator\n}\n\n/**\n * Accumulates
 value starting with [initial] value and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\npublic inline fun <T, R> Array<out T>.foldRightIndexed(initial: R, operation: (index: Int, T, acc: R) -> R): R {\n   var index = lastIndex\n   var accumulator = initial\n   while (index >= 0) {\n   accumulator = operation(index, get(index), accumulator)\n   --index\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator
 value.\n */\npublic inline fun <R> ByteArray.foldRightIndexed(initial: R, operation: (index: Int, Byte, acc: R) -> R): R {\n   var index = lastIndex\n   var accumulator = initial\n   while (index >= 0) {\n   accumulator = operation(index, get(index), accumulator)\n   --index\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\npublic inline fun <R> ShortArray.foldRightIndexed(initial: R, operation: (index: Int, Short, acc: R) -> R): R {\n   var index = lastIndex\n   var accumulator = initial\n   while (index >= 0) {\n   accumulator = operation(index, get(index), accumulator)\n   --index\n   }\n   return accumulator\n}\n\n/**\n
 * Accumulates value starting with [initial] value and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\npublic inline fun <R> IntArray.foldRightIndexed(initial: R, operation: (index: Int, Int, acc: R) -> R): R {\n   var index = lastIndex\n   var accumulator = initial\n   while (index >= 0) {\n   accumulator = operation(index, get(index), accumulator)\n   --index\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n *

and current accumulator value, and calculates
the next accumulator value.\n */\npublic inline fun <R> LongArray.foldRightIndexed(initial: R, operation: (index: Int, Long, acc: R) -> R): R {\n var index = lastIndex\n var accumulator = initial\n while (index >= 0) {\n accumulator = operation(index, get(index), accumulator)\n --index\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\npublic inline fun <R> FloatArray.foldRightIndexed(initial: R, operation: (index: Int, Float, acc: R) -> R): R {\n var index = lastIndex\n var accumulator = initial\n while (index >= 0) {\n accumulator = operation(index, get(index), accumulator)\n --index\n }\n return
accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\npublic inline fun <R> DoubleArray.foldRightIndexed(initial: R, operation: (index: Int, Double, acc: R) -> R): R {\n var index = lastIndex\n var accumulator = initial\n while (index >= 0) {\n accumulator = operation(index, get(index), accumulator)\n --index\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator
value, and calculates the next accumulator value.\n */\npublic inline fun <R> BooleanArray.foldRightIndexed(initial: R, operation: (index: Int, Boolean, acc: R) -> R): R {\n var index = lastIndex\n var accumulator = initial\n while (index >= 0) {\n accumulator = operation(index, get(index), accumulator)\n --index\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\npublic inline fun <R> CharArray.foldRightIndexed(initial: R, operation: (index: Int, Char, acc: R) -> R): R {\n var index = lastIndex\n var accumulator = initial\n while (index >= 0) {\n accumulator = operation(index, get(index), accumulator)\n

--index\n }\n return accumulator\n}\n\n/**\n * Performs the given [action] on each element.\n */\npublic inline fun <T> Array<out T>.forEach(action: (T) -> Unit): Unit {\n for (element in this) action(element)\n}\n\n/**\n * Performs the given [action] on each element.\n */\npublic inline fun ByteArray.forEach(action: (Byte) -> Unit): Unit {\n for (element in this) action(element)\n}\n\n/**\n * Performs the given [action] on each element.\n */\npublic inline fun ShortArray.forEach(action: (Short) -> Unit): Unit {\n for (element in this) action(element)\n}\n\n/**\n * Performs the given [action] on each element.\n */\npublic inline fun IntArray.forEach(action: (Int) -> Unit): Unit {\n for (element in this) action(element)\n}\n\n/**\n * Performs the given [action] on each element.\n */\npublic inline fun LongArray.forEach(action: (Long) -> Unit): Unit {\n for (element in this) action(element)\n}\n\n/**\n * Performs the given [action] on each element.\n */\npublic inline
fun FloatArray.forEach(action: (Float) -> Unit): Unit {\n for (element in this) action(element)\n}\n\n/**\n * Performs the given [action] on each element.\n */\npublic inline fun DoubleArray.forEach(action: (Double) -> Unit): Unit {\n for (element in this) action(element)\n}\n\n/**\n * Performs the given [action] on each element.\n */\npublic inline fun BooleanArray.forEach(action: (Boolean) -> Unit): Unit {\n for (element in this) action(element)\n}\n\n/**\n * Performs the given [action] on each element.\n */\npublic inline fun CharArray.forEach(action: (Char) -> Unit): Unit {\n for (element in this) action(element)\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index with the element.\n * @param [action] function that takes the index of an element and the element itself\n * and performs the desired action on the element.\n */\npublic inline fun <T> Array<out T>.forEachIndexed(action: (index: Int, T) -> Unit): Unit {\n var index = 0\n

for (item in this) action(index++, item)\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index with the element.\n * @param [action] function that takes the index of an element and the element itself\n * and performs the desired action on the element.\n */\npublic inline fun ByteArray.forEachIndexed(action: (index: Int, Byte) -> Unit): Unit {\n var index = 0\n for (item in this) action(index++, item)\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index with the element.\n * @param [action] function that takes the index of an element and the element itself\n * and performs the desired action on the element.\n */\npublic inline fun ShortArray.forEachIndexed(action: (index: Int, Short) -> Unit): Unit {\n var index = 0\n for (item in this) action(index++, item)\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index with the element.\n * @param [action] function that takes the index of an element and the element itself\n * and performs the desired action on the element.\n */\npublic inline fun IntArray.forEachIndexed(action: (index: Int, Int) -> Unit): Unit {\n var index = 0\n for (item in this) action(index++, item)\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index with the element.\n * @param [action] function that takes the index of an element and the element itself\n * and performs the desired action on the element.\n */\npublic inline fun LongArray.forEachIndexed(action: (index: Int, Long) -> Unit): Unit {\n var index = 0\n for (item in this) action(index++, item)\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index with the element.\n * @param [action] function that takes the index of an element and the element itself\n * and performs the desired action on the element.\n */\npublic inline fun FloatArray.forEachIndexed(action: (index: Int, Float) -> Unit): Unit {\n var index = 0\n for (item in this) action(index++, item)\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index with the element.\n * @param [action] function that takes the index of an element and the element itself\n * and performs the desired action on the element.\n */\npublic inline fun DoubleArray.forEachIndexed(action: (index: Int, Double) -> Unit): Unit {\n var index = 0\n for (item in this) action(index++, item)\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index with the element.\n * @param [action] function that takes the index of an element and the element itself\n * and performs the desired action on the element.\n */\npublic inline fun BooleanArray.forEachIndexed(action: (index: Int, Boolean) -> Unit): Unit {\n var index = 0\n for (item in this) action(index++, item)\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index with the element.\n * @param [action] function that takes the index of an element and the element itself\n * and performs the desired action on the element.\n */\npublic inline fun CharArray.forEachIndexed(action: (index: Int, Char) -> Unit): Unit {\n var index = 0\n for (item in this) action(index++, item)\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n */\n@SinceKotlin(\"1.1\")\npublic fun Array<out Double>.max(): Double? {\n if (isEmpty()) return null\n var max = this[0]\n if (max.isNaN()) return max\n for (i in 1..lastIndex) {\n val e = this[i]\n if (e.isNaN()) return e\n if (max < e) max = e\n }\n return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n */\n@SinceKotlin(\"1.1\")\npublic fun Array<out Float>.max(): Float? {\n if (isEmpty()) return null\n var max = this[0]\n if (max.isNaN()) return max\n for (i in 1..lastIndex) {\n val e = this[i]\n if (e.isNaN()) return e\n if (max < e) max = e\n }\n return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n */\npublic fun <T : Comparable<T>> Array<out T>.max(): T? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (max < e) max = e\n }\n return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n */\npublic fun ByteArray.max(): Byte? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (max < e) max = e\n }\n return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n */\npublic fun ShortArray.max(): Short? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (max < e) max = e\n }\n return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n */\npublic fun IntArray.max(): Int? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (max < e) max = e\n }\n return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n

*/\npublic fun LongArray.max(): Long? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (max < e) max = e\n }\n return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n */\npublic fun FloatArray.max(): Float? {\n if (isEmpty()) return null\n var max = this[0]\n if (max.isNaN()) return max\n for (i in 1..lastIndex) {\n val e = this[i]\n if (e.isNaN()) return e\n if (max < e) max = e\n }\n return max\n}\n\n/**\n * Returns
the largest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n */\npublic fun DoubleArray.max(): Double? {\n if (isEmpty()) return null\n var max = this[0]\n if (max.isNaN()) return max\n for (i in 1..lastIndex) {\n val e = this[i]\n if (e.isNaN()) return e\n if (max < e) max = e\n }\n return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n */\npublic fun CharArray.max(): Char? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (max < e) max = e\n }\n return max\n}\n\n/**\n * Returns the first element yielding the largest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.maxBy\n */\npublic inline fun <T, R : Comparable<R>> Array<out T>.maxBy(selector: (T) -> R): T? {\n if (isEmpty()) return null\n var maxElem
= this[0]\n var maxValue = selector(maxElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (maxValue < v) {\n maxElem = e\n maxValue = v\n }\n }\n return maxElem\n}\n\n/**\n * Returns the first element yielding the largest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.maxBy\n */\npublic inline fun <R : Comparable<R>> ByteArray.maxBy(selector: (Byte) -> R): Byte? {\n if (isEmpty()) return null\n var maxElem = this[0]\n var maxValue = selector(maxElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (maxValue < v) {\n maxElem = e\n maxValue = v\n }\n }\n return maxElem\n}\n\n/**\n * Returns the first element yielding the largest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.maxBy\n
*/\npublic inline fun <R : Comparable<R>> ShortArray.maxBy(selector: (Short) -> R): Short? {\n if (isEmpty()) return null\n var maxElem = this[0]\n var maxValue = selector(maxElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (maxValue < v) {\n maxElem = e\n maxValue = v\n }\n }\n return maxElem\n}\n\n/**\n * Returns the first element yielding the largest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.maxBy\n */\npublic inline fun <R : Comparable<R>> IntArray.maxBy(selector: (Int) -> R): Int? {\n if (isEmpty()) return null\n var maxElem = this[0]\n var maxValue = selector(maxElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (maxValue < v) {\n maxElem = e\n maxValue = v\n }\n }\n return maxElem\n}\n\n/**\n
* Returns the first element yielding the largest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.maxBy\n */\npublic inline fun <R : Comparable<R>> LongArray.maxBy(selector: (Long) -> R): Long? {\n if (isEmpty()) return null\n var maxElem = this[0]\n var maxValue = selector(maxElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (maxValue < v) {\n maxElem = e\n maxValue = v\n }\n }\n return maxElem\n}\n\n/**\n * Returns the first element yielding the largest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.maxBy\n */\npublic inline fun <R : Comparable<R>> FloatArray.maxBy(selector: (Float) -> R): Float? {\n if (isEmpty()) return null\n var maxElem = this[0]\n var maxValue = selector(maxElem)\n for (i in 1..lastIndex) {\n
val e = this[i]\n val v = selector(e)\n if (maxValue < v) {\n maxElem = e\n maxValue = v\n }\n }\n return maxElem\n}\n\n/**\n * Returns the first element yielding the largest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.maxBy\n */\npublic inline fun <R : Comparable<R>> DoubleArray.maxBy(selector: (Double) -> R): Double? {\n if (isEmpty()) return null\n var maxElem = this[0]\n var maxValue = selector(maxElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (maxValue < v) {\n maxElem = e\n maxValue

= v\n }\n }\n return maxElem\n}\n\n/**\n * Returns the first element yielding the largest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.maxBy\n */\npublic inline fun <R : Comparable<R>> BooleanArray.maxBy(selector: (Boolean) -> R): Boolean? {\n if (isEmpty()) return null\n var maxElem = this[0]\n var maxValue = selector(maxElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (maxValue < v) {\n maxElem = e\n maxValue = v\n }\n }\n return maxElem\n}\n\n/**\n * Returns the first element yielding the largest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.maxBy\n */\npublic inline fun <R : Comparable<R>> CharArray.maxBy(selector: (Char) -> R): Char? {\n if (isEmpty()) return null\n var maxElem = this[0]\n var maxValue = selector(maxElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (maxValue < v) {\n maxElem = e\n maxValue = v\n }\n }\n return maxElem\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator] or `null` if there are no elements.\n */\npublic fun <T> Array<out T>.maxWith(comparator: Comparator<in T>): T? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (comparator.compare(max, e) < 0) max = e\n }\n return max\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator] or `null` if there are no elements.\n */\npublic fun ByteArray.maxWith(comparator: Comparator<in Byte>): Byte? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (comparator.compare(max, e) < 0) max = e\n }\n return max\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator] or `null` if there are no elements.\n */\npublic fun ShortArray.maxWith(comparator: Comparator<in Short>): Short? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (comparator.compare(max, e) < 0) max = e\n }\n return max\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator] or `null` if there are no elements.\n */\npublic fun IntArray.maxWith(comparator: Comparator<in Int>): Int? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (comparator.compare(max, e) < 0) max = e\n }\n return max\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator] or `null` if there are no elements.\n */\npublic fun LongArray.maxWith(comparator: Comparator<in Long>): Long? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (comparator.compare(max, e) < 0) max = e\n }\n return max\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator] or `null` if there are no elements.\n */\npublic fun FloatArray.maxWith(comparator: Comparator<in Float>): Float? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (comparator.compare(max, e) < 0) max = e\n }\n return max\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator] or `null` if there are no elements.\n */\npublic fun DoubleArray.maxWith(comparator: Comparator<in Double>): Double? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (comparator.compare(max, e) < 0) max = e\n }\n return max\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator] or `null` if there are no elements.\n */\npublic fun BooleanArray.maxWith(comparator: Comparator<in Boolean>): Boolean? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (comparator.compare(max, e) < 0) max = e\n }\n return max\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator] or `null` if there are no elements.\n */\npublic fun CharArray.maxWith(comparator: Comparator<in Char>): Char? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (comparator.compare(max, e) < 0) max = e\n }\n return max\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n */\n@SinceKotlin(\"1.1\")\npublic fun Array<out Double>.min(): Double? {\n if (isEmpty()) return null\n var min = this[0]\n if (min.isNaN()) return min\n for (i in 1..lastIndex) {\n val e = this[i]\n if (e.isNaN()) return e\n if (min > e) min = e\n

}\n return min\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n */\n@SinceKotlin(\"1.1\")\npublic fun Array<out Float>.min(): Float? {\n if (isEmpty()) return null\n var min = this[0]\n if (min.isNaN()) return min\n for (i in 1..lastIndex) {\n val e = this[i]\n if (e.isNaN()) return e\n if (min > e) min = e\n }\n return min\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n */\npublic fun <T : Comparable<T>> Array<out T>.min(): T? {\n if (isEmpty()) return null\n var min = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (min > e) min = e\n }\n return min\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n */\npublic fun ByteArray.min(): Byte? {\n if (isEmpty()) return null\n var min = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (min > e) min = e\n }\n return min\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n */\npublic fun ShortArray.min(): Short? {\n if (isEmpty()) return null\n var min = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (min > e) min = e\n }\n return min\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n */\npublic fun IntArray.min(): Int? {\n if (isEmpty()) return null\n var min = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (min > e) min = e\n }\n return min\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n */\npublic fun LongArray.min(): Long? {\n if (isEmpty()) return null\n var min = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (min > e) min = e\n }\n return min\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n */\npublic fun FloatArray.min(): Float? {\n if (isEmpty()) return null\n var min = this[0]\n if (min.isNaN()) return min\n for (i in 1..lastIndex) {\n val e = this[i]\n if (e.isNaN()) return e\n if (min > e) min = e\n }\n return min\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n */\npublic fun DoubleArray.min(): Double? {\n if (isEmpty()) return null\n var min = this[0]\n if (min.isNaN()) return min\n for (i in 1..lastIndex) {\n val e = this[i]\n if (e.isNaN()) return e\n if (min > e) min = e\n }\n return min\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n */\npublic fun CharArray.min(): Char? {\n if (isEmpty()) return null\n var min = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (min > e) min = e\n }\n return min\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.minBy\n */\npublic inline fun <T, R : Comparable<R>> Array<out T>.minBy(selector: (T) -> R): T? {\n if (isEmpty()) return null\n var minElem = this[0]\n var minValue = selector(minElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (minValue > v) {\n minElem = e\n minValue = v\n }\n }\n return minElem\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.minBy\n */\npublic inline fun <R : Comparable<R>> ByteArray.minBy(selector: (Byte) -> R): Byte? {\n if (isEmpty()) return null\n var minElem = this[0]\n var minValue = selector(minElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (minValue > v) {\n minElem = e\n minValue = v\n }\n }\n return minElem\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.minBy\n */\npublic inline fun <R : Comparable<R>> ShortArray.minBy(selector: (Short) -> R): Short? {\n if (isEmpty()) return null\n var minElem = this[0]\n var minValue = selector(minElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (minValue > v) {\n minElem = e\n minValue = v\n }\n }\n return minElem\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.minBy\n */\npublic inline fun <R : Comparable<R>> IntArray.minBy(selector: (Int) -> R): Int? {\n if (isEmpty()) return null\n var minElem = this[0]\n var minValue = selector(minElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (minValue > v) {\n minElem = e\n minValue = v\n }\n }\n return minElem\n}\n\n/**\n * Returns the first element yielding the

smallest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.minBy\n */\npublic inline fun <R : Comparable<R>> LongArray.minBy(selector: (Long) -> R): Long? {\n if (isEmpty()) return null\n var minElem = this[0]\n var minValue = selector(minElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (minValue > v) {\n minElem = e\n minValue = v\n }\n }\n return minElem\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.minBy\n */\npublic inline fun <R : Comparable<R>> FloatArray.minBy(selector: (Float) -> R): Float? {\n if (isEmpty()) return null\n var minElem = this[0]\n var minValue = selector(minElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (minValue > v) {\n minElem = e\n minValue = v\n }\n }\n return minElem\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.minBy\n */\npublic inline fun <R : Comparable<R>> DoubleArray.minBy(selector: (Double) -> R): Double? {\n if (isEmpty()) return null\n var minElem = this[0]\n var minValue = selector(minElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (minValue > v) {\n minElem = e\n minValue = v\n }\n }\n return minElem\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.minBy\n */\npublic inline fun <R : Comparable<R>> BooleanArray.minBy(selector: (Boolean) -> R): Boolean? {\n if (isEmpty()) return null\n var minElem = this[0]\n var minValue = selector(minElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (minValue > v) {\n minElem = e\n minValue = v\n }\n }\n return minElem\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.minBy\n */\npublic inline fun <R : Comparable<R>> CharArray.minBy(selector: (Char) -> R): Char? {\n if (isEmpty()) return null\n var minElem = this[0]\n var minValue = selector(minElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (minValue > v) {\n minElem = e\n minValue = v\n }\n }\n return minElem\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n */\npublic fun <T> Array<out T>.minWith(comparator: Comparator<in T>): T? {\n if (isEmpty()) return null\n var min = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (comparator.compare(min, e) > 0) min = e\n }\n return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n */\npublic fun ByteArray.minWith(comparator: Comparator<in Byte>): Byte? {\n if (isEmpty()) return null\n var min = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (comparator.compare(min, e) > 0) min = e\n }\n return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n */\npublic fun ShortArray.minWith(comparator: Comparator<in Short>): Short? {\n if (isEmpty()) return null\n var min = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (comparator.compare(min, e) > 0) min = e\n }\n return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n */\npublic fun IntArray.minWith(comparator: Comparator<in Int>): Int? {\n if (isEmpty()) return null\n var min = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (comparator.compare(min, e) > 0) min = e\n }\n return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n */\npublic fun LongArray.minWith(comparator: Comparator<in Long>): Long? {\n if (isEmpty()) return null\n var min = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (comparator.compare(min, e) > 0) min = e\n }\n return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n */\npublic fun FloatArray.minWith(comparator: Comparator<in Float>): Float? {\n if (isEmpty()) return null\n var min = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (comparator.compare(min, e) > 0) min = e\n }\n

return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n */\npublic fun DoubleArray.minWith(comparator: Comparator<in Double>): Double? {\n if (isEmpty()) return null\n var min = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (comparator.compare(min, e) > 0) min = e\n }\n return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n */\npublic fun BooleanArray.minWith(comparator: Comparator<in Boolean>): Boolean? {\n if (isEmpty()) return null\n var min = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (comparator.compare(min, e) > 0) min = e\n }\n return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n */\npublic fun CharArray.minWith(comparator: Comparator<in Char>): Char? {\n if (isEmpty()) return null\n var min = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (comparator.compare(min, e) > 0) min = e\n }\n return min\n}\n\n/**\n * Returns `true` if the array has no elements.\n *
\n * @sample samples.collections.Collections.Aggregates.none\n */\npublic fun <T> Array<out T>.none(): Boolean {\n return isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n * @sample samples.collections.Collections.Aggregates.none\n */\npublic fun ByteArray.none(): Boolean {\n return isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n * @sample samples.collections.Collections.Aggregates.none\n */\npublic fun ShortArray.none(): Boolean {\n return isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n * @sample samples.collections.Collections.Aggregates.none\n */\npublic fun IntArray.none(): Boolean {\n return isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n * @sample samples.collections.Collections.Aggregates.none\n */\npublic fun LongArray.none(): Boolean {\n return isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n * @sample samples.collections.Collections.Aggregates.none\n
*/\npublic fun FloatArray.none(): Boolean {\n return isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n * @sample samples.collections.Collections.Aggregates.none\n */\npublic fun DoubleArray.none(): Boolean {\n return isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n * @sample samples.collections.Collections.Aggregates.none\n */\npublic fun BooleanArray.none(): Boolean {\n return isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n * @sample samples.collections.Collections.Aggregates.none\n */\npublic fun CharArray.none(): Boolean {\n return isEmpty()\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.noneWithPredicate\n */\npublic inline fun <T> Array<out T>.none(predicate: (T) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return false\n return true\n}\n\n/**\n *
Returns `true` if no elements match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.noneWithPredicate\n */\npublic inline fun ByteArray.none(predicate: (Byte) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return false\n return true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.noneWithPredicate\n */\npublic inline fun ShortArray.none(predicate: (Short) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return false\n return true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.noneWithPredicate\n */\npublic inline fun IntArray.none(predicate: (Int) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return false\n return true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n
* @sample samples.collections.Collections.Aggregates.noneWithPredicate\n */\npublic inline fun LongArray.none(predicate: (Long) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return false\n return true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.noneWithPredicate\n */\npublic inline fun FloatArray.none(predicate: (Float) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return false\n return

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true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.noneWithPredicate\n */\npublic inline fun DoubleArray.none(predicate:
(Double) -> Boolean): Boolean {\n    for (element in this) if (predicate(element)) return false\n    return
true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.noneWithPredicate\n
 */\npublic inline fun BooleanArray.none(predicate: (Boolean) -> Boolean): Boolean {\n    for (element in this) if
(predicate(element)) return false\n    return true\n}\n\n/**\n * Returns `true` if no elements match the given
[predicate].\n * \n * @sample samples.collections.Collections.Aggregates.noneWithPredicate\n */\npublic inline fun
CharArray.none(predicate: (Char) -> Boolean): Boolean {\n    for (element in this) if (predicate(element)) return
false\n    return true\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from
left to right to current accumulator value and each element.\n */\npublic inline fun <S, T : S> Array<out
T>.reduce(operation: (acc: S, T) -> S): S {\n    if (isEmpty())\n        throw UnsupportedOperationException(\"Empty
array can't be reduced.\")\n    var accumulator: S = this[0]\n    for (index in 1..lastIndex) {\n        accumulator =
operation(accumulator, this[index])\n    }\n    return accumulator\n}\n\n/**\n
 * Accumulates value starting with the first element and applying [operation] from left to right to current
accumulator value and each element.\n */\npublic inline fun ByteArray.reduce(operation: (acc: Byte, Byte) -> Byte):
Byte {\n    if (isEmpty())\n        throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n    var
accumulator = this[0]\n    for (index in 1..lastIndex) {\n        accumulator = operation(accumulator, this[index])\n
}\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation]
from left to right to current accumulator value and each element.\n */\npublic inline fun
ShortArray.reduce(operation: (acc: Short, Short) -> Short): Short {\n    if (isEmpty())\n        throw
UnsupportedOperationException(\"Empty array can't be reduced.\")\n    var accumulator = this[0]\n    for (index in
1..lastIndex) {\n        accumulator = operation(accumulator, this[index])\n    }\n    return accumulator\n}\n\n/**\n
 * Accumulates value starting with the first element and applying [operation] from left to right to current
accumulator value and each element.\n */\npublic inline fun IntArray.reduce(operation: (acc: Int, Int) -> Int): Int {\n
 if (isEmpty())\n        throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n    var accumulator
= this[0]\n    for (index in 1..lastIndex) {\n        accumulator = operation(accumulator, this[index])\n    }\n    return
accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to
right to current accumulator value and each element.\n */\npublic inline fun LongArray.reduce(operation: (acc:
Long, Long) -> Long): Long {\n    if (isEmpty())\n        throw UnsupportedOperationException(\"Empty array can't
be reduced.\")\n    var accumulator = this[0]\n    for (index in 1..lastIndex) {\n        accumulator =
operation(accumulator, this[index])\n    }\n    return accumulator\n}\n\n/**\n
 * Accumulates value starting with the first element and applying [operation] from left to right to current
accumulator value and each element.\n */\npublic inline fun FloatArray.reduce(operation: (acc: Float, Float) ->
Float): Float {\n    if (isEmpty())\n        throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n
 var accumulator = this[0]\n    for (index in 1..lastIndex) {\n        accumulator = operation(accumulator,
this[index])\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and
applying [operation] from left to right to current accumulator value and each element.\n */\npublic inline fun
DoubleArray.reduce(operation: (acc: Double, Double) -> Double): Double {\n    if (isEmpty())\n        throw
UnsupportedOperationException(\"Empty array can't be reduced.\")\n    var accumulator = this[0]\n    for (index in
1..lastIndex) {\n        accumulator = operation(accumulator, this[index])\n    }\n    return accumulator\n}\n\n/**\n
 * Accumulates value starting with the first element and applying [operation] from left to right to current
accumulator value and each element.\n */\npublic inline fun BooleanArray.reduce(operation: (acc: Boolean,
Boolean) -> Boolean): Boolean {\n    if (isEmpty())\n        throw UnsupportedOperationException(\"Empty array
can't be reduced.\")\n    var accumulator = this[0]\n    for (index in 1..lastIndex) {\n        accumulator =
operation(accumulator, this[index])\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the
first element and applying [operation] from left to right to current accumulator value and each element.\n */\npublic
inline fun CharArray.reduce(operation: (acc: Char, Char) -> Char): Char {\n    if (isEmpty())\n        throw
```

UnsupportedOperationException(\"Empty array can't be reduced.\")\n   var accumulator = this[0]\n   for (index in 1..lastIndex) {\n   accumulator = operation(accumulator, this[index])\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself and calculates the next accumulator value.\n */\npublic inline fun <S, T : S> Array<out T>.reduceIndexed(operation: (index: Int, acc: S, T) -> S): S {\n if (isEmpty())\n   throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n   var accumulator: S = this[0]\n   for (index in 1..lastIndex) {\n   accumulator = operation(index, accumulator, this[index])\n   }\n return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * @param [operation] function that takes the index of an
 element, current accumulator value\n * and the element itself and calculates the next accumulator value.\n */\npublic inline fun ByteArray.reduceIndexed(operation: (index: Int, acc: Byte, Byte) -> Byte): Byte {\n   if (isEmpty())\n   throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n   var accumulator = this[0]\n   for (index in 1..lastIndex) {\n   accumulator = operation(index, accumulator, this[index])\n   }\n return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself and calculates the next accumulator value.\n */\npublic inline fun ShortArray.reduceIndexed(operation: (index: Int, acc: Short, Short) -> Short): Short {\n   if (isEmpty())\n   throw UnsupportedOperationException(\"Empty
 array can't be reduced.\")\n   var accumulator = this[0]\n   for (index in 1..lastIndex) {\n   accumulator = operation(index, accumulator, this[index])\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself and calculates the next accumulator value.\n */\npublic inline fun IntArray.reduceIndexed(operation: (index: Int, acc: Int, Int) -> Int): Int {\n   if (isEmpty())\n   throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n   var accumulator = this[0]\n   for (index in 1..lastIndex) {\n   accumulator = operation(index, accumulator, this[index])\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and
 applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself and calculates the next accumulator value.\n */\npublic inline fun LongArray.reduceIndexed(operation: (index: Int, acc: Long, Long) -> Long): Long {\n   if (isEmpty())\n   throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n   var accumulator = this[0]\n   for (index in 1..lastIndex) {\n   accumulator = operation(index, accumulator, this[index])\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself and calculates the next
 accumulator value.\n */\npublic inline fun FloatArray.reduceIndexed(operation: (index: Int, acc: Float, Float) -> Float): Float {\n   if (isEmpty())\n   throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n   var accumulator = this[0]\n   for (index in 1..lastIndex) {\n   accumulator = operation(index, accumulator, this[index])\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself and calculates the next accumulator value.\n */\npublic inline fun DoubleArray.reduceIndexed(operation: (index: Int, acc: Double, Double) -> Double): Double {\n   if (isEmpty())\n   throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n   var accumulator = this[0]\n

for (index in 1..lastIndex) {\n accumulator = operation(index, accumulator, this[index])\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself and calculates the next accumulator value.\n */\npublic inline fun BooleanArray.reduceIndexed(operation: (index: Int, acc: Boolean, Boolean) -> Boolean): Boolean {\n if (isEmpty())\n throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(index, accumulator, this[index])\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself and calculates the next accumulator value.\n */\npublic inline fun CharArray.reduceIndexed(operation: (index: Int, acc: Char, Char) -> Char): Char {\n if (isEmpty())\n throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(index, accumulator, this[index])\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left to each element and current accumulator value.\n */\npublic inline fun <S, T : S> Array<out T>.reduceRight(operation: (T, acc: S) -> S): S {\n var index = lastIndex\n if (index < 0) throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n var accumulator: S = get(index--)\n while (index >= 0) {\n accumulator = operation(get(index--), accumulator)\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left to each element and current accumulator value.\n */\npublic inline fun ByteArray.reduceRight(operation: (Byte, acc: Byte) -> Byte): Byte {\n var index = lastIndex\n if (index < 0) throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n var accumulator = get(index--)\n while (index >= 0) {\n accumulator = operation(get(index--), accumulator)\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left to each element and current accumulator value.\n */\npublic inline fun ShortArray.reduceRight(operation: (Short, acc: Short) -> Short): Short {\n var index = lastIndex\n if (index < 0) throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n var accumulator = get(index--)\n while (index >= 0) {\n accumulator = operation(get(index--), accumulator)\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left to each element and current accumulator value.\n */\npublic inline fun IntArray.reduceRight(operation: (Int, acc: Int) -> Int): Int {\n var index = lastIndex\n if (index < 0) throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n var accumulator = get(index--)\n while (index >= 0) {\n accumulator = operation(get(index--), accumulator)\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left to each element and current accumulator value.\n */\npublic inline fun LongArray.reduceRight(operation: (Long, acc: Long) -> Long): Long {\n var index = lastIndex\n if (index < 0) throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n var accumulator = get(index--)\n while (index >= 0) {\n accumulator = operation(get(index--), accumulator)\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left to each element and current accumulator value.\n */\npublic inline fun FloatArray.reduceRight(operation: (Float, acc: Float) -> Float): Float {\n var index = lastIndex\n if (index < 0) throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n var accumulator = get(index--)\n while (index >= 0) {\n accumulator = operation(get(index--), accumulator)\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left to each element and current accumulator value.\n */\npublic inline fun DoubleArray.reduceRight(operation: (Double, acc: Double) -> Double): Double {\n var index = lastIndex\n if (index < 0) throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n var accumulator = get(index--)\n while (index >= 0) {\n accumulator = operation(get(index--), accumulator)\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left to each element and current

accumulator value.\n */\npublic inline fun BooleanArray.reduceRight(operation: (Boolean, acc: Boolean) -> Boolean): Boolean {\n   var index = lastIndex\n   if (index < 0) throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n   var accumulator = get(index--)\n   while (index >= 0) {\n   accumulator = operation(get(index--), accumulator)\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left to each element and current accumulator value.\n */\npublic inline fun CharArray.reduceRight(operation: (Char, acc: Char) -> Char): Char {\n   var index = lastIndex\n   if (index < 0) throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n   var accumulator = get(index--)\n   while (index >= 0) {\n   accumulator = operation(get(index--), accumulator)\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\npublic inline fun <S, T : S> Array<out T>.reduceRightIndexed(operation: (index: Int, T, acc: S) -> S): S {\n   var index = lastIndex\n   if (index < 0) throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n   var accumulator: S = get(index--)\n   while (index >= 0) {\n   accumulator = operation(index, get(index), accumulator)\n   --index\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\npublic inline fun ByteArray.reduceRightIndexed(operation: (index: Int, Byte, acc: Byte) -> Byte): Byte {\n   var index = lastIndex\n   if (index < 0) throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n   var accumulator = get(index--)\n   while (index >= 0) {\n   accumulator = operation(index, get(index), accumulator)\n   --index\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * @param [operation] function
that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\npublic inline fun ShortArray.reduceRightIndexed(operation: (index: Int, Short, acc: Short) -> Short): Short {\n   var index = lastIndex\n   if (index < 0) throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n   var accumulator = get(index--)\n   while (index >= 0) {\n   accumulator = operation(index, get(index), accumulator)\n   --index\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\npublic inline fun IntArray.reduceRightIndexed(operation: (index: Int, Int, acc: Int) -> Int):
Int {\n   var index = lastIndex\n   if (index < 0) throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n   var accumulator = get(index--)\n   while (index >= 0) {\n   accumulator = operation(index, get(index), accumulator)\n   --index\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\npublic inline fun LongArray.reduceRightIndexed(operation: (index: Int, Long, acc: Long) -> Long): Long {\n   var index = lastIndex\n   if (index < 0) throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n   var accumulator = get(index--)\n   while (index >= 0) {\n   accumulator = operation(index, get(index),
accumulator)\n   --index\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\npublic inline fun FloatArray.reduceRightIndexed(operation: (index: Int, Float, acc: Float) -> Float): Float {\n   var index =

lastIndex\n   if (index < 0) throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n   var accumulator = get(index--)\n   while (index >= 0) {\n   accumulator = operation(index, get(index), accumulator)\n   --index\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\npublic inline fun DoubleArray.reduceRightIndexed(operation: (index: Int, Double, acc: Double) -> Double): Double {\n   var index = lastIndex\n   if (index < 0) throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n   var accumulator = get(index--)\n   while (index >= 0) {\n   accumulator = operation(index, get(index), accumulator)\n   --index\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\npublic inline fun BooleanArray.reduceRightIndexed(operation:
(index: Int, Boolean, acc: Boolean) -> Boolean): Boolean {\n   var index = lastIndex\n   if (index < 0) throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n   var accumulator = get(index--)\n   while (index >= 0) {\n   accumulator = operation(index, get(index), accumulator)\n   --index\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\npublic inline fun CharArray.reduceRightIndexed(operation: (index: Int, Char, acc: Char) -> Char): Char {\n   var index = lastIndex\n   if (index < 0) throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n   var accumulator = get(index--)\n
while (index >= 0) {\n   accumulator = operation(index, get(index), accumulator)\n   --index\n   }\n   return accumulator\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\npublic inline fun <T> Array<out T>.sumBy(selector: (T) -> Int): Int {\n   var sum: Int = 0\n   for (element in this) {\n   sum += selector(element)\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\npublic inline fun ByteArray.sumBy(selector: (Byte) -> Int): Int {\n   var sum: Int = 0\n   for (element in this) {\n   sum += selector(element)\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\npublic inline fun ShortArray.sumBy(selector: (Short) -> Int): Int {\n   var sum: Int = 0\n   for (element in this) {\n   sum += selector(element)\n
    }\n   return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\npublic inline fun IntArray.sumBy(selector: (Int) -> Int): Int {\n   var sum: Int = 0\n   for (element in this) {\n   sum += selector(element)\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\npublic inline fun LongArray.sumBy(selector: (Long) -> Int): Int {\n   var sum: Int = 0\n   for (element in this) {\n   sum += selector(element)\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\npublic inline fun FloatArray.sumBy(selector: (Float) -> Int): Int {\n   var sum: Int = 0\n   for (element in this) {\n   sum += selector(element)\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element
in the array.\n */\npublic inline fun DoubleArray.sumBy(selector: (Double) -> Int): Int {\n   var sum: Int = 0\n   for (element in this) {\n   sum += selector(element)\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\npublic inline fun BooleanArray.sumBy(selector: (Boolean) -> Int): Int {\n   var sum: Int = 0\n   for (element in this) {\n   sum += selector(element)\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\npublic inline fun CharArray.sumBy(selector: (Char) -> Int): Int {\n   var sum: Int = 0\n   for (element in this) {\n   sum += selector(element)\n   }\n   return sum\n}\n\n/**\n * Returns

the sum of all values produced by [selector] function applied to each element in the array.\n */\npublic inline fun <T> Array<out T>.sumByDouble(selector: (T) -> Double): Double {\n
    var sum: Double = 0.0\n   for (element in this) {\n   sum += selector(element)\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\npublic inline fun ByteArray.sumByDouble(selector: (Byte) -> Double): Double {\n   var sum: Double = 0.0\n   for (element in this) {\n   sum += selector(element)\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\npublic inline fun ShortArray.sumByDouble(selector: (Short) -> Double): Double {\n   var sum: Double = 0.0\n   for (element in this) {\n   sum += selector(element)\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\npublic inline fun IntArray.sumByDouble(selector: (Int) -> Double): Double {\n   var sum: Double = 0.0\n   for (element in this) {\n   sum += selector(element)\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\npublic inline fun LongArray.sumByDouble(selector: (Long) -> Double): Double {\n   var sum: Double = 0.0\n   for (element in this) {\n   sum += selector(element)\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\npublic inline fun FloatArray.sumByDouble(selector: (Float) -> Double): Double {\n   var sum: Double = 0.0\n   for (element in this) {\n   sum += selector(element)\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\npublic inline fun DoubleArray.sumByDouble(selector: (Double) -> Double): Double {\n   var sum: Double = 0.0\n   for (element in this) {\n   sum += selector(element)\n   }\n   return sum\n}\n\n/**\n * Returns
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    return this as Array<T>\n}\n\n/**\n * Splits the original array into pair of lists,\n * where *first* list contains elements for which [predicate] yielded `true`,\n * while *second* list contains elements for which [predicate] yielded `false`.\n */\npublic inline fun <T> Array<out T>.partition(predicate: (T) -> Boolean): Pair<List<T>, List<T>> {\n   val first = ArrayList<T>()\n   val second = ArrayList<T>()\n   for (element in this) {\n   if (predicate(element)) {\n   first.add(element)\n   } else {\n   second.add(element)\n   }\n   }\n   return Pair(first, second)\n}\n\n/**\n * Splits the original array into pair of lists,\n * where *first* list contains elements for which [predicate] yielded `true`,\n * while *second* list contains elements for which [predicate] yielded `false`.\n */\npublic inline fun ByteArray.partition(predicate: (Byte) -> Boolean): Pair<List<Byte>, List<Byte>> {\n   val first = ArrayList<Byte>()\n
    val second = ArrayList<Byte>()\n   for (element in this) {\n   if (predicate(element)) {\n   first.add(element)\n   } else {\n   second.add(element)\n   }\n   }\n   return Pair(first, second)\n}\n\n/**\n * Splits the original array into pair of lists,\n * where *first* list contains elements for which [predicate] yielded `true`,\n * while *second* list contains elements for which [predicate] yielded `false`.\n */\npublic inline fun ShortArray.partition(predicate: (Short) -> Boolean): Pair<List<Short>, List<Short>> {\n   val first = ArrayList<Short>()\n   val second = ArrayList<Short>()\n   for (element in this) {\n   if (predicate(element)) {\n   first.add(element)\n   } else {\n   second.add(element)\n   }\n   }\n   return Pair(first, second)\n}\n\n/**\n * Splits the original array into pair of lists,\n * where *first* list contains elements for which [predicate] yielded `true`,\n * while *second* list contains

elements for which [predicate] yielded `false`.\n */\npublic inline fun IntArray.partition(predicate: (Int) -> Boolean): Pair<List<Int>, List<Int>> {\n val first = ArrayList<Int>()\n val second = ArrayList<Int>()\n for (element in this) {\n if (predicate(element)) {\n first.add(element)\n } else {\n second.add(element)\n }\n }\n return Pair(first, second)\n}\n\n/**\n * Splits the original array into pair of lists,\n * where *first* list contains elements for which [predicate] yielded `true`,\n * while *second* list contains elements for which [predicate] yielded `false`.\n */\npublic inline fun LongArray.partition(predicate: (Long) -> Boolean): Pair<List<Long>, List<Long>> {\n val first = ArrayList<Long>()\n val second = ArrayList<Long>()\n for (element in this) {\n if (predicate(element)) {\n first.add(element)\n } else {\n second.add(element)\n }\n }\n return Pair(first, second)\n}\n\n/**\n * Splits the original array into pair of lists,\n * where *first* list contains elements for which [predicate] yielded `true`,\n * while *second* list contains elements for which [predicate] yielded `false`.\n */\npublic inline fun FloatArray.partition(predicate: (Float) -> Boolean): Pair<List<Float>, List<Float>> {\n val first = ArrayList<Float>()\n val second = ArrayList<Float>()\n for (element in this) {\n if (predicate(element)) {\n first.add(element)\n } else {\n second.add(element)\n }\n }\n return Pair(first, second)\n}\n\n/**\n * Splits the original array into pair of lists,\n * where *first* list contains elements for which [predicate] yielded `true`,\n * while *second* list contains elements for which [predicate] yielded `false`.\n */\npublic inline fun DoubleArray.partition(predicate: (Double) -> Boolean): Pair<List<Double>, List<Double>> {\n val first = ArrayList<Double>()\n val second = ArrayList<Double>()\n for (element in this) {\n if (predicate(element)) {\n first.add(element)\n } else {\n second.add(element)\n }\n }\n return Pair(first, second)\n}\n\n/**\n * Splits the original array into pair of lists,\n * where *first* list contains elements for which [predicate] yielded `true`,\n * while *second* list contains elements for which [predicate] yielded `false`.\n */\npublic inline fun BooleanArray.partition(predicate: (Boolean) -> Boolean): Pair<List<Boolean>, List<Boolean>> {\n val first = ArrayList<Boolean>()\n val second = ArrayList<Boolean>()\n for (element in this) {\n if (predicate(element)) {\n first.add(element)\n } else {\n second.add(element)\n }\n }\n return Pair(first, second)\n}\n\n/**\n * Splits the original array into pair of lists,\n * where *first* list contains elements for which [predicate] yielded `true`,\n * while *second* list contains elements for which [predicate] yielded `false`.\n */\npublic inline fun CharArray.partition(predicate: (Char) -> Boolean): Pair<List<Char>, List<Char>> {\n val first = ArrayList<Char>()\n val second = ArrayList<Char>()\n for (element in this) {\n if (predicate(element)) {\n first.add(element)\n } else {\n second.add(element)\n }\n }\n return Pair(first, second)\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <T, R> Array<out T>.zip(other: Array<out R>): List<Pair<T, R>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <R> ByteArray.zip(other: Array<out R>): List<Pair<Byte, R>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <R> ShortArray.zip(other: Array<out R>): List<Pair<Short, R>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <R> IntArray.zip(other: Array<out R>): List<Pair<Int, R>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun

<R> LongArray.zip(other: Array<out R>): List<Pair<Long, R>> {\n   return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <R> FloatArray.zip(other: Array<out R>): List<Pair<Float, R>> {\n   return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <R> DoubleArray.zip(other: Array<out R>): List<Pair<Double, R>> {\n   return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <R> BooleanArray.zip(other: Array<out R>): List<Pair<Boolean, R>> {\n   return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <R> CharArray.zip(other: Array<out R>): List<Pair<Char, R>> {\n   return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\npublic inline fun <T, R, V> Array<out T>.zip(other: Array<out R>, transform: (a: T, b: R) -> V): List<V> {\n   val size = minOf(size, other.size)\n   val list = ArrayList<V>(size)\n   for (i in 0 until size) {\n   list.add(transform(this[i], other[i]))\n   }\n   return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\npublic inline fun <R, V> ByteArray.zip(other: Array<out R>, transform: (a: Byte, b: R) -> V): List<V> {\n   val size = minOf(size, other.size)\n   val list = ArrayList<V>(size)\n   for (i in 0 until size) {\n   list.add(transform(this[i], other[i]))\n   }\n   return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\npublic inline fun <R, V> ShortArray.zip(other: Array<out R>, transform: (a: Short, b: R) -> V): List<V> {\n   val size = minOf(size, other.size)\n   val list = ArrayList<V>(size)\n   for (i in 0 until size) {\n   list.add(transform(this[i], other[i]))\n   }\n   return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\npublic inline fun <R, V> IntArray.zip(other: Array<out R>, transform: (a: Int, b: R) -> V): List<V> {\n   val size = minOf(size, other.size)\n   val list = ArrayList<V>(size)\n   for (i in 0 until size) {\n   list.add(transform(this[i], other[i]))\n   }\n   return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\npublic inline fun <R, V> LongArray.zip(other: Array<out R>, transform: (a: Long, b: R) -> V): List<V> {\n   val size = minOf(size, other.size)\n   val list = ArrayList<V>(size)\n   for (i in 0 until size) {\n   list.add(transform(this[i],\n   other[i]))\n   }\n   return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample

samples.collections.Iterables.Operations.zipIterableWithTransform\n */\npublic inline fun <R, V> FloatArray.zip(other: Array<out R>, transform: (a: Float, b: R) -> V): List<V> {\n val size = minOf(size, other.size)\n val list = ArrayList<V>(size)\n for (i in 0 until size) {\n list.add(transform(this[i], other[i]))\n }\n return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\npublic inline fun <R, V> DoubleArray.zip(other: Array<out R>, transform: (a: Double, b: R) -> V): List<V> {\n val size = minOf(size, other.size)\n val list = ArrayList<V>(size)\n for (i in 0 until size) {\n list.add(transform(this[i], other[i]))\n }\n return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\npublic inline fun <R, V> BooleanArray.zip(other: Array<out R>, transform: (a: Boolean, b: R) -> V): List<V> {\n val size = minOf(size, other.size)\n val list = ArrayList<V>(size)\n for (i in 0 until size) {\n list.add(transform(this[i], other[i]))\n }\n return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\npublic inline fun <R, V> CharArray.zip(other: Array<out R>, transform: (a: Char, b: R) -> V): List<V> {\n val size = minOf(size, other.size)\n val list = ArrayList<V>(size)\n for (i in 0 until size) {\n list.add(transform(this[i], other[i]))\n }\n return list\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <T, R> Array<out T>.zip(other: Iterable<R>): List<Pair<T, R>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <R> ByteArray.zip(other: Iterable<R>): List<Pair<Byte, R>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <R> ShortArray.zip(other: Iterable<R>): List<Pair<Short, R>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <R> IntArray.zip(other: Iterable<R>): List<Pair<Int, R>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <R> LongArray.zip(other: Iterable<R>): List<Pair<Long, R>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <R> FloatArray.zip(other: Iterable<R>): List<Pair<Float, R>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <R> DoubleArray.zip(other: Iterable<R>): List<Pair<Double, R>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun

<R> BooleanArray.zip(other: Iterable<R>): List<Pair<Boolean, R>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <R> CharArray.zip(other: Iterable<R>): List<Pair<Char, R>>
{\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] collection with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\npublic inline fun <T, R, V> Array<out T>.zip(other: Iterable<R>, transform: (a: T, b: R) -> V): List<V> {\n val arraySize = size\n val list = ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n var i = 0\n for (element in other) {\n if (i >= arraySize) break\n list.add(transform(this[i++], element))\n }\n return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] collection with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length
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arraySize))\n var i = 0\n for (element in other) {\n if (i >= arraySize) break\n list.add(transform(this[i++], element))\n }\n return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] collection with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\npublic inline fun <R, V> IntArray.zip(other: Iterable<R>, transform: (a: Int, b: R) -> V): List<V> {\n val arraySize = size\n val list = ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n var i = 0\n for (element in other) {\n if (i >= arraySize) break\n list.add(transform(this[i++], element))\n }\n return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array
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inline fun <R, V> FloatArray.zip(other: Iterable<R>, transform: (a: Float, b: R) -> V): List<V> {\n val arraySize = size\n val list = ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n var i = 0\n for (element in other) {\n if (i >= arraySize) break\n list.add(transform(this[i++], element))\n }\n return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] collection with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample

samples.collections.Iterables.Operations.zipIterableWithTransform\n */\npublic inline fun <R, V> DoubleArray.zip(other: Iterable<R>, transform: (a: Double, b: R) -> V): List<V> {\n val arraySize = size\n val list = ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n var i = 0\n for (element in other) {\n if (i >= arraySize)
break\n list.add(transform(this[i++], element))\n }\n return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] collection with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\npublic inline fun <R, V> BooleanArray.zip(other: Iterable<R>, transform: (a: Boolean, b: R) -> V): List<V> {\n val arraySize = size\n val list = ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n var i = 0\n for (element in other) {\n if (i >= arraySize) break\n list.add(transform(this[i++], element))\n }\n return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] collection with the same index\n * using the provided [transform] function applied to each pair of
elements.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\npublic inline fun <R, V> CharArray.zip(other: Iterable<R>, transform: (a: Char, b: R) -> V): List<V> {\n val arraySize = size\n val list = ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n var i = 0\n for (element in other) {\n if (i >= arraySize) break\n list.add(transform(this[i++], element))\n }\n return list\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun ByteArray.zip(other: ByteArray): List<Pair<Byte, Byte>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array
with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun ShortArray.zip(other: ShortArray): List<Pair<Short, Short>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun IntArray.zip(other: IntArray): List<Pair<Int, Int>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun LongArray.zip(other: LongArray): List<Pair<Long, Long>> {\n
return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun FloatArray.zip(other: FloatArray): List<Pair<Float, Float>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun DoubleArray.zip(other: DoubleArray): List<Pair<Double, Double>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n
* @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun BooleanArray.zip(other: BooleanArray): List<Pair<Boolean, Boolean>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun CharArray.zip(other: CharArray): List<Pair<Char, Char>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest array.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n

*/\npublic inline fun <V> ByteArray.zip(other: ByteArray, transform: (a: Byte,
b: Byte) -> V): List<V> {\n val size = minOf(size, other.size)\n val list = ArrayList<V>(size)\n for (i in 0 until size) {\n list.add(transform(this[i], other[i]))\n }\n return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest array.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\npublic inline fun <V> ShortArray.zip(other: ShortArray, transform: (a: Short, b: Short) -> V): List<V> {\n val size = minOf(size, other.size)\n val list = ArrayList<V>(size)\n for (i in 0 until size) {\n list.add(transform(this[i], other[i]))\n }\n return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied
to each pair of elements.\n * The returned list has length of the shortest array.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\npublic inline fun <V> IntArray.zip(other: IntArray, transform: (a: Int, b: Int) -> V): List<V> {\n val size = minOf(size, other.size)\n val list = ArrayList<V>(size)\n for (i in 0 until size) {\n list.add(transform(this[i], other[i]))\n }\n return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest array.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\npublic inline fun <V> LongArray.zip(other: LongArray, transform: (a: Long, b: Long) -> V): List<V> {\n val size = minOf(size, other.size)\n val list = ArrayList<V>(size)\n for (i in 0 until size) {\n list.add(transform(this[i], other[i]))\n }\n return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest array.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\npublic inline fun <V> FloatArray.zip(other: FloatArray, transform: (a: Float, b: Float) -> V): List<V> {\n val size = minOf(size, other.size)\n val list = ArrayList<V>(size)\n for (i in 0 until size) {\n list.add(transform(this[i], other[i]))\n }\n return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest array.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\npublic inline fun <V> DoubleArray.zip(other: DoubleArray, transform: (a: Double, b: Double) -> V): List<V> {\n val size = minOf(size, other.size)\n val list = ArrayList<V>(size)\n for (i in 0 until size) {\n list.add(transform(this[i], other[i]))\n }\n return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest array.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\npublic inline fun <V> BooleanArray.zip(other: BooleanArray, transform: (a: Boolean, b: Boolean) -> V): List<V> {\n val size = minOf(size, other.size)\n val list = ArrayList<V>(size)\n for (i in 0 until size) {\n list.add(transform(this[i], other[i]))\n }\n return list\n}\n\n/**\n * Returns a list of values
built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest array.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\npublic inline fun <V> CharArray.zip(other: CharArray, transform: (a: Char, b: Char) -> V): List<V> {\n val size = minOf(size, other.size)\n val list = ArrayList<V>(size)\n for (i in 0 until size) {\n list.add(transform(this[i], other[i]))\n }\n return list\n}\n\n/**\n * Appends the string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to \"...\").\n * \n * @sample samples.collections.Collections.Transformations.joinTo\n

*/\npublic fun <T, A : Appendable> Array<out T>.joinTo(buffer: A, separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((T) -> CharSequence)? = null): A {\n buffer.append(prefix)\n var count = 0\n for (element in this) {\n if (++count > 1) buffer.append(separator)\n if (limit < 0 || count <= limit) {\n buffer.appendElement(element, transform)\n } else break\n }\n if (limit >= 0 && count > limit) buffer.append(truncated)\n buffer.append(postfix)\n return buffer\n}\n\n/**\n * Appends the string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to \"...\").\n * \n * @sample samples.collections.Collections.Transformations.joinTo\n */\npublic fun <A : Appendable> ByteArray.joinTo(buffer: A, separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((Byte) -> CharSequence)? = null): A {\n buffer.append(prefix)\n var count = 0\n for (element in this) {\n if (++count > 1) buffer.append(separator)\n if (limit < 0 || count <= limit) {\n if (transform != null)\n buffer.append(transform(element))\n else\n buffer.append(element.toString())\n } else break\n }\n if (limit >= 0 && count > limit) buffer.append(truncated)\n buffer.append(postfix)\n return buffer\n}\n\n/**\n * Appends the string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a
non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to \"...\").\n * \n * @sample samples.collections.Collections.Transformations.joinTo\n */\npublic fun <A : Appendable> ShortArray.joinTo(buffer: A, separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((Short) -> CharSequence)? = null): A {\n buffer.append(prefix)\n var count = 0\n for (element in this) {\n if (++count > 1) buffer.append(separator)\n if (limit < 0 || count <= limit) {\n if (transform != null)\n buffer.append(transform(element))\n else\n buffer.append(element.toString())\n } else break\n }\n if (limit >= 0 && count > limit) buffer.append(truncated)\n buffer.append(postfix)\n return buffer\n}\n\n/**\n * Appends the string from all
the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to \"...\").\n * \n * @sample samples.collections.Collections.Transformations.joinTo\n */\npublic fun <A : Appendable> IntArray.joinTo(buffer: A, separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((Int) -> CharSequence)? = null): A {\n buffer.append(prefix)\n var count = 0\n for (element in this) {\n if (++count > 1) buffer.append(separator)\n if (limit < 0 || count <= limit) {\n if (transform != null)\n buffer.append(transform(element))\n else\n buffer.append(element.toString())\n } else break\n }\n if (limit >= 0 && count > limit) buffer.append(truncated)\n buffer.append(postfix)\n return buffer\n}\n\n/**\n * Appends the string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to \"...\").\n * \n * @sample samples.collections.Collections.Transformations.joinTo\n */\npublic fun <A : Appendable> LongArray.joinTo(buffer: A, separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((Long) -> CharSequence)? = null): A {\n buffer.append(prefix)\n var count = 0\n for (element in this) {\n if (++count > 1) buffer.append(separator)\n if (limit < 0 || count <= limit) {\n if (transform
!= null)\n buffer.append(transform(element))\n else\n buffer.append(element.toString())\n } else break\n }\n if (limit >= 0 && count > limit) buffer.append(truncated)\n buffer.append(postfix)\n return buffer\n}\n\n/**\n * Appends the string from all the elements separated using [separator] and using the given

[prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to \"...\").\n * \n * @sample samples.collections.Collections.Transformations.joinTo\n */\npublic fun <A : Appendable> FloatArray.joinTo(buffer: A, separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((Float) -> CharSequence)? = null): A {\n buffer.append(prefix)\n var count = 0\n for (element in this) {\n if (++count > 1) buffer.append(separator)\n if (limit < 0 || count <= limit) {\n if (transform != null)\n buffer.append(transform(element))\n else\n buffer.append(element.toString())\n } else break\n }\n if (limit >= 0 && count > limit) buffer.append(truncated)\n buffer.append(postfix)\n return buffer\n}\n\n/**\n * Appends the string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to \"...\").\n * \n * @sample samples.collections.Collections.Transformations.joinTo\n */\npublic fun <A : Appendable> DoubleArray.joinTo(buffer: A, separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((Double) -> CharSequence)? = null): A {\n buffer.append(prefix)\n var count = 0\n for (element in this) {\n if (++count > 1) buffer.append(separator)\n if (limit < 0 || count <= limit) {\n if (transform != null)\n buffer.append(transform(element))\n else\n buffer.append(element.toString())\n } else break\n }\n if (limit >= 0 && count > limit) buffer.append(truncated)\n buffer.append(postfix)\n return buffer\n}\n\n/**\n * Appends the string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to \"...\").\n * \n * @sample samples.collections.Collections.Transformations.joinTo\n */\npublic fun <A : Appendable> BooleanArray.joinTo(buffer: A, separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((Boolean) -> CharSequence)? = null): A {\n buffer.append(prefix)\n var count = 0\n for (element in this) {\n if (++count > 1) buffer.append(separator)\n if (limit < 0 || count <= limit) {\n if (transform != null)\n buffer.append(transform(element))\n else\n buffer.append(element.toString())\n } else break\n }\n if (limit >= 0 && count > limit) buffer.append(truncated)\n buffer.append(postfix)\n return buffer\n}\n\n/**\n * Appends the string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to \"...\").\n * \n * @sample samples.collections.Collections.Transformations.joinTo\n */\npublic fun <A : Appendable> CharArray.joinTo(buffer: A, separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((Char) -> CharSequence)? = null): A {\n buffer.append(prefix)\n var count = 0\n for (element in this) {\n if (++count > 1) buffer.append(separator)\n if (limit < 0 || count <= limit) {\n if (transform != null)\n buffer.append(transform(element))\n else\n buffer.append(element)\n } else break\n }\n if (limit >= 0 && count > limit) buffer.append(truncated)\n buffer.append(postfix)\n return buffer\n}\n\n/**\n * Creates a string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to \"...\").\n * \n * @sample samples.collections.Collections.Transformations.joinToString\n */\npublic fun <T> Array<out T>.joinToString(separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((T) -> CharSequence)? = null): String {\n return

joinTo(StringBuilder(), separator, prefix, postfix, limit, truncated, transform).toString()\n}\n\n/**\n * Creates a string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to \"...\").\n * \n * @sample samples.collections.Collections.Transformations.joinToString\n */\npublic fun ByteArray.joinToString(separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((Byte) -> CharSequence)? = null): String {\n   return joinTo(StringBuilder(), separator, prefix, postfix, limit, truncated, transform).toString()\n}\n\n/**\n * Creates a string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to \"...\").\n * \n * @sample samples.collections.Collections.Transformations.joinToString\n */\npublic fun ShortArray.joinToString(separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((Short) -> CharSequence)? = null): String {\n   return joinTo(StringBuilder(), separator, prefix, postfix, limit, truncated, transform).toString()\n}\n\n/**\n * Creates a string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to \"...\").\n * \n * @sample samples.collections.Collections.Transformations.joinToString\n */\npublic fun IntArray.joinToString(separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((Int) -> CharSequence)? = null): String {\n   return joinTo(StringBuilder(), separator, prefix, postfix, limit, truncated, transform).toString()\n}\n\n/**\n * Creates a string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to \"...\").\n * \n * @sample samples.collections.Collections.Transformations.joinToString\n */\npublic fun LongArray.joinToString(separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((Long) -> CharSequence)? = null): String {\n   return joinTo(StringBuilder(), separator, prefix, postfix, limit, truncated, transform).toString()\n}\n\n/**\n * Creates a string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to \"...\").\n * \n * @sample samples.collections.Collections.Transformations.joinToString\n */\npublic fun FloatArray.joinToString(separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((Float) -> CharSequence)? = null): String {\n   return joinTo(StringBuilder(), separator, prefix, postfix, limit, truncated, transform).toString()\n}\n\n/**\n * Creates a string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to \"...\").\n * \n * @sample samples.collections.Collections.Transformations.joinToString\n */\npublic fun DoubleArray.joinToString(separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((Double) -> CharSequence)? = null): String {\n   return joinTo(StringBuilder(), separator, prefix, postfix, limit, truncated, transform).toString()\n}\n\n/**\n * Creates a string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to \"...\").\n * \n * @sample samples.collections.Collections.Transformations.joinToString\n

*/\npublic fun BooleanArray.joinToString(separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\",
transform: ((Boolean) -> CharSequence)? = null): String {\n return joinTo(StringBuilder(), separator, prefix, postfix, limit, truncated, transform).toString()\n}\n\n/**\n * Creates a string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to \"...\").\n * \n * @sample samples.collections.Collections.Transformations.joinToString\n */\npublic fun CharArray.joinToString(separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((Char) -> CharSequence)? = null): String {\n return joinTo(StringBuilder(), separator, prefix, postfix, limit, truncated, transform).toString()\n}\n\n/**\n * Creates an [Iterable] instance that wraps
the original array returning its elements when being iterated.\n */\npublic fun <T> Array<out T>.asIterable(): Iterable<T> {\n if (isEmpty()) return emptyList()\n return Iterable { this.iterator() }\n}\n\n/**\n * Creates an [Iterable] instance that wraps the original array returning its elements when being iterated.\n */\npublic fun ByteArray.asIterable(): Iterable<Byte> {\n if (isEmpty()) return emptyList()\n return Iterable { this.iterator() }\n}\n\n/**\n * Creates an [Iterable] instance that wraps the original array returning its elements when being iterated.\n */\npublic fun ShortArray.asIterable(): Iterable<Short> {\n if (isEmpty()) return emptyList()\n return Iterable { this.iterator() }\n}\n\n/**\n * Creates an [Iterable] instance that wraps the original array returning its elements when being iterated.\n */\npublic fun IntArray.asIterable(): Iterable<Int> {\n if (isEmpty()) return emptyList()\n return Iterable { this.iterator() }\n}\n\n/**\n * Creates
an [Iterable] instance that wraps the original array returning its elements when being iterated.\n */\npublic fun LongArray.asIterable(): Iterable<Long> {\n if (isEmpty()) return emptyList()\n return Iterable { this.iterator() }\n}\n\n/**\n * Creates an [Iterable] instance that wraps the original array returning its elements when being iterated.\n */\npublic fun FloatArray.asIterable(): Iterable<Float> {\n if (isEmpty()) return emptyList()\n return Iterable { this.iterator() }\n}\n\n/**\n * Creates an [Iterable] instance that wraps the original array returning its elements when being iterated.\n */\npublic fun DoubleArray.asIterable(): Iterable<Double> {\n if (isEmpty()) return emptyList()\n return Iterable { this.iterator() }\n}\n\n/**\n * Creates an [Iterable] instance that wraps the original array returning its elements when being iterated.\n */\npublic fun BooleanArray.asIterable(): Iterable<Boolean> {\n if (isEmpty()) return emptyList()\n return Iterable
{ this.iterator() }\n}\n\n/**\n * Creates an [Iterable] instance that wraps the original array returning its elements when being iterated.\n */\npublic fun CharArray.asIterable(): Iterable<Char> {\n if (isEmpty()) return emptyList()\n return Iterable { this.iterator() }\n}\n\n/**\n * Creates a [Sequence] instance that wraps the original array returning its elements when being iterated.\n * \n * @sample samples.collections.Sequences.Building.sequenceFromArray\n */\npublic fun <T> Array<out T>.asSequence(): Sequence<T> {\n if (isEmpty()) return emptySequence()\n return Sequence { this.iterator() }\n}\n\n/**\n * Creates a [Sequence] instance that wraps the original array returning its elements when being iterated.\n * \n * @sample samples.collections.Sequences.Building.sequenceFromArray\n */\npublic fun ByteArray.asSequence(): Sequence<Byte> {\n if (isEmpty()) return emptySequence()\n return Sequence { this.iterator() }\n}\n\n/**\n * Creates a [Sequence] instance that wraps
the original array returning its elements when being iterated.\n * \n * @sample samples.collections.Sequences.Building.sequenceFromArray\n */\npublic fun ShortArray.asSequence(): Sequence<Short> {\n if (isEmpty()) return emptySequence()\n return Sequence { this.iterator() }\n}\n\n/**\n * Creates a [Sequence] instance that wraps the original array returning its elements when being iterated.\n * \n * @sample samples.collections.Sequences.Building.sequenceFromArray\n */\npublic fun IntArray.asSequence(): Sequence<Int> {\n if (isEmpty()) return emptySequence()\n return Sequence { this.iterator() }\n}\n\n/**\n * Creates a [Sequence] instance that wraps the original array returning its elements when being iterated.\n * \n * @sample samples.collections.Sequences.Building.sequenceFromArray\n */\npublic fun LongArray.asSequence():

Sequence<Long> {\n   if (isEmpty()) return emptySequence()\n   return Sequence { this.iterator() }\n}\n\n/**\n * Creates a [Sequence] instance that
 wraps the original array returning its elements when being iterated.\n * \n * @sample samples.collections.Sequences.Building.sequenceFromArray\n */\npublic fun FloatArray.asSequence(): Sequence<Float> {\n   if (isEmpty()) return emptySequence()\n   return Sequence { this.iterator() }\n}\n\n/**\n * Creates a [Sequence] instance that wraps the original array returning its elements when being iterated.\n * \n * @sample samples.collections.Sequences.Building.sequenceFromArray\n */\npublic fun DoubleArray.asSequence(): Sequence<Double> {\n   if (isEmpty()) return emptySequence()\n   return Sequence { this.iterator() }\n}\n\n/**\n * Creates a [Sequence] instance that wraps the original array returning its elements when being iterated.\n * \n * @sample samples.collections.Sequences.Building.sequenceFromArray\n */\npublic fun BooleanArray.asSequence(): Sequence<Boolean> {\n   if (isEmpty()) return emptySequence()\n   return Sequence { this.iterator() }\n}\n\n/**\n * Creates a [Sequence]
 instance that wraps the original array returning its elements when being iterated.\n * \n * @sample samples.collections.Sequences.Building.sequenceFromArray\n */\npublic fun CharArray.asSequence(): Sequence<Char> {\n   if (isEmpty()) return emptySequence()\n   return Sequence { this.iterator() }\n}\n\n/**\n * Returns an average value of elements in the array.\n */\n@kotlin.jvm.JvmName(\"averageOfByte\")\npublic fun Array<out Byte>.average(): Double {\n   var sum: Double = 0.0\n   var count: Int = 0\n   for (element in this) {\n   sum += element\n   ++count\n   }\n   return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the array.\n */\n@kotlin.jvm.JvmName(\"averageOfShort\")\npublic fun Array<out Short>.average(): Double {\n   var sum: Double = 0.0\n   var count: Int = 0\n   for (element in this) {\n   sum += element\n   ++count\n   }\n   return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the array.\n */\n@kotlin.jvm.JvmName(\"averageOfInt\")\npublic fun Array<out Int>.average(): Double {\n   var sum: Double = 0.0\n   var count: Int = 0\n   for (element in this) {\n   sum += element\n   ++count\n   }\n   return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the array.\n */\n@kotlin.jvm.JvmName(\"averageOfLong\")\npublic fun Array<out Long>.average(): Double {\n   var sum: Double = 0.0\n   var count: Int = 0\n   for (element in this) {\n   sum += element\n   ++count\n   }\n   return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the array.\n */\n@kotlin.jvm.JvmName(\"averageOfFloat\")\npublic fun Array<out Float>.average(): Double {\n   var sum: Double = 0.0\n   var count: Int = 0\n   for (element in this) {\n   sum += element\n   ++count\n   }\n   return if (count == 0) Double.NaN else
 sum / count\n}\n\n/**\n * Returns an average value of elements in the array.\n */\n@kotlin.jvm.JvmName(\"averageOfDouble\")\npublic fun Array<out Double>.average(): Double {\n   var sum: Double = 0.0\n   var count: Int = 0\n   for (element in this) {\n   sum += element\n   ++count\n   }\n   return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the array.\n */\npublic fun ByteArray.average(): Double {\n   var sum: Double = 0.0\n   var count: Int = 0\n   for (element in this) {\n   sum += element\n   ++count\n   }\n   return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the array.\n */\npublic fun ShortArray.average(): Double {\n   var sum: Double = 0.0\n   var count: Int = 0\n   for (element in this) {\n   sum += element\n   ++count\n   }\n   return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements
 in the array.\n */\npublic fun IntArray.average(): Double {\n   var sum: Double = 0.0\n   var count: Int = 0\n   for (element in this) {\n   sum += element\n   ++count\n   }\n   return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the array.\n */\npublic fun LongArray.average(): Double {\n   var sum: Double = 0.0\n   var count: Int = 0\n   for (element in this) {\n   sum += element\n   ++count\n   }\n   return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the array.\n */\npublic fun FloatArray.average(): Double {\n   var sum: Double = 0.0\n   var count: Int = 0\n   for (element in this) {\n   sum += element\n   ++count\n   }\n   return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the array.\n */\npublic fun

DoubleArray.average(): Double {\n   var sum: Double = 0.0\n   var count: Int
 = 0\n   for (element in this) {\n   sum += element\n   ++count\n   }\n   return if (count == 0) Double.NaN
else sum / count\n}\n\n/**\n * Returns the sum of all elements in the array.\n
*/\n@kotlin.jvm.JvmName(\"sumOfByte\")\npublic fun Array<out Byte>.sum(): Int {\n   var sum: Int = 0\n   for
(element in this) {\n   sum += element\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all elements in the
array.\n */\n@kotlin.jvm.JvmName(\"sumOfShort\")\npublic fun Array<out Short>.sum(): Int {\n   var sum: Int =
0\n   for (element in this) {\n   sum += element\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all
elements in the array.\n */\n@kotlin.jvm.JvmName(\"sumOfInt\")\npublic fun Array<out Int>.sum(): Int {\n   var
sum: Int = 0\n   for (element in this) {\n   sum += element\n   }\n   return sum\n}\n\n/**\n * Returns the sum of
all elements in the array.\n */\n@kotlin.jvm.JvmName(\"sumOfLong\")\npublic fun Array<out Long>.sum(): Long
{\n
    var sum: Long = 0L\n   for (element in this) {\n   sum += element\n   }\n   return sum\n}\n\n/**\n * Returns
the sum of all elements in the array.\n */\n@kotlin.jvm.JvmName(\"sumOfFloat\")\npublic fun Array<out
Float>.sum(): Float {\n   var sum: Float = 0.0f\n   for (element in this) {\n   sum += element\n   }\n   return
sum\n}\n\n/**\n * Returns the sum of all elements in the array.\n
*/\n@kotlin.jvm.JvmName(\"sumOfDouble\")\npublic fun Array<out Double>.sum(): Double {\n   var sum:
Double = 0.0\n   for (element in this) {\n   sum += element\n   }\n   return sum\n}\n\n/**\n * Returns the sum of
all elements in the array.\n */\npublic fun ByteArray.sum(): Int {\n   var sum: Int = 0\n   for (element in this) {\n
 sum += element\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all elements in the array.\n */\npublic fun
ShortArray.sum(): Int {\n   var sum: Int = 0\n   for (element in this) {\n   sum += element\n   }\n   return
sum\n}\n\n/**\n
 * Returns the sum of all elements in the array.\n */\npublic fun IntArray.sum(): Int {\n   var sum: Int = 0\n   for
(element in this) {\n   sum += element\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all elements in the
array.\n */\npublic fun LongArray.sum(): Long {\n   var sum: Long = 0L\n   for (element in this) {\n   sum +=
element\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all elements in the array.\n */\npublic fun
FloatArray.sum(): Float {\n   var sum: Float = 0.0f\n   for (element in this) {\n   sum += element\n   }\n   return
sum\n}\n\n/**\n * Returns the sum of all elements in the array.\n */\npublic fun DoubleArray.sum(): Double {\n
var sum: Double = 0.0\n   for (element in this) {\n   sum += element\n   }\n   return sum\n}\n\n","/*\n *
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found in the license/LICENSE.txt file.\n
*/\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"RangesKt\")\n\npackage
 kotlin.ranges\n\n//\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See:
https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n//\n\nimport kotlin.random.*\n\n/**\n * Returns a
random element from this range.\n * \n * @throws IllegalArgumentException if this range is empty.\n
*/\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic inline fun IntRange.random(): Int {\n   return
random(Random)\n}\n\n/**\n * Returns a random element from this range.\n * \n * @throws
IllegalArgumentException if this range is empty.\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic
inline fun LongRange.random(): Long {\n   return random(Random)\n}\n\n/**\n * Returns a random element from
this range.\n * \n * @throws IllegalArgumentException if this range is empty.\n
*/\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic inline fun CharRange.random(): Char {\n   return
 random(Random)\n}\n\n/**\n * Returns a random element from this range using the specified source of
randomness.\n * \n * @throws IllegalArgumentException if this range is empty.\n
*/\n@SinceKotlin(\"1.3\")\npublic fun IntRange.random(random: Random): Int {\n   try {\n   return
random.nextInt(this)\n   } catch(e: IllegalArgumentException) {\n   throw
NoSuchElementException(e.message)\n   }\n}\n\n/**\n * Returns a random element from this range using the
specified source of randomness.\n * \n * @throws IllegalArgumentException if this range is empty.\n
*/\n@SinceKotlin(\"1.3\")\npublic fun LongRange.random(random: Random): Long {\n   try {\n   return
random.nextLong(this)\n   } catch(e: IllegalArgumentException) {\n   throw

NoSuchElementException(e.message)\n   }\n}\n\n/**\n * Returns a random element from this range using the specified source of randomness.\n * \n * @throws IllegalArgumentException if this range is empty.\n */\n@SinceKotlin(\"1.3\")\npublic
fun CharRange.random(random: Random): Char {\n   try {\n   return random.nextInt(first.toInt(), last.toInt() + 1).toChar()\n   } catch(e: IllegalArgumentException) {\n   throw NoSuchElementException(e.message)\n   }\n}\n\n/**\n * Returns `true` if this range contains the specified [element].\n * \n * Always returns `false` if the [element] is `null`.\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic inline operator fun IntRange.contains(element: Int?): Boolean {\n   return element != null && contains(element)\n}\n\n/**\n * Returns `true` if this range contains the specified [element].\n * \n * Always returns `false` if the [element] is `null`.\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic inline operator fun LongRange.contains(element: Long?): Boolean {\n   return element != null && contains(element)\n}\n\n/**\n * Returns `true` if this range contains the specified [element].\n * \n * Always returns `false` if the [element] is `null`.\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic inline operator fun CharRange.contains(element: Char?): Boolean {\n   return element != null && contains(element)\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@kotlin.jvm.JvmName(\"intRangeContains\")\npublic operator fun ClosedRange<Int>.contains(value: Byte): Boolean {\n   return contains(value.toInt())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@kotlin.jvm.JvmName(\"longRangeContains\")\npublic operator fun ClosedRange<Long>.contains(value: Byte): Boolean {\n   return contains(value.toLong())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@kotlin.jvm.JvmName(\"shortRangeContains\")\npublic operator fun ClosedRange<Short>.contains(value: Byte): Boolean {\n   return contains(value.toShort())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@Deprecated(\"This `contains` operation mixing integer and floating
point arguments has ambiguous semantics and is going to be
removed.\")\n@kotlin.jvm.JvmName(\"doubleRangeContains\")\npublic operator fun ClosedRange<Double>.contains(value: Byte): Boolean {\n   return contains(value.toDouble())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@Deprecated(\"This `contains` operation mixing integer and floating point arguments has ambiguous semantics and is going to be
removed.\")\n@kotlin.jvm.JvmName(\"floatRangeContains\")\npublic operator fun ClosedRange<Float>.contains(value: Byte): Boolean {\n   return contains(value.toFloat())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@Deprecated(\"This `contains` operation mixing integer and floating point arguments has ambiguous semantics and is going to be
removed.\")\n@kotlin.jvm.JvmName(\"intRangeContains\")\npublic operator fun ClosedRange<Int>.contains(value: Double): Boolean {\n   return value.toIntExactOrNull().let { if (it != null) contains(it)
else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@Deprecated(\"This `contains` operation mixing integer and floating point arguments has ambiguous semantics and is going to be
removed.\")\n@kotlin.jvm.JvmName(\"longRangeContains\")\npublic operator fun ClosedRange<Long>.contains(value: Double): Boolean {\n   return value.toLongExactOrNull().let { if (it != null) contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@Deprecated(\"This `contains` operation mixing integer and floating point arguments has ambiguous semantics and is going to be removed.\")\n@kotlin.jvm.JvmName(\"byteRangeContains\")\npublic operator fun ClosedRange<Byte>.contains(value: Double): Boolean {\n   return value.toByteExactOrNull().let { if (it != null) contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@Deprecated(\"This `contains` operation mixing integer and floating point
arguments has ambiguous semantics and is going to be
removed.\")\n@kotlin.jvm.JvmName(\"shortRangeContains\")\npublic operator fun ClosedRange<Short>.contains(value: Double): Boolean {\n   return value.toShortExactOrNull().let { if (it != null) contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@kotlin.jvm.JvmName(\"floatRangeContains\")\npublic operator fun ClosedRange<Float>.contains(value:

Double): Boolean {\n   return contains(value.toFloat())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@Deprecated(\"This `contains` operation mixing integer and floating point arguments has ambiguous semantics and is going to be removed.\")\n@kotlin.jvm.JvmName(\"intRangeContains\")\npublic operator fun ClosedRange<Int>.contains(value: Float): Boolean {\n   return value.toIntExactOrNull().let { if (it != null) contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@Deprecated(\"This
 `contains` operation mixing integer and floating point arguments has ambiguous semantics and is going to be removed.\")\n@kotlin.jvm.JvmName(\"longRangeContains\")\npublic operator fun ClosedRange<Long>.contains(value: Float): Boolean {\n   return value.toLongExactOrNull().let { if (it != null) contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@Deprecated(\"This `contains` operation mixing integer and floating point arguments has ambiguous semantics and is going to be removed.\")\n@kotlin.jvm.JvmName(\"byteRangeContains\")\npublic operator fun ClosedRange<Byte>.contains(value: Float): Boolean {\n   return value.toByteExactOrNull().let { if (it != null) contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@Deprecated(\"This `contains` operation mixing integer and floating point arguments has ambiguous semantics and is going to be removed.\")\n@kotlin.jvm.JvmName(\"shortRangeContains\")\npublic
 operator fun ClosedRange<Short>.contains(value: Float): Boolean {\n   return value.toShortExactOrNull().let { if (it != null) contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@kotlin.jvm.JvmName(\"doubleRangeContains\")\npublic operator fun ClosedRange<Double>.contains(value: Float): Boolean {\n   return contains(value.toDouble())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@kotlin.jvm.JvmName(\"longRangeContains\")\npublic operator fun ClosedRange<Long>.contains(value: Int): Boolean {\n   return contains(value.toLong())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@kotlin.jvm.JvmName(\"byteRangeContains\")\npublic operator fun ClosedRange<Byte>.contains(value: Int): Boolean {\n   return value.toByteExactOrNull().let { if (it != null) contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@kotlin.jvm.JvmName(\"shortRangeContains\")\npublic
 operator fun ClosedRange<Short>.contains(value: Int): Boolean {\n   return value.toShortExactOrNull().let { if (it != null) contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@Deprecated(\"This `contains` operation mixing integer and floating point arguments has ambiguous semantics and is going to be removed.\")\n@kotlin.jvm.JvmName(\"doubleRangeContains\")\npublic operator fun ClosedRange<Double>.contains(value: Int): Boolean {\n   return contains(value.toDouble())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@Deprecated(\"This `contains` operation mixing integer and floating point arguments has ambiguous semantics and is going to be removed.\")\n@kotlin.jvm.JvmName(\"floatRangeContains\")\npublic operator fun ClosedRange<Float>.contains(value: Int): Boolean {\n   return contains(value.toFloat())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@kotlin.jvm.JvmName(\"intRangeContains\")\npublic
 operator fun ClosedRange<Int>.contains(value: Long): Boolean {\n   return value.toIntExactOrNull().let { if (it != null) contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@kotlin.jvm.JvmName(\"byteRangeContains\")\npublic operator fun ClosedRange<Byte>.contains(value: Long): Boolean {\n   return value.toByteExactOrNull().let { if (it != null) contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@kotlin.jvm.JvmName(\"shortRangeContains\")\npublic operator fun ClosedRange<Short>.contains(value: Long): Boolean {\n   return value.toShortExactOrNull().let { if (it != null) contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@Deprecated(\"This `contains` operation mixing integer and floating point arguments has ambiguous semantics and is going to be removed.\")\n@kotlin.jvm.JvmName(\"doubleRangeContains\")\npublic
 operator fun ClosedRange<Double>.contains(value: Long): Boolean {\n   return contains(value.toDouble())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@Deprecated(\"This `contains` operation mixing integer and floating point arguments has ambiguous semantics

and is going to be removed.\")\n@kotlin.jvm.JvmName(\"floatRangeContains\")\npublic operator fun ClosedRange<Float>.contains(value: Long): Boolean {\n   return contains(value.toFloat())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@kotlin.jvm.JvmName(\"intRangeContains\")\npublic operator fun ClosedRange<Int>.contains(value: Short): Boolean {\n   return contains(value.toInt())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@kotlin.jvm.JvmName(\"longRangeContains\")\npublic operator fun ClosedRange<Long>.contains(value: Short): Boolean {\n   return contains(value.toLong())\n}\n\n/**\n * Checks if the specified [value] belongs
 to this range.\n */\n@kotlin.jvm.JvmName(\"byteRangeContains\")\npublic operator fun ClosedRange<Byte>.contains(value: Short): Boolean {\n   return value.toByteExactOrNull().let { if (it != null) contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@Deprecated(\"This `contains` operation mixing integer and floating point arguments has ambiguous semantics and is going to be removed.\")\n@kotlin.jvm.JvmName(\"doubleRangeContains\")\npublic operator fun ClosedRange<Double>.contains(value: Short): Boolean {\n   return contains(value.toDouble())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@Deprecated(\"This `contains` operation mixing integer and floating point arguments has ambiguous semantics and is going to be removed.\")\n@kotlin.jvm.JvmName(\"floatRangeContains\")\npublic operator fun ClosedRange<Float>.contains(value: Short): Boolean {\n   return contains(value.toFloat())\n}\n\n/**\n * Returns a progression
 from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n */\npublic infix fun Int.downTo(to: Byte): IntProgression {\n   return IntProgression.fromClosedRange(this, to.toInt(), -1)\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n */\npublic infix fun Long.downTo(to: Byte): LongProgression {\n   return LongProgression.fromClosedRange(this, to.toLong(), -1L)\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the returned progression
 is empty.\n */\npublic infix fun Byte.downTo(to: Byte): IntProgression {\n   return IntProgression.fromClosedRange(this.toInt(), to.toInt(), -1)\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n */\npublic infix fun Short.downTo(to: Byte): IntProgression {\n   return IntProgression.fromClosedRange(this.toInt(), to.toInt(), -1)\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n */\npublic infix fun Char.downTo(to: Char): CharProgression {\n   return CharProgression.fromClosedRange(this, to, -1)\n}\n\n/**\n * Returns a progression from this value down to the specified [to]
 value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n */\npublic infix fun Int.downTo(to: Int): IntProgression {\n   return IntProgression.fromClosedRange(this, to, -1)\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n */\npublic infix fun Long.downTo(to: Int): LongProgression {\n   return LongProgression.fromClosedRange(this, to.toLong(), -1L)\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n */\npublic infix fun Byte.downTo(to: Int): IntProgression
 {\n   return IntProgression.fromClosedRange(this.toInt(), to, -1)\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this`

value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n */\npublic infix fun Short.downTo(to: Int): IntProgression {\n   return IntProgression.fromClosedRange(this.toInt(), to, -1)\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n */\npublic infix fun Int.downTo(to: Long): LongProgression {\n   return LongProgression.fromClosedRange(this.toLong(), to, -1L)\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n */\npublic infix fun Long.downTo(to: Long): LongProgression {\n   return LongProgression.fromClosedRange(this, to, -1L)\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n */\npublic infix fun Byte.downTo(to: Long): LongProgression {\n   return LongProgression.fromClosedRange(this.toLong(), to, -1L)\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n */\npublic infix fun Short.downTo(to: Long): LongProgression {\n   return LongProgression.fromClosedRange(this.toLong(), to, -1L)\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n */\npublic infix fun Int.downTo(to: Short): IntProgression {\n   return IntProgression.fromClosedRange(this, to.toInt(), -1)\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n */\npublic infix fun Long.downTo(to: Short): LongProgression {\n   return LongProgression.fromClosedRange(this, to.toLong(), -1L)\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n */\npublic infix fun Byte.downTo(to: Short): IntProgression {\n   return IntProgression.fromClosedRange(this.toInt(), to.toInt(), -1)\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n */\npublic infix fun Short.downTo(to: Short): IntProgression {\n   return IntProgression.fromClosedRange(this.toInt(), to.toInt(), -1)\n}\n\n/**\n * Returns a progression that goes over the same range in the opposite direction with the same step.\n */\npublic fun IntProgression.reversed(): IntProgression {\n   return IntProgression.fromClosedRange(last, first, -step)\n}\n\n/**\n * Returns a progression that goes over the same range in the opposite direction with the same step.\n */\npublic fun LongProgression.reversed(): LongProgression {\n   return LongProgression.fromClosedRange(last, first, -step)\n}\n\n/**\n * Returns a progression that goes over the same range in the opposite direction with the same step.\n */\npublic fun CharProgression.reversed(): CharProgression {\n   return CharProgression.fromClosedRange(last, first, -step)\n}\n\n/**\n * Returns a progression that goes over the same range with the given step.\n */\npublic infix fun IntProgression.step(step: Int): IntProgression {\n   checkStepIsPositive(step > 0, step)\n   return IntProgression.fromClosedRange(first, last, if (this.step > 0) step else -step)\n}\n\n/**\n * Returns a progression that goes over the same range with the given step.\n */\npublic infix fun LongProgression.step(step: Long): LongProgression {\n   checkStepIsPositive(step > 0, step)\n   return LongProgression.fromClosedRange(first, last, if (this.step > 0) step else -step)\n}\n\n/**\n * Returns a progression that goes over the same range with the given step.\n */\npublic infix fun CharProgression.step(step: Int): CharProgression {\n   checkStepIsPositive(step > 0, step)\n   return CharProgression.fromClosedRange(first, last, if (this.step > 0) step else -step)\n}\n\ninternal fun Int.toByteExactOrNull(): Byte? {\n   return if (this in Byte.MIN_VALUE.toInt()..Byte.MAX_VALUE.toInt()) this.toByte() else null\n}\n\ninternal fun Long.toByteExactOrNull(): Byte? {\n   return if (this in Byte.MIN_VALUE.toLong()..Byte.MAX_VALUE.toLong()) this.toByte() else null\n}\n\ninternal fun

Short.toByteExactOrNull(): Byte? {\n   return if (this in Byte.MIN_VALUE.toShort()..Byte.MAX_VALUE.toShort()) this.toByte() else null\n}\n\ninternal fun Double.toByteExactOrNull(): Byte? {\n   return if (this in Byte.MIN_VALUE.toDouble()..Byte.MAX_VALUE.toDouble()) this.toByte() else null\n}\n\ninternal fun Float.toByteExactOrNull(): Byte? {\n   return if (this in Byte.MIN_VALUE.toFloat()..Byte.MAX_VALUE.toFloat()) this.toByte() else null\n}\n\ninternal fun Long.toIntExactOrNull(): Int?
{\n   return if (this in Int.MIN_VALUE.toLong()..Int.MAX_VALUE.toLong()) this.toInt() else null\n}\n\ninternal fun Double.toIntExactOrNull(): Int? {\n   return if (this in Int.MIN_VALUE.toDouble()..Int.MAX_VALUE.toDouble()) this.toInt() else null\n}\n\ninternal fun Float.toIntExactOrNull(): Int? {\n   return if (this in Int.MIN_VALUE.toFloat()..Int.MAX_VALUE.toFloat()) this.toInt() else null\n}\n\ninternal fun Double.toLongExactOrNull(): Long? {\n   return if (this in Long.MIN_VALUE.toDouble()..Long.MAX_VALUE.toDouble()) this.toLong() else null\n}\n\ninternal fun Float.toLongExactOrNull(): Long? {\n   return if (this in Long.MIN_VALUE.toFloat()..Long.MAX_VALUE.toFloat()) this.toLong() else null\n}\n\ninternal fun Int.toShortExactOrNull(): Short? {\n   return if (this in Short.MIN_VALUE.toInt()..Short.MAX_VALUE.toInt()) this.toShort() else null\n}\n\ninternal fun Long.toShortExactOrNull(): Short? {\n   return if (this in Short.MIN_VALUE.toLong()..Short.MAX_VALUE.toLong()) this.toShort()
else null\n}\n\ninternal fun Double.toShortExactOrNull(): Short? {\n   return if (this in Short.MIN_VALUE.toDouble()..Short.MAX_VALUE.toDouble()) this.toShort() else null\n}\n\ninternal fun Float.toShortExactOrNull(): Short? {\n   return if (this in Short.MIN_VALUE.toFloat()..Short.MAX_VALUE.toFloat()) this.toShort() else null\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to `this` value, then the returned range is empty.\n */\npublic infix fun Int.until(to: Byte): IntRange {\n   return this .. (to.toInt() - 1).toInt()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to `this` value, then the returned range is empty.\n */\npublic infix fun Long.until(to: Byte): LongRange {\n   return this .. (to.toLong() - 1).toLong()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified
[to] value.\n * \n * If the [to] value is less than or equal to `this` value, then the returned range is empty.\n */\npublic infix fun Byte.until(to: Byte): IntRange {\n   return this.toInt() .. (to.toInt() - 1).toInt()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to `this` value, then the returned range is empty.\n */\npublic infix fun Short.until(to: Byte): IntRange {\n   return this.toInt() .. (to.toInt() - 1).toInt()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to `this` value, then the returned range is empty.\n */\npublic infix fun Char.until(to: Char): CharRange {\n   if (to <= '\\u0000') return CharRange.EMPTY\n   return this .. (to - 1).toChar()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than or
equal to `this` value, then the returned range is empty.\n */\npublic infix fun Int.until(to: Int): IntRange {\n   if (to <= Int.MIN_VALUE) return IntRange.EMPTY\n   return this .. (to - 1).toInt()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to `this` value, then the returned range is empty.\n */\npublic infix fun Long.until(to: Int): LongRange {\n   return this .. (to.toLong() - 1).toLong()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to `this` value, then the returned range is empty.\n */\npublic infix fun Byte.until(to: Int): IntRange {\n   if (to <= Int.MIN_VALUE) return IntRange.EMPTY\n   return this.toInt() .. (to - 1).toInt()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to `this` value, then
the returned range is empty.\n */\npublic infix fun Short.until(to: Int): IntRange {\n   if (to <= Int.MIN_VALUE) return IntRange.EMPTY\n   return this.toInt() .. (to - 1).toInt()\n}\n\n/**\n * Returns a range from this value up to

but excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to `this` value, then the returned range is empty.\n */\npublic infix fun Int.until(to: Long): LongRange {\n if (to <= Long.MIN_VALUE) return LongRange.EMPTY\n return this.toLong() .. (to - 1).toLong()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to `this` value, then the returned range is empty.\n */\npublic infix fun Long.until(to: Long): LongRange {\n if (to <= Long.MIN_VALUE) return LongRange.EMPTY\n return this .. (to - 1).toLong()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less
than or equal to `this` value, then the returned range is empty.\n */\npublic infix fun Byte.until(to: Long): LongRange {\n if (to <= Long.MIN_VALUE) return LongRange.EMPTY\n return this.toLong() .. (to - 1).toLong()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to `this` value, then the returned range is empty.\n */\npublic infix fun Short.until(to: Long): LongRange {\n if (to <= Long.MIN_VALUE) return LongRange.EMPTY\n return this.toLong() .. (to - 1).toLong()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to `this` value, then the returned range is empty.\n */\npublic infix fun Int.until(to: Short): IntRange {\n return this .. (to.toInt() - 1).toInt()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than
or equal to `this` value, then the returned range is empty.\n */\npublic infix fun Long.until(to: Short): LongRange {\n return this .. (to.toLong() - 1).toLong()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to `this` value, then the returned range is empty.\n */\npublic infix fun Byte.until(to: Short): IntRange {\n return this.toInt() .. (to.toInt() - 1).toInt()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to `this` value, then the returned range is empty.\n */\npublic infix fun Short.until(to: Short): IntRange {\n return this.toInt() .. (to.toInt() - 1).toInt()\n}\n\n/**\n * Ensures that this value is not less than the specified [minimumValue].\n * \n * @return this value if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise.\n * \n * @sample samples.comparisons.ComparableOps.coerceAtLeastComparable\n */\npublic fun <T : Comparable<T>> T.coerceAtLeast(minimumValue: T): T {\n return if (this < minimumValue) minimumValue else this\n}\n\n/**\n * Ensures that this value is not less than the specified [minimumValue].\n * \n * @return this value if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise.\n * \n * @sample samples.comparisons.ComparableOps.coerceAtLeast\n */\npublic fun Byte.coerceAtLeast(minimumValue: Byte): Byte {\n return if (this < minimumValue) minimumValue else this\n}\n\n/**\n * Ensures that this value is not less than the specified [minimumValue].\n * \n * @return this value if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise.\n * \n * @sample samples.comparisons.ComparableOps.coerceAtLeast\n */\npublic fun Short.coerceAtLeast(minimumValue: Short): Short {\n return if (this < minimumValue) minimumValue else this\n}\n\n/**\n * Ensures that this value is not
less than the specified [minimumValue].\n * \n * @return this value if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise.\n * \n * @sample samples.comparisons.ComparableOps.coerceAtLeast\n */\npublic fun Int.coerceAtLeast(minimumValue: Int): Int {\n return if (this < minimumValue) minimumValue else this\n}\n\n/**\n * Ensures that this value is not less than the specified [minimumValue].\n * \n * @return this value if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise.\n * \n * @sample samples.comparisons.ComparableOps.coerceAtLeast\n */\npublic fun Long.coerceAtLeast(minimumValue: Long): Long {\n return if (this < minimumValue) minimumValue else this\n}\n\n/**\n * Ensures that this value is not less than the specified [minimumValue].\n * \n * @return this value if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise.\n * \n * @sample samples.comparisons.ComparableOps.coerceAtLeast\n */\npublic
fun Float.coerceAtLeast(minimumValue: Float): Float {\n return if (this < minimumValue) minimumValue else this\n}\n\n/**\n * Ensures that this value is not less than the specified [minimumValue].\n * \n * @return this value if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise.\n * \n * @sample samples.comparisons.ComparableOps.coerceAtLeast\n */\npublic fun Double.coerceAtLeast(minimumValue:

Double): Double {\n   return if (this < minimumValue) minimumValue else this\n}\n\n/**\n * Ensures that this value is not greater than the specified [maximumValue].\n * \n * @return this value if it's less than or equal to the [maximumValue] or the [maximumValue] otherwise.\n * \n * @sample samples.comparisons.ComparableOps.coerceAtMostComparable\n */\npublic fun <T : Comparable<T>> T.coerceAtMost(maximumValue: T): T {\n   return if (this > maximumValue) maximumValue else this\n}\n\n/**\n * Ensures that this value is not greater than the specified [maximumValue].\n
 * \n * @return this value if it's less than or equal to the [maximumValue] or the [maximumValue] otherwise.\n * \n * @sample samples.comparisons.ComparableOps.coerceAtMost\n */\npublic fun Byte.coerceAtMost(maximumValue: Byte): Byte {\n   return if (this > maximumValue) maximumValue else this\n}\n\n/**\n * Ensures that this value is not greater than the specified [maximumValue].\n * \n * @return this value if it's less than or equal to the [maximumValue] or the [maximumValue] otherwise.\n * \n * @sample samples.comparisons.ComparableOps.coerceAtMost\n */\npublic fun Short.coerceAtMost(maximumValue: Short): Short {\n   return if (this > maximumValue) maximumValue else this\n}\n\n/**\n * Ensures that this value is not greater than the specified [maximumValue].\n * \n * @return this value if it's less than or equal to the [maximumValue] or the [maximumValue] otherwise.\n * \n * @sample samples.comparisons.ComparableOps.coerceAtMost\n */\npublic fun Int.coerceAtMost(maximumValue: Int): Int {\n   return if (this > maximumValue) maximumValue else this\n}\n\n/**\n * Ensures that this value is not greater than the specified [maximumValue].\n * \n * @return this value if it's less than or equal to the [maximumValue] or the [maximumValue] otherwise.\n * \n * @sample samples.comparisons.ComparableOps.coerceAtMost\n */\npublic fun Long.coerceAtMost(maximumValue: Long): Long {\n   return if (this > maximumValue) maximumValue else this\n}\n\n/**\n * Ensures that this value is not greater than the specified [maximumValue].\n * \n * @return this value if it's less than or equal to the [maximumValue] or the [maximumValue] otherwise.\n * \n * @sample samples.comparisons.ComparableOps.coerceAtMost\n */\npublic fun Float.coerceAtMost(maximumValue: Float): Float {\n   return if (this > maximumValue) maximumValue else this\n}\n\n/**\n * Ensures that this value is not greater than the specified [maximumValue].\n * \n * @return this value if it's less than or equal to the [maximumValue]
 or the [maximumValue] otherwise.\n * \n * @sample samples.comparisons.ComparableOps.coerceAtMost\n */\npublic fun Double.coerceAtMost(maximumValue: Double): Double {\n   return if (this > maximumValue) maximumValue else this\n}\n\n/**\n * Ensures that this value lies in the specified range [minimumValue]..[maximumValue].\n * \n * @return this value if it's in the range, or [minimumValue] if this value is less than [minimumValue], or [maximumValue] if this value is greater than [maximumValue].\n * \n * @sample samples.comparisons.ComparableOps.coerceInComparable\n */\npublic fun <T : Comparable<T>> T.coerceIn(minimumValue: T?, maximumValue: T?): T {\n   if (minimumValue !== null && maximumValue !== null) {\n   if (minimumValue > maximumValue) throw IllegalArgumentException(\"Cannot coerce value to an empty range: maximum $maximumValue is less than minimum $minimumValue.\")\n   if (this < minimumValue) return minimumValue\n   if (this > maximumValue) return maximumValue\n   }\n   else {\n   if (minimumValue !== null && this < minimumValue) return minimumValue\n   if (maximumValue !== null && this > maximumValue) return maximumValue\n   }\n   return this\n}\n\n/**\n * Ensures that this value lies in the specified range [minimumValue]..[maximumValue].\n * \n * @return this value if it's in the range, or [minimumValue] if this value is less than [minimumValue], or [maximumValue] if this value is greater than [maximumValue].\n * \n * @sample samples.comparisons.ComparableOps.coerceIn\n */\npublic fun Byte.coerceIn(minimumValue: Byte, maximumValue: Byte): Byte {\n   if (minimumValue > maximumValue) throw IllegalArgumentException(\"Cannot coerce value to an empty range: maximum $maximumValue is less than minimum $minimumValue.\")\n   if (this < minimumValue) return minimumValue\n   if (this > maximumValue) return maximumValue\n   return this\n}\n\n/**\n * Ensures that this value lies in the specified range [minimumValue]..[maximumValue].\n

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 * \n * @return this value if it's in the range, or [minimumValue] if this value is less than [minimumValue], or [maximumValue] if this value is greater than [maximumValue].\n * \n * @sample samples.comparisons.ComparableOps.coerceIn\n */\npublic fun Short.coerceIn(minimumValue: Short, maximumValue: Short): Short {\n    if (minimumValue > maximumValue) throw IllegalArgumentException(\"Cannot coerce value to an empty range: maximum $maximumValue is less than minimum $minimumValue.\")\n    if (this < minimumValue) return minimumValue\n    if (this > maximumValue) return maximumValue\n    return this\n}\n\n/**\n * Ensures that this value lies in the specified range [minimumValue]..[maximumValue].\n * \n * @return this value if it's in the range, or [minimumValue] if this value is less than [minimumValue], or [maximumValue] if this value is greater than [maximumValue].\n * \n * @sample samples.comparisons.ComparableOps.coerceIn\n */\npublic fun Int.coerceIn(minimumValue: Int, maximumValue: Int): Int {\n    if (minimumValue > maximumValue) throw IllegalArgumentException(\"Cannot coerce value to an empty range: maximum $maximumValue is less than minimum $minimumValue.\")\n    if (this < minimumValue) return minimumValue\n    if (this > maximumValue) return maximumValue\n    return this\n}\n\n/**\n * Ensures that this value lies in the specified range [minimumValue]..[maximumValue].\n * \n * @return this value if it's in the range, or [minimumValue] if this value is less than [minimumValue], or [maximumValue] if this value is greater than [maximumValue].\n * \n * @sample samples.comparisons.ComparableOps.coerceIn\n */\npublic fun Long.coerceIn(minimumValue: Long, maximumValue: Long): Long {\n    if (minimumValue > maximumValue) throw IllegalArgumentException(\"Cannot coerce value to an empty range: maximum $maximumValue is less than minimum $minimumValue.\")\n    if (this < minimumValue) return minimumValue\n    if (this > maximumValue) return maximumValue\n    return this\n}\n\n/**\n * Ensures that this value lies in the specified range [minimumValue]..[maximumValue].\n * \n * @return this value if it's in the range, or [minimumValue] if this value is less than [minimumValue], or [maximumValue] if this value is greater than [maximumValue].\n * \n * @sample samples.comparisons.ComparableOps.coerceIn\n */\npublic fun Float.coerceIn(minimumValue: Float, maximumValue: Float): Float {\n    if (minimumValue > maximumValue) throw IllegalArgumentException(\"Cannot coerce value to an empty range: maximum $maximumValue is less than minimum $minimumValue.\")\n    if (this < minimumValue) return minimumValue\n    if (this > maximumValue) return maximumValue\n    return this\n}\n\n/**\n * Ensures that this value lies in the specified range [minimumValue]..[maximumValue].\n * \n * @return this value if it's in the range, or [minimumValue] if this value is less than [minimumValue], or [maximumValue] if this value is greater than [maximumValue].\n * \n * @sample samples.comparisons.ComparableOps.coerceIn\n */\npublic fun Double.coerceIn(minimumValue: Double, maximumValue: Double): Double {\n    if (minimumValue > maximumValue) throw IllegalArgumentException(\"Cannot coerce value to an empty range: maximum $maximumValue is less than minimum $minimumValue.\")\n    if (this < minimumValue) return minimumValue\n    if (this > maximumValue) return maximumValue\n    return this\n}\n\n/**\n * Ensures that this value lies in the specified [range].\n * \n * @return this value if it's in the [range], or `range.start` if this value is less than `range.start`, or `range.endInclusive` if this value is greater than `range.endInclusive`.\n * \n * @sample samples.comparisons.ComparableOps.coerceInFloatingPointRange\n */\n@SinceKotlin(\"1.1\")\npublic fun <T : Comparable<T>> T.coerceIn(range: ClosedFloatingPointRange<T>): T {\n    if (range.isEmpty()) throw IllegalArgumentException(\"Cannot coerce value to an empty range: $range.\")\n    return when {\n        // this < start equiv to this <= start && !(this >= start)\n        range.lessThanOrEquals(this, range.start) && !range.lessThanOrEquals(range.start, this) -> range.start\n        // this > end equiv to this >= end && !(this <= end)\n        range.lessThanOrEquals(range.endInclusive, this) && !range.lessThanOrEquals(this, range.endInclusive) -> range.endInclusive\n        else -> this\n    }\n}\n\n/**\n * Ensures that this value lies in the specified [range].\n * \n * @return this value if it's in the [range], or `range.start` if this value is less than `range.start`, or `range.endInclusive` if this value is greater than `range.endInclusive`.\n * \n * @sample samples.comparisons.ComparableOps.coerceInComparable\n */\npublic fun <T : Comparable<T>> T.coerceIn(range: ClosedRange<T>): T {\n    if (range is ClosedFloatingPointRange) {\n        return
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this.coerceIn<T>(range)\n   }\n   if (range.isEmpty()) throw IllegalArgumentException(\"Cannot coerce value to an empty range: $range.\")\n
    return when {\n   this < range.start -> range.start\n   this > range.endInclusive -> range.endInclusive\n   else -> this\n   }\n}\n\n/**\n * Ensures that this value lies in the specified [range].\n * \n * @return this value if it's in the [range], or `range.start` if this value is less than `range.start`, or `range.endInclusive` if this value is greater than `range.endInclusive`.\n * \n * @sample samples.comparisons.ComparableOps.coerceIn\n */\npublic fun Int.coerceIn(range: ClosedRange<Int>): Int {\n   if (range is ClosedFloatingPointRange) {\n   return this.coerceIn<Int>(range)\n   }\n   if (range.isEmpty()) throw IllegalArgumentException(\"Cannot coerce value to an empty range: $range.\")\n   return when {\n   this < range.start -> range.start\n   this > range.endInclusive -> range.endInclusive\n   else -> this\n   }\n}\n\n/**\n * Ensures that this value lies in the specified [range].\n * \n * @return this value if it's in the [range],
 or `range.start` if this value is less than `range.start`, or `range.endInclusive` if this value is greater than `range.endInclusive`.\n * \n * @sample samples.comparisons.ComparableOps.coerceIn\n */\npublic fun Long.coerceIn(range: ClosedRange<Long>): Long {\n   if (range is ClosedFloatingPointRange) {\n   return this.coerceIn<Long>(range)\n   }\n   if (range.isEmpty()) throw IllegalArgumentException(\"Cannot coerce value to an empty range: $range.\")\n   return when {\n   this < range.start -> range.start\n   this > range.endInclusive -> range.endInclusive\n   else -> this\n   }\n}\n\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n// Auto-generated file. DO NOT EDIT!\n\npackage kotlin\n\nimport kotlin.experimental.*\n\n@Suppress(\"NON_PUBLIC_PRIMARY_CONSTRUCTOR_OF_INLINE_CLASS\")\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic
 inline class UByte @PublishedApi internal constructor(@PublishedApi internal val data: Byte) : Comparable<UByte> {\n\n   companion object {\n   /**\n   * A constant holding the minimum value an instance of UByte can have.\n   */\n   public const val MIN_VALUE: UByte = UByte(0)\n\n   /**\n   * A constant holding the maximum value an instance of UByte can have.\n   */\n   public const val MAX_VALUE: UByte = UByte(-1)\n\n   /**\n   * The number of bytes used to represent an instance of UByte in a binary form.\n   */\n   public const val SIZE_BYTES: Int = 1\n\n   /**\n   * The number of bits used to represent an instance of UByte in a binary form.\n   */\n   public const val SIZE_BITS: Int = 8\n   }\n\n   /**\n   * Compares this value with the specified value for order.\n   * Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n   *
 or a positive number if it's greater than other.\n   */\n   @kotlin.internal.InlineOnly\n   @Suppress(\"OVERRIDE_BY_INLINE\")\n   public override inline operator fun compareTo(other: UByte): Int = this.toInt().compareTo(other.toInt())\n\n   /**\n   * Compares this value with the specified value for order.\n   * Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n   * or a positive number if it's greater than other.\n   */\n   @kotlin.internal.InlineOnly\n   public inline operator fun compareTo(other: UShort): Int = this.toInt().compareTo(other.toInt())\n\n   /**\n   * Compares this value with the specified value for order.\n   * Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n   * or a positive number if it's greater than other.\n   */\n   @kotlin.internal.InlineOnly\n   public inline operator fun compareTo(other: UInt): Int = this.toUInt().compareTo(other)\n\n
    /**\n   * Compares this value with the specified value for order.\n   * Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n   * or a positive number if it's greater than other.\n   */\n   @kotlin.internal.InlineOnly\n   public inline operator fun compareTo(other: ULong): Int = this.toULong().compareTo(other)\n\n   /** Adds the other value to this value. */\n   @kotlin.internal.InlineOnly\n   public inline operator fun plus(other: UByte): UInt = this.toUInt().plus(other.toUInt())\n   /** Adds the other value to this value. */\n   @kotlin.internal.InlineOnly\n   public inline operator fun plus(other: UShort): UInt = this.toUInt().plus(other.toUInt())\n   /** Adds the other value to this value. */\n   @kotlin.internal.InlineOnly\n   public inline operator fun plus(other: UInt): UInt = this.toUInt().plus(other)\n   /** Adds the other value to this value. */\n   @kotlin.internal.InlineOnly\n

public inline operator fun plus(other: ULong): ULong = this.toULong().plus(other)\n\n /** Subtracts the other value from this value. */\n @kotlin.internal.InlineOnly\n public inline operator fun minus(other: UByte): UInt = this.toUInt().minus(other.toUInt())\n /** Subtracts the other value from this value. */\n @kotlin.internal.InlineOnly\n public inline operator fun minus(other: UShort): UInt = this.toUInt().minus(other.toUInt())\n /** Subtracts the other value from this value. */\n @kotlin.internal.InlineOnly\n public inline operator fun minus(other: UInt): UInt = this.toUInt().minus(other)\n /** Subtracts the other value from this value. */\n @kotlin.internal.InlineOnly\n public inline operator fun minus(other: ULong): ULong = this.toULong().minus(other)\n\n /** Multiplies this value by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun times(other: UByte): UInt = this.toUInt().times(other.toUInt())\n

/** Multiplies this value by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun times(other: UShort): UInt = this.toUInt().times(other.toUInt())\n /** Multiplies this value by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun times(other: UInt): UInt = this.toUInt().times(other)\n /** Multiplies this value by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun times(other: ULong): ULong = this.toULong().times(other)\n\n /** Divides this value by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun div(other: UByte): UInt = this.toUInt().div(other.toUInt())\n /** Divides this value by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun div(other: UShort): UInt = this.toUInt().div(other.toUInt())\n /** Divides this value by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun div(other: UInt): UInt = this.toUInt().div(other)\n /** Divides this value by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun div(other: ULong): ULong = this.toULong().div(other)\n\n /** Calculates the remainder of dividing this value by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun rem(other: UByte): UInt = this.toUInt().rem(other.toUInt())\n /** Calculates the remainder of dividing this value by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun rem(other: UShort): UInt = this.toUInt().rem(other.toUInt())\n /** Calculates the remainder of dividing this value by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun rem(other: UInt): UInt = this.toUInt().rem(other)\n /** Calculates the remainder of dividing this value by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun rem(other: ULong): ULong = this.toULong().rem(other)\n\n /** Increments this value. */\n @kotlin.internal.InlineOnly\n public inline operator fun inc(): UByte = UByte(data.inc())\n /** Decrements this value. */\n @kotlin.internal.InlineOnly\n public inline operator fun dec(): UByte = UByte(data.dec())\n\n /** Creates a range from this value to the specified [other] value. */\n @kotlin.internal.InlineOnly\n public inline operator fun rangeTo(other: UByte): UIntRange = UIntRange(this.toUInt(), other.toUInt())\n\n /** Performs a bitwise AND operation between the two values. */\n @kotlin.internal.InlineOnly\n public inline infix fun and(other: UByte): UByte = UByte(this.data and other.data)\n /** Performs a bitwise OR operation between the two values. */\n @kotlin.internal.InlineOnly\n public inline infix fun or(other: UByte): UByte = UByte(this.data or other.data)\n /** Performs a bitwise XOR operation between the two values. */\n @kotlin.internal.InlineOnly\n public inline infix fun xor(other: UByte): UByte = UByte(this.data xor other.data)\n /** Inverts the bits in this value. */\n @kotlin.internal.InlineOnly\n public inline fun inv(): UByte = UByte(data.inv())\n\n /**\n * Converts this [UByte] value to [Byte].\n *\n * If this value is less than or equals to [Byte.MAX_VALUE], the resulting `Byte` value represents\n * the same numerical value as this `UByte`. Otherwise the result is negative.\n *\n * The resulting `Byte` value has the same binary representation as this `UByte` value.\n */\n @kotlin.internal.InlineOnly\n public inline fun toByte(): Byte = data\n /**\n * Converts this [UByte] value to [Short].\n *\n * The resulting `Short` value represents the same numerical value as this `UByte`.\n *\n * The least significant 8 bits of the resulting `Short` value are the same as the bits of this `UByte` value,\n * whereas the most significant 8 bits are filled with zeros.\n

*/\n @kotlin.internal.InlineOnly\n public inline fun toShort(): Short = data.toShort() and 0xFF\n /**\n * Converts this [UByte] value to [Int].\n *\n * The resulting `Int` value represents the same numerical value as this `UByte`.\n *\n * The least significant 8 bits of the resulting `Int` value are the same as the bits of this `UByte` value,\n * whereas the most significant 24 bits are filled with zeros.\n */\n @kotlin.internal.InlineOnly\n public inline fun toInt(): Int = data.toInt() and 0xFF\n /**\n * Converts this [UByte] value to [Long].\n *\n * The resulting `Long` value represents the same numerical value as this `UByte`.\n *\n * The least significant 8 bits of the resulting `Long` value are the same as the bits of this `UByte` value,\n * whereas the most significant 56 bits are filled with zeros.\n */\n @kotlin.internal.InlineOnly\n public inline fun toLong(): Long = data.toLong() and 0xFF\n\n /** Returns this value. */\n @kotlin.internal.InlineOnly\n public inline fun toUByte(): UByte = this\n /**\n * Converts this [UByte] value to [UShort].\n *\n * The resulting `UShort` value represents the same numerical value as this `UByte`.\n *\n * The least significant 8 bits of the resulting `UShort` value are the same as the bits of this `UByte` value,\n * whereas the most significant 8 bits are filled with zeros.\n */\n @kotlin.internal.InlineOnly\n public inline fun toUShort(): UShort = UShort(data.toShort() and 0xFF)\n /**\n * Converts this [UByte] value to [UInt].\n *\n * The resulting `UInt` value represents the same numerical value as this `UByte`.\n *\n * The least significant 8 bits of the resulting `UInt` value are the same as the bits of this `UByte` value,\n * whereas the most significant 24 bits are filled with zeros.\n */\n @kotlin.internal.InlineOnly\n public inline fun toUInt(): UInt
= UInt(data.toInt() and 0xFF)\n /**\n * Converts this [UByte] value to [ULong].\n *\n * The resulting `ULong` value represents the same numerical value as this `UByte`.\n *\n * The least significant 8 bits of the resulting `ULong` value are the same as the bits of this `UByte` value,\n * whereas the most significant 56 bits are filled with zeros.\n */\n @kotlin.internal.InlineOnly\n public inline fun toULong(): ULong = ULong(data.toLong() and 0xFF)\n\n /**\n * Converts this [UByte] value to [Float].\n *\n * The resulting `Float` value represents the same numerical value as this `UByte`.\n */\n @kotlin.internal.InlineOnly\n public inline fun toFloat(): Float = this.toInt().toFloat()\n /**\n * Converts this [UByte] value to [Double].\n *\n * The resulting `Double` value represents the same numerical value as this `UByte`.\n */\n @kotlin.internal.InlineOnly\n public inline fun toDouble(): Double = this.toInt().toDouble()\n\n public override fun toString(): String = toInt().toString()\n\n}\n\n/**\n * Converts this [Byte] value to [UByte].\n *\n * If this value is positive, the resulting `UByte` value represents the same numerical value as this `Byte`.\n *\n * The resulting `UByte` value has the same binary representation as this `Byte` value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun Byte.toUByte(): UByte = UByte(this)\n/**\n * Converts this [Short] value to [UByte].\n *\n * If this value is positive and less than or equals to [UByte.MAX_VALUE], the resulting `UByte` value represents\n * the same numerical value as this `Short`.\n *\n * The resulting `UByte` value is represented by the least significant 8 bits of this `Short` value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun Short.toUByte(): UByte = UByte(this.toByte())\n/**\n * Converts this [Int] value to
[UByte].\n *\n * If this value is positive and less than or equals to [UByte.MAX_VALUE], the resulting `UByte` value represents\n * the same numerical value as this `Int`.\n *\n * The resulting `UByte` value is represented by the least significant 8 bits of this `Int` value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun Int.toUByte(): UByte = UByte(this.toByte())\n/**\n * Converts this [Long] value to [UByte].\n *\n * If this value is positive and less than or equals to [UByte.MAX_VALUE], the resulting `UByte` value represents\n * the same numerical value as this `Long`.\n *\n * The resulting `UByte` value is represented by the least significant 8 bits of this `Long` value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun Long.toUByte(): UByte = UByte(this.toByte())\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license

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 \n * that can be found in the license/LICENSE.txt file.\n */\n\n// Auto-generated file. DO NOT EDIT!\n\npackage kotlin\n\nimport kotlin.experimental.*\n\n@Suppress(\"NON_PUBLIC_PRIMARY_CONSTRUCTOR_OF_INLINE_CLASS\")\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic inline class UInt @PublishedApi internal constructor(@PublishedApi internal val data: Int) : Comparable<UInt> {\n\n    companion object {\n        /**\n * A constant holding the minimum value an instance of UInt can have.\n         */\n        public const val MIN_VALUE: UInt = UInt(0)\n\n        /**\n         * A constant holding the maximum value an instance of UInt can have.\n         */\n        public const val MAX_VALUE: UInt = UInt(-1)\n\n        /**\n         * The number of bytes used to represent an instance of UInt in a binary form.\n         */\n        public const val SIZE_BYTES: Int = 4\n\n        /**\n         * The number of bits used to represent an instance of UInt in a binary form.\n         */\n        public const val SIZE_BITS: Int = 32\n    }\n\n    /**\n     * Compares this value with the specified value for order.\n     * Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n     * or a positive number if it's greater than other.\n     */\n    @kotlin.internal.InlineOnly\n    public inline operator fun compareTo(other: UByte): Int = this.compareTo(other.toUInt())\n\n    /**\n     * Compares this value with the specified value for order.\n     * Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n     * or a positive number if it's greater than other.\n     */\n    @kotlin.internal.InlineOnly\n    public inline operator fun compareTo(other: UShort): Int = this.compareTo(other.toUInt())\n\n    /**\n     * Compares this value with the specified value for order.\n     * Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n     * or a positive number if it's greater than other.\n     */\n    @kotlin.internal.InlineOnly\n    @Suppress(\"OVERRIDE_BY_INLINE\")\n    public override inline operator fun compareTo(other: UInt): Int = uintCompare(this.data, other.data)\n\n    /**\n     * Compares this value with the specified value for order.\n     * Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n     * or a positive number if it's greater than other.\n     */\n    @kotlin.internal.InlineOnly\n    public inline operator fun compareTo(other: ULong): Int = this.toULong().compareTo(other)\n\n    /** Adds the other value to this value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun plus(other: UByte): UInt = this.plus(other.toUInt())\n    /** Adds the other value to this value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun plus(other: UShort): UInt = this.plus(other.toUInt())\n    /** Adds the other value to this value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun plus(other: UInt): UInt = UInt(this.data.plus(other.data))\n    /** Adds the other value to this value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun plus(other: ULong): ULong = this.toULong().plus(other)\n\n    /** Subtracts the other value from this value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun minus(other: UByte): UInt = this.minus(other.toUInt())\n    /** Subtracts the other value from this value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun minus(other: UShort): UInt = this.minus(other.toUInt())\n    /** Subtracts the other value from this value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun minus(other: UInt): UInt = UInt(this.data.minus(other.data))\n    /** Subtracts the other value from this value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun minus(other: ULong): ULong = this.toULong().minus(other)\n\n    /** Multiplies this value by the other value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun times(other: UByte): UInt = this.times(other.toUInt())\n    /** Multiplies this value by the other value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun times(other: UShort): UInt = this.times(other.toUInt())\n    /** Multiplies this value by the other value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun times(other: UInt): UInt = UInt(this.data.times(other.data))\n    /** Multiplies this value by the other value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun times(other: ULong): ULong = this.toULong().times(other)\n\n    /** Divides this value by the other value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun div(other: UByte): UInt = this.div(other.toUInt())\n    /** Divides this value by the other value. */\n    @kotlin.internal.InlineOnly\n
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    public inline operator fun div(other: UShort): UInt = this.div(other.toUInt())\n    /** Divides this value by the other value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun div(other: UInt): UInt = uintDivide(this, other)\n    /** Divides this value by the other value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun div(other: ULong): ULong = this.toULong().div(other)\n\n    /** Calculates the remainder of dividing this value by the other value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun rem(other: UByte): UInt = this.rem(other.toUInt())\n    /** Calculates the remainder of dividing this value by the other value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun rem(other: UShort): UInt = this.rem(other.toUInt())\n    /** Calculates the remainder of dividing this value by the other value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun rem(other: UInt): UInt = uintRemainder(this, other)\n    /** Calculates the remainder of dividing this value by the other value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun rem(other: ULong): ULong = this.toULong().rem(other)\n\n    /** Increments this value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun inc(): UInt = UInt(data.inc())\n    /** Decrements this value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun dec(): UInt = UInt(data.dec())\n\n    /** Creates a range from this value to the specified [other] value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun rangeTo(other: UInt): UIntRange = UIntRange(this, other)\n\n    /** Shifts this value left by the [bitCount] number of bits. */\n    @kotlin.internal.InlineOnly\n    public inline infix fun shl(bitCount: Int): UInt = UInt(data shl bitCount)\n    /** Shifts this value right by the [bitCount] number of bits, filling the leftmost bits with zeros. */\n    @kotlin.internal.InlineOnly\n
    public inline infix fun shr(bitCount: Int): UInt = UInt(data ushr bitCount)\n    /** Performs a bitwise AND operation between the two values. */\n    @kotlin.internal.InlineOnly\n    public inline infix fun and(other: UInt): UInt = UInt(this.data and other.data)\n    /** Performs a bitwise OR operation between the two values. */\n    @kotlin.internal.InlineOnly\n    public inline infix fun or(other: UInt): UInt = UInt(this.data or other.data)\n    /** Performs a bitwise XOR operation between the two values. */\n    @kotlin.internal.InlineOnly\n    public inline infix fun xor(other: UInt): UInt = UInt(this.data xor other.data)\n    /** Inverts the bits in this value. */\n    @kotlin.internal.InlineOnly\n    public inline fun inv(): UInt = UInt(data.inv())\n\n    /**\n     * Converts this [UInt] value to [Byte].\n     *\n     * If this value is less than or equals to [Byte.MAX_VALUE], the resulting `Byte` value represents\n     * the same numerical value as this `UInt`.\n     *\n     *
     The resulting `Byte` value is represented by the least significant 8 bits of this `UInt` value.\n     * Note that the resulting `Byte` value may be negative.\n     */\n    @kotlin.internal.InlineOnly\n    public inline fun toByte(): Byte = data.toByte()\n    /**\n     * Converts this [UInt] value to [Short].\n     *\n     * If this value is less than or equals to [Short.MAX_VALUE], the resulting `Short` value represents\n     * the same numerical value as this `UInt`.\n     *\n
     * The resulting `Short` value is represented by the least significant 16 bits of this `UInt` value.\n     * Note that the resulting `Short` value may be negative.\n     */\n    @kotlin.internal.InlineOnly\n    public inline fun toShort(): Short = data.toShort()\n    /**\n     * Converts this [UInt] value to [Int].\n     *\n     * If this value is less than or equals to [Int.MAX_VALUE], the resulting `Int` value represents\n     * the same numerical value as this `UInt`. Otherwise the result is negative.\n
     *\n     * The resulting `Int` value has the same binary representation as this `UInt` value.\n     */\n    @kotlin.internal.InlineOnly\n    public inline fun toInt(): Int = data\n    /**\n     * Converts this [UInt] value to [Long].\n     *\n     * The resulting `Long` value represents the same numerical value as this `UInt`.\n     *\n     * The least significant 32 bits of the resulting `Long` value are the same as the bits of this `UInt` value,\n     * whereas the most significant 32 bits are filled with zeros.\n     */\n    @kotlin.internal.InlineOnly\n    public inline fun toLong(): Long = data.toLong() and 0xFFFF_FFFF\n\n    /**\n     * Converts this [UInt] value to [UByte].\n     *\n     * If this value is less than or equals to [UByte.MAX_VALUE], the resulting `UByte` value represents\n     * the same numerical value as this `UInt`.\n     *\n     * The resulting `UByte` value is represented by the least significant 8 bits of this `UInt` value.\n     */\n    @kotlin.internal.InlineOnly\n
    public inline fun toUByte(): UByte = data.toUByte()\n    /**\n     * Converts this [UInt] value to [UShort].\n     *\n
     * If this value is less than or equals to [UShort.MAX_VALUE], the resulting `UShort` value represents\n     * the
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same numerical value as this `UInt`.\n *\n * The resulting `UShort` value is represented by the least significant 16 bits of this `UInt` value.\n */\n @kotlin.internal.InlineOnly\n public inline fun toUShort(): UShort = data.toUShort()\n /** Returns this value. */\n @kotlin.internal.InlineOnly\n public inline fun toUInt(): UInt = this\n /**\n * Converts this [UInt] value to [ULong].\n *\n * The resulting `ULong` value represents the same numerical value as this `UInt`.\n *\n * The least significant 32 bits of the resulting `ULong` value are the same as the bits of this `UInt` value,\n * whereas the most significant 32 bits are filled with zeros.\n */\n @kotlin.internal.InlineOnly\n

public inline fun toULong(): ULong = ULong(data.toLong() and 0xFFFF_FFFF)\n\n /**\n * Converts this [UInt] value to [Float].\n *\n * The resulting value is the closest `Float` to this `UInt` value.\n * In case when this `UInt` value is exactly between two `Float`s,\n * the one with zero at least significant bit of mantissa is selected.\n */\n @kotlin.internal.InlineOnly\n public inline fun toFloat(): Float = this.toDouble().toFloat()\n /**\n * Converts this [UInt] value to [Double].\n *\n * The resulting `Double` value represents the same numerical value as this `UInt`.\n */\n @kotlin.internal.InlineOnly\n public inline fun toDouble(): Double = uintToDouble(data)\n\n public override fun toString(): String = toLong().toString()\n\n}\n\n/**\n * Converts this [Byte] value to [UInt].\n *\n * If this value is positive, the resulting `UInt` value represents the same numerical value as this `Byte`.\n *\n * The least significant

8 bits of the resulting `UInt` value are the same as the bits of this `Byte` value,\n * whereas the most significant 24 bits are filled with the sign bit of this value.\n

*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun Byte.toUInt(): UInt = UInt(this.toInt())\n/**\n * Converts this [Short] value to [UInt].\n *\n * If this value is positive, the resulting `UInt` value represents the same numerical value as this `Short`.\n *\n * The least significant 16 bits of the resulting `UInt` value are the same as the bits of this `Short` value,\n * whereas the most significant 16 bits are filled with the sign bit of this value.\n

*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun Short.toUInt(): UInt = UInt(this.toInt())\n/**\n * Converts this [Int] value to [UInt].\n *\n * If this value is positive, the resulting `UInt` value represents the same numerical value as this `Int`.\n *\n * The resulting

`UInt` value has the same binary representation as this `Int` value.\n

*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun Int.toUInt(): UInt = UInt(this)\n/**\n * Converts this [Long] value to [UInt].\n *\n * If this value is positive and less than or equals to [UInt.MAX_VALUE], the resulting `UInt` value represents\n * the same numerical value as this `Long`.\n *\n * The resulting `UInt` value is represented by the least significant 32 bits of this `Long` value.\n

*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun Long.toUInt(): UInt = UInt(this.toInt())\n\n/**\n * Converts this [Float] value to [UInt].\n *\n * The fractional part, if any, is rounded down.\n * Returns zero if this `Float` value is negative or `NaN`, [UInt.MAX_VALUE] if it's bigger than `UInt.MAX_VALUE`.\n

*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun Float.toUInt():

UInt = doubleToUInt(this.toDouble())\n/**\n * Converts this [Double] value to [UInt].\n *\n * The fractional part, if any, is rounded down.\n * Returns zero if this `Double` value is negative or `NaN`, [UInt.MAX_VALUE] if it's bigger than `UInt.MAX_VALUE`.\n

/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun Double.toUInt(): UInt = doubleToUInt(this)\n","/\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n// Auto-generated file. DO NOT EDIT!\n\npackage kotlin\n\nimport kotlin.experimental.*\n\n@Suppress(\"NON_PUBLIC_PRIMARY_CONSTRUCTOR_OF_INLINE_CLASS\")\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic inline class UShort @PublishedApi internal constructor(@PublishedApi internal val data: Short) : Comparable<UShort> {\n\n companion object {\n /**\n * A constant holding the minimum

value an instance of UShort can have.\n */\n public const val MIN_VALUE: UShort = UShort(0)\n\n /**\n * A constant holding the maximum value an instance of UShort can have.\n */\n public const val MAX_VALUE: UShort = UShort(-1)\n\n /**\n * The number of bytes used to represent an instance of UShort in a binary form.\n */\n public const val SIZE_BYTES: Int = 2\n\n /**\n * The number of bits used to represent an instance of UShort in a binary form.\n */\n public const val SIZE_BITS: Int = 16\n }\n\n /**\n * Compares this value with the specified value for order.\n * Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n * or a positive number if it's greater than other.\n */\n @kotlin.internal.InlineOnly\n public inline operator fun compareTo(other: UByte): Int = this.toInt().compareTo(other.toInt())\n\n

/**\n * Compares this value with the specified value for order.\n * Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n * or a positive number if it's greater than other.\n */\n @kotlin.internal.InlineOnly\n @Suppress(\"OVERRIDE_BY_INLINE\")\n public override inline operator fun compareTo(other: UShort): Int = this.toInt().compareTo(other.toInt())\n\n /**\n * Compares this value with the specified value for order.\n * Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n * or a positive number if it's greater than other.\n */\n @kotlin.internal.InlineOnly\n public inline operator fun compareTo(other: UInt): Int = this.toUInt().compareTo(other)\n\n /**\n * Compares this value with the specified value for order.\n * Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n * or a positive number if it's greater than other.\n */\n @kotlin.internal.InlineOnly\n public inline operator fun compareTo(other: ULong): Int = this.toULong().compareTo(other)\n\n /** Adds the other value to this value. */\n @kotlin.internal.InlineOnly\n public inline operator fun plus(other: UByte): UInt = this.toUInt().plus(other.toUInt())\n /** Adds the other value to this value. */\n @kotlin.internal.InlineOnly\n public inline operator fun plus(other: UShort): UInt = this.toUInt().plus(other.toUInt())\n /** Adds the other value to this value. */\n @kotlin.internal.InlineOnly\n public inline operator fun plus(other: UInt): UInt = this.toUInt().plus(other)\n /** Adds the other value to this value. */\n @kotlin.internal.InlineOnly\n public inline operator fun plus(other: ULong): ULong = this.toULong().plus(other)\n\n /** Subtracts the other value from this value. */\n @kotlin.internal.InlineOnly\n public inline operator fun minus(other: UByte): UInt = this.toUInt().minus(other.toUInt())\n /** Subtracts the other value from this value. */\n @kotlin.internal.InlineOnly\n public inline operator fun minus(other: UShort): UInt = this.toUInt().minus(other.toUInt())\n /** Subtracts the other value from this value. */\n @kotlin.internal.InlineOnly\n public inline operator fun minus(other: UInt): UInt = this.toUInt().minus(other)\n /** Subtracts the other value from this value. */\n @kotlin.internal.InlineOnly\n public inline operator fun minus(other: ULong): ULong = this.toULong().minus(other)\n\n /** Multiplies this value by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun times(other: UByte): UInt = this.toUInt().times(other.toUInt())\n /** Multiplies this value by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun times(other: UShort): UInt = this.toUInt().times(other.toUInt())\n /** Multiplies this value by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun times(other: UInt): UInt = this.toUInt().times(other)\n /** Multiplies this value by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun times(other: ULong): ULong = this.toULong().times(other)\n\n /** Divides this value by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun div(other: UByte): UInt = this.toUInt().div(other.toUInt())\n /** Divides this value by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun div(other: UShort): UInt = this.toUInt().div(other.toUInt())\n /** Divides this value by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun div(other: UInt): UInt = this.toUInt().div(other)\n /** Divides this value by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun div(other: ULong): ULong = this.toULong().div(other)\n\n /** Calculates the remainder of dividing this value by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun rem(other: UByte): UInt =

this.toUInt().rem(other.toUInt())\n   /** Calculates the remainder of dividing this value by the other value. */\n   @kotlin.internal.InlineOnly\n   public inline operator fun rem(other: UShort): UInt = this.toUInt().rem(other.toUInt())\n   /** Calculates the remainder of dividing this value by the other value. */\n   @kotlin.internal.InlineOnly\n   public inline operator fun rem(other: UInt): UInt = this.toUInt().rem(other)\n   /** Calculates the remainder of dividing this value by the other value. */\n   @kotlin.internal.InlineOnly\n   public inline operator fun rem(other: ULong): ULong = this.toULong().rem(other)\n\n   /** Increments this value. */\n   @kotlin.internal.InlineOnly\n   public inline operator fun inc(): UShort = UShort(data.inc())\n   /** Decrements this value.
     */\n   @kotlin.internal.InlineOnly\n   public inline operator fun dec(): UShort = UShort(data.dec())\n\n   /** Creates a range from this value to the specified [other] value. */\n   @kotlin.internal.InlineOnly\n   public inline operator fun rangeTo(other: UShort): UIntRange = UIntRange(this.toUInt(), other.toUInt())\n\n   /** Performs a bitwise AND operation between the two values. */\n   @kotlin.internal.InlineOnly\n   public inline infix fun and(other: UShort): UShort = UShort(this.data and other.data)\n   /** Performs a bitwise OR operation between the two values. */\n   @kotlin.internal.InlineOnly\n   public inline infix fun or(other: UShort): UShort = UShort(this.data or other.data)\n   /** Performs a bitwise XOR operation between the two values. */\n   @kotlin.internal.InlineOnly\n   public inline infix fun xor(other: UShort): UShort = UShort(this.data xor other.data)\n   /** Inverts the bits in this value. */\n   @kotlin.internal.InlineOnly\n   public inline fun inv(): UShort = UShort(data.inv())\n\n   /**\n   * Converts this [UShort] value to [Byte].\n   *\n   * If this value is less than or equals to [Byte.MAX_VALUE], the resulting `Byte` value represents\n   * the same numerical value as this `UShort`.\n   *\n   * The resulting `Byte` value is represented by the least significant 8 bits of this `UShort` value.\n   * Note that the resulting `Byte` value may be negative.\n   */\n   @kotlin.internal.InlineOnly\n   public inline fun toByte(): Byte = data.toByte()\n   /**\n   * Converts this [UShort] value to [Short].\n   *\n   * If this value is less than or equals to [Short.MAX_VALUE], the resulting `Short` value represents\n   * the same numerical value as this `UShort`. Otherwise the result is negative.\n   *\n   * The resulting `Short` value has the same binary representation as this `UShort` value.\n   */\n   @kotlin.internal.InlineOnly\n   public inline fun toShort(): Short = data\n   /**\n   * Converts
     this [UShort] value to [Int].\n   *\n   * The resulting `Int` value represents the same numerical value as this `UShort`.\n   *\n   * The least significant 16 bits of the resulting `Int` value are the same as the bits of this `UShort` value,\n   * whereas the most significant 16 bits are filled with zeros.\n   */\n   @kotlin.internal.InlineOnly\n   public inline fun toInt(): Int = data.toInt() and 0xFFFF\n   /**\n   * Converts this [UShort] value to [Long].\n   *\n   * The resulting `Long` value represents the same numerical value as this `UShort`.\n   *\n   * The least significant 16 bits of the resulting `Long` value are the same as the bits of this `UShort` value,\n   * whereas the most significant 48 bits are filled with zeros.\n   */\n   @kotlin.internal.InlineOnly\n   public inline fun toLong(): Long = data.toLong() and 0xFFFF\n\n   /**\n   * Converts this [UShort] value to [UByte].\n   *\n   * If this value is less than or equals to [UByte.MAX_VALUE],
     the resulting `UByte` value represents\n   * the same numerical value as this `UShort`.\n   *\n   * The resulting `UByte` value is represented by the least significant 8 bits of this `UShort` value.\n   */\n   @kotlin.internal.InlineOnly\n   public inline fun toUByte(): UByte = data.toUByte()\n   /** Returns this value. */\n   @kotlin.internal.InlineOnly\n   public inline fun toUShort(): UShort = this\n   /**\n   * Converts this [UShort] value to [UInt].\n   *\n   * The resulting `UInt` value represents the same numerical value as this `UShort`.\n   *\n   * The least significant 16 bits of the resulting `UInt` value are the same as the bits of this `UShort` value,\n   * whereas the most significant 16 bits are filled with zeros.\n   */\n   @kotlin.internal.InlineOnly\n   public inline fun toUInt(): UInt = UInt(data.toInt() and 0xFFFF)\n   /**\n   * Converts this [UShort] value to [ULong].\n   *\n   * The resulting `ULong` value represents
     the same numerical value as this `UShort`.\n   *\n   * The least significant 16 bits of the resulting `ULong` value are the same as the bits of this `UShort` value,\n   * whereas the most significant 48 bits are filled with zeros.\n   */\n   @kotlin.internal.InlineOnly\n   public inline fun toULong(): ULong = ULong(data.toLong() and 0xFFFF)\n\n   /**\n   * Converts this [UShort] value to [Float].\n   *\n   * The resulting `Float` value represents the same

numerical value as this `UShort`.\n   */\n   @kotlin.internal.InlineOnly\n   public inline fun toFloat(): Float = this.toInt().toFloat()\n   /**\n   * Converts this [UShort] value to [Double].\n   *\n   * The resulting `Double` value represents the same numerical value as this `UShort`.\n   */\n   @kotlin.internal.InlineOnly\n   public inline fun toDouble(): Double = this.toInt().toDouble()\n\n   public override fun toString(): String = toInt().toString()\n\n}\n\n/**\n * Converts this [Byte] value
 to [UShort].\n *\n * If this value is positive, the resulting `UShort` value represents the same numerical value as this `Byte`.\n *\n * The least significant 8 bits of the resulting `UShort` value are the same as the bits of this `Byte` value,\n * whereas the most significant 8 bits are filled with the sign bit of this value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun Byte.toUShort(): UShort = UShort(this.toShort())\n/**\n * Converts this [Short] value to [UShort].\n *\n * If this value is positive, the resulting `UShort` value represents the same numerical value as this `Short`.\n *\n * The resulting `UShort` value has the same binary representation as this `Short` value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun Short.toUShort(): UShort = UShort(this)\n/**\n * Converts this [Int] value to [UShort].\n *\n * If this value is positive and less than or equals to
 [UShort.MAX_VALUE], the resulting `UShort` value represents\n * the same numerical value as this `Int`.\n *\n * The resulting `UShort` value is represented by the least significant 16 bits of this `Int` value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun Int.toUShort(): UShort = UShort(this.toShort())\n/**\n * Converts this [Long] value to [UShort].\n *\n * If this value is positive and less than or equals to [UShort.MAX_VALUE], the resulting `UShort` value represents\n * the same numerical value as this `Long`.\n *\n * The resulting `UShort` value is represented by the least significant 16 bits of this `Long` value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun Long.toUShort(): UShort = UShort(this.toShort())\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n
 */\n\n// Auto-generated file. DO NOT EDIT!\n\npackage kotlin.ranges\n\n/**\n * A range of values of type `Char`.\n */\npublic class CharRange(start: Char, endInclusive: Char) : CharProgression(start, endInclusive, 1), ClosedRange<Char> {\n   override val start: Char get() = first\n   override val endInclusive: Char get() = last\n\n   override fun contains(value: Char): Boolean = first <= value && value <= last\n\n   override fun isEmpty(): Boolean = first > last\n\n   override fun equals(other: Any?): Boolean =\n   other is CharRange && (isEmpty() && other.isEmpty() ||\n   first == other.first && last == other.last)\n\n   override fun hashCode(): Int =\n   if (isEmpty()) -1 else (31 * first.toInt() + last.toInt())\n\n   override fun toString(): String = \"$first..$last\"\n\n   companion object {\n   /** An empty range of values of type Char. */\n   public val EMPTY: CharRange = CharRange(1.toChar(), 0.toChar())\n   }\n}\n\n/**\n * A range of values
 of type `Int`.\n */\npublic class IntRange(start: Int, endInclusive: Int) : IntProgression(start, endInclusive, 1), ClosedRange<Int> {\n   override val start: Int get() = first\n   override val endInclusive: Int get() = last\n\n   override fun contains(value: Int): Boolean = first <= value && value <= last\n\n   override fun isEmpty(): Boolean = first > last\n\n   override fun equals(other: Any?): Boolean =\n   other is IntRange && (isEmpty() && other.isEmpty() ||\n   first == other.first && last == other.last)\n\n   override fun hashCode(): Int =\n   if (isEmpty()) -1 else (31 * first + last)\n\n   override fun toString(): String = \"$first..$last\"\n\n   companion object {\n   /** An empty range of values of type Int. */\n   public val EMPTY: IntRange = IntRange(1, 0)\n   }\n}\n\n/**\n * A range of values of type `Long`.\n */\npublic class LongRange(start: Long, endInclusive: Long) : LongProgression(start, endInclusive, 1), ClosedRange<Long> {\n
  override val start: Long get() = first\n   override val endInclusive: Long get() = last\n\n   override fun contains(value: Long): Boolean = first <= value && value <= last\n\n   override fun isEmpty(): Boolean = first > last\n\n   override fun equals(other: Any?): Boolean =\n   other is LongRange && (isEmpty() && other.isEmpty() ||\n   first == other.first && last == other.last)\n\n   override fun hashCode(): Int =\n   if (isEmpty()) -1 else (31 * (first xor (first ushr 32)) + (last xor (last ushr 32))).toInt()\n\n   override fun toString():

String = \"$first..$last\"\n\n   companion object {\n   /** An empty range of values of type Long. */\n   public val EMPTY: LongRange = LongRange(1, 0)\n   }\n}\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"CollectionsKt\")\n\npackage kotlin.collections\n\nimport kotlin.contracts.*\n\ninternal object EmptyIterator : ListIterator<Nothing> {\n   override fun hasNext(): Boolean = false\n   override fun hasPrevious(): Boolean = false\n   override fun nextIndex(): Int = 0\n   override fun previousIndex(): Int = -1\n   override fun next(): Nothing = throw NoSuchElementException()\n   override fun previous(): Nothing = throw NoSuchElementException()\n}\n\ninternal object EmptyList : List<Nothing>, Serializable, RandomAccess {\n   private const val serialVersionUID: Long = -7390468764508069838L\n\n   override fun equals(other: Any?): Boolean = other is List<*> && other.isEmpty()\n   override fun hashCode(): Int = 1\n   override fun toString(): String = \"[]\"\n\n   override val size: Int get() = 0\n   override fun isEmpty(): Boolean = true\n   override fun contains(element: Nothing): Boolean = false\n   override fun containsAll(elements: Collection<Nothing>): Boolean = elements.isEmpty()\n\n   override fun get(index: Int): Nothing = throw IndexOutOfBoundsException(\"Empty list doesn't contain element at index $index.\")\n   override fun indexOf(element: Nothing): Int = -1\n   override fun lastIndexOf(element: Nothing): Int = -1\n\n   override fun iterator(): Iterator<Nothing> = EmptyIterator\n   override fun listIterator(): ListIterator<Nothing> = EmptyIterator\n   override fun listIterator(index: Int): ListIterator<Nothing> {\n   if (index != 0) throw IndexOutOfBoundsException(\"Index: $index\")\n   return EmptyIterator\n   }\n\n   override fun subList(fromIndex: Int, toIndex: Int): List<Nothing> {\n   if (fromIndex == 0 && toIndex == 0) return this\n   throw IndexOutOfBoundsException(\"fromIndex: $fromIndex, toIndex: $toIndex\")\n   }\n\n   private fun readResolve(): Any = EmptyList\n}\n\ninternal fun <T> Array<out T>.asCollection(): Collection<T> = ArrayAsCollection(this, isVarargs = false)\n\nprivate class ArrayAsCollection<T>(val values: Array<out T>, val isVarargs: Boolean) : Collection<T> {\n   override val size: Int get() = values.size\n   override fun isEmpty(): Boolean = values.isEmpty()\n   override fun contains(element: T): Boolean = values.contains(element)\n   override fun containsAll(elements: Collection<T>): Boolean = elements.all { contains(it) }\n   override fun iterator(): Iterator<T> = values.iterator()\n   // override hidden toArray implementation to prevent copying of values array\n   public fun toArray(): Array<out Any?> = values.copyToArrayOfAny(isVarargs)\n}\n\n/**\n * Returns an empty read-only list. The returned list is serializable (JVM).\n * @sample samples.collections.Collections.Lists.emptyReadOnlyList\n */\npublic fun <T> emptyList(): List<T> = EmptyList\n\n/**\n * Returns a new read-only list of given elements. The returned list is serializable (JVM).\n * @sample samples.collections.Collections.Lists.readOnlyList\n */\npublic fun <T> listOf(vararg elements: T): List<T> = if (elements.size > 0) elements.asList() else emptyList()\n\n/**\n * Returns an empty read-only list. The returned list is serializable (JVM).\n * @sample samples.collections.Collections.Lists.emptyReadOnlyList\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> listOf(): List<T> = emptyList()\n\n/**\n * Returns an empty new [MutableList].\n * @sample samples.collections.Collections.Lists.emptyMutableList\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic inline fun <T> mutableListOf(): MutableList<T> = ArrayList()\n\n/**\n * Returns an empty new [ArrayList].\n * @sample samples.collections.Collections.Lists.emptyArrayList\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic inline fun <T> arrayListOf(): ArrayList<T> = ArrayList()\n\n/**\n * Returns a new [MutableList] with the given elements.\n * @sample samples.collections.Collections.Lists.mutableList\n */\npublic fun <T> mutableListOf(vararg elements: T): MutableList<T> =\n   if (elements.size == 0) ArrayList() else ArrayList(ArrayAsCollection(elements, isVarargs = true))\n\n/**\n * Returns a new [ArrayList] with the given elements.\n * @sample samples.collections.Collections.Lists.arrayList\n */\npublic fun <T> arrayListOf(vararg elements: T): ArrayList<T> =\n   if (elements.size == 0) ArrayList() else ArrayList(ArrayAsCollection(elements, isVarargs = true))\n\n/**\n * Returns a new read-only list either of single given element, if it is not null, or empty list if the element is null. The

returned list is serializable (JVM).\n * @sample samples.collections.Collections.Lists.listOfNotNull\n */\npublic fun <T : Any> listOfNotNull(element: T?): List<T> = if (element != null) listOf(element) else emptyList()\n\n/**\n * Returns a new read-only list only of those given elements, that are not null. The returned list is serializable (JVM).\n * @sample samples.collections.Collections.Lists.listOfNotNull\n */\npublic fun <T : Any> listOfNotNull(vararg elements: T?): List<T> = elements.filterNotNull()\n\n/**\n * Creates a new read-only list with the specified [size], where each element is calculated by calling the specified\n * [init] function. The [init] function returns a list element given its index.\n * @sample samples.collections.Collections.Lists.readOnlyListFromInitializer\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic inline fun <T> List(size: Int, init: (index: Int) -> T): List<T> = MutableList(size, init)\n\n/**\n * Creates a new mutable list with the specified [size], where each element is calculated by calling the specified\n * [init] function. The [init] function returns a list element given its index.\n * @sample samples.collections.Collections.Lists.mutableListFromInitializer\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic inline fun <T> MutableList(size: Int, init: (index: Int) -> T): MutableList<T> {\n   val list = ArrayList<T>(size)\n   repeat(size) { index -> list.add(init(index)) }\n   return list\n}\n\n/**\n * Returns an [IntRange] of the valid indices for this collection.\n * @sample samples.collections.Collections.Collections.indicesOfCollection\n */\npublic val Collection<*>.indices: IntRange\n   get() = 0..size - 1\n\n/**\n * Returns the index of the last item in the list or -1 if the list is empty.\n *\n * @sample samples.collections.Collections.Lists.lastIndexOfList\n */\npublic val <T> List<T>.lastIndex: Int\n   get() = this.size - 1\n\n/**\n * Returns `true` if the collection is not empty.\n * @sample samples.collections.Collections.Collections.collectionIsNotEmpty\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Collection<T>.isNotEmpty(): Boolean = !isEmpty()\n\n/**\n * Returns `true` if this nullable collection is either null or empty.\n * @sample samples.collections.Collections.Collections.collectionIsNullOrEmpty\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic inline fun <T> Collection<T>?.isNullOrEmpty(): Boolean {\n   contract {\n   returns(false) implies (this@isNullOrEmpty != null)\n   }\n\n   return this == null || this.isEmpty()\n}\n\n/**\n * Returns this Collection if it's not `null` and the empty list otherwise.\n * @sample samples.collections.Collections.Collections.collectionOrEmpty\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Collection<T>?.orEmpty(): Collection<T> = this ?: emptyList()\n\n/**\n * Returns this List if it's not `null` and the empty list otherwise.\n * @sample samples.collections.Collections.Lists.listOrEmpty\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> List<T>?.orEmpty(): List<T> = this ?: emptyList()\n\n/**\n * Returns this collection if it's not empty\n * or the result of calling [defaultValue] function if the collection is empty.\n *\n * @sample samples.collections.Collections.Collections.collectionIfEmpty\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic inline fun <C, R> C.ifEmpty(defaultValue: () -> R): R where C : Collection<*>, C : R =\n   if (isEmpty()) defaultValue() else this\n\n/**\n * Checks if all elements in the specified collection are contained in this collection.\n *\n * Allows to overcome type-safety restriction of `containsAll` that requires to pass a collection of type `Collection<E>`.\n * @sample samples.collections.Collections.Collections.collectionContainsAll\n */\n@Suppress(\"EXTENSION_SHADOWED_BY_MEMBER\") // false warning, extension takes precedence in some cases\n@kotlin.internal.InlineOnly\npublic inline fun <@kotlin.internal.OnlyInputTypes T> Collection<T>.containsAll(elements: Collection<T>): Boolean = this.containsAll(elements)\n\ninternal fun <T> List<T>.optimizeReadOnlyList() = when (size) {\n   0 -> emptyList()\n   1 -> listOf(this[0])\n   else -> this\n}\n\n/**\n * Searches this list or its range for the provided [element] using the binary search algorithm.\n * The list is expected to be sorted into ascending order according to the Comparable natural ordering of its elements,\n * otherwise the result is undefined.\n *\n * If the list contains multiple elements equal to the specified [element], there is no guarantee which one will be found.\n *\n * `null` value is considered to be less than any non-null value.\n *\n * @return the index of the element, if it is contained in the list within the specified range;\n * otherwise, the inverted insertion point `(-insertion point -

1)`.\n * The insertion point is defined as the index at which the element should be inserted,\n * so that the list (or the specified subrange of list) still remains sorted.\n * @sample samples.collections.Collections.Lists.binarySearchOnComparable\n * @sample samples.collections.Collections.Lists.binarySearchWithBoundaries\n */\npublic fun <T : Comparable<T>> List<T?>.binarySearch(element: T?, fromIndex: Int = 0, toIndex: Int = size): Int {\n rangeCheck(size, fromIndex, toIndex)\n\n var low = fromIndex\n var high = toIndex - 1\n\n while (low <= high) {\n val mid = (low + high).ushr(1) // safe from overflows\n val midVal = get(mid)\n val cmp = compareValues(midVal, element)\n\n if (cmp < 0)\n low = mid + 1\n else if (cmp > 0)\n high = mid - 1\n else\n return mid // key found\n }\n return -(low + 1) // key not found\n}\n\n/**\n * Searches this list or its range for the provided [element] using the binary search algorithm.\n * The list is expected to be sorted into ascending order according to the specified [comparator],\n * otherwise the result is undefined.\n *\n * If the list contains multiple elements equal to the specified [element], there is no guarantee which one will be found.\n *\n * `null` value is considered to be less than any non-null value.\n *\n * @return the index of the element, if it is contained in the list within the specified range;\n * otherwise, the inverted insertion point `(-insertion point - 1)`.\n * The insertion point is defined as the index at which the element should be inserted,\n * so that the
list (or the specified subrange of list) still remains sorted according to the specified [comparator].\n * @sample samples.collections.Collections.Lists.binarySearchWithComparator\n */\npublic fun <T> List<T>.binarySearch(element: T, comparator: Comparator<in T>, fromIndex: Int = 0, toIndex: Int = size): Int {\n rangeCheck(size, fromIndex, toIndex)\n\n var low = fromIndex\n var high = toIndex - 1\n\n while (low <= high) {\n val mid = (low + high).ushr(1) // safe from overflows\n val midVal = get(mid)\n val cmp = comparator.compare(midVal, element)\n\n if (cmp < 0)\n low = mid + 1\n else if (cmp > 0)\n high = mid - 1\n else\n return mid // key found\n }\n return -(low + 1) // key not found\n}\n\n/**\n * Searches this list or its range for an element having the key returned by the specified [selector] function\n * equal to the provided [key] value using the binary search algorithm.\n * The list
is expected to be sorted into ascending order according to the Comparable natural ordering of keys of its elements.\n * otherwise the result is undefined.\n *\n * If the list contains multiple elements with the specified [key], there is no guarantee which one will be found.\n *\n * `null` value is considered to be less than any non-null value.\n *\n * @return the index of the element with the specified [key], if it is contained in the list within the specified range;\n * otherwise, the inverted insertion point `(-insertion point - 1)`.\n * The insertion point is defined as the index at which the element should be inserted,\n * so that the list (or the specified subrange of list) still remains sorted.\n * @sample samples.collections.Collections.Lists.binarySearchByKey\n */\npublic inline fun <T, K : Comparable<K>> List<T>.binarySearchBy(\n key: K?,\n fromIndex: Int = 0,\n toIndex: Int = size,\n crossinline selector: (T) -> K?\n): Int =\n binarySearch(fromIndex, toIndex)
{ compareValues(selector(it), key) }\n\n// do not introduce this overload --- too rare\n//public fun <T, K> List<T>.binarySearchBy(key: K, comparator: Comparator<K>, fromIndex: Int = 0, toIndex: Int = size(), selector: (T) -> K): Int =\n// binarySearch(fromIndex, toIndex) { comparator.compare(selector(it), key) }\n\n\n/**\n * Searches this list or its range for an element for which [comparison] function returns zero using the binary search algorithm.\n * The list is expected to be sorted into ascending order according to the provided [comparison],\n * otherwise the result is undefined.\n *\n * If the list contains multiple elements for which [comparison] returns zero, there is no guarantee which one will be found.\n *\n * @param comparison function that compares an element of the list with the element being searched.\n *\n * @return the index of the found element, if it is contained in the list within the specified range;\n * otherwise, the inverted insertion point `(-insertion
point - 1)`.\n * The insertion point is defined as the index at which the element should be inserted,\n * so that the list (or the specified subrange of list) still remains sorted.\n * @sample samples.collections.Collections.Lists.binarySearchWithComparisonFunction\n */\npublic fun <T> List<T>.binarySearch(fromIndex: Int = 0, toIndex: Int = size, comparison: (T) -> Int): Int {\n rangeCheck(size, fromIndex, toIndex)\n\n var low = fromIndex\n var high = toIndex - 1\n\n while (low <= high) {\n val mid

= (low + high).ushr(1) // safe from overflows\n val midVal = get(mid)\n val cmp = comparison(midVal)\n\n if (cmp < 0)\n low = mid + 1\n else if (cmp > 0)\n high = mid - 1\n else\n return mid // key found\n }\n return -(low + 1) // key not found\n}\n\n/**\n * Checks that `from` and `to` are in\n * the range of [0..size] and throws an appropriate exception, if they aren't.\n */\nprivate fun rangeCheck(size: Int, fromIndex: Int, toIndex: Int) {\n when {\n fromIndex > toIndex -> throw IllegalArgumentException(\"fromIndex ($fromIndex) is greater than toIndex ($toIndex).\")\n fromIndex < 0 -> throw IndexOutOfBoundsException(\"fromIndex ($fromIndex) is less than zero.\")\n toIndex > size -> throw IndexOutOfBoundsException(\"toIndex ($toIndex) is greater than size ($size).\")\n }\n}\n\n\n@PublishedApi\n@SinceKotlin(\"1.3\")\ninternal expect fun checkIndexOverflow(index: Int): Int\n\n@PublishedApi\n@SinceKotlin(\"1.3\")\ninternal expect fun checkCountOverflow(count: Int): Int\n\n\n@PublishedApi\n@SinceKotlin(\"1.3\")\ninternal fun throwIndexOverflow() { throw ArithmeticException(\"Index overflow has happened.\") }\n\n@PublishedApi\n@SinceKotlin(\"1.3\")\ninternal fun throwCountOverflow() { throw ArithmeticException(\"Count overflow has happened.\") }\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"MapsKt\")\n\npackage kotlin.collections\n\nimport kotlin.contracts.*\n\nprivate object EmptyMap : Map<Any?, Nothing>, Serializable {\n private const val serialVersionUID: Long = 8246714829545688274\n\n override fun equals(other: Any?): Boolean = other is Map<*, *> && other.isEmpty()\n override fun hashCode(): Int = 0\n override fun toString(): String = \"{}\"\n\n override val size: Int get() = 0\n override fun isEmpty(): Boolean = true\n\n override fun containsKey(key: Any?): Boolean = false\n override fun containsValue(value: Nothing): Boolean = false\n override fun get(key: Any?): Nothing? = null\n override val entries: Set<Map.Entry<Any?, Nothing>> get() = EmptySet\n override val keys: Set<Any?> get() = EmptySet\n override val values: Collection<Nothing> get() = EmptyList\n\n private fun readResolve(): Any = EmptyMap\n}\n\n/**\n * Returns an empty read-only map of specified type.\n *\n * The returned map is serializable (JVM).\n * @sample samples.collections.Maps.Instantiation.emptyReadOnlyMap\n */\npublic fun <K, V> emptyMap(): Map<K, V> = @Suppress(\"UNCHECKED_CAST\") (EmptyMap as Map<K, V>)\n\n/**\n * Returns a new read-only map with the specified contents, given as a list of pairs\n * where the first value is the key and the second is the value.\n *\n * If multiple pairs have the same key, the resulting map will contain the value from the last of those pairs.\n *\n * Entries of the map are iterated in the order they were specified.\n *\n * The returned map is serializable (JVM).\n *\n * @sample samples.collections.Maps.Instantiation.mapFromPairs\n */\npublic fun <K, V> mapOf(vararg pairs: Pair<K, V>): Map<K, V> =\n if (pairs.size > 0) pairs.toMap(LinkedHashMap(mapCapacity(pairs.size))) else emptyMap()\n\n/**\n * Returns an empty read-only map.\n *\n * The returned map is serializable (JVM).\n * @sample samples.collections.Maps.Instantiation.emptyReadOnlyMap\n */\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> mapOf(): Map<K, V> = emptyMap()\n\n/**\n * Returns an empty new [MutableMap].\n *\n * The returned map preserves the entry iteration order.\n * @sample samples.collections.Maps.Instantiation.emptyMutableMap\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> mutableMapOf(): MutableMap<K, V> = LinkedHashMap()\n\n/**\n * Returns a new [MutableMap] with the specified contents, given as a list of pairs\n * where the first component is the key and the second is the value.\n *\n * If multiple pairs have the same key, the resulting map will contain the value from the last of those pairs.\n *\n * Entries of the map are iterated in the order they were specified.\n *\n * @sample samples.collections.Maps.Instantiation.mutableMapFromPairs\n * @sample samples.collections.Maps.Instantiation.emptyMutableMap\n */\npublic fun <K, V> mutableMapOf(vararg pairs: Pair<K, V>): MutableMap<K, V> =\n LinkedHashMap<K, V>(mapCapacity(pairs.size)).apply { putAll(pairs) }\n\n/**\n * Returns an empty new [HashMap].\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> hashMapOf(): HashMap<K, V> = HashMap<K, V>()\n\n/**\n * Returns a new [HashMap] with the specified contents, given as a list of pairs\n *

where the first component is the key and the second is the value.\n *\n * @sample samples.collections.Maps.Instantiation.hashMapFromPairs\n */\npublic fun <K, V> hashMapOf(vararg pairs: Pair<K, V>): HashMap<K, V> = HashMap<K, V>(mapCapacity(pairs.size)).apply { putAll(pairs) }\n\n/**\n * Returns an empty new [LinkedHashMap].\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> linkedMapOf(): LinkedHashMap<K, V> = LinkedHashMap<K, V>()\n\n/**\n * Returns a new [LinkedHashMap] with the specified contents, given as a list of pairs\n * where the first component is the key and the second
is the value.\n *\n * If multiple pairs have the same key, the resulting map will contain the value from the last of those pairs.\n *\n * Entries of the map are iterated in the order they were specified.\n *\n * @sample samples.collections.Maps.Instantiation.linkedMapFromPairs\n */\npublic fun <K, V> linkedMapOf(vararg pairs: Pair<K, V>): LinkedHashMap<K, V> = pairs.toMap(LinkedHashMap(mapCapacity(pairs.size)))\n\n/**\n * Calculate the initial capacity of a map, based on Guava's com.google.common.collect.Maps approach. This is equivalent\n * to the Collection constructor for HashSet, (c.size()/.75f) + 1, but provides further optimisations for very small or\n * very large sizes, allows support non-collection classes, and provides consistency for all map based class construction.\n */\n@PublishedApi\ninternal fun mapCapacity(expectedSize: Int): Int {\n   if (expectedSize < 3) {\n   return expectedSize + 1\n   }\n   if (expectedSize < INT_MAX_POWER_OF_TWO) {\n   return expectedSize
+ expectedSize / 3\n   }\n   return Int.MAX_VALUE // any large value\n}\n\nprivate const val INT_MAX_POWER_OF_TWO: Int = Int.MAX_VALUE / 2 + 1\n\n/** Returns `true` if this map is not empty. */\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map<out K, V>.isNotEmpty(): Boolean = !isEmpty()\n\n/**\n * Returns `true` if this nullable map is either null or empty.\n * @sample samples.collections.Maps.Usage.mapIsNullOrEmpty\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map<out K, V>?.isNullOrEmpty(): Boolean {\n   contract {\n   returns(false) implies (this@isNullOrEmpty != null)\n   }\n\n   return this == null || isEmpty()\n}\n\n/**\n * Returns the [Map] if its not `null`, or the empty [Map] otherwise.\n *\n * @sample samples.collections.Maps.Usage.mapOrEmpty\n */\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map<K, V>?.orEmpty(): Map<K, V> = this ?: emptyMap()\n\n/**\n * Returns this map if it's not empty\n * or the result
of calling [defaultValue] function if the map is empty.\n *\n * @sample samples.collections.Maps.Usage.mapIfEmpty\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic inline fun <M, R> M.ifEmpty(defaultValue: () -> R): R where M : Map<*, *>, M : R =\n   if (isEmpty()) defaultValue() else this\n\n/**\n * Checks if the map contains the given key.\n *\n * This method allows to use the `x in map` syntax for checking whether an object is contained in the map.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <@kotlin.internal.OnlyInputTypes K, V> Map<out K, V>.contains(key: K): Boolean = containsKey(key)\n\n/**\n * Returns the value corresponding to the given [key], or `null` if such a key is not present in the map.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <@kotlin.internal.OnlyInputTypes K, V> Map<out K, V>.get(key: K): V? =\n   @Suppress(\"UNCHECKED_CAST\") (this as Map<K, V>).get(key)\n\n/**\n * Allows to use the index operator for storing
values in a mutable map.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <K, V> MutableMap<K, V>.set(key: K, value: V): Unit {\n   put(key, value)\n}\n\n/**\n * Returns `true` if the map contains the specified [key].\n *\n * Allows to overcome type-safety restriction of `containsKey` that requires to pass a key of type `K`.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <@kotlin.internal.OnlyInputTypes K> Map<out K, *>.containsKey(key: K): Boolean =\n   @Suppress(\"UNCHECKED_CAST\") (this as Map<K, *>).containsKey(key)\n\n/**\n * Returns `true` if the map maps one or more keys to the specified [value].\n *\n * Allows to overcome type-safety restriction of `containsValue` that requires to pass a value of type `V`.\n *\n * @sample samples.collections.Maps.Usage.containsValue\n */\n@Suppress(\"EXTENSION_SHADOWED_BY_MEMBER\") // false warning, extension takes precedence in some cases\n@kotlin.internal.InlineOnly\npublic inline fun <K, @kotlin.internal.OnlyInputTypes

V> Map<K, V>.containsValue(value: V): Boolean = this.containsValue(value)\n\n\n/**\n * Removes the specified key and its corresponding value from this map.\n *\n * @return the previous value associated with the key, or `null` if the key was not present in the map.\n\n * Allows to overcome type-safety restriction of `remove` that requires to pass a key of type `K`.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <@kotlin.internal.OnlyInputTypes K, V> MutableMap<out K, V>.remove(key: K): V? =\n   @Suppress(\"UNCHECKED_CAST\") (this as MutableMap<K, V>).remove(key)\n\n/**\n * Returns the key component of the map entry.\n *\n * This method allows to use destructuring declarations when working with maps, for example:\n * ```\n * for ((key, value) in map) {\n *   // do something with the key and the value\n * }\n * ```\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <K, V> Map.Entry<K, V>.component1(): K = key\n\n/**\n * Returns the value component of the map entry.\n

*\n * This method allows to use destructuring declarations when working with maps, for example:\n * ```\n * for ((key, value) in map) {\n *   // do something with the key and the value\n * }\n * ```\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <K, V> Map.Entry<K, V>.component2(): V = value\n\n/**\n * Converts entry to [Pair] with key being first component and value being second.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map.Entry<K, V>.toPair(): Pair<K, V> = Pair(key, value)\n\n/**\n * Returns the value for the given key, or the result of the [defaultValue] function if there was no entry for the given key.\n *\n * @sample samples.collections.Maps.Usage.getOrElse\n */\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map<K, V>.getOrElse(key: K, defaultValue: () -> V): V = get(key) ?: defaultValue()\n\n\ninternal inline fun <K, V> Map<K, V>.getOrElseNullable(key: K, defaultValue: () -> V): V {\n   val value = get(key)\n   if (value == null &&

!containsKey(key)) {\n   return defaultValue()\n   } else {\n   @Suppress(\"UNCHECKED_CAST\")\n return value as V\n   }\n}\n\n/**\n * Returns the value for the given [key] or throws an exception if there is no such key in the map.\n *\n * If the map was created by [withDefault], resorts to its `defaultValue` provider function\n * instead of throwing an exception.\n *\n * @throws NoSuchElementException when the map doesn't contain a value for the specified key and\n * no implicit default value was provided for that map.\n */\n@SinceKotlin(\"1.1\")\npublic fun <K, V> Map<K, V>.getValue(key: K): V = getOrImplicitDefault(key)\n\n/**\n * Returns the value for the given key. If the key is not found in the map, calls the [defaultValue] function,\n * puts its result into the map under the given key and returns it.\n *\n * Note that the operation is not guaranteed to be atomic if the map is being modified concurrently.\n *\n * @sample samples.collections.Maps.Usage.getOrPut\n

*/\npublic inline fun <K, V> MutableMap<K, V>.getOrPut(key: K, defaultValue: () -> V): V {\n   val value = get(key)\n   return if (value == null) {\n   val answer = defaultValue()\n   put(key, answer)\n   answer\n   } else {\n   value\n   }\n}\n\n/**\n * Returns an [Iterator] over the entries in the [Map].\n *\n * @sample samples.collections.Maps.Usage.forOverEntries\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <K, V> Map<out K, V>.iterator(): Iterator<Map.Entry<K, V>> = entries.iterator()\n\n/**\n * Returns a [MutableIterator] over the mutable entries in the [MutableMap].\n *\n */\n@kotlin.jvm.JvmName(\"mutableIterator\")\n@kotlin.internal.InlineOnly\npublic inline operator fun <K, V> MutableMap<K, V>.iterator(): MutableIterator<MutableMap.MutableEntry<K, V>> = entries.iterator()\n\n/**\n * Populates the given [destination] map with entries having the keys of this map and the values obtained\n * by applying the [transform] function to each entry

in this [Map].\n */\npublic inline fun <K, V, R, M : MutableMap<in K, in R>> Map<out K, V>.mapValuesTo(destination: M, transform: (Map.Entry<K, V>) -> R): M {\n   return entries.associateByTo(destination, { it.key }, transform)\n}\n\n/**\n * Populates the given [destination] map with entries having the keys obtained\n * by applying the [transform] function to each entry in this [Map] and the values of this map.\n *\n * In case if any two entries are mapped to the equal keys, the value of the latter one will overwrite\n * the value associated with the former one.\n */\npublic inline fun <K, V, R, M : MutableMap<in R, in V>> Map<out K, V>.mapKeysTo(destination: M, transform: (Map.Entry<K, V>) -> R): M {\n   return entries.associateByTo(destination, transform, { it.value })\n}\n\n/**\n * Puts all the given [pairs] into this

[MutableMap] with the first component in the pair being the key and the second the value.\n */\npublic fun <K, V> MutableMap<in K, in V>.putAll(pairs: Array<out Pair<K, V>>): Unit {\n for ((key, value) in pairs) {\n put(key, value)\n }\n}\n\n/**\n * Puts all the elements of the given collection into this [MutableMap] with the first component in the pair being the key and the second the value.\n */\npublic fun <K, V> MutableMap<in K, in V>.putAll(pairs: Iterable<Pair<K, V>>): Unit {\n for ((key, value) in pairs) {\n put(key, value)\n }\n}\n\n/**\n * Puts all the elements of the given sequence into this [MutableMap] with the first component in the pair being the key and the second the value.\n */\npublic fun <K, V> MutableMap<in K, in V>.putAll(pairs: Sequence<Pair<K, V>>): Unit {\n for ((key, value) in pairs) {\n put(key, value)\n }\n}\n\n/**\n * Returns a new map with entries having the keys of this map and the values obtained by applying the [transform]\n * function to each entry in this [Map].\n *\n * The returned map preserves the entry iteration order of the original map.\n *\n * @sample samples.collections.Maps.Transformations.mapValues\n */\npublic inline fun <K, V, R> Map<out K, V>.mapValues(transform: (Map.Entry<K, V>) -> R): Map<K, R> {\n return mapValuesTo(LinkedHashMap<K, R>(mapCapacity(size)), transform) // .optimizeReadOnlyMap()\n}\n\n/**\n * Returns a new Map with entries having the keys obtained by applying the [transform] function to each entry in this\n * [Map] and the values of this map.\n *\n * In case if any two entries are mapped to the equal keys, the value of the latter one will overwrite\n * the value associated with the former one.\n *\n * The returned map preserves the entry iteration order of the original map.\n *\n * @sample samples.collections.Maps.Transformations.mapKeys\n */\npublic inline fun <K, V, R> Map<out K, V>.mapKeys(transform: (Map.Entry<K, V>) -> R): Map<R, V> {\n return mapKeysTo(LinkedHashMap<R, V>(mapCapacity(size)), transform) // .optimizeReadOnlyMap()\n}\n\n/**\n * Returns a map containing all key-value pairs with keys matching the given [predicate].\n *\n * The returned map preserves the entry iteration order of the original map.\n * @sample samples.collections.Maps.Filtering.filterKeys\n */\npublic inline fun <K, V> Map<out K, V>.filterKeys(predicate: (K) -> Boolean): Map<K, V> {\n val result = LinkedHashMap<K, V>()\n for (entry in this) {\n if (predicate(entry.key)) {\n result.put(entry.key, entry.value)\n }\n }\n return result\n}\n\n/**\n * Returns a map containing all key-value pairs with values matching the given [predicate].\n *\n * The returned map preserves the entry iteration order of the original map.\n * @sample samples.collections.Maps.Filtering.filterValues\n */\npublic inline fun <K, V> Map<out K, V>.filterValues(predicate: (V) -> Boolean): Map<K, V> {\n val result = LinkedHashMap<K, V>()\n for (entry in this) {\n if (predicate(entry.value)) {\n result.put(entry.key, entry.value)\n }\n }\n return result\n}\n\n/**\n * Appends all entries matching the given [predicate] into the mutable map given as [destination] parameter.\n *\n * @return the destination map.\n * @sample samples.collections.Maps.Filtering.filterTo\n */\npublic inline fun <K, V, M : MutableMap<in K, in V>> Map<out K, V>.filterTo(destination: M, predicate: (Map.Entry<K, V>) -> Boolean): M {\n for (element in this) {\n if (predicate(element)) {\n destination.put(element.key, element.value)\n }\n }\n return destination\n}\n\n/**\n * Returns a new map containing all key-value pairs matching the given [predicate].\n *\n * The returned map preserves the entry iteration order of the original map.\n * @sample samples.collections.Maps.Filtering.filter\n */\npublic inline fun <K, V> Map<out K, V>.filter(predicate: (Map.Entry<K, V>) -> Boolean): Map<K, V> {\n return filterTo(LinkedHashMap<K, V>(), predicate)\n}\n\n/**\n * Appends all entries not matching the given [predicate] into the given [destination].\n *\n * @return the destination map.\n * @sample samples.collections.Maps.Filtering.filterNotTo\n */\npublic inline fun <K, V, M : MutableMap<in K, in V>> Map<out K, V>.filterNotTo(destination: M, predicate: (Map.Entry<K, V>) -> Boolean): M {\n for (element in this) {\n if (!predicate(element)) {\n destination.put(element.key, element.value)\n }\n }\n return destination\n}\n\n/**\n * Returns a new map containing all key-value pairs not matching the given [predicate].\n *\n * The returned map preserves the entry iteration order of the original map.\n * @sample samples.collections.Maps.Filtering.filterNot\n */\npublic inline fun <K, V> Map<out K,

V>.filterNot(predicate: (Map.Entry<K, V>) -> Boolean): Map<K, V> {\n   return filterNotTo(LinkedHashMap<K, V>(), predicate)\n}\n\n/**\n * Returns a new map containing all key-value pairs from the given collection of pairs.\n *\n * The returned map preserves the entry iteration order of the original collection.\n * If any
of two pairs would have the same key the last one gets added to the map.\n */\npublic fun <K, V> Iterable<Pair<K, V>>.toMap(): Map<K, V> {\n   if (this is Collection) {\n   return when (size) {\n   0 -> emptyMap()\n
1 -> mapOf(if (this is List) this[0] else iterator().next())\n   else -> toMap(LinkedHashMap<K, V>(mapCapacity(size)))\n   }\n   }\n   return toMap(LinkedHashMap<K, V>()).optimizeReadOnlyMap()\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs from the given collection of pairs.\n */\npublic fun <K, V, M : MutableMap<in K, in V>> Iterable<Pair<K, V>>.toMap(destination: M): M =\n   destination.apply { putAll(this@toMap) }\n\n/**\n * Returns a new map containing all key-value pairs from the given array of pairs.\n *\n * The returned map preserves the entry iteration order of the original array.\n * If any of two pairs would have the same key the last one gets added to the map.\n */\npublic fun <K,
V> Array<out Pair<K, V>>.toMap(): Map<K, V> = when (size) {\n   0 -> emptyMap()\n   1 -> mapOf(this[0])\n   else -> toMap(LinkedHashMap<K, V>(mapCapacity(size)))\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs from the given array of pairs.\n */\npublic fun <K, V, M : MutableMap<in K, in V>> Array<out Pair<K, V>>.toMap(destination: M): M =\n   destination.apply { putAll(this@toMap) }\n\n/**\n * Returns a new map containing all key-value pairs from the given sequence of pairs.\n *\n * The returned map preserves the entry iteration order of the original sequence.\n * If any of two pairs would have the same key the last one gets added to the map.\n */\npublic fun <K, V> Sequence<Pair<K, V>>.toMap(): Map<K, V> = toMap(LinkedHashMap<K, V>()).optimizeReadOnlyMap()\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs from the given sequence of pairs.\n */\npublic fun <K, V, M : MutableMap<in K, in V>> Sequence<Pair<K,
V>>.toMap(destination: M): M =\n   destination.apply { putAll(this@toMap) }\n\n/**\n * Returns a new read-only map containing all key-value pairs from the original map.\n *\n * The returned map preserves the entry iteration order of the original map.\n */\n@SinceKotlin(\"1.1\")\npublic fun <K, V> Map<out K, V>.toMap(): Map<K, V> = when (size) {\n   0 -> emptyMap()\n   1 -> toSingletonMap()\n   else -> toMutableMap()\n}\n\n/**\n * Returns a new mutable map containing all key-value pairs from the original map.\n *\n * The returned map preserves the entry iteration order of the original map.\n */\n@SinceKotlin(\"1.1\")\npublic fun <K, V> Map<out K, V>.toMutableMap(): MutableMap<K, V> = LinkedHashMap(this)\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs from the given map.\n */\n@SinceKotlin(\"1.1\")\npublic fun <K, V, M : MutableMap<in K, in V>> Map<out K, V>.toMap(destination: M): M =\n   destination.apply { putAll(this@toMap) }\n\n/**\n * Creates
a new read-only map by replacing or adding an entry to this map from a given key-value [pair].\n *\n * The returned map preserves the entry iteration order of the original map.\n * The [pair] is iterated in the end if it has a unique key.\n */\npublic operator fun <K, V> Map<out K, V>.plus(pair: Pair<K, V>): Map<K, V> =\n   if (this.isEmpty()) mapOf(pair) else LinkedHashMap(this).apply { put(pair.first, pair.second) }\n\n/**\n * Creates a new read-only map by replacing or adding entries to this map from a given collection of key-value [pairs].\n *\n * The returned map preserves the entry iteration order of the original map.\n * Those [pairs] with unique keys are iterated in the end in the order of [pairs] collection.\n */\npublic operator fun <K, V> Map<out K, V>.plus(pairs: Iterable<Pair<K, V>>): Map<K, V> =\n   if (this.isEmpty()) pairs.toMap() else LinkedHashMap(this).apply { putAll(pairs) }\n\n/**\n * Creates a new read-only map by replacing or adding entries to this map from
a given array of key-value [pairs].\n *\n * The returned map preserves the entry iteration order of the original map.\n * Those [pairs] with unique keys are iterated in the end in the order of [pairs] array.\n */\npublic operator fun <K, V> Map<out K, V>.plus(pairs: Array<out Pair<K, V>>): Map<K, V> =\n   if (this.isEmpty()) pairs.toMap() else LinkedHashMap(this).apply { putAll(pairs) }\n\n/**\n * Creates a new read-only map by replacing or adding entries to this map from a given sequence of key-value [pairs].\n *\n * The returned map preserves the entry iteration order of the original map.\n * Those [pairs] with unique keys are iterated in the end in the order of [pairs]

sequence.\n */\npublic operator fun <K, V> Map<out K, V>.plus(pairs: Sequence<Pair<K, V>>): Map<K, V> =\n LinkedHashMap(this).apply { putAll(pairs) }.optimizeReadOnlyMap()\n\n/**\n * Creates a new read-only map by replacing or adding entries to this map from another [map].\n *\n * The returned map preserves the entry iteration order of the original map.\n * Those entries of another [map] that are missing in this map are iterated in the end in the order of that [map].\n */\npublic operator fun <K, V> Map<out K, V>.plus(map: Map<out K, V>): Map<K, V> =\n LinkedHashMap(this).apply { putAll(map) }\n\n\n/**\n * Appends or replaces the given [pair] in this mutable map.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <K, V> MutableMap<in K, in V>.plusAssign(pair: Pair<K, V>) {\n put(pair.first, pair.second)\n}\n\n/**\n * Appends or replaces all pairs from the given collection of [pairs] in this mutable map.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <K, V> MutableMap<in K, in V>.plusAssign(pairs: Iterable<Pair<K, V>>) {\n putAll(pairs)\n}\n\n/**\n * Appends or replaces all pairs from the given array of [pairs] in this mutable map.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <K, V> MutableMap<in K, in V>.plusAssign(pairs: Array<out Pair<K, V>>) {\n putAll(pairs)\n}\n\n/**\n * Appends or replaces all pairs from the given sequence of [pairs] in this mutable map.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <K, V> MutableMap<in K, in V>.plusAssign(pairs: Sequence<Pair<K, V>>) {\n putAll(pairs)\n}\n\n/**\n * Appends or replaces all entries from the given [map] in this mutable map.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <K, V> MutableMap<in K, in V>.plusAssign(map: Map<K, V>) {\n putAll(map)\n}\n\n/**\n * Returns a map containing all entries of the original map except the entry with the given [key].\n *\n * The returned map preserves the entry iteration order of the original map.\n */\n@SinceKotlin(\"1.1\")\npublic operator fun <K, V> Map<out K, V>.minus(key: K): Map<K, V> =\n this.toMutableMap().apply { minusAssign(key) }.optimizeReadOnlyMap()\n\n/**\n * Returns a map containing all entries of the original map except those entries\n * the keys of which are contained in the given
[keys] collection.\n *\n * The returned map preserves the entry iteration order of the original map.\n */\n@SinceKotlin(\"1.1\")\npublic operator fun <K, V> Map<out K, V>.minus(keys: Iterable<K>): Map<K, V> =\n this.toMutableMap().apply { minusAssign(keys) }.optimizeReadOnlyMap()\n\n/**\n * Returns a map containing all entries of the original map except those entries\n * the keys of which are contained in the given [keys] array.\n *\n * The returned map preserves the entry iteration order of the original map.\n */\n@SinceKotlin(\"1.1\")\npublic operator fun <K, V> Map<out K, V>.minus(keys: Array<out K>): Map<K, V> =\n this.toMutableMap().apply { minusAssign(keys) }.optimizeReadOnlyMap()\n\n/**\n * Returns a map containing all entries of the original map except those entries\n * the keys of which are contained in the given [keys] sequence.\n *\n * The returned map preserves the entry iteration order of the original map.\n */\n@SinceKotlin(\"1.1\")\npublic operator fun <K, V> Map<out
K, V>.minus(keys: Sequence<K>): Map<K, V> =\n this.toMutableMap().apply { minusAssign(keys) }.optimizeReadOnlyMap()\n\n/**\n * Removes the entry with the given [key] from this mutable map.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic inline operator fun <K, V> MutableMap<K, V>.minusAssign(key: K) {\n remove(key)\n}\n\n/**\n * Removes all entries the keys of which are contained in the given [keys] collection from this mutable map.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic inline operator fun <K, V> MutableMap<K, V>.minusAssign(keys: Iterable<K>) {\n this.keys.removeAll(keys)\n}\n\n/**\n * Removes all entries the keys of which are contained in the given [keys] array from this mutable map.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic inline operator fun <K, V> MutableMap<K, V>.minusAssign(keys: Array<out K>) {\n this.keys.removeAll(keys)\n}\n\n/**\n * Removes all entries from the keys of which are contained in
the given [keys] sequence from this mutable map.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic inline operator fun <K, V> MutableMap<K, V>.minusAssign(keys: Sequence<K>) {\n this.keys.removeAll(keys)\n}\n\n\n// do not expose for now @PublishedApi\ninternal fun <K, V> Map<K, V>.optimizeReadOnlyMap() = when (size) {\n 0 -> emptyMap()\n 1 -> toSingletonMapOrSelf()\n else -> this\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source

code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"SetsKt\")\n\npackage kotlin.collections\n\n\ninternal object EmptySet : Set<Nothing>, Serializable {\n   private const val serialVersionUID: Long = 3406603774387020532\n\n   override fun equals(other: Any?): Boolean = other is Set<*> && other.isEmpty()\n   override fun hashCode(): Int = 0\n   override fun toString(): String = \"[]\"\n\n   override val size: Int get() = 0\n   override fun isEmpty(): Boolean = true\n   override fun contains(element: Nothing): Boolean = false\n   override fun containsAll(elements: Collection<Nothing>): Boolean = elements.isEmpty()\n\n   override fun iterator(): Iterator<Nothing> = EmptyIterator\n\n   private fun readResolve(): Any = EmptySet\n}\n\n\n/**\n * Returns an empty read-only set. The returned set is serializable (JVM).\n * @sample samples.collections.Collections.Sets.emptyReadOnlySet\n */\npublic fun <T> emptySet(): Set<T> = EmptySet\n\n/**\n * Returns a new read-only set with the given elements.\n * Elements of the set are iterated in the order they were specified.\n * The returned set is serializable (JVM).\n * @sample samples.collections.Collections.Sets.readOnlySet\n */\npublic fun <T> setOf(vararg elements: T): Set<T> = if (elements.size > 0) elements.toSet() else emptySet()\n\n/**\n * Returns an empty read-only set. The returned set is serializable (JVM).\n * @sample samples.collections.Collections.Sets.emptyReadOnlySet\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> setOf(): Set<T> = emptySet()\n\n/**\n * Returns an empty new [MutableSet].\n *\n * The returned set preserves the element iteration order.\n * @sample samples.collections.Collections.Sets.emptyMutableSet\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic inline fun <T> mutableSetOf(): MutableSet<T> = LinkedHashSet()\n\n/**\n * Returns a new [MutableSet] with the given elements.\n * Elements of the set are iterated in the order they were specified.\n * @sample samples.collections.Collections.Sets.mutableSet\n */\npublic fun <T> mutableSetOf(vararg elements: T): MutableSet<T> = elements.toCollection(LinkedHashSet(mapCapacity(elements.size)))\n\n/** Returns an empty new [HashSet]. */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic inline fun <T> hashSetOf(): HashSet<T> = HashSet()\n\n/** Returns a new [HashSet] with the given elements. */\npublic fun <T> hashSetOf(vararg elements: T): HashSet<T> = elements.toCollection(HashSet(mapCapacity(elements.size)))\n\n/** Returns an empty new [LinkedHashSet]. */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic inline fun <T> linkedSetOf(): LinkedHashSet<T> = LinkedHashSet()\n\n/**\n * Returns a new [LinkedHashSet] with the given elements.\n * Elements of the set are iterated in the order they were specified.\n */\npublic fun <T> linkedSetOf(vararg elements: T): LinkedHashSet<T> = elements.toCollection(LinkedHashSet(mapCapacity(elements.size)))\n\n/** Returns this Set if it's not `null` and the empty set otherwise. */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Set<T>?.orEmpty(): Set<T> = this ?: emptySet()\n\ninternal fun <T> Set<T>.optimizeReadOnlySet() = when (size) {\n   0 -> emptySet()\n   1 -> setOf(iterator().next())\n   else -> this\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"StringsKt\")\n@file:Suppress(\"PLATFORM_CLASS_MAPPED_TO_KOTLIN\")\n\npackage kotlin.text\n\n/**\n * Parses the string as a signed [Byte] number and returns the result\n * or `null` if the string is not a valid representation of a number.\n */\n@SinceKotlin(\"1.1\")\npublic fun String.toByteOrNull(): Byte? = toByteOrNull(radix = 10)\n\n/**\n * Parses the string as a signed [Byte] number and returns the result\n * or `null` if the string is not a valid representation of a number.\n *\n * @throws IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n */\n@SinceKotlin(\"1.1\")\npublic fun String.toByteOrNull(radix: Int): Byte? {\n   val int = this.toIntOrNull(radix) ?: return null\n   if (int < Byte.MIN_VALUE || int > Byte.MAX_VALUE) return null\n   return int.toByte()\n}\n\n/**\n * Parses the string as a [Short] number and returns the result\n * or `null` if the string is not a valid representation of a number.\n */\n@SinceKotlin(\"1.1\")\npublic fun String.toShortOrNull(): Short? = toShortOrNull(radix = 10)\n\n/**\n * Parses the string as a [Short] number and

returns the result\n * or `null` if the string is not a valid representation of a number.\n *\n * @throws IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n */\n@SinceKotlin(\"1.1\")\npublic fun String.toShortOrNull(radix: Int): Short? {\n val int = this.toIntOrNull(radix) ?: return null\n if (int < Short.MIN_VALUE || int > Short.MAX_VALUE) return null\n return int.toShort()\n}\n\n/**\n * Parses the string as an [Int] number and returns the result\n * or `null` if the string is not a valid representation of a number.\n */\n@SinceKotlin(\"1.1\")\npublic fun String.toIntOrNull(): Int? = toIntOrNull(radix = 10)\n\n/**\n * Parses the string as an [Int] number and returns the result\n * or `null` if the string is not a valid representation
of a number.\n *\n * @throws IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n */\n@SinceKotlin(\"1.1\")\npublic fun String.toIntOrNull(radix: Int): Int? {\n checkRadix(radix)\n\n val length = this.length\n if (length == 0) return null\n\n val start: Int\n val isNegative: Boolean\n val limit: Int\n\n val firstChar = this[0]\n if (firstChar < '0') { // Possible leading sign\n if (length == 1) return null // non-digit (possible sign) only, no digits after\n\n start = 1\n\n if (firstChar == '-') {\n isNegative = true\n limit = Int.MIN_VALUE\n } else if (firstChar == '+') {\n isNegative = false\n limit = -Int.MAX_VALUE\n } else\n return null\n } else {\n start = 0\n isNegative = false\n limit = -Int.MAX_VALUE\n }\n\n val limitBeforeMul = limit / radix\n var result = 0\n for (i in start..(length - 1)) {\n val digit = digitOf(this[i], radix)\n\n if (digit < 0) return null\n if (result < limitBeforeMul) return null\n\n result *= radix\n\n if (result < limit + digit) return null\n\n result -= digit\n }\n\n return if (isNegative) result else -result\n}\n\n/**\n * Parses the string as a [Long] number and returns the result\n * or `null` if the string is not a valid representation of a number.\n */\n@SinceKotlin(\"1.1\")\npublic fun String.toLongOrNull(): Long? = toLongOrNull(radix = 10)\n\n/**\n * Parses the string as a [Long] number and returns the result\n * or `null` if the string is not a valid representation of a number.\n *\n * @throws IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n */\n@SinceKotlin(\"1.1\")\npublic fun String.toLongOrNull(radix: Int): Long? {\n checkRadix(radix)\n\n val length = this.length\n if (length == 0) return null\n\n val start: Int\n
val isNegative: Boolean\n val limit: Long\n\n val firstChar = this[0]\n if (firstChar < '0') { // Possible leading sign\n if (length == 1) return null // non-digit (possible sign) only, no digits after\n\n start = 1\n\n if (firstChar == '-') {\n isNegative = true\n limit = Long.MIN_VALUE\n } else if (firstChar == '+') {\n isNegative = false\n limit = -Long.MAX_VALUE\n } else\n return null\n } else {\n start = 0\n isNegative = false\n limit = -Long.MAX_VALUE\n }\n\n val limitBeforeMul = limit / radix\n var result = 0L\n for (i in start..(length - 1)) {\n val digit = digitOf(this[i], radix)\n\n if (digit < 0) return null\n if (result < limitBeforeMul) return null\n\n result *= radix\n\n if (result < limit + digit) return null\n\n result -= digit\n }\n\n return if (isNegative) result else -result\n}\n\n\ninternal fun numberFormatError(input: String): Nothing = throw NumberFormatException(\"Invalid number format: '$input'\")\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n@file:kotlin.jvm.JvmName(\"UnsignedKt\")\n@file:UseExperimental(ExperimentalUnsignedTypes::class)\npackage kotlin\n\n@PublishedApi\ninternal fun uintCompare(v1: Int, v2: Int): Int = (v1 xor Int.MIN_VALUE).compareTo(v2 xor Int.MIN_VALUE)\n@PublishedApi\ninternal fun ulongCompare(v1: Long, v2: Long): Int = (v1 xor Long.MIN_VALUE).compareTo(v2 xor Long.MIN_VALUE)\n\n@PublishedApi\ninternal fun uintDivide(v1: UInt, v2: UInt): UInt = (v1.toLong() / v2.toLong()).toUInt()\n@PublishedApi\ninternal fun uintRemainder(v1: UInt, v2: UInt): UInt = (v1.toLong() % v2.toLong()).toUInt()\n\n// Division and remainder are based on Guava's UnsignedLongs implementation\n// Copyright 2011 The Guava Authors\n\n@PublishedApi\ninternal
fun ulongDivide(v1: ULong, v2: ULong): ULong {\n val dividend = v1.toLong()\n val divisor = v2.toLong()\n if (divisor < 0) { // i.e., divisor >= 2^63:\n return if (v1 < v2) ULong(0) else ULong(1)\n }\n\n // Optimization - use signed division if both dividend and divisor < 2^63\n if (dividend >= 0) {\n return ULong(dividend / divisor)\n }\n\n // Otherwise, approximate the quotient, check, and correct if necessary.\n

val quotient = ((dividend ushr 1) / divisor) shl 1\n   val rem = dividend - quotient * divisor\n   return ULong(quotient + if (ULong(rem) >= ULong(divisor)) 1 else 0)\n\n}\n\n@PublishedApi\ninternal fun ulongRemainder(v1: ULong, v2: ULong): ULong {\n   val dividend = v1.toLong()\n   val divisor = v2.toLong()\n   if (divisor < 0) { // i.e., divisor >= 2^63:\n   return if (v1 < v2) {\n   v1 // dividend < divisor\n   } else {\n   v1 - v2 // dividend >= divisor\n   }\n   }\n\n   // Optimization - use signed modulus if both dividend and divisor < 2^63\n   if (dividend >= 0) {\n   return ULong(dividend % divisor)\n   }\n\n   // Otherwise, approximate the quotient, check, and correct if necessary.\n   val quotient = ((dividend ushr 1) / divisor) shl 1\n   val rem = dividend - quotient * divisor\n   return ULong(rem - if (ULong(rem) >= ULong(divisor)) divisor else 0)\n}\n\n@PublishedApi\ninternal fun doubleToUInt(v: Double): UInt = when {\n   v.isNaN() -> 0u\n   v <= UInt.MIN_VALUE.toDouble() -> UInt.MIN_VALUE\n   v >= UInt.MAX_VALUE.toDouble() -> UInt.MAX_VALUE\n   v <= Int.MAX_VALUE -> v.toInt().toUInt()\n   else -> (v - Int.MAX_VALUE).toInt().toUInt() + Int.MAX_VALUE.toUInt()   // Int.MAX_VALUE < v < UInt.MAX_VALUE\n}\n\n@PublishedApi\ninternal fun doubleToULong(v: Double): ULong = when {\n   v.isNaN() -> 0u\n   v <= ULong.MIN_VALUE.toDouble() -> ULong.MIN_VALUE\n   v >= ULong.MAX_VALUE.toDouble() -> ULong.MAX_VALUE\n   v < Long.MAX_VALUE -> v.toLong().toULong()\n\n   // Real values from Long.MAX_VALUE to (Long.MAX_VALUE + 1) are not representable in Double, so don't handle them.\n   else -> (v - 9223372036854775808.0).toLong().toULong() + 9223372036854775808uL   // Long.MAX_VALUE + 1 < v < ULong.MAX_VALUE\n}\n\n\n@PublishedApi\ninternal fun uintToDouble(v: Int): Double = (v and Int.MAX_VALUE).toDouble() + (v ushr 31 shl 30).toDouble() * 2\n\n@PublishedApi\ninternal fun ulongToDouble(v: Long): Double = (v ushr 11).toDouble() * 2048 + (v and 2047)\n\n\ninternal fun ulongToString(v: Long): String = ulongToString(v, 10)\n\ninternal fun ulongToString(v: Long, base: Int): String {\n   if (v >= 0) return v.toString(base)\n\n   var quotient = ((v ushr 1) / base) shl 1\n   var rem = v - quotient * base\n   if (rem >= base) {\n   rem -= base\n   quotient += 1\n   }\n   return quotient.toString(base) + rem.toString(base)\n}\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"CollectionsKt\")\n\npackage kotlin.collections\n\n/**\n * Given an [iterator] function constructs an [Iterable] instance that returns values through the [Iterator]\n * provided by that function.\n * @sample samples.collections.Iterables.Building.iterable\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable(crossinline iterator: () -> Iterator<T>): Iterable<T> = object : Iterable<T> {\n   override fun iterator(): Iterator<T> = iterator()\n}\n\n/**\n * A wrapper over another [Iterable] (or any other object that can produce an [Iterator]) that returns\n * an indexing iterator.\n */\ninternal class IndexingIterable<out T>(private val iteratorFactory: () -> Iterator<T>) : Iterable<IndexedValue<T>> {\n   override fun iterator(): Iterator<IndexedValue<T>> = IndexingIterator(iteratorFactory())\n}\n\n\n/**\n * Returns the size of this iterable if it is known, or `null` otherwise.\n */\n@PublishedApi\ninternal fun <T> Iterable<T>.collectionSizeOrNull(): Int? = if (this is Collection<*>) this.size else null\n\n/**\n * Returns the size of this iterable if it is known, or the specified [default] value otherwise.\n */\n@PublishedApi\ninternal fun <T> Iterable<T>.collectionSizeOrDefault(default: Int): Int = if (this is Collection<*>) this.size else default\n\n/** Returns true when it's safe to convert this collection to a set without changing contains method behavior. */\nprivate fun <T> Collection<T>.safeToConvertToSet() = size > 2 && this is ArrayList\n\n/** Converts this collection to a set, when it's worth so and it doesn't change contains method behavior. */\ninternal fun <T> Iterable<T>.convertToSetForSetOperationWith(source: Iterable<T>): Collection<T> =\n   when (this) {\n   is Set -> this\n   is Collection ->\n   when {\n   source is Collection && source.size < 2 -> this\n   else -> if (this.safeToConvertToSet()) toHashSet() else this\n   }\n   else -> toHashSet()\n   }\n\n/** Converts this collection to a set, when it's worth so and it doesn't change contains method behavior. */\ninternal fun <T> Iterable<T>.convertToSetForSetOperation(): Collection<T> =\n   when (this) {\n   is Set -> this\n   is Collection -> if (this.safeToConvertToSet()) toHashSet() else this\n   else -> toHashSet()\n   }\n\n\n/**\n *

Returns a single list of all elements from all collections in the given collection.\n * @sample samples.collections.Iterables.Operations.flattenIterable\n */\npublic fun <T> Iterable<Iterable<T>>.flatten(): List<T> {\n   val result = ArrayList<T>()\n   for (element in this) {\n   result.addAll(element)\n   }\n   return result\n}\n\n/**\n * Returns a pair of lists, where\n * *first* list is built from the first values of each pair from this collection,\n * *second* list is built from the second values of
 each pair from this collection.\n * @sample samples.collections.Iterables.Operations.unzipIterable\n */\npublic fun <T, R> Iterable<Pair<T, R>>.unzip(): Pair<List<T>, List<R>> {\n   val expectedSize = collectionSizeOrDefault(10)\n   val listT = ArrayList<T>(expectedSize)\n   val listR = ArrayList<R>(expectedSize)\n   for (pair in this) {\n   listT.add(pair.first)\n   listR.add(pair.second)\n   }\n   return listT to listR\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"SequencesKt\")\n\npackage kotlin.sequences\n\n/**\n * Given an [iterator] function constructs a [Sequence] that returns values through the [Iterator]\n * provided by that function.\n * The values are evaluated lazily, and the sequence is potentially infinite.\n *\n * @sample samples.collections.Sequences.Building.sequenceFromIterator\n
 */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Sequence(crossinline iterator: () -> Iterator<T>): Sequence<T> = object : Sequence<T> {\n   override fun iterator(): Iterator<T> = iterator()\n}\n\n/**\n * Creates a sequence that returns all elements from this iterator. The sequence is constrained to be iterated only once.\n *\n * @sample samples.collections.Sequences.Building.sequenceFromIterator\n */\npublic fun <T> Iterator<T>.asSequence(): Sequence<T> = Sequence { this }.constrainOnce()\n\n/**\n * Creates a sequence that returns the specified values.\n *\n * @sample samples.collections.Sequences.Building.sequenceOfValues\n */\npublic fun <T> sequenceOf(vararg elements: T): Sequence<T> = if (elements.isEmpty()) emptySequence() else elements.asSequence()\n\n/**\n * Returns an empty sequence.\n */\npublic fun <T> emptySequence(): Sequence<T> = EmptySequence\n\nprivate object EmptySequence : Sequence<Nothing>, DropTakeSequence<Nothing> {\n   override fun iterator():
 Iterator<Nothing> = EmptyIterator\n   override fun drop(n: Int) = EmptySequence\n   override fun take(n: Int) = EmptySequence\n}\n\n/**\n * Returns this sequence if it's not `null` and the empty sequence otherwise.\n * @sample samples.collections.Sequences.Usage.sequenceOrEmpty\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic inline fun <T> Sequence<T>?.orEmpty(): Sequence<T> = this ?: emptySequence()\n\n\n/**\n * Returns a sequence that iterates through the elements either of this sequence\n * or, if this sequence turns out to be empty, of the sequence returned by [defaultValue] function.\n *\n * @sample samples.collections.Sequences.Usage.sequenceIfEmpty\n */\n@SinceKotlin(\"1.3\")\npublic fun <T> Sequence<T>.ifEmpty(defaultValue: () -> Sequence<T>): Sequence<T> = sequence {\n   val iterator = this@ifEmpty.iterator()\n   if (iterator.hasNext()) {\n   yieldAll(iterator)\n   } else {\n   yieldAll(defaultValue())\n   }\n}\n\n/**\n * Returns a sequence
 of all elements from all sequences in this sequence.\n *\n * The operation is _intermediate_ and _stateless_.\n */\npublic fun <T> Sequence<Sequence<T>>.flatten(): Sequence<T> = flatten { it.iterator() }\n\n/**\n * Returns a sequence of all elements from all iterables in this sequence.\n *\n * The operation is _intermediate_ and _stateless_.\n */\n@kotlin.jvm.JvmName(\"flattenSequenceOfIterable\")\npublic fun <T> Sequence<Iterable<T>>.flatten(): Sequence<T> = flatten { it.iterator() }\n\nprivate fun <T, R> Sequence<T>.flatten(iterator: (T) -> Iterator<R>): Sequence<R> {\n   if (this is TransformingSequence<*, *>) {\n   return (this as TransformingSequence<*, T>).flatten(iterator)\n   }\n   return FlatteningSequence(this, { it }, iterator)\n}\n\n/**\n * Returns a pair of lists, where\n * *first* list is built from the first values of each pair from this sequence,\n * *second* list is built from the second values of each pair from this sequence.\n *\n * The operation is _terminal_.\n
 */\npublic fun <T, R> Sequence<Pair<T, R>>.unzip(): Pair<List<T>, List<R>> {\n   val listT = ArrayList<T>()\n   val listR = ArrayList<R>()\n   for (pair in this) {\n   listT.add(pair.first)\n   listR.add(pair.second)\n   }\n   return listT to listR\n}\n\n/**\n * A sequence that returns the values from the underlying [sequence] that either

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match or do not match\n * the specified [predicate].\n *\n * @param sendWhen If `true`, values for which the predicate returns `true` are returned. Otherwise,\n * values for which the predicate returns `false` are returned\n */\ninternal class FilteringSequence<T>(\n    private val sequence: Sequence<T>,\n    private val sendWhen: Boolean = true,\n    private val predicate: (T) -> Boolean\n) : Sequence<T> {\n\n    override fun iterator(): Iterator<T> = object : Iterator<T> {\n        val iterator = sequence.iterator()\n        var nextState: Int = -1 // -1 for unknown, 0 for done, 1 for continue\n        var nextItem: T? = null\n\n        private fun calcNext() {\n            while (iterator.hasNext()) {\n                val item = iterator.next()\n                if (predicate(item) == sendWhen) {\n                    nextItem = item\n                    nextState = 1\n                    return\n                }\n            }\n            nextState = 0\n        }\n\n        override fun next(): T {\n            if (nextState == -1)\n                calcNext()\n            if (nextState == 0)\n                throw NoSuchElementException()\n            val result = nextItem\n            nextItem = null\n            nextState = -1\n            @Suppress(\"UNCHECKED_CAST\")\n            return result as T\n        }\n\n        override fun hasNext(): Boolean {\n            if (nextState == -1)\n                calcNext()\n            return nextState == 1\n        }\n    }\n}\n\n/**\n * A sequence which returns the results of applying the given [transformer] function to the values\n * in the underlying [sequence].\n */\n\ninternal class TransformingSequence<T, R>\nconstructor(private val sequence: Sequence<T>, private val transformer: (T) -> R) : Sequence<R> {\n    override fun iterator(): Iterator<R> = object : Iterator<R> {\n        val iterator = sequence.iterator()\n        override fun next(): R {\n            return transformer(iterator.next())\n        }\n\n        override fun hasNext(): Boolean {\n            return iterator.hasNext()\n        }\n    }\n\n    internal fun <E> flatten(iterator: (R) -> Iterator<E>): Sequence<E> {\n        return FlatteningSequence<T, R, E>(sequence, transformer, iterator)\n    }\n}\n\n/**\n * A sequence which returns the results of applying the given [transformer] function to the values\n * in the underlying [sequence], where the transformer function takes the index of the value in the underlying\n * sequence along with the value itself.\n */\ninternal class TransformingIndexedSequence<T, R>\nconstructor(private val sequence: Sequence<T>, private
 val transformer: (Int, T) -> R) : Sequence<R> {\n    override fun iterator(): Iterator<R> = object : Iterator<R> {\n        val iterator = sequence.iterator()\n        var index = 0\n        override fun next(): R {\n            return transformer(checkIndexOverflow(index++), iterator.next())\n        }\n\n        override fun hasNext(): Boolean {\n            return iterator.hasNext()\n        }\n    }\n}\n\n/**\n * A sequence which combines values from the underlying [sequence] with their indices and returns them as\n * [IndexedValue] objects.\n */\ninternal class IndexingSequence<T>\nconstructor(private val sequence: Sequence<T>) : Sequence<IndexedValue<T>> {\n    override fun iterator(): Iterator<IndexedValue<T>> = object : Iterator<IndexedValue<T>> {\n        val iterator = sequence.iterator()\n        var index = 0\n        override fun next(): IndexedValue<T> {\n            return IndexedValue(checkIndexOverflow(index++), iterator.next())\n        }\n\n        override fun hasNext(): Boolean {\n            return iterator.hasNext()\n        }\n    }\n}\n\n/**\n * A sequence which takes the values from two parallel underlying sequences, passes them to the given\n * [transform] function and returns the values returned by that function. The sequence stops returning\n * values as soon as one of the underlying sequences stops returning values.\n */\ninternal class MergingSequence<T1, T2, V>\nconstructor(\n    private val sequence1: Sequence<T1>,\n    private val sequence2: Sequence<T2>,\n    private val transform: (T1, T2) -> V\n) : Sequence<V> {\n    override fun iterator(): Iterator<V> = object : Iterator<V> {\n        val iterator1 = sequence1.iterator()\n        val iterator2 = sequence2.iterator()\n        override fun next(): V {\n            return transform(iterator1.next(), iterator2.next())\n        }\n\n        override fun hasNext(): Boolean {\n            return iterator1.hasNext() && iterator2.hasNext()\n        }\n    }\n}\n\ninternal class FlatteningSequence<T,
 R, E>\nconstructor(\n    private val sequence: Sequence<T>,\n    private val transformer: (T) -> R,\n    private val iterator: (R) -> Iterator<E>\n) : Sequence<E> {\n    override fun iterator(): Iterator<E> = object : Iterator<E> {\n        val iterator = sequence.iterator()\n        var itemIterator: Iterator<E>? = null\n\n        override fun next(): E {\n            if (!ensureItemIterator())\n                throw NoSuchElementException()\n            return itemIterator!!.next()\n        }\n\n        override fun hasNext(): Boolean {\n            return ensureItemIterator()\n        }\n\n        private fun ensureItemIterator(): Boolean {\n            if (itemIterator?.hasNext() == false)\n                itemIterator = null\n\n            while (itemIterator == null) {\n                if (!iterator.hasNext()) {\n                    return false\n                } else {\n
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val element = iterator.next()\n val nextItemIterator = iterator(transformer(element))\n if (nextItemIterator.hasNext()) {\n itemIterator = nextItemIterator\n return true\n }\n }\n }\n return true\n }\n }\n}\n\n/**\n * A sequence that supports drop(n) and take(n) operations\n */\ninternal interface DropTakeSequence<T> : Sequence<T> {\n fun drop(n: Int): Sequence<T>\n fun take(n: Int): Sequence<T>\n}\n\n/**\n * A sequence that skips [startIndex] values from the underlying [sequence]\n * and stops returning values right before [endIndex], i.e. stops at `endIndex - 1`\n */\ninternal class SubSequence<T>(\n private val sequence: Sequence<T>,\n private val startIndex: Int,\n private val endIndex: Int\n) : Sequence<T>, DropTakeSequence<T> {\n\n init {\n require(startIndex >= 0) { \"startIndex should be non-negative, but is $startIndex\" }\n require(endIndex >= 0) { \"endIndex should be non-negative,
 but is $endIndex\" }\n require(endIndex >= startIndex) { \"endIndex should be not less than startIndex, but was $endIndex < $startIndex\" }\n }\n\n private val count: Int get() = endIndex - startIndex\n\n override fun drop(n: Int): Sequence<T> = if (n >= count) emptySequence() else SubSequence(sequence, startIndex + n, endIndex)\n override fun take(n: Int): Sequence<T> = if (n >= count) this else SubSequence(sequence, startIndex, startIndex + n)\n\n override fun iterator() = object : Iterator<T> {\n\n val iterator = sequence.iterator()\n var position = 0\n\n // Shouldn't be called from constructor to avoid premature iteration\n private fun drop() {\n while (position < startIndex && iterator.hasNext()) {\n iterator.next()\n position++\n }\n }\n\n override fun hasNext(): Boolean {\n drop()\n return (position < endIndex) && iterator.hasNext()\n
 }\n\n override fun next(): T {\n drop()\n if (position >= endIndex)\n throw NoSuchElementException()\n position++\n return iterator.next()\n }\n }\n}\n\n/**\n * A sequence that returns at most [count] values from the underlying [sequence], and stops returning values\n * as soon as that count is reached.\n */\ninternal class TakeSequence<T>(\n private val sequence: Sequence<T>,\n private val count: Int\n) : Sequence<T>, DropTakeSequence<T> {\n\n init {\n require(count >= 0) { \"count must be non-negative, but was $count.\" }\n }\n\n override fun drop(n: Int): Sequence<T> = if (n >= count) emptySequence() else SubSequence(sequence, n, count)\n override fun take(n: Int): Sequence<T> = if (n >= count) this else TakeSequence(sequence, n)\n\n override fun iterator(): Iterator<T> = object : Iterator<T> {\n var left = count\n val iterator = sequence.iterator()\n\n
 override fun next(): T {\n if (left == 0)\n throw NoSuchElementException()\n left--\n return iterator.next()\n }\n\n override fun hasNext(): Boolean {\n return left > 0 && iterator.hasNext()\n }\n }\n}\n\n/**\n * A sequence that returns values from the underlying [sequence] while the [predicate] function returns\n * `true`, and stops returning values once the function returns `false` for the next element.\n */\ninternal class TakeWhileSequence<T>\nconstructor(\n private val sequence: Sequence<T>,\n private val predicate: (T) -> Boolean\n) : Sequence<T> {\n override fun iterator(): Iterator<T> = object : Iterator<T> {\n val iterator = sequence.iterator()\n var nextState: Int = -1 // -1 for unknown, 0 for done, 1 for continue\n var nextItem: T? = null\n\n private fun calcNext() {\n if (iterator.hasNext()) {\n
 val item = iterator.next()\n if (predicate(item)) {\n nextState = 1\n nextItem = item\n return\n }\n }\n nextState = 0\n }\n\n override fun next(): T {\n if (nextState == -1)\n calcNext() // will change nextState\n if (nextState == 0)\n throw NoSuchElementException()\n @Suppress(\"UNCHECKED_CAST\")\n val result = nextItem as T\n\n // Clean next to avoid keeping reference on yielded instance\n nextItem = null\n nextState = -1\n return result\n }\n\n override fun hasNext(): Boolean {\n if (nextState == -1)\n calcNext() // will change nextState\n return nextState == 1\n }\n }\n}\n\n/**\n * A sequence that skips the specified number of values from the underlying [sequence] and returns\n * all values after that.\n */\ninternal
 class DropSequence<T>(\n private val sequence: Sequence<T>,\n private val count: Int\n) : Sequence<T>, DropTakeSequence<T> {\n init {\n require(count >= 0) { \"count must be non-negative, but was $count.\" }\n }\n\n override fun drop(n: Int): Sequence<T> = (count + n).let { n1 -> if (n1 < 0) DropSequence(this, n) else
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DropSequence(sequence, n1) }\n    override fun take(n: Int): Sequence<T> = (count + n).let { n1 -> if (n1 < 0)
TakeSequence(this, n) else SubSequence(sequence, count, n1) }\n\n    override fun iterator(): Iterator<T> = object :
Iterator<T> {\n        val iterator = sequence.iterator()\n        var left = count\n\n        // Shouldn't be called from
constructor to avoid premature iteration\n        private fun drop() {\n            while (left > 0 && iterator.hasNext())
{\n                iterator.next()\n                left--\n            }\n        }\n\n        override fun next(): T {\n            drop()\n
    return iterator.next()\n
        }\n\n        override fun hasNext(): Boolean {\n            drop()\n            return iterator.hasNext()\n        }\n
}\n}\n\n/**\n * A sequence that skips the values from the underlying [sequence] while the given [predicate] returns
`true` and returns\n * all values after that.\n */\ninternal class DropWhileSequence<T>\nconstructor(\n    private val
sequence: Sequence<T>,\n    private val predicate: (T) -> Boolean\n) : Sequence<T> {\n\n    override fun iterator():
Iterator<T> = object : Iterator<T> {\n        val iterator = sequence.iterator()\n        var dropState: Int = -1 // -1 for not
dropping, 1 for nextItem, 0 for normal iteration\n        var nextItem: T? = null\n\n        private fun drop() {\n
while (iterator.hasNext()) {\n                val item = iterator.next()\n                if (!predicate(item)) {\n
nextItem = item\n                    dropState = 1\n                    return\n                }\n            }\n            dropState
 = 0\n        }\n\n        override fun next(): T {\n            if (dropState == -1)\n                drop()\n\n            if (dropState
== 1) {\n                @Suppress(\"UNCHECKED_CAST\")\n                val result = nextItem as T\n
nextItem = null\n                dropState = 0\n                return result\n            }\n            return iterator.next()\n
}\n\n        override fun hasNext(): Boolean {\n            if (dropState == -1)\n                drop()\n            return
dropState == 1 || iterator.hasNext()\n        }\n    }\n}\n\ninternal class DistinctSequence<T, K>(private val source:
Sequence<T>, private val keySelector: (T) -> K) : Sequence<T> {\n    override fun iterator(): Iterator<T> =
DistinctIterator(source.iterator(), keySelector)\n}\n\nprivate class DistinctIterator<T, K>(private val source:
Iterator<T>, private val keySelector: (T) -> K) : AbstractIterator<T>() {\n    private val observed =
HashSet<K>()\n\n    override fun computeNext()
 {\n        while (source.hasNext()) {\n            val next = source.next()\n            val key = keySelector(next)\n\n
if (observed.add(key)) {\n                setNext(next)\n                return\n            }\n        }\n\n        done()\n
}\n}\n\n\nprivate class GeneratorSequence<T : Any>(private val getInitialValue: () -> T?, private val getNextValue:
(T) -> T?) : Sequence<T> {\n    override fun iterator(): Iterator<T> = object : Iterator<T> {\n        var nextItem: T?
= null\n        var nextState: Int = -2 // -2 for initial unknown, -1 for next unknown, 0 for done, 1 for continue\n\n
private fun calcNext() {\n            nextItem = if (nextState == -2) getInitialValue() else getNextValue(nextItem!!)\n
    nextState = if (nextItem == null) 0 else 1\n        }\n\n        override fun next(): T {\n            if (nextState < 0)\n
        calcNext()\n\n            if (nextState == 0)\n                throw NoSuchElementException()\n
          val result = nextItem as T\n            // Do not clean nextItem (to avoid keeping reference on yielded instance)
-- need to keep state for getNextValue\n            nextState = -1\n            return result\n        }\n\n        override fun
hasNext(): Boolean {\n            if (nextState < 0)\n                calcNext()\n            return nextState == 1\n        }\n
}\n}\n\n/**\n * Returns a wrapper sequence that provides values of this sequence, but ensures it can be iterated only
one time.\n *\n * The operation is _intermediate_ and _stateless_.\n *\n * [IllegalStateException] is thrown on
iterating the returned sequence from the second time.\n *\n */\npublic fun <T> Sequence<T>.constrainOnce():
Sequence<T> {\n    // as? does not work in js\n    //return this as? ConstrainedOnceSequence<T> ?:
ConstrainedOnceSequence(this)\n    return if (this is ConstrainedOnceSequence<T>) this else
ConstrainedOnceSequence(this)\n}\n\n\n/**\n * Returns a sequence which invokes the function
 to calculate the next value on each iteration until the function returns `null`.\n *\n * The returned sequence is
constrained to be iterated only once.\n *\n * @see constrainOnce\n * @see kotlin.sequences.sequence\n *\n *
@sample samples.collections.Sequences.Building.generateSequence\n */\npublic fun <T : Any>
generateSequence(nextFunction: () -> T?): Sequence<T> {\n    return GeneratorSequence(nextFunction, {
nextFunction() }).constrainOnce()\n}\n\n/**\n * Returns a sequence defined by the starting value [seed] and the
function [nextFunction],\n * which is invoked to calculate the next value based on the previous one on each
iteration.\n *\n * The sequence produces values until it encounters first `null` value.\n * If [seed] is `null`, an empty
sequence is produced.\n *\n * The sequence can be iterated multiple times, each time starting with [seed].\n *\n *
```

@see kotlin.sequences.sequence\n *\n * @sample samples.collections.Sequences.Building.generateSequenceWithSeed\n */\n@kotlin.internal.LowPriorityInOverloadResolution\npublic fun <T : Any> generateSequence(seed: T?, nextFunction: (T) -> T?): Sequence<T> =\n   if (seed == null)\n EmptySequence\n   else\n   GeneratorSequence({ seed }, nextFunction)\n\n/**\n * Returns a sequence defined by the function [seedFunction], which is invoked to produce the starting value,\n * and the [nextFunction], which is invoked to calculate the next value based on the previous one on each iteration.\n *\n * The sequence produces values until it encounters first `null` value.\n * If [seedFunction] returns `null`, an empty sequence is produced.\n *\n * The sequence can be iterated multiple times.\n *\n * @see kotlin.sequences.sequence\n *\n * @sample samples.collections.Sequences.Building.generateSequenceWithLazySeed\n */\npublic fun <T : Any> generateSequence(seedFunction: () -> T?, nextFunction: (T) -> T?): Sequence<T> =\n GeneratorSequence(seedFunction, nextFunction)\n\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n// Auto-generated file. DO NOT EDIT!\n\npackage kotlin\n\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic inline class UByteArray\n@Suppress(\"NON_PUBLIC_PRIMARY_CONSTRUCTOR_OF_INLINE_CLASS\")\n@PublishedApi\ninternal constructor(@PublishedApi internal val storage: ByteArray) : Collection<UByte> {\n\n   /** Creates a new array of the specified [size], with all elements initialized to zero. */\n   public constructor(size: Int) : this(ByteArray(size))\n\n   /**\n   * Returns the array element at the given [index]. This method can be called using the index operator.\n   *\n   * If the [index] is out of bounds of this array, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n   * where the behavior is unspecified.\n   */\n   public operator fun get(index: Int): UByte = storage[index].toUByte()\n\n   /**\n   * Sets the element at the given [index] to the given [value]. This method can be called using the index operator.\n   *\n   * If the [index] is out of bounds of this array, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n   * where the behavior is unspecified.\n   */\n   public operator fun set(index: Int, value: UByte) {\n   storage[index] = value.toByte()\n   }\n\n   /** Returns the number of elements in the array. */\n   public override val size: Int get() = storage.size\n\n   /** Creates an iterator over the elements of the array. */\n   public override operator fun iterator(): UByteIterator = Iterator(storage)\n\n   private class Iterator(private val array: ByteArray) : UByteIterator() {\n   private var index = 0\n   override fun hasNext() = index < array.size\n   override fun nextUByte() = if (index < array.size) array[index++].toUByte() else throw NoSuchElementException(index.toString())\n   }\n\n   override fun contains(element: UByte): Boolean {\n   // TODO: Eliminate this check after KT-30016 gets fixed.\n   // Currently JS BE does not generate special bridge method for this method.\n   if ((element as Any?) !is UByte) return false\n\n   return storage.contains(element.toByte())\n   }\n\n   override fun containsAll(elements: Collection<UByte>): Boolean {\n   return (elements as Collection<*>).all { it is UByte && storage.contains(it.toByte()) }\n   }\n\n   override fun isEmpty(): Boolean = this.storage.size == 0\n}\n\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray(size: Int, init: (Int) -> UByte): UByteArray {\n   return UByteArray(ByteArray(size) { index -> init(index).toByte() })\n}\n\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ubyteArrayOf(vararg elements: UByte): UByteArray = elements\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n// Auto-generated file. DO NOT EDIT!\n\npackage kotlin\n\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic inline class UIntArray\n@Suppress(\"NON_PUBLIC_PRIMARY_CONSTRUCTOR_OF_INLINE_CLASS\")\n@PublishedApi\ninternal constructor(@PublishedApi internal val storage: IntArray) : Collection<UInt> {\n\n   /** Creates a new array of the specified [size], with all elements initialized to zero. */\n   public constructor(size: Int) : this(IntArray(size))\n\n   /**\n   * Returns the array element at the given [index]. This method can be called using

the index operator.\n *\n * If the [index] is out of bounds of this array, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n */\n public operator fun get(index: Int): UInt = storage[index].toUInt()\n\n /**\n * Sets the element at the given [index] to the given [value]. This method
can be called using the index operator.\n *\n * If the [index] is out of bounds of this array, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n */\n public operator fun set(index: Int, value: UInt) {\n storage[index] = value.toInt()\n }\n\n /** Returns the number of elements in the array. */\n public override val size: Int get() = storage.size\n\n /** Creates an iterator over the elements of the array. */\n public override operator fun iterator(): UIntIterator = Iterator(storage)\n\n private class Iterator(private val array: IntArray) : UIntIterator() {\n private var index = 0\n override fun hasNext() = index < array.size\n override fun nextUInt() = if (index < array.size) array[index++].toUInt() else throw NoSuchElementException(index.toString())\n }\n\n override fun contains(element: UInt): Boolean {\n // TODO: Eliminate this check after KT-30016 gets fixed.\n
// Currently JS BE does not generate special bridge method for this method.\n if ((element as Any?) !is UInt) return false\n\n return storage.contains(element.toInt())\n }\n\n override fun containsAll(elements: Collection<UInt>): Boolean {\n return (elements as Collection<*>).all { it is UInt && storage.contains(it.toInt()) }\n }\n\n override fun isEmpty(): Boolean = this.storage.size == 0\n}\n\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray(size: Int, init: (Int) -> UInt): UIntArray {\n return UIntArray(IntArray(size) { index -> init(index).toInt()
})\n}\n\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun uintArrayOf(vararg elements: UInt): UIntArray = elements\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n//
Auto-generated file. DO NOT EDIT!\n\npackage kotlin\n\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic inline class ULongArray\n@Suppress(\"NON_PUBLIC_PRIMARY_CONSTRUCTOR_OF_INLINE_CLASS\")\n@PublishedApi\ninternal constructor(@PublishedApi internal val storage: LongArray) : Collection<ULong> {\n\n /** Creates a new array of the specified [size], with all elements initialized to zero. */\n public constructor(size: Int) : this(LongArray(size))\n\n /**\n * Returns the array element at the given [index]. This method can be called using the index operator.\n *\n * If the [index] is out of bounds of this array, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n */\n public operator fun get(index: Int): ULong = storage[index].toULong()\n\n /**\n * Sets the element at the given [index] to the given [value]. This method can be called using the index operator.\n *\n * If the [index] is out
of bounds of this array, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n */\n public operator fun set(index: Int, value: ULong) {\n storage[index] = value.toLong()\n }\n\n /** Returns the number of elements in the array. */\n public override val size: Int get() = storage.size\n\n /** Creates an iterator over the elements of the array. */\n public override operator fun iterator(): ULongIterator = Iterator(storage)\n\n private class Iterator(private val array: LongArray) : ULongIterator() {\n private var index = 0\n override fun hasNext() = index < array.size\n override fun nextULong() = if (index < array.size) array[index++].toULong() else throw NoSuchElementException(index.toString())\n }\n\n override fun contains(element: ULong): Boolean {\n // TODO: Eliminate this check after KT-30016 gets fixed.\n // Currently JS BE does not generate special bridge method
for this method.\n if ((element as Any?) !is ULong) return false\n\n return storage.contains(element.toLong())\n }\n\n override fun containsAll(elements: Collection<ULong>): Boolean {\n return (elements as Collection<*>).all { it is ULong && storage.contains(it.toLong()) }\n }\n\n override fun isEmpty(): Boolean = this.storage.size == 0\n}\n\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun

ULongArray(size: Int, init: (Int) -> ULong): ULongArray {\n   return ULongArray(LongArray(size) { index -> init(index).toLong()\n})\n}\n\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ulongArrayOf(vararg elements: ULong): ULongArray = elements\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n// Auto-generated file. DO NOT EDIT!\n\npackage kotlin\n\nimport kotlin.experimental.*\n\n@Suppress(\"NON_PUBLIC_PRIMARY_CONSTRUCTOR_OF_INLINE_CLASS\")\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic inline class ULong @PublishedApi internal constructor(@PublishedApi internal val data: Long) : Comparable<ULong> {\n\n   companion object {\n   /**\n   * A constant holding the minimum value an instance of ULong can have.\n   */\n   public const val MIN_VALUE: ULong = ULong(0)\n\n   /**\n   * A constant holding the maximum value an instance of ULong can have.\n   */\n   public const val MAX_VALUE: ULong = ULong(-1)\n\n   /**\n   * The number of bytes used to represent an instance of ULong in a binary form.\n   */\n   public const val SIZE_BYTES: Int = 8\n\n   /**\n   * The number of bits used to represent an instance of ULong in a binary form.\n   */\n   public const val SIZE_BITS: Int = 64\n   }\n\n   /**\n   * Compares this value with the specified value for order.\n   * Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n   * or a positive number if it's greater than other.\n   */\n   @kotlin.internal.InlineOnly\n   public inline operator fun compareTo(other: UByte): Int = this.compareTo(other.toULong())\n\n   /**\n   * Compares this value with the specified value for order.\n   * Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n   * or a positive number if it's greater than other.\n   */\n   @kotlin.internal.InlineOnly\n   public inline operator fun compareTo(other: UShort): Int = this.compareTo(other.toULong())\n\n   /**\n   * Compares this value with the specified value for order.\n   * Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n   * or a positive number if it's greater than other.\n   */\n   @kotlin.internal.InlineOnly\n   public inline operator fun compareTo(other: UInt): Int = this.compareTo(other.toULong())\n\n   /**\n   * Compares this value with the specified value for order.\n   * Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n   * or a positive number if it's greater than other.\n   */\n   @kotlin.internal.InlineOnly\n   @Suppress(\"OVERRIDE_BY_INLINE\")\n   public override inline operator fun compareTo(other: ULong): Int = ulongCompare(this.data, other.data)\n\n   /** Adds the other value to this value. */\n   @kotlin.internal.InlineOnly\n   public inline operator fun plus(other: UByte): ULong = this.plus(other.toULong())\n\n   /** Adds the other value to this value. */\n   @kotlin.internal.InlineOnly\n   public inline operator fun plus(other: UShort): ULong = this.plus(other.toULong())\n\n   /** Adds the other value to this value. */\n   @kotlin.internal.InlineOnly\n   public inline operator fun plus(other: UInt): ULong = this.plus(other.toULong())\n\n   /** Adds the other value to this value. */\n   @kotlin.internal.InlineOnly\n   public inline operator fun plus(other: ULong): ULong = ULong(this.data.plus(other.data))\n\n   /** Subtracts the other value from this value. */\n   @kotlin.internal.InlineOnly\n   public inline operator fun minus(other: UByte): ULong = this.minus(other.toULong())\n\n   /** Subtracts the other value from this value. */\n   @kotlin.internal.InlineOnly\n   public inline operator fun minus(other: UShort): ULong = this.minus(other.toULong())\n\n   /** Subtracts the other value from this value. */\n   @kotlin.internal.InlineOnly\n   public inline operator fun minus(other: UInt): ULong = this.minus(other.toULong())\n\n   /** Subtracts the other value from this value. */\n   @kotlin.internal.InlineOnly\n   public inline operator fun minus(other: ULong): ULong = ULong(this.data.minus(other.data))\n\n   /** Multiplies this value by the other value.\n   */\n   @kotlin.internal.InlineOnly\n   public inline operator fun times(other: UByte): ULong = this.times(other.toULong())\n\n   /** Multiplies this value by the other value. */\n   @kotlin.internal.InlineOnly\n   public inline operator fun times(other: UShort): ULong = this.times(other.toULong())\n\n   /** Multiplies this value by the other value. */\n   @kotlin.internal.InlineOnly\n   public inline operator fun times(other: UInt): ULong = this.times(other.toULong())\n\n   /** Multiplies this value by the other value. */\n   @kotlin.internal.InlineOnly\n

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public inline operator fun times(other: ULong): ULong = ULong(this.data.times(other.data))\n\n    /** Divides this value by the other value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun div(other: UByte): ULong = this.div(other.toULong())\n    /** Divides this value by the other value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun div(other: UShort): ULong = this.div(other.toULong())\n    /** Divides this value by the other value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun div(other: UInt): ULong = this.div(other.toULong())\n    /** Divides this value by the other value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun div(other: ULong): ULong = ulongDivide(this, other)\n\n    /** Calculates the remainder of dividing this value by the other value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun rem(other: UByte): ULong = this.rem(other.toULong())\n    /** Calculates the remainder of dividing this value by the other value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun rem(other: UShort): ULong = this.rem(other.toULong())\n    /** Calculates the remainder of dividing this value by the other value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun rem(other: UInt): ULong = this.rem(other.toULong())\n    /** Calculates the remainder of dividing this value by the other value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun rem(other: ULong): ULong = ulongRemainder(this, other)\n\n    /** Increments this value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun inc(): ULong = ULong(data.inc())\n    /** Decrements this value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun dec(): ULong = ULong(data.dec())\n\n    /** Creates a range from this value to the specified [other] value. */\n    @kotlin.internal.InlineOnly\n    public inline operator fun rangeTo(other: ULong): ULongRange = ULongRange(this, other)\n\n    /** Shifts this value left by the [bitCount] number of bits. */\n    @kotlin.internal.InlineOnly\n    public inline infix fun shl(bitCount: Int): ULong = ULong(data shl bitCount)\n    /** Shifts this value right by the [bitCount] number of bits, filling the leftmost bits with zeros. */\n    @kotlin.internal.InlineOnly\n    public inline infix fun shr(bitCount: Int): ULong = ULong(data ushr bitCount)\n    /** Performs a bitwise AND operation between the two values. */\n    @kotlin.internal.InlineOnly\n    public inline infix fun and(other: ULong): ULong = ULong(this.data and other.data)\n    /** Performs a bitwise OR operation between the two values. */\n    @kotlin.internal.InlineOnly\n    public inline infix fun or(other: ULong): ULong = ULong(this.data or other.data)\n    /** Performs a bitwise XOR operation between the two values. */\n    @kotlin.internal.InlineOnly\n    public inline infix fun xor(other: ULong): ULong = ULong(this.data xor other.data)\n    /** Inverts the bits in this value. */\n    @kotlin.internal.InlineOnly\n    public inline fun inv(): ULong = ULong(data.inv())\n\n    /**\n     * Converts this [ULong] value to [Byte].\n     *\n     * If this value is less than or equals to [Byte.MAX_VALUE], the resulting `Byte` value represents\n     * the same numerical value as this `ULong`.\n     *\n     * The resulting `Byte` value is represented by the least significant 8 bits of this `ULong` value.\n     * Note that the resulting `Byte` value may be negative.\n     */\n    @kotlin.internal.InlineOnly\n    public inline fun toByte(): Byte = data.toByte()\n    /**\n     * Converts this [ULong] value to [Short].\n     *\n     * If this value is less than or equals to [Short.MAX_VALUE], the resulting `Short` value represents\n     * the same numerical value as this `ULong`.\n     *\n     * The resulting `Short` value is represented by the least significant 16 bits of this `ULong` value.\n     * Note that the resulting `Short` value may be negative.\n     */\n    @kotlin.internal.InlineOnly\n    public inline fun toShort(): Short = data.toShort()\n    /**\n     * Converts this [ULong] value to [Int].\n     *\n     * If this value is less than or equals to [Int.MAX_VALUE], the resulting `Int` value represents\n     * the same numerical value as this `ULong`.\n     *\n     * The resulting `Int` value is represented by the least significant 32 bits of this `ULong` value.\n     * Note that the resulting `Int` value may be negative.\n     */\n    @kotlin.internal.InlineOnly\n    public inline fun toInt(): Int = data.toInt()\n    /**\n     * Converts this [ULong] value to [Long].\n     *\n     * If this value is less than or equals to [Long.MAX_VALUE], the resulting `Long` value represents\n     * the same numerical value as this `ULong`. Otherwise the result is negative.\n     *\n     * The resulting `Long` value has the same binary representation as this `ULong` value.\n     */\n    @kotlin.internal.InlineOnly\n    public inline fun toLong(): Long = data\n\n    /**\n     * Converts this [ULong] value to [UByte].\n     *\n     * If this value is less than or equals to [UByte.MAX_VALUE], the resulting `UByte` value represents\n     * the same numerical value as this `ULong`.\n     *\n     * The resulting `UByte` value is represented
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by the least significant 8 bits of this `ULong` value.\n */\n @kotlin.internal.InlineOnly\n public inline fun toUByte(): UByte = data.toUByte()\n /**\n * Converts this [ULong] value to [UShort].\n *\n * If this value is less than or equals to [UShort.MAX_VALUE], the resulting `UShort` value represents\n * the same numerical value as this `ULong`.\n *\n * The resulting `UShort` value is represented by the least significant 16 bits of this `ULong` value.\n */\n @kotlin.internal.InlineOnly\n public inline fun toUShort(): UShort = data.toUShort()\n /**\n * Converts this [ULong] value to [UInt].\n *\n * If this value is less than or equals to [UInt.MAX_VALUE], the resulting `UInt` value represents\n * the same numerical value as this `ULong`.\n *\n * The resulting `UInt` value is represented by the least significant 32 bits of this `ULong` value.\n */\n @kotlin.internal.InlineOnly\n public inline fun toUInt(): UInt = data.toUInt()\n /** Returns this value. */\n @kotlin.internal.InlineOnly\n public inline fun toULong(): ULong = this\n\n /**\n * Converts this [ULong] value to [Float].\n *\n * The resulting value is the closest `Float` to this `ULong` value.\n * In case when this `ULong` value is exactly between two `Float`s,\n * the one with zero at least significant bit of mantissa is selected.\n */\n @kotlin.internal.InlineOnly\n public inline fun toFloat(): Float = this.toDouble().toFloat()\n /**\n * Converts this [ULong] value to [Double].\n *\n * The resulting value is the closest `Double` to this `ULong` value.\n * In case when this `ULong` value is exactly between two `Double`s,\n * the one with zero at least significant bit of mantissa is selected.\n */\n @kotlin.internal.InlineOnly\n public inline fun toDouble(): Double = ulongToDouble(data)\n\n public override fun toString(): String = ulongToString(data)\n\n}\n\n/**\n * Converts this [Byte] value to [ULong].\n *\n * If this value is positive,
the resulting `ULong` value represents the same numerical value as this `Byte`.\n *\n * The least significant 8 bits of the resulting `ULong` value are the same as the bits of this `Byte` value,\n * whereas the most significant 56 bits are filled with the sign bit of this value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun Byte.toULong(): ULong = ULong(this.toLong())\n/**\n * Converts this [Short] value to [ULong].\n *\n * If this value is positive, the resulting `ULong` value represents the same numerical value as this `Short`.\n *\n * The least significant 16 bits of the resulting `ULong` value are the same as the bits of this `Short` value,\n * whereas the most significant 48 bits are filled with the sign bit of this value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun Short.toULong(): ULong = ULong(this.toLong())\n/**\n * Converts this [Int] value to [ULong].\n *\n *
If this value is positive, the resulting `ULong` value represents the same numerical value as this `Int`.\n *\n * The least significant 32 bits of the resulting `ULong` value are the same as the bits of this `Int` value,\n * whereas the most significant 32 bits are filled with the sign bit of this value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun Int.toULong(): ULong = ULong(this.toLong())\n/**\n * Converts this [Long] value to [ULong].\n *\n * If this value is positive, the resulting `ULong` value represents the same numerical value as this `Long`.\n *\n * The resulting `ULong` value has the same binary representation as this `Long` value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun Long.toULong(): ULong = ULong(this)\n\n/**\n * Converts this [Float] value to [ULong].\n *\n * The fractional part, if any, is rounded down.\n * Returns zero if this `Float` value is negative
or `NaN`, [ULong.MAX_VALUE] if it's bigger than `ULong.MAX_VALUE`.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun Float.toULong(): ULong = doubleToULong(this.toDouble())\n/**\n * Converts this [Double] value to [ULong].\n *\n * The fractional part, if any, is rounded down.\n * Returns zero if this `Double` value is negative or `NaN`, [ULong.MAX_VALUE] if it's bigger than `ULong.MAX_VALUE`.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun Double.toULong(): ULong = doubleToULong(this)\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n// Auto-generated file. DO NOT EDIT!\n\npackage

kotlin\n\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic inline class UShortArray\n@Suppress(\"NON_PUBLIC_PRIMARY_CONSTRUCTOR_OF_INLINE_CLASS\")\n@PublishedApi\ninternal
constructor(@PublishedApi internal val storage: ShortArray) : Collection<UShort> {\n\n /** Creates a new array of the specified [size], with all elements initialized to zero. */\n public constructor(size: Int) : this(ShortArray(size))\n\n /**\n * Returns the array element at the given [index]. This method can be called using the index operator.\n *\n * If the [index] is out of bounds of this array, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n */\n public operator fun get(index: Int): UShort = storage[index].toUShort()\n\n /**\n * Sets the element at the given [index] to the given [value]. This method can be called using the index operator.\n *\n * If the [index] is out of bounds of this array, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n */\n public operator fun set(index: Int, value: UShort) {\n storage[index]
= value.toShort()\n }\n\n /** Returns the number of elements in the array. */\n public override val size: Int get() = storage.size\n\n /** Creates an iterator over the elements of the array. */\n public override operator fun iterator(): UShortIterator = Iterator(storage)\n\n private class Iterator(private val array: ShortArray) : UShortIterator() {\n private var index = 0\n override fun hasNext() = index < array.size\n override fun nextUShort() = if (index < array.size) array[index++].toUShort() else throw NoSuchElementException(index.toString())\n }\n\n override fun contains(element: UShort): Boolean {\n // TODO: Eliminate this check after KT-30016 gets fixed.\n // Currently JS BE does not generate special bridge method for this method.\n if ((element as Any?) !is UShort) return false\n\n return storage.contains(element.toShort())\n }\n\n override fun containsAll(elements: Collection<UShort>): Boolean {\n return (elements as Collection<*>).all { it is UShort && storage.contains(it.toShort()) }\n }\n\n override fun isEmpty(): Boolean = this.storage.size == 0\n}\n\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray(size: Int, init: (Int) -> UShort): UShortArray {\n return UShortArray(ShortArray(size) { index -> init(index).toShort()
})\n}\n\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ushortArrayOf(vararg elements: UShort): UShortArray = elements\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin\n\n\npublic actual interface Comparator<T> {\n @JsName(\"compare\")\n actual fun compare(a: T, b: T): Int\n}\n\npublic actual inline fun <T> Comparator(crossinline comparison: (a: T, b: T) -> Int): Comparator<T> = object : Comparator<T>
{\n override fun compare(a: T, b: T): Int = comparison(a, b)\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.coroutines\n\nimport kotlin.coroutines.intrinsics.*\nimport kotlin.internal.InlineOnly\n\n/**\n * Interface representing a continuation after a suspension point that returns value of type `T`.\n */\n@SinceKotlin(\"1.3\")\npublic interface Continuation<in T> {\n /**\n * Context of the coroutine that corresponds to this continuation.\n */\n public val context: CoroutineContext\n\n /**\n * Resumes the execution of the corresponding coroutine passing successful or failed [result] as the\n * return value of the last suspension point.\n */\n public fun resumeWith(result: Result<T>)\n}\n\n/**\n * Classes and interfaces marked with this annotation are restricted when used as receivers for extension\n
* `suspend` functions. These `suspend` extensions can only invoke other member or extension `suspend` functions on this particular\n * receiver only and are restricted from calling arbitrary suspension functions.\n */\n@SinceKotlin(\"1.3\")\n@Target(AnnotationTarget.CLASS)\n@Retention(AnnotationRetention.BINARY)\npublic annotation class RestrictsSuspension\n\n/**\n * Resumes the execution of the corresponding coroutine passing [value] as the return value of the last suspension point.\n */\n@SinceKotlin(\"1.3\")\n@InlineOnly\npublic inline fun <T> Continuation<T>.resume(value: T): Unit =\n resumeWith(Result.success(value))\n\n/**\n * Resumes the execution of the corresponding coroutine so that the [exception] is re-thrown right after the\n * last suspension

point.\n */\n@SinceKotlin(\"1.3\")\n@InlineOnly\npublic inline fun <T>
Continuation<T>.resumeWithException(exception: Throwable): Unit =\n
resumeWith(Result.failure(exception))\n\n\n/**\n * Creates [Continuation] instance with
a given [context] and a given implementation of [resumeWith] method.\n
*/\n@SinceKotlin(\"1.3\")\n@InlineOnly\npublic inline fun <T> Continuation(\n context: CoroutineContext,\n
crossinline resumeWith: (Result<T>) -> Unit\n): Continuation<T> =\n object : Continuation<T> {\n override
val context: CoroutineContext\n get() = context\n\n override fun resumeWith(result: Result<T>) =\n
resumeWith(result)\n }\n\n/**\n * Creates a coroutine without receiver and with result type [T].\n * This function
creates a new, fresh instance of suspendable computation every time it is invoked.\n *\n * To start executing the
created coroutine, invoke `resume(Unit)` on the returned [Continuation] instance.\n * The [completion] continuation
is invoked when coroutine completes with result or exception.\n * Repeated invocation of any resume function on
the resulting continuation produces [IllegalStateException].\n
*/\n@SinceKotlin(\"1.3\")\n@Suppress(\"UNCHECKED_CAST\")\npublic
fun <T> (suspend () -> T).createCoroutine(\n completion: Continuation<T>\n): Continuation<Unit> =\n
SafeContinuation(createCoroutineUnintercepted(completion).intercepted(), COROUTINE_SUSPENDED)\n\n/**\n
* Creates a coroutine with receiver type [R] and result type [T].\n * This function creates a new, fresh instance of
suspendable computation every time it is invoked.\n *\n * To start executing the created coroutine, invoke
`resume(Unit)` on the returned [Continuation] instance.\n * The [completion] continuation is invoked when
coroutine completes with result or exception.\n * Repeated invocation of any resume function on the resulting
continuation produces [IllegalStateException].\n
*/\n@SinceKotlin(\"1.3\")\n@Suppress(\"UNCHECKED_CAST\")\npublic fun <R, T> (suspend R.() ->
T).createCoroutine(\n receiver: R,\n completion: Continuation<T>\n): Continuation<Unit> =\n
SafeContinuation(createCoroutineUnintercepted(receiver, completion).intercepted(),
COROUTINE_SUSPENDED)\n\n/**\n
* Starts coroutine without receiver and with result type [T].\n * This function creates and start a new, fresh instance
of suspendable computation every time it is invoked.\n * The [completion] continuation is invoked when coroutine
completes with result or exception.\n */\n@SinceKotlin(\"1.3\")\n@Suppress(\"UNCHECKED_CAST\")\npublic
fun <T> (suspend () -> T).startCoroutine(\n completion: Continuation<T>\n) {\n
createCoroutineUnintercepted(completion).intercepted().resume(Unit)\n}\n\n/**\n * Starts coroutine with receiver
type [R] and result type [T].\n * This function creates and start a new, fresh instance of suspendable computation
every time it is invoked.\n * The [completion] continuation is invoked when coroutine completes with result or
exception.\n */\n@SinceKotlin(\"1.3\")\n@Suppress(\"UNCHECKED_CAST\")\npublic fun <R, T> (suspend R.() -
> T).startCoroutine(\n receiver: R,\n completion: Continuation<T>\n) {\n
createCoroutineUnintercepted(receiver,
completion).intercepted().resume(Unit)\n}\n\n/**\n * Obtains the current continuation instance inside suspend
functions and suspends\n * currently running coroutine.\n *\n * In this function both [Continuation.resume] and
[Continuation.resumeWithException] can be used either synchronously in\n * the same stack-frame where
suspension function is run or asynchronously later in the same thread or\n * from a different thread of execution.
Repeated invocation of any resume function produces [IllegalStateException].\n
*/\n@SinceKotlin(\"1.3\")\n@InlineOnly\npublic suspend inline fun <T> suspendCoroutine(crossinline block:
(Continuation<T>) -> Unit): T =\n suspendCoroutineUninterceptedOrReturn { c: Continuation<T> ->\n val
safe = SafeContinuation(c.intercepted())\n block(safe)\n safe.getOrThrow()\n }\n\n/**\n * Returns
context of the current coroutine.\n
*/\n@SinceKotlin(\"1.3\")\n@Suppress(\"WRONG_MODIFIER_TARGET\")\n@InlineOnly\npublic suspend inline
val coroutineContext:
CoroutineContext\n get() {\n throw NotImplementedError(\"Implemented as intrinsic\")\n }\n","/*\n *
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*/\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"PreconditionsKt\")\n\npackage kotlin\n\nimport kotlin.contracts.contract\n\n/**\n * Throws an [IllegalArgumentException] if the [value] is false.\n *\n * @sample samples.misc.Preconditions.failRequireWithLazyMessage\n */\n@kotlin.internal.InlineOnly\npublic inline fun require(value: Boolean): Unit {\n contract {\n returns() implies value\n }\n require(value) { \"Failed requirement.\" }\n}\n\n/**\n * Throws an [IllegalArgumentException] with the result of calling [lazyMessage] if the [value] is false.\n *\n * @sample samples.misc.Preconditions.failRequireWithLazyMessage\n */\n@kotlin.internal.InlineOnly\npublic inline fun require(value: Boolean, lazyMessage: () -> Any): Unit {\n contract {\n returns() implies value\n }\n if (!value) {\n val message = lazyMessage()\n throw IllegalArgumentException(message.toString())\n }\n}\n\n/**\n * Throws an [IllegalArgumentException] if the [value] is null. Otherwise returns the not null value.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T : Any> requireNotNull(value: T?): T {\n contract {\n returns() implies (value != null)\n }\n return requireNotNull(value) { \"Required value was null.\" }\n}\n\n/**\n * Throws an [IllegalArgumentException] with the result of calling [lazyMessage] if the [value] is null. Otherwise\n * returns the not null value.\n *\n * @sample samples.misc.Preconditions.failRequireWithLazyMessage\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T : Any> requireNotNull(value: T?, lazyMessage: () -> Any): T {\n contract {\n returns() implies (value != null)\n }\n\n if (value == null) {\n val message = lazyMessage()\n throw IllegalArgumentException(message.toString())\n } else {\n return value\n }\n}\n\n/**\n * Throws an [IllegalStateException] if the [value] is false.\n *\n * @sample samples.misc.Preconditions.failCheckWithLazyMessage\n */\n@kotlin.internal.InlineOnly\npublic inline fun check(value: Boolean): Unit {\n contract {\n returns() implies value\n }\n check(value) { \"Check failed.\" }\n}\n\n/**\n * Throws an [IllegalStateException] with the result of calling [lazyMessage] if the [value] is false.\n *\n * @sample samples.misc.Preconditions.failCheckWithLazyMessage\n */\n@kotlin.internal.InlineOnly\npublic inline fun check(value: Boolean, lazyMessage: () -> Any): Unit {\n contract {\n returns() implies value\n }\n if (!value) {\n val message = lazyMessage()\n throw IllegalStateException(message.toString())\n }\n}\n\n/**\n * Throws an [IllegalStateException] if the [value] is null. Otherwise\n * returns the not null value.\n *\n * @sample samples.misc.Preconditions.failCheckWithLazyMessage\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T : Any> checkNotNull(value: T?): T {\n contract {\n returns() implies (value != null)\n }\n return checkNotNull(value) { \"Required value was null.\" }\n}\n\n/**\n * Throws an [IllegalStateException] with the result of calling [lazyMessage] if the [value] is null. Otherwise\n * returns the not null value.\n *\n * @sample samples.misc.Preconditions.failCheckWithLazyMessage\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T : Any> checkNotNull(value: T?, lazyMessage: () -> Any): T {\n contract {\n returns() implies (value != null)\n }\n\n if (value == null) {\n val message = lazyMessage()\n throw IllegalStateException(message.toString())\n } else {\n return value\n }\n}\n\n/**\n * Throws an [IllegalStateException] with the given [message].\n *\n *
@sample samples.misc.Preconditions.failWithError\n */\n@kotlin.internal.InlineOnly\npublic inline fun error(message: Any): Nothing = throw IllegalStateException(message.toString())\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\n//\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n//\n\nimport kotlin.js.*\nimport primitiveArrayConcat\nimport withType\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic actual fun <T> Array<out T>.elementAt(index: Int): T {\n return elementAtOrElse(index) { throw IndexOutOfBoundsException(\"index: $index, size: $size\") }\n}\n\n/**\n * Returns
an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic actual fun ByteArray.elementAt(index: Int): Byte {\n return elementAtOrElse(index) { throw

IndexOutOfBoundsException(\"index: $index, size: $size}\") }\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic actual fun ShortArray.elementAt(index: Int): Short {\n return elementAtOrElse(index) { throw IndexOutOfBoundsException(\"index: $index, size: $size}\") }\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic actual fun IntArray.elementAt(index: Int):
Int {\n return elementAtOrElse(index) { throw IndexOutOfBoundsException(\"index: $index, size: $size}\") }\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic actual fun LongArray.elementAt(index: Int): Long {\n return elementAtOrElse(index) { throw IndexOutOfBoundsException(\"index: $index, size: $size}\") }\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic actual fun FloatArray.elementAt(index: Int): Float {\n return elementAtOrElse(index) { throw IndexOutOfBoundsException(\"index: $index, size: $size}\") }\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds
of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic actual fun DoubleArray.elementAt(index: Int): Double {\n return elementAtOrElse(index) { throw IndexOutOfBoundsException(\"index: $index, size: $size}\") }\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic actual fun BooleanArray.elementAt(index: Int): Boolean {\n return elementAtOrElse(index) { throw IndexOutOfBoundsException(\"index: $index, size: $size}\") }\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic actual fun CharArray.elementAt(index: Int): Char {\n return elementAtOrElse(index) { throw IndexOutOfBoundsException(\"index: $index, size:
$size}\") }\n}\n\n/**\n * Returns a [List] that wraps the original array.\n */\npublic actual fun <T> Array<out T>.asList(): List<T> {\n return ArrayList<T>(this.unsafeCast<Array<Any?>>())\n}\n\n/**\n * Returns a [List] that wraps the original array.\n */\n@kotlin.internal.InlineOnly\npublic actual inline fun ByteArray.asList(): List<Byte> {\n return this.unsafeCast<Array<Byte>>().asList()\n}\n\n/**\n * Returns a [List] that wraps the original array.\n */\n@kotlin.internal.InlineOnly\npublic actual inline fun ShortArray.asList(): List<Short> {\n return this.unsafeCast<Array<Short>>().asList()\n}\n\n/**\n * Returns a [List] that wraps the original array.\n */\n@kotlin.internal.InlineOnly\npublic actual inline fun IntArray.asList(): List<Int> {\n return this.unsafeCast<Array<Int>>().asList()\n}\n\n/**\n * Returns a [List] that wraps the original array.\n */\n@kotlin.internal.InlineOnly\npublic actual inline fun LongArray.asList(): List<Long> {\n return this.unsafeCast<Array<Long>>().asList()\n}\n\n/**\n
* Returns a [List] that wraps the original array.\n */\n@kotlin.internal.InlineOnly\npublic actual inline fun FloatArray.asList(): List<Float> {\n return this.unsafeCast<Array<Float>>().asList()\n}\n\n/**\n * Returns a [List] that wraps the original array.\n */\n@kotlin.internal.InlineOnly\npublic actual inline fun DoubleArray.asList(): List<Double> {\n return this.unsafeCast<Array<Double>>().asList()\n}\n\n/**\n * Returns a [List] that wraps the original array.\n */\n@kotlin.internal.InlineOnly\npublic actual inline fun BooleanArray.asList(): List<Boolean> {\n return this.unsafeCast<Array<Boolean>>().asList()\n}\n\n/**\n * Returns a [List] that wraps the original array.\n */\npublic actual fun CharArray.asList(): List<Char> {\n return object : AbstractList<Char>(), RandomAccess {\n override val size: Int get() = this@asList.size\n override fun isEmpty(): Boolean = this@asList.isEmpty()\n override fun contains(element:
Char): Boolean = this@asList.contains(element)\n override fun get(index: Int): Char {\n AbstractList.checkElementIndex(index, size)\n return this@asList[index]\n }\n override fun

indexOf(element: Char): Int {\n if ((element as Any?) !is Char) return -1\n return this@asList.indexOf(element)\n }\n override fun lastIndexOf(element: Char): Int {\n if ((element as Any?) !is Char) return -1\n return this@asList.lastIndexOf(element)\n }\n }\n}\n\n/**\n * Returns `true` if the two specified arrays are *deeply* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * If two corresponding elements are nested arrays, they are also compared deeply.\n * If any of arrays contains itself on any nesting level the behavior is undefined.\n * \n * The elements of other types are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayDeepEquals\")\npublic actual infix fun <T> Array<out T>.contentDeepEquals(other: Array<out T>): Boolean {\n definedExternally\n}\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n * Nested arrays are treated as lists too.\n * \n * If any of arrays contains itself on any nesting level the behavior is undefined.\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayDeepHashCode\")\npublic actual fun <T> Array<out T>.contentDeepHashCode(): Int {\n definedExternally\n}\n\n/**\n * Returns a string representation of the contents of this array as if it is a [List].\n * Nested arrays are treated as lists too.\n * \n * If any of arrays contains itself on any nesting level that reference\n * is rendered as `\"[...]\"` to prevent recursion.\n * \n * @sample samples.collections.Arrays.ContentOperations.contentDeepToString\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayDeepToString\")\npublic actual fun <T> Array<out T>.contentDeepToString(): String {\n definedExternally\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayEquals\")\npublic actual infix fun <T> Array<out T>.contentEquals(other: Array<out T>): Boolean {\n definedExternally\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayEquals\")\npublic actual infix fun ByteArray.contentEquals(other: ByteArray): Boolean {\n definedExternally\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayEquals\")\npublic actual infix fun ShortArray.contentEquals(other: ShortArray): Boolean {\n definedExternally\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayEquals\")\npublic actual infix fun IntArray.contentEquals(other: IntArray): Boolean {\n definedExternally\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayEquals\")\npublic actual infix fun LongArray.contentEquals(other: LongArray): Boolean {\n definedExternally\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayEquals\")\npublic actual infix fun FloatArray.contentEquals(other:

FloatArray): Boolean {\n   definedExternally\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayEquals\")\npublic actual infix fun DoubleArray.contentEquals(other: DoubleArray): Boolean {\n   definedExternally\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared
 for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayEquals\")\npublic actual infix fun BooleanArray.contentEquals(other: BooleanArray): Boolean {\n   definedExternally\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayEquals\")\npublic actual infix fun CharArray.contentEquals(other: CharArray): Boolean {\n   definedExternally\n}\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayHashCode\")\npublic
 actual fun <T> Array<out T>.contentHashCode(): Int {\n   definedExternally\n}\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayHashCode\")\npublic actual fun ByteArray.contentHashCode(): Int {\n   definedExternally\n}\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayHashCode\")\npublic actual fun ShortArray.contentHashCode(): Int {\n   definedExternally\n}\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayHashCode\")\npublic actual fun IntArray.contentHashCode(): Int {\n   definedExternally\n}\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayHashCode\")\npublic actual fun LongArray.contentHashCode(): Int {\n   definedExternally\n}\n\n/**\n * Returns a hash
 code based on the contents of this array as if it is [List].\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayHashCode\")\npublic actual fun FloatArray.contentHashCode(): Int {\n   definedExternally\n}\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayHashCode\")\npublic actual fun DoubleArray.contentHashCode(): Int {\n   definedExternally\n}\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayHashCode\")\npublic actual fun BooleanArray.contentHashCode(): Int {\n   definedExternally\n}\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayHashCode\")\npublic actual fun CharArray.contentHashCode(): Int {\n   definedExternally\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
 */\n@SinceKotlin(\"1.1\")\n@library(\"arrayToString\")\npublic actual fun <T> Array<out T>.contentToString(): String {\n   definedExternally\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayToString\")\npublic actual fun ByteArray.contentToString(): String {\n   definedExternally\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayToString\")\npublic actual fun ShortArray.contentToString(): String {\n   definedExternally\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
 */\n@SinceKotlin(\"1.1\")\n@library(\"arrayToString\")\npublic actual fun IntArray.contentToString(): String {\n   definedExternally\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is

[List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayToString\")\npublic actual fun LongArray.contentToString(): String {\n definedExternally\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayToString\")\npublic actual fun FloatArray.contentToString(): String {\n definedExternally\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayToString\")\npublic actual fun DoubleArray.contentToString(): String {\n definedExternally\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayToString\")\npublic actual fun BooleanArray.contentToString(): String {\n definedExternally\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n */\n@SinceKotlin(\"1.1\")\n@library(\"arrayToString\")\npublic actual fun CharArray.contentToString(): String {\n definedExternally\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\n@Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\npublic actual inline fun <T> Array<out T>.copyInto(destination: Array<T>, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): Array<T> {\n arrayCopy(this, destination, destinationOffset, startIndex, endIndex)\n return destination\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\n@Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\npublic actual inline fun ByteArray.copyInto(destination: ByteArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): ByteArray {\n arrayCopy(this.unsafeCast<Array<Byte>>(), destination.unsafeCast<Array<Byte>>(), destinationOffset, startIndex, endIndex)\n return destination\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive)

of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\n@Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\npublic actual inline fun ShortArray.copyInto(destination: ShortArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): ShortArray {\n arrayCopy(this.unsafeCast<Array<Short>>(), destination.unsafeCast<Array<Short>>(), destinationOffset, startIndex, endIndex)\n return destination\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\n@Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\npublic actual inline fun IntArray.copyInto(destination: IntArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): IntArray {\n arrayCopy(this.unsafeCast<Array<Int>>(), destination.unsafeCast<Array<Int>>(), destinationOffset, startIndex, endIndex)\n return destination\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\n@Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\npublic actual inline fun LongArray.copyInto(destination: LongArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): LongArray {\n arrayCopy(this.unsafeCast<Array<Long>>(), destination.unsafeCast<Array<Long>>(), destinationOffset, startIndex, endIndex)\n return destination\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination]
and even specify the subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\n@Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\npublic actual inline fun FloatArray.copyInto(destination:

FloatArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): FloatArray {\n arrayCopy(this.unsafeCast<Array<Float>>(), destination.unsafeCast<Array<Float>>(), destinationOffset, startIndex, endIndex)\n return destination\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\n@Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\npublic actual inline fun DoubleArray.copyInto(destination: DoubleArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): DoubleArray {\n arrayCopy(this.unsafeCast<Array<Double>>(), destination.unsafeCast<Array<Double>>(), destinationOffset, startIndex, endIndex)\n return destination\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\n@Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\npublic actual inline fun BooleanArray.copyInto(destination: BooleanArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): BooleanArray {\n arrayCopy(this.unsafeCast<Array<Boolean>>(), destination.unsafeCast<Array<Boolean>>(), destinationOffset, startIndex, endIndex)\n return destination\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\n@Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\npublic actual inline fun CharArray.copyInto(destination: CharArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): CharArray {\n arrayCopy(this.unsafeCast<Array<Char>>(), destination.unsafeCast<Array<Char>>(), destinationOffset, startIndex, endIndex)\n return destination\n}\n\n/**\n * Returns new array which is a copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOf\n */\n@Suppress(\"ACTUAL_WITHOUT_EXPECT\",

\"NOTHING_TO_INLINE\")\npublic actual inline fun <T> Array<out T>.copyOf(): Array<T> {\n   return this.asDynamic().slice()\n}\n\n/**\n * Returns new array which is a copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOf\n */\n@Suppress(\"NOTHING_TO_INLINE\")\npublic actual inline fun ByteArray.copyOf(): ByteArray {\n   return this.asDynamic().slice()\n}\n\n/**\n * Returns new array which is a copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOf\n */\n@Suppress(\"NOTHING_TO_INLINE\")\npublic actual inline fun ShortArray.copyOf(): ShortArray {\n   return this.asDynamic().slice()\n}\n\n/**\n * Returns new array which is a copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOf\n */\n@Suppress(\"NOTHING_TO_INLINE\")\npublic actual inline fun IntArray.copyOf(): IntArray {\n   return this.asDynamic().slice()\n}\n\n/**\n * Returns new array which is a copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOf\n */\npublic actual fun LongArray.copyOf(): LongArray {\n   return withType(\"LongArray\", this.asDynamic().slice())\n}\n\n/**\n * Returns new array which is a copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOf\n */\n@Suppress(\"NOTHING_TO_INLINE\")\npublic actual inline fun FloatArray.copyOf(): FloatArray {\n   return this.asDynamic().slice()\n}\n\n/**\n * Returns new array which is a copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOf\n */\n@Suppress(\"NOTHING_TO_INLINE\")\npublic actual inline fun DoubleArray.copyOf(): DoubleArray {\n   return this.asDynamic().slice()\n}\n\n/**\n * Returns new array which is a copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOf\n */\npublic actual fun BooleanArray.copyOf(): BooleanArray {\n   return withType(\"BooleanArray\", this.asDynamic().slice())\n}\n\n/**\n * Returns new array which is a copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOf\n */\npublic actual fun CharArray.copyOf(): CharArray {\n   return withType(\"CharArray\", this.asDynamic().slice())\n}\n\n/**\n * Returns new array which is a copy of the original array, resized to the given [newSize].\n * The copy is either truncated or padded at the end with zero values if necessary.\n * \n * - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].\n * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with zero values.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n */\npublic actual fun ByteArray.copyOf(newSize: Int): ByteArray {\n   require(newSize >= 0) { \"Invalid new array size: $newSize.\" }\n   return fillFrom(this, ByteArray(newSize))\n}\n\n/**\n * Returns new array which is a copy of the original array, resized to the given [newSize].\n * The copy is either truncated or padded at the end with zero values if necessary.\n * \n * - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].\n * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with zero values.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n */\npublic actual fun ShortArray.copyOf(newSize: Int): ShortArray {\n   require(newSize >= 0) { \"Invalid new array size: $newSize.\" }\n   return fillFrom(this, ShortArray(newSize))\n}\n\n/**\n * Returns new array which is a copy of the original array, resized to the given [newSize].\n * The copy is either truncated or padded at the end with zero values if necessary.\n * \n * - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].\n * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with zero values.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n */\npublic actual fun IntArray.copyOf(newSize: Int): IntArray {\n   require(newSize >= 0) { \"Invalid new array size: $newSize.\" }\n   return fillFrom(this, IntArray(newSize))\n}\n\n/**\n * Returns new array which is a copy of the original array, resized to the given [newSize].\n * The copy is either truncated or padded at the end with zero values if necessary.\n * \n * - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].\n * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with zero values.\n * \n * @sample

samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n */\npublic actual fun LongArray.copyOf(newSize: Int): LongArray {\n   require(newSize >= 0) { \"Invalid new array size: $newSize.\" }\n   return withType(\"LongArray\", arrayCopyResize(this, newSize, 0L))\n}\n\n/**\n * Returns new array which is a copy of the original array, resized to the given [newSize].\n * The copy is either truncated or padded at the end with zero values if necessary.\n * \n * - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].\n * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with zero values.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n */\npublic actual fun FloatArray.copyOf(newSize: Int): FloatArray {\n   require(newSize >= 0) { \"Invalid new array size: $newSize.\" }\n   return fillFrom(this, FloatArray(newSize))\n}\n\n/**\n * Returns new array which is a copy of the original array, resized to the given [newSize].\n * The copy is either truncated or padded at the end with zero values if necessary.\n * \n * - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].\n * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with zero values.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n */\npublic actual fun DoubleArray.copyOf(newSize: Int): DoubleArray {\n   require(newSize >= 0) { \"Invalid new array size: $newSize.\" }\n   return fillFrom(this, DoubleArray(newSize))\n}\n\n/**\n * Returns new array which is a copy of the original array, resized to the given [newSize].\n * The copy is either truncated or padded at the end with `false` values if necessary.\n * \n * - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].\n * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with `false` values.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n */\npublic actual fun BooleanArray.copyOf(newSize: Int): BooleanArray {\n   require(newSize >= 0) { \"Invalid new array size: $newSize.\" }\n   return withType(\"BooleanArray\", arrayCopyResize(this, newSize, false))\n}\n\n/**\n * Returns new array which is a copy of the original array, resized to the given [newSize].\n * The copy is either truncated or padded at the end with null char (`\\u0000`) values if necessary.\n * \n * - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].\n * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with null char (`\\u0000`) values.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n */\npublic actual fun CharArray.copyOf(newSize: Int): CharArray {\n   require(newSize >= 0) { \"Invalid new array size: $newSize.\" }\n   return withType(\"CharArray\", fillFrom(this, CharArray(newSize)))\n}\n\n/**\n * Returns new array which is a copy of the original array, resized to the given [newSize].\n * The copy is either truncated or padded at the end with `null` values if necessary.\n * \n * - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].\n * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with `null` values.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.resizingCopyOf\n */\n@Suppress(\"ACTUAL_WITHOUT_EXPECT\")\npublic actual fun <T> Array<out T>.copyOf(newSize: Int): Array<T?> {\n   require(newSize >= 0) { \"Invalid new array size: $newSize.\" }\n   return arrayCopyResize(this, newSize, null)\n}\n\n/**\n * Returns a new array which is a copy of the specified range of the original array.\n * \n * @param fromIndex the start of the range (inclusive), must be in `0..array.size`\n * @param toIndex the end of the range (exclusive), must be in `fromIndex..array.size`\n */\n@Suppress(\"ACTUAL_WITHOUT_EXPECT\")\npublic actual fun <T> Array<out T>.copyOfRange(fromIndex: Int, toIndex: Int): Array<T> {\n   AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n   return this.asDynamic().slice(fromIndex, toIndex)\n}\n\n/**\n * Returns a new array which is a copy of the specified range of the original array.\n * \n * @param fromIndex the start of the range (inclusive), must be in `0..array.size`\n * @param toIndex the end of the range (exclusive), must be in `fromIndex..array.size`\n */\npublic actual fun ByteArray.copyOfRange(fromIndex: Int, toIndex: Int): ByteArray {\n

AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n   return this.asDynamic().slice(fromIndex, toIndex)\n}\n\n/**\n * Returns a new array which is a copy of the specified range of the original array.\n * \n * @param fromIndex the start of the range (inclusive), must be in `0..array.size`\n * @param toIndex the end of the range (exclusive), must be in `fromIndex..array.size`\n */\npublic actual fun ShortArray.copyOfRange(fromIndex: Int, toIndex: Int): ShortArray {\n   AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n   return this.asDynamic().slice(fromIndex,
toIndex)\n}\n\n/**\n * Returns a new array which is a copy of the specified range of the original array.\n * \n * @param fromIndex the start of the range (inclusive), must be in `0..array.size`\n * @param toIndex the end of the range (exclusive), must be in `fromIndex..array.size`\n */\npublic actual fun IntArray.copyOfRange(fromIndex: Int, toIndex: Int): IntArray {\n   AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n   return this.asDynamic().slice(fromIndex, toIndex)\n}\n\n/**\n * Returns a new array which is a copy of the specified range of the original array.\n * \n * @param fromIndex the start of the range (inclusive), must be in `0..array.size`\n * @param toIndex the end of the range (exclusive), must be in `fromIndex..array.size`\n */\npublic actual fun LongArray.copyOfRange(fromIndex: Int, toIndex: Int): LongArray {\n   AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n   return withType(\"LongArray\", this.asDynamic().slice(fromIndex, toIndex))\n}\n\n/**\n
* Returns a new array which is a copy of the specified range of the original array.\n * \n * @param fromIndex the start of the range (inclusive), must be in `0..array.size`\n * @param toIndex the end of the range (exclusive), must be in `fromIndex..array.size`\n */\npublic actual fun FloatArray.copyOfRange(fromIndex: Int, toIndex: Int): FloatArray {\n   AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n   return this.asDynamic().slice(fromIndex, toIndex)\n}\n\n/**\n * Returns a new array which is a copy of the specified range of the original array.\n * \n * @param fromIndex the start of the range (inclusive), must be in `0..array.size`\n * @param toIndex the end of the range (exclusive), must be in `fromIndex..array.size`\n */\npublic actual fun DoubleArray.copyOfRange(fromIndex: Int, toIndex: Int): DoubleArray {\n   AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n   return this.asDynamic().slice(fromIndex, toIndex)\n}\n\n/**\n * Returns a new array which is
a copy of the specified range of the original array.\n * \n * @param fromIndex the start of the range (inclusive), must be in `0..array.size`\n * @param toIndex the end of the range (exclusive), must be in `fromIndex..array.size`\n */\npublic actual fun BooleanArray.copyOfRange(fromIndex: Int, toIndex: Int): BooleanArray {\n   AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n   return withType(\"BooleanArray\", this.asDynamic().slice(fromIndex, toIndex))\n}\n\n/**\n * Returns a new array which is a copy of the specified range of the original array.\n * \n * @param fromIndex the start of the range (inclusive), must be in `0..array.size`\n * @param toIndex the end of the range (exclusive), must be in `fromIndex..array.size`\n */\npublic actual fun CharArray.copyOfRange(fromIndex: Int, toIndex: Int): CharArray {\n   AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n   return withType(\"CharArray\", this.asDynamic().slice(fromIndex, toIndex))\n}\n\n/**\n * Returns an array
containing all elements of the original array and then the given [element].\n */\n@Suppress(\"ACTUAL_WITHOUT_EXPECT\", \"NOTHING_TO_INLINE\")\npublic actual inline operator fun <T> Array<out T>.plus(element: T): Array<T> {\n   return this.asDynamic().concat(arrayOf(element))\n}\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n */\n@Suppress(\"NOTHING_TO_INLINE\")\npublic actual inline operator fun ByteArray.plus(element: Byte): ByteArray {\n   return plus(byteArrayOf(element))\n}\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n */\n@Suppress(\"NOTHING_TO_INLINE\")\npublic actual inline operator fun ShortArray.plus(element: Short): ShortArray {\n   return plus(shortArrayOf(element))\n}\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n */\n@Suppress(\"NOTHING_TO_INLINE\")\npublic actual inline operator fun IntArray.plus(element:
Int): IntArray {\n   return plus(intArrayOf(element))\n}\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n */\n@Suppress(\"NOTHING_TO_INLINE\")\npublic actual inline

operator fun LongArray.plus(element: Long): LongArray {\n   return plus(longArrayOf(element))\n}\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n */\n@Suppress(\"NOTHING_TO_INLINE\")\npublic actual inline operator fun FloatArray.plus(element: Float): FloatArray {\n   return plus(floatArrayOf(element))\n}\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n */\n@Suppress(\"NOTHING_TO_INLINE\")\npublic actual inline operator fun DoubleArray.plus(element: Double): DoubleArray {\n   return plus(doubleArrayOf(element))\n}\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n */\n@Suppress(\"NOTHING_TO_INLINE\")\npublic
 actual inline operator fun BooleanArray.plus(element: Boolean): BooleanArray {\n   return plus(booleanArrayOf(element))\n}\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n */\n@Suppress(\"NOTHING_TO_INLINE\")\npublic actual inline operator fun CharArray.plus(element: Char): CharArray {\n   return plus(charArrayOf(element))\n}\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n */\n@Suppress(\"ACTUAL_WITHOUT_EXPECT\")\npublic actual operator fun <T> Array<out T>.plus(elements: Collection<T>): Array<T> {\n   return arrayPlusCollection(this, elements)\n}\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n */\npublic actual operator fun ByteArray.plus(elements: Collection<Byte>): ByteArray {\n   return fillFromCollection(this.copyOf(size + elements.size),
 this.size, elements)\n}\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n */\npublic actual operator fun ShortArray.plus(elements: Collection<Short>): ShortArray {\n   return fillFromCollection(this.copyOf(size + elements.size), this.size, elements)\n}\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n */\npublic actual operator fun IntArray.plus(elements: Collection<Int>): IntArray {\n return fillFromCollection(this.copyOf(size + elements.size), this.size, elements)\n}\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n */\npublic actual operator fun LongArray.plus(elements: Collection<Long>): LongArray {\n   return arrayPlusCollection(this, elements)\n}\n\n/**\n * Returns an array containing all elements of the original array
 and then all elements of the given [elements] collection.\n */\npublic actual operator fun FloatArray.plus(elements: Collection<Float>): FloatArray {\n   return fillFromCollection(this.copyOf(size + elements.size), this.size, elements)\n}\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n */\npublic actual operator fun DoubleArray.plus(elements: Collection<Double>): DoubleArray {\n   return fillFromCollection(this.copyOf(size + elements.size), this.size, elements)\n}\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n */\npublic actual operator fun BooleanArray.plus(elements: Collection<Boolean>): BooleanArray {\n return arrayPlusCollection(this, elements)\n}\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n */\npublic actual operator
 fun CharArray.plus(elements: Collection<Char>): CharArray {\n   return fillFromCollection(this.copyOf(size + elements.size), this.size, elements)\n}\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n */\n@Suppress(\"ACTUAL_WITHOUT_EXPECT\", \"NOTHING_TO_INLINE\")\npublic actual inline operator fun <T> Array<out T>.plus(elements: Array<out T>): Array<T> {\n   return this.asDynamic().concat(elements)\n}\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n */\n@Suppress(\"NOTHING_TO_INLINE\")\npublic actual inline operator fun ByteArray.plus(elements: ByteArray): ByteArray {\n   return primitiveArrayConcat(this, elements)\n}\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n */\n@Suppress(\"NOTHING_TO_INLINE\")\npublic actual inline operator fun ShortArray.plus(elements:
 ShortArray): ShortArray {\n   return primitiveArrayConcat(this, elements)\n}\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n

*/\n@Suppress(\"NOTHING_TO_INLINE\")\npublic actual inline operator fun IntArray.plus(elements: IntArray): IntArray {\n   return primitiveArrayConcat(this, elements)\n}\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n */\n@Suppress(\"NOTHING_TO_INLINE\")\npublic actual inline operator fun LongArray.plus(elements: LongArray): LongArray {\n   return primitiveArrayConcat(this, elements)\n}\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n */\n@Suppress(\"NOTHING_TO_INLINE\")\npublic actual inline operator fun FloatArray.plus(elements: FloatArray): FloatArray {\n   return primitiveArrayConcat(this, elements)\n}\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n */\n@Suppress(\"NOTHING_TO_INLINE\")\npublic actual inline operator fun DoubleArray.plus(elements: DoubleArray): DoubleArray {\n   return primitiveArrayConcat(this, elements)\n}\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n */\n@Suppress(\"NOTHING_TO_INLINE\")\npublic actual inline operator fun BooleanArray.plus(elements: BooleanArray): BooleanArray {\n   return primitiveArrayConcat(this, elements)\n}\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n */\n@Suppress(\"NOTHING_TO_INLINE\")\npublic actual inline operator fun CharArray.plus(elements: CharArray): CharArray {\n   return primitiveArrayConcat(this, elements)\n}\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n */\n@Suppress(\"ACTUAL_WITHOUT_EXPECT\", \"NOTHING_TO_INLINE\")\npublic actual inline fun <T> Array<out T>.plusElement(element: T): Array<T> {\n   return this.asDynamic().concat(arrayOf(element))\n}\n\n/**\n * Sorts the array in-place.\n */\n@library(\"primitiveArraySort\")\npublic actual fun IntArray.sort(): Unit {\n   definedExternally\n}\n\n/**\n * Sorts the array in-place.\n */\npublic actual fun LongArray.sort(): Unit {\n   if (size > 1) sort { a: Long, b: Long -> a.compareTo(b) }\n}\n\n/**\n * Sorts the array in-place.\n */\n@library(\"primitiveArraySort\")\npublic actual fun ByteArray.sort(): Unit {\n   definedExternally\n}\n\n/**\n * Sorts the array in-place.\n */\n@library(\"primitiveArraySort\")\npublic actual fun ShortArray.sort(): Unit {\n   definedExternally\n}\n\n/**\n * Sorts the array in-place.\n */\n@library(\"primitiveArraySort\")\npublic actual fun DoubleArray.sort(): Unit {\n   definedExternally\n}\n\n/**\n * Sorts the array in-place.\n */\n@library(\"primitiveArraySort\")\npublic actual fun FloatArray.sort(): Unit {\n   definedExternally\n}\n\n/**\n * Sorts the array in-place.\n */\n@library(\"primitiveArraySort\")\npublic actual fun CharArray.sort(): Unit {\n   definedExternally\n}\n\n/**\n * Sorts the array in-place according to the natural order of its elements.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\npublic actual fun <T : Comparable<T>> Array<out T>.sort(): Unit {\n   if (size > 1) sortArray(this)\n}\n\n/**\n * Sorts the array in-place according to the order specified by the given [comparison] function.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\npublic fun <T> Array<out T>.sort(comparison: (a: T, b: T) -> Int): Unit {\n   if (size > 1) sortArrayWith(this, comparison)\n}\n\n/**\n * Sorts the array in-place according to the order specified by the given [comparison] function.\n */\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.sort(noinline comparison: (a: Byte, b: Byte) -> Int): Unit {\n   asDynamic().sort(comparison)\n}\n\n/**\n * Sorts the array in-place according to the order specified by the given [comparison] function.\n */\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.sort(noinline comparison: (a: Short, b: Short) -> Int): Unit {\n   asDynamic().sort(comparison)\n}\n\n/**\n * Sorts the array in-place according to the order specified by the given [comparison] function.\n */\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.sort(noinline comparison: (a: Int, b: Int) -> Int): Unit {\n   asDynamic().sort(comparison)\n}\n\n/**\n * Sorts the array in-place according to the order specified by the given [comparison] function.\n */\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.sort(noinline comparison: (a: Long, b: Long) -> Int): Unit {\n   asDynamic().sort(comparison)\n}\n\n/**\n

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 * Sorts the array in-place according to the order specified by the given [comparison] function.\n */\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.sort(noinline comparison: (a: Float, b: Float) -> Int): Unit {\n    asDynamic().sort(comparison)\n}\n\n/**\n * Sorts the array in-place according to the order specified by the given [comparison] function.\n */\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.sort(noinline comparison: (a: Double, b: Double) -> Int): Unit {\n    asDynamic().sort(comparison)\n}\n\n/**\n * Sorts the array in-place according to the order specified by the given [comparison] function.\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.sort(noinline comparison: (a: Char, b: Char) -> Int): Unit {\n    asDynamic().sort(comparison)\n}\n\n/**\n * Sorts the array in-place according to the order specified by the given [comparator].\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other
 after sorting.\n */\npublic actual fun <T> Array<out T>.sortWith(comparator: Comparator<in T>): Unit {\n    if (size > 1) sortArrayWith(this, comparator)\n}\n\n/**\n * Returns a *typed* object array containing all of the elements of this primitive array.\n */\npublic actual fun ByteArray.toTypedArray(): Array<Byte> {\n    return js(\"[]\").slice.call(this)\n}\n\n/**\n * Returns a *typed* object array containing all of the elements of this primitive array.\n */\npublic actual fun ShortArray.toTypedArray(): Array<Short> {\n    return js(\"[]\").slice.call(this)\n}\n\n/**\n * Returns a *typed* object array containing all of the elements of this primitive array.\n */\npublic actual fun IntArray.toTypedArray(): Array<Int> {\n    return js(\"[]\").slice.call(this)\n}\n\n/**\n * Returns a *typed* object array containing all of the elements of this primitive array.\n */\npublic actual fun LongArray.toTypedArray(): Array<Long> {\n    return js(\"[]\").slice.call(this)\n}\n\n/**\n * Returns a
 *typed* object array containing all of the elements of this primitive array.\n */\npublic actual fun FloatArray.toTypedArray(): Array<Float> {\n    return js(\"[]\").slice.call(this)\n}\n\n/**\n * Returns a *typed* object array containing all of the elements of this primitive array.\n */\npublic actual fun DoubleArray.toTypedArray(): Array<Double> {\n    return js(\"[]\").slice.call(this)\n}\n\n/**\n * Returns a *typed* object array containing all of the elements of this primitive array.\n */\npublic actual fun BooleanArray.toTypedArray(): Array<Boolean> {\n    return js(\"[]\").slice.call(this)\n}\n\n/**\n * Returns a *typed* object array containing all of the elements of this primitive array.\n */\npublic actual fun CharArray.toTypedArray(): Array<Char> {\n    return Array(size) { index -> this[index] }\n}\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n@file:kotlin.jvm.JvmName(\"ComparisonsKt\")\n@file:kotlin.jvm.JvmMultifileClass\n\npackage
 kotlin.comparisons\n\n/**\n * Compares two values using the specified functions [selectors] to calculate the result of the comparison.\n * The functions are called sequentially, receive the given values [a] and [b] and return [Comparable]\n * objects. As soon as the [Comparable] instances returned by a function for [a] and [b] values do not\n * compare as equal, the result of that comparison is returned.\n *\n * @sample samples.comparisons.Comparisons.compareValuesByWithSelectors\n */\npublic fun <T> compareValuesBy(a: T, b: T, vararg selectors: (T) -> Comparable<*>?): Int {\n    require(selectors.size > 0)\n    return compareValuesByImpl(a, b, selectors)\n}\n\nprivate fun <T> compareValuesByImpl(a: T, b: T, selectors: Array<out (T) -> Comparable<*>?>): Int {\n    for (fn in selectors) {\n        val v1 = fn(a)\n        val v2 = fn(b)\n        val diff = compareValues(v1, v2)\n        if (diff != 0) return
 diff\n    }\n    return 0\n}\n\n/**\n * Compares two values using the specified [selector] function to calculate the result of the comparison.\n * The function is applied to the given values [a] and [b] and return [Comparable] objects.\n * The result of comparison of these [Comparable] instances is returned.\n *\n * @sample samples.comparisons.Comparisons.compareValuesByWithSingleSelector\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> compareValuesBy(a: T, b: T, selector: (T) -> Comparable<*>?): Int {\n    return compareValues(selector(a), selector(b))\n}\n\n/**\n * Compares two values using the specified [selector] function to calculate the result of the comparison.\n * The function is applied to the given values [a] and [b] and return objects of type K which are then being\n * compared with the given [comparator].\n *\n * @sample samples.comparisons.Comparisons.compareValuesByWithComparator\n */\n@kotlin.internal.InlineOnly\npublic
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inline fun <T, K> compareValuesBy(a: T,
 b: T, comparator: Comparator<in K>, selector: (T) -> K): Int {\n   return comparator.compare(selector(a), selector(b))\n}\n\n//// Not so useful without type inference for receiver of expression\n//// compareValuesWith(v1, v2, compareBy { it.prop1 } thenByDescending { it.prop2 })\n///**\n// * Compares two values using the specified [comparator].\n// */\n//@Suppress(\"NOTHING_TO_INLINE\")\n//public inline fun <T> compareValuesWith(a: T, b: T, comparator: Comparator<T>): Int = comparator.compare(a, b)\n//\n\n\n/**\n * Compares two nullable [Comparable] values. Null is considered less than any value.\n *\n * @sample samples.comparisons.Comparisons.compareValues\n */\npublic fun <T : Comparable<*>> compareValues(a: T?, b: T?): Int {\n   if (a === b) return 0\n   if (a == null) return -1\n   if (b == null) return 1\n\n   @Suppress(\"UNCHECKED_CAST\")\n   return (a as Comparable<Any>).compareTo(b)\n}\n\n/**\n * Creates a comparator using the sequence of functions to calculate a result
 of comparison.\n * The functions are called sequentially, receive the given values `a` and `b` and return [Comparable]\n * objects. As soon as the [Comparable] instances returned by a function for `a` and `b` values do not\n * compare as equal, the result of that comparison is returned from the [Comparator].\n *\n * @sample samples.comparisons.Comparisons.compareByWithSelectors\n */\npublic fun <T> compareBy(vararg selectors: (T) -> Comparable<*>?): Comparator<T> {\n   require(selectors.size > 0)\n   return Comparator { a, b -> compareValuesByImpl(a, b, selectors) }\n}\n\n\n/**\n * Creates a comparator using the function to transform value to a [Comparable] instance for comparison.\n *\n * @sample samples.comparisons.Comparisons.compareByWithSingleSelector\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> compareBy(crossinline selector: (T) -> Comparable<*>?): Comparator<T> =\n   Comparator { a, b -> compareValuesBy(a, b, selector) }\n\n/**\n * Creates a comparator using the
 [selector] function to transform values being compared and then applying\n * the specified [comparator] to compare transformed values.\n *\n * @sample samples.comparisons.Comparisons.compareByWithComparator\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T, K> compareBy(comparator: Comparator<in K>, crossinline selector: (T) -> K): Comparator<T> =\n   Comparator { a, b -> compareValuesBy(a, b, comparator, selector) }\n\n/**\n * Creates a descending comparator using the function to transform value to a [Comparable] instance for comparison.\n *\n * @sample samples.comparisons.Comparisons.compareByDescendingWithSingleSelector\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> compareByDescending(crossinline selector: (T) -> Comparable<*>?): Comparator<T> =\n   Comparator { a, b -> compareValuesBy(b, a, selector) }\n\n/**\n * Creates a descending comparator using the [selector] function to transform values being compared and then applying\n * the specified [comparator] to compare
 transformed values.\n *\n * Note that an order of [comparator] is reversed by this wrapper.\n *\n * @sample samples.comparisons.Comparisons.compareByDescendingWithComparator\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T, K> compareByDescending(comparator: Comparator<in K>, crossinline selector: (T) -> K): Comparator<T> =\n   Comparator { a, b -> compareValuesBy(b, a, comparator, selector) }\n\n/**\n * Creates a comparator comparing values after the primary comparator defined them equal. It uses\n * the function to transform value to a [Comparable] instance for comparison.\n *\n * @sample samples.comparisons.Comparisons.thenBy\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Comparator<T>.thenBy(crossinline selector: (T) -> Comparable<*>?): Comparator<T> =\n   Comparator { a, b ->\n   val previousCompare = this@thenBy.compare(a, b)\n   if (previousCompare != 0) previousCompare else compareValuesBy(a, b, selector)\n   }\n\n/**\n * Creates a comparator
 comparing values after the primary comparator defined them equal. It uses\n * the [selector] function to transform values and then compares them with the given [comparator].\n *\n * @sample samples.comparisons.Comparisons.thenByWithComparator\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T, K> Comparator<T>.thenBy(comparator: Comparator<in K>, crossinline selector: (T) -> K): Comparator<T> =\n   Comparator { a, b ->\n   val previousCompare = this@thenBy.compare(a, b)\n   if (previousCompare != 0) previousCompare else compareValuesBy(a, b, comparator, selector)\n   }\n\n/**\n * Creates a descending comparator using the primary comparator and\n * the function to transform value to a [Comparable] instance for

comparison.\n *\n * @sample samples.comparisons.Comparisons.thenByDescending\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Comparator<T>.thenByDescending(crossinline selector: (T) -> Comparable<*>?): Comparator<T> =\n   Comparator { a, b ->\n   val previousCompare = this@thenByDescending.compare(a, b)\n   if (previousCompare != 0) previousCompare else compareValuesBy(b, a, selector)\n   }\n\n/**\n * Creates a descending comparator comparing values after the primary comparator defined them equal. It uses\n * the [selector] function to transform values and then compares them with the given [comparator].\n *\n * @sample samples.comparisons.Comparisons.thenByDescendingWithComparator\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T, K> Comparator<T>.thenByDescending(comparator: Comparator<in K>, crossinline selector: (T) -> K): Comparator<T> =\n   Comparator { a, b ->\n   val previousCompare = this@thenByDescending.compare(a, b)\n   if (previousCompare != 0) previousCompare else compareValuesBy(b, a, comparator, selector)\n   }\n\n\n/**\n * Creates a comparator using the primary comparator and function to calculate a result of comparison.\n *\n * @sample samples.comparisons.Comparisons.thenComparator\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Comparator<T>.thenComparator(crossinline comparison: (a: T, b: T) -> Int): Comparator<T> =\n   Comparator { a, b ->\n   val previousCompare = this@thenComparator.compare(a, b)\n   if (previousCompare != 0) previousCompare else comparison(a, b)\n   }\n\n/**\n * Combines this comparator and the given [comparator] such that the latter is applied only\n * when the former considered values equal.\n *\n * @sample samples.comparisons.Comparisons.then\n */\npublic infix fun <T> Comparator<T>.then(comparator: Comparator<in T>): Comparator<T> =\n   Comparator { a, b ->\n   val previousCompare = this@then.compare(a, b)\n   if (previousCompare != 0) previousCompare else comparator.compare(a, b)\n   }\n\n/**\n * Combines this comparator and the given [comparator] such that the latter is applied only\n * when the former considered values equal.\n *\n * @sample samples.comparisons.Comparisons.thenDescending\n */\npublic infix fun <T> Comparator<T>.thenDescending(comparator: Comparator<in T>): Comparator<T> =\n   Comparator<T> { a, b ->\n   val previousCompare = this@thenDescending.compare(a, b)\n   if (previousCompare != 0) previousCompare else comparator.compare(b, a)\n   }\n\n// Not so useful without type inference for receiver of expression\n/**\n * Extends the given [comparator] of non-nullable values to a comparator of nullable values\n * considering `null` value less than any other value.\n *\n * @sample samples.comparisons.Comparisons.nullsFirstLastWithComparator\n */\npublic fun <T : Any> nullsFirst(comparator: Comparator<in T>): Comparator<T?> =\n   Comparator { a, b ->\n   when {\n   a === b -> 0\n   a == null -> -1\n   b == null -> 1\n   else -> comparator.compare(a, b)\n   }\n   }\n\n/**\n * Provides a comparator of nullable [Comparable] values\n * considering `null` value less than any other value.\n *\n * @sample samples.comparisons.Comparisons.nullsFirstLastComparator\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T : Comparable<T>> nullsFirst(): Comparator<T?> = nullsFirst(naturalOrder())\n\n/**\n * Extends the given [comparator] of non-nullable values to a comparator of nullable values\n * considering `null` value greater than any other value.\n *\n * @sample samples.comparisons.Comparisons.nullsFirstLastWithComparator\n */\npublic fun <T : Any> nullsLast(comparator: Comparator<in T>): Comparator<T?> =\n   Comparator { a, b ->\n   when {\n   a === b -> 0\n   a == null -> 1\n   b == null -> -1\n   else -> comparator.compare(a, b)\n   }\n   }\n\n/**\n * Provides a comparator of nullable [Comparable] values\n * considering `null` value greater than any other value.\n *\n * @sample samples.comparisons.Comparisons.nullsFirstLastComparator\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T : Comparable<T>> nullsLast(): Comparator<T?> = nullsLast(naturalOrder())\n\n/**\n * Returns a comparator that compares [Comparable] objects in natural order.\n *\n * @sample samples.comparisons.Comparisons.naturalOrderComparator\n */\npublic fun <T : Comparable<T>> naturalOrder(): Comparator<T> = @Suppress(\"UNCHECKED_CAST\") (NaturalOrderComparator as Comparator<T>)\n\n/**\n * Returns a comparator that compares [Comparable] objects in reversed natural order.\n *\n * @sample samples.comparisons.Comparisons.nullsFirstLastWithComparator\n */\npublic fun <T : Comparable<T>>

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reverseOrder(): Comparator<T> = @Suppress(\"UNCHECKED_CAST\") (ReverseOrderComparator as Comparator<T>)\n\n/**\n *  Returns a comparator that imposes the reverse ordering of this comparator.\n *\n * @sample samples.comparisons.Comparisons.reversed\n */\npublic fun <T> Comparator<T>.reversed(): Comparator<T> = when (this) {\n    is ReversedComparator -> this.comparator\n    NaturalOrderComparator -> @Suppress(\"UNCHECKED_CAST\") (ReverseOrderComparator as Comparator<T>)\n    ReverseOrderComparator
 -> @Suppress(\"UNCHECKED_CAST\") (NaturalOrderComparator as Comparator<T>)\n    else -> ReversedComparator(this)\n}\n\n\nprivate class ReversedComparator<T>(public val comparator: Comparator<T>) : Comparator<T> {\n    override fun compare(a: T, b: T): Int = comparator.compare(b, a)\n    @Suppress(\"VIRTUAL_MEMBER_HIDDEN\")\n    fun reversed(): Comparator<T> = comparator\n}\n\nprivate object NaturalOrderComparator : Comparator<Comparable<Any>> {\n    override fun compare(a: Comparable<Any>, b: Comparable<Any>): Int = a.compareTo(b)\n    @Suppress(\"VIRTUAL_MEMBER_HIDDEN\")\n    fun reversed(): Comparator<Comparable<Any>> = ReverseOrderComparator\n}\n\nprivate object ReverseOrderComparator : Comparator<Comparable<Any>> {\n    override fun compare(a: Comparable<Any>, b: Comparable<Any>): Int = b.compareTo(a)\n    @Suppress(\"VIRTUAL_MEMBER_HIDDEN\")\n    fun reversed(): Comparator<Comparable<Any>> = NaturalOrderComparator\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of
 this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"StandardKt\")\npackage kotlin\n\nimport kotlin.contracts.*\n\n/**\n * An exception is thrown to indicate that a method body remains to be implemented.\n */\npublic class NotImplementedError(message: String = \"An operation is not implemented.\") : Error(message)\n\n/**\n * Always throws [NotImplementedError] stating that operation is not implemented.\n */\n\n@kotlin.internal.InlineOnly\npublic inline fun TODO(): Nothing = throw NotImplementedError()\n\n/**\n * Always throws [NotImplementedError] stating that operation is not implemented.\n *\n * @param reason a string explaining why the implementation is missing.\n */\n@kotlin.internal.InlineOnly\npublic inline fun TODO(reason: String): Nothing = throw NotImplementedError(\"An operation is not implemented: $reason\")\n\n\n\n/**\n * Calls the specified function
 [block] and returns its result.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <R> run(block: () -> R): R {\n    contract {\n        callsInPlace(block, InvocationKind.EXACTLY_ONCE)\n    }\n    return block()\n}\n\n/**\n * Calls the specified function [block] with `this` value as its receiver and returns its result.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T, R> T.run(block: T.() -> R): R {\n    contract {\n        callsInPlace(block, InvocationKind.EXACTLY_ONCE)\n    }\n    return block()\n}\n\n/**\n * Calls the specified function [block] with the given [receiver] as its receiver and returns its result.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T, R> with(receiver: T, block: T.() -> R): R {\n    contract {\n      callsInPlace(block, InvocationKind.EXACTLY_ONCE)\n    }\n    return receiver.block()\n}\n\n/**\n * Calls the specified function [block] with `this` value as its receiver and returns `this` value.\n */\n@kotlin.internal.InlineOnly\npublic
 inline fun <T> T.apply(block: T.() -> Unit): T {\n    contract {\n        callsInPlace(block, InvocationKind.EXACTLY_ONCE)\n    }\n    block()\n    return this\n}\n\n/**\n * Calls the specified function [block] with `this` value as its argument and returns `this` value.\n */\n@kotlin.internal.InlineOnly\n@SinceKotlin(\"1.1\")\npublic inline fun <T> T.also(block: (T) -> Unit): T {\n    contract {\n        callsInPlace(block, InvocationKind.EXACTLY_ONCE)\n    }\n    block(this)\n    return this\n}\n\n/**\n * Calls the specified function [block] with `this` value as its argument and returns its result.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T, R> T.let(block: (T) -> R): R {\n    contract {\n        callsInPlace(block, InvocationKind.EXACTLY_ONCE)\n    }\n    return block(this)\n}\n\n/**\n * Returns `this` value if it satisfies the given [predicate] or `null`, if it doesn't.\n */\n@kotlin.internal.InlineOnly\n@SinceKotlin(\"1.1\")\npublic inline fun <T> T.takeIf(predicate: (T)
```

-> Boolean): T? {\n contract {\n callsInPlace(predicate, InvocationKind.EXACTLY_ONCE)\n }\n return if (predicate(this)) this else null\n}\n\n/**\n * Returns `this` value if it _does not_ satisfy the given [predicate] or `null`, if it does.\n */\n@kotlin.internal.InlineOnly\n@SinceKotlin(\"1.1\")\npublic inline fun <T> T.takeUnless(predicate: (T) -> Boolean): T? {\n contract {\n callsInPlace(predicate, InvocationKind.EXACTLY_ONCE)\n }\n return if (!predicate(this)) this else null\n}\n\n/**\n * Executes the given function [action] specified number of [times].\n *\n * A zero-based index of current iteration is passed as a parameter to [action].\n *\n * @sample samples.misc.ControlFlow.repeat\n */\n@kotlin.internal.InlineOnly\npublic inline fun repeat(times: Int, action: (Int) -> Unit) {\n contract { callsInPlace(action) }\n\n for (index in 0 until times) {\n action(index)\n }\n}\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.comparisons\n\n//\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n//\n\nimport kotlin.js.*\n\n/**\n * Returns the greater of two values.\n * If values are equal, returns the first one.\n */\n@SinceKotlin(\"1.1\")\npublic actual fun <T : Comparable<T>> maxOf(a: T, b: T): T {\n return if (a >= b) a else b\n}\n\n/**\n * Returns the greater of two values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\n@Suppress(\"DEPRECATION_ERROR\")\npublic actual inline fun maxOf(a: Byte, b: Byte): Byte {\n return Math.max(a.toInt(), b.toInt()).unsafeCast<Byte>()\n}\n\n/**\n * Returns the greater of two values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\n@Suppress(\"DEPRECATION_ERROR\")\npublic actual inline fun maxOf(a: Short, b: Short): Short {\n return Math.max(a.toInt(), b.toInt()).unsafeCast<Short>()\n}\n\n/**\n * Returns the greater of two values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\n@Suppress(\"DEPRECATION_ERROR\")\npublic actual inline fun maxOf(a: Int, b: Int): Int {\n return Math.max(a, b)\n}\n\n/**\n * Returns the greater of two values.\n */\n@SinceKotlin(\"1.1\")\n@Suppress(\"DEPRECATION_ERROR\", \"NOTHING_TO_INLINE\")\npublic actual inline fun maxOf(a: Long, b: Long): Long {\n return if (a >= b) a else b\n}\n\n/**\n * Returns the greater of two values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\n@Suppress(\"DEPRECATION_ERROR\")\npublic actual inline fun maxOf(a: Float, b: Float): Float {\n return Math.max(a, b)\n}\n\n/**\n * Returns the greater of two values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\n@Suppress(\"DEPRECATION_ERROR\")\npublic actual inline fun maxOf(a: Double, b: Double): Double {\n return Math.max(a, b)\n}\n\n/**\n * Returns the greater of three values.\n */\n@SinceKotlin(\"1.1\")\npublic actual fun <T : Comparable<T>> maxOf(a: T, b: T, c: T): T {\n return maxOf(a, maxOf(b, c))\n}\n\n/**\n * Returns the greater of three values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\n@Suppress(\"DEPRECATION_ERROR\")\npublic actual inline fun maxOf(a: Byte, b: Byte, c: Byte): Byte {\n return Math.max(a.toInt(), b.toInt(), c.toInt()).unsafeCast<Byte>()\n}\n\n/**\n * Returns the greater of three values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\n@Suppress(\"DEPRECATION_ERROR\")\npublic actual inline fun maxOf(a: Short, b: Short, c: Short): Short {\n return Math.max(a.toInt(), b.toInt(), c.toInt()).unsafeCast<Short>()\n}\n\n/**\n * Returns the greater of three values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\n@Suppress(\"DEPRECATION_ERROR\")\npublic actual inline fun maxOf(a: Int, b: Int, c: Int): Int {\n return Math.max(a, b, c)\n}\n\n/**\n * Returns the greater of three values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic actual inline fun maxOf(a: Long, b: Long, c: Long): Long {\n return maxOf(a, maxOf(b, c))\n}\n\n/**\n * Returns the greater of three values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\n@Suppress(\"DEPRECATION_ERROR\")\npublic actual inline fun maxOf(a: Float, b: Float, c: Float): Float {\n return Math.max(a, b, c)\n}\n\n/**\n * Returns the greater of three values.\n

*/\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\n@Suppress(\"DEPRECATION_ERROR\")\npublic actual inline fun maxOf(a: Double, b: Double, c: Double): Double {\n   return Math.max(a, b, c)\n}\n\n/**\n * Returns the smaller of two values.\n * If values are equal, returns the first one.\n */\n@SinceKotlin(\"1.1\")\npublic actual fun <T : Comparable<T>> minOf(a: T, b: T): T {\n   return if (a <= b) a else b\n}\n\n/**\n * Returns the smaller of two values.\n
*/\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\n@Suppress(\"DEPRECATION_ERROR\")\npublic
 actual inline fun minOf(a: Byte, b: Byte): Byte {\n   return Math.min(a.toInt(),
b.toInt()).unsafeCast<Byte>()\n}\n\n/**\n * Returns the smaller of two values.\n
*/\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\n@Suppress(\"DEPRECATION_ERROR\")\npublic actual inline fun minOf(a: Short, b: Short): Short {\n   return Math.min(a.toInt(),
b.toInt()).unsafeCast<Short>()\n}\n\n/**\n * Returns the smaller of two values.\n
*/\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\n@Suppress(\"DEPRECATION_ERROR\")\npublic actual inline fun minOf(a: Int, b: Int): Int {\n   return Math.min(a, b)\n}\n\n/**\n * Returns the smaller of two values.\n
*/\n@SinceKotlin(\"1.1\")\n@Suppress(\"DEPRECATION_ERROR\", \"NOTHING_TO_INLINE\")\npublic actual inline fun minOf(a: Long, b: Long): Long {\n   return if (a <= b) a else b\n}\n\n/**\n * Returns the smaller of two values.\n
*/\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\n@Suppress(\"DEPRECATION_ERROR\")\npublic actual inline fun
 minOf(a: Float, b: Float): Float {\n   return Math.min(a, b)\n}\n\n/**\n * Returns the smaller of two values.\n
*/\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\n@Suppress(\"DEPRECATION_ERROR\")\npublic actual inline fun minOf(a: Double, b: Double): Double {\n   return Math.min(a, b)\n}\n\n/**\n * Returns the smaller of three values.\n */\n@SinceKotlin(\"1.1\")\npublic actual fun <T : Comparable<T>> minOf(a: T, b: T, c: T): T {\n return minOf(a, minOf(b, c))\n}\n\n/**\n * Returns the smaller of three values.\n
*/\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\n@Suppress(\"DEPRECATION_ERROR\")\npublic actual inline fun minOf(a: Byte, b: Byte, c: Byte): Byte {\n   return Math.min(a.toInt(), b.toInt(),
c.toInt()).unsafeCast<Byte>()\n}\n\n/**\n * Returns the smaller of three values.\n
*/\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\n@Suppress(\"DEPRECATION_ERROR\")\npublic actual inline fun minOf(a: Short, b: Short, c: Short): Short {\n   return Math.min(a.toInt(),
 b.toInt(), c.toInt()).unsafeCast<Short>()\n}\n\n/**\n * Returns the smaller of three values.\n
*/\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\n@Suppress(\"DEPRECATION_ERROR\")\npublic actual inline fun minOf(a: Int, b: Int, c: Int): Int {\n   return Math.min(a, b, c)\n}\n\n/**\n * Returns the smaller of three values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic actual inline fun minOf(a: Long, b: Long, c: Long): Long {\n   return minOf(a, minOf(b, c))\n}\n\n/**\n * Returns the smaller of three values.\n
*/\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\n@Suppress(\"DEPRECATION_ERROR\")\npublic actual inline fun minOf(a: Float, b: Float, c: Float): Float {\n   return Math.min(a, b, c)\n}\n\n/**\n * Returns the smaller of three values.\n
/\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\n@Suppress(\"DEPRECATION_ERROR\")\npublic actual inline fun minOf(a: Double, b: Double, c: Double): Double {\n   return Math.min(a, b, c)\n}\n\n","/\n * Copyright
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*/\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"CollectionsKt\")\n\npackage
kotlin.collections\n\n//\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See:
https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n//\n\nimport kotlin.random.*\n\n/**\n * Returns 1st
element from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <T>
List<T>.component1(): T {\n   return get(0)\n}\n\n/**\n * Returns 2nd *element* from the collection.\n
*/\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> List<T>.component2(): T {\n   return
get(1)\n}\n\n/**\n * Returns 3rd *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline
operator fun <T> List<T>.component3(): T {\n   return get(2)\n}\n\n/**\n * Returns 4th *element* from the

collection.\n
*/\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> List<T>.component4(): T {\n return get(3)\n}\n\n/**\n * Returns 5th *element* from the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> List<T>.component5(): T {\n return get(4)\n}\n\n/**\n * Returns `true` if [element] is found in the collection.\n */\npublic operator fun <@kotlin.internal.OnlyInputTypes T> Iterable<T>.contains(element: T): Boolean {\n if (this is Collection)\n return contains(element)\n return indexOf(element) >= 0\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this collection.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic fun <T> Iterable<T>.elementAt(index: Int): T {\n if (this is List)\n return get(index)\n return elementAtOrElse(index) { throw IndexOutOfBoundsException(\"Collection doesn't contain element at index $index.\")
}\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this list.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> List<T>.elementAt(index: Int): T {\n return get(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this collection.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrElse\n */\npublic fun <T> Iterable<T>.elementAtOrElse(index: Int, defaultValue: (Int) -> T): T {\n if (this is List)\n return this.getOrElse(index, defaultValue)\n if (index < 0)\n return defaultValue(index)\n val iterator = iterator()\n var count = 0\n while (iterator.hasNext()) {\n val element = iterator.next()\n if (index == count++)\n return element\n }\n return defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this list.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrElse\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> List<T>.elementAtOrElse(index: Int, defaultValue: (Int) -> T): T {\n return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this collection.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n */\npublic fun <T> Iterable<T>.elementAtOrNull(index: Int): T? {\n if (this is List)\n return this.getOrNull(index)\n if (index < 0)\n return null\n val iterator = iterator()\n var count = 0\n while (iterator.hasNext()) {\n val element = iterator.next()\n if (index == count++)\n return element\n }\n return null\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this list.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> List<T>.elementAtOrNull(index: Int): T? {\n return this.getOrNull(index)\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such element was found.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable<T>.find(predicate: (T) -> Boolean): T? {\n return firstOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable<T>.findLast(predicate: (T) -> Boolean): T? {\n return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n */\n@kotlin.internal.InlineOnly\npublic inline
fun <T> List<T>.findLast(predicate: (T) -> Boolean): T? {\n return lastOrNull(predicate)\n}\n\n/**\n * Returns first element.\n * @throws [NoSuchElementException] if the collection is empty.\n */\npublic fun <T> Iterable<T>.first(): T {\n when (this) {\n is List -> return this.first()\n else -> {\n val iterator = iterator()\n if (!iterator.hasNext())\n throw NoSuchElementException(\"Collection is empty.\")\n return iterator.next()\n }\n }\n}\n\n/**\n * Returns first element.\n * @throws [NoSuchElementException] if the list is empty.\n */\npublic fun <T> List<T>.first(): T {\n if (isEmpty())\n throw NoSuchElementException(\"List is empty.\")\n return this[0]\n}\n\n/**\n * Returns the first element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\npublic inline fun <T>

```
Iterable<T>.first(predicate: (T) -> Boolean): T {\n    for (element in this)
 if (predicate(element)) return element\n    throw NoSuchElementException(\"Collection contains no element
matching the predicate.\")\n}\n\n/**\n * Returns the first element, or `null` if the collection is empty.\n */\npublic
fun <T> Iterable<T>.firstOrNull(): T? {\n    when (this) {\n        is List -> {\n            if (isEmpty())\n
return null\n            else\n                return this[0]\n        }\n        else -> {\n            val iterator = iterator()\n
if (!iterator.hasNext())\n                return null\n            return iterator.next()\n        }\n    }\n}\n\n/**\n * Returns the
first element, or `null` if the list is empty.\n */\npublic fun <T> List<T>.firstOrNull(): T? {\n    return if (isEmpty())
null else this[0]\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if element was not
found.\n */\npublic inline fun <T> Iterable<T>.firstOrNull(predicate: (T) -> Boolean): T? {\n    for (element in this)
if (predicate(element))
 return element\n    return null\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the
[defaultValue] function if the [index] is out of bounds of this list.\n */\n@kotlin.internal.InlineOnly\npublic inline
fun <T> List<T>.getOrElse(index: Int, defaultValue: (Int) -> T): T {\n    return if (index >= 0 && index <=
lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the
[index] is out of bounds of this list.\n */\npublic fun <T> List<T>.getOrNull(index: Int): T? {\n    return if (index >=
0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns first index of [element], or -1 if the collection
does not contain element.\n */\npublic fun <@kotlin.internal.OnlyInputTypes T> Iterable<T>.indexOf(element: T):
Int {\n    if (this is List) return this.indexOf(element)\n    var index = 0\n    for (item in this) {\n
checkIndexOverflow(index)\n        if (element == item)\n
      return index\n        index++\n    }\n    return -1\n}\n\n/**\n * Returns first index of [element], or -1 if the list
does not contain element.\n */\n@Suppress(\"EXTENSION_SHADOWED_BY_MEMBER\") // false warning,
extension takes precedence in some cases\npublic fun <@kotlin.internal.OnlyInputTypes T>
List<T>.indexOf(element: T): Int {\n    return indexOf(element)\n}\n\n/**\n * Returns index of the first element
matching the given [predicate], or -1 if the collection does not contain such element.\n */\npublic inline fun <T>
Iterable<T>.indexOfFirst(predicate: (T) -> Boolean): Int {\n    var index = 0\n    for (item in this) {\n
checkIndexOverflow(index)\n        if (predicate(item))\n            return index\n        index++\n    }\n    return -
1\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the list does not contain
such element.\n */\npublic inline fun <T> List<T>.indexOfFirst(predicate: (T) -> Boolean): Int {\n    var index = 0\n
   for (item in this) {\n        if (predicate(item))\n            return index\n        index++\n    }\n    return -1\n}\n\n/**\n *
Returns index of the last element matching the given [predicate], or -1 if the collection does not contain such
element.\n */\npublic inline fun <T> Iterable<T>.indexOfLast(predicate: (T) -> Boolean): Int {\n    var lastIndex = -
1\n    var index = 0\n    for (item in this) {\n        checkIndexOverflow(index)\n        if (predicate(item))\n
lastIndex = index\n        index++\n    }\n    return lastIndex\n}\n\n/**\n * Returns index of the last element matching
the given [predicate], or -1 if the list does not contain such element.\n */\npublic inline fun <T>
List<T>.indexOfLast(predicate: (T) -> Boolean): Int {\n    val iterator = this.listIterator(size)\n    while
(iterator.hasPrevious()) {\n        if (predicate(iterator.previous())) {\n            return iterator.nextIndex()\n        }\n
}\n    return -1\n}\n\n/**\n * Returns the last element.\n
 * @throws [NoSuchElementException] if the collection is empty.\n */\npublic fun <T> Iterable<T>.last(): T {\n
when (this) {\n        is List -> return this.last()\n        else -> {\n            val iterator = iterator()\n            if
(!iterator.hasNext())\n                throw NoSuchElementException(\"Collection is empty.\")\n            var last =
iterator.next()\n            while (iterator.hasNext())\n                last = iterator.next()\n            return last\n        }\n
}\n}\n\n/**\n * Returns the last element.\n * @throws [NoSuchElementException] if the list is empty.\n */\npublic
fun <T> List<T>.last(): T {\n    if (isEmpty())\n        throw NoSuchElementException(\"List is empty.\")\n    return
this[lastIndex]\n}\n\n/**\n * Returns the last element matching the given [predicate].\n * @throws
[NoSuchElementException] if no such element is found.\n */\npublic inline fun <T> Iterable<T>.last(predicate: (T)
-> Boolean): T {\n    var last: T? = null\n    var
 found = false\n    for (element in this) {\n        if (predicate(element)) {\n            last = element\n            found =
true\n        }\n    }\n    if (!found) throw NoSuchElementException(\"Collection contains no element matching the
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predicate.\")\n    @Suppress(\"UNCHECKED_CAST\")\n    return last as T\n}\n\n/**\n * Returns the last element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\npublic inline fun <T> List<T>.last(predicate: (T) -> Boolean): T {\n    val iterator = this.listIterator(size)\n    while (iterator.hasPrevious()) {\n        val element = iterator.previous()\n        if (predicate(element)) return element\n    }\n    throw NoSuchElementException(\"List contains no element matching the predicate.\")\n}\n\n/**\n * Returns last index of [element], or -1 if the collection does not contain element.\n */\npublic fun <@kotlin.internal.OnlyInputTypes T> Iterable<T>.lastIndexOf(element: T): Int {\n    if (this is List) return this.lastIndexOf(element)\n    var lastIndex = -1\n    var index = 0\n    for (item in this) {\n        checkIndexOverflow(index)\n        if (element == item)\n            lastIndex = index\n        index++\n    }\n    return lastIndex\n}\n\n/**\n * Returns last index of [element], or -1 if the list does not contain element.\n */\n@Suppress(\"EXTENSION_SHADOWED_BY_MEMBER\") // false warning, extension takes precedence in some cases\npublic fun <@kotlin.internal.OnlyInputTypes T> List<T>.lastIndexOf(element: T): Int {\n    return lastIndexOf(element)\n}\n\n/**\n * Returns the last element, or `null` if the collection is empty.\n */\npublic fun <T> Iterable<T>.lastOrNull(): T? {\n    when (this) {\n        is List -> return if (isEmpty()) null else this[size - 1]\n        else -> {\n            val iterator = iterator()\n            if (!iterator.hasNext())\n                return null\n            var last = iterator.next()\n            while (iterator.hasNext())\n                last = iterator.next()\n            return last\n        }\n    }\n}\n\n/**\n * Returns the last element, or `null` if the list is empty.\n */\npublic fun <T> List<T>.lastOrNull(): T? {\n    return if (isEmpty()) null else this[size - 1]\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n */\npublic inline fun <T> Iterable<T>.lastOrNull(predicate: (T) -> Boolean): T? {\n    var last: T? = null\n    for (element in this) {\n        if (predicate(element)) {\n            last = element\n        }\n    }\n    return last\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n */\npublic inline fun <T> List<T>.lastOrNull(predicate: (T) -> Boolean): T? {\n    val iterator = this.listIterator(size)\n    while (iterator.hasPrevious()) {\n        val element = iterator.previous()\n        if (predicate(element)) return element\n    }\n    return null\n}\n\n/**\n * Returns a random element from this collection.\n * \n * @throws NoSuchElementException if this collection is empty.\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic inline fun <T> Collection<T>.random(): T {\n    return random(Random)\n}\n\n/**\n * Returns a random element from this collection using the specified source of randomness.\n * \n * @throws NoSuchElementException if this collection is empty.\n */\n@SinceKotlin(\"1.3\")\npublic fun <T> Collection<T>.random(random: Random): T {\n    if (isEmpty())\n        throw NoSuchElementException(\"Collection is empty.\")\n    return elementAt(random.nextInt(size))\n}\n\n/**\n * Returns the single element, or throws an exception if the collection is empty or has more than one element.\n */\npublic fun <T> Iterable<T>.single(): T {\n    when (this) {\n        is List -> return this.single()\n        else -> {\n            val iterator = iterator()\n            if (!iterator.hasNext())\n                throw NoSuchElementException(\"Collection is empty.\")\n            val single = iterator.next()\n            if (iterator.hasNext())\n                throw IllegalArgumentException(\"Collection has more than one element.\")\n            return single\n        }\n    }\n}\n\n/**\n * Returns the single element, or throws an exception if the list is empty or has more than one element.\n */\npublic fun <T> List<T>.single(): T {\n    return when (size) {\n        0 -> throw NoSuchElementException(\"List is empty.\")\n        1 -> this[0]\n        else -> throw IllegalArgumentException(\"List has more than one element.\")\n    }\n}\n\n/**\n * Returns the single element matching the given [predicate], or throws exception if there is no or more than one matching element.\n */\npublic inline fun <T> Iterable<T>.single(predicate: (T) -> Boolean): T {\n    var single: T? = null\n    var found = false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found) throw IllegalArgumentException(\"Collection contains more than one matching element.\")\n            single = element\n            found = true\n        }\n    }\n    if (!found) throw NoSuchElementException(\"Collection contains no element matching the predicate.\")\n    @Suppress(\"UNCHECKED_CAST\")\n    return single as T\n}\n\n/**\n * Returns single element, or `null` if the collection is empty or has more than one element.\n */\npublic fun <T> Iterable<T>.singleOrNull(): T? {\n    when
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(this) {\n is List -> return if (size == 1) this[0] else null\n else -> {\n val iterator = iterator()\n if (!iterator.hasNext())\n return null\n val single = iterator.next()\n if (iterator.hasNext())\n return null\n return single\n }\n }\n}\n\n/**\n * Returns single element, or `null` if the list is empty or has more than one element.\n */\npublic fun <T> List<T>.singleOrNull(): T? {\n return if (size == 1) this[0] else null\n}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element was not found or more than one element was found.\n */\npublic inline fun <T> Iterable<T>.singleOrNull(predicate: (T) -> Boolean): T? {\n var single: T? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if (found) return null\n single = element\n found = true\n }\n }\n if (!found) return null\n return single\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic fun <T> Iterable<T>.drop(n: Int): List<T> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n if (n == 0) return toList()\n val list: ArrayList<T>\n if (this is Collection<*>) {\n val resultSize = size - n\n if (resultSize <= 0)\n return emptyList()\n if (resultSize == 1)\n return listOf(last())\n list = ArrayList<T>(resultSize)\n if (this is List<T>) {\n if (this is RandomAccess) {\n for (index in n until size)\n list.add(this[index])\n } else {\n for (item in listIterator(n))\n list.add(item)\n }\n return list\n }\n }\n else {\n list = ArrayList<T>()\n }\n var count = 0\n for (item in this) {\n if (count++ >= n) list.add(item)\n }\n return list.optimizeReadOnlyList()\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic fun <T> List<T>.dropLast(n: Int): List<T> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return take((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic inline fun <T> List<T>.dropLastWhile(predicate: (T) -> Boolean): List<T> {\n if (!isEmpty()) {\n val iterator = listIterator(size)\n while (iterator.hasPrevious()) {\n if (!predicate(iterator.previous())) {\n return take(iterator.nextIndex() + 1)\n }\n }\n }\n return emptyList()\n}\n\n/**\n * Returns a list containing all elements except first elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic inline fun <T> Iterable<T>.dropWhile(predicate: (T) -> Boolean): List<T> {\n var yielding = false\n val list = ArrayList<T>()\n for (item in this)\n if (yielding)\n list.add(item)\n else if (!predicate(item)) {\n list.add(item)\n yielding = true\n }\n return list\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n */\npublic inline fun <T> Iterable<T>.filter(predicate: (T) -> Boolean): List<T> {\n return filterTo(ArrayList<T>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\npublic inline fun <T> Iterable<T>.filterIndexed(predicate: (index: Int, T) -> Boolean): List<T> {\n return filterIndexedTo(ArrayList<T>(), predicate)\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\npublic inline fun <T, C : MutableCollection<in T>> Iterable<T>.filterIndexedTo(destination: C, predicate: (index: Int, T) -> Boolean): C {\n forEachIndexed { index, element ->\n if (predicate(index, element)) destination.add(element)\n }\n return destination\n}\n\n/**\n * Returns a list containing all elements that are instances of specified type parameter R.\n */\npublic inline fun <reified R> Iterable<*>.filterIsInstance(): List<@kotlin.internal.NoInfer R> {\n return filterIsInstanceTo(ArrayList<R>())\n}\n\n/**\n * Appends all elements that are instances of specified type parameter R to the given [destination].\n */\npublic inline fun <reified R, C : MutableCollection<in R>> Iterable<*>.filterIsInstanceTo(destination: C): C {\n for (element in this) if

(element is R) destination.add(element)\n   return destination\n}\n\n/**\n * Returns a list containing all elements not matching the given [predicate].\n */\npublic inline fun <T> Iterable<T>.filterNot(predicate: (T) -> Boolean): List<T> {\n   return filterNotTo(ArrayList<T>(), predicate)\n}\n\n/**\n * Returns a list containing all elements that are not `null`.\n */\npublic fun <T : Any> Iterable<T?>.filterNotNull(): List<T> {\n   return filterNotNullTo(ArrayList<T>())\n}\n\n/**\n * Appends all elements that are not `null` to the given [destination].\n */\npublic fun <C : MutableCollection<in T>, T : Any> Iterable<T?>.filterNotNullTo(destination: C): C {\n   for (element in this) if (element != null) destination.add(element)\n   return destination\n}\n\n/**\n * Appends all elements not matching the given [predicate] to the given [destination].\n */\npublic inline fun <T, C : MutableCollection<in T>> Iterable<T>.filterNotTo(destination: C, predicate: (T) -> Boolean): C {\n   for (element in this) if (!predicate(element)) destination.add(element)\n   return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n */\npublic inline fun <T, C : MutableCollection<in T>> Iterable<T>.filterTo(destination: C, predicate: (T) -> Boolean): C {\n   for (element in this) if (predicate(element)) destination.add(element)\n   return destination\n}\n\n/**\n * Returns a list containing elements at indices in the specified [indices] range.\n */\npublic fun <T> List<T>.slice(indices: IntRange): List<T> {\n   if (indices.isEmpty()) return listOf()\n   return this.subList(indices.start, indices.endInclusive + 1).toList()\n}\n\n/**\n * Returns a list containing elements at specified [indices].\n */\npublic fun <T> List<T>.slice(indices: Iterable<Int>): List<T> {\n   val size = indices.collectionSizeOrDefault(10)\n   if (size == 0) return emptyList()\n   val list = ArrayList<T>(size)\n   for (index in indices) {\n   list.add(get(index))\n   }\n   return list\n}\n\n/**\n * Returns a list containing first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic fun <T> Iterable<T>.take(n: Int): List<T> {\n   require(n >= 0) { \"Requested element count $n is less than zero.\" }\n   if (n == 0) return emptyList()\n   if (this is Collection<T>) {\n   if (n >= size) return toList()\n   if (n == 1) return listOf(first())\n   }\n   var count = 0\n   val list = ArrayList<T>(n)\n   for (item in this) {\n   if (count++ == n)\n   break\n   list.add(item)\n   }\n   return list.optimizeReadOnlyList()\n}\n\n/**\n * Returns a list containing last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic fun <T> List<T>.takeLast(n: Int): List<T> {\n   require(n >= 0) { \"Requested element count $n is less than zero.\" }\n   if (n == 0) return emptyList()\n   val size = size\n   if (n >= size) return toList()\n   if (n == 1) return listOf(last())\n   val list = ArrayList<T>(n)\n   if (this is RandomAccess)\n   {\n   for (index in size - n until size)\n   list.add(this[index])\n   } else {\n   for (item in listIterator(size - n))\n   list.add(item)\n   }\n   return list\n}\n\n/**\n * Returns a list containing last elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic inline fun <T> List<T>.takeLastWhile(predicate: (T) -> Boolean): List<T> {\n   if (isEmpty())\n   return emptyList()\n   val iterator = listIterator(size)\n   while (iterator.hasPrevious()) {\n   if (!predicate(iterator.previous())) {\n   iterator.next()\n   val expectedSize = size - iterator.nextIndex()\n   if (expectedSize == 0) return emptyList()\n   return ArrayList<T>(expectedSize).apply {\n   while (iterator.hasNext())\n   add(iterator.next())\n   }\n   }\n   }\n   return toList()\n}\n\n/**\n * Returns a list containing first elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\npublic inline fun <T> Iterable<T>.takeWhile(predicate: (T) -> Boolean): List<T> {\n   val list = ArrayList<T>()\n   for (item in this) {\n   if (!predicate(item))\n   break\n   list.add(item)\n   }\n   return list\n}\n\n/**\n * Reverses elements in the list in-place.\n */\npublic expect fun <T> MutableList<T>.reverse(): Unit\n\n/**\n * Returns a list with elements in reversed order.\n */\npublic fun <T> Iterable<T>.reversed(): List<T> {\n   if (this is Collection && size <= 1) return toList()\n   val list = toMutableList()\n   list.reverse()\n   return list\n}\n\n/**\n * Sorts elements in the list in-place according to natural sort order of the value returned by specified [selector] function.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\npublic inline fun <T, R : Comparable<R>> MutableList<T>.sortBy(crossinline selector: (T) -> R?): Unit {\n   if (size > 1) sortWith(compareBy(selector))\n}\n\n/**\n * Sorts elements in the list in-place descending according to natural sort

order of the value returned by specified [selector] function.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\npublic inline fun <T, R : Comparable<R>> MutableList<T>.sortByDescending(crossinline selector: (T) -> R?): Unit {\n if (size > 1) sortWith(compareByDescending(selector))\n}\n\n/**\n * Sorts elements in the list in-place descending according to their natural sort order.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\npublic fun <T : Comparable<T>> MutableList<T>.sortDescending(): Unit {\n sortWith(reverseOrder())\n}\n\n/**\n * Returns a list of all elements sorted according to their natural sort order.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\npublic fun <T : Comparable<T>> Iterable<T>.sorted(): List<T> {\n if (this is Collection) {\n if (size <= 1) return this.toList()\n @Suppress(\"UNCHECKED_CAST\")\n return (toTypedArray<Comparable<T>>() as Array<T>).apply { sort() }.asList()\n }\n return toMutableList().apply { sort() }\n}\n\n/**\n * Returns a list of all elements sorted according to natural sort order of the value returned by specified [selector] function.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\npublic inline fun <T, R : Comparable<R>> Iterable<T>.sortedBy(crossinline selector: (T) -> R?): List<T> {\n return sortedWith(compareBy(selector))\n}\n\n/**\n * Returns a list of all elements sorted descending according to natural sort order of the value returned by specified [selector] function.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\npublic inline fun <T, R : Comparable<R>> Iterable<T>.sortedByDescending(crossinline selector: (T) -> R?): List<T> {\n return sortedWith(compareByDescending(selector))\n}\n\n/**\n * Returns a list of all elements sorted descending according to their natural sort order.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\npublic fun <T : Comparable<T>> Iterable<T>.sortedDescending(): List<T> {\n return sortedWith(reverseOrder())\n}\n\n/**\n * Returns a list of all elements sorted according to the specified [comparator].\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\npublic fun <T> Iterable<T>.sortedWith(comparator: Comparator<in T>): List<T> {\n if (this is Collection) {\n if (size <= 1) return this.toList()\n @Suppress(\"UNCHECKED_CAST\")\n return (toTypedArray<Any?>() as Array<T>).apply { sortWith(comparator) }.asList()\n }\n return toMutableList().apply { sortWith(comparator) }\n}\n\n/**\n * Returns an array of Boolean containing all of the elements of this collection.\n */\npublic fun Collection<Boolean>.toBooleanArray(): BooleanArray {\n val result = BooleanArray(size)\n var index = 0\n for (element in this)\n result[index++] = element\n return result\n}\n\n/**\n * Returns an array of Byte containing all of the elements of this collection.\n */\npublic fun Collection<Byte>.toByteArray(): ByteArray {\n val result = ByteArray(size)\n var index = 0\n for (element in this)\n result[index++] = element\n return result\n}\n\n/**\n * Returns an array of Char containing all of the elements of this collection.\n */\npublic fun Collection<Char>.toCharArray(): CharArray {\n val result = CharArray(size)\n var index = 0\n for (element in this)\n result[index++] = element\n return result\n}\n\n/**\n * Returns an array of Double containing all of the elements of this collection.\n */\npublic fun Collection<Double>.toDoubleArray(): DoubleArray {\n val result = DoubleArray(size)\n var index = 0\n for (element in this)\n result[index++] = element\n return result\n}\n\n/**\n * Returns an array of Float containing all of the elements of this collection.\n */\npublic fun Collection<Float>.toFloatArray(): FloatArray {\n val result = FloatArray(size)\n var index = 0\n for (element in this)\n result[index++] = element\n return result\n}\n\n/**\n * Returns an array of Int containing all of the elements of this collection.\n */\npublic fun Collection<Int>.toIntArray(): IntArray {\n val result = IntArray(size)\n var index = 0\n for (element in this)\n result[index++] = element\n return result\n}\n\n/**\n * Returns an array of Long containing all of the elements of this collection.\n */\npublic fun Collection<Long>.toLongArray(): LongArray {\n val result = LongArray(size)\n var index = 0\n for (element in this)\n result[index++] = element\n return result\n}\n\n/**\n * Returns an array of Short containing all of the elements of this collection.\n */\npublic fun Collection<Short>.toShortArray(): ShortArray {\n val result = ShortArray(size)\n var index = 0\n for (element in this)\n result[index++] = element\n return result\n}\n\n/**\n * Returns a [Map] containing key-value pairs

provided by [transform] function\n * applied to elements of the given collection.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original collection.\n */\npublic inline fun <T, K, V> Iterable<T>.associate(transform: (T) -> Pair<K, V>): Map<K, V> {\n val capacity = mapCapacity(collectionSizeOrDefault(10)).coerceAtLeast(16)\n return associateTo(LinkedHashMap<K, V>(capacity), transform)\n}\n\n/**\n * Returns a [Map] containing the elements from the given collection indexed by the key\n * returned from [keySelector] function applied to each element.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original collection.\n */\npublic inline fun <T, K> Iterable<T>.associateBy(keySelector: (T) -> K): Map<K, T> {\n val capacity = mapCapacity(collectionSizeOrDefault(10)).coerceAtLeast(16)\n return associateByTo(LinkedHashMap<K, T>(capacity), keySelector)\n}\n\n/**\n * Returns a [Map] containing the values provided by [valueTransform] and indexed by [keySelector] functions applied to elements of the given collection.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original collection.\n */\npublic inline fun <T, K, V> Iterable<T>.associateBy(keySelector: (T) -> K, valueTransform: (T) -> V): Map<K, V> {\n val capacity = mapCapacity(collectionSizeOrDefault(10)).coerceAtLeast(16)\n return associateByTo(LinkedHashMap<K, V>(capacity), keySelector, valueTransform)\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector] function applied to each element of the given collection\n * and value is the element itself.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n */\npublic inline fun <T, K, M : MutableMap<in K, in T>> Iterable<T>.associateByTo(destination: M, keySelector: (T) -> K): M {\n for (element in this) {\n destination.put(keySelector(element), element)\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with\n key-value pairs,\n * where key is provided by the [keySelector] function and\n * and value is provided by the [valueTransform] function applied to elements of the given collection.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n */\npublic inline fun <T, K, V, M : MutableMap<in K, in V>> Iterable<T>.associateByTo(destination: M, keySelector: (T) -> K, valueTransform: (T) -> V): M {\n for (element in this) {\n destination.put(keySelector(element), valueTransform(element))\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs\n * provided by [transform] function applied to each element of the given collection.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n */\npublic inline fun <T, K, V, M : MutableMap<in K, in V>> Iterable<T>.associateTo(destination: M, transform: (T) -> Pair<K, V>): M {\n for (element in this) {\n destination += transform(element)\n }\n return destination\n}\n\n/**\n * Returns a [Map] where keys are elements from the given collection and values are\n * produced by the [valueSelector] function applied to each element.\n * \n * If any two elements are equal, the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original collection.\n * \n * @sample samples.collections.Collections.Transformations.associateWith\n */\n@SinceKotlin(\"1.3\")\npublic inline fun <K, V> Iterable<K>.associateWith(valueSelector: (K) -> V): Map<K, V> {\n val result = LinkedHashMap<K, V>(mapCapacity(collectionSizeOrDefault(10)).coerceAtLeast(16))\n return associateWithTo(result, valueSelector)\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs for each element of the given collection,\n * where key is the element itself and value is provided by the [valueSelector] function applied to that\n key.\n * \n * If any two elements are equal, the last one overwrites the former value in the map.\n */\n@SinceKotlin(\"1.3\")\npublic inline fun <K, V, M : MutableMap<in K, in V>> Iterable<K>.associateWithTo(destination: M, valueSelector: (K) -> V): M {\n for (element in this) {\n destination.put(element, valueSelector(element))\n }\n return destination\n}\n\n/**\n * Appends all elements to the given [destination] collection.\n */\npublic fun <T, C : MutableCollection<in T>> Iterable<T>.toCollection(destination: C): C {\n for (item in this) {\n destination.add(item)\n }\n return

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destination\n}\n\n/**\n * Returns a [HashSet] of all elements.\n */\npublic fun <T> Iterable<T>.toHashSet(): HashSet<T> {\n    return toCollection(HashSet<T>(mapCapacity(collectionSizeOrDefault(12))))\n}\n\n/**\n * Returns a [List] containing all elements.\n */\npublic fun <T> Iterable<T>.toList(): List<T> {\n    if (this is Collection) {\n        return when (size) {\n            0 -> emptyList()\n            1 -> listOf(if (this is List) get(0) else iterator().next())\n            else -> this.toMutableList()\n        }\n    }\n    return this.toMutableList().optimizeReadOnlyList()\n}\n\n/**\n * Returns a [MutableList] filled with all elements of this collection.\n */\npublic fun <T> Iterable<T>.toMutableList(): MutableList<T> {\n    if (this is Collection<T>)\n        return this.toMutableList()\n    return toCollection(ArrayList<T>())\n}\n\n/**\n * Returns a [MutableList] filled with all elements of this collection.\n */\npublic fun <T> Collection<T>.toMutableList(): MutableList<T> {\n    return ArrayList(this)\n}\n\n/**\n * Returns a [Set] of all elements.\n * \n * The returned set preserves the element iteration order of the original collection.\n */\npublic fun <T> Iterable<T>.toSet(): Set<T> {\n    if (this is Collection) {\n        return when (size) {\n            0 -> emptySet()\n            1 -> setOf(if (this is List) this[0] else iterator().next())\n            else -> toCollection(LinkedHashSet<T>(mapCapacity(size)))\n        }\n    }\n    return toCollection(LinkedHashSet<T>()).optimizeReadOnlySet()\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being invoked on each element of original collection.\n */\npublic inline fun <T, R> Iterable<T>.flatMap(transform: (T) -> Iterable<R>): List<R> {\n    return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being invoked on each element of original collection, to the given [destination].\n */\npublic inline fun <T, R, C : MutableCollection<in R>> Iterable<T>.flatMapTo(destination: C, transform: (T) -> Iterable<R>): C {\n    for (element in this) {\n        val list = transform(element)\n        destination.addAll(list)\n    }\n    return destination\n}\n\n/**\n * Groups elements of the original collection by the key returned by the given [keySelector] function\n * applied to each element and returns a map where each group key is associated with a list of corresponding elements.\n * \n * The returned map preserves the entry iteration order of the keys produced from the original collection.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\npublic inline fun <T, K> Iterable<T>.groupBy(keySelector: (T) -> K): Map<K, List<T>> {\n    return groupByTo(LinkedHashMap<K, MutableList<T>>(), keySelector)\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the original collection\n * by the key returned by the given [keySelector] function applied to the element\n * and returns a map where each group key is associated with a list of corresponding values.\n * \n * The returned map preserves the entry iteration order of the keys produced from the original collection.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <T, K, V> Iterable<T>.groupBy(keySelector:
 (T) -> K, valueTransform: (T) -> V): Map<K, List<V>> {\n    return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups elements of the original collection by the key returned by the given [keySelector] function\n * applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.\n * \n * @return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\npublic inline fun <T, K, M : MutableMap<in K, MutableList<T>>> Iterable<T>.groupByTo(destination: M, keySelector: (T) -> K): M {\n    for (element in this) {\n        val key = keySelector(element)\n        val list = destination.getOrPut(key) { ArrayList<T>() }\n        list.add(element)\n    }\n    return destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the original collection\n * by the key returned by
 the given [keySelector] function applied to the element\n * and puts to the [destination] map each group key associated with a list of corresponding values.\n * \n * @return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <T, K, V, M : MutableMap<in K, MutableList<V>>> Iterable<T>.groupByTo(destination: M, keySelector: (T) -> K, valueTransform: (T) -> V): M {\n    for (element in this) {\n        val key = keySelector(element)\n        val list = destination.getOrPut(key) { ArrayList<V>() }\n        list.add(valueTransform(element))\n    }\n    return destination\n}\n\n/**\n * Creates a [Grouping] source from a collection to be used later with one of group-and-fold
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operations\n * using the specified [keySelector] function to extract a key from each element.\n * \n * @sample samples.collections.Grouping.groupingByEachCount\n */\n@SinceKotlin(\"1.1\")\npublic inline fun <T, K> Iterable<T>.groupingBy(crossinline
keySelector: (T) -> K): Grouping<T, K> {\n return object : Grouping<T, K> {\n override fun sourceIterator(): Iterator<T> = this@groupingBy.iterator()\n override fun keyOf(element: T): K = keySelector(element)\n }\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element in the original collection.\n */\npublic inline fun <T, R> Iterable<T>.map(transform: (T) -> R): List<R> {\n return mapTo(ArrayList<R>(collectionSizeOrDefault(10)), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element and its index in the original collection.\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\npublic inline fun <T, R> Iterable<T>.mapIndexed(transform: (index: Int, T) -> R): List<R> {\n return mapIndexedTo(ArrayList<R>(collectionSizeOrDefault(10)),
transform)\n}\n\n/**\n * Returns a list containing only the non-null results of applying the given [transform] function\n * to each element and its index in the original collection.\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\npublic inline fun <T, R : Any> Iterable<T>.mapIndexedNotNull(transform: (index: Int, T) -> R?): List<R> {\n return mapIndexedNotNullTo(ArrayList<R>(), transform)\n}\n\n/**\n * Applies the given [transform] function to each element and its index in the original collection\n * and appends only the non-null results to the given [destination].\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\npublic inline fun <T, R : Any, C : MutableCollection<in R>> Iterable<T>.mapIndexedNotNullTo(destination: C, transform: (index:
Int, T) -> R?): C {\n forEachIndexed { index, element -> transform(index, element)?.let { destination.add(it) } }\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element and its index in the original collection\n * and appends the results to the given [destination].\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\npublic inline fun <T, R, C : MutableCollection<in R>> Iterable<T>.mapIndexedTo(destination: C, transform: (index: Int, T) -> R): C {\n var index = 0\n for (item in this)\n destination.add(transform(checkIndexOverflow(index++), item))\n return destination\n}\n\n/**\n * Returns a list containing only the non-null results of applying the given [transform] function\n * to each element in the original collection.\n */\npublic inline fun <T, R : Any> Iterable<T>.mapNotNull(transform: (T) -> R?): List<R> {\n return
mapNotNullTo(ArrayList<R>(), transform)\n}\n\n/**\n * Applies the given [transform] function to each element in the original collection\n * and appends only the non-null results to the given [destination].\n */\npublic inline fun <T, R : Any, C : MutableCollection<in R>> Iterable<T>.mapNotNullTo(destination: C, transform: (T) -> R?): C {\n forEach { element -> transform(element)?.let { destination.add(it) } }\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element of the original collection\n * and appends the results to the given [destination].\n */\npublic inline fun <T, R, C : MutableCollection<in R>> Iterable<T>.mapTo(destination: C, transform: (T) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return destination\n}\n\n/**\n * Returns a lazy [Iterable] of [IndexedValue] for each element of the original collection.\n */\npublic fun <T> Iterable<T>.withIndex(): Iterable<IndexedValue<T>> {\n return IndexingIterable
{ iterator() }\n}\n\n/**\n * Returns a list containing only distinct elements from the given collection.\n * \n * The elements in the resulting list are in the same order as they were in the source collection.\n */\npublic fun <T> Iterable<T>.distinct(): List<T> {\n return this.toMutableSet().toList()\n}\n\n/**\n * Returns a list containing only elements from the given collection\n * having distinct keys returned by the given [selector] function.\n * \n * The elements in the resulting list are in the same order as they were in the source collection.\n */\npublic inline fun <T, K> Iterable<T>.distinctBy(selector: (T) -> K): List<T> {\n val set = HashSet<K>()\n val list = ArrayList<T>()\n for (e in this) {\n val key = selector(e)\n if (set.add(key))\n list.add(e)\n }\n

return list\n}\n\n/**\n * Returns a set containing all elements that are contained by both this set and the specified collection.\n * \n * The returned set preserves the
element iteration order of the original collection.\n */\npublic infix fun <T> Iterable<T>.intersect(other: Iterable<T>): Set<T> {\n val set = this.toMutableSet()\n set.retainAll(other)\n return set\n}\n\n/**\n * Returns a set containing all elements that are contained by this collection and not contained by the specified collection.\n * \n * The returned set preserves the element iteration order of the original collection.\n */\npublic infix fun <T> Iterable<T>.subtract(other: Iterable<T>): Set<T> {\n val set = this.toMutableSet()\n set.removeAll(other)\n return set\n}\n\n/**\n * Returns a mutable set containing all distinct elements from the given collection.\n * \n * The returned set preserves the element iteration order of the original collection.\n */\npublic fun <T> Iterable<T>.toMutableSet(): MutableSet<T> {\n return when (this) {\n is Collection<T> -> LinkedHashSet(this)\n else -> toCollection(LinkedHashSet<T>())\n }\n}\n\n/**\n * Returns
a set containing all distinct elements from both collections.\n * \n * The returned set preserves the element iteration order of the original collection.\n * Those elements of the [other] collection that are unique are iterated in the end\n * in the order of the [other] collection.\n */\npublic infix fun <T> Iterable<T>.union(other: Iterable<T>): Set<T> {\n val set = this.toMutableSet()\n set.addAll(other)\n return set\n}\n\n/**\n * Returns `true` if all elements match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.all\n */\npublic inline fun <T> Iterable<T>.all(predicate: (T) -> Boolean): Boolean {\n if (this is Collection && isEmpty()) return true\n for (element in this) if (!predicate(element)) return false\n return true\n}\n\n/**\n * Returns `true` if collection has at least one element.\n * \n * @sample samples.collections.Collections.Aggregates.any\n */\npublic fun <T> Iterable<T>.any(): Boolean {\n if (this is Collection)
return !isEmpty()\n return iterator().hasNext()\n}\n\n/**\n * Returns `true` if at least one element matches the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.anyWithPredicate\n */\npublic inline fun <T> Iterable<T>.any(predicate: (T) -> Boolean): Boolean {\n if (this is Collection && isEmpty()) return false\n for (element in this) if (predicate(element)) return true\n return false\n}\n\n/**\n * Returns the number of elements in this collection.\n */\npublic fun <T> Iterable<T>.count(): Int {\n if (this is Collection) return size\n var count = 0\n for (element in this) checkCountOverflow(++count)\n return count\n}\n\n/**\n * Returns the number of elements in this collection.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Collection<T>.count(): Int {\n return size\n}\n\n/**\n * Returns the number of elements matching the given [predicate].\n */\npublic inline fun <T> Iterable<T>.count(predicate: (T) -> Boolean): Int
{\n if (this is Collection && isEmpty()) return 0\n var count = 0\n for (element in this) if (predicate(element)) checkCountOverflow(++count)\n return count\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element.\n */\npublic inline fun <T, R> Iterable<T>.fold(initial: R, operation: (acc: R, T) -> R): R {\n var accumulator = initial\n for (element in this) accumulator = operation(accumulator, element)\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original collection.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n */\npublic inline fun <T, R> Iterable<T>.foldIndexed(initial: R, operation: (index: Int,
acc: R, T) -> R): R {\n var index = 0\n var accumulator = initial\n for (element in this) accumulator = operation(checkIndexOverflow(index++), accumulator, element)\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left to each element and current accumulator value.\n */\npublic inline fun <T, R> List<T>.foldRight(initial: R, operation: (T, acc: R) -> R): R {\n var accumulator = initial\n if (!isEmpty()) {\n val iterator = listIterator(size)\n while (iterator.hasPrevious()) {\n accumulator = operation(iterator.previous(), accumulator)\n }\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left\n * to each element with its index in the original list and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator

value, and calculates the next accumulator value.\n */\npublic inline fun <T, R> List<T>.foldRightIndexed(initial: R, operation: (index: Int, T, acc: R) -> R): R {\n var accumulator = initial\n if (!isEmpty()) {\n val iterator = listIterator(size)\n while (iterator.hasPrevious()) {\n val index = iterator.previousIndex()\n accumulator = operation(index, iterator.previous(), accumulator)\n }\n }\n return accumulator\n}\n\n/**\n * Performs the given [action] on each element.\n */\n@kotlin.internal.HidesMembers\npublic inline fun <T> Iterable<T>.forEach(action: (T) -> Unit): Unit {\n for (element in this) action(element)\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index with the element.\n * @param [action] function that takes the index of an element and the element itself\n * and performs the desired action on the element.\n */\npublic inline fun <T> Iterable<T>.forEachIndexed(action: (index:
Int, T) -> Unit): Unit {\n var index = 0\n for (item in this) action(checkIndexOverflow(index++), item)\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n */\n@SinceKotlin(\"1.1\")\npublic fun Iterable<Double>.max(): Double? {\n val iterator = iterator()\n if (!iterator.hasNext()) return null\n var max = iterator.next()\n if (max.isNaN()) return max\n while (iterator.hasNext()) {\n val e = iterator.next()\n if (e.isNaN()) return e\n if (max < e) max = e\n }\n return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n */\n@SinceKotlin(\"1.1\")\npublic fun Iterable<Float>.max(): Float? {\n val iterator = iterator()\n if (!iterator.hasNext()) return null\n var max = iterator.next()\n if (max.isNaN()) return max\n while (iterator.hasNext()) {\n val e = iterator.next()\n
if (e.isNaN()) return e\n if (max < e) max = e\n }\n return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n */\npublic fun <T : Comparable<T>> Iterable<T>.max(): T? {\n val iterator = iterator()\n if (!iterator.hasNext()) return null\n var max = iterator.next()\n while (iterator.hasNext()) {\n val e = iterator.next()\n if (max < e) max = e\n }\n return max\n}\n\n/**\n * Returns the first element yielding the largest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.maxBy\n */\npublic inline fun <T, R : Comparable<R>> Iterable<T>.maxBy(selector: (T) -> R): T? {\n val iterator = iterator()\n if (!iterator.hasNext()) return null\n var maxElem = iterator.next()\n var maxValue = selector(maxElem)\n while (iterator.hasNext()) {\n val e = iterator.next()\n val v = selector(e)\n if (maxValue
< v) {\n maxElem = e\n maxValue = v\n }\n }\n return maxElem\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator] or `null` if there are no elements.\n */\npublic fun <T> Iterable<T>.maxWith(comparator: Comparator<in T>): T? {\n val iterator = iterator()\n if (!iterator.hasNext()) return null\n var max = iterator.next()\n while (iterator.hasNext()) {\n val e = iterator.next()\n if (comparator.compare(max, e) < 0) max = e\n }\n return max\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n */\n@SinceKotlin(\"1.1\")\npublic fun Iterable<Double>.min(): Double? {\n val iterator = iterator()\n if (!iterator.hasNext()) return null\n var min = iterator.next()\n if (min.isNaN()) return min\n while (iterator.hasNext()) {\n val e = iterator.next()\n if (e.isNaN())
return e\n if (min > e) min = e\n }\n return min\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n */\n@SinceKotlin(\"1.1\")\npublic fun Iterable<Float>.min(): Float? {\n val iterator = iterator()\n if (!iterator.hasNext()) return null\n var min = iterator.next()\n if (min.isNaN()) return min\n while (iterator.hasNext()) {\n val e = iterator.next()\n if (e.isNaN()) return e\n if (min > e) min = e\n }\n return min\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n */\npublic fun <T : Comparable<T>> Iterable<T>.min(): T? {\n val iterator = iterator()\n if (!iterator.hasNext()) return null\n var min = iterator.next()\n while (iterator.hasNext()) {\n val e = iterator.next()\n if (min > e) min = e\n }\n return min\n}\n\n/**\n * Returns the first element yielding the smallest value of the given
function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.minBy\n */\npublic inline fun <T, R : Comparable<R>> Iterable<T>.minBy(selector: (T) -> R): T? {\n val iterator = iterator()\n if (!iterator.hasNext()) return null\n var minElem = iterator.next()\n var minValue =

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selector(minElem)\n    while (iterator.hasNext()) {\n        val e = iterator.next()\n        val v = selector(e)\n        if (minValue > v) {\n            minElem = e\n            minValue = v\n        }\n    }\n    return minElem\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n */\npublic fun <T> Iterable<T>.minWith(comparator: Comparator<in T>): T? {\n    val iterator = iterator()\n    if (!iterator.hasNext()) return null\n    var min = iterator.next()\n    while (iterator.hasNext()) {\n        val e = iterator.next()\n        if (comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns `true` if the collection has no elements.\n * \n * @sample samples.collections.Collections.Aggregates.none\n */\npublic fun <T> Iterable<T>.none(): Boolean {\n    if (this is Collection) return isEmpty()\n    return !iterator().hasNext()\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.noneWithPredicate\n */\npublic inline fun <T> Iterable<T>.none(predicate: (T) -> Boolean): Boolean {\n    if (this is Collection && isEmpty()) return true\n    for (element in this) if (predicate(element)) return false\n    return true\n}\n\n/**\n * Performs the given [action] on each element and returns the collection itself afterwards.\n */\n@SinceKotlin(\"1.1\")\npublic inline fun <T, C : Iterable<T>> C.onEach(action: (T) -> Unit): C {\n    return apply { for (element in this) action(element) }\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right to current accumulator value and each element.\n */\npublic inline fun <S, T : S> Iterable<T>.reduce(operation: (acc: S, T) -> S): S {\n    val iterator = this.iterator()\n    if (!iterator.hasNext()) throw UnsupportedOperationException(\"Empty collection can't be reduced.\")\n    var accumulator: S = iterator.next()\n    while (iterator.hasNext()) {\n        accumulator = operation(accumulator, iterator.next())\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original collection.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself and calculates the next accumulator value.\n */\npublic inline fun <S, T : S> Iterable<T>.reduceIndexed(operation: (index: Int, acc: S, T) -> S): S {\n    val iterator = this.iterator()\n    if (!iterator.hasNext()) throw UnsupportedOperationException(\"Empty collection can't be reduced.\")\n    var index = 1\n    var accumulator: S = iterator.next()\n    while (iterator.hasNext()) {\n        accumulator = operation(checkIndexOverflow(index++), accumulator, iterator.next())\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left to each element and current accumulator value.\n */\npublic inline fun <S, T : S> List<T>.reduceRight(operation: (T, acc: S) -> S): S {\n    val iterator = listIterator(size)\n    if (!iterator.hasPrevious())\n        throw UnsupportedOperationException(\"Empty list can't be reduced.\")\n    var accumulator: S = iterator.previous()\n    while (iterator.hasPrevious()) {\n        accumulator = operation(iterator.previous(), accumulator)\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left\n * to each element with its index in the original list and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\npublic inline fun <S, T : S> List<T>.reduceRightIndexed(operation: (index: Int, T, acc: S) -> S): S {\n    val iterator = listIterator(size)\n    if (!iterator.hasPrevious())\n        throw UnsupportedOperationException(\"Empty list can't be reduced.\")\n    var accumulator: S = iterator.previous()\n    while (iterator.hasPrevious()) {\n        val index = iterator.previousIndex()\n        accumulator = operation(index, iterator.previous(), accumulator)\n    }\n    return accumulator\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the collection.\n */\npublic inline fun <T> Iterable<T>.sumBy(selector: (T) -> Int): Int {\n    var sum: Int = 0\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the collection.\n */\npublic inline fun <T> Iterable<T>.sumByDouble(selector: (T) -> Double): Double {\n    var sum: Double = 0.0\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns an original collection containing all the non-`null` elements, throwing an [IllegalArgumentException] if there are any `null` elements.\n */\npublic fun <T : Any> Iterable<T?>.requireNoNulls(): Iterable<T> {\n    for (element in this) {\n        if (element == null) {\n            throw
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IllegalArgumentException(\"null element found in $this.\")\n }\n }\n @Suppress(\"UNCHECKED_CAST\")\n return this as Iterable<T>\n}\n\n/**\n * Returns an original collection containing all the non-`null` elements, throwing an [IllegalArgumentException] if there are any `null` elements.\n */\npublic fun <T : Any> List<T?>.requireNoNulls():
List<T> {\n for (element in this) {\n if (element == null) {\n throw IllegalArgumentException(\"null element found in $this.\")\n }\n }\n @Suppress(\"UNCHECKED_CAST\")\n return this as List<T>\n}\n\n/**\n * Splits this collection into a list of lists each not exceeding the given [size].\n * \n * The last list in the resulting list may have less elements than the given [size].\n * \n * @param size the number of elements to take in each list, must be positive and can be greater than the number of elements in this collection.\n * \n * @sample samples.collections.Collections.Transformations.chunked\n */\n@SinceKotlin(\"1.2\")\npublic fun <T> Iterable<T>.chunked(size: Int): List<List<T>> {\n return windowed(size, size, partialWindows = true)\n}\n\n/**\n * Splits this collection into several lists each not exceeding the given [size]\n * and applies the given [transform] function to an each.\n * \n * @return list of results of the [transform]
applied to an each list.\n * \n * Note that the list passed to the [transform] function is ephemeral and is valid only inside that function.\n * You should not store it or allow it to escape in some way, unless you made a snapshot of it.\n * The last list may have less elements than the given [size].\n * \n * @param size the number of elements to take in each list, must be positive and can be greater than the number of elements in this collection.\n * \n * @sample samples.text.Strings.chunkedTransform\n */\n@SinceKotlin(\"1.2\")\npublic fun <T, R> Iterable<T>.chunked(size: Int, transform: (List<T>) -> R): List<R> {\n return windowed(size, size, partialWindows = true, transform = transform)\n}\n\n/**\n * Returns a list containing all elements of the original collection without the first occurrence of the given [element].\n */\npublic operator fun <T> Iterable<T>.minus(element: T): List<T> {\n val result = ArrayList<T>(collectionSizeOrDefault(10))\n var removed = false\n
return this.filterTo(result) { if (!removed && it == element) { removed = true; false } else true }\n}\n\n/**\n * Returns a list containing all elements of the original collection except the elements contained in the given [elements] array.\n * \n * The [elements] array may be converted to a [HashSet] to speed up the operation, thus the elements are required to have\n * a correct and stable implementation of `hashCode()` that doesn't change between successive invocations.\n */\npublic operator fun <T> Iterable<T>.minus(elements: Array<out T>): List<T> {\n if (elements.isEmpty()) return this.toList()\n val other = elements.toHashSet()\n return this.filterNot { it in other }\n}\n\n/**\n * Returns a list containing all elements of the original collection except the elements contained in the given [elements] collection.\n * \n * The [elements] collection may be converted to a [HashSet] to speed up the operation, thus the elements are required to have\n * a correct and stable
implementation of `hashCode()` that doesn't change between successive invocations.\n */\npublic operator fun <T> Iterable<T>.minus(elements: Iterable<T>): List<T> {\n val other = elements.convertToSetForSetOperationWith(this)\n if (other.isEmpty())\n return this.toList()\n return this.filterNot { it in other }\n}\n\n/**\n * Returns a list containing all elements of the original collection except the elements contained in the given [elements] sequence.\n * \n * The [elements] sequence may be converted to a [HashSet] to speed up the operation, thus the elements are required to have\n * a correct and stable implementation of `hashCode()` that doesn't change between successive invocations.\n */\npublic operator fun <T> Iterable<T>.minus(elements: Sequence<T>): List<T> {\n val other = elements.toHashSet()\n if (other.isEmpty())\n return this.toList()\n return this.filterNot { it in other }\n}\n\n/**\n * Returns a list containing all elements of the original
collection without the first occurrence of the given [element].\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable<T>.minusElement(element: T): List<T> {\n return minus(element)\n}\n\n/**\n * Splits the original collection into pair of lists,\n * where *first* list contains elements for which [predicate] yielded `true`,\n * while *second* list contains elements for which [predicate] yielded `false`.\n */\npublic inline fun <T> Iterable<T>.partition(predicate: (T) -> Boolean): Pair<List<T>, List<T>> {\n val first = ArrayList<T>()\n val second = ArrayList<T>()\n for (element in this) {\n if (predicate(element)) {\n first.add(element)\n

} else {\n second.add(element)\n }\n }\n return Pair(first, second)\n}\n\n/**\n * Returns a list containing all elements of the original collection and then the given [element].\n */\npublic operator fun <T> Iterable<T>.plus(element: T): List<T> {\n if (this is Collection) return this.plus(element)\n val result = ArrayList<T>()\n result.addAll(this)\n result.add(element)\n return result\n}\n\n/**\n * Returns a list containing all elements of the original collection and then the given [element].\n */\npublic operator fun <T> Collection<T>.plus(element: T): List<T> {\n val result = ArrayList<T>(size + 1)\n result.addAll(this)\n result.add(element)\n return result\n}\n\n/**\n * Returns a list containing all elements of the original collection and then all elements of the given [elements] array.\n */\npublic operator fun <T> Iterable<T>.plus(elements: Array<out T>): List<T> {\n if (this is Collection) return this.plus(elements)\n val result = ArrayList<T>()\n result.addAll(this)\n result.addAll(elements)\n return result\n}\n\n/**\n * Returns a list containing all elements of the original collection and then all elements of the given [elements] array.\n */\npublic operator fun <T> Collection<T>.plus(elements: Array<out T>): List<T> {\n val result = ArrayList<T>(this.size + elements.size)\n result.addAll(this)\n result.addAll(elements)\n return result\n}\n\n/**\n * Returns a list containing all elements of the original collection and then all elements of the given [elements] collection.\n */\npublic operator fun <T> Iterable<T>.plus(elements: Iterable<T>): List<T> {\n if (this is Collection) return this.plus(elements)\n val result = ArrayList<T>()\n result.addAll(this)\n result.addAll(elements)\n return result\n}\n\n/**\n * Returns a list containing all elements of the original collection and then all elements of the given [elements] collection.\n */\npublic operator fun <T> Collection<T>.plus(elements: Iterable<T>): List<T> {\n if (elements is Collection) {\n val result = ArrayList<T>(this.size + elements.size)\n result.addAll(this)\n result.addAll(elements)\n return result\n } else {\n val result = ArrayList<T>(this)\n result.addAll(elements)\n return result\n }\n}\n\n/**\n * Returns a list containing all elements of the original collection and then all elements of the given [elements] sequence.\n */\npublic operator fun <T> Iterable<T>.plus(elements: Sequence<T>): List<T> {\n val result = ArrayList<T>()\n result.addAll(this)\n result.addAll(elements)\n return result\n}\n\n/**\n * Returns a list containing all elements of the original collection and then all elements of the given [elements] sequence.\n */\npublic operator fun <T> Collection<T>.plus(elements: Sequence<T>): List<T> {\n val result = ArrayList<T>(this.size + 10)\n result.addAll(this)\n result.addAll(elements)\n return result\n}\n\n/**\n * Returns a list containing all elements of the original collection and then the given [element].\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable<T>.plusElement(element: T): List<T> {\n return plus(element)\n}\n\n/**\n * Returns a list containing all elements of the original collection and then the given [element].\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Collection<T>.plusElement(element: T): List<T> {\n return plus(element)\n}\n\n/**\n * Returns a list of snapshots of the window of the given [size]\n * sliding along this collection with the given [step], where each\n * snapshot is a list.\n * \n * Several last lists may have less elements than the given [size].\n * \n * Both [size] and [step] must be positive and can be greater than the number of elements in this collection.\n * @param size the number of elements to take in each window\n * @param step the number of elements to move the window forward by on an each step, by default 1\n * @param partialWindows controls whether or not to keep partial windows in the end if any,\n * by default `false` which means partial windows won't be preserved\n * \n * @sample samples.collections.Sequences.Transformations.takeWindows\n */\n@SinceKotlin(\"1.2\")\npublic fun <T> Iterable<T>.windowed(size: Int, step: Int = 1, partialWindows: Boolean = false): List<List<T>> {\n checkWindowSizeStep(size, step)\n if (this is RandomAccess && this is List) {\n val thisSize = this.size\n val result = ArrayList<List<T>>((thisSize + step - 1) / step)\n var index = 0\n while (index < thisSize) {\n val windowSize = size.coerceAtMost(thisSize - index)\n if (windowSize < size && !partialWindows) break\n result.add(List(windowSize) { this[it + index] })\n index += step\n }\n return result\n }\n val result = ArrayList<List<T>>()\n windowedIterator(iterator(), size, step, partialWindows, reuseBuffer = false).forEach {\n result.add(it)\n }\n return result\n}\n\n/**\n * Returns a list of results of applying the

given [transform] function to\n * an each list representing a view over the window of the given [size]\n * sliding along this collection with the given [step].\n * \n *
Note that the list passed to the [transform] function is ephemeral and is valid only inside that function.\n * You should not store it or allow it to escape in some way, unless you made a snapshot of it.\n * Several last lists may have less elements than the given [size].\n * \n * Both [size] and [step] must be positive and can be greater than the number of elements in this collection.\n * @param size the number of elements to take in each window\n * @param step the number of elements to move the window forward by on an each step, by default 1\n * @param partialWindows controls whether or not to keep partial windows in the end if any,\n * by default `false` which means partial windows won't be preserved\n * \n * @sample samples.collections.Sequences.Transformations.averageWindows\n */\n@SinceKotlin(\"1.2\")\npublic fun <T, R> Iterable<T>.windowed(size: Int, step: Int = 1, partialWindows: Boolean = false, transform: (List<T>) -> R): List<R> {\n checkWindowSizeStep(size, step)\n if (this is RandomAccess && this is List) {\n val thisSize = this.size\n val result = ArrayList<R>((thisSize + step - 1) / step)\n val window = MovingSubList(this)\n var index = 0\n while (index < thisSize) {\n window.move(index, (index + size).coerceAtMost(thisSize))\n if (!partialWindows && window.size < size) break\n result.add(transform(window))\n index += step\n }\n return result\n }\n val result = ArrayList<R>()\n windowedIterator(iterator(), size, step, partialWindows, reuseBuffer = true).forEach {\n result.add(transform(it))\n }\n return result\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <T, R> Iterable<T>.zip(other: Array<out R>): List<Pair<T, R>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of values built from the elements of `this` collection and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\npublic inline fun <T, R, V> Iterable<T>.zip(other: Array<out R>, transform: (a: T, b: R) -> V): List<V> {\n val arraySize = other.size\n val list = ArrayList<V>(minOf(collectionSizeOrDefault(10), arraySize))\n var i = 0\n for (element in this) {\n if (i >= arraySize) break\n list.add(transform(element, other[i++]))\n }\n return list\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] collection with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <T, R> Iterable<T>.zip(other: Iterable<R>): List<Pair<T, R>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of values built from the elements of `this` collection and the [other] collection with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\npublic inline fun <T, R, V> Iterable<T>.zip(other: Iterable<R>, transform: (a: T, b: R) -> V): List<V> {\n val first = iterator()\n val second = other.iterator()\n val list = ArrayList<V>(minOf(collectionSizeOrDefault(10), other.collectionSizeOrDefault(10)))\n while (first.hasNext() && second.hasNext()) {\n list.add(transform(first.next(), second.next()))\n }\n return list\n}\n\n/**\n * Returns a list of pairs of each two adjacent elements
in this collection.\n * \n * The returned list is empty if this collection contains less than two elements.\n * \n * @sample samples.collections.Collections.Transformations.zipWithNext\n */\n@SinceKotlin(\"1.2\")\npublic fun <T> Iterable<T>.zipWithNext(): List<Pair<T, T>> {\n return zipWithNext { a, b -> a to b }\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to an each pair of two adjacent elements in this collection.\n * \n * The returned list is empty if this collection contains less than two elements.\n * \n * @sample samples.collections.Collections.Transformations.zipWithNextToFindDeltas\n */\n@SinceKotlin(\"1.2\")\npublic inline fun <T, R> Iterable<T>.zipWithNext(transform: (a: T, b: T) -> R): List<R> {\n val iterator = iterator()\n if (!iterator.hasNext()) return emptyList()\n val result =

mutableListOf<R>()\n   var current = iterator.next()\n   while (iterator.hasNext()) {\n   val next = iterator.next()\n
        result.add(transform(current, next))\n   current = next\n   }\n   return result\n}\n\n/**\n * Appends the string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to \"...\").\n * \n * @sample samples.collections.Collections.Transformations.joinTo\n */\npublic fun <T, A : Appendable> Iterable<T>.joinTo(buffer: A, separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((T) -> CharSequence)? = null): A {\n buffer.append(prefix)\n   var count = 0\n   for (element in this) {\n   if (++count > 1) buffer.append(separator)\n   if (limit < 0 || count <= limit) {\n   buffer.appendElement(element, transform)\n   } else break\n   }\n   if (limit >= 0 && count > limit) buffer.append(truncated)\n   buffer.append(postfix)\n   return buffer\n}\n\n/**\n * Creates a string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to \"...\").\n * \n * @sample samples.collections.Collections.Transformations.joinToString\n */\npublic fun <T> Iterable<T>.joinToString(separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((T) -> CharSequence)? = null): String {\n return joinTo(StringBuilder(), separator, prefix, postfix, limit, truncated, transform).toString()\n}\n\n/**\n * Returns this collection as an [Iterable].\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable<T>.asIterable(): Iterable<T> {\n   return this\n}\n\n/**\n * Creates a [Sequence] instance that wraps the original collection returning its elements when being iterated.\n * \n * @sample samples.collections.Sequences.Building.sequenceFromCollection\n */\npublic fun <T> Iterable<T>.asSequence(): Sequence<T> {\n   return Sequence { this.iterator() }\n}\n\n/**\n * Returns an average value of elements in the collection.\n */\n@kotlin.jvm.JvmName(\"averageOfByte\")\npublic fun Iterable<Byte>.average(): Double {\n   var sum: Double = 0.0\n   var count: Int = 0\n   for (element in this) {\n   sum += element\n   checkCountOverflow(++count)\n   }\n   return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the collection.\n */\n@kotlin.jvm.JvmName(\"averageOfShort\")\npublic fun Iterable<Short>.average(): Double {\n   var sum: Double = 0.0\n   var count: Int = 0\n   for (element in this) {\n   sum += element\n   checkCountOverflow(++count)\n   }\n   return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the collection.\n */\n@kotlin.jvm.JvmName(\"averageOfInt\")\npublic fun Iterable<Int>.average(): Double {\n   var sum: Double = 0.0\n   var count: Int = 0\n   for (element in this) {\n   sum += element\n   checkCountOverflow(++count)\n   }\n   return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the collection.\n */\n@kotlin.jvm.JvmName(\"averageOfLong\")\npublic fun Iterable<Long>.average(): Double {\n   var sum: Double = 0.0\n   var count: Int = 0\n   for (element in this) {\n   sum += element\n   checkCountOverflow(++count)\n   }\n   return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the collection.\n */\n@kotlin.jvm.JvmName(\"averageOfFloat\")\npublic fun Iterable<Float>.average(): Double {\n   var sum: Double = 0.0\n   var count: Int = 0\n   for (element in this) {\n   sum += element\n   checkCountOverflow(++count)\n   }\n   return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the collection.\n */\n@kotlin.jvm.JvmName(\"averageOfDouble\")\npublic fun Iterable<Double>.average(): Double {\n   var sum: Double = 0.0\n   var count: Int = 0\n   for (element in this) {\n   sum += element\n   checkCountOverflow(++count)\n   }\n   return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns the sum of all elements in the collection.\n */\n@kotlin.jvm.JvmName(\"sumOfByte\")\npublic fun Iterable<Byte>.sum(): Int {\n   var sum: Int = 0\n   for (element in this) {\n   sum += element\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all elements in the collection.\n */\n@kotlin.jvm.JvmName(\"sumOfShort\")\npublic fun Iterable<Short>.sum(): Int

{\n var sum: Int = 0\n for (element in this) {\n sum += element\n }\n return sum\n}\n\n/**\n * Returns the sum of all elements in the collection.\n */\n@kotlin.jvm.JvmName(\"sumOfInt\")\npublic fun Iterable<Int>.sum(): Int {\n var sum: Int = 0\n for (element in this) {\n sum += element\n }\n return sum\n}\n\n/**\n * Returns the sum of all elements in the collection.\n */\n@kotlin.jvm.JvmName(\"sumOfLong\")\npublic fun Iterable<Long>.sum(): Long {\n var sum: Long = 0L\n for (element in this) {\n sum += element\n }\n return sum\n}\n\n/**\n * Returns the sum of all elements in the collection.\n */\n@kotlin.jvm.JvmName(\"sumOfFloat\")\npublic fun Iterable<Float>.sum(): Float {\n var sum: Float = 0.0f\n for (element in this) {\n sum += element\n }\n return sum\n}\n\n/**\n * Returns the sum of all elements in the collection.\n */\n@kotlin.jvm.JvmName(\"sumOfDouble\")\npublic fun Iterable<Double>.sum(): Double {\n var sum: Double = 0.0\n for (element in this) {\n sum += element\n }\n return sum\n}\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\nimport kotlin.comparisons.naturalOrder\nimport kotlin.random.Random\n\n/** Returns the array if it's not `null`, or an empty array otherwise. */\n@kotlin.internal.InlineOnly\npublic actual inline fun <T> Array<out T>?.orEmpty(): Array<out T> = this ?: emptyArray<T>()\n\n@kotlin.internal.InlineOnly\npublic actual inline fun <T> Collection<T>.toTypedArray(): Array<T> = copyToArray(this)\n\n@JsName(\"copyToArray\")\n@PublishedApi\ninternal fun <T> copyToArray(collection: Collection<T>): Array<T> {\n return if (collection.asDynamic().toArray !== undefined)\n collection.asDynamic().toArray().unsafeCast<Array<T>>()\n else\n copyToArrayImpl(collection).unsafeCast<Array<T>>()\n}\n\n@JsName(\"copyToArrayImpl\")\ninternal actual fun copyToArrayImpl(collection: Collection<*>): Array<Any?> {\n val array = emptyArray<Any?>()\n val iterator = collection.iterator()\n while (iterator.hasNext())\n array.asDynamic().push(iterator.next())\n return array\n}\n\n@JsName(\"copyToExistingArrayImpl\")\ninternal actual fun <T> copyToArrayImpl(collection: Collection<*>, array: Array<T>): Array<T> {\n if (array.size < collection.size)\n return copyToArrayImpl(collection).unsafeCast<Array<T>>()\n\n val iterator = collection.iterator()\n var index = 0\n while (iterator.hasNext()) {\n array[index++] = iterator.next().unsafeCast<T>()\n }\n if (index < array.size) {\n array[index] = null.unsafeCast<T>()\n }\n return array\n}\n\n/**\n * Returns an immutable list containing only the specified object [element].\n */\npublic fun <T> listOf(element: T): List<T> = arrayListOf(element)\n\n/**\n * Returns an immutable set containing only the specified object [element].\n */\npublic fun <T> setOf(element: T): Set<T> = hashSetOf(element)\n\n/**\n * Returns an immutable map, mapping only the specified key to the\n * specified value.\n */\npublic fun <K, V> mapOf(pair: Pair<K, V>): Map<K, V> = hashMapOf(pair)\n\n/**\n * Fills the list with the provided [value].\n *\n * Each element in the list gets replaced with the [value].\n */\n@SinceKotlin(\"1.2\")\npublic actual fun <T> MutableList<T>.fill(value: T): Unit {\n for (index in 0..lastIndex) {\n this[index] = value\n }\n}\n\n/**\n * Randomly shuffles elements in this list.\n *\n * See: https://en.wikipedia.org/wiki/Fisher%E2%80%93Yates_shuffle#The_modern_algorithm\n */\n@SinceKotlin(\"1.2\")\npublic actual fun <T> MutableList<T>.shuffle(): Unit = shuffle(Random)\n\n/**\n * Returns a new list with the elements of this list randomly shuffled.\n */\n@SinceKotlin(\"1.2\")\npublic actual fun <T> Iterable<T>.shuffled(): List<T> = toMutableList().apply { shuffle() }\n\n/**\n * Sorts elements in the list in-place according to their natural sort order.\n *\n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\npublic actual fun <T : Comparable<T>> MutableList<T>.sort(): Unit {\n collectionsSort(this, naturalOrder())\n}\n\n/**\n * Sorts elements in the list in-place according to the order specified with [comparator].\n *\n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\npublic actual fun <T> MutableList<T>.sortWith(comparator: Comparator<in T>): Unit {\n collectionsSort(this, comparator)\n}\n\nprivate fun <T> collectionsSort(list: MutableList<T>, comparator: Comparator<in T>) {\n if (list.size <= 1) return\n\n val array = copyToArray(list)\n sortArrayWith(array, comparator)\n\n for (i in 0 until

array.size) {\n   list[i] = array[i]\n   }\n}\n\ninternal actual fun <T> arrayOfNulls(reference: Array<T>, size: Int): Array<T> {\n   return arrayOfNulls<Any>(size).unsafeCast<Array<T>>()\n}\n\n@SinceKotlin(\"1.3\")\n@PublishedApi\n@JsName(\"arrayCopy\")\ninternal fun <T> arrayCopy(source: Array<out T>, destination: Array<in T>, destinationOffset: Int, startIndex: Int, endIndex: Int) {\n   AbstractList.checkRangeIndexes(startIndex, endIndex, source.size)\n   val rangeSize = endIndex - startIndex\n   AbstractList.checkRangeIndexes(destinationOffset, destinationOffset + rangeSize, destination.size)\n\n   if (js(\"ArrayBuffer\").isView(destination) && js(\"ArrayBuffer\").isView(source)) {\n   val subrange = source.asDynamic().subarray(startIndex, endIndex)\n   destination.asDynamic().set(subrange, destinationOffset)\n   } else {\n   if (source !== destination || destinationOffset <= startIndex) {\n   for (index in 0 until rangeSize) {\n   destination[destinationOffset + index] = source[startIndex + index]\n   }\n   } else {\n   for (index in rangeSize - 1 downTo 0) {\n   destination[destinationOffset + index] = source[startIndex + index]\n   }\n   }\n   }\n}\n\n// no singleton map implementation in js, return map as is\n@Suppress(\"NOTHING_TO_INLINE\")\ninternal actual inline fun <K, V> Map<K, V>.toSingletonMapOrSelf(): Map<K, V> = this\n\n@Suppress(\"NOTHING_TO_INLINE\")\ninternal actual inline fun <K, V> Map<out K, V>.toSingletonMap(): Map<K, V> = this.toMutableMap()\n\n\n@Suppress(\"NOTHING_TO_INLINE\")\ninternal actual inline fun <T> Array<out T>.copyToArrayOfAny(isVarargs: Boolean): Array<out Any?> =\n   if (isVarargs)\n   // no need to copy vararg array in JS\n   this\n   else\n   this.copyOf()\n\n\n\n@PublishedApi\ninternal actual fun checkIndexOverflow(index: Int): Int {\n   if (index < 0) {\n   throwIndexOverflow()\n   }\n   return index\n}\n\n@PublishedApi\ninternal actual fun checkCountOverflow(count: Int): Int {\n   if (count < 0) {\n   throwCountOverflow()\n   }\n   return count\n}\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"CollectionsKt\")\n\npackage kotlin.collections\n\n\n/**\n * Returns the given iterator itself. This allows to use an instance of iterator in a `for` loop.\n * @sample samples.collections.Iterators.iterator\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> Iterator<T>.iterator(): Iterator<T> = this\n\n/**\n * Returns an [Iterator] wrapping each value produced by this [Iterator] with the [IndexedValue],\n * containing value and it's index.\n * @sample samples.collections.Iterators.withIndexIterator\n */\npublic fun <T> Iterator<T>.withIndex(): Iterator<IndexedValue<T>> = IndexingIterator(this)\n\n/**\n * Performs the given [operation] on each element of this [Iterator].\n *\n * @sample samples.collections.Iterators.forEachIterator\n */\npublic inline fun <T> Iterator<T>.forEach(operation: (T) -> Unit): Unit {\n   for (element in this) operation(element)\n}\n\n/**\n * Iterator transforming original `iterator` into iterator of [IndexedValue], counting index from zero.\n */\ninternal class IndexingIterator<out T>(private val iterator: Iterator<T>) : Iterator<IndexedValue<T>> {\n   private var index = 0\n   final override fun hasNext(): Boolean = iterator.hasNext()\n   final override fun next(): IndexedValue<T> = IndexedValue(checkIndexOverflow(index++), iterator.next())\n}\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"ComparisonsKt\")\n\npackage kotlin.comparisons\n\n//\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n//\n\nimport kotlin.random.*\n\n/**\n * Returns the greater of two values.\n * If values are equal, returns the first one.\n */\n@SinceKotlin(\"1.1\")\npublic expect fun <T : Comparable<T>> maxOf(a: T, b: T): T\n\n/**\n * Returns the greater of two values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic expect inline fun maxOf(a: Byte, b: Byte): Byte\n\n/**\n * Returns the greater of two values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic expect inline fun maxOf(a: Short, b: Short): Short\n\n/**\n * Returns the greater of two values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic expect inline fun maxOf(a: Int, b: Int): Int\n\n/**\n

* Returns the greater of two values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic expect inline fun maxOf(a: Long, b: Long): Long\n\n/**\n * Returns the greater of two values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic expect inline fun maxOf(a: Float, b: Float): Float\n\n/**\n * Returns the greater of two values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic expect inline fun maxOf(a: Double, b: Double): Double\n\n/**\n * Returns the greater of three values.\n */\n@SinceKotlin(\"1.1\")\npublic expect fun <T : Comparable<T>> maxOf(a: T, b: T, c: T): T\n\n/**\n * Returns the greater of three values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic expect inline fun maxOf(a: Byte, b: Byte, c: Byte): Byte\n\n/**\n * Returns the greater of three values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic expect inline fun maxOf(a: Short, b: Short, c: Short): Short\n\n/**\n * Returns the greater of three values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic expect inline fun maxOf(a: Int, b: Int, c: Int): Int\n\n/**\n * Returns the greater of three values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic expect inline fun maxOf(a: Long, b: Long, c: Long): Long\n\n/**\n * Returns the greater of three values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic expect inline fun maxOf(a: Float, b: Float, c: Float): Float\n\n/**\n * Returns the greater of three values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic expect inline fun maxOf(a: Double, b: Double, c: Double): Double\n\n/**\n * Returns the greater of three values according to the order specified by the given [comparator].\n */\n@SinceKotlin(\"1.1\")\npublic fun <T> maxOf(a: T, b: T, c: T, comparator: Comparator<in T>): T {\n   return maxOf(a, maxOf(b, c, comparator), comparator)\n}\n\n/**\n * Returns the greater of two values according to the order specified by the given [comparator].\n * If values are equal, returns the first one.\n */\n@SinceKotlin(\"1.1\")\npublic fun <T> maxOf(a: T, b: T, comparator: Comparator<in T>): T {\n   return if (comparator.compare(a, b) >= 0) a else b\n}\n\n/**\n * Returns the smaller of two values.\n * If values are equal, returns the first one.\n */\n@SinceKotlin(\"1.1\")\npublic expect fun <T : Comparable<T>> minOf(a: T, b: T): T\n\n/**\n * Returns the smaller of two values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic expect inline fun minOf(a: Byte, b: Byte): Byte\n\n/**\n * Returns the smaller of two values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic expect inline fun minOf(a: Short, b: Short): Short\n\n/**\n * Returns the smaller of two values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic expect inline fun minOf(a: Int, b: Int): Int\n\n/**\n * Returns the smaller of two values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic expect inline fun minOf(a: Long, b: Long): Long\n\n/**\n * Returns the smaller of two values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic expect inline fun minOf(a: Float, b: Float): Float\n\n/**\n * Returns the smaller of two values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic expect inline fun minOf(a: Double, b: Double): Double\n\n/**\n * Returns the smaller of three values.\n */\n@SinceKotlin(\"1.1\")\npublic expect fun <T : Comparable<T>> minOf(a: T, b: T, c: T): T\n\n/**\n * Returns the smaller of three values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic expect inline fun minOf(a: Byte, b: Byte, c: Byte): Byte\n\n/**\n * Returns the smaller of three values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic expect inline fun minOf(a: Short, b: Short, c: Short): Short\n\n/**\n * Returns the smaller of three values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic expect inline fun minOf(a: Int, b: Int, c: Int): Int\n\n/**\n * Returns the smaller of three values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic expect inline fun minOf(a: Long, b: Long, c: Long): Long\n\n/**\n * Returns the smaller of three values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic expect inline fun minOf(a: Float, b: Float, c: Float): Float\n\n/**\n * Returns the smaller of three values.\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic expect inline fun minOf(a: Double, b: Double, c:

Double): Double\n\n/**\n * Returns the smaller of three values according to the order specified by the given [comparator].\n */\n@SinceKotlin(\"1.1\")\npublic fun <T> minOf(a: T, b: T, c: T, comparator: Comparator<in T>): T {\n return minOf(a, minOf(b, c, comparator), comparator)\n}\n\n/**\n * Returns the smaller of two values according to the order specified by the given [comparator].\n * If values are equal, returns the first one.\n */\n@SinceKotlin(\"1.1\")\npublic fun <T> minOf(a: T, b: T, comparator: Comparator<in T>): T {\n return if (comparator.compare(a, b) <= 0) a else b\n}\n\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found
in the license/LICENSE.txt file.\n
/\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"MapsKt\")\n\npackage kotlin.collections\n\n//\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n//\n\nimport kotlin.random.\n\n/**\n * Returns a [List] containing all key-value pairs.\n */\npublic fun <K, V> Map<out K, V>.toList(): List<Pair<K, V>> {\n if (size == 0)\n return emptyList()\n val iterator = entries.iterator()\n if (!iterator.hasNext())\n return emptyList()\n val first = iterator.next()\n if (!iterator.hasNext())\n return listOf(first.toPair())\n val result = ArrayList<Pair<K, V>>(size)\n result.add(first.toPair())\n do {\n result.add(iterator.next().toPair())\n } while (iterator.hasNext())\n return result\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being invoked on
each entry of original map.\n */\npublic inline fun <K, V, R> Map<out K, V>.flatMap(transform: (Map.Entry<K, V>) -> Iterable<R>): List<R> {\n return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being invoked on each entry of original map, to the given [destination].\n */\npublic inline fun <K, V, R, C : MutableCollection<in R>> Map<out K, V>.flatMapTo(destination: C, transform: (Map.Entry<K, V>) -> Iterable<R>): C {\n for (element in this) {\n val list = transform(element)\n destination.addAll(list)\n }\n return destination\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each entry in the original map.\n */\npublic inline fun <K, V, R> Map<out K, V>.map(transform: (Map.Entry<K, V>) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing only the non-null results of applying the given [transform]
function\n * to each entry in the original map.\n */\npublic inline fun <K, V, R : Any> Map<out K, V>.mapNotNull(transform: (Map.Entry<K, V>) -> R?): List<R> {\n return mapNotNullTo(ArrayList<R>(), transform)\n}\n\n/**\n * Applies the given [transform] function to each entry in the original map\n * and appends only the non-null results to the given [destination].\n */\npublic inline fun <K, V, R : Any, C : MutableCollection<in R>> Map<out K, V>.mapNotNullTo(destination: C, transform: (Map.Entry<K, V>) -> R?): C {\n forEach { element -> transform(element)?.let { destination.add(it) } }\n return destination\n}\n\n/**\n * Applies the given [transform] function to each entry of the original map\n * and appends the results to the given [destination].\n */\npublic inline fun <K, V, R, C : MutableCollection<in R>> Map<out K, V>.mapTo(destination: C, transform: (Map.Entry<K, V>) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return destination\n}\n\n/**\n
* Returns `true` if all entries match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.all\n */\npublic inline fun <K, V> Map<out K, V>.all(predicate: (Map.Entry<K, V>) -> Boolean): Boolean {\n if (isEmpty()) return true\n for (element in this) if (!predicate(element)) return false\n return true\n}\n\n/**\n * Returns `true` if map has at least one entry.\n * \n * @sample samples.collections.Collections.Aggregates.any\n */\npublic fun <K, V> Map<out K, V>.any(): Boolean {\n return !isEmpty()\n}\n\n/**\n * Returns `true` if at least one entry matches the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.anyWithPredicate\n */\npublic inline fun <K, V> Map<out K, V>.any(predicate: (Map.Entry<K, V>) -> Boolean): Boolean {\n if (isEmpty()) return false\n for (element in this) if (predicate(element)) return true\n return false\n}\n\n/**\n * Returns the number of entries in this map.\n */\n@kotlin.internal.InlineOnly\npublic

inline fun <K, V> Map<out K, V>.count(): Int {\n   return size\n}\n\n/**\n * Returns the number of entries matching the given [predicate].\n */\npublic inline fun <K, V> Map<out K, V>.count(predicate: (Map.Entry<K, V>) -> Boolean): Int {\n   if (isEmpty()) return 0\n   var count = 0\n   for (element in this) if (predicate(element)) ++count\n   return count\n}\n\n/**\n * Performs the given [action] on each entry.\n */\n@kotlin.internal.HidesMembers\npublic inline fun <K, V> Map<out K, V>.forEach(action: (Map.Entry<K, V>) -> Unit): Unit {\n   for (element in this) action(element)\n}\n\n/**\n * Returns the first entry yielding the largest value of the given function or `null` if there are no entries.\n * \n * @sample samples.collections.Collections.Aggregates.maxBy\n */\n@kotlin.internal.InlineOnly\npublic inline fun <K, V, R : Comparable<R>> Map<out K, V>.maxBy(selector: (Map.Entry<K, V>) -> R): Map.Entry<K, V>? {\n   return entries.maxBy(selector)\n}\n\n/**\n
 * Returns the first entry having the largest value according to the provided [comparator] or `null` if there are no entries.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map<out K, V>.maxWith(comparator: Comparator<in Map.Entry<K, V>>): Map.Entry<K, V>? {\n   return entries.maxWith(comparator)\n}\n\n/**\n * Returns the first entry yielding the smallest value of the given function or `null` if there are no entries.\n * \n * @sample samples.collections.Collections.Aggregates.minBy\n */\npublic inline fun <K, V, R : Comparable<R>> Map<out K, V>.minBy(selector: (Map.Entry<K, V>) -> R): Map.Entry<K, V>? {\n   return entries.minBy(selector)\n}\n\n/**\n * Returns the first entry having the smallest value according to the provided [comparator] or `null` if there are no entries.\n */\npublic fun <K, V> Map<out K, V>.minWith(comparator: Comparator<in Map.Entry<K, V>>): Map.Entry<K, V>? {\n   return entries.minWith(comparator)\n}\n\n/**\n * Returns `true` if the map has
 no entries.\n * \n * @sample samples.collections.Collections.Aggregates.none\n */\npublic fun <K, V> Map<out K, V>.none(): Boolean {\n   return isEmpty()\n}\n\n/**\n * Returns `true` if no entries match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.noneWithPredicate\n */\npublic inline fun <K, V> Map<out K, V>.none(predicate: (Map.Entry<K, V>) -> Boolean): Boolean {\n   if (isEmpty()) return true\n   for (element in this) if (predicate(element)) return false\n   return true\n}\n\n/**\n * Performs the given [action] on each entry and returns the map itself afterwards.\n */\n@SinceKotlin(\"1.1\")\npublic inline fun <K, V, M : Map<out K, V>> M.onEach(action: (Map.Entry<K, V>) -> Unit): M {\n   return apply { for (element in this) action(element) }\n}\n\n/**\n * Creates an [Iterable] instance that wraps the original map returning its entries when being iterated.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map<out K, V>.asIterable():
 Iterable<Map.Entry<K, V>> {\n   return entries\n}\n\n/**\n * Creates a [Sequence] instance that wraps the original map returning its entries when being iterated.\n */\npublic fun <K, V> Map<out K, V>.asSequence(): Sequence<Map.Entry<K, V>> {\n   return entries.asSequence()\n}\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.ranges\n\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic inline operator fun Float.rangeTo(that: Float): ClosedFloatingPointRange<Float> =\n this.toDouble().rangeTo(that.toDouble()).unsafeCast<ClosedFloatingPointRange<Float>>()\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"SequencesKt\")\n\npackage kotlin.sequences\n\n//\n//
 NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n//\n\nimport kotlin.random.*\n\n/**\n * Returns `true` if [element] is found in the sequence.\n *\n * The operation is _terminal_.\n */\npublic operator fun <@kotlin.internal.OnlyInputTypes T> Sequence<T>.contains(element: T): Boolean {\n   return indexOf(element) >= 0\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this sequence.\n *\n * The operation is _terminal_.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic fun <T> Sequence<T>.elementAt(index: Int): T

{\n   return elementAtOrElse(index) { throw IndexOutOfBoundsException(\"Sequence doesn't contain element at index $index.\") }\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this sequence.\n
 *\n * The operation is _terminal_.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrElse\n */\npublic fun <T> Sequence<T>.elementAtOrElse(index: Int, defaultValue: (Int) -> T): T {\n   if (index < 0)\n return defaultValue(index)\n   val iterator = iterator()\n   var count = 0\n   while (iterator.hasNext()) {\n   val element = iterator.next()\n   if (index == count++)\n   return element\n   }\n   return defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this sequence.\n *\n * The operation is _terminal_.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n */\npublic fun <T> Sequence<T>.elementAtOrNull(index: Int): T? {\n   if (index < 0)\n   return null\n   val iterator = iterator()\n   var count = 0\n   while (iterator.hasNext()) {\n   val element = iterator.next()\n   if (index == count++)\n   return element\n
    }\n   return null\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such element was found.\n *\n * The operation is _terminal_.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Sequence<T>.find(predicate: (T) -> Boolean): T? {\n   return firstOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n *\n * The operation is _terminal_.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Sequence<T>.findLast(predicate: (T) -> Boolean): T? {\n   return lastOrNull(predicate)\n}\n\n/**\n * Returns first element.\n * @throws [NoSuchElementException] if the sequence is empty.\n *\n * The operation is _terminal_.\n */\npublic fun <T> Sequence<T>.first(): T {\n   val iterator = iterator()\n   if (!iterator.hasNext())\n   throw NoSuchElementException(\"Sequence is empty.\")\n   return iterator.next()\n}\n\n/**\n * Returns the first element matching the given
 [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n *\n * The operation is _terminal_.\n */\npublic inline fun <T> Sequence<T>.first(predicate: (T) -> Boolean): T {\n   for (element in this) if (predicate(element)) return element\n   throw NoSuchElementException(\"Sequence contains no element matching the predicate.\")\n}\n\n/**\n * Returns the first element, or `null` if the sequence is empty.\n *\n * The operation is _terminal_.\n */\npublic fun <T> Sequence<T>.firstOrNull(): T? {\n   val iterator = iterator()\n   if (!iterator.hasNext())\n   return null\n   return iterator.next()\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if element was not found.\n *\n * The operation is _terminal_.\n */\npublic inline fun <T> Sequence<T>.firstOrNull(predicate: (T) -> Boolean): T? {\n   for (element in this) if (predicate(element)) return element\n   return null\n}\n\n/**\n * Returns first index of [element], or -1
 if the sequence does not contain element.\n *\n * The operation is _terminal_.\n */\npublic fun <@kotlin.internal.OnlyInputTypes T> Sequence<T>.indexOf(element: T): Int {\n   var index = 0\n   for (item in this) {\n   checkIndexOverflow(index)\n   if (element == item)\n   return index\n   index++\n   }\n   return -1\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the sequence does not contain such element.\n *\n * The operation is _terminal_.\n */\npublic inline fun <T> Sequence<T>.indexOfFirst(predicate: (T) -> Boolean): Int {\n   var index = 0\n   for (item in this) {\n   checkIndexOverflow(index)\n   if (predicate(item))\n   return index\n   index++\n   }\n   return -1\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the sequence does not contain such element.\n *\n * The operation is _terminal_.\n */\npublic inline fun <T> Sequence<T>.indexOfLast(predicate:
 (T) -> Boolean): Int {\n   var lastIndex = -1\n   var index = 0\n   for (item in this) {\n   checkIndexOverflow(index)\n   if (predicate(item))\n   lastIndex = index\n   index++\n   }\n   return lastIndex\n}\n\n/**\n * Returns the last element.\n * @throws [NoSuchElementException] if the sequence is empty.\n *\n * The operation is _terminal_.\n */\npublic fun <T> Sequence<T>.last(): T {\n   val iterator = iterator()\n   if (!iterator.hasNext())\n   throw NoSuchElementException(\"Sequence is empty.\")\n   var last = iterator.next()\n   while (iterator.hasNext())\n   last = iterator.next()\n   return last\n}\n\n/**\n * Returns the last

element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n *\n * The operation is _terminal_.\n */\npublic inline fun <T> Sequence<T>.last(predicate: (T) -> Boolean): T {\n var last: T? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n last = element\n found = true\n }\n }\n if (!found) throw NoSuchElementException(\"Sequence contains no element matching the predicate.\")\n @Suppress(\"UNCHECKED_CAST\")\n return last as T\n}\n\n/**\n * Returns last index of [element], or -1 if the sequence does not contain element.\n *\n * The operation is _terminal_.\n */\npublic fun <@kotlin.internal.OnlyInputTypes T> Sequence<T>.lastIndexOf(element: T): Int {\n var lastIndex = -1\n var index = 0\n for (item in this) {\n checkIndexOverflow(index)\n if (element == item)\n lastIndex = index\n index++\n }\n return lastIndex\n}\n\n/**\n * Returns the last element, or `null` if the sequence is empty.\n *\n * The operation is _terminal_.\n */\npublic fun <T> Sequence<T>.lastOrNull(): T? {\n val iterator = iterator()\n if (!iterator.hasNext())\n return null\n var last = iterator.next()\n while (iterator.hasNext())\n last = iterator.next()\n return last\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n *\n * The operation is _terminal_.\n */\npublic inline fun <T> Sequence<T>.lastOrNull(predicate: (T) -> Boolean): T? {\n var last: T? = null\n for (element in this) {\n if (predicate(element)) {\n last = element\n }\n }\n return last\n}\n\n/**\n * Returns the single element, or throws an exception if the sequence is empty or has more than one element.\n *\n * The operation is _terminal_.\n */\npublic fun <T> Sequence<T>.single(): T {\n val iterator = iterator()\n if (!iterator.hasNext())\n throw NoSuchElementException(\"Sequence is empty.\")\n val single = iterator.next()\n if (iterator.hasNext())\n throw IllegalArgumentException(\"Sequence has more than one element.\")\n return single\n}\n\n/**\n * Returns the single element matching the given [predicate],
or throws exception if there is no or more than one matching element.\n *\n * The operation is _terminal_.\n */\npublic inline fun <T> Sequence<T>.single(predicate: (T) -> Boolean): T {\n var single: T? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if (found) throw IllegalArgumentException(\"Sequence contains more than one matching element.\")\n single = element\n found = true\n }\n }\n if (!found) throw NoSuchElementException(\"Sequence contains no element matching the predicate.\")\n @Suppress(\"UNCHECKED_CAST\")\n return single as T\n}\n\n/**\n * Returns single element, or `null` if the sequence is empty or has more than one element.\n *\n * The operation is _terminal_.\n */\npublic fun <T> Sequence<T>.singleOrNull(): T? {\n val iterator = iterator()\n if (!iterator.hasNext())\n return null\n val single = iterator.next()\n if (iterator.hasNext())\n return null\n return single\n}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element was not found or more than one element was found.\n *\n * The operation is _terminal_.\n */\npublic inline fun <T> Sequence<T>.singleOrNull(predicate: (T) -> Boolean): T? {\n var single: T? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if (found) return null\n single = element\n found = true\n }\n }\n if (!found) return null\n return single\n}\n\n/**\n * Returns a sequence containing all elements except first [n] elements.\n *\n * The operation is _intermediate_ and _stateless_.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic fun <T> Sequence<T>.drop(n: Int): Sequence<T> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n return when {\n n == 0 -> this\n this is DropTakeSequence -> this.drop(n)\n else -> DropSequence(this, n)\n }\n}\n\n/**\n * Returns a sequence containing all elements except first elements that satisfy the given [predicate].\n *\n * The operation is _intermediate_ and _stateless_.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic fun <T> Sequence<T>.dropWhile(predicate: (T) -> Boolean): Sequence<T> {\n return DropWhileSequence(this, predicate)\n}\n\n/**\n * Returns a sequence containing only elements matching the given [predicate].\n *\n * The operation is _intermediate_ and _stateless_.\n */\npublic fun <T> Sequence<T>.filter(predicate: (T) -> Boolean): Sequence<T> {\n return FilteringSequence(this, true, predicate)\n}\n\n/**\n * Returns a sequence containing only elements matching the given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and

returns the result of predicate evaluation
 on the element.\n *\n * The operation is _intermediate_ and _stateless_.\n */\npublic fun <T> Sequence<T>.filterIndexed(predicate: (index: Int, T) -> Boolean): Sequence<T> {\n   // TODO: Rewrite with generalized MapFilterIndexingSequence\n   return TransformingSequence(FilteringSequence(IndexingSequence(this), true, { predicate(it.index, it.value) }), { it.value })\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n *\n * The operation is _terminal_.\n */\npublic inline fun <T, C : MutableCollection<in T>> Sequence<T>.filterIndexedTo(destination: C, predicate: (index: Int, T) -> Boolean): C {\n   forEachIndexed { index, element ->\n   if (predicate(index, element)) destination.add(element)\n   }\n   return destination\n}\n\n/**\n * Returns a sequence containing all elements
 that are instances of specified type parameter R.\n *\n * The operation is _intermediate_ and _stateless_.\n */\npublic inline fun <reified R> Sequence<*>.filterIsInstance(): Sequence<@kotlin.internal.NoInfer R> {\n   @Suppress(\"UNCHECKED_CAST\")\n   return filter { it is R } as Sequence<R>\n}\n\n/**\n * Appends all elements that are instances of specified type parameter R to the given [destination].\n *\n * The operation is _terminal_.\n */\npublic inline fun <reified R, C : MutableCollection<in R>> Sequence<*>.filterIsInstanceTo(destination: C): C {\n   for (element in this) if (element is R) destination.add(element)\n   return destination\n}\n\n/**\n * Returns a sequence containing all elements not matching the given [predicate].\n *\n * The operation is _intermediate_ and _stateless_.\n */\npublic fun <T> Sequence<T>.filterNot(predicate: (T) -> Boolean): Sequence<T> {\n   return FilteringSequence(this, false, predicate)\n}\n\n/**\n * Returns a sequence containing all elements
 that are not `null`.\n *\n * The operation is _intermediate_ and _stateless_.\n */\npublic fun <T : Any> Sequence<T?>.filterNotNull(): Sequence<T> {\n   @Suppress(\"UNCHECKED_CAST\")\n   return filterNot { it == null } as Sequence<T>\n}\n\n/**\n * Appends all elements that are not `null` to the given [destination].\n *\n * The operation is _terminal_.\n */\npublic fun <C : MutableCollection<in T>, T : Any> Sequence<T?>.filterNotNullTo(destination: C): C {\n   for (element in this) if (element != null) destination.add(element)\n   return destination\n}\n\n/**\n * Appends all elements not matching the given [predicate] to the given [destination].\n *\n * The operation is _terminal_.\n */\npublic inline fun <T, C : MutableCollection<in T>> Sequence<T>.filterNotTo(destination: C, predicate: (T) -> Boolean): C {\n   for (element in this) if (!predicate(element)) destination.add(element)\n   return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the
 given [destination].\n *\n * The operation is _terminal_.\n */\npublic inline fun <T, C : MutableCollection<in T>> Sequence<T>.filterTo(destination: C, predicate: (T) -> Boolean): C {\n   for (element in this) if (predicate(element)) destination.add(element)\n   return destination\n}\n\n/**\n * Returns a sequence containing first [n] elements.\n *\n * The operation is _intermediate_ and _stateless_.\n * \n * @throws IllegalArgumentException if [n] is negative.\n *\n * @sample samples.collections.Collections.Transformations.take\n */\npublic fun <T> Sequence<T>.take(n: Int): Sequence<T> {\n   require(n >= 0) { \"Requested element count $n is less than zero.\" }\n   return when {\n   n == 0 -> emptySequence()\n   this is DropTakeSequence -> this.take(n)\n   else -> TakeSequence(this, n)\n   }\n}\n\n/**\n * Returns a sequence containing first elements satisfying the given [predicate].\n *\n * The operation is _intermediate_ and _stateless_.\n * \n * @sample samples.collections.Collections.Transformations.take\n
 */\npublic fun <T> Sequence<T>.takeWhile(predicate: (T) -> Boolean): Sequence<T> {\n   return TakeWhileSequence(this, predicate)\n}\n\n/**\n * Returns a sequence that yields elements of this sequence sorted according to their natural sort order.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n *\n * The operation is _intermediate_ and _stateful_.\n */\npublic fun <T : Comparable<T>> Sequence<T>.sorted(): Sequence<T> {\n   return object : Sequence<T> {\n   override fun iterator(): Iterator<T> {\n   val sortedList = this@sorted.toMutableList()\n   sortedList.sort()\n   return sortedList.iterator()\n   }\n   }\n}\n\n/**\n * Returns a sequence that yields elements of this sequence sorted according to natural sort order of the value returned by specified [selector] function.\n * \n * The sort is

stable. It means that equal elements
preserve their order relative to each other after sorting.\n *\n * The operation is _intermediate_ and _stateful_.\n */\npublic inline fun <T, R : Comparable<R>> Sequence<T>.sortedBy(crossinline selector: (T) -> R?): Sequence<T> {\n return sortedWith(compareBy(selector))\n}\n\n/**\n * Returns a sequence that yields elements of this sequence sorted descending according to natural sort order of the value returned by specified [selector] function.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n *\n * The operation is _intermediate_ and _stateful_.\n */\npublic inline fun <T, R : Comparable<R>> Sequence<T>.sortedByDescending(crossinline selector: (T) -> R?): Sequence<T> {\n return sortedWith(compareByDescending(selector))\n}\n\n/**\n * Returns a sequence that yields elements of this sequence sorted descending according to their natural sort order.\n * \n * The sort is _stable_. It means that equal elements preserve
their order relative to each other after sorting.\n *\n * The operation is _intermediate_ and _stateful_.\n */\npublic fun <T : Comparable<T>> Sequence<T>.sortedDescending(): Sequence<T> {\n return sortedWith(reverseOrder())\n}\n\n/**\n * Returns a sequence that yields elements of this sequence sorted according to the specified [comparator].\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n *\n * The operation is _intermediate_ and _stateful_.\n */\npublic fun <T> Sequence<T>.sortedWith(comparator: Comparator<in T>): Sequence<T> {\n return object : Sequence<T> {\n override fun iterator(): Iterator<T> {\n val sortedList = this@sortedWith.toMutableList()\n sortedList.sortWith(comparator)\n return sortedList.iterator()\n }\n }\n}\n\n/**\n * Returns a [Map] containing key-value pairs provided by [transform] function\n * applied to elements of the given sequence.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original sequence.\n *\n * The operation is _terminal_.\n */\npublic inline fun <T, K, V> Sequence<T>.associate(transform: (T) -> Pair<K, V>): Map<K, V> {\n return associateTo(LinkedHashMap<K, V>(), transform)\n}\n\n/**\n * Returns a [Map] containing the elements from the given sequence indexed by the key\n * returned from [keySelector] function applied to each element.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original sequence.\n *\n * The operation is _terminal_.\n */\npublic inline fun <T, K> Sequence<T>.associateBy(keySelector: (T) -> K): Map<K, T> {\n return associateByTo(LinkedHashMap<K, T>(), keySelector)\n}\n\n/**\n * Returns a [Map] containing the values provided by [valueTransform]
and indexed by [keySelector] functions applied to elements of the given sequence.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original sequence.\n *\n * The operation is _terminal_.\n */\npublic inline fun <T, K, V> Sequence<T>.associateBy(keySelector: (T) -> K, valueTransform: (T) -> V): Map<K, V> {\n return associateByTo(LinkedHashMap<K, V>(), keySelector, valueTransform)\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector] function applied to each element of the given sequence\n * and value is the element itself.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n *\n * The operation is _terminal_.\n */\npublic inline fun <T, K, M : MutableMap<in K, in T>> Sequence<T>.associateByTo(destination:
M, keySelector: (T) -> K): M {\n for (element in this) {\n destination.put(keySelector(element), element)\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector] function and\n * and value is provided by the [valueTransform] function applied to elements of the given sequence.\n * \n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n *\n * The operation is _terminal_.\n */\npublic inline fun <T, K, V, M : MutableMap<in K, in V>> Sequence<T>.associateByTo(destination: M, keySelector: (T) -> K, valueTransform: (T) -> V): M {\n for (element in this) {\n destination.put(keySelector(element), valueTransform(element))\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs\n * provided by [transform] function applied to each element of the

given sequence.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n *\n * The operation is _terminal_.\n */\npublic inline fun <T, K, V, M : MutableMap<in K, in V>> Sequence<T>.associateTo(destination: M, transform: (T) -> Pair<K, V>): M {\n for (element in this) {\n destination += transform(element)\n }\n return destination\n}\n\n/**\n * Returns a [Map] where keys are elements from the given sequence and values are\n * produced by the [valueSelector] function applied to each element.\n * \n * If any two elements are equal, the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original sequence.\n *\n * The operation is _terminal_.\n * \n * @sample samples.collections.Collections.Transformations.associateWith\n */\n@SinceKotlin(\"1.3\")\npublic inline fun <K, V> Sequence<K>.associateWith(valueSelector: (K) -> V): Map<K, V> {\n val result = LinkedHashMap<K, V>()\n return associateWithTo(result, valueSelector)\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs for each element of the given sequence,\n * where key is the element itself and value is provided by the [valueSelector] function applied to that key.\n * \n * If any two elements are equal, the last one overwrites the former value in the map.\n *\n * The operation is _terminal_.\n */\n@SinceKotlin(\"1.3\")\npublic inline fun <K, V, M : MutableMap<in K, in V>> Sequence<K>.associateWithTo(destination: M, valueSelector: (K) -> V): M {\n for (element in this) {\n destination.put(element, valueSelector(element))\n }\n return destination\n}\n\n/**\n * Appends all elements to the given [destination] collection.\n *\n * The operation is _terminal_.\n */\npublic fun <T, C : MutableCollection<in T>> Sequence<T>.toCollection(destination: C): C {\n for (item in this) {\n destination.add(item)\n }\n return destination\n}\n\n/**\n * Returns a [HashSet] of all elements.\n *\n * The operation is _terminal_.\n */\npublic fun <T> Sequence<T>.toHashSet(): HashSet<T> {\n return toCollection(HashSet<T>())\n}\n\n/**\n * Returns a [List] containing all elements.\n *\n * The operation is _terminal_.\n */\npublic fun <T> Sequence<T>.toList(): List<T> {\n return this.toMutableList().optimizeReadOnlyList()\n}\n\n/**\n * Returns a [MutableList] filled with all elements of this sequence.\n *\n * The operation is _terminal_.\n */\npublic fun <T> Sequence<T>.toMutableList(): MutableList<T> {\n return toCollection(ArrayList<T>())\n}\n\n/**\n * Returns a [Set] of all elements.\n * \n * The returned set preserves the element iteration order of the original sequence.\n *\n * The operation is _terminal_.\n */\npublic fun <T> Sequence<T>.toSet(): Set<T> {\n return toCollection(LinkedHashSet<T>()).optimizeReadOnlySet()\n}\n\n/**\n * Returns a single sequence of all elements from results of [transform] function being invoked on each element of original sequence.\n *\n * The operation is _intermediate_ and _stateless_.\n */\npublic fun <T, R> Sequence<T>.flatMap(transform: (T) -> Sequence<R>): Sequence<R> {\n return FlatteningSequence(this, transform, { it.iterator() })\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being invoked on each element of original sequence, to the given [destination].\n *\n * The operation is _terminal_.\n */\npublic inline fun <T, R, C : MutableCollection<in R>> Sequence<T>.flatMapTo(destination: C, transform: (T) -> Sequence<R>): C {\n for (element in this) {\n val list = transform(element)\n destination.addAll(list)\n }\n return destination\n}\n\n/**\n * Groups elements of the original sequence by the key returned by the given [keySelector] function\n * applied to each element and returns a map where each group key is associated with a list of corresponding elements.\n * \n * The returned map preserves the entry iteration order of the keys produced from the original sequence.\n *\n * The operation is _terminal_.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\npublic inline fun <T, K> Sequence<T>.groupBy(keySelector: (T) -> K): Map<K, List<T>> {\n return groupByTo(LinkedHashMap<K, MutableList<T>>(), keySelector)\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the original sequence\n * by the key returned by the given [keySelector] function applied to the element\n * and returns a map where each group key is associated with a list of corresponding values.\n * \n * The returned map preserves the entry iteration order of the keys produced from the original sequence.\n *\n * The operation is _terminal_.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <T, K, V> Sequence<T>.groupBy(keySelector: (T) -> K, valueTransform: (T) -> V): Map<K, List<V>> {\n return

groupByTo(LinkedHashMap<K,
MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups elements of the original sequence by the key returned by the given [keySelector] function\n * applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.\n * \n * @return The [destination] map.\n *\n * The operation is _terminal_.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\npublic inline fun <T, K, M : MutableMap<in K, MutableList<T>>> Sequence<T>.groupByTo(destination: M, keySelector: (T) -> K): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<T>() }\n list.add(element)\n }\n return destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the original sequence\n * by the key returned by the given [keySelector] function applied to the element\n * and puts to the [destination]
map each group key associated with a list of corresponding values.\n * \n * @return The [destination] map.\n *\n * The operation is _terminal_.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <T, K, V, M : MutableMap<in K, MutableList<V>>> Sequence<T>.groupByTo(destination: M, keySelector: (T) -> K, valueTransform: (T) -> V): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<V>() }\n list.add(valueTransform(element))\n }\n return destination\n}\n\n/**\n * Creates a [Grouping] source from a sequence to be used later with one of group-and-fold operations\n * using the specified [keySelector] function to extract a key from each element.\n *\n * The operation is _intermediate_ and _stateless_.\n * \n * @sample samples.collections.Grouping.groupingByEachCount\n */\n@SinceKotlin(\"1.1\")\npublic inline fun <T, K> Sequence<T>.groupingBy(crossinline
keySelector: (T) -> K): Grouping<T, K> {\n return object : Grouping<T, K> {\n override fun sourceIterator(): Iterator<T> = this@groupingBy.iterator()\n override fun keyOf(element: T): K = keySelector(element)\n }\n}\n\n/**\n * Returns a sequence containing the results of applying the given [transform] function\n * to each element in the original sequence.\n *\n * The operation is _intermediate_ and _stateless_.\n */\npublic fun <T, R> Sequence<T>.map(transform: (T) -> R): Sequence<R> {\n return TransformingSequence(this, transform)\n}\n\n/**\n * Returns a sequence containing the results of applying the given [transform] function\n * to each element and its index in the original sequence.\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n *\n * The operation is _intermediate_ and _stateless_.\n */\npublic fun <T, R> Sequence<T>.mapIndexed(transform:
(index: Int, T) -> R): Sequence<R> {\n return TransformingIndexedSequence(this, transform)\n}\n\n/**\n * Returns a sequence containing only the non-null results of applying the given [transform] function\n * to each element and its index in the original sequence.\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n *\n * The operation is _intermediate_ and _stateless_.\n */\npublic fun <T, R : Any> Sequence<T>.mapIndexedNotNull(transform: (index: Int, T) -> R?): Sequence<R> {\n return TransformingIndexedSequence(this, transform).filterNotNull()\n}\n\n/**\n * Applies the given [transform] function to each element and its index in the original sequence\n * and appends only the non-null results to the given [destination].\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the
element.\n *\n * The operation is _terminal_.\n */\npublic inline fun <T, R : Any, C : MutableCollection<in R>> Sequence<T>.mapIndexedNotNullTo(destination: C, transform: (index: Int, T) -> R?): C {\n forEachIndexed { index, element -> transform(index, element)?.let { destination.add(it) } }\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element and its index in the original sequence\n * and appends the results to the given [destination].\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n *\n * The operation is _terminal_.\n */\npublic inline fun <T, R, C : MutableCollection<in R>> Sequence<T>.mapIndexedTo(destination: C, transform: (index: Int, T) -> R): C {\n var index = 0\n for (item in this)\n destination.add(transform(checkIndexOverflow(index++), item))\n return destination\n}\n\n/**\n * Returns a

sequence containing
only the non-null results of applying the given [transform] function\n * to each element in the original sequence.\n *\n * The operation is _intermediate_ and _stateless_.\n */\npublic fun <T, R : Any> Sequence<T>.mapNotNull(transform: (T) -> R?): Sequence<R> {\n return TransformingSequence(this, transform).filterNotNull()\n}\n\n/**\n * Applies the given [transform] function to each element in the original sequence\n * and appends only the non-null results to the given [destination].\n *\n * The operation is _terminal_.\n */\npublic inline fun <T, R : Any, C : MutableCollection<in R>> Sequence<T>.mapNotNullTo(destination: C, transform: (T) -> R?): C {\n forEach { element -> transform(element)?.let { destination.add(it) } }\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element of the original sequence\n * and appends the results to the given [destination].\n *\n * The operation is _terminal_.\n */\npublic inline fun <T, R, C : MutableCollection<in
R>> Sequence<T>.mapTo(destination: C, transform: (T) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return destination\n}\n\n/**\n * Returns a sequence of [IndexedValue] for each element of the original sequence.\n *\n * The operation is _intermediate_ and _stateless_.\n */\npublic fun <T> Sequence<T>.withIndex(): Sequence<IndexedValue<T>> {\n return IndexingSequence(this)\n}\n\n/**\n * Returns a sequence containing only distinct elements from the given sequence.\n * \n * The elements in the resulting sequence are in the same order as they were in the source sequence.\n *\n * The operation is _intermediate_ and _stateful_.\n */\npublic fun <T> Sequence<T>.distinct(): Sequence<T> {\n return this.distinctBy { it }\n}\n\n/**\n * Returns a sequence containing only elements from the given sequence\n * having distinct keys returned by the given [selector] function.\n * \n * The elements in the resulting sequence are in the same order as they were
in the source sequence.\n *\n * The operation is _intermediate_ and _stateful_.\n */\npublic fun <T, K> Sequence<T>.distinctBy(selector: (T) -> K): Sequence<T> {\n return DistinctSequence(this, selector)\n}\n\n/**\n * Returns a mutable set containing all distinct elements from the given sequence.\n * \n * The returned set preserves the element iteration order of the original sequence.\n *\n * The operation is _terminal_.\n */\npublic fun <T> Sequence<T>.toMutableSet(): MutableSet<T> {\n val set = LinkedHashSet<T>()\n for (item in this) set.add(item)\n return set\n}\n\n/**\n * Returns `true` if all elements match the given [predicate].\n *\n * The operation is _terminal_.\n * \n * @sample samples.collections.Collections.Aggregates.all\n */\npublic inline fun <T> Sequence<T>.all(predicate: (T) -> Boolean): Boolean {\n for (element in this) if (!predicate(element)) return false\n return true\n}\n\n/**\n * Returns `true` if sequence has at least one element.\n *\n * The
operation is _terminal_.\n * \n * @sample samples.collections.Collections.Aggregates.any\n */\npublic fun <T> Sequence<T>.any(): Boolean {\n return iterator().hasNext()\n}\n\n/**\n * Returns `true` if at least one element matches the given [predicate].\n *\n * The operation is _terminal_.\n * \n * @sample samples.collections.Collections.Aggregates.anyWithPredicate\n */\npublic inline fun <T> Sequence<T>.any(predicate: (T) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return true\n return false\n}\n\n/**\n * Returns the number of elements in this sequence.\n *\n * The operation is _terminal_.\n */\npublic fun <T> Sequence<T>.count(): Int {\n var count = 0\n for (element in this) checkCountOverflow(++count)\n return count\n}\n\n/**\n * Returns the number of elements matching the given [predicate].\n *\n * The operation is _terminal_.\n */\npublic inline fun <T> Sequence<T>.count(predicate: (T) -> Boolean): Int {\n var count = 0\n for (element
in this) if (predicate(element)) checkCountOverflow(++count)\n return count\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element.\n *\n * The operation is _terminal_.\n */\npublic inline fun <T, R> Sequence<T>.fold(initial: R, operation: (acc: R, T) -> R): R {\n var accumulator = initial\n for (element in this) accumulator = operation(accumulator, element)\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original sequence.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n *\n * The operation is _terminal_.\n */\npublic inline fun <T, R> Sequence<T>.foldIndexed(initial: R, operation: (index: Int, acc: R, T) ->

R): R {\n   var index = 0\n   var accumulator = initial\n   for (element in this) accumulator = operation(checkIndexOverflow(index++), accumulator, element)\n   return accumulator\n}\n\n/**\n * Performs the given [action] on each element.\n *\n * The operation is _terminal_.\n */\npublic inline fun <T> Sequence<T>.forEach(action: (T) -> Unit): Unit {\n   for (element in this) action(element)\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index with the element.\n * @param [action] function that takes the index of an element and the element itself\n * and performs the desired action on the element.\n *\n * The operation is _terminal_.\n */\npublic inline fun <T> Sequence<T>.forEachIndexed(action: (index: Int, T) -> Unit): Unit {\n   var index = 0\n   for (item in this) action(checkIndexOverflow(index++), item)\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n *\n *
The operation is _terminal_.\n */\n@SinceKotlin(\"1.1\")\npublic fun Sequence<Double>.max(): Double? {\n   val iterator = iterator()\n   if (!iterator.hasNext()) return null\n   var max = iterator.next()\n   if (max.isNaN()) return max\n   while (iterator.hasNext()) {\n   val e = iterator.next()\n   if (e.isNaN()) return e\n   if (max < e) max = e\n   }\n   return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n *\n * The operation is _terminal_.\n */\n@SinceKotlin(\"1.1\")\npublic fun Sequence<Float>.max(): Float? {\n   val iterator = iterator()\n   if (!iterator.hasNext()) return null\n   var max = iterator.next()\n   if (max.isNaN()) return max\n   while (iterator.hasNext()) {\n   val e = iterator.next()\n   if (e.isNaN()) return e\n   if (max < e) max = e\n   }\n   return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n
*\n * The operation is _terminal_.\n */\npublic fun <T : Comparable<T>> Sequence<T>.max(): T? {\n   val iterator = iterator()\n   if (!iterator.hasNext()) return null\n   var max = iterator.next()\n   while (iterator.hasNext()) {\n   val e = iterator.next()\n   if (max < e) max = e\n   }\n   return max\n}\n\n/**\n * Returns the first element yielding the largest value of the given function or `null` if there are no elements.\n *\n * The operation is _terminal_.\n * \n * @sample samples.collections.Collections.Aggregates.maxBy\n */\npublic inline fun <T, R : Comparable<R>> Sequence<T>.maxBy(selector: (T) -> R): T? {\n   val iterator = iterator()\n   if (!iterator.hasNext()) return null\n   var maxElem = iterator.next()\n   var maxValue = selector(maxElem)\n   while (iterator.hasNext()) {\n   val e = iterator.next()\n   val v = selector(e)\n   if (maxValue < v) {\n   maxElem = e\n   maxValue = v\n   }\n   }\n   return maxElem\n}\n\n/**\n
* Returns the first element having the largest value according to the provided [comparator] or `null` if there are no elements.\n *\n * The operation is _terminal_.\n */\npublic fun <T> Sequence<T>.maxWith(comparator: Comparator<in T>): T? {\n   val iterator = iterator()\n   if (!iterator.hasNext()) return null\n   var max = iterator.next()\n   while (iterator.hasNext()) {\n   val e = iterator.next()\n   if (comparator.compare(max, e) < 0) max = e\n   }\n   return max\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n *\n * The operation is _terminal_.\n */\n@SinceKotlin(\"1.1\")\npublic fun Sequence<Double>.min(): Double? {\n   val iterator = iterator()\n   if (!iterator.hasNext()) return null\n   var min = iterator.next()\n   if (min.isNaN()) return min\n   while (iterator.hasNext()) {\n   val e = iterator.next()\n   if (e.isNaN()) return e\n   if (min >
e) min = e\n   }\n   return min\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n *\n * The operation is _terminal_.\n */\n@SinceKotlin(\"1.1\")\npublic fun Sequence<Float>.min(): Float? {\n   val iterator = iterator()\n   if (!iterator.hasNext()) return null\n   var min = iterator.next()\n   if (min.isNaN()) return min\n   while (iterator.hasNext()) {\n   val e = iterator.next()\n   if (e.isNaN()) return e\n   if (min > e) min = e\n   }\n   return min\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n *\n * The operation is _terminal_.\n */\npublic fun <T : Comparable<T>> Sequence<T>.min(): T? {\n   val iterator = iterator()\n   if (!iterator.hasNext()) return null\n   var min = iterator.next()\n   while (iterator.hasNext()) {\n   val e = iterator.next()\n   if (min > e) min = e\n   }\n   return min\n}\n\n/**\n * Returns the first element
yielding the smallest value of the given function or `null` if there are no elements.\n *\n * The operation is _terminal_.\n * \n * @sample samples.collections.Collections.Aggregates.minBy\n */\npublic inline fun <T, R : Comparable<R>> Sequence<T>.minBy(selector: (T) -> R): T? {\n   val iterator = iterator()\n   if

(!iterator.hasNext()) return null\n   var minElem = iterator.next()\n   var minValue = selector(minElem)\n   while (iterator.hasNext()) {\n   val e = iterator.next()\n   val v = selector(e)\n   if (minValue > v) {\n   minElem = e\n   minValue = v\n   }\n   }\n   return minElem\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n *\n * The operation is _terminal_.\n */\npublic fun <T> Sequence<T>.minWith(comparator: Comparator<in T>): T? {\n   val iterator = iterator()\n   if (!iterator.hasNext()) return null\n   var min = iterator.next()\n   while (iterator.hasNext()) {\n   val e = iterator.next()\n   if (comparator.compare(min, e) > 0) min = e\n   }\n   return min\n}\n\n/**\n * Returns `true` if the sequence has no elements.\n *\n * The operation is _terminal_.\n * \n * @sample samples.collections.Collections.Aggregates.none\n */\npublic fun <T> Sequence<T>.none(): Boolean {\n   return !iterator().hasNext()\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n *\n * The operation is _terminal_.\n * \n * @sample samples.collections.Collections.Aggregates.noneWithPredicate\n */\npublic inline fun <T> Sequence<T>.none(predicate: (T) -> Boolean): Boolean {\n   for (element in this) if (predicate(element)) return false\n   return true\n}\n\n/**\n * Returns a sequence which performs the given [action] on each element of the original sequence as they pass through it.\n *\n * The operation is _intermediate_ and _stateless_.\n */\n@SinceKotlin(\"1.1\")\npublic fun <T> Sequence<T>.onEach(action: (T) -> Unit): Sequence<T> {\n   return map {\n   action(it)\n   it\n   }\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right to current accumulator value and each element.\n *\n * The operation is _terminal_.\n */\npublic inline fun <S, T : S> Sequence<T>.reduce(operation: (acc: S, T) -> S): S {\n   val iterator = this.iterator()\n   if (!iterator.hasNext()) throw UnsupportedOperationException(\"Empty sequence can't be reduced.\")\n   var accumulator: S = iterator.next()\n   while (iterator.hasNext()) {\n   accumulator = operation(accumulator, iterator.next())\n   }\n   return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original sequence.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself and calculates the next accumulator value.\n *\n * The operation is _terminal_.\n */\npublic inline fun <S, T : S> Sequence<T>.reduceIndexed(operation: (index: Int, acc: S, T) -> S): S {\n   val iterator = this.iterator()\n   if (!iterator.hasNext()) throw UnsupportedOperationException(\"Empty sequence can't be reduced.\")\n   var index = 1\n   var accumulator: S = iterator.next()\n   while (iterator.hasNext()) {\n   accumulator = operation(checkIndexOverflow(index++), accumulator, iterator.next())\n   }\n   return accumulator\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the sequence.\n *\n * The operation is _terminal_.\n */\npublic inline fun <T> Sequence<T>.sumBy(selector: (T) -> Int): Int {\n   var sum: Int = 0\n   for (element in this) {\n   sum += selector(element)\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the sequence.\n *\n * The operation is _terminal_.\n */\npublic inline fun <T> Sequence<T>.sumByDouble(selector: (T) -> Double): Double {\n   var sum: Double = 0.0\n   for (element in this) {\n   sum += selector(element)\n   }\n   return sum\n}\n\n/**\n * Returns an original collection containing all the non-`null` elements, throwing an [IllegalArgumentException] if there are any `null` elements.\n *\n * The operation is _intermediate_ and _stateless_.\n */\npublic fun <T : Any> Sequence<T?>.requireNoNulls(): Sequence<T> {\n   return map { it ?: throw IllegalArgumentException(\"null element found in $this.\") }\n}\n\n/**\n * Splits this sequence into a sequence of lists each not exceeding the given [size].\n * \n * The last list in the resulting sequence may have less elements than the given [size].\n * \n * @param size the number of elements to take in each list, must be positive and can be greater than the number of elements in this sequence.\n *\n * The operation is _intermediate_ and _stateful_.\n * \n * @sample samples.collections.Collections.Transformations.chunked\n */\n@SinceKotlin(\"1.2\")\npublic fun <T> Sequence<T>.chunked(size: Int): Sequence<List<T>> {\n   return windowed(size, size, partialWindows = true)\n}\n\n/**\n * Splits this sequence into several lists each not exceeding the given [size]\n * and applies the given [transform] function to an each.\n * \n * @return sequence of results of the [transform] applied to an each list.\n * \n * Note that the list passed to the [transform] function is ephemeral and is

valid only inside that function.\n * You should not store it or allow it to escape in some way, unless you made a snapshot of it.\n * The last list may have less elements than the given [size].\n * \n * @param size the number of elements to take in each list, must be positive and can be greater than the number of elements in this sequence.\n *\n * The operation is _intermediate_ and _stateful_.\n * \n * @sample samples.text.Strings.chunkedTransform\n */\n@SinceKotlin(\"1.2\")\npublic fun <T, R> Sequence<T>.chunked(size: Int, transform: (List<T>) -> R): Sequence<R> {\n return windowed(size, size, partialWindows = true, transform = transform)\n}\n\n/**\n * Returns a sequence containing all elements of the original sequence without the first occurrence of the given [element].\n *\n * The operation is _intermediate_ and _stateless_.\n */\npublic operator fun <T> Sequence<T>.minus(element: T): Sequence<T> {\n return object: Sequence<T> {\n override fun iterator(): Iterator<T> {\n var removed = false\n return this@minus.filter { if (!removed && it == element) { removed = true; false } else true }.iterator()\n }\n }\n}\n\n/**\n * Returns a sequence containing all elements of original sequence except the elements contained in the given [elements] array.\n * \n * Note that the source sequence and the array being subtracted are iterated only when an `iterator` is requested from\n * the resulting sequence. Changing any of them between successive calls to `iterator` may affect the result.\n * \n * The [elements] array may be converted to a [HashSet] to speed up the operation, thus the elements are required to have\n * a correct and stable implementation of `hashCode()` that doesn't change between successive invocations.\n *\n * The operation is _intermediate_ and _stateful_.\n */\npublic operator fun <T> Sequence<T>.minus(elements: Array<out T>): Sequence<T> {\n if (elements.isEmpty()) return this\n return object: Sequence<T> {\n override fun iterator(): Iterator<T> {\n val other = elements.toHashSet()\n return this@minus.filterNot { it in other }.iterator()\n }\n }\n}\n\n/**\n * Returns a sequence containing all elements of original sequence except the elements contained in the given [elements] collection.\n * \n * Note that the source sequence and the collection being subtracted are iterated only when an `iterator` is requested from\n * the resulting sequence. Changing any of them between successive calls to `iterator` may affect the result.\n * \n * The [elements] collection may be converted to a [HashSet] to speed up the operation, thus the elements are required to have\n * a correct and stable implementation of `hashCode()` that doesn't change between successive invocations.\n *\n * The operation is _intermediate_ and _stateful_.\n */\npublic operator fun <T> Sequence<T>.minus(elements: Iterable<T>): Sequence<T> {\n return object: Sequence<T> {\n override fun iterator(): Iterator<T> {\n val other = elements.convertToSetForSetOperation()\n if (other.isEmpty())\n return this@minus.iterator()\n else\n return this@minus.filterNot { it in other }.iterator()\n }\n }\n}\n\n/**\n * Returns a sequence containing all elements of original sequence except the elements contained in the given [elements] sequence.\n * \n * Note that the source sequence and the sequence being subtracted are iterated only when an `iterator` is requested from\n * the resulting sequence. Changing any of them between successive calls to `iterator` may affect the result.\n * \n * The operation is _intermediate_ for this sequence and _terminal_ and _stateful_ for the [elements] sequence.\n * \n * The [elements] sequence may be converted to a [HashSet] to speed up the operation, thus the elements are required to have\n * a correct and stable implementation of `hashCode()` that doesn't change between successive invocations.\n */\npublic operator fun <T> Sequence<T>.minus(elements: Sequence<T>): Sequence<T> {\n return object: Sequence<T> {\n override fun iterator(): Iterator<T> {\n val other = elements.toHashSet()\n if (other.isEmpty())\n return this@minus.iterator()\n else\n return this@minus.filterNot { it in other }.iterator()\n }\n }\n}\n\n/**\n * Returns a sequence containing all elements of the original sequence without the first occurrence of the given [element].\n *\n * The operation is _intermediate_ and _stateless_.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Sequence<T>.minusElement(element: T): Sequence<T> {\n return minus(element)\n}\n\n/**\n * Splits the original sequence into pair of lists,\n * where *first* list contains elements for which [predicate] yielded `true`,\n * while *second* list contains elements for which [predicate] yielded `false`.\n *\n * The operation is _terminal_.\n */\npublic inline fun <T> Sequence<T>.partition(predicate: (T) -> Boolean): Pair<List<T>, List<T>> {\n val first = ArrayList<T>()\n val second = ArrayList<T>()\n for (element in this) {\n if (predicate(element)) {\n first.add(element)\n } else {\n second.add(element)\n }\n }\n return Pair(first,

second)\n}\n\n/**\n * Returns a sequence containing all elements of the original
sequence and then the given [element].\n *\n * The operation is _intermediate_ and _stateless_.\n */\npublic operator fun <T> Sequence<T>.plus(element: T): Sequence<T> {\n return sequenceOf(this, sequenceOf(element)).flatten()\n}\n\n/**\n * Returns a sequence containing all elements of original sequence and then all elements of the given [elements] array.\n * \n * Note that the source sequence and the array being added are iterated only when an `iterator` is requested from\n * the resulting sequence. Changing any of them between successive calls to `iterator` may affect the result.\n *\n * The operation is _intermediate_ and _stateless_.\n */\npublic operator fun <T> Sequence<T>.plus(elements: Array<out T>): Sequence<T> {\n return this.plus(elements.asList())\n}\n\n/**\n * Returns a sequence containing all elements of original sequence and then all elements of the given [elements] collection.\n * \n * Note that the source sequence and the collection being added are iterated only
when an `iterator` is requested from\n * the resulting sequence. Changing any of them between successive calls to `iterator` may affect the result.\n *\n * The operation is _intermediate_ and _stateless_.\n */\npublic operator fun <T> Sequence<T>.plus(elements: Iterable<T>): Sequence<T> {\n return sequenceOf(this, elements.asSequence()).flatten()\n}\n\n/**\n * Returns a sequence containing all elements of original sequence and then all elements of the given [elements] sequence.\n * \n * Note that the source sequence and the sequence being added are iterated only when an `iterator` is requested from\n * the resulting sequence. Changing any of them between successive calls to `iterator` may affect the result.\n *\n * The operation is _intermediate_ and _stateless_.\n */\npublic operator fun <T> Sequence<T>.plus(elements: Sequence<T>): Sequence<T> {\n return sequenceOf(this, elements).flatten()\n}\n\n/**\n * Returns a sequence containing all elements of the original sequence and then
the given [element].\n *\n * The operation is _intermediate_ and _stateless_.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Sequence<T>.plusElement(element: T): Sequence<T> {\n return plus(element)\n}\n\n/**\n * Returns a sequence of snapshots of the window of the given [size]\n * sliding along this sequence with the given [step], where each\n * snapshot is a list.\n * \n * Several last lists may have less elements than the given [size].\n * \n * Both [size] and [step] must be positive and can be greater than the number of elements in this sequence.\n * @param size the number of elements to take in each window\n * @param step the number of elements to move the window forward by on an each step, by default 1\n * @param partialWindows controls whether or not to keep partial windows in the end if any,\n * by default `false` which means partial windows won't be preserved\n * \n * @sample samples.collections.Sequences.Transformations.takeWindows\n */\n@SinceKotlin(\"1.2\")\npublic
fun <T> Sequence<T>.windowed(size: Int, step: Int = 1, partialWindows: Boolean = false): Sequence<List<T>> {\n return windowedSequence(size, step, partialWindows, reuseBuffer = false)\n}\n\n/**\n * Returns a sequence of results of applying the given [transform] function to\n * an each list representing a view over the window of the given [size]\n * sliding along this sequence with the given [step].\n * \n * Note that the list passed to the [transform] function is ephemeral and is valid only inside that function.\n * You should not store it or allow it to escape in some way, unless you made a snapshot of it.\n * Several last lists may have less elements than the given [size].\n * \n * Both [size] and [step] must be positive and can be greater than the number of elements in this sequence.\n * @param size the number of elements to take in each window\n * @param step the number of elements to move the window forward by on an each step, by default 1\n * @param partialWindows controls
whether or not to keep partial windows in the end if any,\n * by default `false` which means partial windows won't be preserved\n * \n * @sample samples.collections.Sequences.Transformations.averageWindows\n */\n@SinceKotlin(\"1.2\")\npublic fun <T, R> Sequence<T>.windowed(size: Int, step: Int = 1, partialWindows: Boolean = false, transform: (List<T>) -> R): Sequence<R> {\n return windowedSequence(size, step, partialWindows, reuseBuffer = true).map(transform)\n}\n\n/**\n * Returns a sequence of values built from the elements of `this` sequence and the [other] sequence with the same index.\n * The resulting sequence ends as soon as the shortest input sequence ends.\n *\n * The operation is _intermediate_ and _stateless_.\n * \n * @sample samples.collections.Sequences.Transformations.zip\n */\npublic infix fun <T, R> Sequence<T>.zip(other:

Sequence<R>): Sequence<Pair<T, R>> {\n   return MergingSequence(this, other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a sequence of values
 built from the elements of `this` sequence and the [other] sequence with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The resulting sequence ends as soon as the shortest input sequence ends.\n *\n * The operation is _intermediate_ and _stateless_.\n * \n * @sample samples.collections.Sequences.Transformations.zipWithTransform\n */\npublic fun <T, R, V> Sequence<T>.zip(other: Sequence<R>, transform: (a: T, b: R) -> V): Sequence<V> {\n   return MergingSequence(this, other, transform)\n}\n\n/**\n * Returns a sequence of pairs of each two adjacent elements in this sequence.\n * \n * The returned sequence is empty if this sequence contains less than two elements.\n *\n * The operation is _intermediate_ and _stateless_.\n * \n * @sample samples.collections.Collections.Transformations.zipWithNext\n */\n@SinceKotlin(\"1.2\")\npublic fun <T> Sequence<T>.zipWithNext(): Sequence<Pair<T, T>> {\n   return zipWithNext { a, b -> a to b }\n}\n\n/**\n
 * Returns a sequence containing the results of applying the given [transform] function\n * to an each pair of two adjacent elements in this sequence.\n * \n * The returned sequence is empty if this sequence contains less than two elements.\n *\n * The operation is _intermediate_ and _stateless_.\n * \n * @sample samples.collections.Collections.Transformations.zipWithNextToFindDeltas\n */\n@SinceKotlin(\"1.2\")\npublic fun <T, R> Sequence<T>.zipWithNext(transform: (a: T, b: T) -> R): Sequence<R> {\n   return sequence result@ {\n   val iterator = iterator()\n   if (!iterator.hasNext()) return@result\n   var current = iterator.next()\n   while (iterator.hasNext()) {\n   val next = iterator.next()\n   yield(transform(current, next))\n   current = next\n   }\n   }\n}\n\n/**\n * Appends the string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could
 be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to \"...\").\n *\n * The operation is _terminal_.\n * \n * @sample samples.collections.Collections.Transformations.joinTo\n */\npublic fun <T, A : Appendable> Sequence<T>.joinTo(buffer: A, separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((T) -> CharSequence)? = null): A {\n   buffer.append(prefix)\n   var count = 0\n   for (element in this) {\n   if (++count > 1) buffer.append(separator)\n   if (limit < 0 || count <= limit) {\n   buffer.appendElement(element, transform)\n   } else break\n   }\n   if (limit >= 0 && count > limit) buffer.append(truncated)\n   buffer.append(postfix)\n   return buffer\n}\n\n/**\n * Creates a string from all the elements separated using [separator]
 and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to \"...\").\n *\n * The operation is _terminal_.\n * \n * @sample samples.collections.Collections.Transformations.joinToString\n */\npublic fun <T> Sequence<T>.joinToString(separator: CharSequence = \", \", prefix: CharSequence = \"\", postfix: CharSequence = \"\", limit: Int = -1, truncated: CharSequence = \"...\", transform: ((T) -> CharSequence)? = null): String {\n   return joinTo(StringBuilder(), separator, prefix, postfix, limit, truncated, transform).toString()\n}\n\n/**\n * Creates an [Iterable] instance that wraps the original sequence returning its elements when being iterated.\n */\npublic fun <T> Sequence<T>.asIterable(): Iterable<T> {\n   return Iterable { this.iterator() }\n}\n\n/**\n * Returns this sequence
 as a [Sequence].\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Sequence<T>.asSequence(): Sequence<T> {\n   return this\n}\n\n/**\n * Returns an average value of elements in the sequence.\n *\n * The operation is _terminal_.\n */\n@kotlin.jvm.JvmName(\"averageOfByte\")\npublic fun Sequence<Byte>.average(): Double {\n   var sum: Double = 0.0\n   var count: Int = 0\n   for (element in this) {\n   sum += element\n   checkCountOverflow(++count)\n   }\n   return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the sequence.\n *\n * The operation is _terminal_.\n */\n@kotlin.jvm.JvmName(\"averageOfShort\")\npublic fun Sequence<Short>.average(): Double {\n   var sum: Double = 0.0\n   var count: Int = 0\n   for (element in this) {\n   sum += element\n   checkCountOverflow(++count)\n   }\n   return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns

an average value of elements in the sequence.\n
*\n * The operation is _terminal_.\n */\n@kotlin.jvm.JvmName(\"averageOfInt\")\npublic fun Sequence<Int>.average(): Double {\n var sum: Double = 0.0\n var count: Int = 0\n for (element in this) {\n sum += element\n checkCountOverflow(++count)\n }\n return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the sequence.\n *\n * The operation is _terminal_.\n */\n@kotlin.jvm.JvmName(\"averageOfLong\")\npublic fun Sequence<Long>.average(): Double {\n var sum: Double = 0.0\n var count: Int = 0\n for (element in this) {\n sum += element\n checkCountOverflow(++count)\n }\n return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the sequence.\n *\n * The operation is _terminal_.\n */\n@kotlin.jvm.JvmName(\"averageOfFloat\")\npublic fun Sequence<Float>.average(): Double {\n var sum: Double = 0.0\n var count: Int = 0\n for (element
in this) {\n sum += element\n checkCountOverflow(++count)\n }\n return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the sequence.\n *\n * The operation is _terminal_.\n */\n@kotlin.jvm.JvmName(\"averageOfDouble\")\npublic fun Sequence<Double>.average(): Double {\n var sum: Double = 0.0\n var count: Int = 0\n for (element in this) {\n sum += element\n checkCountOverflow(++count)\n }\n return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns the sum of all elements in the sequence.\n *\n * The operation is _terminal_.\n */\n@kotlin.jvm.JvmName(\"sumOfByte\")\npublic fun Sequence<Byte>.sum(): Int {\n var sum: Int = 0\n for (element in this) {\n sum += element\n }\n return sum\n}\n\n/**\n * Returns the sum of all elements in the sequence.\n *\n * The operation is _terminal_.\n */\n@kotlin.jvm.JvmName(\"sumOfShort\")\npublic fun Sequence<Short>.sum():
Int {\n var sum: Int = 0\n for (element in this) {\n sum += element\n }\n return sum\n}\n\n/**\n * Returns the sum of all elements in the sequence.\n *\n * The operation is _terminal_.\n */\n@kotlin.jvm.JvmName(\"sumOfInt\")\npublic fun Sequence<Int>.sum(): Int {\n var sum: Int = 0\n for (element in this) {\n sum += element\n }\n return sum\n}\n\n/**\n * Returns the sum of all elements in the sequence.\n *\n * The operation is _terminal_.\n */\n@kotlin.jvm.JvmName(\"sumOfLong\")\npublic fun Sequence<Long>.sum(): Long {\n var sum: Long = 0L\n for (element in this) {\n sum += element\n }\n return sum\n}\n\n/**\n * Returns the sum of all elements in the sequence.\n *\n * The operation is _terminal_.\n */\n@kotlin.jvm.JvmName(\"sumOfFloat\")\npublic fun Sequence<Float>.sum(): Float {\n var sum: Float = 0.0f\n for (element in this) {\n sum += element\n }\n return sum\n}\n\n/**\n * Returns the sum of all elements
in the sequence.\n *\n * The operation is _terminal_.\n */\n@kotlin.jvm.JvmName(\"sumOfDouble\")\npublic fun Sequence<Double>.sum(): Double {\n var sum: Double = 0.0\n for (element in this) {\n sum += element\n }\n return sum\n}\n\n",null,"/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"SetsKt\")\n\npackage kotlin.collections\n\n//\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n//\n\nimport kotlin.random.*\n\n/**\n * Returns a set containing all elements of the original set except the given [element].\n * \n * The returned set preserves the element iteration order of the original set.\n */\npublic operator fun <T> Set<T>.minus(element: T): Set<T> {\n val result = LinkedHashSet<T>(mapCapacity(size))\n
var removed = false\n return this.filterTo(result) { if (!removed && it == element) { removed = true; false } else true }\n}\n\n/**\n * Returns a set containing all elements of the original set except the elements contained in the given [elements] array.\n * \n * The returned set preserves the element iteration order of the original set.\n * \n * The [elements] array may be converted to a [HashSet] to speed up the operation, thus the elements are required to have\n * a correct and stable implementation of `hashCode()` that doesn't change between successive invocations.\n */\npublic operator fun <T> Set<T>.minus(elements: Array<out T>): Set<T> {\n val result = LinkedHashSet<T>(this)\n result.removeAll(elements)\n return result\n}\n\n/**\n * Returns a set containing all elements of the original set except the elements contained in the given [elements] collection.\n * \n * The returned

set preserves the element iteration order of the original set.\n * \n * The
[elements] collection may be converted to a [HashSet] to speed up the operation, thus the elements are required to have\n * a correct and stable implementation of `hashCode()` that doesn't change between successive invocations.\n */\npublic operator fun <T> Set<T>.minus(elements: Iterable<T>): Set<T> {\n val other = elements.convertToSetForSetOperationWith(this)\n if (other.isEmpty())\n return this.toSet()\n if (other is Set)\n return this.filterNotTo(LinkedHashSet<T>()) { it in other }\n val result = LinkedHashSet<T>(this)\n result.removeAll(other)\n return result\n}\n\n/**\n * Returns a set containing all elements of the original set except the elements contained in the given [elements] sequence.\n * \n * The returned set preserves the element iteration order of the original set.\n * \n * The [elements] sequence may be converted to a [HashSet] to speed up the operation, thus the elements are required to have\n * a correct and stable implementation of
`hashCode()` that doesn't change between successive invocations.\n */\npublic operator fun <T> Set<T>.minus(elements: Sequence<T>): Set<T> {\n val result = LinkedHashSet<T>(this)\n result.removeAll(elements)\n return result\n}\n\n/**\n * Returns a set containing all elements of the original set except the given [element].\n * \n * The returned set preserves the element iteration order of the original set.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Set<T>.minusElement(element: T): Set<T> {\n return minus(element)\n}\n\n/**\n * Returns a set containing all elements of the original set and then the given [element] if it isn't already in this set.\n * \n * The returned set preserves the element iteration order of the original set.\n */\npublic operator fun <T> Set<T>.plus(element: T): Set<T> {\n val result = LinkedHashSet<T>(mapCapacity(size + 1))\n result.addAll(this)\n result.add(element)\n return result\n}\n\n/**\n * Returns a set containing all elements
of the original set and the given [elements] array,\n * which aren't already in this set.\n * \n * The returned set preserves the element iteration order of the original set.\n */\npublic operator fun <T> Set<T>.plus(elements: Array<out T>): Set<T> {\n val result = LinkedHashSet<T>(mapCapacity(this.size + elements.size))\n result.addAll(this)\n result.addAll(elements)\n return result\n}\n\n/**\n * Returns a set containing all elements of the original set and the given [elements] collection,\n * which aren't already in this set.\n * The returned set preserves the element iteration order of the original set.\n */\npublic operator fun <T> Set<T>.plus(elements: Iterable<T>): Set<T> {\n val result = LinkedHashSet<T>(mapCapacity(elements.collectionSizeOrNull()?.let { this.size + it } ?: this.size * 2))\n result.addAll(this)\n result.addAll(elements)\n return result\n}\n\n/**\n * Returns a set containing all elements of the original set and the given [elements] sequence,\n
* which aren't already in this set.\n * \n * The returned set preserves the element iteration order of the original set.\n */\npublic operator fun <T> Set<T>.plus(elements: Sequence<T>): Set<T> {\n val result = LinkedHashSet<T>(mapCapacity(this.size * 2))\n result.addAll(this)\n result.addAll(elements)\n return result\n}\n\n/**\n * Returns a set containing all elements of the original set and then the given [element] if it isn't already in this set.\n * \n * The returned set preserves the element iteration order of the original set.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Set<T>.plusElement(element: T): Set<T> {\n return plus(element)\n}\n\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"StringsKt\")\n\npackage kotlin.text\n\n//\n// NOTE: THIS FILE IS AUTO-GENERATED
by the GenerateStandardLib.kt\n// See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n//\n\nimport kotlin.random.*\n\n/**\n * Returns a character at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this char sequence.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic expect fun CharSequence.elementAt(index: Int): Char\n\n/**\n * Returns a character at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this char sequence.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrElse\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.elementAtOrElse(index: Int, defaultValue: (Int) -> Char): Char {\n return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns a character at the given [index] or `null` if

the [index] is out of bounds of this char sequence.\n * \n
 * @sample samples.collections.Collections.Elements.elementAtOrNull\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.elementAtOrNull(index: Int): Char? {\n   return this.getOrNull(index)\n}\n\n/**\n * Returns the first character matching the given [predicate], or `null` if no such character was found.\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.find(predicate: (Char) -> Boolean): Char? {\n return firstOrNull(predicate)\n}\n\n/**\n * Returns the last character matching the given [predicate], or `null` if no such character was found.\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.findLast(predicate: (Char) -> Boolean): Char? {\n   return lastOrNull(predicate)\n}\n\n/**\n * Returns first character.\n * @throws [NoSuchElementException] if the char sequence is empty.\n */\npublic fun CharSequence.first(): Char {\n   if (isEmpty())\n   throw NoSuchElementException(\"Char sequence is empty.\")\n   return this[0]\n}\n\n/**\n
 * Returns the first character matching the given [predicate].\n * @throws [NoSuchElementException] if no such character is found.\n */\npublic inline fun CharSequence.first(predicate: (Char) -> Boolean): Char {\n   for (element in this) if (predicate(element)) return element\n   throw NoSuchElementException(\"Char sequence contains no character matching the predicate.\")\n}\n\n/**\n * Returns the first character, or `null` if the char sequence is empty.\n */\npublic fun CharSequence.firstOrNull(): Char? {\n   return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first character matching the given [predicate], or `null` if character was not found.\n */\npublic inline fun CharSequence.firstOrNull(predicate: (Char) -> Boolean): Char? {\n   for (element in this) if (predicate(element)) return element\n   return null\n}\n\n/**\n * Returns a character at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this char sequence.\n
 */\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.getOrElse(index: Int, defaultValue: (Int) -> Char): Char {\n   return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns a character at the given [index] or `null` if the [index] is out of bounds of this char sequence.\n */\npublic fun CharSequence.getOrNull(index: Int): Char? {\n   return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns index of the first character matching the given [predicate], or -1 if the char sequence does not contain such character.\n */\npublic inline fun CharSequence.indexOfFirst(predicate: (Char) -> Boolean): Int {\n for (index in indices) {\n   if (predicate(this[index])) {\n   return index\n   }\n   }\n   return -1\n}\n\n/**\n * Returns index of the last character matching the given [predicate], or -1 if the char sequence does not contain such character.\n */\npublic inline fun CharSequence.indexOfLast(predicate:
 (Char) -> Boolean): Int {\n   for (index in indices.reversed()) {\n   if (predicate(this[index])) {\n   return index\n   }\n   }\n   return -1\n}\n\n/**\n * Returns the last character.\n * @throws [NoSuchElementException] if the char sequence is empty.\n */\npublic fun CharSequence.last(): Char {\n   if (isEmpty())\n   throw NoSuchElementException(\"Char sequence is empty.\")\n   return this[lastIndex]\n}\n\n/**\n * Returns the last character matching the given [predicate].\n * @throws [NoSuchElementException] if no such character is found.\n */\npublic inline fun CharSequence.last(predicate: (Char) -> Boolean): Char {\n   for (index in this.indices.reversed()) {\n   val element = this[index]\n   if (predicate(element)) return element\n   }\n   throw NoSuchElementException(\"Char sequence contains no character matching the predicate.\")\n}\n\n/**\n * Returns the last character, or `null` if the char sequence is empty.\n
 */\npublic fun CharSequence.lastOrNull(): Char? {\n   return if (isEmpty()) null else this[length - 1]\n}\n\n/**\n * Returns the last character matching the given [predicate], or `null` if no such character was found.\n */\npublic inline fun CharSequence.lastOrNull(predicate: (Char) -> Boolean): Char? {\n   for (index in this.indices.reversed()) {\n
 val element = this[index]\n   if (predicate(element)) return element\n   }\n   return null\n}\n\n/**\n * Returns a random character from this char sequence.\n * \n * @throws NoSuchElementException if this char sequence is empty.\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.random(): Char {\n   return random(Random)\n}\n\n/**\n * Returns a random character from this char sequence using the specified source of randomness.\n * \n * @throws NoSuchElementException if this char sequence is empty.\n */\n@SinceKotlin(\"1.3\")\npublic fun CharSequence.random(random: Random): Char {\n
  if (isEmpty())\n   throw NoSuchElementException(\"Char sequence is empty.\")\n   return get(random.nextInt(length))\n}\n\n/**\n * Returns the single character, or throws an exception if the char sequence

is empty or has more than one character.\n */\npublic fun CharSequence.single(): Char {\n return when (length) {\n 0 -> throw NoSuchElementException(\"Char sequence is empty.\")\n 1 -> this[0]\n else -> throw IllegalArgumentException(\"Char sequence has more than one element.\")\n }\n}\n\n/**\n * Returns the single character matching the given [predicate], or throws exception if there is no or more than one matching character.\n */\npublic inline fun CharSequence.single(predicate: (Char) -> Boolean): Char {\n var single: Char? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if (found) throw IllegalArgumentException(\"Char sequence contains more than one matching element.\")\n single = element\n found = true\n }\n }\n if (!found) throw NoSuchElementException(\"Char sequence contains no character matching the predicate.\")\n @Suppress(\"UNCHECKED_CAST\")\n return single as Char\n}\n\n/**\n * Returns single character, or `null` if the char sequence is empty or has more than one character.\n */\npublic fun CharSequence.singleOrNull(): Char? {\n return if (length == 1) this[0] else null\n}\n\n/**\n * Returns the single character matching the given [predicate], or `null` if character was not found or more than one character was found.\n */\npublic inline fun CharSequence.singleOrNull(predicate: (Char) -> Boolean): Char? {\n var single: Char? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if (found) return null\n single = element\n found = true\n }\n }\n if (!found) return null\n return single\n}\n\n/**\n * Returns a subsequence of this char sequence with the first [n] characters removed.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.text.Strings.drop\n */\npublic fun CharSequence.drop(n: Int): CharSequence {\n require(n >= 0) { \"Requested character count $n is less than zero.\" }\n return subSequence(n.coerceAtMost(length), length)\n}\n\n/**\n * Returns a string with the first [n] characters removed.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.text.Strings.drop\n */\npublic fun String.drop(n: Int): String {\n require(n >= 0) { \"Requested character count $n is less than zero.\" }\n return substring(n.coerceAtMost(length))\n}\n\n/**\n * Returns a subsequence of this char sequence with the last [n] characters removed.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.text.Strings.drop\n */\npublic fun CharSequence.dropLast(n: Int): CharSequence {\n require(n >= 0) { \"Requested character count $n is less than zero.\" }\n return take((length - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a string with the last [n] characters removed.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.text.Strings.drop\n */\npublic fun String.dropLast(n: Int): String {\n require(n >= 0) { \"Requested character count $n is less than zero.\" }\n return take((length - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a subsequence of this char sequence containing all characters except last characters that satisfy the given [predicate].\n * \n * @sample samples.text.Strings.drop\n */\npublic inline fun CharSequence.dropLastWhile(predicate: (Char) -> Boolean): CharSequence {\n for (index in lastIndex downTo 0)\n if (!predicate(this[index]))\n return subSequence(0, index + 1)\n return \"\"\n}\n\n/**\n * Returns a string containing all characters except last characters that satisfy the given [predicate].\n * \n * @sample samples.text.Strings.drop\n */\npublic inline fun String.dropLastWhile(predicate: (Char) -> Boolean): String {\n for (index in lastIndex downTo 0)\n if (!predicate(this[index]))\n return substring(0, index + 1)\n return \"\"\n}\n\n/**\n * Returns a subsequence of this char sequence containing all characters except first characters that satisfy the given [predicate].\n * \n * @sample samples.text.Strings.drop\n */\npublic inline fun CharSequence.dropWhile(predicate: (Char) -> Boolean): CharSequence {\n for (index in this.indices)\n if (!predicate(this[index]))\n return subSequence(index, length)\n return \"\"\n}\n\n/**\n * Returns a string containing all characters except first characters that satisfy the given [predicate].\n * \n * @sample samples.text.Strings.drop\n */\npublic inline fun String.dropWhile(predicate: (Char) -> Boolean): String {\n for (index in this.indices)\n if (!predicate(this[index]))\n return substring(index)\n return \"\"\n}\n\n/**\n * Returns a char sequence containing only those characters from the original char sequence that match the given [predicate].\n */\npublic inline fun CharSequence.filter(predicate: (Char) -> Boolean): CharSequence {\n return filterTo(StringBuilder(), predicate)\n}\n\n/**\n * Returns a string containing only those characters from the original string that match the given [predicate].\n */\npublic inline fun String.filter(predicate:

(Char) -> Boolean): String {\n   return filterTo(StringBuilder(), predicate).toString()\n}\n\n/**\n * Returns a char sequence containing only those characters from the original char sequence that match the given [predicate].\n * @param [predicate] function that takes the index of a character and the character itself\n * and returns the result of predicate evaluation on the character.\n */\npublic inline fun CharSequence.filterIndexed(predicate: (index: Int, Char) -> Boolean): CharSequence {\n   return filterIndexedTo(StringBuilder(),
predicate)\n}\n\n/**\n * Returns a string containing only those characters from the original string that match the given [predicate].\n * @param [predicate] function that takes the index of a character and the character itself\n * and returns the result of predicate evaluation on the character.\n */\npublic inline fun String.filterIndexed(predicate: (index: Int, Char) -> Boolean): String {\n   return filterIndexedTo(StringBuilder(), predicate).toString()\n}\n\n/**\n * Appends all characters matching the given [predicate] to the given [destination].\n * @param [predicate] function that takes the index of a character and the character itself\n * and returns the result of predicate evaluation on the character.\n */\npublic inline fun <C : Appendable> CharSequence.filterIndexedTo(destination: C, predicate: (index: Int, Char) -> Boolean): C {\n   forEachIndexed { index, element ->\n   if (predicate(index, element)) destination.append(element)\n   }\n   return destination\n}\n\n/**\n
* Returns a char sequence containing only those characters from the original char sequence that do not match the given [predicate].\n */\npublic inline fun CharSequence.filterNot(predicate: (Char) -> Boolean): CharSequence {\n return filterNotTo(StringBuilder(), predicate)\n}\n\n/**\n * Returns a string containing only those characters from the original string that do not match the given [predicate].\n */\npublic inline fun String.filterNot(predicate: (Char) -> Boolean): String {\n   return filterNotTo(StringBuilder(), predicate).toString()\n}\n\n/**\n * Appends all characters not matching the given [predicate] to the given [destination].\n */\npublic inline fun <C : Appendable> CharSequence.filterNotTo(destination: C, predicate: (Char) -> Boolean): C {\n   for (element in this) if (!predicate(element)) destination.append(element)\n   return destination\n}\n\n/**\n * Appends all characters matching the given [predicate] to the given [destination].\n */\npublic inline
fun <C : Appendable> CharSequence.filterTo(destination: C, predicate: (Char) -> Boolean): C {\n   for (index in 0 until length) {\n   val element = get(index)\n   if (predicate(element)) destination.append(element)\n   }\n return destination\n}\n\n/**\n * Returns a char sequence containing characters of the original char sequence at the specified range of [indices].\n */\npublic fun CharSequence.slice(indices: IntRange): CharSequence {\n   if (indices.isEmpty()) return \"\"\n   return subSequence(indices)\n}\n\n/**\n * Returns a string containing characters of the original string at the specified range of [indices].\n */\npublic fun String.slice(indices: IntRange): String {\n if (indices.isEmpty()) return \"\"\n   return substring(indices)\n}\n\n/**\n * Returns a char sequence containing characters of the original char sequence at specified [indices].\n */\npublic fun CharSequence.slice(indices: Iterable<Int>): CharSequence {\n   val size = indices.collectionSizeOrDefault(10)\n
if (size == 0) return \"\"\n   val result = StringBuilder(size)\n   for (i in indices) {\n   result.append(get(i))\n }\n   return result\n}\n\n/**\n * Returns a string containing characters of the original string at specified [indices].\n */\n@kotlin.internal.InlineOnly\npublic inline fun String.slice(indices: Iterable<Int>): String {\n   return (this as CharSequence).slice(indices).toString()\n}\n\n/**\n * Returns a subsequence of this char sequence containing the first [n] characters from this char sequence, or the entire char sequence if this char sequence is shorter.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.text.Strings.take\n */\npublic fun CharSequence.take(n: Int): CharSequence {\n   require(n >= 0) { \"Requested character count $n is less than zero.\" }\n   return subSequence(0, n.coerceAtMost(length))\n}\n\n/**\n * Returns a string containing the first [n] characters from this string, or the entire
string if this string is shorter.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.text.Strings.take\n */\npublic fun String.take(n: Int): String {\n   require(n >= 0) { \"Requested character count $n is less than zero.\" }\n   return substring(0, n.coerceAtMost(length))\n}\n\n/**\n * Returns a subsequence of this char sequence containing the last [n] characters from this char sequence, or the entire char sequence if this char sequence is shorter.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.text.Strings.take\n */\npublic fun CharSequence.takeLast(n: Int): CharSequence {\n   require(n >= 0) { \"Requested character count $n is less than zero.\" }\n   val length = length\n   return subSequence(length -

n.coerceAtMost(length), length)\n}\n\n/**\n * Returns a string containing the last [n] characters from this string, or the entire string if this string is shorter.\n * \n * @throws IllegalArgumentException
if [n] is negative.\n * \n * @sample samples.text.Strings.take\n */\npublic fun String.takeLast(n: Int): String {\n require(n >= 0) { \"Requested character count $n is less than zero.\" }\n val length = length\n return substring(length - n.coerceAtMost(length))\n}\n\n/**\n * Returns a subsequence of this char sequence containing last characters that satisfy the given [predicate].\n * \n * @sample samples.text.Strings.take\n */\npublic inline fun CharSequence.takeLastWhile(predicate: (Char) -> Boolean): CharSequence {\n for (index in lastIndex downTo 0) {\n if (!predicate(this[index])) {\n return subSequence(index + 1, length)\n }\n }\n return subSequence(0, length)\n}\n\n/**\n * Returns a string containing last characters that satisfy the given [predicate].\n * \n * @sample samples.text.Strings.take\n */\npublic inline fun String.takeLastWhile(predicate: (Char) -> Boolean): String {\n for (index in lastIndex downTo 0) {\n if (!predicate(this[index]))
{\n return substring(index + 1)\n }\n }\n return this\n}\n\n/**\n * Returns a subsequence of this char sequence containing the first characters that satisfy the given [predicate].\n * \n * @sample samples.text.Strings.take\n */\npublic inline fun CharSequence.takeWhile(predicate: (Char) -> Boolean): CharSequence {\n for (index in 0 until length)\n if (!predicate(get(index))) {\n return subSequence(0, index)\n }\n return subSequence(0, length)\n}\n\n/**\n * Returns a string containing the first characters that satisfy the given [predicate].\n * \n * @sample samples.text.Strings.take\n */\npublic inline fun String.takeWhile(predicate: (Char) -> Boolean): String {\n for (index in 0 until length)\n if (!predicate(get(index))) {\n return substring(0, index)\n }\n return this\n}\n\n/**\n * Returns a char sequence with characters in reversed order.\n */\npublic fun CharSequence.reversed():
CharSequence {\n return StringBuilder(this).reverse()\n}\n\n/**\n * Returns a string with characters in reversed order.\n */\n@kotlin.internal.InlineOnly\npublic inline fun String.reversed(): String {\n return (this as CharSequence).reversed().toString()\n}\n\n/**\n * Returns a [Map] containing key-value pairs provided by [transform] function\n * applied to characters of the given char sequence.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original char sequence.\n */\npublic inline fun <K, V> CharSequence.associate(transform: (Char) -> Pair<K, V>): Map<K, V> {\n val capacity = mapCapacity(length).coerceAtLeast(16)\n return associateTo(LinkedHashMap<K, V>(capacity), transform)\n}\n\n/**\n * Returns a [Map] containing the characters from the given char sequence indexed by the key\n * returned from [keySelector] function applied to each character.\n * \n * If any
two characters would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original char sequence.\n */\npublic inline fun <K> CharSequence.associateBy(keySelector: (Char) -> K): Map<K, Char> {\n val capacity = mapCapacity(length).coerceAtLeast(16)\n return associateByTo(LinkedHashMap<K, Char>(capacity), keySelector)\n}\n\n/**\n * Returns a [Map] containing the values provided by [valueTransform] and indexed by [keySelector] functions applied to characters of the given char sequence.\n * \n * If any two characters would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original char sequence.\n */\npublic inline fun <K, V>
CharSequence.associateBy(keySelector: (Char) -> K, valueTransform: (Char) -> V): Map<K, V> {\n val capacity = mapCapacity(length).coerceAtLeast(16)\n return associateByTo(LinkedHashMap<K,
V>(capacity), keySelector, valueTransform)\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector] function applied to each character of the given char sequence\n * and value is the character itself.\n * \n * If any two characters would have the same key returned by [keySelector] the last one gets added to the map.\n */\npublic inline fun <K, M : MutableMap<in K, in Char>>
CharSequence.associateByTo(destination: M, keySelector: (Char) -> K): M {\n for (element in this) {\n destination.put(keySelector(element), element)\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector] function and\n * and value is provided by the [valueTransform] function applied to characters of the given char sequence.\n * \n * If any

two characters would have the same key returned by [keySelector]
 the last one gets added to the map.\n */\npublic inline fun <K, V, M : MutableMap<in K, in V>> CharSequence.associateByTo(destination: M, keySelector: (Char) -> K, valueTransform: (Char) -> V): M {\n   for (element in this) {\n   destination.put(keySelector(element), valueTransform(element))\n   }\n   return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs\n * provided by [transform] function applied to each character of the given char sequence.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n */\npublic inline fun <K, V, M : MutableMap<in K, in V>> CharSequence.associateTo(destination: M, transform: (Char) -> Pair<K, V>): M {\n   for (element in this) {\n   destination += transform(element)\n   }\n   return destination\n}\n\n/**\n * Returns a [Map] where keys are characters from the given char sequence and values are\n * produced by the [valueSelector] function applied
 to each character.\n * \n * If any two characters are equal, the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original char sequence.\n * \n * @sample samples.text.Strings.associateWith\n */\n@SinceKotlin(\"1.3\")\npublic inline fun <V> CharSequence.associateWith(valueSelector: (Char) -> V): Map<Char, V> {\n   val result = LinkedHashMap<Char, V>(mapCapacity(length).coerceAtLeast(16))\n   return associateWithTo(result, valueSelector)\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs for each character of the given char sequence,\n * where key is the character itself and value is provided by the [valueSelector] function applied to that key.\n * \n * If any two characters are equal, the last one overwrites the former value in the map.\n */\n@SinceKotlin(\"1.3\")\npublic inline fun <V, M : MutableMap<in Char, in V>> CharSequence.associateWithTo(destination: M, valueSelector: (Char) -> V): M {\n
  for (element in this) {\n   destination.put(element, valueSelector(element))\n   }\n   return destination\n}\n\n/**\n * Appends all characters to the given [destination] collection.\n */\npublic fun <C : MutableCollection<in Char>> CharSequence.toCollection(destination: C): C {\n   for (item in this) {\n   destination.add(item)\n   }\n   return destination\n}\n\n/**\n * Returns a [HashSet] of all characters.\n */\npublic fun CharSequence.toHashSet(): HashSet<Char> {\n   return toCollection(HashSet<Char>(mapCapacity(length)))\n}\n\n/**\n * Returns a [List] containing all characters.\n */\npublic fun CharSequence.toList(): List<Char> {\n   return when (length) {\n   0 -> emptyList()\n   1 -> listOf(this[0])\n   else -> this.toMutableList()\n   }\n}\n\n/**\n * Returns a [MutableList] filled with all characters of this char sequence.\n */\npublic fun CharSequence.toMutableList(): MutableList<Char> {\n   return toCollection(ArrayList<Char>(length))\n}\n\n/**\n
 * Returns a [Set] of all characters.\n * \n * The returned set preserves the element iteration order of the original char sequence.\n */\npublic fun CharSequence.toSet(): Set<Char> {\n   return when (length) {\n   0 -> emptySet()\n
  1 -> setOf(this[0])\n   else -> toCollection(LinkedHashSet<Char>(mapCapacity(length)))\n   }\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being invoked on each character of original char sequence.\n */\npublic inline fun <R> CharSequence.flatMap(transform: (Char) -> Iterable<R>): List<R> {\n   return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being invoked on each character of original char sequence, to the given [destination].\n */\npublic inline fun <R, C : MutableCollection<in R>> CharSequence.flatMapTo(destination: C, transform: (Char) -> Iterable<R>): C {\n   for (element in this) {\n   val list =
 transform(element)\n   destination.addAll(list)\n   }\n   return destination\n}\n\n/**\n * Groups characters of the original char sequence by the key returned by the given [keySelector] function\n * applied to each character and returns a map where each group key is associated with a list of corresponding characters.\n * \n * The returned map preserves the entry iteration order of the keys produced from the original char sequence.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\npublic inline fun <K> CharSequence.groupBy(keySelector: (Char) -> K): Map<K, List<Char>> {\n   return groupByTo(LinkedHashMap<K, MutableList<Char>>(), keySelector)\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each character of the original char sequence\n * by the key returned by the given [keySelector] function applied to the character\n * and returns a map where each group key is associated with

a list of corresponding values.\n * \n *
The returned map preserves the entry iteration order of the keys produced from the original char sequence.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <K, V> CharSequence.groupBy(keySelector: (Char) -> K, valueTransform: (Char) -> V): Map<K, List<V>> {\n return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups characters of the original char sequence by the key returned by the given [keySelector] function\n * applied to each character and puts to the [destination] map each group key associated with a list of corresponding characters.\n * \n * @return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\npublic inline fun <K, M : MutableMap<in K, MutableList<Char>>> CharSequence.groupByTo(destination: M, keySelector: (Char) -> K): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key)
{ ArrayList<Char>() }\n list.add(element)\n }\n return destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each character of the original char sequence\n * by the key returned by the given [keySelector] function applied to the character\n * and puts to the [destination] map each group key associated with a list of corresponding values.\n * \n * @return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\npublic inline fun <K, V, M : MutableMap<in K, MutableList<V>>> CharSequence.groupByTo(destination: M, keySelector: (Char) -> K, valueTransform: (Char) -> V): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<V>() }\n list.add(valueTransform(element))\n }\n return destination\n}\n\n/**\n * Creates a [Grouping] source from a char sequence to be used later with
one of group-and-fold operations\n * using the specified [keySelector] function to extract a key from each character.\n * \n * @sample samples.collections.Grouping.groupingByEachCount\n */\n@SinceKotlin(\"1.1\")\npublic inline fun <K> CharSequence.groupingBy(crossinline keySelector: (Char) -> K): Grouping<Char, K> {\n return object : Grouping<Char, K> {\n override fun sourceIterator(): Iterator<Char> = this@groupingBy.iterator()\n override fun keyOf(element: Char): K = keySelector(element)\n }\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each character in the original char sequence.\n */\npublic inline fun <R> CharSequence.map(transform: (Char) -> R): List<R> {\n return mapTo(ArrayList<R>(length), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each character and its index in the original char sequence.\n * @param [transform] function that takes
the index of a character and the character itself\n * and returns the result of the transform applied to the character.\n */\npublic inline fun <R> CharSequence.mapIndexed(transform: (index: Int, Char) -> R): List<R> {\n return mapIndexedTo(ArrayList<R>(length), transform)\n}\n\n/**\n * Returns a list containing only the non-null results of applying the given [transform] function\n * to each character and its index in the original char sequence.\n * @param [transform] function that takes the index of a character and the character itself\n * and returns the result of the transform applied to the character.\n */\npublic inline fun <R : Any> CharSequence.mapIndexedNotNull(transform: (index: Int, Char) -> R?): List<R> {\n return mapIndexedNotNullTo(ArrayList<R>(), transform)\n}\n\n/**\n * Applies the given [transform] function to each character and its index in the original char sequence\n * and appends only the non-null results to the given [destination].\n * @param [transform]
function that takes the index of a character and the character itself\n * and returns the result of the transform applied to the character.\n */\npublic inline fun <R : Any, C : MutableCollection<in R>> CharSequence.mapIndexedNotNullTo(destination: C, transform: (index: Int, Char) -> R?): C {\n forEachIndexed { index, element -> transform(index, element)?.let { destination.add(it) } }\n return destination\n}\n\n/**\n * Applies the given [transform] function to each character and its index in the original char sequence\n * and appends the results to the given [destination].\n * @param [transform] function that takes the index of a character and the character itself\n * and returns the result of the transform applied to the character.\n */\npublic inline fun <R, C : MutableCollection<in R>> CharSequence.mapIndexedTo(destination: C, transform: (index: Int, Char) -> R): C {\n

var index = 0\n   for (item in this)\n   destination.add(transform(index++, item))\n   return destination\n}\n\n/**\n
 * Returns a list containing only the non-null results of applying the given [transform] function\n * to each character in the original char sequence.\n */\npublic inline fun <R : Any> CharSequence.mapNotNull(transform: (Char) -> R?): List<R> {\n   return mapNotNullTo(ArrayList<R>(), transform)\n}\n\n/**\n * Applies the given [transform] function to each character in the original char sequence\n * and appends only the non-null results to the given [destination].\n */\npublic inline fun <R : Any, C : MutableCollection<in R>> CharSequence.mapNotNullTo(destination: C, transform: (Char) -> R?): C {\n   forEach { element -> transform(element)?.let { destination.add(it) } }\n   return destination\n}\n\n/**\n * Applies the given [transform] function to each character of the original char sequence\n * and appends the results to the given [destination].\n */\npublic inline fun <R, C : MutableCollection<in R>> CharSequence.mapTo(destination: C, transform: (Char) -> R): C {\n
    for (item in this)\n   destination.add(transform(item))\n   return destination\n}\n\n/**\n * Returns a lazy [Iterable] of [IndexedValue] for each character of the original char sequence.\n */\npublic fun CharSequence.withIndex(): Iterable<IndexedValue<Char>> {\n   return IndexingIterable { iterator() }\n}\n\n/**\n * Returns `true` if all characters match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.all\n */\npublic inline fun CharSequence.all(predicate: (Char) -> Boolean): Boolean {\n   for (element in this) if (!predicate(element)) return false\n   return true\n}\n\n/**\n * Returns `true` if char sequence has at least one character.\n * \n * @sample samples.collections.Collections.Aggregates.any\n */\npublic fun CharSequence.any(): Boolean {\n   return !isEmpty()\n}\n\n/**\n * Returns `true` if at least one character matches the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.anyWithPredicate\n */\npublic
 inline fun CharSequence.any(predicate: (Char) -> Boolean): Boolean {\n   for (element in this) if (predicate(element)) return true\n   return false\n}\n\n/**\n * Returns the length of this char sequence.\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.count(): Int {\n   return length\n}\n\n/**\n * Returns the number of characters matching the given [predicate].\n */\npublic inline fun CharSequence.count(predicate: (Char) -> Boolean): Int {\n   var count = 0\n   for (element in this) if (predicate(element)) ++count\n   return count\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each character.\n */\npublic inline fun <R> CharSequence.fold(initial: R, operation: (acc: R, Char) -> R): R {\n   var accumulator = initial\n   for (element in this) accumulator = operation(accumulator, element)\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value
 and applying [operation] from left to right\n * to current accumulator value and each character with its index in the original char sequence.\n * @param [operation] function that takes the index of a character, current accumulator value\n * and the character itself, and calculates the next accumulator value.\n */\npublic inline fun <R> CharSequence.foldIndexed(initial: R, operation: (index: Int, acc: R, Char) -> R): R {\n   var index = 0\n   var accumulator = initial\n   for (element in this) accumulator = operation(index++, accumulator, element)\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left to each character and current accumulator value.\n */\npublic inline fun <R> CharSequence.foldRight(initial: R, operation: (Char, acc: R) -> R): R {\n   var index = lastIndex\n   var accumulator = initial\n   while (index >= 0) {\n   accumulator = operation(get(index--), accumulator)\n   }\n   return
 accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left\n * to each character with its index in the original char sequence and current accumulator value.\n * @param [operation] function that takes the index of a character, the character itself\n * and current accumulator value, and calculates the next accumulator value.\n */\npublic inline fun <R> CharSequence.foldRightIndexed(initial: R, operation: (index: Int, Char, acc: R) -> R): R {\n   var index = lastIndex\n   var accumulator = initial\n   while (index >= 0) {\n   accumulator = operation(index, get(index), accumulator)\n   --index\n   }\n   return accumulator\n}\n\n/**\n * Performs the given [action] on each character.\n */\npublic inline fun

CharSequence.forEach(action: (Char) -> Unit): Unit {\n for (element in this) action(element)\n}\n\n/**\n * Performs the given [action] on each character, providing sequential index with the character.\n * @param [action] function that takes the index of a character and the character itself\n * and performs the desired action on the character.\n */\npublic inline fun CharSequence.forEachIndexed(action: (index: Int, Char) -> Unit): Unit {\n var index = 0\n for (item in this) action(index++, item)\n}\n\n/**\n * Returns the largest character or `null` if there are no characters.\n */\npublic fun CharSequence.max(): Char? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (max < e) max = e\n }\n return max\n}\n\n/**\n * Returns the first character yielding the largest value of the given function or `null` if there are no characters.\n * \n * @sample samples.collections.Collections.Aggregates.maxBy\n */\npublic inline fun <R : Comparable<R>> CharSequence.maxBy(selector: (Char) -> R): Char? {\n if (isEmpty()) return null\n var maxElem = this[0]\n var maxValue = selector(maxElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (maxValue < v) {\n maxElem = e\n maxValue = v\n }\n }\n return maxElem\n}\n\n/**\n * Returns the first character having the largest value according to the provided [comparator] or `null` if there are no characters.\n */\npublic fun CharSequence.maxWith(comparator: Comparator<in Char>): Char? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (comparator.compare(max, e) < 0) max = e\n }\n return max\n}\n\n/**\n * Returns the smallest character or `null` if there are no characters.\n */\npublic fun CharSequence.min(): Char? {\n if (isEmpty()) return null\n var min = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (min > e) min = e\n }\n return min\n}\n\n/**\n * Returns the first character yielding the smallest value of the given function or `null` if there are no characters.\n
 * \n * @sample samples.collections.Collections.Aggregates.minBy\n */\npublic inline fun <R : Comparable<R>> CharSequence.minBy(selector: (Char) -> R): Char? {\n if (isEmpty()) return null\n var minElem = this[0]\n var minValue = selector(minElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (minValue > v) {\n minElem = e\n minValue = v\n }\n }\n return minElem\n}\n\n/**\n * Returns the first character having the smallest value according to the provided [comparator] or `null` if there are no characters.\n */\npublic fun CharSequence.minWith(comparator: Comparator<in Char>): Char? {\n if (isEmpty()) return null\n var min = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (comparator.compare(min, e) > 0) min = e\n }\n return min\n}\n\n/**\n * Returns `true` if the char sequence has no characters.\n * \n * @sample samples.collections.Collections.Aggregates.none\n
 */\npublic fun CharSequence.none(): Boolean {\n return isEmpty()\n}\n\n/**\n * Returns `true` if no characters match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.noneWithPredicate\n */\npublic inline fun CharSequence.none(predicate: (Char) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return false\n return true\n}\n\n/**\n * Performs the given [action] on each character and returns the char sequence itself afterwards.\n */\n@SinceKotlin(\"1.1\")\npublic inline fun <S : CharSequence> S.onEach(action: (Char) -> Unit): S {\n return apply { for (element in this) action(element) }\n}\n\n/**\n * Accumulates value starting with the first character and applying [operation] from left to right to current accumulator value and each character.\n */\npublic inline fun CharSequence.reduce(operation: (acc: Char, Char) -> Char): Char {\n if (isEmpty())\n throw UnsupportedOperationException(\"Empty char
 sequence can't be reduced.\")\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(accumulator, this[index])\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with the first character and applying [operation] from left to right\n * to current accumulator value and each character with its index in the original char sequence.\n * @param [operation] function that takes the index of a character, current accumulator value\n * and the character itself and calculates the next accumulator value.\n */\npublic inline fun CharSequence.reduceIndexed(operation: (index: Int, acc: Char, Char) -> Char): Char {\n if (isEmpty())\n throw UnsupportedOperationException(\"Empty char sequence can't be reduced.\")\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(index, accumulator, this[index])\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with last character

and applying [operation] from right to left to each character and current accumulator value.\n */\npublic inline fun CharSequence.reduceRight(operation: (Char, acc: Char) -> Char): Char {\n var index = lastIndex\n if (index < 0) throw UnsupportedOperationException(\"Empty char sequence can't be reduced.\")\n var accumulator = get(index--)\n while (index >= 0) {\n accumulator = operation(get(index--), accumulator)\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with last character and applying [operation] from right to left\n * to each character with its index in the original char sequence and current accumulator value.\n * @param [operation] function that takes the index of a character, the character itself\n * and current accumulator value, and calculates the next accumulator value.\n */\npublic inline fun CharSequence.reduceRightIndexed(operation: (index: Int, Char, acc: Char) -> Char): Char {\n var index = lastIndex\n if (index < 0) throw UnsupportedOperationException(\"Empty char sequence can't be reduced.\")\n var accumulator = get(index--)\n while (index >= 0) {\n accumulator = operation(index, get(index), accumulator)\n --index\n }\n return accumulator\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each character in the char sequence.\n */\npublic inline fun CharSequence.sumBy(selector: (Char) -> Int): Int {\n var sum: Int = 0\n for (element in this) {\n sum += selector(element)\n }\n return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each character in the char sequence.\n */\npublic inline fun CharSequence.sumByDouble(selector: (Char) -> Double): Double {\n var sum: Double = 0.0\n for (element in this) {\n sum += selector(element)\n }\n return sum\n}\n\n/**\n * Splits this char sequence into a list of strings each not exceeding the given [size].\n * \n * The last string in the resulting list may have less characters than the given [size].\n * \n * @param size the number of elements to take in each string, must be positive and can be greater than the number of elements in this char sequence.\n * \n * @sample samples.collections.Collections.Transformations.chunked\n */\n@SinceKotlin(\"1.2\")\npublic fun CharSequence.chunked(size: Int): List<String> {\n return windowed(size, size, partialWindows = true)\n}\n\n/**\n * Splits this char sequence into several char sequences each not exceeding the given [size]\n * and applies the given [transform] function to an each.\n * \n * @return list of results of the [transform] applied to an each char sequence.\n * \n * Note that the char sequence passed to the [transform] function is ephemeral and is valid only inside that function.\n * You should not store it or allow it to escape in some way, unless you made a snapshot of it.\n * The last char sequence may have less characters than the given [size].\n * \n * @param size the number of elements to take in each char sequence, must be positive and can be greater than the number of elements in this char sequence.\n * \n * @sample samples.text.Strings.chunkedTransform\n */\n@SinceKotlin(\"1.2\")\npublic fun <R> CharSequence.chunked(size: Int, transform: (CharSequence) -> R): List<R> {\n return windowed(size, size, partialWindows = true, transform = transform)\n}\n\n/**\n * Splits this char sequence into a sequence of strings each not exceeding the given [size].\n * \n * The last string in the resulting sequence may have less characters than the given [size].\n * \n * @param size the number of elements to take in each string, must be positive and can be greater than the number of elements in this char sequence.\n * \n * @sample samples.collections.Collections.Transformations.chunked\n */\n@SinceKotlin(\"1.2\")\npublic fun CharSequence.chunkedSequence(size: Int): Sequence<String> {\n return chunkedSequence(size) { it.toString() }\n}\n\n/**\n * Splits this char sequence into several char sequences each not exceeding the given [size]\n * and applies the given [transform] function to an each.\n * \n * @return sequence of results of the [transform] applied to an each char sequence.\n * \n * Note that the char sequence passed to the [transform] function is ephemeral and is valid only inside that function.\n * You should not store it or allow it to escape in some way, unless you made a snapshot of it.\n * The last char sequence may have less characters than the given [size].\n * \n * @param size the number of elements to take in each char sequence, must be positive and can be greater than the number of elements in this char sequence.\n * \n * @sample samples.text.Strings.chunkedTransformToSequence\n */\n@SinceKotlin(\"1.2\")\npublic fun <R> CharSequence.chunkedSequence(size: Int, transform: (CharSequence) -> R): Sequence<R> {\n return windowedSequence(size, size, partialWindows = true, transform = transform)\n}\n\n/**\n

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 * Splits the original char sequence into pair of char sequences,\n * where *first* char sequence contains characters for which [predicate] yielded `true`,\n * while *second* char sequence contains characters for which [predicate] yielded `false`.\n */\npublic inline fun CharSequence.partition(predicate: (Char) -> Boolean): Pair<CharSequence, CharSequence> {\n    val first = StringBuilder()\n    val second = StringBuilder()\n    for (element in this) {\n        if (predicate(element)) {\n            first.append(element)\n        } else {\n            second.append(element)\n        }\n    }\n    return Pair(first, second)\n}\n\n/**\n * Splits the original string into pair of strings,\n * where *first* string contains characters for which [predicate] yielded `true`,\n * while *second* string contains characters for which [predicate] yielded `false`.\n */\npublic inline fun String.partition(predicate: (Char) -> Boolean): Pair<String, String> {\n    val first = StringBuilder()\n    val second = StringBuilder()\n    for (element in this) {\n        if (predicate(element)) {\n            first.append(element)\n        } else {\n            second.append(element)\n        }\n    }\n    return Pair(first.toString(), second.toString())\n}\n\n/**\n * Returns a list of snapshots of the window of the given [size]\n * sliding along this char sequence with the given [step], where each\n * snapshot is a string.\n * \n * Several last strings may have less characters than the given [size].\n * \n * Both [size] and [step] must be positive and can be greater than the number of elements in this char sequence.\n * @param size the number of elements to take in each window\n * @param step the number of elements to move the window forward by on an each step, by default 1\n * @param partialWindows controls whether or not to keep partial windows in the end if any,\n * by default `false` which means partial windows won't be preserved\n * \n * @sample samples.collections.Sequences.Transformations.takeWindows\n */\n@SinceKotlin(\"1.2\")\npublic fun CharSequence.windowed(size: Int, step: Int = 1, partialWindows: Boolean = false): List<String> {\n    return windowed(size, step, partialWindows) { it.toString() }\n}\n\n/**\n * Returns a list of results of applying the given [transform] function to\n * an each char sequence representing a view over the window of the given [size]\n * sliding along this char sequence with the given [step].\n * \n * Note that the char sequence passed to the [transform] function is ephemeral and is valid only inside that function.\n * You should not store it or allow it to escape in some way, unless you made a snapshot of it.\n * Several last char sequences may have less characters than the given [size].\n * \n * Both [size] and [step] must be positive and can be greater than the number of elements in this char sequence.\n * @param size the number of elements to take in each window\n * @param step the number of elements to move the window forward
 by on an each step, by default 1\n * @param partialWindows controls whether or not to keep partial windows in the end if any,\n * by default `false` which means partial windows won't be preserved\n * \n * @sample samples.collections.Sequences.Transformations.averageWindows\n */\n@SinceKotlin(\"1.2\")\npublic fun <R> CharSequence.windowed(size: Int, step: Int = 1, partialWindows: Boolean = false, transform: (CharSequence) -> R): List<R> {\n    checkWindowSizeStep(size, step)\n    val thisSize = this.length\n    val result = ArrayList<R>((thisSize + step - 1) / step)\n    var index = 0\n    while (index < thisSize) {\n        val end = index + size\n        val coercedEnd = if (end > thisSize) { if (partialWindows) thisSize else break } else end\n        result.add(transform(subSequence(index, coercedEnd)))\n        index += step\n    }\n    return result\n}\n\n/**\n * Returns a sequence of snapshots of the window of the given [size]\n * sliding along this char sequence with the given
 [step], where each\n * snapshot is a string.\n * \n * Several last strings may have less characters than the given [size].\n * \n * Both [size] and [step] must be positive and can be greater than the number of elements in this char sequence.\n * @param size the number of elements to take in each window\n * @param step the number of elements to move the window forward by on an each step, by default 1\n * @param partialWindows controls whether or not to keep partial windows in the end if any,\n * by default `false` which means partial windows won't be preserved\n * \n * @sample samples.collections.Sequences.Transformations.takeWindows\n */\n@SinceKotlin(\"1.2\")\npublic fun CharSequence.windowedSequence(size: Int, step: Int = 1, partialWindows: Boolean = false): Sequence<String> {\n    return windowedSequence(size, step, partialWindows) { it.toString() }\n}\n\n/**\n * Returns a sequence of results of applying the given [transform] function to\n * an each char sequence representing a
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 view over the window of the given [size]\n * sliding along this char sequence with the given [step].\n * \n * Note that the char sequence passed to the [transform] function is ephemeral and is valid only inside that function.\n * You should not store it or allow it to escape in some way, unless you made a snapshot of it.\n * Several last char sequences may have less characters than the given [size].\n * \n * Both [size] and [step] must be positive and can be greater than the number of elements in this char sequence.\n * @param size the number of elements to take in each window\n * @param step the number of elements to move the window forward by on an each step, by default 1\n * @param partialWindows controls whether or not to keep partial windows in the end if any,\n * by default `false` which means partial windows won't be preserved\n * \n * @sample samples.collections.Sequences.Transformations.averageWindows\n */\n@SinceKotlin(\"1.2\")\npublic fun <R> CharSequence.windowedSequence(size:
 Int, step: Int = 1, partialWindows: Boolean = false, transform: (CharSequence) -> R): Sequence<R> {\n checkWindowSizeStep(size, step)\n    val windows = (if (partialWindows) indices else 0 until length - size + 1) step step\n    return windows.asSequence().map { index -> transform(subSequence(index, (index + size).coerceAtMost(length))) }\n}\n\n/**\n * Returns a list of pairs built from the characters of `this` and the [other] char sequences with the same index\n * The returned list has length of the shortest char sequence.\n * \n * @sample samples.text.Strings.zip\n */\npublic infix fun CharSequence.zip(other: CharSequence): List<Pair<Char, Char>> {\n  return zip(other) { c1, c2 -> c1 to c2 }\n}\n\n/**\n * Returns a list of values built from the characters of `this` and the [other] char sequences with the same index\n * using the provided [transform] function applied to each pair of characters.\n * The returned list has length of the shortest char sequence.\n * \n * @sample samples.text.Strings.zipWithTransform\n
 */\npublic inline fun <V> CharSequence.zip(other: CharSequence, transform: (a: Char, b: Char) -> V): List<V> {\n  val length = minOf(this.length, other.length)\n    val list = ArrayList<V>(length)\n    for (i in 0 until length) {\n list.add(transform(this[i], other[i]))\n    }\n    return list\n}\n\n/**\n * Returns a list of pairs of each two adjacent characters in this char sequence.\n * \n * The returned list is empty if this char sequence contains less than two characters.\n * \n * @sample samples.collections.Collections.Transformations.zipWithNext\n */\n@SinceKotlin(\"1.2\")\npublic fun CharSequence.zipWithNext(): List<Pair<Char, Char>> {\n    return zipWithNext { a, b -> a to b }\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to an each pair of two adjacent characters in this char sequence.\n * \n * The returned list is empty if this char sequence contains less than two characters.\n
 * \n * @sample samples.collections.Collections.Transformations.zipWithNextToFindDeltas\n */\n@SinceKotlin(\"1.2\")\npublic inline fun <R> CharSequence.zipWithNext(transform: (a: Char, b: Char) -> R): List<R> {\n    val size = length - 1\n    if (size < 1) return emptyList()\n    val result = ArrayList<R>(size)\n    for (index in 0 until size) {\n        result.add(transform(this[index], this[index + 1]))\n    }\n    return result\n}\n\n/**\n * Creates an [Iterable] instance that wraps the original char sequence returning its characters when being iterated.\n */\npublic fun CharSequence.asIterable(): Iterable<Char> {\n    if (this is String && isEmpty()) return emptyList()\n  return Iterable { this.iterator() }\n}\n\n/**\n * Creates a [Sequence] instance that wraps the original char sequence returning its characters when being iterated.\n */\npublic fun CharSequence.asSequence(): Sequence<Char> {\n    if (this is String && isEmpty()) return emptySequence()\n    return Sequence { this.iterator()
 }\n}\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"StringsKt\")\n\npackage kotlin.text\n\nimport kotlin.contracts.contract\n\n/**\n * Returns a sub sequence of this char sequence having leading and trailing characters matching the [predicate] removed.\n */\npublic inline fun CharSequence.trim(predicate: (Char) -> Boolean): CharSequence {\n    var startIndex = 0\n    var endIndex = length - 1\n    var startFound = false\n\n    while (startIndex <= endIndex) {\n        val index = if (!startFound) startIndex else endIndex\n        val match = predicate(this[index])\n\n        if (!startFound) {\n            if (!match)\n startFound = true\n            else\n                startIndex += 1\n        } else {\n            if (!match)\n                break\n  else\n
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endIndex -= 1\n }\n }\n\n return subSequence(startIndex, endIndex + 1)\n}\n\n/**\n * Returns a string having leading and trailing characters matching the [predicate] removed.\n */\npublic inline fun String.trim(predicate: (Char) -> Boolean): String =\n (this as CharSequence).trim(predicate).toString()\n\n/**\n * Returns a sub sequence of this char sequence having leading characters matching the [predicate] removed.\n */\npublic inline fun CharSequence.trimStart(predicate: (Char) -> Boolean): CharSequence {\n for (index in this.indices)\n if (!predicate(this[index]))\n return subSequence(index, length)\n\n return \"\"\n}\n\n/**\n * Returns a string having leading characters matching the [predicate] removed.\n */\npublic inline fun String.trimStart(predicate: (Char) -> Boolean): String =\n (this as CharSequence).trimStart(predicate).toString()\n\n/**\n * Returns a sub sequence of this char sequence having trailing characters matching
the [predicate] removed.\n */\npublic inline fun CharSequence.trimEnd(predicate: (Char) -> Boolean): CharSequence {\n for (index in this.indices.reversed())\n if (!predicate(this[index]))\n return subSequence(0, index + 1)\n\n return \"\"\n}\n\n/**\n * Returns a string having trailing characters matching the [predicate] removed.\n */\npublic inline fun String.trimEnd(predicate: (Char) -> Boolean): String =\n (this as CharSequence).trimEnd(predicate).toString()\n\n/**\n * Returns a sub sequence of this char sequence having leading and trailing characters from the [chars] array removed.\n */\npublic fun CharSequence.trim(vararg chars: Char): CharSequence = trim { it in chars }\n\n/**\n * Returns a string having leading and trailing characters from the [chars] array removed.\n */\npublic fun String.trim(vararg chars: Char): String = trim { it in chars }\n\n/**\n * Returns a sub sequence of this char sequence having leading characters from the [chars] array
removed.\n */\npublic fun CharSequence.trimStart(vararg chars: Char): CharSequence = trimStart { it in chars }\n\n/**\n * Returns a string having leading characters from the [chars] array removed.\n */\npublic fun String.trimStart(vararg chars: Char): String = trimStart { it in chars }\n\n/**\n * Returns a sub sequence of this char sequence having trailing characters from the [chars] array removed.\n */\npublic fun CharSequence.trimEnd(vararg chars: Char): CharSequence = trimEnd { it in chars }\n\n/**\n * Returns a string having trailing characters from the [chars] array removed.\n */\npublic fun String.trimEnd(vararg chars: Char): String = trimEnd { it in chars }\n\n/**\n * Returns a sub sequence of this char sequence having leading and trailing whitespace removed.\n */\npublic fun CharSequence.trim(): CharSequence = trim(Char::isWhitespace)\n\n/**\n * Returns a string having leading and trailing whitespace removed.\n */\n@kotlin.internal.InlineOnly\npublic inline fun String.trim():
String = (this as CharSequence).trim().toString()\n\n/**\n * Returns a sub sequence of this char sequence having leading whitespace removed.\n */\npublic fun CharSequence.trimStart(): CharSequence = trimStart(Char::isWhitespace)\n\n/**\n * Returns a string having leading whitespace removed.\n */\n@kotlin.internal.InlineOnly\npublic inline fun String.trimStart(): String = (this as CharSequence).trimStart().toString()\n\n/**\n * Returns a sub sequence of this char sequence having trailing whitespace removed.\n */\npublic fun CharSequence.trimEnd(): CharSequence = trimEnd(Char::isWhitespace)\n\n/**\n * Returns a string having trailing whitespace removed.\n */\n@kotlin.internal.InlineOnly\npublic inline fun String.trimEnd(): String = (this as CharSequence).trimEnd().toString()\n\n/**\n * Returns a char sequence with content of this char sequence padded at the beginning\n * to the specified [length] with the specified character or space.\n *\n * @param length the desired string length.\n *
@param padChar the character to pad string with, if it has length less than the [length] specified. Space is used by default.\n * @return Returns a char sequence of length at least [length] consisting of `this` char sequence prepended with [padChar] as many times\n * as are necessary to reach that length.\n * @sample samples.text.Strings.padStart\n */\npublic fun CharSequence.padStart(length: Int, padChar: Char = ' '): CharSequence {\n if (length < 0)\n throw IllegalArgumentException(\"Desired length $length is less than zero.\")\n if (length <= this.length)\n return this.subSequence(0, this.length)\n\n val sb = StringBuilder(length)\n for (i in 1..(length - this.length))\n sb.append(padChar)\n sb.append(this)\n return sb\n}\n\n/**\n * Pads the string to the specified [length] at the beginning with the specified character or space.\n *\n * @param length the desired string length.\n * @param padChar the character to pad string with, if it has length

less than the [length] specified. Space is used by default.\n * @return Returns a string of length at least [length] consisting of `this` string prepended with [padChar] as many times\n * as are necessary to reach that length.\n * @sample samples.text.Strings.padStart\n */\npublic fun String.padStart(length: Int, padChar: Char = ' '): String =\n (this as CharSequence).padStart(length, padChar).toString()\n\n/**\n * Returns a char sequence with content of this char sequence padded at the end\n * to the specified [length] with the specified character or space.\n *\n * @param length the desired string length.\n * @param padChar the character to pad string with, if it has length less than the [length] specified. Space is used by default.\n * @return Returns a char sequence of length at least [length] consisting of `this` char sequence appended with [padChar] as many times\n * as are necessary to reach that length.\n * @sample samples.text.Strings.padEnd\n */\npublic fun CharSequence.padEnd(length: Int, padChar: Char = ' '): CharSequence {\n if (length < 0)\n throw IllegalArgumentException(\"Desired length $length is less than zero.\")\n if (length <= this.length)\n return this.subSequence(0, this.length)\n\n val sb = StringBuilder(length)\n sb.append(this)\n for (i in 1..(length - this.length))\n sb.append(padChar)\n return sb\n}\n\n/**\n * Pads the string to the specified [length] at the end with the specified character or space.\n *\n * @param length the desired string length.\n * @param padChar the character to pad string with, if it has length less than the [length] specified. Space is used by default.\n * @return Returns a string of length at least [length] consisting of `this` string appended with [padChar] as many times\n * as are necessary to reach that length.\n * @sample samples.text.Strings.padEnd\n */\npublic fun String.padEnd(length: Int, padChar: Char = ' '): String =\n (this as CharSequence).padEnd(length, padChar).toString()\n\n/**\n * Returns `true` if this nullable char sequence is either `null` or empty.\n *\n * @sample samples.text.Strings.stringIsNullOrEmpty\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence?.isNullOrEmpty(): Boolean {\n contract {\n returns(false) implies (this@isNullOrEmpty != null)\n }\n\n return this == null || this.length == 0\n}\n\n/**\n * Returns `true` if this char sequence is empty (contains no characters).\n *\n * @sample samples.text.Strings.stringIsEmpty\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.isEmpty(): Boolean = length == 0\n\n/**\n * Returns `true` if this char sequence is not empty.\n *\n * @sample samples.text.Strings.stringIsNotEmpty\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.isNotEmpty(): Boolean = length > 0\n\n// implemented differently in JVM and JS\n//public fun String.isBlank(): Boolean = length() == 0 || all { it.isWhitespace() }\n\n\n/**\n * Returns `true` if this
char sequence is not empty and contains some characters except of whitespace characters.\n *\n * @sample samples.text.Strings.stringIsNotBlank\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.isNotBlank(): Boolean = !isBlank()\n\n/**\n * Returns `true` if this nullable char sequence is either `null` or empty or consists solely of whitespace characters.\n *\n * @sample samples.text.Strings.stringIsNullOrBlank\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence?.isNullOrBlank(): Boolean {\n contract {\n returns(false) implies (this@isNullOrBlank != null)\n }\n\n return this == null || this.isBlank()\n}\n\n/**\n * Iterator for characters of the given char sequence.\n */\npublic operator fun CharSequence.iterator(): CharIterator = object : CharIterator() {\n private var index = 0\n\n public override fun nextChar(): Char = get(index++)\n\n public override fun hasNext(): Boolean = index < length\n}\n\n/** Returns the string if it is not
`null`, or the empty string otherwise. */\n@kotlin.internal.InlineOnly\npublic inline fun String?.orEmpty(): String = this ?: \"\"\n\n/**\n * Returns this char sequence if it's not empty\n * or the result of calling [defaultValue] function if the char sequence is empty.\n *\n * @sample samples.text.Strings.stringIfEmpty\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic inline fun <C, R> C.ifEmpty(defaultValue: () -> R): R where C : CharSequence, C : R =\n if (isEmpty()) defaultValue() else this\n\n/**\n * Returns this char sequence if it is not empty and doesn't consist solely of whitespace characters,\n * or the result of calling [defaultValue] function otherwise.\n *\n * @sample samples.text.Strings.stringIfBlank\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic inline fun <C, R> C.ifBlank(defaultValue: () -> R): R where C : CharSequence, C : R =\n if (isBlank()) defaultValue() else this\n\n/**\n * Returns the range of valid character indices for

this char sequence.\n */\npublic val CharSequence.indices: IntRange\n   get() = 0..length - 1\n\n/**\n * Returns the index of the last character in the char sequence or -1 if it is empty.\n */\npublic val CharSequence.lastIndex: Int\n get() = this.length - 1\n\n/**\n * Returns `true` if this CharSequence has Unicode surrogate pair at the specified [index].\n */\npublic fun CharSequence.hasSurrogatePairAt(index: Int): Boolean {\n   return index in 0..length - 2\n   && this[index].isHighSurrogate()\n   && this[index + 1].isLowSurrogate()\n}\n\n/**\n * Returns a substring specified by the given [range] of indices.\n */\npublic fun String.substring(range: IntRange): String = substring(range.start, range.endInclusive + 1)\n\n/**\n * Returns a subsequence of this char sequence specified by the given [range] of indices.\n */\npublic fun CharSequence.subSequence(range: IntRange): CharSequence = subSequence(range.start, range.endInclusive + 1)\n\n/**\n * Returns a subsequence
 of this char sequence.\n *\n * This extension is chosen only for invocation with old-named parameters.\n * Replace parameter names with the same as those of [CharSequence.subSequence].\n */\n@kotlin.internal.InlineOnly\n@Suppress(\"EXTENSION_SHADOWED_BY_MEMBER\") // false warning\n@Deprecated(\"Use parameters named startIndex and endIndex.\", ReplaceWith(\"subSequence(startIndex = start, endIndex = end)\"))\npublic inline fun String.subSequence(start: Int, end: Int): CharSequence = subSequence(start, end)\n\n/**\n * Returns a substring of chars from a range of this char sequence starting at the [startIndex] and ending right before the [endIndex].\n *\n * @param startIndex the start index (inclusive).\n * @param endIndex the end index (exclusive). If not specified, the length of the char sequence is used.\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.substring(startIndex: Int, endIndex: Int = length): String = subSequence(startIndex, endIndex).toString()\n\n/**\n
 * Returns a substring of chars at indices from the specified [range] of this char sequence.\n */\npublic fun CharSequence.substring(range: IntRange): String = subSequence(range.start, range.endInclusive + 1).toString()\n\n/**\n * Returns a substring before the first occurrence of [delimiter].\n * If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n */\npublic fun String.substringBefore(delimiter: Char, missingDelimiterValue: String = this): String {\n   val index = indexOf(delimiter)\n   return if (index == -1) missingDelimiterValue else substring(0, index)\n}\n\n/**\n * Returns a substring before the first occurrence of [delimiter].\n * If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n */\npublic fun String.substringBefore(delimiter: String, missingDelimiterValue: String = this): String {\n   val index = indexOf(delimiter)\n   return if (index == -1) missingDelimiterValue else substring(0, index)\n}\n\n/**\n * Returns a substring after the first occurrence of [delimiter].\n * If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n */\npublic fun String.substringAfter(delimiter: Char, missingDelimiterValue: String = this): String {\n   val index = indexOf(delimiter)\n   return if (index == -1) missingDelimiterValue else substring(index + 1, length)\n}\n\n/**\n * Returns a substring after the first occurrence of [delimiter].\n * If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n */\npublic fun String.substringAfter(delimiter: String, missingDelimiterValue: String = this): String {\n   val index = indexOf(delimiter)\n   return if (index == -1) missingDelimiterValue else substring(index + delimiter.length, length)\n}\n\n/**\n * Returns a substring before the last occurrence of [delimiter].\n * If
 the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n */\npublic fun String.substringBeforeLast(delimiter: Char, missingDelimiterValue: String = this): String {\n   val index = lastIndexOf(delimiter)\n   return if (index == -1) missingDelimiterValue else substring(0, index)\n}\n\n/**\n * Returns a substring before the last occurrence of [delimiter].\n * If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n */\npublic fun String.substringBeforeLast(delimiter: String, missingDelimiterValue: String = this): String {\n   val index = lastIndexOf(delimiter)\n   return if (index == -1) missingDelimiterValue else substring(0, index)\n}\n\n/**\n * Returns a substring after the last occurrence of [delimiter].\n * If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n */\npublic fun String.substringAfterLast(delimiter: Char, missingDelimiterValue: String = this): String {\n   val index = lastIndexOf(delimiter)\n   return if (index == -1) missingDelimiterValue else substring(index + 1, length)\n}\n\n/**\n * Returns a substring after the last

occurrence of [delimiter].\n * If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n */\npublic fun String.substringAfterLast(delimiter: String, missingDelimiterValue: String = this): String {\n   val index = lastIndexOf(delimiter)\n   return if (index == -1) missingDelimiterValue else substring(index + delimiter.length, length)\n}\n\n/**\n * Returns a char sequence with content of this char sequence where its part at the given range\n * is replaced with the [replacement] char sequence.\n * @param startIndex the index of the first character to be replaced.\n * @param endIndex the index of the first character after the replacement to keep in the string.\n */\npublic fun CharSequence.replaceRange(startIndex:
Int, endIndex: Int, replacement: CharSequence): CharSequence {\n   if (endIndex < startIndex)\n   throw IndexOutOfBoundsException(\"End index ($endIndex) is less than start index ($startIndex).\")\n   val sb = StringBuilder()\n   sb.append(this, 0, startIndex)\n   sb.append(replacement)\n   sb.append(this, endIndex, length)\n   return sb\n}\n\n/**\n * Replaces the part of the string at the given range with the [replacement] char sequence.\n * @param startIndex the index of the first character to be replaced.\n * @param endIndex the index of the first character after the replacement to keep in the string.\n */\n@kotlin.internal.InlineOnly\npublic inline fun String.replaceRange(startIndex: Int, endIndex: Int, replacement: CharSequence): String =\n   (this as CharSequence).replaceRange(startIndex, endIndex, replacement).toString()\n\n/**\n * Returns a char sequence with content of this char sequence where its part at the given [range]\n * is replaced
with the [replacement] char sequence.\n *\n * The end index of the [range] is included in the part to be replaced.\n */\npublic fun CharSequence.replaceRange(range: IntRange, replacement: CharSequence): CharSequence =\n   replaceRange(range.start, range.endInclusive + 1, replacement)\n\n/**\n * Replace the part of string at the given [range] with the [replacement] string.\n *\n * The end index of the [range] is included in the part to be replaced.\n */\n@kotlin.internal.InlineOnly\npublic inline fun String.replaceRange(range: IntRange, replacement: CharSequence): String =\n   (this as CharSequence).replaceRange(range, replacement).toString()\n\n/**\n * Returns a char sequence with content of this char sequence where its part at the given range is removed.\n *\n * @param startIndex the index of the first character to be removed.\n * @param endIndex the index of the first character after the removed part to keep in the string.\n *\n * [endIndex] is not included in the removed part.\n */\npublic fun CharSequence.removeRange(startIndex: Int, endIndex: Int): CharSequence {\n   if (endIndex < startIndex)\n   throw IndexOutOfBoundsException(\"End index ($endIndex) is less than start index ($startIndex).\")\n\n   if (endIndex == startIndex)\n   return this.subSequence(0, length)\n\n   val sb = StringBuilder(length - (endIndex - startIndex))\n   sb.append(this, 0, startIndex)\n   sb.append(this, endIndex, length)\n   return sb\n}\n\n/**\n * Removes the part of a string at a given range.\n * @param startIndex the index of the first character to be removed.\n * @param endIndex the index of the first character after the removed part to keep in the string.\n *\n * [endIndex] is not included in the removed part.\n */\n@kotlin.internal.InlineOnly\npublic inline fun String.removeRange(startIndex: Int, endIndex: Int): String =\n   (this as CharSequence).removeRange(startIndex, endIndex).toString()\n\n/**\n * Returns a char sequence with content of this char sequence
where its part at the given [range] is removed.\n *\n * The end index of the [range] is included in the removed part.\n */\npublic fun CharSequence.removeRange(range: IntRange): CharSequence = removeRange(range.start, range.endInclusive + 1)\n\n/**\n * Removes the part of a string at the given [range].\n *\n * The end index of the [range] is included in the removed part.\n */\n@kotlin.internal.InlineOnly\npublic inline fun String.removeRange(range: IntRange): String =\n   (this as CharSequence).removeRange(range).toString()\n\n/**\n * If this char sequence starts with the given [prefix], returns a new char sequence\n * with the prefix removed. Otherwise, returns a new char sequence with the same characters.\n */\npublic fun CharSequence.removePrefix(prefix: CharSequence): CharSequence {\n   if (startsWith(prefix)) {\n   return subSequence(prefix.length, length)\n   }\n   return subSequence(0, length)\n}\n\n/**\n * If this string starts with the given [prefix], returns a copy
of this string\n * with the prefix removed. Otherwise, returns this string.\n */\npublic fun String.removePrefix(prefix: CharSequence): String {\n   if (startsWith(prefix)) {\n   return substring(prefix.length)\n   }\n   return this\n}\n\n/**\n * If this char sequence ends with the given [suffix], returns

a new char sequence\n * with the suffix removed. Otherwise, returns a new char sequence with the same characters.\n */\npublic fun CharSequence.removeSuffix(suffix: CharSequence): CharSequence {\n if (endsWith(suffix)) {\n return subSequence(0, length - suffix.length)\n }\n return subSequence(0, length)\n}\n\n/**\n * If this string ends with the given [suffix], returns a copy of this string\n * with the suffix removed. Otherwise, returns this string.\n */\npublic fun String.removeSuffix(suffix: CharSequence): String {\n if (endsWith(suffix)) {\n return substring(0, length - suffix.length)\n }\n return this\n}\n\n/**\n * When this char sequence
starts with the given [prefix] and ends with the given [suffix],\n * returns a new char sequence having both the given [prefix] and [suffix] removed.\n * Otherwise returns a new char sequence with the same characters.\n */\npublic fun CharSequence.removeSurrounding(prefix: CharSequence, suffix: CharSequence): CharSequence {\n if ((length >= prefix.length + suffix.length) && startsWith(prefix) && endsWith(suffix)) {\n return subSequence(prefix.length, length - suffix.length)\n }\n return subSequence(0, length)\n}\n\n/**\n * Removes from a string both the given [prefix] and [suffix] if and only if\n * it starts with the [prefix] and ends with the [suffix].\n * Otherwise returns this string unchanged.\n */\npublic fun String.removeSurrounding(prefix: CharSequence, suffix: CharSequence): String {\n if ((length >= prefix.length + suffix.length) && startsWith(prefix) && endsWith(suffix)) {\n return substring(prefix.length, length - suffix.length)\n }\n return
this\n}\n\n/**\n * When this char sequence starts with and ends with the given [delimiter],\n * returns a new char sequence having this [delimiter] removed both from the start and end.\n * Otherwise returns a new char sequence with the same characters.\n */\npublic fun CharSequence.removeSurrounding(delimiter: CharSequence): CharSequence = removeSurrounding(delimiter, delimiter)\n\n/**\n * Removes the given [delimiter] string from both the start and the end of this string\n * if and only if it starts with and ends with the [delimiter].\n * Otherwise returns this string unchanged.\n */\npublic fun String.removeSurrounding(delimiter: CharSequence): String = removeSurrounding(delimiter, delimiter)\n\n/**\n * Replace part of string before the first occurrence of given delimiter with the [replacement] string.\n * If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n */\npublic fun String.replaceBefore(delimiter: Char, replacement:
String, missingDelimiterValue: String = this): String {\n val index = indexOf(delimiter)\n return if (index == -1) missingDelimiterValue else replaceRange(0, index, replacement)\n}\n\n/**\n * Replace part of string before the first occurrence of given delimiter with the [replacement] string.\n * If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n */\npublic fun String.replaceBefore(delimiter: String, replacement: String, missingDelimiterValue: String = this): String {\n val index = indexOf(delimiter)\n return if (index == -1) missingDelimiterValue else replaceRange(0, index, replacement)\n}\n\n/**\n * Replace part of string after the first occurrence of given delimiter with the [replacement] string.\n * If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n */\npublic fun String.replaceAfter(delimiter: Char, replacement: String, missingDelimiterValue:
String = this): String {\n val index = indexOf(delimiter)\n return if (index == -1) missingDelimiterValue else replaceRange(index + 1, length, replacement)\n}\n\n/**\n * Replace part of string after the first occurrence of given delimiter with the [replacement] string.\n * If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n */\npublic fun String.replaceAfter(delimiter: String, replacement: String, missingDelimiterValue: String = this): String {\n val index = indexOf(delimiter)\n return if (index == -1) missingDelimiterValue else replaceRange(index + delimiter.length, length, replacement)\n}\n\n/**\n * Replace part of string after the last occurrence of given delimiter with the [replacement] string.\n * If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n */\npublic fun String.replaceAfterLast(delimiter: String, replacement: String,
missingDelimiterValue: String = this): String {\n val index = lastIndexOf(delimiter)\n return if (index == -1) missingDelimiterValue else replaceRange(index + delimiter.length, length, replacement)\n}\n\n/**\n * Replace part of string after the last occurrence of given delimiter with the [replacement] string.\n * If the string does not contain

the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n */\npublic fun String.replaceAfterLast(delimiter: Char, replacement: String, missingDelimiterValue: String = this): String {\n val index = lastIndexOf(delimiter)\n return if (index == -1) missingDelimiterValue else replaceRange(index + 1, length, replacement)\n}\n\n/**\n * Replace part of string before the last occurrence of given delimiter with the [replacement] string.\n * If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n */\npublic fun String.replaceBeforeLast(delimiter: Char, replacement: String, missingDelimiterValue: String = this): String {\n val index = lastIndexOf(delimiter)\n return if (index == -1) missingDelimiterValue else replaceRange(0, index, replacement)\n}\n\n/**\n * Replace part of string before the last occurrence of given delimiter with the [replacement] string.\n * If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n */\npublic fun String.replaceBeforeLast(delimiter: String, replacement: String, missingDelimiterValue: String = this): String {\n val index = lastIndexOf(delimiter)\n return if (index == -1) missingDelimiterValue else replaceRange(0, index, replacement)\n}\n\n\n// public fun String.replace(oldChar: Char, newChar: Char, ignoreCase: Boolean): String // JVM- and JS-specific\n// public fun String.replace(oldValue: String, newValue: String, ignoreCase: Boolean): String // JVM- and JS-specific\n\n/**\n * Returns a new string obtained by replacing each substring of this char sequence that matches the given regular expression\n * with the given [replacement].\n *\n * The [replacement] can consist of any combination of literal text and $-substitutions. To treat the replacement string\n * literally escape it with the [kotlin.text.Regex.Companion.escapeReplacement] method.\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.replace(regex: Regex, replacement: String): String = regex.replace(this, replacement)\n\n/**\n * Returns a new string obtained by replacing each substring of this char sequence that matches the given regular expression\n * with the result of the given function [transform] that takes [MatchResult] and returns a string to be used as a\n * replacement for that match.\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.replace(regex: Regex, noinline transform: (MatchResult) -> CharSequence): String =\n regex.replace(this, transform)\n\n/**\n * Replaces the first occurrence of the given regular expression [regex] in this char sequence with specified [replacement] expression.\n *\n * @param replacement A replacement expression that can include substitutions. See [Regex.replaceFirst] for details.\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.replaceFirst(regex: Regex, replacement: String): String = regex.replaceFirst(this, replacement)\n\n\n/**\n * Returns `true` if this char sequence matches the given regular expression.\n */\n@kotlin.internal.InlineOnly\npublic inline infix fun CharSequence.matches(regex: Regex): Boolean = regex.matches(this)\n\n/**\n * Implementation of [regionMatches] for CharSequences.\n * Invoked when it's already known that arguments are not Strings, so that no additional type checks are performed.\n */\ninternal fun CharSequence.regionMatchesImpl(thisOffset: Int, other: CharSequence, otherOffset: Int, length: Int, ignoreCase: Boolean): Boolean {\n if ((otherOffset < 0) || (thisOffset < 0) || (thisOffset > this.length - length) || (otherOffset > other.length - length)) {\n return false\n }\n\n for (index in 0 until length) {\n if (!this[thisOffset + index].equals(other[otherOffset + index], ignoreCase))\n return false\n }\n return true\n}\n\n/**\n * Returns `true` if this char sequence starts with the specified character.\n */\npublic fun CharSequence.startsWith(char: Char, ignoreCase: Boolean = false): Boolean =\n this.length > 0 && this[0].equals(char, ignoreCase)\n\n/**\n * Returns `true` if this char sequence ends with the specified character.\n */\npublic fun CharSequence.endsWith(char: Char, ignoreCase: Boolean = false): Boolean =\n this.length > 0 && this[lastIndex].equals(char, ignoreCase)\n\n/**\n * Returns `true` if this char sequence starts with the specified prefix.\n */\npublic fun CharSequence.startsWith(prefix: CharSequence, ignoreCase: Boolean = false): Boolean {\n if (!ignoreCase && this is String && prefix is String)\n return this.startsWith(prefix)\n else\n return regionMatchesImpl(0, prefix, 0, prefix.length, ignoreCase)\n}\n\n/**\n * Returns `true` if a substring of this char sequence starting at the specified offset [startIndex] starts with the specified prefix.\n */\npublic fun CharSequence.startsWith(prefix: CharSequence, startIndex: Int, ignoreCase: Boolean = false): Boolean {\n if (!ignoreCase && this is String && prefix is String)\n return this.startsWith(prefix, startIndex)\n else\n return regionMatchesImpl(startIndex, prefix, 0, prefix.length, ignoreCase)\n}\n\n/**\n *

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Returns `true` if this char sequence ends with the specified suffix.\n */\npublic fun CharSequence.endsWith(suffix: CharSequence, ignoreCase: Boolean = false): Boolean {\n    if (!ignoreCase && this is String && suffix is String)\n        return this.endsWith(suffix)\n    else\n        return regionMatchesImpl(length - suffix.length, suffix, 0, suffix.length, ignoreCase)\n}\n\n\n// common prefix and suffix\n\n/**\n * Returns the longest string `prefix` such that this char sequence and [other] char sequence both start with this prefix,\n * taking care not to split surrogate pairs.\n * If this and [other] have no common prefix, returns the empty string.\n\n * @param ignoreCase `true` to ignore character case when matching a character. By default `false`.\n * @sample samples.text.Strings.commonPrefixWith\n */\npublic fun CharSequence.commonPrefixWith(other: CharSequence, ignoreCase: Boolean = false): String {\n    val shortestLength = minOf(this.length, other.length)\n\n    var i = 0\n    while (i < shortestLength && this[i].equals(other[i], ignoreCase = ignoreCase)) {\n        i++\n    }\n    if (this.hasSurrogatePairAt(i - 1) || other.hasSurrogatePairAt(i - 1)) {\n        i--\n    }\n    return subSequence(0, i).toString()\n}\n\n/**\n * Returns the longest string `suffix` such that this char sequence and [other] char sequence both end with this suffix,\n * taking care not to split surrogate pairs.\n * If this and [other] have no common suffix, returns the empty string.\n\n * @param ignoreCase `true` to ignore character case when matching a character. By default `false`.\n * @sample samples.text.Strings.commonSuffixWith\n */\npublic fun CharSequence.commonSuffixWith(other: CharSequence, ignoreCase: Boolean = false): String {\n    val thisLength = this.length\n    val otherLength = other.length\n    val shortestLength = minOf(thisLength, otherLength)\n\n    var i = 0\n    while (i < shortestLength && this[thisLength - i - 1].equals(other[otherLength - i - 1], ignoreCase = ignoreCase)) {\n        i++\n    }\n    if (this.hasSurrogatePairAt(thisLength - i - 1) || other.hasSurrogatePairAt(otherLength - i - 1)) {\n        i--\n    }\n    return subSequence(thisLength - i, thisLength).toString()\n}\n\n\n// indexOfAny()\n\n/**\n * Finds the index of the first occurrence of any of the specified [chars] in this char sequence,\n * starting from the specified [startIndex] and optionally ignoring
 the case.\n *\n * @param ignoreCase `true` to ignore character case when matching a character. By default `false`.\n * @return An index of the first occurrence of matched character from [chars] or -1 if none of [chars] are found.\n *\n */\npublic fun CharSequence.indexOfAny(chars: CharArray, startIndex: Int = 0, ignoreCase: Boolean = false): Int {\n    if (!ignoreCase && chars.size == 1 && this is String) {\n        val char = chars.single()\n        return nativeIndexOf(char, startIndex)\n    }\n\n    for (index in startIndex.coerceAtLeast(0)..lastIndex) {\n        val charAtIndex = get(index)\n        if (chars.any { it.equals(charAtIndex, ignoreCase) })\n            return index\n    }\n    return -1\n}\n\n/**\n * Finds the index of the last occurrence of any of the specified [chars] in this char sequence,\n * starting from the specified [startIndex] and optionally ignoring the case.\n *\n * @param startIndex The index of character to start searching at. The search proceeds
 backward toward the beginning of the string.\n * @param ignoreCase `true` to ignore character case when matching a character. By default `false`.\n * @return An index of the last occurrence of matched character from [chars] or -1 if none of [chars] are found.\n *\n */\npublic fun CharSequence.lastIndexOfAny(chars: CharArray, startIndex: Int = lastIndex, ignoreCase: Boolean = false): Int {\n    if (!ignoreCase && chars.size == 1 && this is String) {\n        val char = chars.single()\n        return nativeLastIndexOf(char, startIndex)\n    }\n\n    for (index in startIndex.coerceAtMost(lastIndex) downTo 0) {\n        val charAtIndex = get(index)\n        if (chars.any { it.equals(charAtIndex, ignoreCase) })\n            return index\n    }\n\n    return -1\n}\n\n\nprivate fun CharSequence.indexOf(other: CharSequence, startIndex: Int, endIndex: Int, ignoreCase: Boolean, last: Boolean = false): Int {\n    val indices = if (!last)\n        startIndex.coerceAtLeast(0)..endIndex.coerceAtMost(length)\n    else\n        startIndex.coerceAtMost(lastIndex) downTo endIndex.coerceAtLeast(0)\n\n    if (this is String && other is String) { // smart cast\n        for (index in indices) {\n            if (other.regionMatches(0, this, index, other.length, ignoreCase))\n                return index\n        }\n    } else {\n        for (index in indices) {\n            if (other.regionMatchesImpl(0, this, index, other.length, ignoreCase))\n                return index\n        }\n    }\n    return -1\n}\n\nprivate fun CharSequence.findAnyOf(strings: Collection<String>, startIndex: Int, ignoreCase: Boolean, last: Boolean): Pair<Int, String>? {\n    if (!ignoreCase && strings.size == 1) {\n        val string = strings.single()\n        val index = if (!last) indexOf(string, startIndex) else lastIndexOf(string, startIndex)\n        return if (index < 0) null
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else index to string\n   }\n\n   val indices = if (!last) startIndex.coerceAtLeast(0)..length else startIndex.coerceAtMost(lastIndex)
 downTo 0\n\n   if (this is String) {\n   for (index in indices) {\n   val matchingString = strings.firstOrNull { it.regionMatches(0, this, index, it.length, ignoreCase) }\n   if (matchingString != null)\n   return index to matchingString\n   }\n   } else {\n   for (index in indices) {\n   val matchingString = strings.firstOrNull { it.regionMatchesImpl(0, this, index, it.length, ignoreCase) }\n   if (matchingString != null)\n   return index to matchingString\n   }\n   }\n\n   return null\n}\n\n/**\n * Finds the first occurrence of any of the specified [strings] in this char sequence,\n * starting from the specified [startIndex] and optionally ignoring the case.\n *\n * @param ignoreCase `true` to ignore character case when matching a string. By default `false`.\n * @return A pair of an index of the first occurrence of matched string from [strings] and the string matched\n * or `null` if none of
 [strings] are found.\n *\n * To avoid ambiguous results when strings in [strings] have characters in common, this method proceeds from\n * the beginning to the end of this string, and finds at each position the first element in [strings]\n * that matches this string at that position.\n */\npublic fun CharSequence.findAnyOf(strings: Collection<String>, startIndex: Int = 0, ignoreCase: Boolean = false): Pair<Int, String>? =\n   findAnyOf(strings, startIndex, ignoreCase, last = false)\n\n/**\n * Finds the last occurrence of any of the specified [strings] in this char sequence,\n * starting from the specified [startIndex] and optionally ignoring the case.\n *\n * @param startIndex The index of character to start searching at. The search proceeds backward toward the beginning of the string.\n * @param ignoreCase `true` to ignore character case when matching a string. By default `false`.\n * @return A pair of an index of the last occurrence of matched string from [strings] and the string matched
 or `null` if none of [strings] are found.\n *\n * To avoid ambiguous results when strings in [strings] have characters in common, this method proceeds from\n * the end toward the beginning of this string, and finds at each position the first element in [strings]\n * that matches this string at that position.\n */\npublic fun CharSequence.findLastAnyOf(strings: Collection<String>, startIndex: Int = lastIndex, ignoreCase: Boolean = false): Pair<Int, String>? =\n   findAnyOf(strings, startIndex, ignoreCase, last = true)\n\n/**\n * Finds the index of the first occurrence of any of the specified [strings] in this char sequence,\n * starting from the specified [startIndex] and optionally ignoring the case.\n *\n * @param ignoreCase `true` to ignore character case when matching a string. By default `false`.\n * @return An index of the first occurrence of matched string from [strings] or -1 if none of [strings] are found.\n *\n * To avoid ambiguous results when strings in [strings] have
 characters in common, this method proceeds from\n * the beginning to the end of this string, and finds at each position the first element in [strings]\n * that matches this string at that position.\n */\npublic fun CharSequence.indexOfAny(strings: Collection<String>, startIndex: Int = 0, ignoreCase: Boolean = false): Int =\n findAnyOf(strings, startIndex, ignoreCase, last = false)?.first ?: -1\n\n/**\n * Finds the index of the last occurrence of any of the specified [strings] in this char sequence,\n * starting from the specified [startIndex] and optionally ignoring the case.\n *\n * @param startIndex The index of character to start searching at. The search proceeds backward toward the beginning of the string.\n * @param ignoreCase `true` to ignore character case when matching a string. By default `false`.\n * @return An index of the last occurrence of matched string from [strings] or -1 if none of [strings] are found.\n *\n * To avoid ambiguous results when strings in [strings] have
 characters in common, this method proceeds from\n * the end toward the beginning of this string, and finds at each position the first element in [strings]\n * that matches this string at that position.\n */\npublic fun CharSequence.lastIndexOfAny(strings: Collection<String>, startIndex: Int = lastIndex, ignoreCase: Boolean = false): Int =\n   findAnyOf(strings, startIndex, ignoreCase, last = true)?.first ?: -1\n\n\n// indexOf\n\n/**\n * Returns the index within this string of the first occurrence of the specified character, starting from the specified [startIndex].\n *\n * @param ignoreCase `true` to ignore character case when matching a character. By default `false`.\n * @return An index of the first occurrence of [char] or -1 if none is found.\n */\npublic fun CharSequence.indexOf(char: Char, startIndex: Int = 0, ignoreCase: Boolean = false): Int {\n   return if (ignoreCase || this !is String)\n   indexOfAny(charArrayOf(char), startIndex, ignoreCase)\n   else\n   nativeIndexOf(char,

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startIndex)\n}\n\n/**\n * Returns the index within this char sequence of the first occurrence of the specified [string],\n * starting from the specified [startIndex].\n *\n * @param ignoreCase `true` to ignore character case when matching a string. By default `false`.\n * @return An index of the first occurrence of [string] or `-1` if none is found.\n */\npublic fun CharSequence.indexOf(string: String, startIndex: Int = 0, ignoreCase: Boolean = false): Int {\n    return if (ignoreCase || this !is String)\n        indexOf(string, startIndex, length, ignoreCase)\n    else\n nativeIndexOf(string, startIndex)\n}\n\n/**\n * Returns the index within this char sequence of the last occurrence of the specified character,\n * starting from the specified [startIndex].\n *\n * @param startIndex The index of character to start searching at. The search proceeds backward toward the beginning of the string.\n * @param ignoreCase `true` to ignore character case when matching a character.
 By default `false`.\n * @return An index of the first occurrence of [char] or -1 if none is found.\n */\npublic fun CharSequence.lastIndexOf(char: Char, startIndex: Int = lastIndex, ignoreCase: Boolean = false): Int {\n    return if (ignoreCase || this !is String)\n        lastIndexOfAny(charArrayOf(char), startIndex, ignoreCase)\n    else\n nativeLastIndexOf(char, startIndex)\n}\n\n/**\n * Returns the index within this char sequence of the last occurrence of the specified [string],\n * starting from the specified [startIndex].\n *\n * @param startIndex The index of character to start searching at. The search proceeds backward toward the beginning of the string.\n * @param ignoreCase `true` to ignore character case when matching a string. By default `false`.\n * @return An index of the first occurrence of [string] or -1 if none is found.\n */\npublic fun CharSequence.lastIndexOf(string: String, startIndex: Int = lastIndex, ignoreCase: Boolean = false): Int {\n    return
 if (ignoreCase || this !is String)\n        indexOf(string, startIndex, 0, ignoreCase, last = true)\n    else\n nativeLastIndexOf(string, startIndex)\n}\n\n/**\n * Returns `true` if this char sequence contains the specified [other] sequence of characters as a substring.\n *\n * @param ignoreCase `true` to ignore character case when comparing strings. By default `false`.\n */\n@Suppress(\"INAPPLICABLE_OPERATOR_MODIFIER\")\npublic operator fun CharSequence.contains(other: CharSequence, ignoreCase: Boolean = false): Boolean =\n    if (other is String)\n indexOf(other, ignoreCase = ignoreCase) >= 0\n    else\n        indexOf(other, 0, length, ignoreCase) >= 0\n\n\n\n/**\n * Returns `true` if this char sequence contains the specified character [char].\n *\n * @param ignoreCase `true` to ignore character case when comparing characters. By default `false`.\n */\n@Suppress(\"INAPPLICABLE_OPERATOR_MODIFIER\")\npublic operator fun CharSequence.contains(char: Char, ignoreCase: Boolean
 = false): Boolean =\n    indexOf(char, ignoreCase = ignoreCase) >= 0\n\n/**\n * Returns `true` if this char sequence contains at least one match of the specified regular expression [regex].\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun CharSequence.contains(regex: Regex): Boolean = regex.containsMatchIn(this)\n\n\n// rangesDelimitedBy\n\n\nprivate class DelimitedRangesSequence(\n    private val input: CharSequence,\n    private val startIndex: Int,\n    private val limit: Int,\n    private val getNextMatch: CharSequence.(currentIndex: Int) -> Pair<Int, Int>?\n) : Sequence<IntRange> {\n\n    override fun iterator(): Iterator<IntRange> = object : Iterator<IntRange> {\n        var nextState: Int = -1 // -1 for unknown, 0 for done, 1 for continue\n        var currentStartIndex: Int = startIndex.coerceIn(0, input.length)\n        var nextSearchIndex: Int = currentStartIndex\n
 var nextItem: IntRange? = null\n        var counter: Int = 0\n\n        private fun calcNext()
 {\n            if (nextSearchIndex < 0) {\n                nextState = 0\n                nextItem = null\n            } else {\n
 if (limit > 0 && ++counter >= limit || nextSearchIndex > input.length) {\n                nextItem = currentStartIndex..input.lastIndex\n                nextSearchIndex = -1\n            } else {\n                val match = input.getNextMatch(nextSearchIndex)\n                if (match == null) {\n                    nextItem = currentStartIndex..input.lastIndex\n                    nextSearchIndex = -1\n                } else {\n                    val (index, length) = match\n                    nextItem = currentStartIndex until index\n                    currentStartIndex = index + length\n                    nextSearchIndex = currentStartIndex + if (length == 0) 1 else 0\n                }\n            }\n            nextState = 1\n        }\n    }\n\n    override
 fun next(): IntRange {\n        if (nextState == -1)\n            calcNext()\n        if (nextState == 0)\n            throw NoSuchElementException()\n        val result = nextItem as IntRange\n        // Clean next to avoid keeping reference on yielded instance\n        nextItem = null\n        nextState = -1\n        return result\n    }\n\n
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override fun hasNext(): Boolean {\n if (nextState == -1)\n calcNext()\n return nextState == 1\n }\n }\n\n/**\n * Returns a sequence of index ranges of substrings in this char sequence around occurrences of the specified [delimiters].\n *\n * @param delimiters One or more characters to be used as delimiters.\n * @param startIndex The index to start searching delimiters from.\n * No range having its start value less than [startIndex] is returned.\n * [startIndex] is coerced to be non-negative and not greater than length of this string.\n * @param
ignoreCase `true` to ignore character case when matching a delimiter. By default `false`.\n * @param limit The maximum number of substrings to return. Zero by default means no limit is set.\n */\nprivate fun CharSequence.rangesDelimitedBy(delimiters: CharArray, startIndex: Int = 0, ignoreCase: Boolean = false, limit: Int = 0): Sequence<IntRange> {\n require(limit >= 0, { \"Limit must be non-negative, but was $limit.\" })\n\n return DelimitedRangesSequence(this, startIndex, limit, { currentIndex ->\n indexOfAny(delimiters, currentIndex, ignoreCase = ignoreCase).let { if (it < 0) null else it to 1 }\n })\n}\n\n\n/**\n * Returns a sequence of index ranges of substrings in this char sequence around occurrences of the specified [delimiters].\n *\n * @param delimiters One or more strings to be used as delimiters.\n * @param startIndex The index to start searching delimiters from.\n * No range having its start value less than [startIndex] is returned.\n * [startIndex] is coerced
to be non-negative and not greater than length of this string.\n * @param ignoreCase `true` to ignore character case when matching a delimiter. By default `false`.\n * @param limit The maximum number of substrings to return. Zero by default means no limit is set.\n *\n * To avoid ambiguous results when strings in [delimiters] have characters in common, this method proceeds from\n * the beginning to the end of this string, and finds at each position the first element in [delimiters]\n * that matches this string at that position.\n */\nprivate fun CharSequence.rangesDelimitedBy(delimiters: Array<out String>, startIndex: Int = 0, ignoreCase: Boolean = false, limit: Int = 0): Sequence<IntRange> {\n require(limit >= 0, { \"Limit must be non-negative, but was $limit.\" })\n val delimitersList = delimiters.asList()\n\n return DelimitedRangesSequence(this, startIndex, limit, { currentIndex -> findAnyOf(delimitersList, currentIndex, ignoreCase = ignoreCase, last = false)?.let {
it.first to it.second.length } })\n\n}\n\n\n// split\n\n/**\n * Splits this char sequence to a sequence of strings around occurrences of the specified [delimiters].\n *\n * @param delimiters One or more strings to be used as delimiters.\n * @param ignoreCase `true` to ignore character case when matching a delimiter. By default `false`.\n * @param limit The maximum number of substrings to return. Zero by default means no limit is set.\n *\n * To avoid ambiguous results when strings in [delimiters] have characters in common, this method proceeds from\n * the beginning to the end of this string, and finds at each position the first element in [delimiters]\n * that matches this string at that position.\n */\npublic fun CharSequence.splitToSequence(vararg delimiters: String, ignoreCase: Boolean = false, limit: Int = 0): Sequence<String> =\n rangesDelimitedBy(delimiters, ignoreCase = ignoreCase, limit = limit).map { substring(it) }\n\n/**\n * Splits this char sequence to a list of strings
around occurrences of the specified [delimiters].\n *\n * @param delimiters One or more strings to be used as delimiters.\n * @param ignoreCase `true` to ignore character case when matching a delimiter. By default `false`.\n * @param limit The maximum number of substrings to return. Zero by default means no limit is set.\n *\n * To avoid ambiguous results when strings in [delimiters] have characters in common, this method proceeds from\n * the beginning to the end of this string, and matches at each position the first element in [delimiters]\n * that is equal to a delimiter in this instance at that position.\n */\npublic fun CharSequence.split(vararg delimiters: String, ignoreCase: Boolean = false, limit: Int = 0): List<String> {\n if (delimiters.size == 1) {\n val delimiter = delimiters[0]\n if (!delimiter.isEmpty()) {\n return split(delimiter, ignoreCase, limit)\n }\n }\n\n return rangesDelimitedBy(delimiters, ignoreCase = ignoreCase, limit =
limit).asIterable().map { substring(it) }\n}\n\n/**\n * Splits this char sequence to a sequence of strings around occurrences of the specified [delimiters].\n *\n * @param delimiters One or more characters to be used as delimiters.\n * @param ignoreCase `true` to ignore character case when matching a delimiter. By default `false`.\n * @param limit The maximum number of substrings to return.\n */\npublic fun CharSequence.splitToSequence(vararg delimiters: Char, ignoreCase: Boolean = false, limit: Int = 0): Sequence<String> =\n rangesDelimitedBy(delimiters, ignoreCase = ignoreCase, limit = limit).map { substring(it) }\n\n/**\n * Splits this

char sequence to a list of strings around occurrences of the specified [delimiters].\n *\n * @param delimiters One or more characters to be used as delimiters.\n * @param ignoreCase `true` to ignore character case when matching a delimiter. By default `false`.\n * @param limit The maximum number of substrings to return.\n */\npublic fun CharSequence.split(vararg
delimiters: Char, ignoreCase: Boolean = false, limit: Int = 0): List<String> {\n if (delimiters.size == 1) {\n return split(delimiters[0].toString(), ignoreCase, limit)\n }\n\n return rangesDelimitedBy(delimiters, ignoreCase = ignoreCase, limit = limit).asIterable().map { substring(it) }\n}\n\n/**\n * Splits this char sequence to a list of strings around occurrences of the specified [delimiter].\n * This is specialized version of split which receives single non-empty delimiter and offers better performance\n *\n * @param delimiter String used as delimiter\n * @param ignoreCase `true` to ignore character case when matching a delimiter. By default `false`.\n * @param limit The maximum number of substrings to return.\n */\nprivate fun CharSequence.split(delimiter: String, ignoreCase: Boolean, limit: Int): List<String> {\n require(limit >= 0, { \"Limit must be non-negative, but was $limit.\" })\n\n var currentOffset = 0\n var nextIndex = indexOf(delimiter,
currentOffset, ignoreCase)\n if (nextIndex == -1 || limit == 1) {\n return listOf(this.toString())\n }\n\n val isLimited = limit > 0\n val result = ArrayList<String>(if (isLimited) limit.coerceAtMost(10) else 10)\n do {\n result.add(substring(currentOffset, nextIndex))\n currentOffset = nextIndex + delimiter.length\n // Do not search for next occurrence if we're reaching limit\n if (isLimited && result.size == limit - 1) break\n nextIndex = indexOf(delimiter, currentOffset, ignoreCase)\n } while (nextIndex != -1)\n\n result.add(substring(currentOffset, length))\n return result\n}\n\n/**\n * Splits this char sequence around matches of the given regular expression.\n *\n * @param limit Non-negative value specifying the maximum number of substrings to return.\n * Zero by default means no limit is set.\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.split(regex: Regex, limit: Int = 0): List<String>
= regex.split(this, limit)\n\n/**\n * Splits this char sequence to a sequence of lines delimited by any of the following character sequences: CRLF, LF or CR.\n *\n * The lines returned do not include terminating line separators.\n */\npublic fun CharSequence.lineSequence(): Sequence<String> = splitToSequence(\"\\r\\n\", \"\\n\", \"\\r\")\n\n/**\n * Splits this char sequence to a list of lines delimited by any of the following character sequences: CRLF, LF or CR.\n *\n * The lines returned do not include terminating line separators.\n */\npublic fun CharSequence.lines(): List<String> = lineSequence().toList()\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.text\n\nimport kotlin.js.RegExp\n\n/**\n * Converts the characters in the specified array to a string.\n */\n@SinceKotlin(\"1.2\")\npublic actual fun String(chars: CharArray): String {\n var result
= \"\"\n for (char in chars) {\n result += char\n }\n return result\n}\n\n/**\n * Converts the characters from a portion of the specified array to a string.\n *\n * @throws IndexOutOfBoundsException if either [offset] or [length] are less than zero\n * or `offset + length` is out of [chars] array bounds.\n */\n@SinceKotlin(\"1.2\")\npublic actual fun String(chars: CharArray, offset: Int, length: Int): String {\n if (offset < 0 || length < 0 || chars.size - offset < length)\n throw IndexOutOfBoundsException(\"size: ${chars.size}; offset: $offset; length: $length\")\n var result = \"\"\n for (index in offset until offset + length) {\n result += chars[index]\n }\n return result\n}\n\n/**\n * Returns a copy of this string converted to upper case using the rules of the default locale.\n *\n * @sample samples.text.Strings.toUpperCase\n */\n@kotlin.internal.InlineOnly\npublic actual inline fun String.toUpperCase(): String = asDynamic().toUpperCase()\n\n/**\n
* Returns a copy of this string converted to lower case using the rules of the default locale.\n *\n * @sample samples.text.Strings.toLowerCase\n */\n@kotlin.internal.InlineOnly\npublic actual inline fun String.toLowerCase(): String = asDynamic().toLowerCase()\n\n@kotlin.internal.InlineOnly\ninternal actual inline fun String.nativeIndexOf(str: String, fromIndex: Int): Int = asDynamic().indexOf(str, fromIndex)\n\n@kotlin.internal.InlineOnly\ninternal actual inline fun String.nativeLastIndexOf(str: String, fromIndex: Int): Int = asDynamic().lastIndexOf(str, fromIndex)\n\n@kotlin.internal.InlineOnly\ninternal inline fun String.nativeStartsWith(s: String, position: Int): Boolean = asDynamic().startsWith(s, position)\n\n@kotlin.internal.InlineOnly\ninternal inline fun String.nativeEndsWith(s: String): Boolean =

asDynamic().endsWith(s)\n\n@kotlin.internal.InlineOnly\npublic actual inline fun String.substring(startIndex: Int): String = asDynamic().substring(startIndex)\n\n@kotlin.internal.InlineOnly\npublic actual inline fun String.substring(startIndex: Int, endIndex: Int): String = asDynamic().substring(startIndex, endIndex)\n\n@kotlin.internal.InlineOnly\npublic inline fun String.concat(str: String): String = asDynamic().concat(str)\n\n@kotlin.internal.InlineOnly\npublic inline fun String.match(regex: String): Array<String>? = asDynamic().match(regex)\n\n//native public fun String.trim(): String\n//TODO: String.replace to implement effective trimLeading and trimTrailing\n\n@kotlin.internal.InlineOnly\ninternal inline fun String.nativeReplace(pattern: RegExp, replacement: String): String = asDynamic().replace(pattern, replacement)\n\n@SinceKotlin(\"1.2\")\n@Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\npublic actual fun String.compareTo(other: String, ignoreCase: Boolean = false): Int {\n if (ignoreCase) {\n val n1 = this.length\n val n2 = other.length\n val min = minOf(n1, n2)\n if (min == 0) return n1 - n2\n\n var start = 0\n while (true) {\n val end = minOf(start + 16, min)\n var s1 = this.substring(start, end)\n var s2 = other.substring(start, end)\n if (s1 != s2) {\n s1 = s1.toUpperCase()\n s2 = s2.toUpperCase()\n if (s1 != s2) {\n s1 = s1.toLowerCase()\n s2 = s2.toLowerCase()\n if (s1 != s2) {\n return s1.compareTo(s2)\n }\n }\n }\n if (end == min) break\n start = end\n }\n return n1 - n2\n } else {\n return compareTo(other)\n }\n}\n\n\nprivate val STRING_CASE_INSENSITIVE_ORDER = Comparator<String> { a, b -> a.compareTo(b, ignoreCase = true) }\n\n@SinceKotlin(\"1.2\")\npublic actual val String.Companion.CASE_INSENSITIVE_ORDER: Comparator<String>\n get() = STRING_CASE_INSENSITIVE_ORDER\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"UArraysKt\")\n@file:kotlin.jvm.JvmPackageName(\"kotlin.collections.unsigned\")\n\npackage kotlin.collections\n\n//\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n//\n\nimport kotlin.random.*\n\n/**\n * Returns 1st *element* from the collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UIntArray.component1(): UInt {\n return get(0)\n}\n\n/**\n * Returns 1st *element* from the collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun ULongArray.component1(): ULong {\n return get(0)\n}\n\n/**\n * Returns 1st *element* from the collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UByteArray.component1(): UByte {\n return get(0)\n}\n\n/**\n * Returns 1st *element* from the collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UShortArray.component1(): UShort {\n return get(0)\n}\n\n/**\n * Returns 2nd *element* from the collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UIntArray.component2(): UInt {\n return get(1)\n}\n\n/**\n * Returns 2nd *element* from the collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun ULongArray.component2(): ULong {\n return get(1)\n}\n\n/**\n * Returns 2nd *element* from the collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UByteArray.component2(): UByte {\n return get(1)\n}\n\n/**\n * Returns 2nd *element* from the collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UShortArray.component2(): UShort {\n return get(1)\n}\n\n/**\n * Returns 3rd *element* from the collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UIntArray.component3(): UInt {\n return get(2)\n}\n\n/**\n * Returns 3rd *element* from the collection.\n

*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun ULongArray.component3(): ULong {\n   return get(2)\n}\n\n/**\n * Returns 3rd *element* from the collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UByteArray.component3(): UByte {\n   return get(2)\n}\n\n/**\n * Returns 3rd *element* from the collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UShortArray.component3(): UShort {\n   return get(2)\n}\n\n/**\n * Returns 4th *element* from the collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UIntArray.component4(): UInt {\n   return get(3)\n}\n\n/**\n * Returns 4th *element* from the collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun ULongArray.component4(): ULong {\n   return get(3)\n}\n\n/**\n * Returns 4th *element* from the collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UByteArray.component4(): UByte {\n   return get(3)\n}\n\n/**\n * Returns 4th *element* from the collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UShortArray.component4():
UShort {\n   return get(3)\n}\n\n/**\n * Returns 5th *element* from the collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UIntArray.component5(): UInt {\n   return get(4)\n}\n\n/**\n * Returns 5th *element* from the collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun ULongArray.component5(): ULong {\n   return get(4)\n}\n\n/**\n * Returns 5th *element* from the collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UByteArray.component5(): UByte {\n   return get(4)\n}\n\n/**\n * Returns 5th *element* from the collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UShortArray.component5(): UShort {\n   return get(4)\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException]
if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAt\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic expect fun UIntArray.elementAt(index: Int): UInt\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic expect fun ULongArray.elementAt(index: Int): ULong\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic expect fun UByteArray.elementAt(index: Int): UByte\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index]
is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic expect fun UShortArray.elementAt(index: Int): UShort\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrElse\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.elementAtOrElse(index: Int, defaultValue: (Int) -> UInt): UInt {\n   return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrElse\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun ULongArray.elementAtOrElse(index: Int, defaultValue: (Int) -> ULong): ULong {\n   return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index]

or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrElse\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.elementAtOrElse(index: Int, defaultValue: (Int) -> UByte): UByte {\n   return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrElse\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.elementAtOrElse(index: Int, defaultValue: (Int) -> UShort): UShort {\n   return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.elementAtOrNull(index: Int): UInt? {\n   return this.getOrNull(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.elementAtOrNull(index: Int): ULong? {\n   return this.getOrNull(index)\n}\n\n/**\n * Returns an element at the given [index] or `null`
 if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.elementAtOrNull(index: Int): UByte? {\n   return this.getOrNull(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAtOrNull\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.elementAtOrNull(index: Int): UShort? {\n   return this.getOrNull(index)\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such element was found.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.find(predicate: (UInt) -> Boolean): UInt? {\n   return firstOrNull(predicate)\n}\n\n/**\n
 * Returns the first element matching the given [predicate], or `null` if no such element was found.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.find(predicate: (ULong) -> Boolean): ULong? {\n   return firstOrNull(predicate)\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such element was found.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.find(predicate: (UByte) -> Boolean): UByte? {\n   return firstOrNull(predicate)\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such element was found.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.find(predicate: (UShort) -> Boolean): UShort? {\n   return firstOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if
 no such element was found.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.findLast(predicate: (UInt) -> Boolean): UInt? {\n   return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.findLast(predicate: (ULong) -> Boolean): ULong? {\n   return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun

UByteArray.findLast(predicate: (UByte) -> Boolean): UByte? {\n   return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.findLast(predicate: (UShort) -> Boolean): UShort? {\n   return lastOrNull(predicate)\n}\n\n/**\n * Returns first element.\n * @throws [NoSuchElementException] if the array is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.first(): UInt {\n   return storage.first().toUInt()\n}\n\n/**\n * Returns first element.\n * @throws [NoSuchElementException] if the array is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.first(): ULong {\n   return storage.first().toULong()\n}\n\n/**\n * Returns first element.\n * @throws [NoSuchElementException] if the array is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.first(): UByte {\n   return storage.first().toUByte()\n}\n\n/**\n * Returns first element.\n * @throws [NoSuchElementException] if the array is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.first(): UShort {\n   return storage.first().toUShort()\n}\n\n/**\n * Returns the first element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.first(predicate: (UInt) -> Boolean): UInt {\n   for (element in this) if (predicate(element)) return element\n   throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n}\n\n/**\n * Returns the first element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.first(predicate: (ULong) -> Boolean): ULong {\n   for (element in this) if (predicate(element)) return element\n   throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n}\n\n/**\n * Returns the first element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.first(predicate: (UByte) -> Boolean): UByte {\n   for (element in this) if (predicate(element)) return element\n   throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n}\n\n/**\n * Returns the first element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.first(predicate: (UShort) -> Boolean): UShort {\n   for (element in this) if (predicate(element)) return element\n   throw NoSuchElementException(\"Array contains\n no element matching the predicate.\")\n}\n\n/**\n * Returns the first element, or `null` if the array is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.firstOrNull(): UInt? {\n   return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element, or `null` if the array is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.firstOrNull(): ULong? {\n return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element, or `null` if the array is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.firstOrNull(): UByte? {\n return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element, or `null` if the array is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.firstOrNull(): UShort? {\n return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element matching the given [predicate],\n or `null` if element was not found.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.firstOrNull(predicate: (UInt) -> Boolean): UInt? {\n   for (element in this) if (predicate(element)) return element\n   return null\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if element

was not found.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.firstOrNull(predicate: (ULong) -> Boolean): ULong? {\n   for (element in this) if (predicate(element)) return element\n   return null\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if element was not found.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.firstOrNull(predicate: (UByte) -> Boolean): UByte? {\n   for (element in this) if (predicate(element)) return element\n   return null\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if element was not found.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.firstOrNull(predicate: (UShort) -> Boolean): UShort? {\n   for (element in this) if (predicate(element)) return element\n   return null\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.getOrElse(index: Int, defaultValue: (Int) -> UInt): UInt {\n   return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.getOrElse(index: Int, defaultValue: (Int) -> ULong): ULong {\n   return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.getOrElse(index: Int, defaultValue: (Int) -> UByte): UByte {\n   return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.getOrElse(index: Int, defaultValue: (Int) -> UShort): UShort {\n   return if (index >= 0 && index <= lastIndex) get(index)\n   else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.getOrNull(index: Int): UInt? {\n   return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.getOrNull(index: Int): ULong? {\n   return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.getOrNull(index: Int): UByte? {\n   return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds\n of this array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.getOrNull(index: Int): UShort? {\n   return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns first index of [element], or -1 if the array does not contain element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.indexOf(element: UInt): Int {\n   return storage.indexOf(element.toInt())\n}\n\n/**\n * Returns first index of [element], or -1 if the array does not contain element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.indexOf(element: ULong): Int {\n   return storage.indexOf(element.toLong())\n}\n\n/**\n * Returns first index of [element], or -1 if the array does not contain element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.indexOf(element: UByte):

Int {\n   return storage.indexOf(element.toByte())\n}\n\n/**\n * Returns first index of [element], or -1 if the array does not contain element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.indexOf(element: UShort): Int {\n   return storage.indexOf(element.toShort())\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the array does not contain such element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.indexOfFirst(predicate: (UInt) -> Boolean): Int {\n   return storage.indexOfFirst { predicate(it.toUInt()) }\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the array does not contain such element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.indexOfFirst(predicate: (ULong) -> Boolean): Int {\n   return storage.indexOfFirst { predicate(it.toULong()) }\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the array does not contain such element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.indexOfFirst(predicate: (UByte) -> Boolean): Int {\n   return storage.indexOfFirst { predicate(it.toUByte()) }\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the array does not contain such element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.indexOfFirst(predicate: (UShort) -> Boolean): Int {\n   return storage.indexOfFirst { predicate(it.toUShort()) }\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.indexOfLast(predicate: (UInt) -> Boolean): Int {\n   return storage.indexOfLast { predicate(it.toUInt()) }\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.indexOfLast(predicate: (ULong) -> Boolean): Int {\n   return storage.indexOfLast { predicate(it.toULong()) }\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.indexOfLast(predicate: (UByte) -> Boolean): Int {\n   return storage.indexOfLast { predicate(it.toUByte()) }\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.indexOfLast(predicate: (UShort) -> Boolean): Int {\n   return storage.indexOfLast { predicate(it.toUShort()) }\n}\n\n/**\n * Returns the last element.\n * @throws [NoSuchElementException] if the array is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.last(): UInt {\n   return storage.last().toUInt()\n}\n\n/**\n * Returns the last element.\n * @throws [NoSuchElementException] if the array is empty.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.last(): ULong {\n   return storage.last().toULong()\n}\n\n/**\n * Returns the last element.\n * @throws [NoSuchElementException] if the array is empty.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.last(): UByte {\n   return storage.last().toUByte()\n}\n\n/**\n
 * Returns the last element.\n * @throws [NoSuchElementException] if the array is empty.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.last(): UShort {\n   return storage.last().toUShort()\n}\n\n/**\n * Returns the last element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun

UIntArray.last(predicate: (UInt) -> Boolean): UInt {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n}\n\n/**\n * Returns the last element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.last(predicate: (ULong) -> Boolean): ULong {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n}\n\n/**\n * Returns the last element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.last(predicate: (UByte) -> Boolean): UByte {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n}\n\n/**\n * Returns the last element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.last(predicate: (UShort) -> Boolean): UShort {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n}\n\n/**\n * Returns last index of [element], or -1 if the array does not contain element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.lastIndexOf(element: UInt): Int {\n return storage.lastIndexOf(element.toInt())\n}\n\n/**\n * Returns last index of [element], or -1 if the array does not contain element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.lastIndexOf(element: ULong): Int {\n return storage.lastIndexOf(element.toLong())\n}\n\n/**\n * Returns last index of [element], or -1 if the array
does not contain element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.lastIndexOf(element: UByte): Int {\n return storage.lastIndexOf(element.toByte())\n}\n\n/**\n * Returns last index of [element], or -1 if the array does not contain element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.lastIndexOf(element: UShort): Int {\n return storage.lastIndexOf(element.toShort())\n}\n\n/**\n * Returns the last element, or `null` if the array is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.lastOrNull(): UInt? {\n return if (isEmpty()) null else this[size - 1]\n}\n\n/**\n * Returns the last element, or `null` if the array is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.lastOrNull(): ULong? {\n return if (isEmpty()) null else this[size - 1]\n}\n\n/**\n * Returns the
last element, or `null` if the array is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.lastOrNull(): UByte? {\n return if (isEmpty()) null else this[size - 1]\n}\n\n/**\n * Returns the last element, or `null` if the array is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.lastOrNull(): UShort? {\n return if (isEmpty()) null else this[size - 1]\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.lastOrNull(predicate: (UInt) -> Boolean): UInt? {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n return null\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun ULongArray.lastOrNull(predicate: (ULong) -> Boolean): ULong? {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n

return null\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.lastOrNull(predicate: (UByte) -> Boolean): UByte? {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n return null\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.lastOrNull(predicate: (UShort) -> Boolean): UShort? {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if (predicate(element)) return element\n }\n return null\n}\n\n/**\n * Returns a random element from this array.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.random(): UInt {\n return random(Random)\n}\n\n/**\n * Returns a random element from this array.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.random(): ULong {\n return random(Random)\n}\n\n/**\n * Returns a random element from this array.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.random(): UByte {\n return random(Random)\n}\n\n/**\n * Returns a random element from this array.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.random(): UShort {\n return random(Random)\n}\n\n/**\n * Returns a random element from this array using the specified source of randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.random(random: Random): UInt {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.random(random: Random): ULong {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.random(random: Random): UByte {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.random(random: Random): UShort {\n if (isEmpty())\n throw NoSuchElementException(\"Array is empty.\")\n return get(random.nextInt(size))\n}\n\n/**\n * Returns the single element, or throws an exception if the array is empty or has more than one element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.single(): UInt {\n return storage.single().toUInt()\n}\n\n/**\n * Returns the single element, or throws an exception if the array is empty or has more than one element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.single(): ULong {\n return storage.single().toULong()\n}\n\n/**\n * Returns the single element, or throws an exception if the array is empty or has more than one element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.single(): UByte {\n return storage.single().toUByte()\n}\n\n/**\n * Returns the single element, or throws an exception if the array is empty or has more than one element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun

UShortArray.single(): UShort {\n   return storage.single().toUShort()\n}\n\n/**\n *
 Returns the single element matching the given [predicate], or throws exception if there is no or more than one matching element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.single(predicate: (UInt) -> Boolean): UInt {\n   var single: UInt? = null\n   var found = false\n   for (element in this) {\n   if (predicate(element)) {\n   if (found) throw IllegalArgumentException(\"Array contains more than one matching element.\")\n   single = element\n   found = true\n   }\n   }\n   if (!found) throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n   @Suppress(\"UNCHECKED_CAST\")\n   return single as UInt\n}\n\n/**\n * Returns the single element matching the given [predicate], or throws exception if there is no or more than one matching element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.single(predicate:
 (ULong) -> Boolean): ULong {\n   var single: ULong? = null\n   var found = false\n   for (element in this) {\n   if (predicate(element)) {\n   if (found) throw IllegalArgumentException(\"Array contains more than one matching element.\")\n   single = element\n   found = true\n   }\n   }\n   if (!found) throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n   @Suppress(\"UNCHECKED_CAST\")\n   return single as ULong\n}\n\n/**\n * Returns the single element matching the given [predicate], or throws exception if there is no or more than one matching element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.single(predicate: (UByte) -> Boolean): UByte {\n   var single: UByte? = null\n   var found = false\n   for (element in this) {\n   if (predicate(element)) {\n   if (found) throw IllegalArgumentException(\"Array contains more than one matching element.\")\n   single = element\n   found = true\n   }\n   }\n   if (!found) throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n   @Suppress(\"UNCHECKED_CAST\")\n   return single as UByte\n}\n\n/**\n * Returns the single element matching the given [predicate], or throws exception if there is no or more than one matching element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.single(predicate: (UShort) -> Boolean): UShort {\n   var single: UShort? = null\n   var found = false\n   for (element in this) {\n   if (predicate(element)) {\n   if (found) throw IllegalArgumentException(\"Array contains more than one matching element.\")\n   single = element\n   found = true\n   }\n   }\n   if (!found) throw NoSuchElementException(\"Array contains no element matching the predicate.\")\n   @Suppress(\"UNCHECKED_CAST\")\n
    return single as UShort\n}\n\n/**\n * Returns single element, or `null` if the array is empty or has more than one element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.singleOrNull(): UInt? {\n   return if (size == 1) this[0] else null\n}\n\n/**\n * Returns single element, or `null` if the array is empty or has more than one element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.singleOrNull(): ULong? {\n   return if (size == 1) this[0] else null\n}\n\n/**\n * Returns single element, or `null` if the array is empty or has more than one element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.singleOrNull(): UByte? {\n   return if (size == 1) this[0] else null\n}\n\n/**\n * Returns single element, or `null` if the array is empty or has more than one element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.singleOrNull(): UShort?
 {\n   return if (size == 1) this[0] else null\n}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element was not found or more than one element was found.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.singleOrNull(predicate: (UInt) -> Boolean): UInt? {\n   var single: UInt? = null\n   var found = false\n   for (element in this) {\n   if (predicate(element)) {\n   if (found) return null\n   single = element\n   found = true\n   }\n   }\n   if (!found) return null\n   return single\n}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element was not found or more than one element was found.\n

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*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.singleOrNull(predicate: (ULong) -> Boolean): ULong? {\n    var single: ULong? = null\n    var found =
 false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found) return null\n            single = element\n            found = true\n        }\n    }\n    if (!found) return null\n    return single\n}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element was not found or more than one element was found.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.singleOrNull(predicate: (UByte) -> Boolean): UByte? {\n    var single: UByte? = null\n    var found = false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found) return null\n            single = element\n            found = true\n        }\n    }\n    if (!found) return null\n    return single\n}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element was not found or more than one element was found.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
 inline fun UShortArray.singleOrNull(predicate: (UShort) -> Boolean): UShort? {\n    var single: UShort? = null\n    var found = false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found) return null\n            single = element\n            found = true\n        }\n    }\n    if (!found) return null\n    return single\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.drop(n: Int): List<UInt> {\n    require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    return takeLast((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n
 * @sample samples.collections.Collections.Transformations.drop\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.drop(n: Int): List<ULong> {\n    require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    return takeLast((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.drop(n: Int): List<UByte> {\n    require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    return takeLast((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic
 fun UShortArray.drop(n: Int): List<UShort> {\n    require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    return takeLast((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.dropLast(n: Int): List<UInt> {\n    require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    return take((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.dropLast(n: Int): List<ULong> {\n    require(n >= 0) { \"Requested element count $n
 is less than zero.\" }\n    return take((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.dropLast(n: Int): List<UByte>
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{\n   require(n >= 0) { \"Requested element count $n is less than zero.\" }\n   return take((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.dropLast(n: Int): List<UShort> {\n   require(n >= 0) { \"Requested element count $n is less than zero.\" }\n   return take((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.dropLastWhile(predicate: (UInt) -> Boolean): List<UInt> {\n   for (index in lastIndex downTo 0) {\n   if (!predicate(this[index])) {\n   return take(index + 1)\n   }\n   }\n   return emptyList()\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.dropLastWhile(predicate: (ULong) -> Boolean): List<ULong> {\n   for (index in lastIndex downTo 0) {\n   if (!predicate(this[index])) {\n   return take(index + 1)\n   }\n   }\n   return emptyList()\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.dropLastWhile(predicate: (UByte) -> Boolean): List<UByte> {\n   for (index in lastIndex downTo 0) {\n   if (!predicate(this[index])) {\n   return take(index + 1)\n   }\n   }\n   return emptyList()\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.dropLastWhile(predicate: (UShort) -> Boolean): List<UShort> {\n   for (index in lastIndex downTo 0) {\n   if (!predicate(this[index])) {\n   return take(index + 1)\n   }\n   }\n   return emptyList()\n}\n\n/**\n * Returns a list containing all elements except first elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.dropWhile(predicate: (UInt) -> Boolean): List<UInt> {\n   var yielding = false\n   val list = ArrayList<UInt>()\n   for (item in this)\n   if (yielding)\n   list.add(item)\n   else if (!predicate(item)) {\n   list.add(item)\n   yielding = true\n   }\n   return list\n}\n\n/**\n * Returns a list containing all elements except first elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.dropWhile(predicate: (ULong) -> Boolean): List<ULong> {\n   var yielding = false\n   val list = ArrayList<ULong>()\n   for (item in this)\n   if (yielding)\n   list.add(item)\n   else if (!predicate(item)) {\n   list.add(item)\n   yielding = true\n   }\n   return list\n}\n\n/**\n * Returns a list containing all elements except first elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.dropWhile(predicate: (UByte) -> Boolean): List<UByte> {\n   var yielding = false\n   val list = ArrayList<UByte>()\n   for (item in this)\n   if (yielding)\n   list.add(item)\n   else if (!predicate(item)) {\n   list.add(item)\n   yielding = true\n   }\n   return list\n}\n\n/**\n * Returns a list containing all elements except first elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n

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*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.dropWhile(predicate: (UShort) -> Boolean): List<UShort> {\n    var yielding = false\n    val list = ArrayList<UShort>()\n    for (item in this)\n        if (yielding)\n            list.add(item)\n        else if (!predicate(item)) {\n            list.add(item)\n            yielding = true\n        }\n    return list\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.filter(predicate: (UInt) -> Boolean): List<UInt> {\n    return filterTo(ArrayList<UInt>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.filter(predicate: (ULong) -> Boolean): List<ULong> {\n    return filterTo(ArrayList<ULong>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.filter(predicate: (UByte) -> Boolean): List<UByte> {\n    return filterTo(ArrayList<UByte>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.filter(predicate: (UShort) -> Boolean): List<UShort> {\n    return filterTo(ArrayList<UShort>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.filterIndexed(predicate: (index: Int, UInt) -> Boolean): List<UInt> {\n    return filterIndexedTo(ArrayList<UInt>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.filterIndexed(predicate: (index: Int, ULong) -> Boolean): List<ULong> {\n    return filterIndexedTo(ArrayList<ULong>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.filterIndexed(predicate: (index: Int, UByte) -> Boolean): List<UByte> {\n    return filterIndexedTo(ArrayList<UByte>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.filterIndexed(predicate: (index: Int, UShort) -> Boolean): List<UShort> {\n    return filterIndexedTo(ArrayList<UShort>(), predicate)\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C : MutableCollection<in UInt>> UIntArray.filterIndexedTo(destination: C, predicate: (index: Int, UInt) -> Boolean): C {\n    forEachIndexed { index, element ->\n        if (predicate(index, element)) destination.add(element)\n    }\n    return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C :
```

MutableCollection<in ULong>> ULongArray.filterIndexedTo(destination: C, predicate: (index: Int, ULong) -> Boolean): C {\n   forEachIndexed { index, element ->\n   if (predicate(index, element)) destination.add(element)\n   }\n   return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C : MutableCollection<in UByte>> UByteArray.filterIndexedTo(destination: C, predicate: (index: Int, UByte) -> Boolean): C {\n   forEachIndexed { index, element ->\n   if (predicate(index, element)) destination.add(element)\n   }\n   return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C : MutableCollection<in UShort>> UShortArray.filterIndexedTo(destination: C, predicate: (index: Int, UShort) -> Boolean): C {\n   forEachIndexed { index, element\n   ->\n   if (predicate(index, element)) destination.add(element)\n   }\n   return destination\n}\n\n/**\n * Returns a list containing all elements not matching the given [predicate].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.filterNot(predicate: (UInt) -> Boolean): List<UInt> {\n   return filterNotTo(ArrayList<UInt>(), predicate)\n}\n\n/**\n * Returns a list containing all elements not matching the given [predicate].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.filterNot(predicate: (ULong) -> Boolean): List<ULong> {\n   return filterNotTo(ArrayList<ULong>(), predicate)\n}\n\n/**\n * Returns a list containing all elements not matching the given [predicate].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.filterNot(predicate: (UByte) -> Boolean): List<UByte> {\n   return filterNotTo(ArrayList<UByte>(), predicate)\n}\n\n/**\n * Returns a list containing all elements not matching the given [predicate].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.filterNot(predicate: (UShort) -> Boolean): List<UShort> {\n   return filterNotTo(ArrayList<UShort>(), predicate)\n}\n\n/**\n * Appends all elements not matching the given [predicate] to the given [destination].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C : MutableCollection<in UInt>> UIntArray.filterNotTo(destination: C, predicate: (UInt) -> Boolean): C {\n   for (element in this) if (!predicate(element)) destination.add(element)\n   return destination\n}\n\n/**\n * Appends all elements not matching the given [predicate] to the given [destination].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C : MutableCollection<in ULong>>
ULongArray.filterNotTo(destination: C, predicate: (ULong) -> Boolean): C {\n   for (element in this) if (!predicate(element)) destination.add(element)\n   return destination\n}\n\n/**\n * Appends all elements not matching the given [predicate] to the given [destination].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C : MutableCollection<in UByte>> UByteArray.filterNotTo(destination: C, predicate: (UByte) -> Boolean): C {\n   for (element in this) if (!predicate(element)) destination.add(element)\n   return destination\n}\n\n/**\n * Appends all elements not matching the given [predicate] to the given [destination].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C : MutableCollection<in UShort>> UShortArray.filterNotTo(destination: C, predicate: (UShort) -> Boolean): C {\n   for (element in this) if (!predicate(element)) destination.add(element)\n   return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C :

MutableCollection<in UInt>> UIntArray.filterTo(destination: C, predicate: (UInt) -> Boolean): C {\n for (element in this) if (predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C : MutableCollection<in ULong>> ULongArray.filterTo(destination: C, predicate: (ULong) -> Boolean): C {\n for (element in this) if (predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C : MutableCollection<in UByte>> UByteArray.filterTo(destination: C, predicate: (UByte) -> Boolean): C {\n for (element in this) if (predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C : MutableCollection<in UShort>> UShortArray.filterTo(destination: C, predicate: (UShort) -> Boolean): C {\n for (element in this) if (predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Returns a list containing elements at indices in the specified [indices] range.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.slice(indices: IntRange): List<UInt> {\n if (indices.isEmpty()) return listOf()\n return copyOfRange(indices.start, indices.endInclusive + 1).asList()\n}\n\n/**\n * Returns a list containing elements at indices in the specified [indices] range.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.slice(indices: IntRange): List<ULong> {\n if (indices.isEmpty()) return listOf()\n return copyOfRange(indices.start, indices.endInclusive + 1).asList()\n}\n\n/**\n * Returns a list containing elements at indices in the specified [indices] range.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.slice(indices: IntRange): List<UByte> {\n if (indices.isEmpty()) return listOf()\n return copyOfRange(indices.start, indices.endInclusive + 1).asList()\n}\n\n/**\n * Returns a list containing elements at indices in the specified [indices] range.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.slice(indices: IntRange): List<UShort> {\n if (indices.isEmpty()) return listOf()\n return copyOfRange(indices.start, indices.endInclusive + 1).asList()\n}\n\n/**\n * Returns a list containing elements at specified [indices].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.slice(indices: Iterable<Int>): List<UInt> {\n val size = indices.collectionSizeOrDefault(10)\n if (size == 0) return emptyList()\n val list = ArrayList<UInt>(size)\n for (index in indices) {\n list.add(get(index))\n }\n return list\n}\n\n/**\n * Returns a list containing elements at specified [indices].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.slice(indices: Iterable<Int>): List<ULong> {\n val size = indices.collectionSizeOrDefault(10)\n if (size == 0) return emptyList()\n val list = ArrayList<ULong>(size)\n for (index in indices) {\n list.add(get(index))\n }\n return list\n}\n\n/**\n * Returns a list containing elements at specified [indices].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.slice(indices: Iterable<Int>): List<UByte> {\n val size = indices.collectionSizeOrDefault(10)\n if (size == 0) return emptyList()\n val list = ArrayList<UByte>(size)\n for (index in indices) {\n list.add(get(index))\n }\n return list\n}\n\n/**\n * Returns a list containing elements at specified [indices].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.slice(indices: Iterable<Int>): List<UShort> {\n val size = indices.collectionSizeOrDefault(10)\n if (size == 0) return emptyList()\n val list = ArrayList<UShort>(size)\n for (index in indices) {\n list.add(get(index))\n }\n return list\n}\n\n/**\n * Returns an array containing elements of this array at specified [indices].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.sliceArray(indices: Collection<Int>): UIntArray {\n return UIntArray(storage.sliceArray(indices))\n}\n\n/**\n * Returns an array containing elements of this array at specified [indices].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic

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 fun ULongArray.sliceArray(indices: Collection<Int>): ULongArray {\n    return
ULongArray(storage.sliceArray(indices))\n}\n\n/**\n * Returns an array containing elements of this array at
specified [indices].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun
UByteArray.sliceArray(indices: Collection<Int>): UByteArray {\n    return
UByteArray(storage.sliceArray(indices))\n}\n\n/**\n * Returns an array containing elements of this array at
specified [indices].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun
UShortArray.sliceArray(indices: Collection<Int>): UShortArray {\n    return
UShortArray(storage.sliceArray(indices))\n}\n\n/**\n * Returns an array containing elements at indices in the
specified [indices] range.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun
UIntArray.sliceArray(indices: IntRange): UIntArray {\n    return UIntArray(storage.sliceArray(indices))\n}\n\n/**\n
* Returns an array containing elements at
 indices in the specified [indices] range.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun
ULongArray.sliceArray(indices: IntRange): ULongArray {\n    return
ULongArray(storage.sliceArray(indices))\n}\n\n/**\n * Returns an array containing elements at indices in the
specified [indices] range.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun
UByteArray.sliceArray(indices: IntRange): UByteArray {\n    return
UByteArray(storage.sliceArray(indices))\n}\n\n/**\n * Returns an array containing elements at indices in the
specified [indices] range.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun
UShortArray.sliceArray(indices: IntRange): UShortArray {\n    return
UShortArray(storage.sliceArray(indices))\n}\n\n/**\n * Returns a list containing first [n] elements.\n * \n *
@throws IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.take\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic
 fun UIntArray.take(n: Int): List<UInt> {\n    require(n >= 0) { \"Requested element count $n is less than zero.\" }\n
 if (n == 0) return emptyList()\n    if (n >= size) return toList()\n    if (n == 1) return listOf(this[0])\n    var count =
0\n    val list = ArrayList<UInt>(n)\n    for (item in this) {\n        if (count++ == n)\n            break\n
list.add(item)\n    }\n    return list\n}\n\n/**\n * Returns a list containing first [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.take\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.take(n: Int): List<ULong> {\n
 require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    if (n == 0) return emptyList()\n    if (n >=
size) return toList()\n    if (n == 1) return listOf(this[0])\n    var count = 0\n    val list = ArrayList<ULong>(n)\n    for
(item in this) {\n        if (count++
 == n)\n            break\n        list.add(item)\n    }\n    return list\n}\n\n/**\n * Returns a list containing first [n]
elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.take\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.take(n: Int): List<UByte> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    if (n == 0) return emptyList()\n    if (n >=
size) return toList()\n    if (n == 1) return listOf(this[0])\n    var count = 0\n    val list = ArrayList<UByte>(n)\n    for
(item in this) {\n        if (count++ == n)\n            break\n        list.add(item)\n    }\n    return list\n}\n\n/**\n * Returns
a list containing first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.take\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun
 UShortArray.take(n: Int): List<UShort> {\n    require(n >= 0) { \"Requested element count $n is less than zero.\"
}\n    if (n == 0) return emptyList()\n    if (n >= size) return toList()\n    if (n == 1) return listOf(this[0])\n    var
count = 0\n    val list = ArrayList<UShort>(n)\n    for (item in this) {\n        if (count++ == n)\n            break\n
list.add(item)\n    }\n    return list\n}\n\n/**\n * Returns a list containing last [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
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samples.collections.Collections.Transformations.take\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.takeLast(n: Int): List<UInt> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n if (n == 0) return emptyList()\n val size = size\n if (n >= size) return toList()\n if (n == 1) return listOf(this[size - 1])\n val list = ArrayList<UInt>(n)\n for (index in size - n until size)\n
list.add(this[index])\n return list\n}\n\n/**\n * Returns a list containing last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.take\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.takeLast(n: Int): List<ULong> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n if (n == 0) return emptyList()\n val size = size\n if (n >= size) return toList()\n if (n == 1) return listOf(this[size - 1])\n val list = ArrayList<ULong>(n)\n for (index in size - n until size)\n list.add(this[index])\n return list\n}\n\n/**\n * Returns a list containing last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.takeLast(n: Int): List<UByte> {\n require(n
>= 0) { \"Requested element count $n is less than zero.\" }\n if (n == 0) return emptyList()\n val size = size\n if (n >= size) return toList()\n if (n == 1) return listOf(this[size - 1])\n val list = ArrayList<UByte>(n)\n for (index in size - n until size)\n list.add(this[index])\n return list\n}\n\n/**\n * Returns a list containing last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.take\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.takeLast(n: Int): List<UShort> {\n require(n >= 0) { \"Requested element count $n is less than zero.\" }\n if (n == 0) return emptyList()\n val size = size\n if (n >= size) return toList()\n if (n == 1) return listOf(this[size - 1])\n val list = ArrayList<UShort>(n)\n for (index in size - n until size)\n list.add(this[index])\n return list\n}\n\n/**\n * Returns a list containing
last elements satisfying the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.take\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.takeLastWhile(predicate: (UInt) -> Boolean): List<UInt> {\n for (index in lastIndex downTo 0) {\n if (!predicate(this[index])) {\n return drop(index + 1)\n }\n }\n return toList()\n}\n\n/**\n * Returns a list containing last elements satisfying the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.take\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.takeLastWhile(predicate: (ULong) -> Boolean): List<ULong> {\n for (index in lastIndex downTo 0) {\n if (!predicate(this[index])) {\n return drop(index + 1)\n }\n }\n return toList()\n}\n\n/**\n * Returns a list containing last elements satisfying
the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.takeLastWhile(predicate: (UByte) -> Boolean): List<UByte> {\n for (index in lastIndex downTo 0) {\n if (!predicate(this[index])) {\n return drop(index + 1)\n }\n }\n return toList()\n}\n\n/**\n * Returns a list containing last elements satisfying the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.take\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.takeLastWhile(predicate: (UShort) -> Boolean): List<UShort> {\n for (index in lastIndex downTo 0) {\n if (!predicate(this[index])) {\n return drop(index + 1)\n }\n }\n return toList()\n}\n\n/**\n * Returns a list containing first elements satisfying the given

[predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.takeWhile(predicate: (UInt) -> Boolean): List<UInt> {\n val list = ArrayList<UInt>()\n for (item in this) {\n if (!predicate(item))\n break\n list.add(item)\n }\n return list\n}\n\n/**\n * Returns a list containing first elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.takeWhile(predicate: (ULong) -> Boolean): List<ULong> {\n val list = ArrayList<ULong>()\n for (item in this) {\n if (!predicate(item))\n break\n list.add(item)\n }\n return list\n}\n\n/**\n * Returns a list containing first elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.takeWhile(predicate: (UByte) -> Boolean): List<UByte> {\n val list = ArrayList<UByte>()\n for (item in this) {\n if (!predicate(item))\n break\n list.add(item)\n }\n return list\n}\n\n/**\n * Returns a list containing first elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.takeWhile(predicate: (UShort) -> Boolean): List<UShort> {\n val list = ArrayList<UShort>()\n for (item in this) {\n if (!predicate(item))\n break\n list.add(item)\n }\n return list\n}\n\n/**\n * Reverses elements in the array in-place.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.reverse(): Unit {\n storage.reverse()\n}\n\n/**\n * Reverses elements in the array in-place.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.reverse(): Unit {\n storage.reverse()\n}\n\n/**\n * Reverses elements in the array in-place.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.reverse(): Unit {\n storage.reverse()\n}\n\n/**\n * Reverses elements in the array in-place.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.reverse(): Unit {\n storage.reverse()\n}\n\n/**\n * Returns a list with elements in reversed order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.reversed(): List<UInt> {\n if (isEmpty()) return emptyList()\n val list = toMutableList()\n list.reverse()\n return list\n}\n\n/**\n * Returns a list with elements in reversed order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.reversed(): List<ULong> {\n if (isEmpty()) return emptyList()\n val list = toMutableList()\n list.reverse()\n return list\n}\n\n/**\n * Returns a list with elements in reversed order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.reversed(): List<UByte> {\n if (isEmpty()) return emptyList()\n val list = toMutableList()\n list.reverse()\n return list\n}\n\n/**\n * Returns a list with elements in reversed order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.reversed(): List<UShort> {\n if (isEmpty()) return emptyList()\n val list = toMutableList()\n list.reverse()\n return list\n}\n\n/**\n * Returns an array with elements of this array in reversed order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.reversedArray(): UIntArray {\n return UIntArray(storage.reversedArray())\n}\n\n/**\n * Returns an array with elements of this array in reversed order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.reversedArray(): ULongArray {\n return ULongArray(storage.reversedArray())\n}\n\n/**\n * Returns an array with elements of this array in reversed order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.reversedArray(): UByteArray {\n return UByteArray(storage.reversedArray())\n}\n\n/**\n * Returns an array with elements of this array in reversed order.\n

*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.reversedArray(): UShortArray {\n   return UShortArray(storage.reversedArray())\n}\n\n/**\n * Sorts elements in the array in-place descending according to their natural sort order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.sortDescending(): Unit {\n   if (size > 1) {\n   sort()\n   reverse()\n   }\n}\n\n/**\n * Sorts elements in the array in-place descending according to their natural sort order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.sortDescending(): Unit {\n   if (size > 1) {\n   sort()\n   reverse()\n   }\n}\n\n/**\n * Sorts elements in the array in-place descending according to their natural sort order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.sortDescending(): Unit {\n   if (size > 1) {\n   sort()\n   reverse()\n   }\n}\n\n/**\n * Sorts elements in the array in-place descending according to their natural sort order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.sortDescending(): Unit {\n   if (size > 1) {\n   sort()\n   reverse()\n   }\n}\n\n/**\n * Returns a list of all elements sorted according to their natural sort order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.sorted(): List<UInt> {\n   return copyOf().apply { sort() }.asList()\n}\n\n/**\n * Returns a list of all elements sorted according to their natural sort order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.sorted(): List<ULong> {\n   return copyOf().apply { sort() }.asList()\n}\n\n/**\n * Returns a list of all elements sorted according to their natural sort order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.sorted(): List<UByte> {\n   return copyOf().apply { sort() }.asList()\n}\n\n/**\n * Returns a list of all elements sorted according to their natural sort order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.sorted(): List<UShort> {\n   return copyOf().apply { sort() }.asList()\n}\n\n/**\n * Returns an array with all elements of this array sorted according to their natural sort order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.sortedArray(): UIntArray {\n   if (isEmpty()) return this\n   return this.copyOf().apply { sort() }\n}\n\n/**\n * Returns an array with all elements of this array sorted according to their natural sort order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.sortedArray(): ULongArray {\n   if (isEmpty()) return this\n   return this.copyOf().apply { sort() }\n}\n\n/**\n * Returns an array with all elements of this array sorted according to their natural sort order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.sortedArray(): UByteArray {\n   if (isEmpty()) return this\n   return this.copyOf().apply { sort() }\n}\n\n/**\n * Returns an array with all elements of this array sorted according to their natural sort order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.sortedArray(): UShortArray {\n   if (isEmpty()) return this\n   return this.copyOf().apply { sort() }\n}\n\n/**\n * Returns an array with all elements of this array sorted descending according to their natural sort order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.sortedArrayDescending(): UIntArray {\n   if (isEmpty()) return this\n   return this.copyOf().apply { sortDescending() }\n}\n\n/**\n * Returns an array with all elements of this array sorted descending according to their natural sort order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.sortedArrayDescending(): ULongArray {\n   if (isEmpty()) return this\n   return this.copyOf().apply { sortDescending() }\n}\n\n/**\n * Returns an array with all elements of this array sorted descending according to their natural sort order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.sortedArrayDescending(): UByteArray {\n   if (isEmpty())\n   return this\n   return this.copyOf().apply { sortDescending() }\n}\n\n/**\n * Returns an array with all elements of this array sorted descending according to their natural sort order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.sortedArrayDescending(): UShortArray {\n   if (isEmpty()) return this\n   return this.copyOf().apply { sortDescending() }\n}\n\n/**\n * Returns a list of all elements sorted descending according to their natural sort order.\n * \n * The sort is _stable_. It

means that equal elements preserve their order relative to each other after sorting.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.sortedDescending(): List<UInt> {\n   return copyOf().apply { sort() }.reversed()\n}\n\n/**\n * Returns a list of all elements sorted descending according to their natural sort order.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.sortedDescending(): List<ULong> {\n   return copyOf().apply { sort() }.reversed()\n}\n\n/**\n * Returns a list of all elements sorted descending according to their natural sort order.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.sortedDescending(): List<UByte> {\n   return copyOf().apply { sort() }.reversed()\n}\n\n/**\n * Returns a list of all elements sorted descending according to their natural sort order.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.sortedDescending(): List<UShort> {\n   return copyOf().apply { sort() }.reversed()\n}\n\n/**\n * Returns an array of type [ByteArray], which is a view of
this array where each element is a signed reinterpretation\n * of the corresponding element of this array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.asByteArray(): ByteArray {\n   return storage\n}\n\n/**\n * Returns an array of type [IntArray], which is a view of this array where each element is a signed reinterpretation\n * of the corresponding element of this array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.asIntArray(): IntArray {\n   return storage\n}\n\n/**\n * Returns a [List] that wraps the original array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic expect fun UIntArray.asList(): List<UInt>\n\n/**\n * Returns a [List] that wraps the original array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic expect fun ULongArray.asList(): List<ULong>\n\n/**\n * Returns a [List] that wraps the original array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic expect fun UByteArray.asList(): List<UByte>\n\n/**\n * Returns a [List] that wraps the original array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic expect fun UShortArray.asList(): List<UShort>\n\n/**\n * Returns an array of type [LongArray], which is a view of this array where each element is a signed reinterpretation\n * of the corresponding element of this array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.asLongArray(): LongArray {\n   return storage\n}\n\n/**\n * Returns an array of type [ShortArray], which is a view of this array where each element is a signed reinterpretation\n * of the corresponding element of this array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.asShortArray(): ShortArray {\n   return storage\n}\n\n/**\n * Returns an array of type [UByteArray], which is a view of this array where each element is an unsigned reinterpretation\n * of the corresponding element of this array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.asUByteArray(): UByteArray {\n   return UByteArray(this)\n}\n\n/**\n * Returns an array of type [UIntArray], which is a view of this array where each element is an unsigned reinterpretation\n * of the corresponding element of this array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.asUIntArray(): UIntArray {\n   return UIntArray(this)\n}\n\n/**\n * Returns an array of type [ULongArray], which is a view of this array where each element is an unsigned reinterpretation\n * of the corresponding element of this array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.asULongArray(): ULongArray {\n   return ULongArray(this)\n}\n\n/**\n * Returns an array of type [UShortArray], which is a view of this array where each element is an unsigned reinterpretation\n * of the corresponding element of this array.\n

*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.asUShortArray(): UShortArray {\n   return UShortArray(this)\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic infix fun UIntArray.contentEquals(other: UIntArray): Boolean {\n   return storage.contentEquals(other.storage)\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic infix fun ULongArray.contentEquals(other: ULongArray):
 Boolean {\n   return storage.contentEquals(other.storage)\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic infix fun UByteArray.contentEquals(other: UByteArray): Boolean {\n   return storage.contentEquals(other.storage)\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic infix fun UShortArray.contentEquals(other: UShortArray): Boolean {\n   return storage.contentEquals(other.storage)\n}\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.contentHashCode(): Int {\n   return storage.contentHashCode()\n}\n\n/**\n
 * Returns a hash code based on the contents of this array as if it is [List].\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.contentHashCode(): Int {\n return storage.contentHashCode()\n}\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.contentHashCode(): Int {\n   return storage.contentHashCode()\n}\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.contentHashCode(): Int {\n   return storage.contentHashCode()\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.contentToString(): String {\n return joinToString(\",
 \", \"[\", \"]\")\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is [List].\n *
\n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.contentToString(): String {\n return joinToString(\", \", \"[\", \"]\")\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.contentToString(): String {\n return joinToString(\", \", \"[\", \"]\")\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.contentToString(): String {\n
    return joinToString(\", \", \"[\", \"]\")\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices

range.\n * \n * @return the [destination] array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.copyInto(destination: UIntArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): UIntArray {\n storage.copyInto(destination.storage, destinationOffset, startIndex, endIndex)\n return destination\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.copyInto(destination: ULongArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): ULongArray {\n storage.copyInto(destination.storage, destinationOffset, startIndex, endIndex)\n return destination\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.copyInto(destination: UByteArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): UByteArray {\n storage.copyInto(destination.storage, destinationOffset, startIndex, endIndex)\n return destination\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.copyInto(destination: UShortArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): UShortArray {\n storage.copyInto(destination.storage, destinationOffset, startIndex, endIndex)\n return destination\n}\n\n/**\n * Returns new array which is a copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOf\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.copyOf(): UIntArray {\n return UIntArray(storage.copyOf())\n}\n\n/**\n * Returns new array which is a copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOf\n

*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.copyOf(): ULongArray {\n   return ULongArray(storage.copyOf())\n}\n\n/**\n * Returns new array
which is a copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOf\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.copyOf(): UByteArray {\n   return UByteArray(storage.copyOf())\n}\n\n/**\n * Returns new array
which is a copy of the original array.\n * \n * @sample samples.collections.Arrays.CopyOfOperations.copyOf\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.copyOf(): UShortArray {\n   return UShortArray(storage.copyOf())\n}\n\n/**\n * Returns new array
which is a copy of the original array, resized to the given [newSize].\n * The copy is either truncated or padded at
the end with zero values if necessary.\n * \n * - If [newSize] is less than the size of the original array, the copy array
is truncated to
the [newSize].\n * - If [newSize] is greater than the size of the original array, the extra elements in the copy array
are filled with zero values.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.copyOf(newSize: Int): UIntArray {\n   return UIntArray(storage.copyOf(newSize))\n}\n\n/**\n *
Returns new array which is a copy of the original array, resized to the given [newSize].\n * The copy is either
truncated or padded at the end with zero values if necessary.\n * \n * - If [newSize] is less than the size of the
original array, the copy array is truncated to the [newSize].\n * - If [newSize] is greater than the size of the original
array, the extra elements in the copy array are filled with zero values.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.copyOf(newSize: Int): ULongArray {\n   return ULongArray(storage.copyOf(newSize))\n}\n\n/**\n *
Returns
new array which is a copy of the original array, resized to the given [newSize].\n * The copy is either truncated or
padded at the end with zero values if necessary.\n * \n * - If [newSize] is less than the size of the original array, the
copy array is truncated to the [newSize].\n * - If [newSize] is greater than the size of the original array, the extra
elements in the copy array are filled with zero values.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.copyOf(newSize: Int): UByteArray {\n   return UByteArray(storage.copyOf(newSize))\n}\n\n/**\n *
Returns new array which is a copy of the original array, resized to the given [newSize].\n * The copy is either
truncated or padded at the end with zero values if necessary.\n * \n * - If [newSize] is less than the size of the
original array, the copy array is truncated to the [newSize].\n * - If [newSize] is greater than the size of the original
array, the extra elements
in the copy array are filled with zero values.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.copyOf(newSize: Int): UShortArray {\n   return UShortArray(storage.copyOf(newSize))\n}\n\n/**\n *
Returns a new array which is a copy of the specified range of the original array.\n * \n * @param fromIndex the start
of the range (inclusive), must be in `0..array.size`\n * @param toIndex the end of the range (exclusive), must be in
`fromIndex..array.size`\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.copyOfRange(fromIndex: Int, toIndex: Int): UIntArray {\n   return
UIntArray(storage.copyOfRange(fromIndex, toIndex))\n}\n\n/**\n * Returns a new array which is a copy of the
specified range of the original array.\n * \n * @param fromIndex the start of the range (inclusive), must be in
`0..array.size`\n * @param toIndex the end of the range (exclusive), must be
in `fromIndex..array.size`\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.copyOfRange(fromIndex: Int, toIndex: Int): ULongArray {\n   return
ULongArray(storage.copyOfRange(fromIndex, toIndex))\n}\n\n/**\n * Returns a new array which is a copy of the
specified range of the original array.\n * \n * @param fromIndex the start of the range (inclusive), must be in

`0..array.size`\n * @param toIndex the end of the range (exclusive), must be in `fromIndex..array.size`\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.copyOfRange(fromIndex: Int, toIndex: Int): UByteArray {\n return UByteArray(storage.copyOfRange(fromIndex, toIndex))\n}\n\n/**\n * Returns a new array which is a copy of the specified range of the original array.\n * \n * @param fromIndex the start of the range (inclusive), must be in `0..array.size`\n * @param toIndex the end of the range (exclusive), must be in `fromIndex..array.size`\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.copyOfRange(fromIndex: Int, toIndex: Int): UShortArray {\n return UShortArray(storage.copyOfRange(fromIndex, toIndex))\n}\n\n/**\n * Returns the range of valid indices for the array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic inline val UIntArray.indices: IntRange\n get() = storage.indices\n\n/**\n * Returns the range of valid indices for the array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic inline val ULongArray.indices: IntRange\n get() = storage.indices\n\n/**\n * Returns the range of valid indices for the array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic inline val UByteArray.indices: IntRange\n get() = storage.indices\n\n/**\n * Returns the range of valid indices for the array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic inline val UShortArray.indices: IntRange\n get() = storage.indices\n\n/**\n * Returns the last valid index for the array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic inline val UIntArray.lastIndex: Int\n get() = storage.lastIndex\n\n/**\n * Returns the last valid index for the array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic inline val ULongArray.lastIndex: Int\n get() = storage.lastIndex\n\n/**\n * Returns the last valid index for the array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic inline val UByteArray.lastIndex: Int\n get() = storage.lastIndex\n\n/**\n * Returns the last valid index for the array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic inline val UShortArray.lastIndex: Int\n get() = storage.lastIndex\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UIntArray.plus(element: UInt): UIntArray {\n return UIntArray(storage + element.toInt())\n}\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun ULongArray.plus(element: ULong): ULongArray {\n return ULongArray(storage + element.toLong())\n}\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UByteArray.plus(element: UByte): UByteArray {\n return UByteArray(storage + element.toByte())\n}\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UShortArray.plus(element: UShort): UShortArray {\n return UShortArray(storage + element.toShort())\n}\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic operator fun UIntArray.plus(elements: Collection<UInt>): UIntArray {\n var index = size\n val result = storage.copyOf(size + elements.size)\n for (element in elements) result[index++] = element.toInt()\n return UIntArray(result)\n}\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic operator fun ULongArray.plus(elements: Collection<ULong>): ULongArray {\n var index = size\n val result = storage.copyOf(size + elements.size)\n for (element in elements) result[index++] = element.toLong()\n return ULongArray(result)\n}\n\n/**\n * Returns an array containing

all elements of the original array and then all elements of the given [elements] collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic operator fun UByteArray.plus(elements: Collection<UByte>): UByteArray {\n var index = size\n val result = storage.copyOf(size + elements.size)\n for (element in elements) result[index++] = element.toByte()\n return UByteArray(result)\n}\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic operator fun UShortArray.plus(elements: Collection<UShort>): UShortArray {\n var index = size\n val result = storage.copyOf(size + elements.size)\n for (element in elements) result[index++] = element.toShort()\n return UShortArray(result)\n}\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UIntArray.plus(elements: UIntArray): UIntArray {\n return UIntArray(storage + elements.storage)\n}\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun ULongArray.plus(elements: ULongArray): ULongArray {\n return ULongArray(storage + elements.storage)\n}\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UByteArray.plus(elements: UByteArray): UByteArray {\n return UByteArray(storage + elements.storage)\n}\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the given
[elements] array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UShortArray.plus(elements: UShortArray): UShortArray {\n return UShortArray(storage + elements.storage)\n}\n\n/**\n * Sorts the array in-place.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.sort(): Unit {\n if (size > 1) sortArray(this)\n}\n\n/**\n * Sorts the array in-place.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.sort(): Unit {\n if (size > 1) sortArray(this)\n}\n\n/**\n * Sorts the array in-place.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.sort(): Unit {\n if (size > 1) sortArray(this)\n}\n\n/**\n * Sorts the array in-place.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.sort(): Unit {\n if (size > 1) sortArray(this)\n}\n\n/**\n * Returns an array of type [ByteArray], which is a copy of this array where each element is a signed reinterpretation\n * of the corresponding element of this array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.toByteArray(): ByteArray {\n return storage.copyOf()\n}\n\n/**\n * Returns an array of type [IntArray], which is a copy of this array where each element is a signed reinterpretation\n * of the corresponding element of this array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.toIntArray(): IntArray {\n return storage.copyOf()\n}\n\n/**\n * Returns an array of type [LongArray], which is a copy of this array where each element is a signed reinterpretation\n * of the corresponding element of this array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.toLongArray(): LongArray {\n return storage.copyOf()\n}\n\n/**\n * Returns an array of type [ShortArray],
which is a copy of this array where each element is a signed reinterpretation\n * of the corresponding element of this array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.toShortArray(): ShortArray {\n return storage.copyOf()\n}\n\n/**\n * Returns a *typed* object array containing all of the elements of this primitive array.\n

*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.toTypedArray(): Array<UInt> {\n   return Array(size) { index -> this[index] }\n}\n\n/**\n * Returns a *typed* object array containing all of the elements of this primitive array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.toTypedArray(): Array<ULong> {\n   return Array(size) { index -> this[index] }\n}\n\n/**\n * Returns a *typed* object array containing all of the elements of this primitive array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.toTypedArray(): Array<UByte> {\n   return Array(size) { index -> this[index] }\n}\n\n/**\n * Returns a *typed* object array containing all of the elements of this primitive array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.toTypedArray(): Array<UShort> {\n   return Array(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of UByte containing all of the elements of this generic array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Array<out UByte>.toUByteArray(): UByteArray {\n   return UByteArray(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of type [UByteArray], which is a copy of this array where each element is an unsigned reinterpretation\n * of the corresponding element of this array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.toUByteArray(): UByteArray {\n   return UByteArray(this.copyOf())\n}\n\n/**\n * Returns an array of UInt containing all of the elements of this generic array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Array<out UInt>.toUIntArray(): UIntArray {\n   return UIntArray(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of type [UIntArray], which is a copy of this array where each element is an unsigned reinterpretation\n * of the corresponding element of this array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.toUIntArray(): UIntArray {\n   return UIntArray(this.copyOf())\n}\n\n/**\n * Returns an array of ULong containing all of the elements of this generic array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Array<out ULong>.toULongArray(): ULongArray {\n   return ULongArray(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of type [ULongArray], which is a copy of this array where each element is an unsigned reinterpretation\n * of the corresponding
element of this array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.toULongArray(): ULongArray {\n   return ULongArray(this.copyOf())\n}\n\n/**\n * Returns an array of UShort containing all of the elements of this generic array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Array<out UShort>.toUShortArray(): UShortArray {\n   return UShortArray(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of type [UShortArray], which is a copy of this array where each element is an unsigned reinterpretation\n * of the corresponding element of this array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.toUShortArray(): UShortArray {\n   return UShortArray(this.copyOf())\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being invoked on each element of original array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun <R> UIntArray.flatMap(transform: (UInt) -> Iterable<R>): List<R> {\n   return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being invoked on each element of original array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> ULongArray.flatMap(transform: (ULong) -> Iterable<R>): List<R> {\n   return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being invoked on each element of original array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> UByteArray.flatMap(transform: (UByte) -> Iterable<R>): List<R> {\n   return flatMapTo(ArrayList<R>(),

transform)\n}\n\n/**\n * Returns a single list of all elements
 yielded from results of [transform] function being invoked on each element of original array.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UShortArray.flatMap(transform: (UShort) -> Iterable<R>): List<R> {\n   return flatMapTo(ArrayList<R>(),
transform)\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being invoked on each
element of original array, to the given [destination].\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, C :
MutableCollection<in R>> UIntArray.flatMapTo(destination: C, transform: (UInt) -> Iterable<R>): C {\n   for
(element in this) {\n   val list = transform(element)\n   destination.addAll(list)\n   }\n   return
destination\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being invoked on each
element of original array, to the given [destination].\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
 inline fun <R, C : MutableCollection<in R>> ULongArray.flatMapTo(destination: C, transform: (ULong) ->
Iterable<R>): C {\n   for (element in this) {\n   val list = transform(element)\n   destination.addAll(list)\n
}\n   return destination\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being
invoked on each element of original array, to the given [destination].\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, C :
MutableCollection<in R>> UByteArray.flatMapTo(destination: C, transform: (UByte) -> Iterable<R>): C {\n   for
(element in this) {\n   val list = transform(element)\n   destination.addAll(list)\n   }\n   return
destination\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being invoked on each
element of original array, to the given [destination].\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
 inline fun <R, C : MutableCollection<in R>> UShortArray.flatMapTo(destination: C, transform: (UShort) ->
Iterable<R>): C {\n   for (element in this) {\n   val list = transform(element)\n   destination.addAll(list)\n
}\n   return destination\n}\n\n/**\n * Groups elements of the original array by the key returned by the given
[keySelector] function\n * applied to each element and returns a map where each group key is associated with a list
of corresponding elements.\n * \n * The returned map preserves the entry iteration order of the keys produced from
the original array.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K>
UIntArray.groupBy(keySelector: (UInt) -> K): Map<K, List<UInt>> {\n   return groupByTo(LinkedHashMap<K,
MutableList<UInt>>(), keySelector)\n}\n\n/**\n
 * Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each
element and returns a map where each group key is associated with a list of corresponding elements.\n * \n * The
returned map preserves the entry iteration order of the keys produced from the original array.\n * \n * @sample
samples.collections.Collections.Transformations.groupBy\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K>
ULongArray.groupBy(keySelector: (ULong) -> K): Map<K, List<ULong>> {\n   return
groupByTo(LinkedHashMap<K, MutableList<ULong>>(), keySelector)\n}\n\n/**\n * Groups elements of the
original array by the key returned by the given [keySelector] function\n * applied to each element and returns a map
where each group key is associated with a list of corresponding elements.\n * \n * The returned map preserves the
entry iteration order of the keys produced from the original array.\n * \n *
 @sample samples.collections.Collections.Transformations.groupBy\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K>
UByteArray.groupBy(keySelector: (UByte) -> K): Map<K, List<UByte>> {\n   return
groupByTo(LinkedHashMap<K, MutableList<UByte>>(), keySelector)\n}\n\n/**\n * Groups elements of the
original array by the key returned by the given [keySelector] function\n * applied to each element and returns a map
where each group key is associated with a list of corresponding elements.\n * \n * The returned map preserves the
entry iteration order of the keys produced from the original array.\n * \n * @sample

samples.collections.Collections.Transformations.groupBy\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K>
UShortArray.groupBy(keySelector: (UShort) -> K): Map<K, List<UShort>> {\n   return
groupByTo(LinkedHashMap<K, MutableList<UShort>>(), keySelector)\n}\n\n/**\n * Groups
values returned by the [valueTransform] function applied to each element of the original array\n * by the key
returned by the given [keySelector] function applied to the element\n * and returns a map where each group key is
associated with a list of corresponding values.\n * \n * The returned map preserves the entry iteration order of the
keys produced from the original array.\n * \n * @sample
samples.collections.Collections.Transformations.groupByKeysAndValues\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, V>
UIntArray.groupBy(keySelector: (UInt) -> K, valueTransform: (UInt) -> V): Map<K, List<V>> {\n   return
groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups values
returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by
the given [keySelector] function applied to the element\n * and returns a map where each group key
is associated with a list of corresponding values.\n * \n * The returned map preserves the entry iteration order of the
keys produced from the original array.\n * \n * @sample
samples.collections.Collections.Transformations.groupByKeysAndValues\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, V>
ULongArray.groupBy(keySelector: (ULong) -> K, valueTransform: (ULong) -> V): Map<K, List<V>> {\n   return
groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups values
returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by
the given [keySelector] function applied to the element\n * and returns a map where each group key is associated
with a list of corresponding values.\n * \n * The returned map preserves the entry iteration order of the keys
produced from the original array.\n * \n * @sample
samples.collections.Collections.Transformations.groupByKeysAndValues\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, V>
UByteArray.groupBy(keySelector: (UByte) -> K, valueTransform: (UByte) -> V): Map<K, List<V>> {\n   return
groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups values
returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by
the given [keySelector] function applied to the element\n * and returns a map where each group key is associated
with a list of corresponding values.\n * \n * The returned map preserves the entry iteration order of the keys
produced from the original array.\n * \n * @sample
samples.collections.Collections.Transformations.groupByKeysAndValues\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, V>
UShortArray.groupBy(keySelector: (UShort) -> K, valueTransform: (UShort) -> V): Map<K,
List<V>> {\n   return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector,
valueTransform)\n}\n\n/**\n * Groups elements of the original array by the key returned by the given [keySelector]
function\n * applied to each element and puts to the [destination] map each group key associated with a list of
corresponding elements.\n * \n * @return The [destination] map.\n * \n * @sample
samples.collections.Collections.Transformations.groupBy\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, M :
MutableMap<in K, MutableList<UInt>>> UIntArray.groupByTo(destination: M, keySelector: (UInt) -> K): M {\n
for (element in this) {\n   val key = keySelector(element)\n   val list = destination.getOrPut(key) {
ArrayList<UInt>() }\n   list.add(element)\n   }\n   return destination\n}\n\n/**\n * Groups elements of the
original array by the key returned by the given [keySelector] function\n * applied to each element and
puts to the [destination] map each group key associated with a list of corresponding elements.\n * \n * @return The
[destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, M :

MutableMap<in K, MutableList<ULong>>> ULongArray.groupByTo(destination: M, keySelector: (ULong) -> K): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<ULong>() }\n list.add(element)\n }\n return destination\n}\n\n/**\n * Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.\n * \n * @return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, M : MutableMap<in K, MutableList<UByte>>> UByteArray.groupByTo(destination: M, keySelector: (UByte) -> K): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<UByte>() }\n list.add(element)\n }\n return destination\n}\n\n/**\n * Groups elements of the original array by the key returned by the given [keySelector] function\n * applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.\n * \n * @return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, M : MutableMap<in K, MutableList<UShort>>> UShortArray.groupByTo(destination: M, keySelector: (UShort) -> K): M {\n for (element in this) {\n val key
= keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<UShort>() }\n list.add(element)\n }\n return destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by the given [keySelector] function applied to the element\n * and puts to the [destination] map each group key associated with a list of corresponding values.\n * \n * @return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, V, M : MutableMap<in K, MutableList<V>>> UIntArray.groupByTo(destination: M, keySelector: (UInt) -> K, valueTransform: (UInt) -> V): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<V>() }\n list.add(valueTransform(element))\n }\n return destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by the given [keySelector] function applied to the element\n * and puts to the [destination] map each group key associated with a list of corresponding values.\n * \n * @return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, V, M : MutableMap<in K, MutableList<V>>> ULongArray.groupByTo(destination: M, keySelector: (ULong) -> K, valueTransform: (ULong) -> V): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<V>() }\n list.add(valueTransform(element))\n }\n return destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each
element of the original array\n * by the key returned by the given [keySelector] function applied to the element\n * and puts to the [destination] map each group key associated with a list of corresponding values.\n * \n * @return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, V, M : MutableMap<in K, MutableList<V>>> UByteArray.groupByTo(destination: M, keySelector: (UByte) -> K, valueTransform: (UByte) -> V): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<V>() }\n list.add(valueTransform(element))\n }\n return destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by the given [keySelector] function applied to the element\n *
and puts to the [destination] map each group key associated with a list of corresponding values.\n * \n * @return The [destination] map.\n * \n * @sample

samples.collections.Collections.Transformations.groupByKeysAndValues\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, V, M : MutableMap<in K, MutableList<V>>> UShortArray.groupByTo(destination: M, keySelector: (UShort) -> K, valueTransform: (UShort) -> V): M {\n for (element in this) {\n val key = keySelector(element)\n val list = destination.getOrPut(key) { ArrayList<V>() }\n list.add(valueTransform(element))\n }\n return destination\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element in the original array.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> UIntArray.map(transform: (UInt) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element in the original array.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> ULongArray.map(transform: (ULong) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element in the original array.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> UByteArray.map(transform: (UByte) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element in the original array.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> UShortArray.map(transform: (UShort) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element and its index in the original array.\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> UIntArray.mapIndexed(transform: (index: Int, UInt) -> R): List<R> {\n return mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element and its index in the original array.\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> ULongArray.mapIndexed(transform: (index: Int, ULong) -> R): List<R> {\n return mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element and its index in the original array.\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> UByteArray.mapIndexed(transform: (index: Int, UByte) -> R): List<R> {\n return mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to each element and its index in the original array.\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> UShortArray.mapIndexed(transform: (index: Int, UShort) -> R): List<R> {\n return mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/**\n * Applies the given [transform] function to each element and its index in the original array\n * and appends the results to the given [destination].\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, C :

MutableCollection<in R>> UIntArray.mapIndexedTo(destination: C, transform: (index: Int, UInt) -> R): C {\n var index = 0\n for (item in this)\n destination.add(transform(index++, item))\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element and its index in the original array\n * and appends the results to the given [destination].\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, C : MutableCollection<in R>> ULongArray.mapIndexedTo(destination: C, transform: (index: Int, ULong) -> R): C {\n var index = 0\n for (item in this)\n destination.add(transform(index++, item))\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element and its index in the original array\n * and appends the results to the given [destination].\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, C : MutableCollection<in
R>> UByteArray.mapIndexedTo(destination: C, transform: (index: Int, UByte) -> R): C {\n var index = 0\n for (item in this)\n destination.add(transform(index++, item))\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element and its index in the original array\n * and appends the results to the given [destination].\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of the transform applied to the element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, C : MutableCollection<in R>> UShortArray.mapIndexedTo(destination: C, transform: (index: Int, UShort) -> R): C {\n var index = 0\n for (item in this)\n destination.add(transform(index++, item))\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element of the original array\n * and appends the results to the given [destination].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, C : MutableCollection<in R>> UIntArray.mapTo(destination: C, transform: (UInt) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element of the original array\n * and appends the results to the given [destination].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, C : MutableCollection<in R>> ULongArray.mapTo(destination: C, transform: (ULong) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element of the original array\n * and appends the results to the given [destination].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, C : MutableCollection<in
R>> UByteArray.mapTo(destination: C, transform: (UByte) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return destination\n}\n\n/**\n * Applies the given [transform] function to each element of the original array\n * and appends the results to the given [destination].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, C : MutableCollection<in R>> UShortArray.mapTo(destination: C, transform: (UShort) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return destination\n}\n\n/**\n * Returns a lazy [Iterable] of [IndexedValue] for each element of the original array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.withIndex(): Iterable<IndexedValue<UInt>> {\n return IndexingIterable { iterator() }\n}\n\n/**\n * Returns a lazy [Iterable] of [IndexedValue] for each element of the original array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic
fun ULongArray.withIndex(): Iterable<IndexedValue<ULong>> {\n return IndexingIterable { iterator() }\n}\n\n/**\n * Returns a lazy [Iterable] of [IndexedValue] for each element of the original array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.withIndex(): Iterable<IndexedValue<UByte>> {\n return IndexingIterable { iterator() }\n}\n\n/**\n * Returns a lazy [Iterable]

of [IndexedValue] for each element of the original array.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.withIndex():
Iterable<IndexedValue<UShort>> {\n   return IndexingIterable { iterator() }\n}\n\n/**\n * Returns `true` if all
elements match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.all\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.all(predicate: (UInt) -> Boolean): Boolean {\n   for (element in this)
 if (!predicate(element)) return false\n   return true\n}\n\n/**\n * Returns `true` if all elements match the given
[predicate].\n * \n * @sample samples.collections.Collections.Aggregates.all\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.all(predicate: (ULong) -> Boolean): Boolean {\n   for (element in this) if (!predicate(element)) return
false\n   return true\n}\n\n/**\n * Returns `true` if all elements match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.all\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.all(predicate: (UByte) -> Boolean): Boolean {\n   for (element in this) if (!predicate(element)) return
false\n   return true\n}\n\n/**\n * Returns `true` if all elements match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.all\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
 inline fun UShortArray.all(predicate: (UShort) -> Boolean): Boolean {\n   for (element in this) if
(!predicate(element)) return false\n   return true\n}\n\n/**\n * Returns `true` if array has at least one element.\n * \n
* @sample samples.collections.Collections.Aggregates.any\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.any(): Boolean {\n   return storage.any()\n}\n\n/**\n * Returns `true` if array has at least one element.\n
* \n * @sample samples.collections.Collections.Aggregates.any\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.any(): Boolean {\n   return storage.any()\n}\n\n/**\n * Returns `true` if array has at least one
element.\n * \n * @sample samples.collections.Collections.Aggregates.any\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline
 fun UByteArray.any(): Boolean {\n   return storage.any()\n}\n\n/**\n * Returns `true` if array has at least one
element.\n * \n * @sample samples.collections.Collections.Aggregates.any\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.any(): Boolean {\n   return storage.any()\n}\n\n/**\n * Returns `true` if at least one element matches
the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.anyWithPredicate\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.any(predicate: (UInt) -> Boolean): Boolean {\n   for (element in this) if (predicate(element)) return true\n
  return false\n}\n\n/**\n * Returns `true` if at least one element matches the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.anyWithPredicate\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
 inline fun ULongArray.any(predicate: (ULong) -> Boolean): Boolean {\n   for (element in this) if
(predicate(element)) return true\n   return false\n}\n\n/**\n * Returns `true` if at least one element matches the
given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.anyWithPredicate\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.any(predicate: (UByte) -> Boolean): Boolean {\n   for (element in this) if (predicate(element)) return
true\n   return false\n}\n\n/**\n * Returns `true` if at least one element matches the given [predicate].\n * \n *
@sample samples.collections.Collections.Aggregates.anyWithPredicate\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.any(predicate: (UShort) -> Boolean): Boolean {\n   for (element in this) if (predicate(element)) return
true\n   return false\n}\n\n/**\n * Returns the number of elements

matching the given [predicate].\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.count(predicate: (UInt) -> Boolean): Int {\n   var count = 0\n   for (element in this) if (predicate(element)) ++count\n   return count\n}\n\n/**\n * Returns the number of elements matching the given [predicate].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.count(predicate: (ULong) -> Boolean): Int {\n   var count = 0\n   for (element in this) if (predicate(element)) ++count\n   return count\n}\n\n/**\n * Returns the number of elements matching the given [predicate].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.count(predicate: (UByte) -> Boolean): Int {\n   var count = 0\n   for (element in this) if (predicate(element)) ++count\n   return count\n}\n\n/**\n * Returns the number of elements matching
the given [predicate].\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.count(predicate: (UShort) -> Boolean): Int {\n   var count = 0\n   for (element in this) if (predicate(element)) ++count\n   return count\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> UIntArray.fold(initial: R, operation: (acc: R, UInt) -> R): R {\n   var accumulator = initial\n   for (element in this) accumulator = operation(accumulator, element)\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> ULongArray.fold(initial: R, operation: (acc: R, ULong) -> R): R {\n   var accumulator = initial\n   for (element in this) accumulator = operation(accumulator, element)\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> UByteArray.fold(initial: R, operation: (acc: R, UByte) -> R): R {\n   var accumulator = initial\n   for (element in this) accumulator = operation(accumulator, element)\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> UShortArray.fold(initial: R, operation: (acc: R, UShort) -> R): R {\n   var accumulator =
initial\n   for (element in this) accumulator = operation(accumulator, element)\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> UIntArray.foldIndexed(initial: R, operation: (index: Int, acc: R, UInt) -> R): R {\n   var index = 0\n   var accumulator = initial\n   for (element in this) accumulator = operation(index++, accumulator, element)\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n
* @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> ULongArray.foldIndexed(initial: R, operation: (index: Int, acc: R, ULong) -> R): R {\n   var index = 0\n   var accumulator = initial\n   for (element in this) accumulator = operation(index++, accumulator, element)\n   return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>

UByteArray.foldIndexed(initial:
R, operation: (index: Int, acc: R, UByte) -> R): R {\n var index = 0\n var accumulator = initial\n for (element in this) accumulator = operation(index++, accumulator, element)\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> UShortArray.foldIndexed(initial: R, operation: (index: Int, acc: R, UShort) -> R): R {\n var index = 0\n var accumulator = initial\n for (element in this) accumulator = operation(index++, accumulator, element)\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value
and applying [operation] from right to left to each element and current accumulator value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> UIntArray.foldRight(initial: R, operation: (UInt, acc: R) -> R): R {\n var index = lastIndex\n var accumulator = initial\n while (index >= 0) {\n accumulator = operation(get(index--), accumulator)\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left to each element and current accumulator value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> ULongArray.foldRight(initial: R, operation: (ULong, acc: R) -> R): R {\n var index = lastIndex\n var accumulator = initial\n while (index >= 0) {\n accumulator = operation(get(index--), accumulator)\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial]
value and applying [operation] from right to left to each element and current accumulator value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> UByteArray.foldRight(initial: R, operation: (UByte, acc: R) -> R): R {\n var index = lastIndex\n var accumulator = initial\n while (index >= 0) {\n accumulator = operation(get(index--), accumulator)\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left to each element and current accumulator value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> UShortArray.foldRight(initial: R, operation: (UShort, acc: R) -> R): R {\n var index = lastIndex\n var accumulator = initial\n while (index >= 0) {\n accumulator = operation(get(index--), accumulator)\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting
with [initial] value and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> UIntArray.foldRightIndexed(initial: R, operation: (index: Int, UInt, acc: R) -> R): R {\n var index = lastIndex\n var accumulator = initial\n while (index >= 0) {\n accumulator = operation(index, get(index), accumulator)\n --index\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> ULongArray.foldRightIndexed(initial: R, operation: (index: Int, ULong, acc: R) -> R): R {\n var index = lastIndex\n var accumulator = initial\n while (index >= 0) {\n accumulator = operation(index, get(index), accumulator)\n --index\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>

UByteArray.foldRightIndexed(initial: R, operation: (index: Int,
UByte, acc: R) -> R): R {\n var index = lastIndex\n var accumulator = initial\n while (index >= 0) {\n accumulator = operation(index, get(index), accumulator)\n --index\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> UShortArray.foldRightIndexed(initial: R, operation: (index: Int, UShort, acc: R) -> R): R {\n var index = lastIndex\n var accumulator = initial\n while (index >= 0) {\n accumulator = operation(index, get(index), accumulator)\n --index\n }\n return accumulator\n}\n\n/**\n * Performs
the given [action] on each element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.forEach(action: (UInt) -> Unit): Unit {\n for (element in this) action(element)\n}\n\n/**\n * Performs the given [action] on each element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.forEach(action: (ULong) -> Unit): Unit {\n for (element in this) action(element)\n}\n\n/**\n * Performs the given [action] on each element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.forEach(action: (UByte) -> Unit): Unit {\n for (element in this) action(element)\n}\n\n/**\n * Performs the given [action] on each element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.forEach(action: (UShort) -> Unit): Unit {\n for (element in this) action(element)\n}\n\n/**\n
* Performs the given [action] on each element, providing sequential index with the element.\n * @param [action] function that takes the index of an element and the element itself\n * and performs the desired action on the element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.forEachIndexed(action: (index: Int, UInt) -> Unit): Unit {\n var index = 0\n for (item in this) action(index++, item)\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index with the element.\n * @param [action] function that takes the index of an element and the element itself\n * and performs the desired action on the element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.forEachIndexed(action: (index: Int, ULong) -> Unit): Unit {\n var index = 0\n for (item in this) action(index++, item)\n}\n\n/**\n * Performs
the given [action] on each element, providing sequential index with the element.\n * @param [action] function that takes the index of an element and the element itself\n * and performs the desired action on the element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.forEachIndexed(action: (index: Int, UByte) -> Unit): Unit {\n var index = 0\n for (item in this) action(index++, item)\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index with the element.\n * @param [action] function that takes the index of an element and the element itself\n * and performs the desired action on the element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.forEachIndexed(action: (index: Int, UShort) -> Unit): Unit {\n var index = 0\n for (item in this) action(index++, item)\n}\n\n/**\n * Returns the largest element or `null` if
there are no elements.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.max(): UInt? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (max < e) max = e\n }\n return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.max(): ULong? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (max < e) max = e\n }\n return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n

*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.max(): UByte? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (max < e) max = e\n }\n return max\n}\n\n/**\n * Returns the largest element or
`null` if there are no elements.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.max(): UShort? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (max < e) max = e\n }\n return max\n}\n\n/**\n * Returns the first element yielding the largest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.maxBy\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>> UIntArray.maxBy(selector: (UInt) -> R): UInt? {\n if (isEmpty()) return null\n var maxElem = this[0]\n var maxValue = selector(maxElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (maxValue < v) {\n maxElem = e\n maxValue = v\n }\n }\n return maxElem\n}\n\n/**\n * Returns the first element yielding
the largest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.maxBy\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>> ULongArray.maxBy(selector: (ULong) -> R): ULong? {\n if (isEmpty()) return null\n var maxElem = this[0]\n var maxValue = selector(maxElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (maxValue < v) {\n maxElem = e\n maxValue = v\n }\n }\n return maxElem\n}\n\n/**\n * Returns the first element yielding the largest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.maxBy\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>> UByteArray.maxBy(selector: (UByte) -> R): UByte? {\n if (isEmpty())
return null\n var maxElem = this[0]\n var maxValue = selector(maxElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (maxValue < v) {\n maxElem = e\n maxValue = v\n }\n }\n return maxElem\n}\n\n/**\n * Returns the first element yielding the largest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.maxBy\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>> UShortArray.maxBy(selector: (UShort) -> R): UShort? {\n if (isEmpty()) return null\n var maxElem = this[0]\n var maxValue = selector(maxElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (maxValue < v) {\n maxElem = e\n maxValue = v\n }\n }\n return maxElem\n}\n\n/**\n * Returns the first element having
the largest value according to the provided [comparator] or `null` if there are no elements.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.maxWith(comparator: Comparator<in UInt>): UInt? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (comparator.compare(max, e) < 0) max = e\n }\n return max\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator] or `null` if there are no elements.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.maxWith(comparator: Comparator<in ULong>): ULong? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (comparator.compare(max, e) < 0) max = e\n }\n return max\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator] or `null` if there are no
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 return max\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.min(): UInt? {\n    if (isEmpty())
return null\n    var
 min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (min > e) min = e\n    }\n    return
min\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.min(): ULong? {\n    if
(isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (min > e) min =
e\n    }\n    return min\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.min(): UByte? {\n    if
(isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (min > e) min =
e\n    }\n    return min\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.min(): UShort? {\n    if
(isEmpty()) return
 null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (min > e) min = e\n    }\n    return
min\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function or `null` if there are no
elements.\n * \n * @sample samples.collections.Collections.Aggregates.minBy\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> UIntArray.minBy(selector: (UInt) -> R): UInt? {\n    if (isEmpty()) return null\n    var minElem =
this[0]\n    var minValue = selector(minElem)\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        val v =
selector(e)\n        if (minValue > v) {\n            minElem = e\n            minValue = v\n        }\n    }\n    return
minElem\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function or `null` if there
are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.minBy\n
 */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> ULongArray.minBy(selector: (ULong) -> R): ULong? {\n    if (isEmpty()) return null\n    var
minElem = this[0]\n    var minValue = selector(minElem)\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        val
v = selector(e)\n        if (minValue > v) {\n            minElem = e\n            minValue = v\n        }\n    }\n    return
minElem\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function or `null` if there
are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.minBy\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> UByteArray.minBy(selector: (UByte) -> R): UByte? {\n    if (isEmpty()) return null\n    var
minElem = this[0]\n    var minValue = selector(minElem)\n    for (i in 1..lastIndex) {\n        val e = this[i]\n
  val v = selector(e)\n        if (minValue > v) {\n            minElem = e\n            minValue = v\n        }\n    }\n    return
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*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> UShortArray.minBy(selector: (UShort) -> R): UShort? {\n    if (isEmpty()) return null\n    var
minElem = this[0]\n    var minValue = selector(minElem)\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        val
v = selector(e)\n        if (minValue > v) {\n            minElem = e\n            minValue = v\n        }\n    }\n    return
minElem\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator]
or `null` if there are no elements.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic
 fun UIntArray.minWith(comparator: Comparator<in UInt>): UInt? {\n    if (isEmpty()) return null\n    var min =
this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(min, e) > 0) min = e\n    }\n
return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator]
or `null` if there are no elements.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun
ULongArray.minWith(comparator: Comparator<in ULong>): ULong? {\n    if (isEmpty()) return null\n    var min =
this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(min, e) > 0) min = e\n    }\n
return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator]
or `null` if there are no elements.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun
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UByteArray.minWith(comparator: Comparator<in UByte>): UByte? {\n
if (isEmpty()) return null\n var min = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (comparator.compare(min, e) > 0) min = e\n }\n return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.minWith(comparator: Comparator<in UShort>): UShort? {\n if (isEmpty()) return null\n var min = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (comparator.compare(min, e) > 0) min = e\n }\n return min\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n * @sample samples.collections.Collections.Aggregates.none\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.none(): Boolean {\n return isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.none\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.none(): Boolean {\n return isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n * @sample samples.collections.Collections.Aggregates.none\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.none(): Boolean {\n return isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n * @sample samples.collections.Collections.Aggregates.none\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.none(): Boolean {\n return isEmpty()\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.noneWithPredicate\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun UIntArray.none(predicate: (UInt) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return false\n return true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.noneWithPredicate\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.none(predicate: (ULong) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return false\n return true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.noneWithPredicate\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.none(predicate: (UByte) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return false\n return true\n}\n\n/**\n * Returns `true` if no elements match the given
[predicate].\n * \n * @sample samples.collections.Collections.Aggregates.noneWithPredicate\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.none(predicate: (UShort) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return false\n return true\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right to current accumulator value and each element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.reduce(operation: (acc: UInt, UInt) -> UInt): UInt {\n if (isEmpty())\n throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(accumulator, this[index])\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation]
from left to right to current accumulator value and each element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.reduce(operation: (acc: ULong, ULong) -> ULong): ULong {\n if (isEmpty())\n throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(accumulator, this[index])\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right to current accumulator

value and each element.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.reduce(operation: (acc: UByte, UByte) -> UByte): UByte {\n if (isEmpty())\n throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n
accumulator = operation(accumulator, this[index])\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right to current accumulator value and each element.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.reduce(operation: (acc: UShort, UShort) -> UShort): UShort {\n if (isEmpty())\n throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(accumulator, this[index])\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself and calculates
the next accumulator value.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.reduceIndexed(operation: (index: Int, acc: UInt, UInt) -> UInt): UInt {\n if (isEmpty())\n throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(index, accumulator, this[index])\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself and calculates the next accumulator value.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.reduceIndexed(operation: (index: Int, acc: ULong,
ULong) -> ULong): ULong {\n if (isEmpty())\n throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(index, accumulator, this[index])\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself and calculates the next accumulator value.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.reduceIndexed(operation: (index: Int, acc: UByte, UByte) -> UByte): UByte {\n if (isEmpty())\n throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n var accumulator = this[0]\n for (index in 1..lastIndex)
{\n accumulator = operation(index, accumulator, this[index])\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original array.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself and calculates the next accumulator value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.reduceIndexed(operation: (index: Int, acc: UShort, UShort) -> UShort): UShort {\n if (isEmpty())\n throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(index, accumulator, this[index])\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation]
from right to left to each element and current accumulator value.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.reduceRight(operation: (UInt, acc: UInt) -> UInt): UInt {\n var index = lastIndex\n if (index < 0)
throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n var accumulator = get(index--)\n

while (index >= 0) {\n accumulator = operation(get(index--), accumulator)\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left to each element and current accumulator value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.reduceRight(operation: (ULong, acc: ULong) -> ULong): ULong {\n var index = lastIndex\n if (index < 0) throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n var accumulator = get(index--)\n while (index >= 0) {\n accumulator = operation(get(index--), accumulator)\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left to each element and current accumulator value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.reduceRight(operation: (UByte, acc: UByte) -> UByte): UByte {\n var index = lastIndex\n if (index < 0) throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n var accumulator = get(index--)\n while (index >= 0) {\n accumulator = operation(get(index--), accumulator)\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left to each element and current accumulator value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.reduceRight(operation:
(UShort, acc: UShort) -> UShort): UShort {\n var index = lastIndex\n if (index < 0) throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n var accumulator = get(index--)\n while (index >= 0) {\n accumulator = operation(get(index--), accumulator)\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.reduceRightIndexed(operation: (index: Int, UInt, acc: UInt) -> UInt): UInt {\n var index = lastIndex\n if (index < 0) throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n var accumulator = get(index--)\n while (index >= 0) {\n accumulator = operation(index, get(index), accumulator)\n --index\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.reduceRightIndexed(operation: (index: Int, ULong, acc: ULong) -> ULong): ULong {\n var index = lastIndex\n if (index < 0) throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n var accumulator = get(index--)\n while (index >= 0) {\n accumulator = operation(index, get(index), accumulator)\n --index\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.reduceRightIndexed(operation: (index: Int, UByte, acc: UByte) -> UByte): UByte {\n var index = lastIndex\n if (index < 0) throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n var accumulator = get(index--)\n while (index >= 0) {\n accumulator = operation(index, get(index), accumulator)\n --index\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with last element and applying [operation] from right to left\n * to each element with its index in the original
array and current accumulator value.\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n

*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.reduceRightIndexed(operation: (index: Int, UShort, acc: UShort) -> UShort): UShort {\n var index = lastIndex\n if (index < 0) throw UnsupportedOperationException(\"Empty array can't be reduced.\")\n var accumulator = get(index--)\n while (index >= 0) {\n accumulator = operation(index, get(index), accumulator)\n --index\n }\n return accumulator\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.sumBy(selector: (UInt) -> UInt): UInt {\n var sum: UInt = 0u\n for (element in this) {\n sum += selector(element)\n }\n return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.sumBy(selector: (ULong) -> UInt): UInt {\n var sum: UInt = 0u\n for (element in this) {\n sum += selector(element)\n }\n return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.sumBy(selector: (UByte) -> UInt): UInt {\n var sum: UInt = 0u\n for (element in this) {\n sum += selector(element)\n }\n return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.sumBy(selector: (UShort) -> UInt): UInt {\n var sum: UInt = 0u\n for (element in this) {\n sum += selector(element)\n }\n return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.sumByDouble(selector: (UInt) -> Double): Double {\n var sum: Double = 0.0\n for (element in this) {\n sum += selector(element)\n }\n return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.sumByDouble(selector: (ULong) -> Double): Double {\n var sum: Double = 0.0\n for (element in this) {\n sum += selector(element)\n }\n return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.sumByDouble(selector: (UByte) -> Double): Double {\n var sum: Double = 0.0\n for (element in this) {\n sum += selector(element)\n }\n return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.sumByDouble(selector: (UShort) -> Double): Double {\n var sum: Double = 0.0\n for (element in this) {\n sum += selector(element)\n }\n return sum\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic infix fun <R> UIntArray.zip(other: Array<out R>): List<Pair<UInt, R>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic infix fun <R> ULongArray.zip(other: Array<out R>): List<Pair<ULong, R>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic infix fun <R> UByteArray.zip(other:

Array<out R>): List<Pair<UByte, R>> {\n   return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic infix fun <R> UShortArray.zip(other: Array<out R>): List<Pair<UShort, R>> {\n   return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, V> UIntArray.zip(other:
Array<out R>, transform: (a: UInt, b: R) -> V): List<V> {\n   val size = minOf(size, other.size)\n   val list = ArrayList<V>(size)\n   for (i in 0 until size) {\n   list.add(transform(this[i], other[i]))\n   }\n   return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, V> ULongArray.zip(other: Array<out R>, transform: (a: ULong, b: R) -> V): List<V> {\n   val size = minOf(size, other.size)\n   val list = ArrayList<V>(size)\n   for (i in 0 until size) {\n   list.add(transform(this[i], other[i]))\n   }\n   return list\n}\n\n/**\n * Returns a list of values built
from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, V> UByteArray.zip(other: Array<out R>, transform: (a: UByte, b: R) -> V): List<V> {\n   val size = minOf(size, other.size)\n   val list = ArrayList<V>(size)\n   for (i in 0 until size) {\n   list.add(transform(this[i], other[i]))\n   }\n   return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, V> UShortArray.zip(other: Array<out R>, transform: (a: UShort, b: R) -> V): List<V> {\n   val size = minOf(size, other.size)\n   val list = ArrayList<V>(size)\n   for (i in 0 until size) {\n   list.add(transform(this[i], other[i]))\n   }\n   return list\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic infix fun <R> UIntArray.zip(other: Iterable<R>): List<Pair<UInt, R>> {\n   return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] array with the same index.\n * The returned list has length of the shortest collection.\n
* \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic infix fun <R> ULongArray.zip(other: Iterable<R>): List<Pair<ULong, R>> {\n   return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic infix fun <R> UByteArray.zip(other: Iterable<R>): List<Pair<UByte, R>> {\n   return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n

*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic
infix fun <R> UShortArray.zip(other: Iterable<R>): List<Pair<UShort, R>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] collection with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, V> UIntArray.zip(other: Iterable<R>, transform: (a: UInt, b: R) -> V): List<V> {\n val arraySize = size\n val list = ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n var i = 0\n for (element in other) {\n if (i >= arraySize) break\n list.add(transform(this[i++], element))\n }\n return list\n}\n\n/**\n * Returns a list of values built from the elements of `this`
array and the [other] collection with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, V> ULongArray.zip(other: Iterable<R>, transform: (a: ULong, b: R) -> V): List<V> {\n val arraySize = size\n val list = ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n var i = 0\n for (element in other) {\n if (i >= arraySize) break\n list.add(transform(this[i++], element))\n }\n return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] collection with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n
* @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, V> UByteArray.zip(other: Iterable<R>, transform: (a: UByte, b: R) -> V): List<V> {\n val arraySize = size\n val list = ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n var i = 0\n for (element in other) {\n if (i >= arraySize) break\n list.add(transform(this[i++], element))\n }\n return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] collection with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, V> UShortArray.zip(other:
Iterable<R>, transform: (a: UShort, b: R) -> V): List<V> {\n val arraySize = size\n val list = ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n var i = 0\n for (element in other) {\n if (i >= arraySize) break\n list.add(transform(this[i++], element))\n }\n return list\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic infix fun UIntArray.zip(other: UIntArray): List<Pair<UInt, UInt>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic infix fun ULongArray.zip(other: ULongArray): List<Pair<ULong, ULong>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic infix fun UByteArray.zip(other: UByteArray): List<Pair<UByte, UByte>> {\n return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n

*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic infix fun UShortArray.zip(other: UShortArray): List<Pair<UShort,
UShort>> {\n   return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest array.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <V> UIntArray.zip(other: UIntArray, transform: (a: UInt, b: UInt) -> V): List<V> {\n   val size = minOf(size, other.size)\n   val list = ArrayList<V>(size)\n   for (i in 0 until size) {\n   list.add(transform(this[i], other[i]))\n   }\n   return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length
of the shortest array.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <V> ULongArray.zip(other: ULongArray, transform: (a: ULong, b: ULong) -> V): List<V> {\n   val size = minOf(size, other.size)\n   val list = ArrayList<V>(size)\n   for (i in 0 until size) {\n   list.add(transform(this[i], other[i]))\n   }\n   return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest array.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <V> UByteArray.zip(other: UByteArray, transform: (a: UByte, b: UByte) -> V): List<V>
{\n   val size = minOf(size, other.size)\n   val list = ArrayList<V>(size)\n   for (i in 0 until size) {\n   list.add(transform(this[i], other[i]))\n   }\n   return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest array.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <V> UShortArray.zip(other: UShortArray, transform: (a: UShort, b: UShort) -> V): List<V> {\n   val size = minOf(size, other.size)\n   val list = ArrayList<V>(size)\n   for (i in 0 until size) {\n   list.add(transform(this[i], other[i]))\n   }\n   return list\n}\n\n/**\n * Returns the sum of all elements in the array.\n */\n@kotlin.jvm.JvmName(\"sumOfUInt\")\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic
fun Array<out UInt>.sum(): UInt {\n   var sum: UInt = 0u\n   for (element in this) {\n   sum += element\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all elements in the array.\n */\n@kotlin.jvm.JvmName(\"sumOfULong\")\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Array<out ULong>.sum(): ULong {\n   var sum: ULong = 0uL\n   for (element in this) {\n   sum += element\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all elements in the array.\n */\n@kotlin.jvm.JvmName(\"sumOfUByte\")\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Array<out UByte>.sum(): UInt {\n   var sum: UInt = 0u\n   for (element in this) {\n   sum += element\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all elements in the array.\n */\n@kotlin.jvm.JvmName(\"sumOfUShort\")\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Array<out UShort>.sum(): UInt {\n   var sum: UInt
= 0u\n   for (element in this) {\n   sum += element\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all elements in the array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.sum(): UInt {\n   return storage.sum().toUInt()\n}\n\n/**\n * Returns the sum of all elements in the array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.sum(): ULong {\n   return storage.sum().toULong()\n}\n\n/**\n * Returns the sum of all elements in

the array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.sum(): UInt {\n   return sumBy { it.toUInt() }\n}\n\n/**\n * Returns the sum of all elements in the array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.sum(): UInt {\n   return sumBy { it.toUInt() }\n}\n\n","/*\n * Copyright
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/\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"UCollectionsKt\")\n\npackage kotlin.collections\n\n//\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n//\n\nimport kotlin.random.\n\n/**\n * Returns an array of UByte containing all of the elements of this collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Collection<UByte>.toUByteArray(): UByteArray {\n   val result = UByteArray(size)\n   var index = 0\n   for (element in this)\n   result[index++] = element\n   return result\n}\n\n/**\n * Returns an array of UInt containing all of the elements of this collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Collection<UInt>.toUIntArray(): UIntArray {\n   val result
 = UIntArray(size)\n   var index = 0\n   for (element in this)\n   result[index++] = element\n   return result\n}\n\n/**\n * Returns an array of ULong containing all of the elements of this collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Collection<ULong>.toULongArray(): ULongArray {\n   val result = ULongArray(size)\n   var index = 0\n   for (element in this)\n   result[index++] = element\n   return result\n}\n\n/**\n * Returns an array of UShort containing all of the elements of this collection.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Collection<UShort>.toUShortArray(): UShortArray {\n   val result = UShortArray(size)\n   var index = 0\n   for (element in this)\n   result[index++] = element\n   return result\n}\n\n/**\n * Returns the sum of all elements in the collection.\n */\n@kotlin.jvm.JvmName(\"sumOfUInt\")\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Iterable<UInt>.sum(): UInt
 {\n   var sum: UInt = 0u\n   for (element in this) {\n   sum += element\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all elements in the collection.\n */\n@kotlin.jvm.JvmName(\"sumOfULong\")\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Iterable<ULong>.sum(): ULong {\n   var sum: ULong = 0uL\n   for (element in this) {\n   sum += element\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all elements in the collection.\n */\n@kotlin.jvm.JvmName(\"sumOfUByte\")\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Iterable<UByte>.sum(): UInt {\n   var sum: UInt = 0u\n   for (element in this) {\n   sum += element\n   }\n   return sum\n}\n\n/**\n * Returns the sum of all elements in the collection.\n */\n@kotlin.jvm.JvmName(\"sumOfUShort\")\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Iterable<UShort>.sum(): UInt {\n   var sum: UInt = 0u\n   for (element in this) {\n   sum += element\n   }\n   return
 sum\n}\n\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n
/\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"UComparisonsKt\")\n\npackage kotlin.comparisons\n\n//\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n//\n\nimport kotlin.random.\n\n/**\n * Returns the greater of two values.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun maxOf(a: UInt, b: UInt): UInt {\n   return if (a >= b) a else b\n}\n\n/**\n * Returns the greater of two values.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun maxOf(a: ULong, b: ULong): ULong {\n   return if (a >= b) a else b\n}\n\n/**\n * Returns the greater of two values.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun maxOf(a: UByte, b: UByte): UByte {\n   return

if (a >= b) a else b\n}\n\n/**\n * Returns the greater of two values.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun maxOf(a: UShort, b: UShort): UShort {\n
return if (a >= b) a else b\n}\n\n/**\n * Returns the greater of three values.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
maxOf(a: UInt, b: UInt, c: UInt): UInt {\n   return maxOf(a, maxOf(b, c))\n}\n\n/**\n * Returns the greater of three
values.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline
fun maxOf(a: ULong, b: ULong, c: ULong): ULong {\n   return maxOf(a, maxOf(b, c))\n}\n\n/**\n * Returns the
greater of three values.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
maxOf(a: UByte, b: UByte, c: UByte): UByte {\n   return maxOf(a, maxOf(b, c))\n}\n\n/**\n * Returns the greater
of three values.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun maxOf(a: UShort, b: UShort, c: UShort): UShort {\n   return maxOf(a, maxOf(b, c))\n}\n\n/**\n *
Returns the smaller of two values.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun
minOf(a: UInt, b: UInt): UInt {\n   return if (a <= b) a else b\n}\n\n/**\n * Returns the smaller of two values.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun minOf(a: ULong, b: ULong): ULong {\n
return if (a <= b) a else b\n}\n\n/**\n * Returns the smaller of two values.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun minOf(a: UByte, b: UByte): UByte {\n
return if (a <= b) a else b\n}\n\n/**\n * Returns the smaller of two values.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun minOf(a: UShort, b: UShort): UShort {\n
return if (a <= b) a else b\n}\n\n/**\n * Returns the smaller of three values.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun minOf(a: UInt, b: UInt, c: UInt): UInt {\n   return minOf(a, minOf(b, c))\n}\n\n/**\n * Returns the
smaller of three values.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
minOf(a: ULong, b: ULong, c: ULong): ULong {\n   return minOf(a, minOf(b, c))\n}\n\n/**\n * Returns the
smaller of three values.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
minOf(a: UByte, b: UByte, c: UByte): UByte {\n   return minOf(a, minOf(b, c))\n}\n\n/**\n * Returns the smaller
of three values.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun minOf(a: UShort, b: UShort, c: UShort): UShort {\n   return minOf(a, minOf(b, c))\n}\n\n","/*\n *
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found in the license/LICENSE.txt file.\n
*/\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"URangesKt\")\n\npackage
kotlin.ranges\n\n//\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See:
https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n//\n\nimport kotlin.random.*\n\n/**\n * Returns a
random element from this range.\n * \n * @throws IllegalArgumentException if this range is empty.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntRange.random(): UInt {\n   return random(Random)\n}\n\n/**\n * Returns a random element from this range.\n
* \n * @throws IllegalArgumentException if this range is empty.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongRange.random(): ULong {\n   return random(Random)\n}\n\n/**\n * Returns a random element from this
range using the specified source of randomness.\n * \n * @throws IllegalArgumentException if this range is
empty.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntRange.random(random: Random):
UInt {\n   try {\n   return random.nextUInt(this)\n   } catch(e: IllegalArgumentException) {\n   throw
NoSuchElementException(e.message)\n   }\n}\n\n/**\n * Returns a random element from this range using the
specified source of randomness.\n * \n * @throws IllegalArgumentException if this range is empty.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongRange.random(random: Random):

ULong {\n try {\n return random.nextULong(this)\n } catch(e: IllegalArgumentException) {\n throw NoSuchElementException(e.message)\n }\n}\n\n/**\n * Returns `true` if this range contains the specified [element].\n * \n * Always returns `false` if the [element] is `null`.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UIntRange.contains(element: UInt?): Boolean {\n return element != null && contains(element)\n}\n\n/**\n * Returns `true` if this range contains the specified [element].\n * \n * Always returns `false` if the [element] is `null`.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun ULongRange.contains(element: ULong?): Boolean {\n return element != null && contains(element)\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic operator fun UIntRange.contains(value: UByte): Boolean {\n return contains(value.toUInt())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic operator fun ULongRange.contains(value: UByte): Boolean {\n return contains(value.toULong())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic operator fun ULongRange.contains(value: UInt): Boolean {\n return contains(value.toULong())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic operator fun UIntRange.contains(value: ULong): Boolean {\n return (value shr UInt.SIZE_BITS) == 0uL && contains(value.toUInt())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic operator fun UIntRange.contains(value: UShort): Boolean {\n return contains(value.toUInt())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic operator fun ULongRange.contains(value: UShort): Boolean {\n return contains(value.toULong())\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic infix fun UByte.downTo(to: UByte): UIntProgression {\n return UIntProgression.fromClosedRange(this.toUInt(), to.toUInt(), -1)\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic infix fun UInt.downTo(to: UInt): UIntProgression {\n return UIntProgression.fromClosedRange(this, to, -1)\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic infix fun ULong.downTo(to: ULong): ULongProgression {\n return ULongProgression.fromClosedRange(this, to, -1L)\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic infix fun UShort.downTo(to: UShort): UIntProgression {\n return UIntProgression.fromClosedRange(this.toUInt(), to.toUInt(), -1)\n}\n\n/**\n * Returns a progression that goes over the same range in the opposite direction with the same step.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UIntProgression.reversed(): UIntProgression {\n return UIntProgression.fromClosedRange(last, first, -step)\n}\n\n/**\n * Returns a progression that goes over the same range in the opposite direction with the same step.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULongProgression.reversed(): ULongProgression {\n return ULongProgression.fromClosedRange(last, first, -step)\n}\n\n/**\n * Returns a progression that goes over the same range with the given step.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic infix fun UIntProgression.step(step: Int):

UIntProgression {\n   checkStepIsPositive(step > 0, step)\n   return UIntProgression.fromClosedRange(first, last, if (this.step > 0) step else -step)\n}\n\n/**\n * Returns a progression that goes over the same range with the given step.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic infix fun ULongProgression.step(step: Long): ULongProgression {\n   checkStepIsPositive(step > 0, step)\n   return ULongProgression.fromClosedRange(first, last, if (this.step > 0) step else -step)\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to `this` value, then
 the returned range is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic infix fun UByte.until(to: UByte): UIntRange {\n   if (to <= UByte.MIN_VALUE) return UIntRange.EMPTY\n   return this.toUInt() .. (to - 1u).toUInt()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to `this` value, then the returned range is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic infix fun UInt.until(to: UInt): UIntRange {\n   if (to <= UInt.MIN_VALUE) return UIntRange.EMPTY\n   return this .. (to - 1u).toUInt()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to `this` value, then the returned range is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic infix fun ULong.until(to: ULong): ULongRange {\n   if (to <= ULong.MIN_VALUE) return ULongRange.EMPTY\n
    return this .. (to - 1u).toULong()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to `this` value, then the returned range is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic infix fun UShort.until(to: UShort): UIntRange {\n   if (to <= UShort.MIN_VALUE) return UIntRange.EMPTY\n   return this.toUInt() .. (to - 1u).toUInt()\n}\n\n/**\n * Ensures that this value is not less than the specified [minimumValue].\n * \n * @return this value if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise.\n * \n * @sample samples.comparisons.ComparableOps.coerceAtLeastUnsigned\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UInt.coerceAtLeast(minimumValue: UInt): UInt {\n   return if (this < minimumValue) minimumValue else this\n}\n\n/**\n * Ensures that this value is not less than the specified [minimumValue].\n * \n * @return this value
 if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise.\n * \n * @sample samples.comparisons.ComparableOps.coerceAtLeastUnsigned\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULong.coerceAtLeast(minimumValue: ULong): ULong {\n   return if (this < minimumValue) minimumValue else this\n}\n\n/**\n * Ensures that this value is not less than the specified [minimumValue].\n * \n * @return this value if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise.\n * \n * @sample samples.comparisons.ComparableOps.coerceAtLeastUnsigned\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByte.coerceAtLeast(minimumValue: UByte): UByte {\n   return if (this < minimumValue) minimumValue else this\n}\n\n/**\n * Ensures that this value is not less than the specified [minimumValue].\n * \n * @return this value if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise.\n * \n * @sample
 samples.comparisons.ComparableOps.coerceAtLeastUnsigned\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShort.coerceAtLeast(minimumValue: UShort): UShort {\n   return if (this < minimumValue) minimumValue else this\n}\n\n/**\n * Ensures that this value is not greater than the specified [maximumValue].\n * \n * @return this value if it's less than or equal to the [maximumValue] or the [maximumValue] otherwise.\n * \n * @sample samples.comparisons.ComparableOps.coerceAtMostUnsigned\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UInt.coerceAtMost(maximumValue: UInt): UInt {\n   return if (this > maximumValue) maximumValue else this\n}\n\n/**\n * Ensures that this value is not greater than the specified [maximumValue].\n * \n * @return this value if it's less than or equal to the [maximumValue] or the [maximumValue] otherwise.\n * \n * @sample

samples.comparisons.ComparableOps.coerceAtMostUnsigned\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic
fun ULong.coerceAtMost(maximumValue: ULong): ULong {\n return if (this > maximumValue) maximumValue
else this\n}\n\n/**\n * Ensures that this value is not greater than the specified [maximumValue].\n * \n * @return
this value if it's less than or equal to the [maximumValue] or the [maximumValue] otherwise.\n * \n * @sample
samples.comparisons.ComparableOps.coerceAtMostUnsigned\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByte.coerceAtMost(maximumValue:
UByte): UByte {\n return if (this > maximumValue) maximumValue else this\n}\n\n/**\n * Ensures that this
value is not greater than the specified [maximumValue].\n * \n * @return this value if it's less than or equal to the
[maximumValue] or the [maximumValue] otherwise.\n * \n * @sample
samples.comparisons.ComparableOps.coerceAtMostUnsigned\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShort.coerceAtMost(maximumValue:
UShort): UShort {\n return if (this > maximumValue)
maximumValue else this\n}\n\n/**\n * Ensures that this value lies in the specified range
[minimumValue]..[maximumValue].\n * \n * @return this value if it's in the range, or [minimumValue] if this value
is less than [minimumValue], or [maximumValue] if this value is greater than [maximumValue].\n * \n * @sample
samples.comparisons.ComparableOps.coerceInUnsigned\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UInt.coerceIn(minimumValue: UInt,
maximumValue: UInt): UInt {\n if (minimumValue > maximumValue) throw IllegalArgumentException(\"Cannot
coerce value to an empty range: maximum $maximumValue is less than minimum $minimumValue.\")\n if (this <
minimumValue) return minimumValue\n if (this > maximumValue) return maximumValue\n return
this\n}\n\n/**\n * Ensures that this value lies in the specified range [minimumValue]..[maximumValue].\n * \n *
@return this value if it's in the range, or [minimumValue] if this value is less than [minimumValue], or
[maximumValue] if this value is greater than [maximumValue].\n * \n * @sample
samples.comparisons.ComparableOps.coerceInUnsigned\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULong.coerceIn(minimumValue: ULong,
maximumValue: ULong): ULong {\n if (minimumValue > maximumValue) throw
IllegalArgumentException(\"Cannot coerce value to an empty range: maximum $maximumValue is less than
minimum $minimumValue.\")\n if (this < minimumValue) return minimumValue\n if (this > maximumValue)
return maximumValue\n return this\n}\n\n/**\n * Ensures that this value lies in the specified range
[minimumValue]..[maximumValue].\n * \n * @return this value if it's in the range, or [minimumValue] if this value
is less than [minimumValue], or [maximumValue] if this value is greater than [maximumValue].\n * \n * @sample
samples.comparisons.ComparableOps.coerceInUnsigned\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UByte.coerceIn(minimumValue: UByte,
maximumValue:
UByte): UByte {\n if (minimumValue > maximumValue) throw IllegalArgumentException(\"Cannot coerce
value to an empty range: maximum $maximumValue is less than minimum $minimumValue.\")\n if (this <
minimumValue) return minimumValue\n if (this > maximumValue) return maximumValue\n return
this\n}\n\n/**\n * Ensures that this value lies in the specified range [minimumValue]..[maximumValue].\n * \n *
@return this value if it's in the range, or [minimumValue] if this value is less than [minimumValue], or
[maximumValue] if this value is greater than [maximumValue].\n * \n * @sample
samples.comparisons.ComparableOps.coerceInUnsigned\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UShort.coerceIn(minimumValue: UShort,
maximumValue: UShort): UShort {\n if (minimumValue > maximumValue) throw
IllegalArgumentException(\"Cannot coerce value to an empty range: maximum $maximumValue is less than
minimum $minimumValue.\")\n if (this < minimumValue) return
minimumValue\n if (this > maximumValue) return maximumValue\n return this\n}\n\n/**\n * Ensures that this
value lies in the specified [range].\n * \n * @return this value if it's in the [range], or `range.start` if this value is less

than `range.start`, or `range.endInclusive` if this value is greater than `range.endInclusive`.\n * \n * @sample samples.comparisons.ComparableOps.coerceInUnsigned\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun UInt.coerceIn(range: ClosedRange<UInt>): UInt {\n if (range is ClosedFloatingPointRange) {\n return this.coerceIn<UInt>(range)\n }\n if (range.isEmpty()) throw IllegalArgumentException(\"Cannot coerce value to an empty range: $range.\")\n return when {\n this < range.start -> range.start\n this > range.endInclusive -> range.endInclusive\n else -> this\n }\n}\n\n/**\n * Ensures that this value lies in the specified [range].\n * \n * @return this value if it's in the [range], or `range.start`
if this value is less than `range.start`, or `range.endInclusive` if this value is greater than `range.endInclusive`.\n * \n * @sample samples.comparisons.ComparableOps.coerceInUnsigned\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULong.coerceIn(range: ClosedRange<ULong>): ULong {\n if (range is ClosedFloatingPointRange) {\n return this.coerceIn<ULong>(range)\n }\n if (range.isEmpty()) throw IllegalArgumentException(\"Cannot coerce value to an empty range: $range.\")\n return when {\n this < range.start -> range.start\n this > range.endInclusive -> range.endInclusive\n else -> this\n }\n}\n\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"USequencesKt\")\n\npackage kotlin.sequences\n\n//\n// NOTE: THIS FILE IS AUTO-GENERATED
by the GenerateStandardLib.kt\n// See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n//\n\nimport kotlin.random.*\n\n/**\n * Returns the sum of all elements in the sequence.\n *\n * The operation is _terminal_.\n */\n@kotlin.jvm.JvmName(\"sumOfUInt\")\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Sequence<UInt>.sum(): UInt {\n var sum: UInt = 0u\n for (element in this) {\n sum += element\n }\n return sum\n}\n\n/**\n * Returns the sum of all elements in the sequence.\n *\n * The operation is _terminal_.\n */\n@kotlin.jvm.JvmName(\"sumOfULong\")\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Sequence<ULong>.sum(): ULong {\n var sum: ULong = 0uL\n for (element in this) {\n sum += element\n }\n return sum\n}\n\n/**\n * Returns the sum of all elements in the sequence.\n *\n * The operation is _terminal_.\n */\n@kotlin.jvm.JvmName(\"sumOfUByte\")\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Sequence<UByte>.sum(): UInt {\n var sum: UInt = 0u\n for (element in this) {\n sum += element\n }\n return sum\n}\n\n/**\n * Returns the sum of all elements in the sequence.\n *\n * The operation is _terminal_.\n */\n@kotlin.jvm.JvmName(\"sumOfUShort\")\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Sequence<UShort>.sum(): UInt {\n var sum: UInt = 0u\n for (element in this) {\n sum += element\n }\n return sum\n}\n\n","/*\n * Copyright 2010-2015 JetBrains s.r.o.\n *\n * Licensed under the Apache License, Version 2.0 (the \"License\");\n * you may not use this file except in compliance with the License.\n * You may obtain a copy of the License at\n *\n * http://www.apache.org/licenses/LICENSE-2.0\n *\n * Unless required by applicable law or agreed to in writing, software\n * distributed under the License is distributed on an \"AS IS\" BASIS,\n * WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.\n * See the License for the specific language governing permissions and\n * limitations under the License.\n */\n\npackage kotlin.collections\n\nimport kotlin.internal.PlatformDependent\n\n/**\n * Classes that inherit from this interface can be represented as a sequence of elements that can\n * be iterated over.\n * @param T the type of element being iterated over. The iterator is covariant on its element type.\n */\npublic interface Iterable<out T> {\n /**\n * Returns an iterator over the elements of this object.\n */\n public operator fun iterator(): Iterator<T>\n}\n\n/**\n * Classes that inherit from this interface can be represented as a sequence of elements that can\n * be iterated over and that supports removing elements during iteration.\n * @param T the type of element being iterated over. The mutable iterator is invariant on its element type.\n */\npublic interface MutableIterable<out T> : Iterable<T> {\n /**\n * Returns an iterator over the elements of this sequence

that supports removing elements during iteration.\n */\n override fun iterator(): MutableIterator<T>\n}\n\n/**\n * A generic collection of elements. Methods in this interface support only read-only access to the collection;\n * read/write access is supported through the [MutableCollection] interface.\n * @param E the type of elements contained in the collection. The collection is covariant on its element type.\n */\npublic interface Collection<out E> : Iterable<E> {\n // Query Operations\n /**\n * Returns the size of the collection.\n */\n public val size: Int\n\n /**\n * Returns `true` if the collection is empty (contains no elements), `false` otherwise.\n */\n public fun isEmpty(): Boolean\n\n /**\n * Checks if the specified element is contained in this collection.\n */\n public operator fun contains(element: @UnsafeVariance E): Boolean\n\n override fun iterator(): Iterator<E>\n\n // Bulk Operations\n /**\n * Checks
if all elements in the specified collection are contained in this collection.\n */\n public fun containsAll(elements: Collection<@UnsafeVariance E>): Boolean\n}\n\n/**\n * A generic collection of elements that supports adding and removing elements.\n *\n * @param E the type of elements contained in the collection. The mutable collection is invariant on its element type.\n */\npublic interface MutableCollection<E> : Collection<E>, MutableIterable<E> {\n // Query Operations\n override fun iterator(): MutableIterator<E>\n\n // Modification Operations\n /**\n * Adds the specified element to the collection.\n *\n * @return `true` if the element has been added, `false` if the collection does not support duplicates\n * and the element is already contained in the collection.\n */\n public fun add(element: E): Boolean\n\n /**\n * Removes a single instance of the specified element from this\n * collection, if it is present.\n *\n * @return
`true` if the element has been successfully removed; `false` if it was not present in the collection.\n */\n public fun remove(element: E): Boolean\n\n // Bulk Modification Operations\n /**\n * Adds all of the elements of the specified collection to this collection.\n *\n * @return `true` if any of the specified elements was added to the collection, `false` if the collection was not modified.\n */\n public fun addAll(elements: Collection<E>): Boolean\n\n /**\n * Removes all of this collection's elements that are also contained in the specified collection.\n *\n * @return `true` if any of the specified elements was removed from the collection, `false` if the collection was not modified.\n */\n public fun removeAll(elements: Collection<E>): Boolean\n\n /**\n * Retains only the elements in this collection that are contained in the specified collection.\n *\n * @return `true` if any element was removed from the collection,
`false` if the collection was not modified.\n */\n public fun retainAll(elements: Collection<E>): Boolean\n\n /**\n * Removes all elements from this collection.\n */\n public fun clear(): Unit\n}\n\n/**\n * A generic ordered collection of elements. Methods in this interface support only read-only access to the list;\n * read/write access is supported through the [MutableList] interface.\n * @param E the type of elements contained in the list. The list is covariant on its element type.\n */\npublic interface List<out E> : Collection<E> {\n // Query Operations\n\n override val size: Int\n override fun isEmpty(): Boolean\n override fun contains(element: @UnsafeVariance E): Boolean\n override fun iterator(): Iterator<E>\n\n // Bulk Operations\n override fun containsAll(elements: Collection<@UnsafeVariance E>): Boolean\n\n // Positional Access Operations\n /**\n * Returns the element at the specified index in the list.\n */\n
public operator fun get(index: Int): E\n\n // Search Operations\n /**\n * Returns the index of the first occurrence of the specified element in the list, or -1 if the specified\n * element is not contained in the list.\n */\n public fun indexOf(element: @UnsafeVariance E): Int\n\n /**\n * Returns the index of the last occurrence of the specified element in the list, or -1 if the specified\n * element is not contained in the list.\n */\n public fun lastIndexOf(element: @UnsafeVariance E): Int\n\n // List Iterators\n /**\n * Returns a list iterator over the elements in this list (in proper sequence).\n */\n public fun listIterator(): ListIterator<E>\n\n /**\n * Returns a list iterator over the elements in this list (in proper sequence), starting at the specified [index].\n */\n public fun listIterator(index: Int): ListIterator<E>\n\n // View\n /**\n * Returns a view of the portion of this list between the specified
[fromIndex] (inclusive) and [toIndex] (exclusive).\n * The returned list is backed by this list, so non-structural changes in the returned list are reflected in this list, and vice-versa.\n *\n * Structural changes in the base list make the behavior of the view undefined.\n */\n public fun subList(fromIndex: Int, toIndex: Int):

List<E>\n}\n\n/**\n * A generic ordered collection of elements that supports adding and removing elements.\n * @param E the type of elements contained in the list. The mutable list is invariant on its element type.\n */\npublic interface MutableList<E> : List<E>, MutableCollection<E> {\n // Modification Operations\n /**\n * Adds the specified element to the end of this list.\n *\n * @return `true` because the list is always modified as the result of this operation.\n */\n override fun add(element: E): Boolean\n\n override fun remove(element: E): Boolean\n\n // Bulk Modification Operations\n /**\n *
Adds all of the elements of the specified collection to the end of this list.\n *\n * The elements are appended in the order they appear in the [elements] collection.\n *\n * @return `true` if the list was changed as the result of the operation.\n */\n override fun addAll(elements: Collection<E>): Boolean\n\n /**\n * Inserts all of the elements of the specified collection [elements] into this list at the specified [index].\n *\n * @return `true` if the list was changed as the result of the operation.\n */\n public fun addAll(index: Int, elements: Collection<E>): Boolean\n\n override fun removeAll(elements: Collection<E>): Boolean\n override fun retainAll(elements: Collection<E>): Boolean\n override fun clear(): Unit\n\n // Positional Access Operations\n /**\n * Replaces the element at the specified position in this list with the specified element.\n *\n * @return the element previously at the specified position.\n
*/\n public operator fun set(index: Int, element: E): E\n\n /**\n * Inserts an element into the list at the specified [index].\n */\n public fun add(index: Int, element: E): Unit\n\n /**\n * Removes an element at the specified [index] from the list.\n *\n * @return the element that has been removed.\n */\n public fun removeAt(index: Int): E\n\n // List Iterators\n override fun listIterator(): MutableListIterator<E>\n\n override fun listIterator(index: Int): MutableListIterator<E>\n\n // View\n override fun subList(fromIndex: Int, toIndex: Int): MutableList<E>\n}\n\n/**\n * A generic unordered collection of elements that does not support duplicate elements.\n * Methods in this interface support only read-only access to the set;\n * read/write access is supported through the [MutableSet] interface.\n * @param E the type of elements contained in the set. The set is covariant on its element type.\n */\npublic interface Set<out E> :
Collection<E> {\n // Query Operations\n\n override val size: Int\n override fun isEmpty(): Boolean\n override fun contains(element: @UnsafeVariance E): Boolean\n override fun iterator(): Iterator<E>\n\n // Bulk Operations\n override fun containsAll(elements: Collection<@UnsafeVariance E>): Boolean\n}\n\n/**\n * A generic unordered collection of elements that does not support duplicate elements, and supports\n * adding and removing elements.\n * @param E the type of elements contained in the set. The mutable set is invariant on its element type.\n */\npublic interface MutableSet<E> : Set<E>, MutableCollection<E> {\n // Query Operations\n override fun iterator(): MutableIterator<E>\n\n // Modification Operations\n\n /**\n * Adds the specified element to the set.\n *\n * @return `true` if the element has been added, `false` if the element is already contained in the set.\n */\n override fun add(element: E): Boolean\n\n override fun remove(element: E): Boolean\n\n // Bulk Modification Operations\n\n override fun addAll(elements: Collection<E>): Boolean\n override fun removeAll(elements: Collection<E>): Boolean\n override fun retainAll(elements: Collection<E>): Boolean\n override fun clear(): Unit\n}\n\n/**\n * A collection that holds pairs of objects (keys and values) and supports efficiently retrieving\n * the value corresponding to each key. Map keys are unique; the map holds only one value for each key.\n * Methods in this interface support only read-only access to the map; read-write access is supported through\n * the [MutableMap] interface.\n * @param K the type of map keys. The map is invariant on its key type, as it\n * can accept key as a parameter (of [containsKey] for example) and return it in [keys] set.\n * @param V the type of map values. The map is covariant on its value type.\n */\npublic interface Map<K, out V> {\n // Query Operations\n /**\n * Returns the number of
key/value pairs in the map.\n */\n public val size: Int\n\n /**\n * Returns `true` if the map is empty (contains no elements), `false` otherwise.\n */\n public fun isEmpty(): Boolean\n\n /**\n * Returns `true` if the map contains the specified [key].\n */\n public fun containsKey(key: K): Boolean\n\n /**\n * Returns `true` if the map maps one or more keys to the specified [value].\n */\n public fun containsValue(value: @UnsafeVariance V): Boolean\n\n /**\n * Returns the value corresponding to the given [key], or `null` if such a key is not present in the map.\n */\n public operator fun get(key: K): V?\n\n /**\n * Returns the value

corresponding to the given [key], or [defaultValue] if such a key is not present in the map.\n *\n * @since JDK 1.8\n */\n @SinceKotlin(\"1.1\")\n @PlatformDependent\n public fun getOrDefault(key: K, defaultValue: @UnsafeVariance V): V {\n // See default implementation
in JDK sources\n return null as V\n }\n\n // Views\n /**\n * Returns a read-only [Set] of all keys in this map.\n */\n public val keys: Set<K>\n\n /**\n * Returns a read-only [Collection] of all values in this map. Note that this collection may contain duplicate values.\n */\n public val values: Collection<V>\n\n /**\n * Returns a read-only [Set] of all key/value pairs in this map.\n */\n public val entries: Set<Map.Entry<K, V>>\n\n /**\n * Represents a key/value pair held by a [Map].\n */\n public interface Entry<out K, out V> {\n /**\n * Returns the key of this key/value pair.\n */\n public val key: K\n\n /**\n * Returns the value of this key/value pair.\n */\n public val value: V\n }\n}\n\n/**\n * A modifiable collection that holds pairs of objects (keys and values) and supports efficiently retrieving\n * the value corresponding to each key. Map
keys are unique; the map holds only one value for each key.\n * @param K the type of map keys. The map is invariant on its key type.\n * @param V the type of map values. The mutable map is invariant on its value type.\n */\npublic interface MutableMap<K, V> : Map<K, V> {\n // Modification Operations\n /**\n * Associates the specified [value] with the specified [key] in the map.\n *\n * @return the previous value associated with the key, or `null` if the key was not present in the map.\n */\n public fun put(key: K, value: V): V?\n\n /**\n * Removes the specified key and its corresponding value from this map.\n *\n * @return the previous value associated with the key, or `null` if the key was not present in the map.\n */\n public fun remove(key: K): V?\n\n /**\n * Removes the entry for the specified key only if it is mapped to the specified value.\n *\n * @return true if entry was removed\n */\n @SinceKotlin(\"1.1\")\n
@PlatformDependent\n public fun remove(key: K, value: V): Boolean {\n // See default implementation in JDK sources\n return true\n }\n\n // Bulk Modification Operations\n /**\n * Updates this map with key/value pairs from the specified map [from].\n */\n public fun putAll(from: Map<out K, V>): Unit\n\n /**\n * Removes all elements from this map.\n */\n public fun clear(): Unit\n\n // Views\n /**\n * Returns a [MutableSet] of all keys in this map.\n */\n override val keys: MutableSet<K>\n\n /**\n * Returns a [MutableCollection] of all values in this map. Note that this collection may contain duplicate values.\n */\n override val values: MutableCollection<V>\n\n /**\n * Returns a [MutableSet] of all key/value pairs in this map.\n */\n override val entries: MutableSet<MutableMap.MutableEntry<K, V>>\n\n /**\n * Represents a key/value pair held by a [MutableMap].\n */\n public
interface MutableEntry<K, V> : Map.Entry<K, V> {\n /**\n * Changes the value associated with the key of this entry.\n *\n * @return the previous value corresponding to the key.\n */\n public fun setValue(newValue: V): V\n }\n}\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n// Auto-generated file. DO NOT EDIT!\n\npackage kotlin.collections\n\n/** An iterator over a sequence of values of type `Byte`. */\npublic abstract class ByteIterator : Iterator<Byte> {\n override final fun next() = nextByte()\n\n /** Returns the next value in the sequence without boxing. */\n public abstract fun nextByte(): Byte\n}\n\n/** An iterator over a sequence of values of type `Char`. */\npublic abstract class CharIterator : Iterator<Char> {\n override final fun next() = nextChar()\n\n /** Returns the next value in the sequence
without boxing. */\n public abstract fun nextChar(): Char\n}\n\n/** An iterator over a sequence of values of type `Short`. */\npublic abstract class ShortIterator : Iterator<Short> {\n override final fun next() = nextShort()\n\n /** Returns the next value in the sequence without boxing. */\n public abstract fun nextShort(): Short\n}\n\n/** An iterator over a sequence of values of type `Int`. */\npublic abstract class IntIterator : Iterator<Int> {\n override final fun next() = nextInt()\n\n /** Returns the next value in the sequence without boxing. */\n public abstract fun nextInt(): Int\n}\n\n/** An iterator over a sequence of values of type `Long`. */\npublic abstract class LongIterator : Iterator<Long> {\n override final fun next() = nextLong()\n\n /** Returns the next value in the sequence without boxing. */\n public abstract fun nextLong(): Long\n}\n\n/** An iterator over a sequence of values of type `Float`. */\npublic abstract class FloatIterator

: Iterator<Float> {\n override final fun next() = nextFloat()\n\n /** Returns the next value in the sequence without boxing. */\n public abstract fun nextFloat(): Float\n}\n\n/** An iterator over a sequence of values of type `Double`. */\npublic abstract class DoubleIterator : Iterator<Double> {\n override final fun next() = nextDouble()\n\n /** Returns the next value in the sequence without boxing. */\n public abstract fun nextDouble(): Double\n}\n\n/** An iterator over a sequence of values of type `Boolean`. */\npublic abstract class BooleanIterator : Iterator<Boolean> {\n override final fun next() = nextBoolean()\n\n /** Returns the next value in the sequence without boxing. */\n public abstract fun nextBoolean(): Boolean\n}\n\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n// Auto-generated file. DO NOT EDIT!\n\npackage kotlin.ranges\n\n/**\n * An iterator over a progression of values of type `Char`.\n * @property step the number by which the value is incremented on each step.\n */\ninternal class CharProgressionIterator(first: Char, last: Char, val step: Int) : CharIterator() {\n private val finalElement = last.toInt()\n private var hasNext: Boolean = if (step > 0) first <= last else first >= last\n private var next = if (hasNext) first.toInt() else finalElement\n\n override fun hasNext(): Boolean = hasNext\n\n override fun nextChar(): Char {\n val value = next\n if (value == finalElement) {\n if (!hasNext) throw kotlin.NoSuchElementException()\n hasNext = false\n }\n else {\n next += step\n }\n return value.toChar()\n }\n}\n\n/**\n * An iterator over a progression of values of type `Int`.\n * @property step the number by which the value is incremented on each step.\n */\ninternal class IntProgressionIterator(first:
Int, last: Int, val step: Int) : IntIterator() {\n private val finalElement = last\n private var hasNext: Boolean = if (step > 0) first <= last else first >= last\n private var next = if (hasNext) first else finalElement\n\n override fun hasNext(): Boolean = hasNext\n\n override fun nextInt(): Int {\n val value = next\n if (value == finalElement) {\n if (!hasNext) throw kotlin.NoSuchElementException()\n hasNext = false\n }\n else {\n next += step\n }\n return value\n }\n}\n\n/**\n * An iterator over a progression of values of type `Long`.\n * @property step the number by which the value is incremented on each step.\n */\ninternal class LongProgressionIterator(first: Long, last: Long, val step: Long) : LongIterator() {\n private val finalElement = last\n private var hasNext: Boolean = if (step > 0) first <= last else first >= last\n private var next = if (hasNext) first else finalElement\n\n

override fun hasNext(): Boolean = hasNext\n\n override fun nextLong(): Long {\n val value = next\n if (value == finalElement) {\n if (!hasNext) throw kotlin.NoSuchElementException()\n hasNext = false\n }\n else {\n next += step\n }\n return value\n }\n}\n\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n// Auto-generated file. DO NOT EDIT!\n\npackage kotlin.ranges\n\nimport kotlin.internal.getProgressionLastElement\n\n/**\n * A progression of values of type `Char`.\n */\npublic open class CharProgression\n internal constructor\n (\n start: Char,\n endInclusive: Char,\n step: Int\n) : Iterable<Char> {\n init {\n if (step == 0) throw kotlin.IllegalArgumentException(\"Step must be non-zero.\")\n if (step == Int.MIN_VALUE)
throw kotlin.IllegalArgumentException(\"Step must be greater than Int.MIN_VALUE to avoid overflow on negation.\")\n }\n\n /**\n * The first element in the progression.\n */\n public val first: Char = start\n\n /**\n * The last element in the progression.\n */\n public val last: Char = getProgressionLastElement(start.toInt(), endInclusive.toInt(), step).toChar()\n\n /**\n * The step of the progression.\n */\n public val step: Int = step\n\n override fun iterator(): CharIterator = CharProgressionIterator(first, last, step)\n\n /** Checks if the progression is empty. */\n public open fun isEmpty(): Boolean = if (step > 0) first > last else first < last\n\n override fun equals(other: Any?): Boolean =\n other is CharProgression && (isEmpty() && other.isEmpty() ||\n first == other.first && last == other.last && step == other.step)\n\n override fun hashCode(): Int =\n if (isEmpty()) -1 else (31 * (31 * first.toInt()
+ last.toInt()) + step)\n\n override fun toString(): String = if (step > 0) \"$first..$last step $step\" else \"$first downTo $last step ${-step}\"\n\n companion object {\n /**\n * Creates CharProgression within the specified bounds of a closed range.\n\n * The progression starts with the [rangeStart] value and goes toward the

[rangeEnd] value not excluding it, with the specified [step].\n * In order to go backwards the [step] must be negative.\n *\n * [step] must be greater than `Int.MIN_VALUE` and not equal to zero.\n */\n public fun fromClosedRange(rangeStart: Char, rangeEnd: Char, step: Int): CharProgression = CharProgression(rangeStart, rangeEnd, step)\n }\n}\n\n/**\n * A progression of values of type `Int`.\n */\npublic open class IntProgression\n internal constructor\n (\n start: Int,\n endInclusive: Int,\n step: Int\n) : Iterable<Int> {\n init {\n if (step == 0) throw kotlin.IllegalArgumentException(\"Step must be non-zero.\")\n if (step == Int.MIN_VALUE) throw kotlin.IllegalArgumentException(\"Step must be greater than Int.MIN_VALUE to avoid overflow on negation.\")\n }\n\n /**\n * The first element in the progression.\n */\n public val first: Int = start\n\n /**\n * The last element in the progression.\n */\n public val last: Int = getProgressionLastElement(start.toInt(), endInclusive.toInt(), step).toInt()\n\n /**\n * The step of the progression.\n */\n public val step: Int = step\n\n override fun iterator(): IntIterator = IntProgressionIterator(first, last, step)\n\n /** Checks if the progression is empty. */\n public open fun isEmpty(): Boolean = if (step > 0) first > last else first < last\n\n override fun equals(other: Any?): Boolean =\n other is IntProgression && (isEmpty() && other.isEmpty() ||\n first == other.first && last == other.last && step == other.step)\n\n override fun hashCode(): Int =\n if (isEmpty()) -1 else (31 * (31 * first + last) + step)\n\n override fun toString(): String = if (step > 0) \"$first..$last step $step\" else \"$first downTo $last step ${-step}\"\n\n companion object {\n /**\n * Creates IntProgression within the specified bounds of a closed range.\n\n * The progression starts with the [rangeStart] value and goes toward the [rangeEnd] value not excluding it, with the specified [step].\n * In order to go backwards the [step] must be negative.\n *\n * [step] must be greater than `Int.MIN_VALUE` and not equal to zero.\n */\n public fun fromClosedRange(rangeStart: Int, rangeEnd: Int, step: Int): IntProgression = IntProgression(rangeStart, rangeEnd, step)\n }\n}\n\n/**\n * A progression of values of type `Long`.\n */\npublic open class LongProgression\n internal constructor\n (\n start: Long,\n endInclusive: Long,\n step: Long\n) : Iterable<Long> {\n init {\n if (step == 0L) throw kotlin.IllegalArgumentException(\"Step must be non-zero.\")\n if (step == Long.MIN_VALUE) throw kotlin.IllegalArgumentException(\"Step must be greater than Long.MIN_VALUE to avoid overflow on negation.\")\n }\n\n /**\n * The first element in the progression.\n */\n public val first: Long = start\n\n /**\n * The last element in the progression.\n */\n public val last: Long = getProgressionLastElement(start.toLong(), endInclusive.toLong(), step).toLong()\n\n /**\n * The step of the progression.\n */\n public val step: Long = step\n\n override fun iterator(): LongIterator = LongProgressionIterator(first, last, step)\n\n /** Checks if the progression is empty. */\n public open fun isEmpty(): Boolean = if (step > 0) first > last else first < last\n\n override fun equals(other: Any?): Boolean =\n other is LongProgression
&& (isEmpty() && other.isEmpty() ||\n first == other.first && last == other.last && step == other.step)\n\n override fun hashCode(): Int =\n if (isEmpty()) -1 else (31 * (31 * (first xor (first ushr 32)) + (last xor (last ushr 32))) + (step xor (step ushr 32))).toInt()\n\n override fun toString(): String = if (step > 0) \"$first..$last step $step\" else \"$first downTo $last step ${-step}\"\n\n companion object {\n /**\n * Creates LongProgression within the specified bounds of a closed range.\n\n * The progression starts with the [rangeStart] value and goes toward the [rangeEnd] value not excluding it, with the specified [step].\n * In order to go backwards the [step] must be negative.\n *\n * [step] must be greater than `Long.MIN_VALUE` and not equal to zero.\n */\n public fun fromClosedRange(rangeStart: Long, rangeEnd: Long, step: Long): LongProgression = LongProgression(rangeStart, rangeEnd,
step)\n }\n}\n\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.ranges\n\n/**\n * Represents a range of values (for example, numbers or characters).\n * See the [Kotlin language documentation](https://kotlinlang.org/docs/reference/ranges.html) for more information.\n */\npublic interface ClosedRange<T: Comparable<T>> {\n /**\n * The minimum value in the range.\n */\n public val start:

T\n\n   /**\n   * The maximum value in the range (inclusive).\n   */\n   public val endInclusive: T\n\n   /**\n   * Checks whether the specified [value] belongs to the range.\n   */\n   public operator fun contains(value: T): Boolean = value >= start && value <= endInclusive\n\n   /**\n   * Checks whether the range is empty.\n   */\n   public fun isEmpty(): Boolean = start > endInclusive\n}\n","/*\n * Copyright 2010-2015 JetBrains s.r.o.\n *\n * Licensed under the Apache License, Version 2.0 (the \"License\");\n * you may not use this file except in compliance with the License.\n * You may obtain a copy of the License at\n *\n * http://www.apache.org/licenses/LICENSE-2.0\n *\n * Unless required by applicable law or agreed to in writing, software\n * distributed under the License is distributed on an \"AS IS\" BASIS,\n * WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.\n * See the License for the specific language governing permissions and\n * limitations under the License.\n */\n\npackage kotlin\n\n/**\n * The type with only one value: the `Unit` object. This type corresponds to the `void` type in Java.\n */\npublic object Unit {\n   override fun toString() = \"kotlin.Unit\"\n}\n","/*\n * Copyright 2010-2015 JetBrains s.r.o.\n *\n * Licensed under the Apache License, Version 2.0 (the \"License\");\n * you may not use this file except in compliance with the License.\n * You may obtain a copy of the License at\n *\n * http://www.apache.org/licenses/LICENSE-2.0\n *\n * Unless required by applicable law or agreed to in writing, software\n * distributed under the License is distributed on an \"AS IS\" BASIS,\n * WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.\n * See the License for the specific language governing permissions and\n * limitations under the License.\n */\n\npackage kotlin.annotation\n\nimport kotlin.annotation.AnnotationTarget.*\n\n/**\n * Contains the list of code elements which are the possible annotation targets\n */\npublic enum class AnnotationTarget {\n   /** Class, interface or object, annotation class is also included */\n   CLASS,\n   /** Annotation class only */\n   ANNOTATION_CLASS,\n   /** Generic type parameter (unsupported yet) */\n   TYPE_PARAMETER,\n   /** Property */\n   PROPERTY,\n   /** Field, including property's backing field */\n   FIELD,\n   /** Local variable */\n   LOCAL_VARIABLE,\n   /** Value parameter of a function or a constructor */\n   VALUE_PARAMETER,\n   /** Constructor only (primary or secondary) */\n   CONSTRUCTOR,\n   /** Function (constructors are not included) */\n   FUNCTION,\n   /** Property getter only */\n   PROPERTY_GETTER,\n   /** Property setter only */\n   PROPERTY_SETTER,\n   /** Type usage */\n   TYPE,\n   /** Any expression */\n   EXPRESSION,\n   /** File */\n   FILE,\n   /** Type alias */\n   @SinceKotlin(\"1.1\")\n   TYPEALIAS\n}\n\n/**\n * Contains the list of possible annotation's retentions.\n *\n * Determines how an annotation is stored in binary output.\n */\npublic enum class AnnotationRetention {\n   /** Annotation isn't stored in binary output */\n   SOURCE,\n   /** Annotation is stored in binary output, but invisible for reflection */\n   BINARY,\n   /** Annotation is stored in binary output and visible for reflection (default retention) */\n   RUNTIME\n}\n\n/**\n * This meta-annotation indicates the kinds of code elements which are possible targets of an annotation.\n *\n * If the target meta-annotation is not present on an annotation declaration, the annotation is applicable to the following elements:\n * [CLASS], [PROPERTY], [FIELD], [LOCAL_VARIABLE], [VALUE_PARAMETER], [CONSTRUCTOR], [FUNCTION], [PROPERTY_GETTER], [PROPERTY_SETTER].\n *\n * @property allowedTargets list of allowed annotation targets\n */\n@Target(AnnotationTarget.ANNOTATION_CLASS)\n@MustBeDocumented\npublic annotation class Target(vararg val allowedTargets: AnnotationTarget)\n\n/**\n * This meta-annotation determines whether an annotation is stored in binary output and visible for reflection. By default, both are true.\n *\n * @property value necessary annotation retention (RUNTIME, BINARY or SOURCE)\n */\n@Target(AnnotationTarget.ANNOTATION_CLASS)\npublic annotation class Retention(val value: AnnotationRetention = AnnotationRetention.RUNTIME)\n\n/**\n * This meta-annotation determines that an annotation is applicable twice or more on a single code element\n */\n@Target(AnnotationTarget.ANNOTATION_CLASS)\npublic annotation class Repeatable\n\n/**\n * This meta-annotation determines that an annotation is a part of public API and therefore should be included in the generated\n * documentation for the element to which the annotation is applied.\n

/\n@Target(AnnotationTarget.ANNOTATION_CLASS)\npublic annotation class MustBeDocumented\n","/\n * Copyright 2010-2016 JetBrains s.r.o.\n *\n * Licensed under the Apache License, Version 2.0 (the \"License\");\n * you may not use this file except in compliance with the License.\n * You may obtain a copy of the License at\n *\n * http://www.apache.org/licenses/LICENSE-2.0\n *\n * Unless required by applicable law or agreed to in writing, software\n * distributed under the License is distributed on an \"AS IS\" BASIS,\n * WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.\n * See the License for the specific language governing permissions and\n *
limitations under the License.\n */\n\npackage kotlin.internal\n\n/**\n * Specifies that the corresponding type parameter is not used for unsafe operations such as casts or 'is' checks\n * That means it's completely safe to use generic types as argument for such parameter.\n
*/\n@Target(AnnotationTarget.TYPE_PARAMETER)\n@Retention(AnnotationRetention.BINARY)\ninternal annotation class PureReifiable\n\n/**\n * Specifies that the corresponding built-in method exists depending on platform.\n * Current implementation for JVM looks whether method with same JVM descriptor exists in the module JDK.\n * For example MutableMap.remove(K, V) available only if corresponding\n * method 'java/util/Map.remove(Ljava/lang/Object;Ljava/lang/Object;)Z' is defined in JDK (i.e. for major versions >= 8)\n */\n@Target(AnnotationTarget.FUNCTION)\n@Retention(AnnotationRetention.BINARY)\ninternal annotation class PlatformDependent\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed
by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.internal\n\n// a mod b (in arithmetical sense)\nprivate fun mod(a: Int, b: Int): Int {\n   val mod = a % b\n   return if (mod >= 0) mod else mod + b\n}\n\nprivate fun mod(a: Long, b: Long): Long {\n   val mod = a % b\n   return if (mod >= 0) mod else mod + b\n}\n\n// (a - b) mod c\nprivate fun differenceModulo(a: Int, b: Int, c: Int): Int {\n   return mod(mod(a, c) - mod(b, c), c)\n}\n\nprivate fun differenceModulo(a: Long, b: Long, c: Long): Long {\n   return mod(mod(a, c) - mod(b, c), c)\n}\n\n/**\n * Calculates the final element of a bounded arithmetic progression, i.e. the last element of the progression which is in the range\n * from [start] to [end] in case of a positive [step], or from [end] to [start] in case of a negative\n * [step].\n *\n * No validation on passed parameters is performed. The given parameters should satisfy the condition:\n *\n * - either `step >
0` and `start <= end`,\n * - or `step < 0` and `start >= end`.\n *\n * @param start first element of the progression\n * @param end ending bound for the progression\n * @param step increment, or difference of successive elements in the progression\n * @return the final element of the progression\n * @suppress\n */\n@PublishedApi\ninternal fun getProgressionLastElement(start: Int, end: Int, step: Int): Int = when {\n   step > 0 -> if (start >= end) end else end - differenceModulo(end, start, step)\n   step < 0 -> if (start <= end) end else end + differenceModulo(start, end, -step)\n   else -> throw kotlin.IllegalArgumentException(\"Step is zero.\")\n}\n\n/**\n * Calculates the final element of a bounded arithmetic progression, i.e. the last element of the progression which is in the range\n * from [start] to [end] in case of a positive [step], or from [end] to [start] in case of a negative\n * [step].\n *\n * No validation on passed parameters is performed. The given parameters should
satisfy the condition:\n *\n * - either `step > 0` and `start <= end`,\n * - or `step < 0` and `start >= end`.\n *\n * @param start first element of the progression\n * @param end ending bound for the progression\n * @param step increment, or difference of successive elements in the progression\n * @return the final element of the progression\n * @suppress\n */\n@PublishedApi\ninternal fun getProgressionLastElement(start: Long, end: Long, step: Long): Long = when {\n   step > 0 -> if (start >= end) end else end - differenceModulo(end, start, step)\n   step < 0 -> if (start <= end) end else end + differenceModulo(start, end, -step)\n   else -> throw kotlin.IllegalArgumentException(\"Step is zero.\")\n}\n","/*\n * Copyright 2010-2015 JetBrains s.r.o.\n *\n * Licensed under the Apache License, Version 2.0 (the \"License\");\n * you may not use this file except in compliance with the License.\n * You may obtain a copy of the License at\n *\n * http://www.apache.org/licenses/LICENSE-2.0\n
*\n * Unless required by applicable law or agreed to in writing, software\n * distributed under the License is distributed on an \"AS IS\" BASIS,\n * WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.\n * See the License for the specific language governing permissions and\n * limitations under

the License.\n */\n\npackage kotlin.reflect\n\n/**\n * Represents a parameter passed to a function or a property getter/setter,\n * including `this` and extension receiver parameters.\n */\npublic interface KParameter : KAnnotatedElement {\n /**\n * 0-based index of this parameter in the parameter list of its containing callable.\n */\n public val index: Int\n\n /**\n * Name of this parameter as it was declared in the source code,\n * or `null` if the parameter has no name or its name is not available at runtime.\n * Examples of nameless parameters include `this` instance for member functions,\n * extension receiver for extension functions
or properties, parameters of Java methods\n * compiled without the debug information, and others.\n */\n public val name: String?\n\n /**\n * Type of this parameter. For a `vararg` parameter, this is the type of the corresponding array,\n * not the individual element.\n */\n public val type: KType\n\n /**\n * Kind of this parameter.\n */\n public val kind: Kind\n\n /**\n * Kind represents a particular position of the parameter declaration in the source code,\n * such as an instance, an extension receiver parameter or a value parameter.\n */\n public enum class Kind {\n /** Instance required to make a call to the member, or an outer class instance for an inner class constructor. */\n INSTANCE,\n\n /** Extension receiver of an extension function or property. */\n EXTENSION_RECEIVER,\n\n /** Ordinary named value parameter. */\n VALUE,\n }\n\n /**\n * `true` if this parameter
is optional and can be omitted when making a call via [KCallable.callBy], or `false` otherwise.\n *\n * A parameter is optional in any of the two cases:\n * 1. The default value is provided at the declaration of this parameter.\n * 2. The parameter is declared in a member function and one of the corresponding parameters in the super functions is optional.\n */\n public val isOptional: Boolean\n\n /**\n * `true` if this parameter is `vararg`.\n * See the [Kotlin language documentation](https://kotlinlang.org/docs/reference/functions.html#variable-number-of-arguments-varargs)\n * for more information.\n */\n @SinceKotlin(\"1.1\")\n public val isVararg: Boolean\n}\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.reflect\n\n/**\n * Represents a type. Type is usually either a class with optional type arguments,\n
* or a type parameter of some declaration, plus nullability.\n */\npublic interface KType : KAnnotatedElement {\n /**\n * The declaration of the classifier used in this type.\n * For example, in the type `List<String>` the classifier would be the [KClass] instance for [List].\n *\n * Returns `null` if this type is not denotable in Kotlin, for example if it is an intersection type.\n */\n @SinceKotlin(\"1.1\")\n public val classifier: KClassifier?\n\n /**\n * Type arguments passed for the parameters of the classifier in this type.\n * For example, in the type `Array<out Number>` the only type argument is `out Number`.\n *\n * In case this type is based on an inner class, the returned list contains the type arguments provided for the innermost class first,\n * then its outer class, and so on.\n * For example, in the type `Outer<A, B>.Inner<C, D>` the returned list is `[C, D, A, B]`.\n */\n @SinceKotlin(\"1.1\")\n public
val arguments: List<KTypeProjection>\n\n /**\n * `true` if this type was marked nullable in the source code.\n *\n * For Kotlin types, it means that `null` value is allowed to be represented by this type.\n * In practice it means that the type was declared with a question mark at the end.\n * For non-Kotlin types, it means the type or the symbol which was declared with this type\n * is annotated with a runtime-retained nullability annotation such as [javax.annotation.Nullable].\n *\n * Note that even if [isMarkedNullable] is false, values of the type can still be `null`.\n * This may happen if it is a type of the type parameter with a nullable upper bound:\n *\n * ```\n * fun <T> foo(t: T) {\n * // isMarkedNullable == false for t's type, but t can be null here when T = \"Any?\"\n * }\n * ```\n */\n public val isMarkedNullable: Boolean\n}\n\n/**\n * Represents a type projection. Type projection is usually the
argument to another type in a type usage.\n * For example, in the type `Array<out Number>`, `out Number` is the covariant projection of the type represented by the class `Number`.\n *\n * Type projection is either the star projection, or an entity consisting of a specific type plus optional variance.\n *\n * See the [Kotlin language documentation](https://kotlinlang.org/docs/reference/generics.html#type-projections)\n * for more information.\n */\n@SinceKotlin(\"1.1\")\npublic data class KTypeProjection constructor(\n /**\n * The use-site variance

specified in the projection, or `null` if this is a star projection.\n */\n public val variance: KVariance?,\n /**\n * The type specified in the projection, or `null` if this is a star projection.\n */\n public val type: KType?\n) {\n public companion object {\n /**\n * Star projection, denoted by the `*` character.\n * For example, in the type `KClass<*>`,
`*` is the star projection.\n * See the [Kotlin language documentation](https://kotlinlang.org/docs/reference/generics.html#star-projections)\n * for more information.\n */\n public val STAR: KTypeProjection = KTypeProjection(null, null)\n\n /**\n * Creates an invariant projection of a given type. Invariant projection is just the type itself,\n * without any use-site variance modifiers applied to it.\n * For example, in the type `Set<String>`, `String` is an invariant projection of the type represented by the class `String`.\n */\n public fun invariant(type: KType): KTypeProjection =\n KTypeProjection(KVariance.INVARIANT, type)\n\n /**\n * Creates a contravariant projection of a given type, denoted by the `in` modifier applied to a type.\n * For example, in the type `MutableList<in Number>`, `in Number` is a contravariant projection of the type of class `Number`.\n */\n public fun contravariant(type: KType): KTypeProjection =\n KTypeProjection(KVariance.IN, type)\n\n /**\n * Creates a covariant projection of a given type, denoted by the `out` modifier applied to a type.\n * For example, in the type `Array<out Number>`, `out Number` is a covariant projection of the type of class `Number`.\n */\n public fun covariant(type: KType): KTypeProjection =\n KTypeProjection(KVariance.OUT, type)\n }\n}\n","/*\n * Copyright 2010-2016 JetBrains s.r.o.\n *\n * Licensed under the Apache License, Version 2.0 (the \"License\");\n * you may not use this file except in compliance with the License.\n * You may obtain a copy of the License at\n *\n * http://www.apache.org/licenses/LICENSE-2.0\n *\n * Unless required by applicable law or agreed to in writing, software\n * distributed under the License is distributed on an \"AS IS\" BASIS,\n * WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.\n * See the License for the specific language governing permissions and\n * limitations under the License.\n */\n\npackage kotlin.reflect\n\n/**\n * Represents variance applied to a type parameter on the declaration site (*declaration-site variance*),\n * or to a type in a projection (*use-site variance*).\n *\n * See the [Kotlin language documentation](https://kotlinlang.org/docs/reference/generics.html#variance)\n * for more information.\n *\n * @see [KTypeParameter.variance]\n * @see [KTypeProjection]\n */\n@SinceKotlin(\"1.1\")\nenum class KVariance {\n /**\n * The affected type parameter or type is *invariant*, which means it has no variance applied to it.\n */\n INVARIANT,\n\n /**\n * The affected type parameter or type is *contravariant*. Denoted by the `in` modifier in the source code.\n */\n IN,\n\n /**\n * The affected type parameter or type is *covariant*. Denoted by the `out` modifier in the source code.\n */\n OUT,\n}\n","/*\n * Copyright 2010-2016 JetBrains s.r.o.\n *\n * Licensed under the Apache License, Version 2.0 (the \"License\");\n * you may not use this file except in compliance with the License.\n * You may obtain a copy of the License at\n *\n * http://www.apache.org/licenses/LICENSE-2.0\n *\n * Unless required by applicable law or agreed to in writing, software\n * distributed under the License is distributed on an \"AS IS\" BASIS,\n * WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.\n * See the License for the specific language governing permissions and\n * limitations under the License.\n */\n\npackage kotlin.reflect\n\n/**\n * Visibility is an aspect of a Kotlin declaration regulating where that declaration is accessible in the source code.\n * Visibility can be changed with one of the following modifiers: `public`, `protected`, `internal`, `private`.\n *\n * Note that some Java visibilities such as package-private and protected (which also gives access
to items from the same package)\n * cannot be represented in Kotlin, so there's no [KVisibility] value corresponding to them.\n *\n * See the [Kotlin language documentation](https://kotlinlang.org/docs/reference/visibility-modifiers.html)\n * for more information.\n */\n@SinceKotlin(\"1.1\")\nenum class KVisibility {\n /**\n * Visibility of declarations marked with the `public` modifier, or with no modifier at all.\n */\n PUBLIC,\n\n /**\n * Visibility of declarations marked with the `protected` modifier.\n */\n PROTECTED,\n\n /**\n * Visibility of declarations marked with the `internal` modifier.\n */\n INTERNAL,\n\n /**\n * Visibility of declarations marked with the `private`

modifier.\n */\n PRIVATE,\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n@JsName(\"arrayIterator\")\ninternal fun arrayIterator(array: dynamic, type: String?) = when (type) {\n null -> {\n val arr: Array<dynamic> = array\n object : Iterator<dynamic> {\n var index = 0\n override fun hasNext() = index < arr.size\n override fun next() = if (index < arr.size) arr[index++] else throw NoSuchElementException(\"$index\")\n }\n }\n \"BooleanArray\" -> booleanArrayIterator(array)\n \"ByteArray\" -> byteArrayIterator(array)\n \"ShortArray\" -> shortArrayIterator(array)\n \"CharArray\" -> charArrayIterator(array)\n \"IntArray\" -> intArrayIterator(array)\n \"LongArray\" -> longArrayIterator(array)\n \"FloatArray\" -> floatArrayIterator(array)\n \"DoubleArray\" -> doubleArrayIterator(array)\n else -> throw IllegalStateException(\"Unsupported type argument for arrayIterator: $type\")\n}\n\n@JsName(\"booleanArrayIterator\")\ninternal fun booleanArrayIterator(array: BooleanArray) = object : BooleanIterator() {\n var index = 0\n override fun hasNext() = index < array.size\n override fun nextBoolean() = if (index < array.size) array[index++] else throw NoSuchElementException(\"$index\")\n}\n\n@JsName(\"byteArrayIterator\")\ninternal fun byteArrayIterator(array: ByteArray) = object : ByteIterator() {\n var index = 0\n override fun hasNext() = index < array.size\n override fun nextByte() = if (index < array.size) array[index++] else throw NoSuchElementException(\"$index\")\n}\n\n@JsName(\"shortArrayIterator\")\ninternal fun shortArrayIterator(array: ShortArray) = object : ShortIterator() {\n var index = 0\n override fun hasNext() = index < array.size\n override fun nextShort() = if (index < array.size) array[index++] else throw NoSuchElementException(\"$index\")\n}\n\n@JsName(\"charArrayIterator\")\ninternal fun charArrayIterator(array: CharArray) = object : CharIterator() {\n var index = 0\n override fun hasNext() = index < array.size\n override fun nextChar() = if (index < array.size) array[index++] else throw NoSuchElementException(\"$index\")\n}\n\n@JsName(\"intArrayIterator\")\ninternal fun intArrayIterator(array: IntArray) = object : IntIterator() {\n var index = 0\n override fun hasNext() = index < array.size\n override fun nextInt() = if (index < array.size) array[index++] else throw NoSuchElementException(\"$index\")\n}\n\n@JsName(\"floatArrayIterator\")\ninternal fun floatArrayIterator(array: FloatArray) = object : FloatIterator() {\n var index = 0\n override fun hasNext() = index < array.size\n override fun nextFloat() = if (index < array.size) array[index++] else throw NoSuchElementException(\"$index\")\n}\n\n@JsName(\"doubleArrayIterator\")\ninternal fun doubleArrayIterator(array: DoubleArray) = object : DoubleIterator() {\n var index = 0\n override fun hasNext() = index < array.size\n override fun nextDouble() = if (index < array.size) array[index++] else throw NoSuchElementException(\"$index\")\n}\n\n@JsName(\"longArrayIterator\")\ninternal fun longArrayIterator(array: LongArray) = object : LongIterator() {\n var index = 0\n override fun hasNext() = index < array.size\n override fun nextLong() = if (index < array.size) array[index++] else throw NoSuchElementException(\"$index\")\n}\n\n@JsName(\"PropertyMetadata\")\ninternal class PropertyMetadata(@JsName(\"callableName\") val name: String)\n\n@JsName(\"noWhenBranchMatched\")\ninternal fun noWhenBranchMatched(): Nothing = throw NoWhenBranchMatchedException()\n\n@JsName(\"subSequence\")\ninternal fun subSequence(c: CharSequence, startIndex: Int, endIndex: Int): CharSequence {\n if (c is String) {\n return c.substring(startIndex, endIndex)\n } else {\n return c.asDynamic().`subSequence_vux9f0$`(startIndex, endIndex)\n }\n}\n\n@JsName(\"captureStack\")\ninternal fun captureStack(baseClass: JsClass<in Throwable>, instance: Throwable) {\n if (js(\"Error\").captureStackTrace) {\n js(\"Error\").captureStackTrace(instance, instance::class.js);\n } else {\n instance.asDynamic().stack = js(\"new Error()\").stack;\n }\n}\n\n@JsName(\"newThrowable\")\ninternal fun newThrowable(message: String?, cause: Throwable?): Throwable {\n val throwable = js(\"new Error()\")\n throwable.message = if (jsTypeOf(message) == \"undefined\") {\n if (cause != null) cause.toString() else null\n } else {\n message\n }\n throwable.cause = cause\n throwable.name = \"Throwable\"\n return

throwable\n}\n\n@JsName(\"BoxedChar\")\ninternal class BoxedChar(val c: Int) : Comparable<Int> {\n override fun equals(other: Any?): Boolean {\n return other is BoxedChar && c == other.c\n }\n\n override fun hashCode(): Int {\n return c\n }\n\n override fun toString(): String {\n return js(\"this.c\").unsafeCast<Char>().toString()\n }\n\n override fun compareTo(other: Int): Int {\n return js(\"this.c - other\").unsafeCast<Int>()\n }\n\n @JsName(\"valueOf\")\n public fun valueOf(): Int {\n return c\n }\n}\n\n@kotlin.internal.InlineOnly\ninternal inline fun <T> concat(args: Array<T>): T {\n val typed = js(\"Array\")(args.size)\n for (i in args.indices) {\n val arr = args[i]\n if (arr !is Array<*>) {\n typed[i] = js(\"[]\").slice.call(arr)\n } else {\n typed[i] = arr\n }\n }\n return js(\"[]\").concat.apply(js(\"[]\"), typed);\n}\n\n/** Concat regular Array's and TypedArray's into an Array.\n */\n@PublishedApi\n@JsName(\"arrayConcat\")\n@Suppress(\"UNUSED_PARAMETER\")\ninternal fun <T> arrayConcat(a: T, b: T): T {\n return concat(js(\"arguments\"))\n}\n\n/** Concat primitive arrays. Main use: prepare vararg arguments.\n * For compatibility with 1.1.0 the arguments may be a mixture of Array's and TypedArray's.\n *\n * If the first argument is TypedArray (Byte-, Short-, Char-, Int-, Float-, and DoubleArray) returns a TypedArray, otherwise an Array.\n *\n * If the first argument has the $type$ property (Boolean-, Char-, and LongArray) copy its value to result.$type$.\n * If the first argument is a regular Array without the $type$ property default to arrayConcat.\n */\n@PublishedApi\n@JsName(\"primitiveArrayConcat\")\n@Suppress(\"UNUSED_PARAMETER\")\ninternal fun <T> primitiveArrayConcat(a: T, b: T): T {\n val args: Array<T> = js(\"arguments\")\n if (a is Array<*> && a.asDynamic().`$type$` === undefined) {\n return concat(args)\n } else {\n var size = 0\n for (i in args.indices) {\n size += args[i].asDynamic().length as Int\n }\n val result = js(\"new a.constructor(size)\")\n kotlin.copyArrayType(a, result)\n size = 0\n for (i in args.indices) {\n val arr = args[i].asDynamic()\n for (j in 0 until arr.length) {\n result[size++] = arr[j]\n }\n }\n return result\n }\n}\n\n@JsName(\"booleanArrayOf\")\ninternal fun booleanArrayOf() = withType(\"BooleanArray\", js(\"[].slice.call(arguments)\"))\n\n@JsName(\"charArrayOf\") // The arguments have to be slice'd here because of Rhino (see KT-16974)\ninternal fun charArrayOf() = withType(\"CharArray\", js(\"new Uint16Array([].slice.call(arguments))\"))\n\n@JsName(\"longArrayOf\")\ninternal fun longArrayOf() = withType(\"LongArray\", js(\"[].slice.call(arguments)\"))\n\n@JsName(\"withType\")\n@kotlin.internal.InlineOnly\ninternal inline fun withType(type: String, array: dynamic): dynamic {\n array.`$type$` = type\n return array\n}","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\n//\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n//\n\nimport kotlin.js.*\n\n/**\n * Reverses elements in the list in-place.\n */\npublic actual fun <T> MutableList<T>.reverse(): Unit {\n val midPoint = (size / 2) - 1\n if (midPoint < 0) return\n var reverseIndex = lastIndex\n for (index in 0..midPoint) {\n val tmp = this[index]\n this[index] = this[reverseIndex]\n this[reverseIndex] = tmp\n reverseIndex--\n }\n}\n\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.text\n\n//\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n//\n\nimport kotlin.js.*\n\n/**\n * Returns a character at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this char sequence.\n *\n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic actual fun CharSequence.elementAt(index: Int): Char {\n return elementAtOrElse(index) { throw IndexOutOfBoundsException(\"index: $index, length: $length}\") }\n}\n\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license

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\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\n//\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n//\n\nimport kotlin.js.*\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic actual fun UIntArray.elementAt(index: Int): UInt {\n    return elementAtOrElse(index) { throw IndexOutOfBoundsException(\"index: $index, size: $size}\") }\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic actual fun ULongArray.elementAt(index: Int): ULong {\n    return elementAtOrElse(index) { throw IndexOutOfBoundsException(\"index: $index, size: $size}\") }\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic actual fun UByteArray.elementAt(index: Int): UByte {\n    return elementAtOrElse(index) { throw IndexOutOfBoundsException(\"index: $index, size: $size}\") }\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n * @sample samples.collections.Collections.Elements.elementAt\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic actual fun UShortArray.elementAt(index: Int): UShort {\n    return elementAtOrElse(index) { throw IndexOutOfBoundsException(\"index: $index, size: $size}\") }\n}\n\n/**\n * Returns a [List] that wraps the original array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic actual fun UIntArray.asList(): List<UInt> {\n    return object : AbstractList<UInt>(), RandomAccess {\n        override val size: Int get() = this@asList.size\n        override fun isEmpty(): Boolean = this@asList.isEmpty()\n        override fun contains(element: UInt): Boolean = this@asList.contains(element)\n        override fun get(index: Int): UInt {\n            AbstractList.checkElementIndex(index, size)\n            return this@asList[index]\n        }\n        override fun indexOf(element: UInt): Int {\n            if ((element as Any?) !is UInt) return -1\n            return this@asList.indexOf(element)\n        }\n        override fun lastIndexOf(element: UInt): Int {\n            if ((element as Any?) !is UInt) return -1\n            return this@asList.lastIndexOf(element)\n        }\n    }\n}\n\n/**\n * Returns a [List] that wraps the original array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic actual fun ULongArray.asList(): List<ULong> {\n    return object : AbstractList<ULong>(), RandomAccess {\n        override val size: Int get() = this@asList.size\n        override fun isEmpty(): Boolean = this@asList.isEmpty()\n        override fun contains(element: ULong): Boolean = this@asList.contains(element)\n        override fun get(index: Int): ULong {\n            AbstractList.checkElementIndex(index, size)\n            return this@asList[index]\n        }\n        override fun indexOf(element: ULong): Int {\n            if ((element as Any?) !is ULong) return -1\n            return this@asList.indexOf(element)\n        }\n        override fun lastIndexOf(element: ULong): Int {\n            if ((element as Any?) !is ULong) return -1\n            return this@asList.lastIndexOf(element)\n        }\n    }\n}\n\n/**\n * Returns a [List] that wraps the original array.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic actual fun UByteArray.asList(): List<UByte> {\n    return object : AbstractList<UByte>(), RandomAccess {\n        override val size: Int get() = this@asList.size\n        override fun isEmpty(): Boolean = this@asList.isEmpty()\n        override fun contains(element: UByte): Boolean = this@asList.contains(element)\n        override fun get(index: Int): UByte {\n            AbstractList.checkElementIndex(index, size)\n            return this@asList[index]\n        }\n        override fun indexOf(element: UByte): Int {\n            if ((element as Any?) !is UByte) return -1\n            return this@asList.indexOf(element)\n        }\n        override fun lastIndexOf(element: UByte): Int {\n            if ((element as Any?) !is UByte) return -1\n            return this@asList.lastIndexOf(element)\n
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    }\n    }\n}\n\n/**\n * Returns a [List] that wraps the original array.\n
*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic actual fun UShortArray.asList(): List<UShort>
{\n    return object : AbstractList<UShort>(), RandomAccess {\n        override val size: Int get() = this@asList.size\n
    override fun isEmpty(): Boolean = this@asList.isEmpty()\n        override fun contains(element: UShort):
Boolean = this@asList.contains(element)\n        override fun get(index: Int): UShort {\n
AbstractList.checkElementIndex(index, size)\n            return this@asList[index]\n        }\n        override fun
indexOf(element: UShort): Int {\n            if ((element as Any?) !is UShort) return -1\n            return
this@asList.indexOf(element)\n        }\n        override fun lastIndexOf(element: UShort): Int {\n            if ((element
as Any?) !is UShort) return -1\n            return this@asList.lastIndexOf(element)\n        }\n    }\n}\n\n","@file:
 Suppress(\"DEPRECATION\")\npackage jquery.ui\n\n\n//jquery UI\nimport jquery.JQuery\nimport
kotlin.js.Json\n\n@Deprecated(\"Use declarations from 'https://bintray.com/kotlin/js-externals/kotlin-js-jquery'
package instead.\")\npublic inline fun JQuery.buttonset(): JQuery = asDynamic().buttonset()\n\n@Deprecated(\"Use
declarations from 'https://bintray.com/kotlin/js-externals/kotlin-js-jquery' package instead.\")\npublic inline fun
JQuery.dialog(): JQuery = asDynamic().dialog()\n\n@Deprecated(\"Use declarations from
'https://bintray.com/kotlin/js-externals/kotlin-js-jquery' package instead.\")\npublic inline fun JQuery.dialog(params:
Json): JQuery = asDynamic().dialog(params)\n\n@Deprecated(\"Use declarations from
'https://bintray.com/kotlin/js-externals/kotlin-js-jquery' package instead.\")\npublic inline fun JQuery.dialog(mode:
String, param: String): Any? = asDynamic().dialog(mode, param)\n\n@Deprecated(\"Use declarations from
'https://bintray.com/kotlin/js-externals/kotlin-js-jquery'
 package instead.\")\npublic inline fun JQuery.dialog(mode: String): JQuery =
asDynamic().dialog(mode)\n\n@Deprecated(\"Use declarations from 'https://bintray.com/kotlin/js-externals/kotlin-
js-jquery' package instead.\")\npublic inline fun JQuery.dialog(mode: String, param: String, value: Any?): JQuery =
asDynamic().dialog(mode, param, value)\n\n@Deprecated(\"Use declarations from 'https://bintray.com/kotlin/js-
externals/kotlin-js-jquery' package instead.\")\npublic inline fun JQuery.button(): JQuery =
asDynamic().button()\n\n@Deprecated(\"Use declarations from 'https://bintray.com/kotlin/js-externals/kotlin-js-
jquery' package instead.\")\npublic inline fun JQuery.accordion(): JQuery =
asDynamic().accordion()\n\n@Deprecated(\"Use declarations from 'https://bintray.com/kotlin/js-externals/kotlin-js-
jquery' package instead.\")\npublic inline fun JQuery.draggable(params: Json): JQuery =
asDynamic().draggable(params)\n\n@Deprecated(\"Use declarations from 'https://bintray.com/kotlin/js-
externals/kotlin-js-jquery'
 package instead.\")\npublic inline fun JQuery.selectable(): JQuery = asDynamic().selectable()\n","/*\n * Copyright
2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the
license/LICENSE.txt file.\n */\n\npackage kotlin.js\n\nimport
kotlin.annotation.AnnotationTarget.*\n\n@Target(CLASS, FUNCTION, PROPERTY, CONSTRUCTOR,
VALUE_PARAMETER, PROPERTY_GETTER, PROPERTY_SETTER)\n@Deprecated(\"Use `external` modifier
instead\", level = DeprecationLevel.ERROR)\npublic annotation class native(public val name: String =
\"\")\n\n@Target(FUNCTION)\n@Deprecated(\"Use inline extension function with body using dynamic\")\npublic
annotation class nativeGetter\n\n@Target(FUNCTION)\n@Deprecated(\"Use inline extension function with body
using dynamic\")\npublic annotation class nativeSetter\n\n@Target(FUNCTION)\n@Deprecated(\"Use inline
extension function with body using dynamic\")\npublic annotation class
 nativeInvoke\n\n@Target(CLASS, FUNCTION, PROPERTY)\ninternal annotation class library(public val name:
String = \"\")\n\n@Target(CLASS)\ninternal annotation class marker\n\n/**\n * Gives a declaration (a function, a
property or a class) specific name in JavaScript.\n *\n * This may be useful in the following cases:\n *\n *   * There
are two functions for which the compiler gives same name in JavaScript, you can\n *     mark one with
`@JsName(...)` to prevent the compiler from reporting error.\n *   * You are writing a JavaScript library in Kotlin.
The compiler produces mangled names\n *     for functions with parameters, which is unnatural for usual JavaScript
developer.\n *     You can put `@JsName(...)` on functions you want to be available from JavaScript.\n *   * For
some reason you want to rename declaration, e.g. there's common term in JavaScript\n *     for a concept provided
```

by the declaration, which in uncommon in Kotlin.\n *\n * Example:\n *\n * ``` kotlin\n * class Person(val name: String) {\n * fun hello() {\n * println(\"Hello $name!\")\n * }\n *\n * @JsName(\"helloWithGreeting\")\n * fun hello(greeting: String) {\n * println(\"$greeting $name!\")\n * }\n * }\n * ```\n *\n * @property name the name which compiler uses both for declaration itself and for all references to the declaration.\n * It's required to denote a valid JavaScript identifier.\n *\n */\n@Retention(AnnotationRetention.BINARY)\n@Target(CLASS, FUNCTION, PROPERTY, CONSTRUCTOR, PROPERTY_GETTER, PROPERTY_SETTER)\npublic actual annotation class JsName(actual val name: String)\n\n/**\n * Denotes an `external` declaration that must be imported from native JavaScript library.\n *\n * The compiler produces the code relevant for the target module system, for example, in case of CommonJS,\n * it will import the declaration via the `require(...)` function.\n *\n * The annotation can be used on top-level external declarations (classes, properties, functions) and files.\n * In case of file (which can't be `external`) the following rule applies: all the declarations in\n * the file must be `external`. By applying `@JsModule(...)` on a file you tell the compiler to import a JavaScript object\n * that contain all the declarations from the file.\n *\n * Example:\n *\n * ``` kotlin\n * @JsModule(\"jquery\")\n * external abstract class JQuery() {\n * // some declarations here\n * }\n *\n * @JsModule(\"jquery\")\n * external fun JQuery(element: Element): JQuery\n * ```\n *\n * @property import name of a module to import declaration from.\n * It is not interpreted by the Kotlin compiler, it's passed as is directly to the target module system.\n *\n * @see JsNonModule\n */\n@Retention(AnnotationRetention.BINARY)\n@Target(CLASS, PROPERTY, FUNCTION, FILE)\npublic annotation class JsModule(val import: String)\n\n/**\n * Denotes an `external` declaration that can be used without module system.\n *\n * By default, an `external` declaration is available regardless your target module system.\n * However, by applying [JsModule] annotation you can make a declaration unavailable to *plain* module system.\n * Some JavaScript libraries are distributed both as a standalone downloadable piece of JavaScript and as a module available\n * as an npm package.\n * To tell the Kotlin compiler to accept both cases, you can augment [JsModule] with the `@JsNonModule` annotation.\n *\n * For example:\n *\n * ``` kotlin\n * @JsModule(\"jquery\")\n * @JsNonModule\n * @JsName(\"$\")\n * external abstract class JQuery() {\n * // some declarations here\n * }\n *\n * @JsModule(\"jquery\")\n * @JsNonModule\n * @JsName(\"$\")\n * external fun JQuery(element: Element): JQuery\n * ```\n *\n * @see JsModule\n */\n@Retention(AnnotationRetention.BINARY)\n@Target(CLASS, PROPERTY, FUNCTION, FILE)\npublic annotation class JsNonModule\n\n/**\n * Adds prefix to `external` declarations in a source file.\n *\n * JavaScript does not have concept of packages (namespaces). They are usually emulated by nested objects.\n * The compiler turns references to `external` declarations either to plain unprefixed names (in case of *plain* modules)\n * or to plain imports.\n * However, if a JavaScript library provides its declarations in packages, you won't be satisfied with this.\n * You can tell the compiler to generate additional prefix before references to `external` declarations using the `@JsQualifier(...)`\n * annotation.\n *\n * Note that a file marked with the `@JsQualifier(...)` annotation can't contain non-`external` declarations.\n *\n * Example:\n *\n * ```\n * @file:JsQualifier(\"my.jsPackageName\")\n * package some.kotlinPackage\n *\n * external fun foo(x: Int)\n *\n * external fun bar(): String\n * ```\n *\n * @property value the qualifier to add to the declarations in the generated code.\n * It must be a sequence of valid JavaScript identifiers separated by the `.` character.\n * Examples of valid qualifiers are: `foo`, `bar.Baz`, `_.$0.f`.\n *\n * @see JsModule\n */\n@Retention(AnnotationRetention.BINARY)\n@Target(AnnotationTarget.FILE)\npublic annotation class JsQualifier(val value: String)","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.jvm\n\n// these are used in common generated code in stdlib\n\n// TODO: find how to deprecate these ones\n\n@Target(AnnotationTarget.FIELD)\n@Retention(AnnotationRetention.SOURCE)\npublic actual annotation class Volatile\n\n@Target(AnnotationTarget.FUNCTION, AnnotationTarget.PROPERTY_GETTER, AnnotationTarget.PROPERTY_SETTER)\n@Retention(AnnotationRetention.SOURCE)\npublic actual annotation class Synchronized\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the

Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.js\n\n/**\n * Function corresponding
 to JavaScript's `typeof` operator\n
/\n@kotlin.internal.InlineOnly\n@Suppress(\"UNUSED_PARAMETER\")\npublic inline fun jsTypeOf(a: Any?): String = js(\"typeof a\")\n","/\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n
*/\n\n@file:Suppress(\"UNUSED_PARAMETER\", \"NOTHING_TO_INLINE\")\n\npackage kotlin\n\n/**\n * Returns an empty array of the specified type [T].\n */\npublic inline fun <T> emptyArray(): Array<T> = js(\"[]\")\n\n@library\npublic fun <T> arrayOf(vararg elements: T): Array<T> = definedExternally\n\n@library\npublic fun doubleArrayOf(vararg elements: Double): DoubleArray = definedExternally\n\n@library\npublic fun floatArrayOf(vararg elements: Float): FloatArray = definedExternally\n\n@library\npublic fun longArrayOf(vararg elements: Long): LongArray = definedExternally\n\n@library\npublic fun intArrayOf(vararg elements: Int): IntArray = definedExternally\n\n@library\npublic
 fun charArrayOf(vararg elements: Char): CharArray = definedExternally\n\n@library\npublic fun shortArrayOf(vararg elements: Short): ShortArray = definedExternally\n\n@library\npublic fun byteArrayOf(vararg elements: Byte): ByteArray = definedExternally\n\n@library\npublic fun booleanArrayOf(vararg elements: Boolean): BooleanArray = definedExternally\n\n/**\n * Creates a new instance of the [Lazy] that uses the specified initialization function [initializer].\n */\npublic actual fun <T> lazy(initializer: () -> T): Lazy<T> = UnsafeLazyImpl(initializer)\n\n/**\n * Creates a new instance of the [Lazy] that uses the specified initialization function [initializer].\n *\n * The [mode] parameter is ignored. */\npublic actual fun <T> lazy(mode: LazyThreadSafetyMode, initializer: () -> T): Lazy<T> = UnsafeLazyImpl(initializer)\n\n/**\n * Creates a new instance of the [Lazy] that uses the specified initialization function [initializer].\n *\n * The [lock] parameter is ignored.\n
 */\npublic actual fun <T> lazy(lock: Any?, initializer: () -> T): Lazy<T> = UnsafeLazyImpl(initializer)\n\n\ninternal fun fillFrom(src: dynamic, dst: dynamic): dynamic {\n   val srcLen: Int = src.length\n   val dstLen: Int = dst.length\n   var index: Int = 0\n   while (index < srcLen && index < dstLen) dst[index] = src[index++]\n   return dst\n}\n\n\ninternal fun arrayCopyResize(source: dynamic, newSize: Int, defaultValue: Any?): dynamic {\n   val result = source.slice(0, newSize)\n   copyArrayType(source, result)\n   var index: Int = source.length\n   if (newSize > index) {\n   result.length = newSize\n   while (index < newSize) result[index++] = defaultValue\n   }\n   return result\n}\n\ninternal fun <T> arrayPlusCollection(array: dynamic, collection: Collection<T>): dynamic {\n   val result = array.slice()\n   result.length += collection.size\n   copyArrayType(array, result)\n   var index: Int = array.length\n   for (element in collection) result[index++]
 = element\n   return result\n}\n\ninternal fun <T> fillFromCollection(dst: dynamic, startIndex: Int, collection: Collection<T>): dynamic {\n   var index = startIndex\n   for (element in collection) dst[index++] = element\n   return dst\n}\n\ninternal inline fun copyArrayType(from: dynamic, to: dynamic) {\n   if (from.`$type$` !== undefined) {\n   to.`$type$` = from.`$type$`\n   }\n}\n\ninternal inline fun jsIsType(obj: dynamic, jsClass: dynamic) = js(\"Kotlin\").isType(obj, jsClass)","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.text\n\n// actually \\s is enough to match all whitespace, but \\xA0 added because of different regexp behavior of Rhino used in Selenium tests\npublic actual fun Char.isWhitespace(): Boolean = toString().matches(\"[\\\\s\\\\xA0]\")\n\n@kotlin.internal.InlineOnly\npublic actual inline fun Char.toLowerCase(): Char =
 js(\"String.fromCharCode\")(toInt()).toLowerCase().charCodeAt(0).unsafeCast<Int>().toChar()\n\n@kotlin.internal.InlineOnly\npublic actual inline fun Char.toUpperCase(): Char = js(\"String.fromCharCode\")(toInt()).toUpperCase().charCodeAt(0).unsafeCast<Int>().toChar()\n\n/**\n * Returns `true` if this character is a Unicode high-surrogate code unit (also known as leading-surrogate code unit).\n */\npublic actual fun Char.isHighSurrogate(): Boolean = this in

Char.MIN_HIGH_SURROGATE..Char.MAX_HIGH_SURROGATE\n\n/**\n * Returns `true` if this character is a Unicode low-surrogate code unit (also known as trailing-surrogate code unit).\n */\npublic actual fun Char.isLowSurrogate(): Boolean = this in Char.MIN_LOW_SURROGATE..Char.MAX_LOW_SURROGATE\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\n/**\n * Provides a skeletal implementation of the [MutableCollection] interface.\n *\n * @param E the type of elements contained in the collection. The collection is invariant on its element type.\n */\npublic actual abstract class AbstractMutableCollection<E> protected actual constructor() : AbstractCollection<E>(), MutableCollection<E> {\n\n actual abstract override fun add(element: E): Boolean\n\n actual override fun remove(element: E): Boolean {\n val iterator = iterator()\n while (iterator.hasNext()) {\n if (iterator.next() == element) {\n iterator.remove()\n return true\n }\n }\n return false\n }\n\n actual override fun addAll(elements: Collection<E>): Boolean {\n var modified = false\n for (element in elements) {\n if (add(element)) modified = true\n }\n return modified\n }\n\n actual override fun removeAll(elements: Collection<E>): Boolean = (this as MutableIterable<E>).removeAll { it in elements }\n actual override fun retainAll(elements: Collection<E>): Boolean = (this as MutableIterable<E>).removeAll { it !in elements }\n\n actual override fun clear(): Unit {\n val iterator = this.iterator()\n while (iterator.hasNext()) {\n iterator.next()\n iterator.remove()\n }\n }\n\n open fun toJSON(): Any = this.toArray()\n}\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n/*\n * Based on GWT AbstractList\n * Copyright 2007 Google Inc.\n*/\n\n\npackage kotlin.collections\n\n/**\n * Provides a skeletal implementation of the [MutableList] interface.\n *\n * @param E the type of elements contained in the list. The list is invariant on its element type.\n */\npublic actual abstract class AbstractMutableList<E> protected actual constructor() : AbstractMutableCollection<E>(), MutableList<E> {\n protected var modCount: Int = 0\n\n abstract override fun add(index: Int, element: E): Unit\n abstract override fun removeAt(index: Int): E\n abstract override fun set(index: Int, element: E): E\n\n /**\n * Adds the specified element to the end of this list.\n *\n * @return `true` because the list is always modified as the result of this operation.\n */\n actual override fun add(element: E): Boolean {\n add(size, element)\n return true\n }\n\n actual override fun addAll(index: Int, elements: Collection<E>): Boolean {\n var _index = index\n var changed = false\n for (e in elements) {\n add(_index++, e)\n changed = true\n }\n return changed\n }\n\n actual override fun clear() {\n removeRange(0, size)\n }\n\n actual override fun removeAll(elements: Collection<E>): Boolean = removeAll { it in elements }\n actual override fun retainAll(elements: Collection<E>): Boolean = removeAll { it !in elements }\n\n\n actual override fun iterator(): MutableIterator<E> = IteratorImpl()\n\n actual override fun contains(element: E): Boolean = indexOf(element) >= 0\n\n actual override fun indexOf(element: E): Int {\n for (index in 0..lastIndex) {\n if (get(index) == element) {\n return index\n }\n }\n return -1\n }\n\n actual override fun lastIndexOf(element: E): Int {\n for (index in lastIndex downTo 0) {\n if (get(index) == element) {\n return index\n }\n }\n return -1\n }\n\n actual override fun listIterator(): MutableListIterator<E> = listIterator(0)\n actual override fun listIterator(index: Int): MutableListIterator<E> = ListIteratorImpl(index)\n\n\n actual override fun subList(fromIndex: Int, toIndex: Int): MutableList<E> = SubList(this, fromIndex, toIndex)\n\n /**\n * Removes the range of elements from this list starting from [fromIndex] and ending with but not including [toIndex].\n */\n protected open fun removeRange(fromIndex: Int, toIndex: Int) {\n val iterator = listIterator(fromIndex)\n repeat(toIndex - fromIndex) {\n iterator.next()\n iterator.remove()\n }\n }\n\n /**\n * Compares this list with another list instance with the ordered structural equality.\n *\n * @return true, if [other] instance is a [List] of the same size, which contains the same elements in the same order.\n */\n override fun equals(other: Any?): Boolean {\n if (other === this) return true\n if (other !is List<*>) return false\n\n return

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AbstractList.orderedEquals(this, other)\n    }\n\n    /**\n     * Returns the hash code value for this list.\n     */\n    override fun hashCode(): Int = AbstractList.orderedHashCode(this)\n\n\n    private open inner class IteratorImpl : MutableIterator<E> {\n        /** the index of
     the item that will be returned on the next call to [next]`()` */\n        protected var index = 0\n        /** the index of the item that was returned on the previous call to [next]`()`\n         * or [ListIterator.previous]`()` (for `ListIterator`),\n         * -1 if no such item exists\n         */\n        protected var last = -1\n\n        override fun hasNext(): Boolean = index < size\n\n        override fun next(): E {\n            if (!hasNext()) throw NoSuchElementException()\n            last = index++\n            return get(last)\n        }\n\n        override fun remove() {\n            check(last != -1) { \"Call next() or previous() before removing element from the iterator.\" }\n\n            removeAt(last)\n            index = last\n            last = -1\n        }\n    }\n\n    /**\n     * Implementation of `MutableListIterator` for abstract lists.\n     */\n    private inner class ListIteratorImpl(index: Int) : IteratorImpl(), MutableListIterator<E> {\n\n        init
     {\n            AbstractList.checkPositionIndex(index, this@AbstractMutableList.size)\n            this.index = index\n        }\n\n        override fun hasPrevious(): Boolean = index > 0\n\n        override fun nextIndex(): Int = index\n\n        override fun previous(): E {\n            if (!hasPrevious()) throw NoSuchElementException()\n\n            last = --index\n            return get(last)\n        }\n\n        override fun previousIndex(): Int = index - 1\n\n        override fun add(element: E) {\n            add(index, element)\n            index++\n            last = -1\n        }\n\n        override fun set(element: E) {\n            check(last != -1) { \"Call next() or previous() before updating element value with the iterator.\" }\n            this@AbstractMutableList[last] = element\n        }\n    }\n\n    private class SubList<E>(private val list: AbstractMutableList<E>, private val fromIndex: Int, toIndex: Int) : AbstractMutableList<E>(), RandomAccess {\n        private
     var _size: Int = 0\n\n        init {\n            AbstractList.checkRangeIndexes(fromIndex, toIndex, list.size)\n            this._size = toIndex - fromIndex\n        }\n\n        override fun add(index: Int, element: E) {\n            AbstractList.checkPositionIndex(index, _size)\n\n            list.add(fromIndex + index, element)\n            _size++\n        }\n\n        override fun get(index: Int): E {\n            AbstractList.checkElementIndex(index, _size)\n\n            return list[fromIndex + index]\n        }\n\n        override fun removeAt(index: Int): E {\n            AbstractList.checkElementIndex(index, _size)\n\n            val result = list.removeAt(fromIndex + index)\n            _size--\n            return result\n        }\n\n        override fun set(index: Int, element: E): E {\n            AbstractList.checkElementIndex(index, _size)\n\n            return list.set(fromIndex + index, element)\n        }\n\n        override val size: Int get() = _size\n    }\n\n}\n","/*\n
     * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n/*\n * Based on GWT AbstractMap\n * Copyright 2007 Google Inc.\n */\n\npackage kotlin.collections\n\n/**\n * Provides a skeletal implementation of the [MutableMap] interface.\n *\n * The implementor is required to implement [entries] property, which should return mutable set of map entries, and [put] function.\n *\n * @param K the type of map keys. The map is invariant on its key type.\n * @param V the type of map values. The map is invariant on its value type.\n */\npublic actual abstract class AbstractMutableMap<K, V> protected actual constructor() : AbstractMap<K, V>(), MutableMap<K, V> {\n\n    /**\n     * A mutable [Map.Entry] shared by several [Map] implementations.\n     */\n    internal open class SimpleEntry<K, V>(override val key: K, value: V) : MutableMap.MutableEntry<K, V> {\n        constructor(entry: Map.Entry<K,
     V>) : this(entry.key, entry.value)\n\n        private var _value = value\n\n        override val value: V get() = _value\n\n        override fun setValue(newValue: V): V {\n            val oldValue = this._value\n            this._value = newValue\n            return oldValue\n        }\n\n        override fun hashCode(): Int = entryHashCode(this)\n        override fun toString(): String = entryToString(this)\n        override fun equals(other: Any?): Boolean = entryEquals(this, other)\n\n    }\n\n    actual override fun clear() {\n        entries.clear()\n    }\n\n    private var _keys: MutableSet<K>? = null\n    actual override val keys: MutableSet<K>\n        get() {\n            if (_keys == null) {\n                _keys = object : AbstractMutableSet<K>() {\n                    override fun add(element: K): Boolean = throw UnsupportedOperationException(\"Add is not supported on keys\")\n                    override fun clear() {\n
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this@AbstractMutableMap.clear()\n
                }\n\n                override operator fun contains(element: K): Boolean = containsKey(element)\n\n
        override operator fun iterator(): MutableIterator<K> {\n                val entryIterator = entries.iterator()\n
                return object : MutableIterator<K> {\n                override fun hasNext(): Boolean =
entryIterator.hasNext()\n                override fun next(): K = entryIterator.next().key\n
override fun remove() = entryIterator.remove()\n                }\n                }\n\n                override fun
remove(element: K): Boolean {\n                if (containsKey(element)) {\n
this@AbstractMutableMap.remove(element)\n                return true\n                }\n                return
false\n                }\n\n                override val size: Int get()
 = this@AbstractMutableMap.size\n                }\n                }\n                return _keys!!\n                }\n\n    actual abstract
override fun put(key: K, value: V): V?\n\n    actual override fun putAll(from: Map<out K, V>) {\n        for ((key,
value) in from) {\n            put(key, value)\n        }\n    }\n\n    private var _values: MutableCollection<V>? = null\n
actual override val values: MutableCollection<V>\n        get() {\n            if (_values == null) {\n                _values =
object : AbstractMutableCollection<V>() {\n                override fun add(element: V): Boolean = throw
UnsupportedOperationException(\"Add is not supported on values\")\n                override fun clear() =
this@AbstractMutableMap.clear()\n\n                override operator fun contains(element: V): Boolean =
containsValue(element)\n\n                override operator fun iterator(): MutableIterator<V> {\n                val
entryIterator = entries.iterator()\n
                return object : MutableIterator<V> {\n                override fun hasNext(): Boolean =
entryIterator.hasNext()\n                override fun next(): V = entryIterator.next().value\n
override fun remove() = entryIterator.remove()\n                }\n                }\n\n                override val size:
Int get() = this@AbstractMutableMap.size\n\n                // TODO: should we implement them this way? Currently
it's unspecified in JVM\n                override fun equals(other: Any?): Boolean {\n                if (this === other)
return true\n                if (other !is Collection<*>) return false\n                return
AbstractList.orderedEquals(this, other)\n                }\n\n                override fun hashCode(): Int =
AbstractList.orderedHashCode(this)\n                }\n            }\n            return _values!!\n        }\n\n    actual override
 fun remove(key: K): V? {\n        val iter = entries.iterator()\n        while (iter.hasNext()) {\n            val entry =
iter.next()\n            val k = entry.key\n            if (key == k) {\n                val value = entry.value\n
iter.remove()\n                return value\n            }\n        }\n        return null\n    }\n\n}\n","/*\n * Copyright 2010-2018
JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the
license/LICENSE.txt file.\n */\npackage kotlin.collections\n\n/**\n * Provides a skeletal implementation of the
[MutableSet] interface.\n *\n * @param E the type of elements contained in the set. The set is invariant on its
element type.\n */\npublic actual abstract class AbstractMutableSet<E> protected actual constructor() :
AbstractMutableCollection<E>(), MutableSet<E> {\n\n    /**\n     * Compares this set with another set instance with
the unordered structural equality.\n     *\n     * @return
 `true`, if [other] instance is a [Set] of the same size, all elements of which are contained in this set.\n     */\n
override fun equals(other: Any?): Boolean {\n        if (other === this) return true\n        if (other !is Set<*>) return
false\n        return AbstractSet.setEquals(this, other)\n    }\n\n    /**\n     * Returns the hash code value for this set.\n
 */\n    override fun hashCode(): Int = AbstractSet.unorderedHashCode(this)\n\n}","/*\n * Copyright 2010-2018
JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the
license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\n/**\n * Provides a [MutableList] implementation,
which uses a resizable array as its backing storage.\n *\n * This implementation doesn't provide a way to manage
capacity, as backing JS array is resizeable itself.\n * There is no speed advantage to pre-allocating array sizes in
JavaScript, so this implementation does not include any of the\n
 * capacity and \"growth increment\" concepts.\n */\npublic actual open class ArrayList<E> internal
constructor(private var array: Array<Any?>) : AbstractMutableList<E>(), MutableList<E>, RandomAccess {\n\n
/**\n     * Creates an empty [ArrayList].\n     */\n    public actual constructor() : this(emptyArray()) {}\n\n    /**\n
* Creates an empty [ArrayList].\n     * @param initialCapacity initial capacity (ignored)\n     */\n
```

@Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\n public actual constructor(initialCapacity: Int = 0) : this(emptyArray()) {}\n\n /**\n * Creates an [ArrayList] filled from the [elements] collection.\n */\n public actual constructor(elements: Collection<E>) : this(elements.toTypedArray<Any?>()) {}\n\n /** Does nothing in this ArrayList implementation. */\n public actual fun trimToSize() {}\n\n /** Does nothing in this ArrayList implementation. */\n public actual fun ensureCapacity(minCapacity: Int) {}\n\n actual override val size: Int get() = array.size\n @Suppress(\"UNCHECKED_CAST\")\n actual override fun get(index: Int): E = array[rangeCheck(index)] as E\n actual override fun set(index: Int, element: E): E {\n rangeCheck(index)\n @Suppress(\"UNCHECKED_CAST\")\n return array[index].apply { array[index] = element } as E\n }\n\n actual override fun add(element: E): Boolean {\n array.asDynamic().push(element)\n modCount++\n return true\n }\n\n actual override fun add(index: Int, element: E): Unit {\n insertionRangeCheck(index)\n array.asDynamic().splice(insertionRangeCheck(index), 0, element)\n modCount++\n }\n\n actual override fun addAll(elements: Collection<E>): Boolean {\n if (elements.isEmpty()) return false\n\n array += elements.toTypedArray<Any?>()\n modCount++\n return true\n }\n\n actual override fun addAll(index: Int, elements: Collection<E>): Boolean {\n insertionRangeCheck(index)\n\n if (index == size) return addAll(elements)\n if (elements.isEmpty()) return false\n when (index) {\n size -> return addAll(elements)\n 0 -> array = elements.toTypedArray<Any?>() + array\n else -> array = array.copyOfRange(0, index).asDynamic().concat(elements.toTypedArray<Any?>(), array.copyOfRange(index, size))\n }\n\n modCount++\n return true\n }\n\n actual override fun removeAt(index: Int): E {\n rangeCheck(index)\n modCount++\n return if (index == lastIndex)\n array.asDynamic().pop()\n else\n array.asDynamic().splice(index, 1)[0]\n }\n\n actual override fun remove(element: E): Boolean {\n for (index in array.indices) {\n if (array[index] == element) {\n array.asDynamic().splice(index, 1)\n modCount++\n return true\n }\n }\n return false\n }\n\n override fun removeRange(fromIndex: Int, toIndex: Int) {\n modCount++\n array.asDynamic().splice(fromIndex, toIndex - fromIndex)\n }\n\n actual override fun clear() {\n array = emptyArray()\n modCount++\n }\n\n\n actual override fun indexOf(element: E): Int = array.indexOf(element)\n\n actual override fun lastIndexOf(element: E): Int = array.lastIndexOf(element)\n\n override fun toString() = arrayToString(array)\n override fun toArray(): Array<Any?> = js(\"[]\").slice.call(array)\n\n\n private fun rangeCheck(index: Int) = index.apply {\n AbstractList.checkElementIndex(index, size)\n }\n\n private fun insertionRangeCheck(index: Int) = index.apply {\n AbstractList.checkPositionIndex(index, size)\n }\n}","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\ninternal fun <T> sortArrayWith(array: Array<out T>, comparison: (T, T) -> Int) {\n if (getStableSortingIsSupported()) {\n array.asDynamic().sort(comparison)\n } else {\n mergeSort(array.unsafeCast<Array<T>>(), 0, array.lastIndex, Comparator(comparison))\n }\n}\n\ninternal fun <T> sortArrayWith(array: Array<out T>, comparator: Comparator<in T>) {\n if (getStableSortingIsSupported()) {\n val comparison = { a: T, b: T -> comparator.compare(a, b) }\n array.asDynamic().sort(comparison)\n } else {\n mergeSort(array.unsafeCast<Array<T>>(), 0, array.lastIndex, comparator)\n }\n}\n\ninternal fun <T : Comparable<T>> sortArray(array: Array<out T>) {\n if (getStableSortingIsSupported()) {\n val comparison = { a: T, b: T -> a.compareTo(b) }\n array.asDynamic().sort(comparison)\n } else {\n mergeSort(array.unsafeCast<Array<T>>(), 0, array.lastIndex, naturalOrder())\n }\n}\n\nprivate var _stableSortingIsSupported: Boolean? = null\nprivate fun getStableSortingIsSupported(): Boolean {\n _stableSortingIsSupported?.let { return it }\n _stableSortingIsSupported = false\n\n val array = js(\"[]\").unsafeCast<Array<Int>>()\n // known implementations may use stable sort for arrays of up to 512 elements\n // so we create slightly more elements to test stability\n for (index in 0 until 600) array.asDynamic().push(index)\n val comparison = { a: Int, b: Int -> (a and 3) - (b and 3) }\n array.asDynamic().sort(comparison)\n for (index in 1 until array.size) {\n val a = array[index - 1]\n val b

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= array[index]\n        if ((a and 3) == (b and 3) && a >= b) return false\n    }\n    _stableSortingIsSupported = true\n    return true\n}\n\n\nprivate fun <T> mergeSort(array: Array<T>, start: Int, endInclusive: Int, comparator: Comparator<in T>) {\n    val buffer = arrayOfNulls<Any?>(array.size).unsafeCast<Array<T>>()\n    val result = mergeSort(array, buffer, start, endInclusive, comparator)\n    if (result !== array) {\n        result.forEachIndexed { i, v -> array[i] = v }\n    }\n}\n\n// Both start and end are inclusive indices.\nprivate fun <T> mergeSort(array: Array<T>, buffer: Array<T>, start: Int, end: Int, comparator: Comparator<in T>): Array<T> {\n    if (start == end) {\n        return array\n    }\n\n    val median = (start + end) / 2\n    val left = mergeSort(array, buffer, start, median, comparator)\n    val right = mergeSort(array, buffer, median + 1, end, comparator)\n\n    val target = if (left === buffer) array else buffer\n\n    // Merge.\n    var leftIndex = start\n    var rightIndex = median + 1\n    for (i in start..end) {\n        when {\n            leftIndex <= median && rightIndex <= end -> {\n                val leftValue = left[leftIndex]\n                val rightValue = right[rightIndex]\n\n                if (comparator.compare(leftValue, rightValue) <= 0) {\n                    target[i] = leftValue\n                    leftIndex++\n                } else {\n                    target[i] = rightValue\n                    rightIndex++\n                }\n            }\n            leftIndex <= median -> {\n                target[i] = left[leftIndex]\n                leftIndex++\n            }\n            else /* rightIndex <= end */ -> {\n                target[i] = right[rightIndex]\n                rightIndex++\n            }\n        }\n    }\n\n    return target\n}","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\n\n@UseExperimental(ExperimentalUnsignedTypes::class)\n@SinceKotlin(\"1.3\")\n@kotlin.js.JsName(\"contentDeepHashCodeImpl\")\ninternal fun <T> Array<out T>.contentDeepHashCodeImpl(): Int {\n    var result = 1\n    for (element in this) {\n        val elementHash = when {\n            element == null -> 0\n            js(\"Kotlin\").isArrayish(element) -> (element.unsafeCast<Array<*>>()).contentDeepHashCodeImpl()\n\n            element is UByteArray   -> element.contentHashCode()\n            element is UShortArray  -> element.contentHashCode()\n            element is UIntArray    -> element.contentHashCode()\n            element is ULongArray   -> element.contentHashCode()\n\n            else                    -> element.hashCode()\n        }\n\n        result = 31 * result + elementHash\n    }\n    return result\n}","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\ninternal interface EqualityComparator {\n    /**\n     * Subclasses must override to return a value indicating\n     * whether or not two keys or values are equal.\n     */\n    abstract fun equals(value1: Any?, value2: Any?): Boolean\n\n    /**\n     * Subclasses must override to return the hash code of a given key.\n     */\n    abstract fun getHashCode(value: Any?): Int\n\n\n\n    object HashCode : EqualityComparator {\n        override fun equals(value1: Any?, value2: Any?): Boolean = value1 == value2\n\n        override fun getHashCode(value: Any?): Int = value?.hashCode() ?: 0\n    }\n}","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n/*\n * Based on GWT AbstractHashMap\n * Copyright 2008 Google Inc.\n */\n\npackage kotlin.collections\n\nimport kotlin.collections.MutableMap.MutableEntry\n\n/**\n * Hash table based implementation of the [MutableMap] interface.\n *\n * This implementation makes no guarantees regarding the order of enumeration of [keys], [values] and [entries] collections.\n */\npublic actual open class HashMap<K, V> : AbstractMutableMap<K, V>, MutableMap<K, V> {\n\n    private inner class EntrySet : AbstractMutableSet<MutableEntry<K, V>>() {\n\n        override fun add(element: MutableEntry<K, V>): Boolean = throw UnsupportedOperationException(\"Add is not supported on entries\")\n        override fun clear() {\n            this@HashMap.clear()\n        }\n\n        override operator fun contains(element: MutableEntry<K, V>): Boolean = containsEntry(element)\n\n        override operator fun iterator(): MutableIterator<MutableEntry<K, V>> = internalMap.iterator()\n\n        override fun remove(element: MutableEntry<K, V>): Boolean {\n            if (contains(element)) {\n                this@HashMap.remove(element.key)\n                return true\n            }\n            return false\n        }\n\n        override val size: Int get() = this@HashMap.size\n    }\n\n\n    /**\n     * Internal implementation of the map: either string-based or hashcode-based.\n     */\n    private val internalMap:
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InternalMap<K, V>\n\n    private val equality: EqualityComparator\n\n    internal constructor(internalMap: InternalMap<K, V>) : super() {\n        this.internalMap = internalMap\n        this.equality = internalMap.equality\n    }\n\n    /**\n     * Constructs an empty [HashMap] instance.\n     */\n    actual constructor() : this(InternalHashCodeMap(EqualityComparator.HashCode))\n\n    /**\n     * Constructs an empty [HashMap] instance.\n     *\n     * @param  initialCapacity the initial capacity (ignored)\n     * @param  loadFactor      the load factor (ignored)\n     *\n     * @throws IllegalArgumentException if the initial capacity or load factor are negative\n     */\n    @Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\n    actual constructor(initialCapacity: Int, loadFactor: Float = 0.0f) : this() {\n        // This implementation of HashMap has no need of load factors or capacities.\n        require(initialCapacity >= 0) { \"Negative initial capacity: $initialCapacity\" }\n        require(loadFactor >= 0) { \"Non-positive load factor: $loadFactor\" }\n    }\n\n    actual constructor(initialCapacity: Int) : this(initialCapacity, 0.0f)\n\n\n    /**\n     * Constructs an instance of [HashMap] filled with the contents of the specified [original] map.\n     */\n    actual constructor(original: Map<out K, V>) : this() {\n        this.putAll(original)\n    }\n\n    actual override fun clear() {\n        internalMap.clear()\n//        structureChanged(this)\n    }\n\n    actual override fun containsKey(key: K): Boolean = internalMap.contains(key)\n\n    actual override fun containsValue(value: V): Boolean = internalMap.any { equality.equals(it.value, value) }\n\n    private var _entries: MutableSet<MutableMap.MutableEntry<K, V>>? = null\n    actual override val entries: MutableSet<MutableMap.MutableEntry<K, V>>\n        get() {\n            if (_entries == null) {\n                _entries = createEntrySet()\n            }\n            return _entries!!\n        }\n\n    protected open fun createEntrySet(): MutableSet<MutableMap.MutableEntry<K, V>> = EntrySet()\n\n    actual override operator fun get(key: K): V? = internalMap.get(key)\n\n    actual override fun put(key: K, value: V): V? = internalMap.put(key, value)\n\n    actual override fun remove(key: K): V? = internalMap.remove(key)\n\n    actual override val size: Int get() = internalMap.size\n\n}\n\n/**\n * Constructs the specialized implementation of [HashMap] with [String] keys, which stores the keys as properties of\n * JS object without hashing them.\n */\npublic fun <V> stringMapOf(vararg pairs: Pair<String, V>): HashMap<String, V> {\n    return HashMap<String, V>(InternalStringMap(EqualityComparator.HashCode)).apply { putAll(pairs) }\n}","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n/*\n * Based on GWT HashSet\n * Copyright 2008 Google Inc.\n */\n\npackage kotlin.collections\n\n/**\n * The implementation of the [MutableSet] interface, backed by a [HashMap] instance.\n */\npublic actual open class HashSet<E> : AbstractMutableSet<E>, MutableSet<E> {\n\n    private val map: HashMap<E, Any>\n\n    /**\n     * Constructs a new empty [HashSet].\n     */\n    actual constructor() {\n        map = HashMap<E, Any>()\n    }\n\n    /**\n     * Constructs a new [HashSet] filled with the elements of the specified collection.\n     */\n    actual constructor(elements: Collection<E>) {\n        map = HashMap<E, Any>(elements.size)\n        addAll(elements)\n    }\n\n    /**\n     * Constructs a new empty [HashSet].\n     *\n     * @param  initialCapacity the initial capacity (ignored)\n     * @param  loadFactor      the load factor (ignored)\n     *\n     * @throws IllegalArgumentException if the initial capacity or load factor are negative\n     */\n    @Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\n    actual constructor(initialCapacity: Int, loadFactor: Float = 0.0f) {\n        map = HashMap<E, Any>(initialCapacity, loadFactor)\n    }\n\n    actual constructor(initialCapacity: Int) : this(initialCapacity, 0.0f)\n\n    /**\n     * Protected constructor to specify the underlying map. This is used by\n     * LinkedHashSet.\n\n     * @param map underlying map to use.\n     */\n    internal constructor(map: HashMap<E, Any>) {\n        this.map = map\n    }\n\n    actual override fun add(element: E): Boolean {\n        val old = map.put(element, this)\n        return old == null\n    }\n\n    actual override fun clear() {\n        map.clear()\n    }\n\n//    public override fun clone(): Any {\n//        return HashSet<E>(this)\n//    }\n\n    actual override operator fun contains(element: E): Boolean = map.containsKey(element)\n\n    actual override fun isEmpty(): Boolean = map.isEmpty()\n\n    actual override fun iterator(): MutableIterator<E> = map.keys.iterator()\n\n    actual override fun remove(element: E): Boolean = map.remove(element) != null\n\n    actual override val size: Int get() = map.size\n\n}\n\n/**\n * Creates a new instance of the specialized implementation of [HashSet] with the specified [String]
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 elements,\n * which elements the keys as properties of JS object without hashing them.\n */\npublic fun
stringSetOf(vararg elements: String): HashSet<String> {\n    return HashSet(stringMapOf<Any>()).apply {
addAll(elements) }\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the
Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n/*\n * Based on GWT
InternalHashCodeMap\n * Copyright 2008 Google Inc.\n */\n\npackage kotlin.collections\n\nimport
kotlin.collections.MutableMap.MutableEntry\nimport kotlin.collections.AbstractMutableMap.SimpleEntry\n\n/**\n
* A simple wrapper around JavaScriptObject to provide [java.util.Map]-like semantics for any\n * key type.\n *\n
*\n * Implementation notes:\n *\n *\n * A key's hashCode is the index in backingMap which should contain that
key. Since several keys may\n * have the same hash, each value in hashCodeMap is actually an array containing all
entries whose\n * keys share the same
 hash.\n */\ninternal class InternalHashCodeMap<K, V>(override val equality: EqualityComparator) :
InternalMap<K, V> {\n\n    private var backingMap: dynamic = createJsMap()\n    override var size: Int = 0\n
private set\n\n    override fun put(key: K, value: V): V? {\n        val hashCode = equality.getHashCode(key)\n
val chainOrEntry = getChainOrEntryOrNull(hashCode)\n        if (chainOrEntry == null) {\n            // This is a new
chain, put it to the map.\n            backingMap[hashCode] = SimpleEntry(key, value)\n        } else {\n            if
(chainOrEntry !is Array<*>) {\n                // It is an entry\n                val entry: SimpleEntry<K, V> =
chainOrEntry\n                if (equality.equals(entry.key, key)) {\n                    return entry.setValue(value)\n
} else {\n                    backingMap[hashCode] = arrayOf(entry, SimpleEntry(key, value))\n                    size++\n
                return null\n                }\n
            } else {\n                // Chain already exists, perhaps key also exists.\n                val chain:
Array<MutableEntry<K, V>> = chainOrEntry\n                val entry = chain.findEntryInChain(key)\n                if
(entry != null) {\n                    return entry.setValue(value)\n                }\n
chain.asDynamic().push(SimpleEntry(key, value))\n            }\n        }\n        size++\n//        structureChanged(host)\n
        return null\n    }\n\n    override fun remove(key: K): V? {\n        val hashCode = equality.getHashCode(key)\n
 val chainOrEntry = getChainOrEntryOrNull(hashCode) ?: return null\n        if (chainOrEntry !is Array<*>) {\n
  val entry: MutableEntry<K, V> = chainOrEntry\n            if (equality.equals(entry.key, key)) {\n
deleteProperty(backingMap, hashCode)\n                size--\n                return entry.value\n            } else {\n
return null\n            }\n        } else
 {\n            val chain: Array<MutableEntry<K, V>> = chainOrEntry\n            for (index in chain.indices) {\n
 val entry = chain[index]\n                if (equality.equals(key, entry.key)) {\n                    if (chain.size == 1) {\n
            chain.asDynamic().length = 0\n                        // remove the whole array\n
deleteProperty(backingMap, hashCode)\n                    } else {\n                        // splice out the entry we're
removing\n                        chain.asDynamic().splice(index, 1)\n                    }\n                    size--\n//
structureChanged(host)\n                    return entry.value\n                }\n            }\n        }\n        return null\n    }\n\n
override fun clear() {\n        backingMap = createJsMap()\n        size = 0\n    }\n\n    override fun contains(key: K):
Boolean = getEntry(key) != null\n\n    override fun get(key: K): V? = getEntry(key)?.value\n\n
    private fun getEntry(key: K): MutableEntry<K, V>? {\n        val chainOrEntry =
getChainOrEntryOrNull(equality.getHashCode(key)) ?: return null\n        if (chainOrEntry !is Array<*>) {\n
val entry: MutableEntry<K, V> = chainOrEntry\n            if (equality.equals(entry.key, key)) {\n                return
entry\n            } else {\n                return null\n            }\n        } else {\n            val chain: Array<MutableEntry<K,
V>> = chainOrEntry\n            return chain.findEntryInChain(key)\n        }\n    }\n\n    private fun
Array<MutableEntry<K, V>>.findEntryInChain(key: K): MutableEntry<K, V>? =\n        firstOrNull { entry ->
equality.equals(entry.key, key) }\n\n    override fun iterator(): MutableIterator<MutableEntry<K, V>> {\n\n
return object : MutableIterator<MutableEntry<K, V>> {\n            var state = -1 // -1 not ready, 0 - ready, 1 -
done\n\n            val keys: Array<Int> = js(\"Object\").keys(backingMap)\n            var keyIndex
 = -1\n\n            var chainOrEntry: dynamic = null\n            var isChain = false\n            var itemIndex = -1\n
var lastEntry: MutableEntry<K, V>? = null\n\n            private fun computeNext(): Int {\n                if (chainOrEntry
!= null && isChain) {\n                    val chainSize: Int = chainOrEntry.unsafeCast<Array<MutableEntry<K,
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V>>>().size\n if (++itemIndex < chainSize)\n return 0\n }\n\n if (++keyIndex < keys.size) {\n chainOrEntry = backingMap[keys[keyIndex]]\n isChain = chainOrEntry is Array<*>\n itemIndex = 0\n return 0\n } else {\n chainOrEntry = null\n return 1\n }\n }\n\n override fun hasNext(): Boolean {\n if (state == -1)\n state = computeNext()\n return state == 0\n }\n\n override fun next(): MutableEntry<K, V> {\n if (!hasNext()) throw NoSuchElementException()\n val lastEntry = if (isChain) {\n chainOrEntry.unsafeCast<Array<MutableEntry<K, V>>>()[itemIndex]\n } else {\n chainOrEntry.unsafeCast<MutableEntry<K, V>>()\n }\n this.lastEntry = lastEntry\n state = -1\n return lastEntry\n }\n\n override fun remove() {\n checkNotNull(lastEntry)\n this@InternalHashCodeMap.remove(lastEntry!!.key)\n lastEntry = null\n // the chain being iterated just got modified by InternalHashCodeMap.remove\n itemIndex--\n }\n }\n }\n\n private fun getChainOrEntryOrNull(hashCode: Int): dynamic {\n val chainOrEntry = backingMap[hashCode]\n return if (chainOrEntry === undefined) null else chainOrEntry\n }\n\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\n@kotlin.internal.InlineOnly\n@Suppress(\"UNUSED_PARAMETER\")\ninternal inline fun deleteProperty(obj: Any, property: Any) {\n js(\"delete obj[property]\")\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\n/**\n * The common interface of [InternalStringMap] and [InternalHashCodeMap].\n */\ninternal interface InternalMap<K, V> : MutableIterable<MutableMap.MutableEntry<K, V>> {\n val equality: EqualityComparator\n val size: Int\n operator fun contains(key: K): Boolean\n operator fun get(key: K): V?\n\n fun put(key: K, value: V): V?\n fun remove(key: K): V?\n fun clear(): Unit\n\n fun createJsMap(): dynamic {\n val result = js(\"Object.create(null)\")\n // force to switch object representation to dictionary mode\n // Using js-function due to JS_IR limitations\n js(\"result[\\\"foo\\\"] = 1\")\n js(\"delete result[\\\"foo\\\"]\")\n return result\n }\n}","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n/*\n * Based on GWT InternalStringMap\n * Copyright 2008 Google Inc.\n */\npackage kotlin.collections\n\nimport kotlin.collections.MutableMap.MutableEntry\n\n/**\n * A simple wrapper around JavaScript Map for key type is string.\n *\n * Though this map is instantiated only with K=String, the K type is not fixed to String statically,\n * because we want to have it erased to Any? in order not to generate type-safe override bridges for\n * [get], [contains], [remove] etc, if they ever are generated.\n */\ninternal class InternalStringMap<K, V>(override val equality: EqualityComparator) : InternalMap<K, V> {\n\n private var backingMap: dynamic = createJsMap()\n override var size: Int = 0\n private set\n\n// /**\n// * A mod count to track 'value' replacements in map to ensure that the 'value' that we have in the\n// * iterator entry is guaranteed to be still correct.\n// * This is to optimize for the common scenario where the values are not modified during\n// * iterations where the entries are never stale.\n// */\n// private var valueMod: Int = 0\n\n override operator fun contains(key: K): Boolean {\n if (key !is String) return false\n return backingMap[key] !== undefined\n }\n\n override operator fun get(key: K): V? {\n if (key !is String) return null\n val value = backingMap[key]\n return if (value !== undefined) value.unsafeCast<V>() else null\n }\n\n\n override fun put(key: K, value: V): V? {\n require(key is String)\n val oldValue = backingMap[key]\n backingMap[key] = value\n\n if (oldValue === undefined) {\n size++\n// structureChanged(host)\n return null\n } else {\n// valueMod++\n return oldValue.unsafeCast<V>()\n }\n }\n\n override fun remove(key: K): V? {\n if (key !is String) return null\n val value = backingMap[key]\n if (value !== undefined) {\n deleteProperty(backingMap, key)\n size--\n// structureChanged(host)\n return value.unsafeCast<V>()\n } else {\n// valueMod++\n return null\n }\n }\n\n override fun

clear() {\n backingMap = createJsMap()\n size = 0\n }\n\n\n override fun iterator(): MutableIterator<MutableEntry<K, V>> {\n return object : MutableIterator<MutableEntry<K, V>> {\n private val keys: Array<String>
= js(\"Object\").keys(backingMap)\n private val iterator = keys.iterator()\n private var lastKey: String? = null\n\n override fun hasNext(): Boolean = iterator.hasNext()\n\n override fun next(): MutableEntry<K, V> {\n val key = iterator.next()\n lastKey = key\n @Suppress(\"UNCHECKED_CAST\")\n return newMapEntry(key as K)\n }\n\n override fun remove() {\n @Suppress(\"UNCHECKED_CAST\")\n this@InternalStringMap.remove(checkNotNull(lastKey) as K)\n }\n }\n }\n\n private fun newMapEntry(key: K): MutableEntry<K, V> = object : MutableEntry<K, V> {\n override val key: K get() = key\n override val value: V get() = this@InternalStringMap[key].unsafeCast<V>()\n\n override fun setValue(newValue: V): V = this@InternalStringMap.put(key, newValue).unsafeCast<V>()\n\n override fun hashCode():
Int = AbstractMap.entryHashCode(this)\n override fun toString(): String = AbstractMap.entryToString(this)\n override fun equals(other: Any?): Boolean = AbstractMap.entryEquals(this, other)\n }\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n/*\n * Based on GWT LinkedHashMap\n * Copyright 2008 Google Inc.\n */\npackage kotlin.collections\n\nimport kotlin.collections.MutableMap.MutableEntry\n\n/**\n * Hash table based implementation of the [MutableMap] interface, which additionally preserves the insertion order\n * of entries during the iteration.\n *\n * The insertion order is preserved by maintaining a doubly-linked list of all of its entries.\n */\npublic actual open class LinkedHashMap<K, V> : HashMap<K, V>, MutableMap<K, V> {\n\n /**\n * The entry we use includes next/prev pointers for a doubly-linked circular\n * list with a head
node. This reduces the special cases we have to deal with\n * in the list operations.\n\n * Note that we duplicate the key from the underlying hash map so we can find\n * the eldest entry. The alternative would have been to modify HashMap so more\n * of the code was directly usable here, but this would have added some\n * overhead to HashMap, or to reimplement most of the HashMap code here with\n * small modifications. Paying a small storage cost only if you use\n * LinkedHashMap and minimizing code size seemed like a better tradeoff\n */\n private class ChainEntry<K, V>(key: K, value: V) : AbstractMutableMap.SimpleEntry<K, V>(key, value) {\n internal var next: ChainEntry<K, V>? = null\n internal var prev: ChainEntry<K, V>? = null\n }\n\n private inner class EntrySet : AbstractMutableSet<MutableEntry<K, V>>() {\n\n private inner class EntryIterator : MutableIterator<MutableEntry<K, V>> {\n // The last entry that
was returned from this iterator.\n private var last: ChainEntry<K, V>? = null\n\n // The next entry to return from this iterator.\n private var next: ChainEntry<K, V>? = null\n\n init {\n next = head\n// recordLastKnownStructure(map, this)\n }\n\n override fun hasNext(): Boolean {\n return next !== null\n }\n\n override fun next(): MutableEntry<K, V> {\n// checkStructuralChange(map, this)\n if (!hasNext()) throw NoSuchElementException()\n\n val current = next!!\n last = current\n next = current.next.takeIf { it !== head }\n return current\n }\n\n override fun remove() {\n check(last != null)\n// checkStructuralChange(map, this)\n\n last!!.remove()\n map.remove(last!!.key)\n// recordLastKnownStructure(map, this)\n last = null\n }\n }\n\n override fun add(element: MutableEntry<K, V>): Boolean = throw UnsupportedOperationException(\"Add is not supported on entries\")\n override fun clear() {\n this@LinkedHashMap.clear()\n }\n\n override operator fun contains(element: MutableEntry<K, V>): Boolean = containsEntry(element)\n\n override operator fun iterator(): MutableIterator<MutableEntry<K, V>> = EntryIterator()\n\n override fun remove(element: MutableEntry<K, V>): Boolean {\n if (contains(element)) {\n this@LinkedHashMap.remove(element.key)\n return true\n }\n return false\n }\n\n override val size: Int get() = this@LinkedHashMap.size\n }\n\n\n /*\n * The head of the insert order chain, which is a doubly-linked circular\n * list.\n *\n * The most recently inserted node is at the end

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 of the chain, ie.\n   * chain.prev.\n   */\n    private var head: ChainEntry<K, V>? = null\n\n    /**\n     * Add this node to the end of the chain.\n     */\n    private fun ChainEntry<K, V>.addToEnd() {\n        // This entry is not in the list.\n        check(next == null && prev == null)\n\n        val _head = head\n        if (_head == null) {\n            head = this\n            next = this\n            prev = this\n        } else {\n            // Chain is valid.\n            val _tail = checkNotNull(_head.prev)\n            // Update me.\n            prev = _tail\n            next = _head\n            // Update my new siblings: current head and old tail\n            _head.prev = this\n            _tail.next = this\n        }\n    }\n\n    /**\n     * Remove this node from the chain it is a part of.\n     */\n    private fun ChainEntry<K, V>.remove() {\n        if (this.next === this) {\n            // if this is single element, remove head\n            head = null\n        }
 else {\n            if (head === this) {\n                // if this is first element, move head to next\n                head = next\n            }\n            next!!.prev = prev\n            prev!!.next = next\n        }\n        next = null\n        prev = null\n    }\n\n    /*\n   * The hashmap that keeps track of our entries and the chain. Note that we\n   * duplicate the key here to eliminate changes to HashMap and minimize the\n   * code here, at the expense of additional space.\n   */\n    private val map: HashMap<K, ChainEntry<K, V>>\n\n    /**\n     * Constructs an empty [LinkedHashMap] instance.\n     */\n    actual constructor() : super() {\n        map = HashMap<K, ChainEntry<K, V>>()\n    }\n\n    internal constructor(backingMap: HashMap<K, Any>) : super() {\n        @Suppress(\"UNCHECKED_CAST\") // expected to work due to erasure\n        map = backingMap as HashMap<K, ChainEntry<K, V>>\n    }\n\n    /**\n     * Constructs an empty [LinkedHashMap] instance.\n     *\n
    * @param  initialCapacity the initial capacity (ignored)\n     * @param  loadFactor      the load factor (ignored)\n     *\n     * @throws IllegalArgumentException if the initial capacity or load factor are negative\n     */\n    @Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\n    actual constructor(initialCapacity: Int, loadFactor: Float = 0.0f) : super(initialCapacity, loadFactor) {\n        map = HashMap<K, ChainEntry<K, V>>()\n    }\n\n    actual constructor(initialCapacity: Int) : this(initialCapacity, 0.0f)\n\n    /**\n     * Constructs an instance of [LinkedHashMap] filled with the contents of the specified [original] map.\n     */\n    actual constructor(original: Map<out K, V>) {\n        map = HashMap<K, ChainEntry<K, V>>()\n        this.putAll(original)\n    }\n\n    actual override fun clear() {\n        map.clear()\n        head = null\n    }\n\n\n//    override fun clone(): Any {\n//        return LinkedHashMap(this)\n//    }\n\n\n    actual override fun containsKey(key:
 K): Boolean = map.containsKey(key)\n\n    actual override fun containsValue(value: V): Boolean {\n        var node: ChainEntry<K, V> = head ?: return false\n        do {\n            if (node.value == value) {\n                return true\n            }\n            node = node.next!!\n        } while (node !== head)\n        return false\n    }\n\n\n    override fun createEntrySet(): MutableSet<MutableMap.MutableEntry<K, V>> = EntrySet()\n\n    actual override operator fun get(key: K): V? = map.get(key)?.value\n\n    actual override fun put(key: K, value: V): V? {\n        val old = map.get(key)\n        if (old == null) {\n            val newEntry = ChainEntry(key, value)\n            map.put(key, newEntry)\n            newEntry.addToEnd()\n            return null\n        } else {\n            return old.setValue(value)\n        }\n    }\n\n    actual override fun remove(key: K): V? {\n        val entry = map.remove(key)\n        if (entry != null) {\n            entry.remove()\n
            return entry.value\n        }\n        return null\n    }\n\n    actual override val size: Int get() = map.size\n\n}\n\n/**\n * Constructs the specialized implementation of [LinkedHashMap] with [String] keys, which stores the keys as properties of\n * JS object without hashing them.\n */\npublic fun <V> linkedStringMapOf(vararg pairs: Pair<String, V>): LinkedHashMap<String, V> {\n    return LinkedHashMap<String, V>(stringMapOf<Any>()).apply { putAll(pairs) }\n}","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n/*\n * Based on GWT LinkedHashSet\n * Copyright 2008 Google Inc.\n */\n\npackage kotlin.collections\n\n/**\n * The implementation of the [MutableSet] interface, backed by a [LinkedHashMap] instance.\n *\n * This implementation preserves the insertion order of elements during the iteration.\n */\npublic actual open class LinkedHashSet<E> : HashSet<E>,
 MutableSet<E> {\n\n    internal constructor(map: LinkedHashMap<E, Any>) : super(map)\n\n    /**\n     * Constructs a new empty [LinkedHashSet].\n     */\n    actual constructor() : super(LinkedHashMap<E, Any>())\n\n    /**\n     * Constructs a new [LinkedHashSet] filled with the elements of the specified collection.\n     */\n    actual
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constructor(elements: Collection<E>) : super(LinkedHashMap<E, Any>()) {\n addAll(elements)\n }\n\n /**\n * Constructs a new empty [LinkedHashSet].\n *\n * @param initialCapacity the initial capacity (ignored)\n * @param loadFactor the load factor (ignored)\n *\n * @throws IllegalArgumentException if the initial capacity or load factor are negative\n */\n @Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\n actual constructor(initialCapacity: Int, loadFactor: Float = 0.0f) : super(LinkedHashMap<E, Any>(initialCapacity, loadFactor))\n\n actual constructor(initialCapacity: Int) : this(initialCapacity,
0.0f)\n\n// public override fun clone(): Any {\n// return LinkedHashSet(this)\n// }\n\n}\n\n/**\n * Creates a new instance of the specialized implementation of [LinkedHashSet] with the specified [String] elements,\n * which elements the keys as properties of JS object without hashing them.\n */\npublic fun linkedStringSetOf(vararg elements: String): LinkedHashSet<String> {\n return LinkedHashSet(linkedStringMapOf<Any>()).apply { addAll(elements) }\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin\n\nimport kotlin.contracts.*\n\n\n@Deprecated(\"Do not use Synchronized annotation in pure Kotlin/JS code\", level = DeprecationLevel.ERROR)\npublic typealias Synchronized = kotlin.jvm.Synchronized\n\n@Deprecated(\"Do not use Volatile annotation in pure Kotlin/JS code\", level = DeprecationLevel.ERROR)\npublic typealias Volatile = kotlin.jvm.Volatile\n\n@kotlin.internal.InlineOnly\npublic actual inline fun <R> synchronized(lock: Any, block: () -> R): R {\n contract {\n callsInPlace(block, InvocationKind.EXACTLY_ONCE)\n }\n return block()\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.io\n\ninternal abstract class BaseOutput {\n open fun println() {\n print(\"\\n\")\n }\n\n open fun println(message: Any?) {\n print(message)\n println()\n }\n\n abstract fun print(message: Any?)\n\n open fun flush() {}\n}\n\n/** JsName used to make the declaration available outside of module to test it */\n@JsName(\"NodeJsOutput\")\ninternal class NodeJsOutput(val outputStream: dynamic) : BaseOutput() {\n override fun print(message: Any?) = outputStream.write(String(message))\n}\n\n/** JsName used to make the declaration available
outside of module to test it */\n@JsName(\"OutputToConsoleLog\")\ninternal class OutputToConsoleLog : BaseOutput() {\n override fun print(message: Any?) {\n console.log(message)\n }\n\n override fun println(message: Any?) {\n console.log(message)\n }\n\n override fun println() {\n console.log(\"\")\n }\n}\n\n/** JsName used to make the declaration available outside of module to test it and use at try.kotl.in */\n@JsName(\"BufferedOutput\")\ninternal open class BufferedOutput : BaseOutput() {\n var buffer = \"\"\n\n override fun print(message: Any?) {\n buffer += String(message)\n }\n\n override fun flush() {\n buffer = \"\"\n }\n}\n\n/** JsName used to make the declaration available outside of module to test it */\n@JsName(\"BufferedOutputToConsoleLog\")\ninternal class BufferedOutputToConsoleLog : BufferedOutput() {\n override fun print(message: Any?) {\n var s = String(message)\n val i = s.lastIndexOf('\\n')\n if (i >= 0) {\n buffer += s.substring(0, i)\n flush()\n s = s.substring(i + 1)\n }\n buffer += s\n }\n\n override fun flush() {\n console.log(buffer)\n buffer = \"\"\n }\n}\n\n/** JsName used to make the declaration available outside of module to test it and use at try.kotl.in */\n@JsName(\"output\")\ninternal var output = run {\n val isNode: Boolean = js(\"typeof process !== 'undefined' && process.versions && !!process.versions.node\")\n if (isNode) NodeJsOutput(js(\"process.stdout\")) else BufferedOutputToConsoleLog()\n}\n\n@kotlin.internal.InlineOnly\nprivate inline fun String(value: Any?): String = js(\"String\")(value)\n\n/** Prints the line separator to the standard output stream. */\npublic actual fun println() {\n output.println()\n}\n\n/** Prints the given [message] and the line separator to the standard output stream. */\npublic actual fun println(message: Any?) {\n output.println(message)\n}\n\n/**
Prints the given [message] to the standard output stream. */\npublic actual fun print(message: Any?) {\n output.print(message)\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.coroutines\n\nimport

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kotlin.coroutines.intrinsics.COROUTINE_SUSPENDED\n\n@SinceKotlin(\"1.3\")\n@JsName(\"CoroutineImpl\")\ninternal abstract class CoroutineImpl(private val resultContinuation: Continuation<Any?>) : Continuation<Any?> {\n    protected var state = 0\n    protected var exceptionState = 0\n    protected var result: Any? = null\n    protected var exception: Throwable? = null\n    protected var finallyPath: Array<Int>? = null\n\n    public override val context: CoroutineContext = resultContinuation.context\n\n    private var intercepted_: Continuation<Any?>? = null\n\n    public fun intercepted(): Continuation<Any?> =\n        intercepted_\n            ?: (context[ContinuationInterceptor]?.interceptContinuation(this) ?: this)\n                .also { intercepted_ = it }\n\n    override fun resumeWith(result: Result<Any?>) {\n        var current = this\n        var currentResult: Any? = result.getOrNull()\n        var currentException: Throwable? = result.exceptionOrNull()\n\n        // This loop unrolls recursion in current.resumeWith(param) to make saner and shorter stack traces on resume\n        while (true) {\n            with(current) {\n                val completion = resultContinuation\n\n                // Set result and exception fields in the current continuation\n                if (currentException == null) {\n                    this.result = currentResult\n                } else {\n                    state = exceptionState\n                    exception = currentException\n                }\n\n                try {\n                    val outcome = doResume()\n                    if (outcome === COROUTINE_SUSPENDED) return\n                    currentResult = outcome\n                    currentException = null\n                } catch (exception: dynamic) { // Catch all exceptions\n                    currentResult = null\n                    currentException = exception.unsafeCast<Throwable>()\n                }\n\n                releaseIntercepted() // this state machine instance is terminating\n\n                if (completion is CoroutineImpl) {\n                    // unrolling recursion via loop\n                    current = completion\n                } else {\n                    // top-level completion reached -- invoke and return\n                    currentException?.let {\n                        completion.resumeWithException(it)\n                    } ?: completion.resume(currentResult)\n                    return\n                }\n            }\n        }\n    }\n\n    private fun releaseIntercepted() {\n        val intercepted = intercepted_\n        if (intercepted != null && intercepted !== this) {\n            context[ContinuationInterceptor]!!.releaseInterceptedContinuation(intercepted)\n        }\n        this.intercepted_ = CompletedContinuation // just in case\n    }\n\n    protected abstract fun doResume(): Any?\n}\n\ninternal object CompletedContinuation : Continuation<Any?> {\n    override val context: CoroutineContext\n        get() = error(\"This continuation is already complete\")\n\n    override fun resumeWith(result: Result<Any?>) {\n        error(\"This continuation is already complete\")\n    }\n\n    override fun toString(): String = \"This continuation is already complete\"\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:Suppress(\"UNCHECKED_CAST\", \"RedundantVisibilityModifier\")\n\npackage kotlin\n\nimport kotlin.contracts.*\nimport kotlin.internal.InlineOnly\nimport kotlin.jvm.JvmField\n\n/**\n * A discriminated union that encapsulates successful outcome with a value of type [T]\n * or a failure with an arbitrary [Throwable] exception.\n */\n@Suppress(\"NON_PUBLIC_PRIMARY_CONSTRUCTOR_OF_INLINE_CLASS\")\n@SinceKotlin(\"1.3\")\npublic inline class Result<out T> @PublishedApi internal constructor(\n    @PublishedApi\n    internal val value: Any?\n) : Serializable {\n    // discovery\n\n    /**\n     * Returns `true` if this instance represents successful outcome.\n     * In this case [isFailure] returns `false`.\n     */\n    public val isSuccess: Boolean get() = value !is Failure\n\n    /**\n     * Returns `true` if this instance represents failed outcome.\n     * In this case [isSuccess] returns `false`.\n     */\n    public val isFailure: Boolean get() = value is Failure\n\n    // value & exception retrieval\n\n    /**\n     * Returns the encapsulated value if this instance represents [success][Result.isSuccess] or `null`\n     * if it is [failure][Result.isFailure].\n     *\n     * This function is shorthand for `getOrElse { null }` (see [getOrElse]) or\n     * `fold(onSuccess = { it }, onFailure = { null })` (see [fold]).\n     */\n    @InlineOnly\n    public inline fun getOrNull(): T? =\n        when {\n            isFailure -> null\n            else -> value as T\n        }\n\n    /**\n     * Returns the encapsulated exception if this instance represents [failure][isFailure] or `null`\n     * if it is [success][isSuccess].\n     *\n     * This function is shorthand for `fold(onSuccess = { null }, onFailure = { it })` (see [fold]).\n     */\n    public fun exceptionOrNull(): Throwable? =\n        when (value) {\n            is Failure -> value.exception\n            else -> null\n        }\n\n    /**\n
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* Returns a string `Success(v)` if this instance represents [success][Result.isSuccess]\n     * where `v` is a string representation of the value or a string `Failure(x)` if\n     * it is [failure][isFailure] where `x` is a string representation
 of the exception.\n     */\n    public override fun toString(): String =\n        when (value) {\n            is Failure -> value.toString() // \"Failure($exception)\"\n            else -> \"Success($value)\"\n        }\n\n    // companion with constructors\n\n    /**\n     * Companion object for [Result] class that contains its constructor functions\n     * [success] and [failure].\n     */\n    public companion object {\n        /**\n         * Returns an instance that encapsulates the given [value] as successful value.\n         */\n        @InlineOnly\n        public inline fun <T> success(value: T): Result<T> =\n            Result(value)\n\n        /**\n         * Returns an instance that encapsulates the given [exception] as failure.\n         */\n        @InlineOnly\n        public inline fun <T> failure(exception: Throwable): Result<T> =\n            Result(createFailure(exception))\n    }\n\n    internal class Failure(\n        @JvmField\n        val exception: Throwable\n    ) : Serializable {\n        override fun equals(other: Any?): Boolean = other is Failure && exception == other.exception\n        override fun hashCode(): Int = exception.hashCode()\n        override fun toString(): String = \"Failure($exception)\"\n    }\n}\n\n/**\n * Creates an instance of internal marker [Result.Failure] class to\n * make sure that this class is not exposed in ABI.\n */\n@PublishedApi\n@SinceKotlin(\"1.3\")\ninternal fun createFailure(exception: Throwable): Any =\n    Result.Failure(exception)\n\n/**\n * Throws exception if the result is failure. This internal function minimizes\n * inlined bytecode for [getOrThrow] and makes sure that in the future we can\n * add some exception-augmenting logic here (if needed).\n */\n@PublishedApi\n@SinceKotlin(\"1.3\")\ninternal fun Result<*>.throwOnFailure() {\n    if (value is Result.Failure) throw value.exception\n}\n\n/**\n * Calls the specified function [block] and returns its encapsulated result if invocation was successful,\n
 * catching and encapsulating any thrown exception as a failure.\n */\n@InlineOnly\n@SinceKotlin(\"1.3\")\npublic inline fun <R> runCatching(block: () -> R): Result<R> {\n    return try {\n        Result.success(block())\n    } catch (e: Throwable) {\n        Result.failure(e)\n    }\n}\n\n/**\n * Calls the specified function [block] with `this` value as its receiver and returns its encapsulated result\n * if invocation was successful, catching and encapsulating any thrown exception as a failure.\n */\n@InlineOnly\n@SinceKotlin(\"1.3\")\npublic inline fun <T, R> T.runCatching(block: T.() -> R): Result<R> {\n    return try {\n        Result.success(block())\n    } catch (e: Throwable) {\n        Result.failure(e)\n    }\n}\n\n// -- extensions ---\n\n/**\n * Returns the encapsulated value if this instance represents [success][Result.isSuccess] or throws the encapsulated exception\n * if it is [failure][Result.isFailure].\n *\n * This function is shorthand for `getOrElse { throw
 it }` (see [getOrElse]).\n */\n@InlineOnly\n@SinceKotlin(\"1.3\")\npublic inline fun <T> Result<T>.getOrThrow(): T {\n    throwOnFailure()\n    return value as T\n}\n\n/**\n * Returns the encapsulated value if this instance represents [success][Result.isSuccess] or the\n * result of [onFailure] function for encapsulated exception if it is [failure][Result.isFailure].\n *\n * Note, that an exception thrown by [onFailure] function is rethrown by this function.\n *\n * This function is shorthand for `fold(onSuccess = { it }, onFailure = onFailure)` (see [fold]).\n */\n@InlineOnly\n@SinceKotlin(\"1.3\")\npublic inline fun <R, T : R> Result<T>.getOrElse(onFailure: (exception: Throwable) -> R): R {\n    contract {\n        callsInPlace(onFailure, InvocationKind.AT_MOST_ONCE)\n    }\n    return when (val exception = exceptionOrNull()) {\n        null -> value as T\n        else -> onFailure(exception)\n    }\n}\n\n/**\n * Returns the encapsulated value if this instance represents [success][Result.isSuccess]
 or the\n * [defaultValue] if it is [failure][Result.isFailure].\n *\n * This function is shorthand for `getOrElse { defaultValue }` (see [getOrElse]).\n */\n@InlineOnly\n@SinceKotlin(\"1.3\")\npublic inline fun <R, T : R> Result<T>.getOrDefault(defaultValue: R): R {\n    if (isFailure) return defaultValue\n    return value as T\n}\n\n/**\n * Returns the the result of [onSuccess] for encapsulated value if this instance represents [success][Result.isSuccess]\n * or the result of [onFailure] function for encapsulated exception if it is [failure][Result.isFailure].\n *\n * Note, that an exception thrown by [onSuccess] or by [onFailure] function is rethrown by this function.\n */\n@InlineOnly\n@SinceKotlin(\"1.3\")\npublic inline fun <R, T> Result<T>.fold(\n
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onSuccess: (value: T) -> R,\n   onFailure: (exception: Throwable) -> R\n): R {\n   contract {\n callsInPlace(onSuccess, InvocationKind.AT_MOST_ONCE)\n   callsInPlace(onFailure, InvocationKind.AT_MOST_ONCE)\n
    }\n   return when (val exception = exceptionOrNull()) {\n   null -> onSuccess(value as T)\n   else -> onFailure(exception)\n   }\n}\n\n// transformation\n\n/**\n * Returns the encapsulated result of the given [transform] function applied to encapsulated value\n * if this instance represents [success][Result.isSuccess] or the\n * original encapsulated exception if it is [failure][Result.isFailure].\n *\n * Note, that an exception thrown by [transform] function is rethrown by this function.\n * See [mapCatching] for an alternative that encapsulates exceptions.\n */\n@InlineOnly\n@SinceKotlin(\"1.3\")\npublic inline fun <R, T> Result<T>.map(transform: (value: T) -> R): Result<R> {\n   contract {\n   callsInPlace(transform, InvocationKind.AT_MOST_ONCE)\n   }\n return when {\n   isSuccess -> Result.success(transform(value as T))\n   else -> Result(value)\n }\n}\n\n/**\n * Returns the encapsulated result of the given [transform] function applied to
 encapsulated value\n * if this instance represents [success][Result.isSuccess] or the\n * original encapsulated exception if it is [failure][Result.isFailure].\n *\n * Any exception thrown by [transform] function is caught, encapsulated as a failure and returned by this function.\n * See [map] for an alternative that rethrows exceptions.\n */\n@InlineOnly\n@SinceKotlin(\"1.3\")\npublic inline fun <R, T> Result<T>.mapCatching(transform: (value: T) -> R): Result<R> {\n   return when {\n   isSuccess -> runCatching { transform(value as T) }\n   else -> Result(value)\n   }\n}\n\n/**\n * Returns the encapsulated result of the given [transform] function applied to encapsulated exception\n * if this instance represents [failure][Result.isFailure] or the\n * original encapsulated value if it is [success][Result.isSuccess].\n *\n * Note, that an exception thrown by [transform] function is rethrown by this function.\n * See [recoverCatching] for an alternative that encapsulates exceptions.\n
 */\n@InlineOnly\n@SinceKotlin(\"1.3\")\npublic inline fun <R, T : R> Result<T>.recover(transform: (exception: Throwable) -> R): Result<R> {\n   contract {\n   callsInPlace(transform, InvocationKind.AT_MOST_ONCE)\n }\n   return when (val exception = exceptionOrNull()) {\n   null -> this\n   else -> Result.success(transform(exception))\n   }\n}\n\n/**\n * Returns the encapsulated result of the given [transform] function applied to encapsulated exception\n * if this instance represents [failure][Result.isFailure] or the\n * original encapsulated value if it is [success][Result.isSuccess].\n *\n * Any exception thrown by [transform] function is caught, encapsulated as a failure and returned by this function.\n * See [recover] for an alternative that rethrows exceptions.\n */\n@InlineOnly\n@SinceKotlin(\"1.3\")\npublic inline fun <R, T : R> Result<T>.recoverCatching(transform: (exception: Throwable) -> R): Result<R> {\n   val value = value // workaround for inline
 classes BE bug\n   return when (val exception = exceptionOrNull()) {\n   null -> this\n   else -> runCatching { transform(exception) }\n   }\n}\n\n// \"peek\" onto value/exception and pipe\n\n/**\n * Performs the given [action] on encapsulated exception if this instance represents [failure][Result.isFailure].\n * Returns the original `Result` unchanged.\n */\n@InlineOnly\n@SinceKotlin(\"1.3\")\npublic inline fun <T> Result<T>.onFailure(action: (exception: Throwable) -> Unit): Result<T> {\n   contract {\n   callsInPlace(action, InvocationKind.AT_MOST_ONCE)\n   }\n   exceptionOrNull()?.let { action(it) }\n   return this\n}\n\n/**\n * Performs the given [action] on encapsulated value if this instance represents [success][Result.isSuccess].\n * Returns the original `Result` unchanged.\n */\n@InlineOnly\n@SinceKotlin(\"1.3\")\npublic inline fun <T> Result<T>.onSuccess(action: (value: T) -> Unit): Result<T> {\n   contract {\n   callsInPlace(action, InvocationKind.AT_MOST_ONCE)\n
    }\n   if (isSuccess) action(value as T)\n   return this\n}\n\n// ----------\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.coroutines\n\nimport kotlin.coroutines.intrinsics.CoroutineSingletons.*\nimport kotlin.coroutines.intrinsics.COROUTINE_SUSPENDED\n\n@PublishedApi\n@SinceKotlin(\"1.3\")\ninternal actual class SafeContinuation<in T>\ninternal actual constructor(\n   private val delegate: Continuation<T>,\n initialResult: Any?\n) : Continuation<T> {\n   @PublishedApi\n   internal actual constructor(delegate:

Continuation<T>) : this(delegate, UNDECIDED)\n\n   public actual override val context: CoroutineContext\n get() = delegate.context\n\n   private var result: Any? = initialResult\n\n   public actual override fun resumeWith(result: Result<T>) {\n   val cur = this.result\n   when {\n   cur === UNDECIDED -> {\n   this.result = result.value\n   }\n   cur === COROUTINE_SUSPENDED -> {\n   this.result = RESUMED\n   delegate.resumeWith(result)\n   }\n   else -> throw IllegalStateException(\"Already resumed\")\n   }\n   }\n\n   @PublishedApi\n internal actual fun getOrThrow(): Any? {\n   if (result === UNDECIDED) {\n   result = COROUTINE_SUSPENDED\n   return COROUTINE_SUSPENDED\n   }\n   val result = this.result\n return when {\n   result === RESUMED -> COROUTINE_SUSPENDED // already called continuation, indicate COROUTINE_SUSPENDED upstream\n   result is Result.Failure -> throw result.exception\n   else -> result // either COROUTINE_SUSPENDED or data\n   }\n   }\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt
 file.\n */\n\npackage kotlin.coroutines.intrinsics\n\nimport kotlin.coroutines.*\nimport kotlin.internal.InlineOnly\n\n/**\n * Starts unintercepted coroutine without receiver and with result type [T] and executes it until its first suspension.\n * Returns the result of the coroutine or throws its exception if it does not suspend or [COROUTINE_SUSPENDED] if it suspends.\n * In the later case, the [completion] continuation is invoked when coroutine completes with result or exception.\n *\n * The coroutine is started directly in the invoker's thread without going through the [ContinuationInterceptor] that might\n * be present in the completion's [CoroutineContext]. It is invoker's responsibility to ensure that the proper invocation\n * context is established.\n *\n * This function is designed to be used from inside of [suspendCoroutineUninterceptedOrReturn] to resume the execution of suspended\n * coroutine using a reference to the suspending function.\n */\n@SinceKotlin(\"1.3\")\n@InlineOnly\npublic
 actual inline fun <T> (suspend () -> T).startCoroutineUninterceptedOrReturn(\n   completion: Continuation<T>\n): Any? = this.asDynamic()(completion, false)\n\n/**\n * Starts unintercepted coroutine with receiver type [R] and result type [T] and executes it until its first suspension.\n * Returns the result of the coroutine or throws its exception if it does not suspend or [COROUTINE_SUSPENDED] if it suspends.\n * In the later case, the [completion] continuation is invoked when coroutine completes with result or exception.\n *\n * The coroutine is started directly in the invoker's thread without going through the [ContinuationInterceptor] that might\n * be present in the completion's [CoroutineContext]. It is invoker's responsibility to ensure that the proper invocation\n * context is established.\n *\n * This function is designed to be used from inside of [suspendCoroutineUninterceptedOrReturn] to resume the execution of suspended\n * coroutine using a reference
 to the suspending function.\n */\n@SinceKotlin(\"1.3\")\n@InlineOnly\npublic actual inline fun <R, T> (suspend R.() -> T).startCoroutineUninterceptedOrReturn(\n   receiver: R,\n   completion: Continuation<T>\n): Any? = this.asDynamic()(receiver, completion, false)\n\n\n/**\n * Creates unintercepted coroutine without receiver and with result type [T].\n * This function creates a new, fresh instance of suspendable computation every time it is invoked.\n *\n * To start executing the created coroutine, invoke `resume(Unit)` on the returned [Continuation] instance.\n * The [completion] continuation is invoked when coroutine completes with result or exception.\n *\n * This function returns unintercepted continuation.\n * Invocation of `resume(Unit)` starts coroutine immediately in the invoker's call stack without going through the\n * [ContinuationInterceptor] that might be present in the completion's [CoroutineContext].\n * It is invoker's responsibility to ensure that the proper invocation
 context is established.\n * Note that [completion] of this function may get invoked in an arbitrary context.\n *\n * [Continuation.intercepted] can be used to acquire the intercepted continuation.\n * Invocation of `resume(Unit)` on intercepted continuation guarantees that execution of\n * both the coroutine and [completion] happens in the invocation context established by\n * [ContinuationInterceptor].\n *\n * Repeated invocation of any resume function on the resulting continuation corrupts the\n * state machine of the coroutine and may result in arbitrary behaviour or exception.\n */\n@SinceKotlin(\"1.3\")\npublic actual fun <T> (suspend () -> T).createCoroutineUnintercepted(\n completion: Continuation<T>\n): Continuation<Unit> =\n   // Kotlin/JS suspend lambdas have an extra parameter

`suspended`\n   if (this.asDynamic().length == 2) {\n   // When `suspended` is true the continuation is created, but not executed\n   this.asDynamic()(completion, true)\n   } else {\n   createCoroutineFromSuspendFunction(completion) {\n   this.asDynamic()(completion)\n   }\n}\n\n/**\n * Creates unintercepted coroutine with receiver type [R] and result type [T].\n * This function creates a new, fresh instance of suspendable computation every time it is invoked.\n *\n * To start executing the created coroutine, invoke `resume(Unit)` on the returned [Continuation] instance.\n * The [completion] continuation is invoked when coroutine completes with result or exception.\n *\n * This function returns unintercepted continuation.\n * Invocation of `resume(Unit)` starts coroutine immediately in the invoker's call stack without going through the\n * [ContinuationInterceptor] that might be present in the completion's [CoroutineContext].\n * It is invoker's responsibility to ensure that the proper invocation context is established.\n * Note that [completion] of this function may get invoked in an arbitrary context.\n *\n * [Continuation.intercepted] can be used to acquire the intercepted continuation.\n * Invocation of `resume(Unit)` on intercepted continuation guarantees that execution of\n * both the coroutine and [completion] happens in the invocation context established by\n * [ContinuationInterceptor].\n *\n * Repeated invocation of any resume function on the resulting continuation corrupts the\n * state machine of the coroutine and may result in arbitrary behaviour or exception.\n */\n@SinceKotlin(\"1.3\")\npublic actual fun <R, T> (suspend R.() -> T).createCoroutineUnintercepted(\n   receiver: R,\n   completion: Continuation<T>\n): Continuation<Unit> =\n   // Kotlin/JS suspend lambdas have an extra parameter `suspended`\n   if (this.asDynamic().length == 3) {\n   // When `suspended` is true the continuation is created, but not executed\n   this.asDynamic()(receiver, completion, true)\n   } else {\n   createCoroutineFromSuspendFunction(completion) {\n   this.asDynamic()(receiver, completion)\n   }\n   }\n\n/**\n * Intercepts this continuation with [ContinuationInterceptor].\n *\n * This function shall be used on the immediate result of [createCoroutineUnintercepted] or [suspendCoroutineUninterceptedOrReturn],\n * in which case it checks for [ContinuationInterceptor] in the continuation's [context][Continuation.context],\n * invokes [ContinuationInterceptor.interceptContinuation], caches and returns result.\n *\n * If this function is invoked on other [Continuation] instances it returns `this` continuation unchanged.\n */\n@SinceKotlin(\"1.3\")\npublic actual fun <T> Continuation<T>.intercepted(): Continuation<T> =\n   (this as? CoroutineImpl)?.intercepted() ?: this\n\n\nprivate inline fun <T> createCoroutineFromSuspendFunction(\n   completion: Continuation<T>,\n   crossinline block: () -> Any?\n): Continuation<Unit> {\n   @Suppress(\"UNCHECKED_CAST\")\n   return object : CoroutineImpl(completion as Continuation<Any?>) {\n   override fun doResume(): Any? {\n   exception?.let { throw it }\n   return block()\n   }\n   }\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.coroutines.js.internal\n\nimport kotlin.coroutines.Continuation\nimport kotlin.coroutines.EmptyCoroutineContext\n\n@PublishedApi\n@SinceKotlin(\"1.3\")\ninternal val EmptyContinuation = Continuation<Any?>(EmptyCoroutineContext) { result ->\n   result.getOrThrow()\n}","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.js\n\n/**\n * Exposes the [Date API](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Date) to Kotlin.\n */\n@Suppress(\"NOT_DOCUMENTED\")\npublic external class Date() {\n   public constructor(milliseconds: Number)\n\n   public constructor(dateString: String)\n\n   public constructor(year: Int, month: Int)\n\n   public constructor(year: Int, month: Int, day: Int)\n\n   public constructor(year: Int, month: Int, day: Int, hour: Int)\n\n   public constructor(year: Int, month: Int, day: Int, hour: Int, minute: Int)\n\n   public constructor(year: Int, month: Int, day: Int, hour: Int, minute: Int, second: Int)\n\n   public constructor(year: Int, month: Int, day: Int, hour: Int, minute: Int, second: Int, millisecond: Number)\n\n   public fun getDate(): Int\n\n   public fun getDay(): Int\n\n   public fun getFullYear(): Int\n\n   public fun getHours(): Int\n\n   public fun getMilliseconds(): Int\n\n   public fun getMinutes(): Int\n\n   public fun getMonth(): Int\n\n   public fun getSeconds(): Int\n\n   public fun getTime(): Double\n\n   public fun

getTimezoneOffset(): Int\n\n   public fun getUTCDate(): Int\n\n   public fun getUTCDay(): Int\n\n   public fun getUTCFullYear(): Int\n\n   public fun getUTCHours():
Int\n\n   public fun getUTCMilliseconds(): Int\n\n   public fun getUTCMinutes(): Int\n\n   public fun getUTCMonth(): Int\n\n   public fun getUTCSeconds(): Int\n\n   public fun toDateString(): String\n\n   public fun toISOString(): String\n\n   public fun toJSON(): Json\n\n   public fun toLocaleDateString(locales: Array<String> = definedExternally, options: LocaleOptions = definedExternally): String\n\n   public fun toLocaleDateString(locales: String, options: LocaleOptions = definedExternally): String\n\n   public fun toLocaleString(locales: Array<String> = definedExternally, options: LocaleOptions = definedExternally): String\n\n   public fun toLocaleString(locales: String, options: LocaleOptions = definedExternally): String\n\n   public fun toLocaleTimeString(locales: Array<String> = definedExternally, options: LocaleOptions = definedExternally): String\n\n   public fun toLocaleTimeString(locales: String, options: LocaleOptions = definedExternally): String\n\n   public
fun toTimeString(): String\n\n   public fun toUTCString(): String\n\n   public companion object {\n   public fun now(): Double\n\n   public fun parse(dateString: String): Double\n\n   public fun UTC(year: Int, month: Int): Double\n\n   public fun UTC(year: Int, month: Int, day: Int): Double\n\n   public fun UTC(year: Int, month: Int, day: Int, hour: Int): Double\n\n   public fun UTC(year: Int, month: Int, day: Int, hour: Int, minute: Int): Double\n\n   public fun UTC(year: Int, month: Int, day: Int, hour: Int, minute: Int, second: Int): Double\n\n
public fun UTC(year: Int, month: Int, day: Int, hour: Int, minute: Int, second: Int, millisecond: Number): Double\n   }\n\n   public interface LocaleOptions {\n   public var localeMatcher: String?\n\n   public var timeZone: String?\n\n   public var hour12: Boolean?\n\n   public var formatMatcher: String?\n\n   public var weekday: String?\n\n   public var era: String?\n\n
        public var year: String?\n\n   public var month: String?\n\n   public var day: String?\n\n   public var hour: String?\n\n   public var minute: String?\n\n   public var second: String?\n\n   public var timeZoneName: String?\n   }\n}\n\npublic inline fun dateLocaleOptions(init: Date.LocaleOptions.() -> Unit): Date.LocaleOptions {\n   val result = js(\"new Object()\").unsafeCast<Date.LocaleOptions>()\n   init(result)\n   return result\n}","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.dom\n\nimport org.w3c.dom.*\n\n/**\n * Creates a new element with the specified [name].\n *\n * The element is initialized with the speicifed [init] function.\n */\npublic fun Document.createElement(name: String, init: Element.() -> Unit): Element = createElement(name).apply(init)\n\n/**\n * Appends a newly created element with
the specified [name] to this element.\n *\n * The element is initialized with the speicifed [init] function.\n */\npublic fun Element.appendElement(name: String, init: Element.() -> Unit): Element =\n ownerDocument!!.createElement(name, init).also { appendChild(it) }\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.dom\n\nimport org.w3c.dom.*\n\n/** Returns true if the element has the given CSS class style in its 'class' attribute */\nfun Element.hasClass(cssClass: String): Boolean = className.matches(\"\\"\"(^|.*\\s+)$cssClass($|\\s+.*)\"\\"\".toRegex())\n\n/**\n * Adds CSS class to element. Has no effect if all specified classes are already in class attribute of the element\n *\n * @return true if at least one class has been added\n */\nfun Element.addClass(vararg cssClasses: String): Boolean {\n   val missingClasses = cssClasses.filterNot
{ hasClass(it) }\n   if (missingClasses.isNotEmpty()) {\n   val presentClasses = className.trim()\n   className = buildString {\n   append(presentClasses)\n   if (!presentClasses.isEmpty()) {\n   append(\" \")\n   }\n   missingClasses.joinTo(this, \" \")\n   }\n   return true\n   }\n\n   return false\n}\n\n/**\n * Removes all [cssClasses] from element. Has no effect if all specified classes are missing in class attribute of the element\n *\n * @return true if at least one class has been removed\n */\nfun Element.removeClass(vararg cssClasses: String): Boolean {\n   if (cssClasses.any { hasClass(it) }) {\n   val toBeRemoved = cssClasses.toSet()\n   className = className.trim().split(\"\\\\s+\".toRegex()).filter { it !in toBeRemoved }.joinToString(\" \")\n   return true\n   }\n\n   return false\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n

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 * that can be found in the license/LICENSE.txt file.\n
*/\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"StringsKt\")\n\npackage
kotlin.text\n\n/**\n * Converts the string into a regular expression [Regex] with the default options.\n
*/\n@kotlin.internal.InlineOnly\npublic inline fun String.toRegex(): Regex = Regex(this)\n\n/**\n * Converts the
string into a regular expression [Regex] with the specified single [option].\n */\n@kotlin.internal.InlineOnly\npublic
inline fun String.toRegex(option: RegexOption): Regex = Regex(this, option)\n\n/**\n * Converts the string into a
regular expression [Regex] with the specified set of [options].\n */\n@kotlin.internal.InlineOnly\npublic inline fun
String.toRegex(options: Set<RegexOption>): Regex = Regex(this, options)\n","/*\n * Copyright 2010-2018
JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the
license/LICENSE.txt file.\n
*/\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"StringsKt\")\n\npackage
 kotlin.text\n\n/**\n * Builds new string by populating newly created [StringBuilder] using provided
[builderAction]\n * and then converting it to [String].\n */\n@kotlin.internal.InlineOnly\npublic inline fun
buildString(builderAction: StringBuilder.() -> Unit): String =\n
StringBuilder().apply(builderAction).toString()\n\n/**\n * Builds new string by populating newly created
[StringBuilder] initialized with the given [capacity]\n * using provided [builderAction] and then converting it to
[String].\n */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic inline fun buildString(capacity: Int,
builderAction: StringBuilder.() -> Unit): String =\n
StringBuilder(capacity).apply(builderAction).toString()\n\n/**\n * Appends all arguments to the given
[Appendable].\n */\npublic fun <T : Appendable> T.append(vararg value: CharSequence?): T {\n    for (item in
value)\n        append(item)\n    return this\n}\n\n/**\n * Appends
 all arguments to the given StringBuilder.\n */\npublic fun StringBuilder.append(vararg value: String?):
StringBuilder {\n    for (item in value)\n        append(item)\n    return this\n}\n\n/**\n * Appends all arguments to
the given StringBuilder.\n */\npublic fun StringBuilder.append(vararg value: Any?): StringBuilder {\n    for (item in
value)\n        append(item)\n    return this\n}\n\n\ninternal fun <T> Appendable.appendElement(element: T,
transform: ((T) -> CharSequence)?) {\n    when {\n        transform != null -> append(transform(element))\n
element is CharSequence? -> append(element)\n        element is Char -> append(element)\n        else ->
append(element.toString())\n    }\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is
governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage
kotlin.dom\n\nimport org.w3c.dom.*\n\n/**\n * Gets a value indicating whether this node is a TEXT_NODE or a
CDATA_SECTION_NODE.\n
 */\npublic val Node.isText: Boolean\n    get() = nodeType == Node.TEXT_NODE || nodeType ==
Node.CDATA_SECTION_NODE\n\n/**\n * Gets a value indicating whether this node is an [Element].\n */\npublic
val Node.isElement: Boolean\n    get() = nodeType == Node.ELEMENT_NODE\n","/*\n * Copyright 2010-2018
JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the
license/LICENSE.txt file.\n */\n\npackage org.w3c.dom.events\n\npublic fun EventListener(handler: (Event) ->
Unit): EventListener = EventListenerHandler(handler)\n\nprivate class EventListenerHandler(private val handler:
(Event) -> Unit) : EventListener {\n    public override fun handleEvent(event: Event) {\n        handler(event)\n
}\n\n    public override fun toString(): String = \"EventListenerHandler($handler)\"\n}\n","/*\n * Copyright 2010-
2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the
license/LICENSE.txt
 file.\n */\n\npackage org.w3c.dom\n\npublic external interface ItemArrayLike<out T> {\n    val length: Int\n    fun
item(index: Int): T?\n}\n\n/**\n * Returns the view of this `ItemArrayLike<T>` collection as `List<T>`\n */\npublic
fun <T> ItemArrayLike<T>.asList(): List<T> = object : AbstractList<T>() {\n    override val size: Int get() =
this@asList.length\n\n    override fun get(index: Int): T = when (index) {\n        in 0..lastIndex ->
this@asList.item(index).unsafeCast<T>()\n        else -> throw IndexOutOfBoundsException(\"index $index is not in
range [0..$lastIndex]\")\n    }\n}","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed
by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage
```

kotlin.dom\n\nimport org.w3c.dom.*\n\n/** Removes all the children from this node. */\npublic fun Node.clear() {\n while (hasChildNodes()) {\n removeChild(firstChild!!)\n }\n}\n\n/**\n * Creates text node and append it to the element.\n *\n * @return this element\n */\nfun Element.appendText(text: String): Element {\n appendChild(ownerDocument!!.createTextNode(text))\n return this\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.js\n\n/**\n * Reinterprets this value as a value of the [dynamic type](/docs/reference/dynamic-type.html).\n */\n@kotlin.internal.InlineOnly\npublic inline fun Any?.asDynamic(): dynamic = this\n\n/**\n * Reinterprets this value as a value of the specified type [T] without any actual type checking.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Any?.unsafeCast(): @kotlin.internal.NoInfer T = this.asDynamic()\n\n/**\n * Reinterprets this `dynamic` value as a value of the specified type [T] without any actual type checking.\n */\n@kotlin.internal.DynamicExtension\n@JsName(\"unsafeCastDynamic\")\n@kotlin.internal.InlineOnly\npublic inline fun <T> dynamic.unsafeCast(): @kotlin.internal.NoInfer T = this\n\n/**\n * Allows to iterate this `dynamic` object in the following cases:\n * - when it has an `iterator` function,\n * - when it is an array\n * - when it is an instance of [kotlin.collections.Iterable]\n */\n@kotlin.internal.DynamicExtension\npublic operator fun dynamic.iterator(): Iterator<dynamic> {\n val r: Any? = this\n\n return when {\n this[\"iterator\"] != null -> \n this[\"iterator\"]()\n js(\"Kotlin\").isArrayish(r) -> \n r.unsafeCast<Array<*>>().iterator()\n\n else -> \n (r as Iterable<*>).iterator()\n }\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n// a package is omitted to get declarations directly under the module\n\n@JsName(\"throwNPE\")\ninternal fun throwNPE(message: String) {\n throw NullPointerException(message)\n}\n\n@JsName(\"throwCCE\")\ninternal fun throwCCE() {\n throw ClassCastException(\"Illegal cast\")\n}\n\n@JsName(\"throwISE\")\ninternal fun throwISE(message: String) {\n throw IllegalStateException(message)\n}\n\n@JsName(\"throwUPAE\")\ninternal fun throwUPAE(propertyName: String) {\n throw UninitializedPropertyAccessException(\"lateinit property ${propertyName} has not been initialized\")\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin\n\n// NOTE: Do not author your exceptions as they are written in this file, instead use this template:\n/*\npublic open class MyException : Exception {\n constructor() : super()\n constructor(message: String?) : super(message)\n constructor(message: String?, cause: Throwable?) : super(message, cause)\n constructor(cause: Throwable?) : super(cause)\n}\n*/\n\n\n//
TODO: remove workarounds for KT-22053 from direct Throwable inheritors\n// TODO: remove primary constructors, make all secondary KT-22055\n\n@Suppress(\"USELESS_ELVIS_RIGHT_IS_NULL\")\npublic actual open class Error actual constructor(message: String?, cause: Throwable?) : Throwable(message, cause ?: null) {\n actual constructor() : this(null, null) {\n Error::class.js.asDynamic().call(this, null, null)\n }\n\n actual constructor(message: String?) : this(message, null) {\n Error::class.js.asDynamic().call(this, message, null)\n }\n\n actual constructor(cause: Throwable?) : this(undefined, cause) {\n Error::class.js.asDynamic().call(this, undefined, cause)\n }\n}\n\n@Suppress(\"USELESS_ELVIS_RIGHT_IS_NULL\")\npublic actual open class Exception actual constructor(message: String?, cause: Throwable?) : Throwable(message, cause ?: null) {\n actual constructor() : this(null, null) {\n Exception::class.js.asDynamic().call(this, null, null)\n }\n\n actual constructor(message: String?) : this(message, null) {\n Exception::class.js.asDynamic().call(this, message, null)\n }\n\n actual constructor(cause: Throwable?) : this(undefined, cause) {\n Exception::class.js.asDynamic().call(this, undefined, cause)\n }\n}\n\npublic actual open class RuntimeException actual constructor(message: String?, cause: Throwable?) : Exception(message, cause) {\n actual constructor() : this(null, null)\n actual constructor(message: String?) : this(message, null)\n actual constructor(cause: Throwable?) : this(undefined, cause)\n}\n\npublic actual open class IllegalArgumentException actual constructor(message: String?, cause: Throwable?) : RuntimeException(message, cause) {\n actual constructor() : this(null, null)\n actual constructor(message: String?) : this(message, null)\n actual

constructor(cause: Throwable?) : this(undefined, cause)\n}\n\npublic actual open class IllegalStateException actual constructor(message:
String?, cause: Throwable?) : RuntimeException(message, cause) {\n actual constructor() : this(null, null)\n actual constructor(message: String?) : this(message, null)\n actual constructor(cause: Throwable?) : this(undefined, cause)\n}\n\npublic actual open class IndexOutOfBoundsException actual constructor(message: String?) : RuntimeException(message) {\n actual constructor() : this(null)\n}\n\npublic actual open class ConcurrentModificationException actual constructor(message: String?, cause: Throwable?) : RuntimeException(message, cause) {\n actual constructor() : this(null, null)\n actual constructor(message: String?) : this(message, null)\n actual constructor(cause: Throwable?) : this(undefined, cause)\n}\n\npublic actual open class UnsupportedOperationException actual constructor(message: String?, cause: Throwable?) : RuntimeException(message, cause) {\n actual constructor() : this(null, null)\n actual constructor(message: String?) : this(message,
null)\n actual constructor(cause: Throwable?) : this(undefined, cause)\n}\n\n\npublic actual open class NumberFormatException actual constructor(message: String?) : IllegalArgumentException(message) {\n actual constructor() : this(null)\n}\n\n\npublic actual open class NullPointerException actual constructor(message: String?) : RuntimeException(message) {\n actual constructor() : this(null)\n}\n\npublic actual open class ClassCastException actual constructor(message: String?) : RuntimeException(message) {\n actual constructor() : this(null)\n}\n\npublic actual open class AssertionError private constructor(message: String?, cause: Throwable?) : Error(message, cause) {\n actual constructor() : this(null)\n constructor(message: String?) : this(message, null)\n actual constructor(message: Any?) : this(message.toString(), message as? Throwable)\n}\n\npublic actual open class NoSuchElementException actual constructor(message: String?) : RuntimeException(message)
{\n actual constructor() : this(null)\n}\n\n@SinceKotlin(\"1.3\")\npublic actual open class ArithmeticException actual constructor(message: String?) : RuntimeException(message) {\n actual constructor() : this(null)\n}\n\npublic actual open class NoWhenBranchMatchedException actual constructor(message: String?, cause: Throwable?) : RuntimeException(message, cause) {\n actual constructor() : this(null, null)\n actual constructor(message: String?) : this(message, null)\n actual constructor(cause: Throwable?) : this(undefined, cause)\n}\n\npublic actual open class UninitializedPropertyAccessException actual constructor(message: String?, cause: Throwable?) : RuntimeException(message, cause) {\n actual constructor() : this(null, null)\n actual constructor(message: String?) : this(message, null)\n actual constructor(cause: Throwable?) : this(undefined, cause)\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n
* that can be found in the license/LICENSE.txt file.\n
*/\n\n@file:kotlin.jvm.JvmName(\"GroupingKt\")\n@file:kotlin.jvm.JvmMultifileClass\n\npackage kotlin.collections\n\n/**\n * Represents a source of elements with a [keyOf] function, which can be applied to each element to get its key.\n *\n * A [Grouping] structure serves as an intermediate step in group-and-fold operations:\n * they group elements by their keys and then fold each group with some aggregating operation.\n *\n * It is created by attaching `keySelector: (T) -> K` function to a source of elements.\n * To get an instance of [Grouping] use one of `groupingBy` extension functions:\n * - [Iterable.groupingBy]\n * - [Sequence.groupingBy]\n * - [Array.groupingBy]\n * - [CharSequence.groupingBy]\n *\n * For the list of group-and-fold operations available, see the [extension functions](#extension-functions) for `Grouping`.\n */\n@SinceKotlin(\"1.1\")\npublic interface Grouping<T, out K> {\n /** Returns an [Iterator]
over the elements of the source of this grouping. */\n fun sourceIterator(): Iterator<T>\n /** Extracts the key of an [element]. */\n fun keyOf(element: T): K\n}\n\n/**\n * Groups elements from the [Grouping] source by key and applies [operation] to the elements of each group sequentially,\n * passing the previously accumulated value and the current element as arguments, and stores the results in a new map.\n *\n * The key for each element is provided by the [Grouping.keyOf] function.\n *\n * @param operation function is invoked on each element with the following parameters:\n * - `key`: the key of the group this element belongs to;\n * - `accumulator`: the current value of the accumulator of the group, can be `null` if it's the first `element` encountered in the group;\n *

`element`: the element from the source being aggregated;\n * - `first`: indicates whether it's the first `element` encountered in the group.\n *\n * @return a [Map] associating the key of each group
 with the result of aggregation of the group elements.\n * @sample
samples.collections.Grouping.aggregateByRadix\n */\n@SinceKotlin(\"1.1\")\npublic inline fun <T, K, R> Grouping<T, K>.aggregate(\n   operation: (key: K, accumulator: R?, element: T, first: Boolean) -> R\n): Map<K, R> {\n   return aggregateTo(mutableMapOf<K, R>(), operation)\n}\n\n/**\n * Groups elements from the [Grouping] source by key and applies [operation] to the elements of each group sequentially,\n * passing the previously accumulated value and the current element as arguments,\n * and stores the results in the given [destination] map.\n *\n * The key for each element is provided by the [Grouping.keyOf] function.\n *\n * @param operation a function that is invoked on each element with the following parameters:\n * - `key`: the key of the group this element belongs to;\n * - `accumulator`: the current value of the accumulator of the group, can be `null` if it's the first `element` encountered in the group;\n *
 - `element`: the element from the source being aggregated;\n * - `first`: indicates whether it's the first `element` encountered in the group.\n *\n * If the [destination] map already has a value corresponding to some key,\n * then the elements being aggregated for that key are never considered as `first`.\n *\n * @return the [destination] map associating the key of each group with the result of aggregation of the group elements.\n * @sample
samples.collections.Grouping.aggregateByRadixTo\n */\n@SinceKotlin(\"1.1\")\npublic inline fun <T, K, R, M : MutableMap<in K, R>> Grouping<T, K>.aggregateTo(\n   destination: M,\n   operation: (key: K, accumulator: R?, element: T, first: Boolean) -> R\n): M {\n   for (e in this.sourceIterator()) {\n   val key = keyOf(e)\n   val accumulator = destination[key]\n   destination[key] = operation(key, accumulator, e, accumulator == null && !destination.containsKey(key))\n   }\n   return destination\n}\n\n/**\n * Groups elements from
 the [Grouping] source by key and applies [operation] to the elements of each group sequentially,\n * passing the previously accumulated value and the current element as arguments, and stores the results in a new map.\n * An initial value of accumulator is provided by [initialValueSelector] function.\n *\n * @param initialValueSelector a function that provides an initial value of accumulator for each group.\n * It's invoked with parameters:\n * - `key`: the key of the group;\n * - `element`: the first element being encountered in that group.\n *\n * @param operation a function that is invoked on each element with the following parameters:\n * - `key`: the key of the group this element belongs to;\n * - `accumulator`: the current value of the accumulator of the group;\n * - `element`: the element from the source being accumulated.\n *\n * @return a [Map] associating the key of each group with the result of accumulating the group elements.\n * @sample
samples.collections.Grouping.foldByEvenLengthWithComputedInitialValue\n
 */\n@SinceKotlin(\"1.1\")\npublic inline fun <T, K, R> Grouping<T, K>.fold(\n   initialValueSelector: (key: K, element: T) -> R,\n   operation: (key: K, accumulator: R, element: T) -> R\n): Map<K, R> =\n   @Suppress(\"UNCHECKED_CAST\")\n   aggregate { key, acc, e, first -> operation(key, if (first) initialValueSelector(key, e) else acc as R, e) }\n\n/**\n * Groups elements from the [Grouping] source by key and applies [operation] to the elements of each group sequentially,\n * passing the previously accumulated value and the current element as arguments,\n * and stores the results in the given [destination] map.\n * An initial value of accumulator is provided by [initialValueSelector] function.\n *\n * @param initialValueSelector a function that provides an initial value of accumulator for each group.\n * It's invoked with parameters:\n * - `key`: the key of the group;\n * - `element`: the first element being encountered in that group.\n
 *\n * If the [destination] map already has a value corresponding to some key, that value is used as an initial value of\n * the accumulator for that group and the [initialValueSelector] function is not called for that group.\n *\n * @param operation a function that is invoked on each element with the following parameters:\n * - `key`: the key of the group this element belongs to;\n * - `accumulator`: the current value of the accumulator of the group;\n * - `element`: the element from the source being accumulated.\n *\n * @return the [destination] map associating the key of each group with the result of accumulating the group elements.\n * @sample
samples.collections.Grouping.foldByEvenLengthWithComputedInitialValueTo\n */\n@SinceKotlin(\"1.1\")\npublic inline fun <T, K, R, M : MutableMap<in K, R>> Grouping<T, K>.foldTo(\n   destination: M,\n

initialValueSelector: (key: K, element: T) -> R,\n   operation: (key: K, accumulator: R, element: T) -> R\n): M =\n @Suppress(\"UNCHECKED_CAST\")\n
    aggregateTo(destination) { key, acc, e, first -> operation(key, if (first) initialValueSelector(key, e) else acc as R, e) }\n\n\n/**\n * Groups elements from the [Grouping] source by key and applies [operation] to the elements of each group sequentially,\n * passing the previously accumulated value and the current element as arguments, and stores the results in a new map.\n * An initial value of accumulator is the same [initialValue] for each group.\n *\n * @param operation a function that is invoked on each element with the following parameters:\n * - `accumulator`: the current value of the accumulator of the group;\n * - `element`: the element from the source being accumulated.\n *\n * @return a [Map] associating the key of each group with the result of accumulating the group elements.\n * @sample samples.collections.Grouping.foldByEvenLengthWithConstantInitialValue\n */\n@SinceKotlin(\"1.1\")\npublic inline fun <T, K, R> Grouping<T, K>.fold(\n   initialValue: R,\n   operation: (accumulator: R, element: T) -> R\n): Map<K, R> =\n   @Suppress(\"UNCHECKED_CAST\")\n aggregate { _, acc, e, first -> operation(if (first) initialValue else acc as R, e) }\n\n/**\n * Groups elements from the [Grouping] source by key and applies [operation] to the elements of each group sequentially,\n * passing the previously accumulated value and the current element as arguments,\n * and stores the results in the given [destination] map.\n * An initial value of accumulator is the same [initialValue] for each group.\n *\n * If the [destination] map already has a value corresponding to the key of some group,\n * that value is used as an initial value of the accumulator for that group.\n *\n * @param operation a function that is invoked on each element with the following parameters:\n * - `accumulator`: the current value of the accumulator of the group;\n * - `element`: the element from the source being accumulated.\n *\n * @return the [destination] map associating
 the key of each group with the result of accumulating the group elements.\n * @sample samples.collections.Grouping.foldByEvenLengthWithConstantInitialValueTo\n */\n@SinceKotlin(\"1.1\")\npublic inline fun <T, K, R, M : MutableMap<in K, R>> Grouping<T, K>.foldTo(\n   destination: M,\n   initialValue: R,\n
 operation: (accumulator: R, element: T) -> R\n): M =\n   @Suppress(\"UNCHECKED_CAST\")\n aggregateTo(destination) { _, acc, e, first -> operation(if (first) initialValue else acc as R, e) }\n\n\n/**\n * Groups elements from the [Grouping] source by key and applies the reducing [operation] to the elements of each group\n * sequentially starting from the second element of the group,\n * passing the previously accumulated value and the current element as arguments,\n * and stores the results in a new map.\n * An initial value of accumulator is the first element of the group.\n *\n * @param operation a function that is invoked on each subsequent element of the group with the following
 parameters:\n * - `key`: the key of the group this element belongs to;\n * - `accumulator`: the current value of the accumulator of the group;\n * - `element`: the element from the source being accumulated.\n *\n * @return a [Map] associating the key of each group with the result of accumulating the group elements.\n * @sample samples.collections.Grouping.reduceByMaxVowels\n */\n@SinceKotlin(\"1.1\")\npublic inline fun <S, T : S, K> Grouping<T, K>.reduce(\n   operation: (key: K, accumulator: S, element: T) -> S\n): Map<K, S> =\n   aggregate { key, acc, e, first ->\n   @Suppress(\"UNCHECKED_CAST\")\n   if (first) e else operation(key, acc as S, e)\n }\n\n/**\n * Groups elements from the [Grouping] source by key and applies the reducing [operation] to the elements of each group\n * sequentially starting from the second element of the group,\n * passing the previously accumulated value and the current element as arguments,\n * and stores the results in the given [destination]
 map.\n * An initial value of accumulator is the first element of the group.\n *\n * If the [destination] map already has a value corresponding to the key of some group,\n * that value is used as an initial value of the accumulator for that group and the first element of that group is also\n * subjected to the [operation].\n\n * @param operation a function that is invoked on each subsequent element of the group with the following parameters:\n * - `accumulator`: the current value of the accumulator of the group;\n * - `element`: the element from the source being folded;\n *\n * @return the [destination] map associating the key of each group with the result of accumulating the group elements.\n * @sample samples.collections.Grouping.reduceByMaxVowelsTo\n */\n@SinceKotlin(\"1.1\")\npublic inline fun <S, T : S, K, M : MutableMap<in K, S>> Grouping<T, K>.reduceTo(\n   destination: M,\n   operation: (key: K, accumulator: S, element: T) -> S\n): M =\n

aggregateTo(destination)
{ key, acc, e, first ->\n @Suppress(\"UNCHECKED_CAST\")\n if (first) e else operation(key, acc as S, e)\n }\n\n/**\n * Groups elements from the [Grouping] source by key and counts elements in each group to the given [destination] map.\n *\n * If the [destination] map already has a value corresponding to the key of some group,\n * that value is used as an initial value of the counter for that group.\n *\n * @return the [destination] map associating the key of each group with the count of elements in the group.\n *\n * @sample samples.collections.Grouping.groupingByEachCount\n */\n@SinceKotlin(\"1.1\")\npublic fun <T, K, M : MutableMap<in K, Int>> Grouping<T, K>.eachCountTo(destination: M): M =\n foldTo(destination, 0) { acc, _ -> acc + 1 }\n\n/*\n/**\n * Groups elements from the [Grouping] source by key and sums values provided by the [valueSelector] function for elements in each group\n * to the given [destination] map.\n *\n *\n * If the [destination] map already
has a value corresponding to the key of some group,\n * that value is used as an initial value of the sum for that group.\n *\n * @return the [destination] map associating the key of each group with the sum of elements in the group.\n */\n@SinceKotlin(\"1.1\")\npublic inline fun <T, K, M : MutableMap<in K, Int>> Grouping<T, K>.eachSumOfTo(destination: M, valueSelector: (T) -> Int): M =\n foldTo(destination, 0) { acc, e -> acc + valueSelector(e)}\n*/\n\n\n/*\n// TODO: sum by long and by double overloads\n\npublic inline fun <T, K, M : MutableMap<in K, Long>> Grouping<T, K>.sumEachByLongTo(destination: M, valueSelector: (T) -> Long): M =\n foldTo(destination, 0L) { acc, e -> acc + valueSelector(e)}\n\npublic inline fun <T, K> Grouping<T, K>.sumEachByLong(valueSelector: (T) -> Long): Map<K, Long> =\n fold(0L) { acc, e -> acc + valueSelector(e)}\n\npublic inline fun <T, K, M : MutableMap<in K, Double>> Grouping<T, K>.sumEachByDoubleTo(destination: M, valueSelector:
(T) -> Double): M =\n foldTo(destination, 0.0) { acc, e -> acc + valueSelector(e)}\n\npublic inline fun <T, K> Grouping<T, K>.sumEachByDouble(valueSelector: (T) -> Double): Map<K, Double> =\n fold(0.0) { acc, e -> acc + valueSelector(e)}\n*/\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\npackage kotlin.collections\n\n/**\n * Groups elements from the [Grouping] source by key and counts elements in each group.\n *\n * @return a [Map] associating the key of each group with the count of element in the group.\n */\n@SinceKotlin(\"1.1\")\npublic actual fun <T, K> Grouping<T, K>.eachCount(): Map<K, Int> =\n fold(0) { acc, _ -> acc + 1 }\n\n/*\n/**\n * Groups elements from the [Grouping] source by key and sums values provided by the [valueSelector] function for elements in each group.\n *\n * @return a [Map] associating the key of each group with the count
of element in the group.\n */\n@SinceKotlin(\"1.1\")\npublic inline fun <T, K> Grouping<T, K>.eachSumOf(valueSelector: (T) -> Int): Map<K, Int> =\n fold(0) { acc, e -> acc + valueSelector(e) }\n*/","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.js\n\n/**\n * Exposes the JavaScript [Math object](https://developer.mozilla.org/en/docs/Web/JavaScript/Reference/Global_Objects/Math) to Kotlin.\n */\n@Deprecated(\"Use top-level functions from kotlin.math package instead.\", level = DeprecationLevel.WARNING)\npublic external object Math {\n @Deprecated(\"Use kotlin.math.PI instead.\", ReplaceWith(\"PI\", \"kotlin.math.PI\"), level = DeprecationLevel.ERROR)\n public val PI: Double\n @Deprecated(\"Use Random.nextDouble instead\", ReplaceWith(\"kotlin.random.Random.nextDouble()\", \"kotlin.random.Random\"), level = DeprecationLevel.WARNING)\n
public fun random(): Double\n @Deprecated(\"Use kotlin.math.abs instead.\", ReplaceWith(\"abs(value)\", \"kotlin.math.abs\"), level = DeprecationLevel.ERROR)\n public fun abs(value: Double): Double\n @Deprecated(\"Use kotlin.math.acos instead.\", ReplaceWith(\"acos(value)\", \"kotlin.math.acos\"), level = DeprecationLevel.ERROR)\n public fun acos(value: Double): Double\n @Deprecated(\"Use kotlin.math.asin instead.\", ReplaceWith(\"asin(value)\", \"kotlin.math.asin\"), level = DeprecationLevel.ERROR)\n public fun asin(value: Double): Double\n @Deprecated(\"Use kotlin.math.atan instead.\", ReplaceWith(\"atan(value)\", \"kotlin.math.atan\"), level = DeprecationLevel.ERROR)\n public fun atan(value: Double): Double\n

@Deprecated(\"Use kotlin.math.atan2 instead.\", ReplaceWith(\"atan2(y, x)\", \"kotlin.math.atan2\"), level = DeprecationLevel.ERROR)\n   public fun atan2(y: Double, x: Double): Double\n   @Deprecated(\"Use kotlin.math.cos instead.\", ReplaceWith(\"cos(value)\",
\"kotlin.math.cos\"), level = DeprecationLevel.ERROR)\n   public fun cos(value: Double): Double\n @Deprecated(\"Use kotlin.math.sin instead.\", ReplaceWith(\"sin(value)\", \"kotlin.math.sin\"), level = DeprecationLevel.ERROR)\n   public fun sin(value: Double): Double\n   @Deprecated(\"Use kotlin.math.exp instead.\", ReplaceWith(\"exp(value)\", \"kotlin.math.exp\"), level = DeprecationLevel.ERROR)\n   public fun exp(value: Double): Double\n   @Deprecated(\"Use maxOf or kotlin.math.max instead\", level = DeprecationLevel.ERROR)\n   public fun max(vararg values: Int): Int\n   @Deprecated(\"Use maxOf or kotlin.math.max instead\", level = DeprecationLevel.ERROR)\n   public fun max(vararg values: Float): Float\n @Deprecated(\"Use maxOf or kotlin.math.max instead\", level = DeprecationLevel.ERROR)\n   public fun max(vararg values: Double): Double\n   @Deprecated(\"Use minOf or kotlin.math.min instead\", level = DeprecationLevel.ERROR)\n   public fun min(vararg
values: Int): Int\n   @Deprecated(\"Use minOf or kotlin.math.min instead\", level = DeprecationLevel.ERROR)\n public fun min(vararg values: Float): Float\n   @Deprecated(\"Use minOf or kotlin.math.min instead\", level = DeprecationLevel.ERROR)\n   public fun min(vararg values: Double): Double\n   @Deprecated(\"Use kotlin.math.sqrt instead.\", ReplaceWith(\"sqrt(value)\", \"kotlin.math.sqrt\"), level = DeprecationLevel.ERROR)\n public fun sqrt(value: Double): Double\n   @Deprecated(\"Use kotlin.math.tan instead.\", ReplaceWith(\"tan(value)\", \"kotlin.math.tan\"), level = DeprecationLevel.ERROR)\n   public fun tan(value: Double): Double\n   @Deprecated(\"Use kotlin.math.ln instead.\", ReplaceWith(\"ln(value)\", \"kotlin.math.ln\"), level = DeprecationLevel.ERROR)\n   public fun log(value: Double): Double\n   @Deprecated(\"Use kotlin.math.pow instead.\", ReplaceWith(\"pow(base, exp)\", \"kotlin.math.pow\"), level = DeprecationLevel.ERROR)\n   public fun pow(base: Double,
exp: Double): Double\n   @Deprecated(\"Use kotlin.math.round instead.\", ReplaceWith(\"round(value)\", \"kotlin.math.round\"), level = DeprecationLevel.ERROR)\n   public fun round(value: Number): Int\n @Deprecated(\"Use kotlin.math.floor instead.\", ReplaceWith(\"floor(value)\", \"kotlin.math.floor\"), level = DeprecationLevel.ERROR)\n   public fun floor(value: Number): Int\n   @Deprecated(\"Use kotlin.math.ceil instead.\", ReplaceWith(\"ceil(value)\", \"kotlin.math.ceil\"), level = DeprecationLevel.ERROR)\n   public fun ceil(value: Number): Int\n\n   @PublishedApi\n   internal fun trunc(value: Number): Double\n   @PublishedApi\n internal fun sign(value: Number): Double\n\n   @PublishedApi\n   internal fun sinh(value: Double): Double\n @PublishedApi\n   internal fun cosh(value: Double): Double\n   @PublishedApi\n   internal fun tanh(value: Double): Double\n   @PublishedApi\n   internal fun asinh(value: Double): Double\n   @PublishedApi\n   internal fun acosh(value:
Double): Double\n   @PublishedApi\n   internal fun atanh(value: Double): Double\n\n   @PublishedApi\n internal fun hypot(x: Double, y: Double): Double\n\n   @PublishedApi\n   internal fun expm1(value: Double): Double\n\n   @PublishedApi\n   internal fun log10(value: Double): Double\n   @PublishedApi\n   internal fun log2(value: Double): Double\n   @PublishedApi\n   internal fun log1p(value: Double): Double\n}\n\n/**\n * Returns the smaller of two values.\n */\n@Suppress(\"DEPRECATION\")\n@Deprecated(\"Use minOf or kotlin.math.min instead\", ReplaceWith(\"minOf(a, b)\"), level = DeprecationLevel.ERROR)\npublic fun Math.min(a: Long, b: Long): Long = if (a <= b) a else b\n\n/**\n * Returns the greater of two values.\n */\n@Suppress(\"DEPRECATION\")\n@Deprecated(\"Use maxOf or kotlin.math.max instead\", ReplaceWith(\"maxOf(a, b)\"), level = DeprecationLevel.ERROR)\npublic fun Math.max(a: Long, b: Long): Long = if (a >= b) a else b\n","/*\n * Copyright 2010-2018 JetBrains
s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.js\n\n/**\n * An interface for indexing access to a collection of key-value pairs, where type of key is [String] and type of value is [Any?][Any].\n */\npublic external interface Json {\n   /**\n   * Calls to the function will be translated to indexing operation (square brackets) on the receiver with [propertyName] as the argument.\n   *\n   * E.g. for next code:\n   * ```kotlin\n   * fun test(j: Json, p: String) =

j[\"prop\"] + j.get(p)\n * ```\n *\n * will be generated:\n * ```js\n * function test(j, p) {\n * return j[\"prop\"] + j[p];\n * }\n * ```\n */\n operator fun get(propertyName: String): Any?\n\n /**\n * Calls of the function will be translated to an assignment of [value] to the receiver indexed (with square brackets/index operation) with [propertyName].\n *\n
* E.g. for the following code:\n * ```kotlin\n * fun test(j: Json, p: String, newValue: Any) {\n * j[\"prop\"] = 1\n * j.set(p, newValue)\n * }\n * ```\n *\n * will be generated:\n * ```js\n * function test(j, p, newValue) {\n * j[\"prop\"] = 1;\n * j[p] = newValue;\n * }\n * }\n * ```\n */\n operator fun set(propertyName: String, value: Any?): Unit\n}\n\n/**\n * Returns a simple JavaScript object (as [Json]) using provided key-value pairs as names and values of its properties.\n */\npublic fun json(vararg pairs: Pair<String, Any?>): Json {\n val res: dynamic = js(\"({})\")\n for ((name, value) in pairs) {\n res[name] = value\n }\n return res\n}\n\n/**\n * Adds key-value pairs from [other] to [this].\n * Returns the original receiver.\n */\npublic fun Json.add(other: Json): Json {\n val keys: Array<String> = js(\"Object\").keys(other)\n for (key in keys) {\n if (other.asDynamic().hasOwnProperty(key))
{\n this[key] = other[key];\n }\n }\n return this\n}\n\n/**\n * Exposes the JavaScript [JSON object](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/JSON) to Kotlin.\n */\n@Suppress(\"NOT_DOCUMENTED\")\npublic external object JSON {\n public fun stringify(o: Any?): String\n public fun stringify(o: Any?, replacer: ((key: String, value: Any?) -> Any?)): String\n public fun stringify(o: Any?, replacer: ((key: String, value: Any?) -> Any?)? = definedExternally, space: Int): String\n public fun stringify(o: Any?, replacer: ((key: String, value: Any?) -> Any?)? = definedExternally, space: String): String\n public fun stringify(o: Any?, replacer: Array<String>): String\n public fun stringify(o: Any?, replacer: Array<String>, space: Int): String\n public fun stringify(o: Any?, replacer: Array<String>, space: String): String\n\n public fun <T> parse(text: String): T\n public fun <T>
parse(text: String, reviver: ((key: String, value: Any?) -> Any?)): T\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n@file:Suppress(\"DEPRECATION\", \"DEPRECATION_ERROR\")\npackage kotlin.math\n\n\nimport kotlin.internal.InlineOnly\nimport kotlin.js.Math as nativeMath\n\n\n// region ================ Double Math ==\n\n/** Computes the sine of the angle [x] given in radians.\n *\n * Special cases:\n * - `sin(NaN|+Inf|-Inf)` is `NaN`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun sin(x: Double): Double = nativeMath.sin(x)\n\n/** Computes the cosine of the angle [x] given in radians.\n *\n * Special cases:\n * - `cos(NaN|+Inf|-Inf)` is `NaN`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun cos(x: Double): Double = nativeMath.cos(x)\n\n/** Computes the tangent of the angle [x] given in
radians.\n *\n * Special cases:\n * - `tan(NaN|+Inf|-Inf)` is `NaN`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun tan(x: Double): Double = nativeMath.tan(x)\n\n/**\n * Computes the arc sine of the value [x];\n * the returned value is an angle in the range from `-PI/2` to `PI/2` radians.\n *\n * Special cases:\n * - `asin(x)` is `NaN`, when `abs(x) > 1` or x is `NaN`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun asin(x: Double): Double = nativeMath.asin(x)\n\n/**\n * Computes the arc cosine of the value [x];\n * the returned value is an angle in the range from `0.0` to `PI` radians.\n *\n * Special cases:\n * - `acos(x)` is `NaN`, when `abs(x) > 1` or x is `NaN`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun acos(x: Double): Double = nativeMath.acos(x)\n\n/**\n * Computes the arc tangent of the value [x];\n * the returned value is an angle in the range from `-PI/2` to `PI/2` radians.\n *\n * Special cases:\n * - `atan(NaN)`
is `NaN`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun atan(x: Double): Double = nativeMath.atan(x)\n\n/**\n * Returns the angle `theta` of the polar coordinates `(r, theta)` that correspond\n * to the rectangular coordinates `(x, y)` by computing the arc tangent of the value [y] / [x];\n * the returned value is an angle in the range from `-PI` to `PI` radians.\n *\n * Special cases:\n * - `atan2(0.0, 0.0)` is `0.0`\n * - `atan2(0.0, x)` is `0.0` for `x > 0` and `PI` for `x < 0`\n * - `atan2(-0.0, x)` is `-0.0` for 'x > 0` and `-PI` for `x < 0`\n * - `atan2(y, +Inf)` is `0.0` for `0 < y < +Inf` and `-0.0` for '-Inf < y < 0`\n * - `atan2(y, -Inf)` is `PI` for `0 < y < +Inf` and `-PI`

for `-Inf < y < 0`\n *   - `atan2(y, 0.0)` is `PI/2` for `y > 0` and `-PI/2` for `y < 0`\n *   - `atan2(+Inf, x)` is `PI/2` for finite `x`y\n *   - `atan2(-Inf, x)` is `-PI/2` for finite `x`\n *   - `atan2(NaN, x)` and `atan2(y, NaN)` is `NaN`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic
 actual inline fun atan2(y: Double, x: Double): Double = nativeMath.atan2(y, x)\n\n/**\n * Computes the hyperbolic sine of the value [x].\n *\n * Special cases:\n *   - `sinh(NaN)` is `NaN`\n *   - `sinh(+Inf)` is `+Inf`\n *   - `sinh(-Inf)` is `-Inf`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun sinh(x: Double): Double = nativeMath.sinh(x)\n\n/**\n * Computes the hyperbolic cosine of the value [x].\n *\n * Special cases:\n *   - `cosh(NaN)` is `NaN`\n *   - `cosh(+Inf|-Inf)` is `+Inf`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun cosh(x: Double): Double = nativeMath.cosh(x)\n\n/**\n * Computes the hyperbolic tangent of the value [x].\n *\n * Special cases:\n *   - `tanh(NaN)` is `NaN`\n *   - `tanh(+Inf)` is `1.0`\n *   - `tanh(-Inf)` is `-1.0`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun tanh(x: Double): Double = nativeMath.tanh(x)\n\n/**\n * Computes the inverse hyperbolic sine of the value [x].\n
 *\n * The returned value is `y` such that `sinh(y) == x`.\n *\n * Special cases:\n *   - `asinh(NaN)` is `NaN`\n *   - `asinh(+Inf)` is `+Inf`\n *   - `asinh(-Inf)` is `-Inf`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun asinh(x: Double): Double = nativeMath.asinh(x)\n\n/**\n * Computes the inverse hyperbolic cosine of the value [x].\n *\n * The returned value is positive `y` such that `cosh(y) == x`.\n *\n * Special cases:\n *   - `acosh(NaN)` is `NaN`\n *   - `acosh(x)` is `NaN` when `x < 1`\n *   - `acosh(+Inf)` is `+Inf`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun acosh(x: Double): Double = nativeMath.acosh(x)\n\n/**\n * Computes the inverse hyperbolic tangent of the value [x].\n *\n * The returned value is `y` such that `tanh(y) == x`.\n *\n * Special cases:\n *   - `tanh(NaN)` is `NaN`\n *   - `tanh(x)` is `NaN` when `x > 1` or `x < -1`\n *   - `tanh(1.0)` is `+Inf`\n *   - `tanh(-1.0)` is `-Inf`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic
 actual inline fun atanh(x: Double): Double = nativeMath.atanh(x)\n\n/**\n * Computes `sqrt(x^2 + y^2)` without intermediate overflow or underflow.\n *\n * Special cases:\n *   - returns `+Inf` if any of arguments is infinite\n *   - returns `NaN` if any of arguments is `NaN` and the other is not infinite\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun hypot(x: Double, y: Double): Double = nativeMath.hypot(x, y)\n\n/**\n * Computes the positive square root of the value [x].\n *\n * Special cases:\n *   - `sqrt(x)` is `NaN` when `x < 0` or `x` is `NaN`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun sqrt(x: Double): Double = nativeMath.sqrt(x)\n\n/**\n * Computes Euler's number `e` raised to the power of the value [x].\n *\n * Special cases:\n *   - `exp(NaN)` is `NaN`\n *   - `exp(+Inf)` is `+Inf`\n *   - `exp(-Inf)` is `0.0`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun exp(x: Double): Double = nativeMath.exp(x)\n\n/**\n
 * Computes `exp(x) - 1`.\n *\n * This function can be implemented to produce more precise result for [x] near zero.\n *\n * Special cases:\n *   - `expm1(NaN)` is `NaN`\n *   - `expm1(+Inf)` is `+Inf`\n *   - `expm1(-Inf)` is `-1.0`\n *\n * @see [exp] function.\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun expm1(x: Double): Double = nativeMath.expm1(x)\n\n/**\n * Computes the logarithm of the value [x] to the given [base].\n *\n * Special cases:\n *   - `log(x, b)` is `NaN` if either `x` or `b` are `NaN`\n *   - `log(x, b)` is `NaN` when `x < 0` or `b <= 0` or `b == 1.0`\n *   - `log(+Inf, +Inf)` is `NaN`\n *   - `log(+Inf, b)` is `+Inf` for `b > 1` and `-Inf` for `b < 1`\n *   - `log(0.0, b)` is `-Inf` for `b > 1` and `+Inf` for `b > 1`\n *\n * See also logarithm functions for common fixed bases: [ln], [log10] and [log2].\n */\n@SinceKotlin(\"1.2\")\npublic actual fun log(x: Double, base: Double): Double {\n   if (base <= 0.0 || base == 1.0) return Double.NaN\n
    return nativeMath.log(x) / nativeMath.log(base)\n}\n\n/**\n * Computes the natural logarithm (base `E`) of the value [x].\n *\n * Special cases:\n *   - `ln(NaN)` is `NaN`\n *   - `ln(x)` is `NaN` when `x < 0.0`\n *   - `ln(+Inf)` is `+Inf`\n *   - `ln(0.0)` is `-Inf`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun ln(x: Double): Double = nativeMath.log(x)\n\n/**\n * Computes the common logarithm (base 10) of the value [x].\n *\n * @see [ln] function for special cases.\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun log10(x: Double): Double = nativeMath.log10(x)\n\n/**\n * Computes the binary logarithm (base 2) of the value [x].\n *\n * @see [ln] function for special cases.\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun log2(x:

Double): Double = nativeMath.log2(x)\n\n/**\n * Computes `ln(x + 1)`.\n *\n * This function can be implemented to produce more precise result for [x] near zero.\n *\n * Special cases:\n * - `ln1p(NaN)` is `NaN`\n * - `ln1p(x)` is `NaN` where `x < -1.0`\n * - `ln1p(-1.0)` is `-Inf`\n * - `ln1p(+Inf)` is `+Inf`\n *\n * @see [ln] function\n * @see [expm1] function\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun ln1p(x: Double): Double = nativeMath.log1p(x)\n\n/**\n * Rounds the given value [x] to an integer towards positive infinity.\n\n * @return the smallest double value that is greater than or equal to the given value [x] and is a mathematical integer.\n *\n * Special cases:\n * - `ceil(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun ceil(x: Double): Double = nativeMath.ceil(x).unsafeCast<Double>() // TODO: Remove unsafe cast after removing public js.math\n\n/**\n * Rounds the given value [x] to an integer towards negative infinity.\n\n * @return the largest double value that is smaller than or equal to the given value [x] and is a mathematical integer.\n *\n * Special cases:\n * - `floor(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun floor(x: Double): Double = nativeMath.floor(x).unsafeCast<Double>()\n\n/**\n * Rounds the given value [x] to an integer towards zero.\n *\n * @return the value [x] having its fractional part truncated.\n *\n * Special cases:\n * - `truncate(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun truncate(x: Double): Double = nativeMath.trunc(x)\n\n/**\n * Rounds the given value [x] towards the closest integer with ties rounded towards even integer.\n *\n * Special cases:\n * - `round(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.\n */\n@SinceKotlin(\"1.2\")\npublic actual fun round(x: Double): Double {\n   if (x % 0.5 != 0.0) {\n   return nativeMath.round(x).unsafeCast<Double>()\n   }\n   val floor = floor(x)\n   return if (floor % 2 == 0.0) floor else ceil(x)\n}\n\n/**\n * Returns the absolute value of the given value [x].\n *\n * Special cases:\n * - `abs(NaN)` is `NaN`\n *\n * @see absoluteValue extension property for [Double]\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun abs(x: Double): Double = nativeMath.abs(x)\n\n/**\n * Returns the sign of the given value [x]:\n * - `-1.0` if the value is negative,\n * - zero if the value is zero,\n * - `1.0` if the value is positive\n *\n * Special case:\n * - `sign(NaN)` is `NaN`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun sign(x: Double): Double = nativeMath.sign(x)\n\n\n/**\n * Returns the smaller of two values.\n *\n * If either value is `NaN`, then the result is `NaN`.\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun min(a: Double, b: Double): Double = nativeMath.min(a, b)\n\n/**\n * Returns the greater of two values.\n *\n * If either value is `NaN`, then the result is `NaN`.\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun max(a: Double, b: Double): Double = nativeMath.max(a, b)\n\n// extensions\n\n/**\n * Raises this value to the power [x].\n *\n * Special cases:\n * - `b.pow(0.0)` is `1.0`\n * - `b.pow(1.0) == b`\n * - `b.pow(NaN)` is `NaN`\n * - `NaN.pow(x)` is `NaN` for `x != 0.0`\n * - `b.pow(Inf)` is `NaN` for `abs(b) == 1.0`\n * - `b.pow(x)` is `NaN` for `b < 0` and `x` is finite and not an integer\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun Double.pow(x: Double): Double = nativeMath.pow(this, x)\n\n/**\n * Raises this value to the integer power [n].\n *\n * See the other overload of [pow] for details.\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun Double.pow(n: Int): Double = nativeMath.pow(this, n.toDouble())\n\n/**\n * Returns the absolute value of this value.\n *\n * Special cases:\n * - `NaN.absoluteValue` is `NaN`\n *\n * @see abs function\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline val Double.absoluteValue: Double get() = nativeMath.abs(this)\n\n/**\n * Returns the sign of this value:\n * - `-1.0` if the value is negative,\n * - zero if the value is zero,\n * - `1.0` if the value is positive\n *\n * Special case:\n * - `NaN.sign` is `NaN`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline val Double.sign: Double get() = nativeMath.sign(this)\n\n/**\n * Returns this value with the sign bit same as of the [sign] value.\n *\n * If [sign] is `NaN` the sign of the result is undefined.\n */\n@SinceKotlin(\"1.2\")\npublic actual fun Double.withSign(sign: Double): Double {\n   val thisSignBit = js(\"Kotlin\").doubleSignBit(this).unsafeCast<Int>()\n   val newSignBit = js(\"Kotlin\").doubleSignBit(sign).unsafeCast<Int>()\n   return if (thisSignBit == newSignBit) this else -this\n}\n\n/**\n * Returns this value with the sign bit same as of the [sign]

value.\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun Double.withSign(sign: Int): Double = this.withSign(sign.toDouble())\n\n/**\n * Returns the ulp (unit in the last place) of this value.\n *\n * An ulp is a positive distance between this value and the next nearest [Double] value larger in magnitude.\n *\n * Special Cases:\n * - `NaN.ulp` is `NaN`\n * - `x.ulp` is `+Inf` when `x` is `+Inf` or `-Inf`\n * - `0.0.ulp` is `Double.MIN_VALUE`\n */\n@SinceKotlin(\"1.2\")\npublic actual val Double.ulp: Double get() = when {\n   this < 0 -> (-this).ulp\n   this.isNaN() || this == Double.POSITIVE_INFINITY -> this\n   this == Double.MAX_VALUE -> this - this.nextDown()\n   else -> this.nextUp() - this\n}\n\n/**\n * Returns the [Double] value nearest to this value in direction of positive infinity.\n */\n@SinceKotlin(\"1.2\")\npublic actual fun Double.nextUp(): Double = when {\n   this.isNaN() || this == Double.POSITIVE_INFINITY -> this\n   this == 0.0 -> Double.MIN_VALUE\n
    else -> Double.fromBits(this.toRawBits() + if (this > 0) 1 else -1)\n}\n\n/**\n * Returns the [Double] value nearest to this value in direction of negative infinity.\n */\n@SinceKotlin(\"1.2\")\npublic actual fun Double.nextDown(): Double = when {\n   this.isNaN() || this == Double.NEGATIVE_INFINITY -> this\n   this == 0.0 -> -Double.MIN_VALUE\n   else -> Double.fromBits(this.toRawBits() + if (this > 0) -1 else 1)\n}\n\n\n/**\n * Returns the [Double] value nearest to this value in direction from this value towards the value [to].\n *\n * Special cases:\n * - `x.nextTowards(y)` is `NaN` if either `x` or `y` are `NaN`\n * - `x.nextTowards(x) == x`\n *\n */\n@SinceKotlin(\"1.2\")\npublic actual fun Double.nextTowards(to: Double): Double = when {\n   this.isNaN() || to.isNaN() -> Double.NaN\n   to == this -> to\n   to > this -> this.nextUp()\n   else /* to < this */ -> this.nextDown()\n}\n\n\n/**\n * Rounds this [Double] value to the nearest integer and converts the result to [Int].\n * Ties are rounded towards positive infinity.\n *\n * Special cases:\n * - `x.roundToInt() == Int.MAX_VALUE` when `x > Int.MAX_VALUE`\n * - `x.roundToInt() == Int.MIN_VALUE` when `x < Int.MIN_VALUE`\n *\n * @throws IllegalArgumentException when this value is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic actual fun Double.roundToInt(): Int = when {\n   isNaN() -> throw IllegalArgumentException(\"Cannot round NaN value.\")\n   this > Int.MAX_VALUE -> Int.MAX_VALUE\n   this < Int.MIN_VALUE -> Int.MIN_VALUE\n   else -> nativeMath.round(this).unsafeCast<Double>().toInt()\n}\n\n/**\n * Rounds this [Double] value to the nearest integer and converts the result to [Long].\n * Ties are rounded towards positive infinity.\n *\n * Special cases:\n * - `x.roundToLong() == Long.MAX_VALUE` when `x > Long.MAX_VALUE`\n * - `x.roundToLong() == Long.MIN_VALUE` when `x < Long.MIN_VALUE`\n *\n * @throws IllegalArgumentException when this value is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic
 actual fun Double.roundToLong(): Long = when {\n   isNaN() -> throw IllegalArgumentException(\"Cannot round NaN value.\")\n   this > Long.MAX_VALUE -> Long.MAX_VALUE\n   this < Long.MIN_VALUE -> Long.MIN_VALUE\n   else -> nativeMath.round(this).unsafeCast<Double>().toLong()\n}\n\n// endregion\n\n\n\n// region ================ Float Math ======================================\n\n/** Computes the sine of the angle [x] given in radians.\n *\n * Special cases:\n * - `sin(NaN|+Inf|-Inf)` is `NaN`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun sin(x: Float): Float = nativeMath.sin(x.toDouble()).toFloat()\n\n/** Computes the cosine of the angle [x] given in radians.\n *\n * Special cases:\n * - `cos(NaN|+Inf|-Inf)` is `NaN`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun cos(x: Float): Float = nativeMath.cos(x.toDouble()).toFloat()\n\n/** Computes the tangent of the angle [x] given in radians.\n *\n * Special cases:\n * - `tan(NaN|+Inf|-Inf)`
 is `NaN`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun tan(x: Float): Float = nativeMath.tan(x.toDouble()).toFloat()\n\n/**\n * Computes the arc sine of the value [x];\n * the returned value is an angle in the range from `-PI/2` to `PI/2` radians.\n *\n * Special cases:\n * - `asin(x)` is `NaN`, when `abs(x) > 1` or x is `NaN`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun asin(x: Float): Float = nativeMath.asin(x.toDouble()).toFloat()\n\n/**\n * Computes the arc cosine of the value [x];\n * the returned value is an angle in the range from `0.0` to `PI` radians.\n *\n * Special cases:\n * - `acos(x)` is `NaN`, when `abs(x) > 1` or x is `NaN`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun acos(x: Float): Float = nativeMath.acos(x.toDouble()).toFloat()\n\n/**\n * Computes the arc tangent of the value [x];\n * the returned value

is an angle in the range from `-PI/2` to `PI/2` radians.\n *\n * Special cases:\n
 * - `atan(NaN)` is `NaN`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun atan(x: Float): Float = nativeMath.atan(x.toDouble()).toFloat()\n\n/**\n * Returns the angle `theta` of the polar coordinates `(r, theta)` that correspond\n * to the rectangular coordinates `(x, y)` by computing the arc tangent of the value [y] / [x];\n * the returned value is an angle in the range from `-PI` to `PI` radians.\n *\n * Special cases:\n * - `atan2(0.0, 0.0)` is `0.0`\n * - `atan2(0.0, x)` is `0.0` for `x > 0` and `PI` for `x < 0`\n * - `atan2(-0.0, x)` is `-0.0` for 'x > 0` and `-PI` for `x < 0`\n *  - `atan2(y, +Inf)` is `0.0` for `0 < y < +Inf` and `-0.0` for '-Inf < y < 0`\n * - `atan2(y, -Inf)` is `PI` for `0 < y < +Inf` and `-PI` for `-Inf < y < 0`\n * - `atan2(y, 0.0)` is `PI/2` for `y > 0` and `-PI/2` for `y < 0`\n * - `atan2(+Inf, x)` is `PI/2` for finite `x`y\n * - `atan2(-Inf, x)` is `-PI/2` for finite `x`\n * - `atan2(NaN, x)` and `atan2(y, NaN)` is `NaN`\n
 */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun atan2(y: Float, x: Float): Float = nativeMath.atan2(y.toDouble(), x.toDouble()).toFloat()\n\n/**\n * Computes the hyperbolic sine of the value [x].\n *\n * Special cases:\n * - `sinh(NaN)` is `NaN`\n * - `sinh(+Inf)` is `+Inf`\n * - `sinh(-Inf)` is `-Inf`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun sinh(x: Float): Float = nativeMath.sinh(x.toDouble()).toFloat()\n\n/**\n * Computes the hyperbolic cosine of the value [x].\n *\n * Special cases:\n * - `cosh(NaN)` is `NaN`\n * - `cosh(+Inf|-Inf)` is `+Inf`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun cosh(x: Float): Float = nativeMath.cosh(x.toDouble()).toFloat()\n\n/**\n * Computes the hyperbolic tangent of the value [x].\n *\n * Special cases:\n * - `tanh(NaN)` is `NaN`\n * - `tanh(+Inf)` is `1.0`\n * - `tanh(-Inf)` is `-1.0`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun tanh(x: Float):
 Float = nativeMath.tanh(x.toDouble()).toFloat()\n\n/**\n * Computes the inverse hyperbolic sine of the value [x].\n *\n * The returned value is `y` such that `sinh(y) == x`.\n *\n * Special cases:\n * - `asinh(NaN)` is `NaN`\n * - `asinh(+Inf)` is `+Inf`\n * - `asinh(-Inf)` is `-Inf`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun asinh(x: Float): Float = nativeMath.asinh(x.toDouble()).toFloat()\n\n/**\n * Computes the inverse hyperbolic cosine of the value [x].\n *\n * The returned value is positive `y` such that `cosh(y) == x`.\n *\n * Special cases:\n * - `acosh(NaN)` is `NaN`\n * - `acosh(x)` is `NaN` when `x < 1`\n * - `acosh(+Inf)` is `+Inf`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun acosh(x: Float): Float = nativeMath.acosh(x.toDouble()).toFloat()\n\n/**\n * Computes the inverse hyperbolic tangent of the value [x].\n *\n * The returned value is `y` such that `tanh(y) == x`.\n *\n * Special cases:\n * - `tanh(NaN)` is `NaN`\n * - `tanh(x)` is `NaN` when `x > 1` or `x < -1`\n * - `tanh(1.0)` is `+Inf`\n * - `tanh(-1.0)` is `-Inf`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun atanh(x: Float): Float = nativeMath.atanh(x.toDouble()).toFloat()\n\n/**\n * Computes `sqrt(x^2 + y^2)` without intermediate overflow or underflow.\n *\n * Special cases:\n * - returns `+Inf` if any of arguments is infinite\n * - returns `NaN` if any of arguments is `NaN` and the other is not infinite\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun hypot(x: Float, y: Float): Float = nativeMath.hypot(x.toDouble(), y.toDouble()).toFloat()\n\n/**\n * Computes the positive square root of the value [x].\n *\n * Special cases:\n * - `sqrt(x)` is `NaN` when `x < 0` or `x` is `NaN`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun sqrt(x: Float): Float = nativeMath.sqrt(x.toDouble()).toFloat()\n\n/**\n * Computes Euler's number `e` raised to the power of the value [x].\n *\n
 * Special cases:\n * - `exp(NaN)` is `NaN`\n * - `exp(+Inf)` is `+Inf`\n * - `exp(-Inf)` is `0.0`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun exp(x: Float): Float = nativeMath.exp(x.toDouble()).toFloat()\n\n/**\n * Computes `exp(x) - 1`.\n *\n * This function can be implemented to produce more precise result for [x] near zero.\n *\n * Special cases:\n * - `expm1(NaN)` is `NaN`\n * - `expm1(+Inf)` is `+Inf`\n * - `expm1(-Inf)` is `-1.0`\n *\n * @see [exp] function.\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun expm1(x: Float): Float = nativeMath.expm1(x.toDouble()).toFloat()\n\n/**\n * Computes the logarithm of the value [x] to the given [base].\n *\n * Special cases:\n * - `log(x, b)` is `NaN` if either `x` or `b` are `NaN`\n * - `log(x, b)` is `NaN` when `x < 0` or `b <= 0` or `b == 1.0`\n * - `log(+Inf, +Inf)` is `NaN`\n * - `log(+Inf, b)` is `+Inf` for `b > 1` and `-Inf` for `b <

1`\n *  - `log(0.0, b)` is `-Inf` for
`b > 1` and `+Inf` for `b > 1`\n *\n * See also logarithm functions for common fixed bases: [ln], [log10] and [log2].\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun log(x: Float, base: Float): Float = log(x.toDouble(), base.toDouble()).toFloat()\n\n/**\n * Computes the natural logarithm (base `E`) of the value [x].\n *\n * Special cases:\n * - `ln(NaN)` is `NaN`\n * - `ln(x)` is `NaN` when `x < 0.0`\n * - `ln(+Inf)` is `+Inf`\n * - `ln(0.0)` is `-Inf`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun ln(x: Float): Float = nativeMath.log(x.toDouble()).toFloat()\n\n/**\n * Computes the common logarithm (base 10) of the value [x].\n *\n * @see [ln] function for special cases.\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun log10(x: Float): Float = nativeMath.log10(x.toDouble()).toFloat()\n\n/**\n * Computes the binary logarithm (base 2) of the value [x].\n *\n * @see [ln] function for special cases.\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic
actual inline fun log2(x: Float): Float = nativeMath.log2(x.toDouble()).toFloat()\n\n/**\n * Computes `ln(a + 1)`.\n *\n * This function can be implemented to produce more precise result for [x] near zero.\n *\n * Special cases:\n * - `ln1p(NaN)` is `NaN`\n * - `ln1p(x)` is `NaN` where `x < -1.0`\n * - `ln1p(-1.0)` is `-Inf`\n * - `ln1p(+Inf)` is `+Inf`\n *\n * @see [ln] function\n * @see [expm1] function\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun ln1p(x: Float): Float = nativeMath.log1p(x.toDouble()).toFloat()\n\n/**\n * Rounds the given value [x] to an integer towards positive infinity.\n\n * @return the smallest Float value that is greater than or equal to the given value [x] and is a mathematical integer.\n *\n * Special cases:\n * - `ceil(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun ceil(x: Float): Float = nativeMath.ceil(x.toDouble()).toFloat()\n\n/**\n
* Rounds the given value [x] to an integer towards negative infinity.\n\n * @return the largest Float value that is smaller than or equal to the given value [x] and is a mathematical integer.\n *\n * Special cases:\n * - `floor(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.\n
*/\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun floor(x: Float): Float = nativeMath.floor(x.toDouble()).toFloat()\n\n/**\n * Rounds the given value [x] to an integer towards zero.\n *\n * @return the value [x] having its fractional part truncated.\n *\n * Special cases:\n * - `truncate(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun truncate(x: Float): Float = truncate(x.toDouble()).toFloat()\n\n/**\n * Rounds the given value [x] towards the closest integer with ties rounded towards even integer.\n *\n * Special cases:\n
* - `round(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.\n
*/\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun round(x: Float): Float = round(x.toDouble()).toFloat()\n\n\n/**\n * Returns the absolute value of the given value [x].\n *\n * Special cases:\n * - `abs(NaN)` is `NaN`\n *\n * @see absoluteValue extension property for [Float]\n
*/\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun abs(x: Float): Float = nativeMath.abs(x.toDouble()).toFloat()\n\n/**\n * Returns the sign of the given value [x]:\n * - `-1.0` if the value is negative,\n * - zero if the value is zero,\n * - `1.0` if the value is positive\n *\n * Special case:\n * - `sign(NaN)` is `NaN`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun sign(x: Float): Float = nativeMath.sign(x.toDouble()).toFloat()\n\n\n\n/**\n * Returns the smaller of two values.\n *\n * If either value is `NaN`, then the result is `NaN`.\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic
actual inline fun min(a: Float, b: Float): Float = nativeMath.min(a, b)\n\n/**\n * Returns the greater of two values.\n *\n * If either value is `NaN`, then the result is `NaN`.\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun max(a: Float, b: Float): Float = nativeMath.max(a, b)\n\n// extensions\n\n\n/**\n * Raises this value to the power [x].\n *\n * Special cases:\n * - `b.pow(0.0)` is `1.0`\n * - `b.pow(1.0) == b`\n * - `b.pow(NaN)` is `NaN`\n * - `NaN.pow(x)` is `NaN` for `x != 0.0`\n * - `b.pow(Inf)` is `NaN` for `abs(b) == 1.0`\n * - `b.pow(x)` is `NaN` for `b < 0` and `x` is finite and not an integer\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun Float.pow(x: Float): Float = nativeMath.pow(this.toDouble(), x.toDouble()).toFloat()\n\n/**\n * Raises this value to the integer power [n].\n *\n * See the other overload of [pow] for details.\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline

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fun Float.pow(n: Int): Float = nativeMath.pow(this.toDouble(), n.toDouble()).toFloat()\n\n/**\n * Returns the absolute value of this value.\n *\n * Special cases:\n *   - `NaN.absoluteValue` is `NaN`\n *\n * @see abs function\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline val Float.absoluteValue: Float get() = nativeMath.abs(this.toDouble()).toFloat()\n\n/**\n * Returns the sign of this value:\n *   - `-1.0` if the value is negative,\n *   - zero if the value is zero,\n *   - `1.0` if the value is positive\n *\n * Special case:\n *   - `NaN.sign` is `NaN`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline val Float.sign: Float get() = nativeMath.sign(this.toDouble()).toFloat()\n\n/**\n * Returns this value with the sign bit same as of the [sign] value.\n *\n * If [sign] is `NaN` the sign of the result is undefined.\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun Float.withSign(sign: Float): Float = this.toDouble().withSign(sign.toDouble()).toFloat()\n\n/**\n * Returns this value with the sign bit same as of the [sign] value.\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun Float.withSign(sign: Int): Float = this.toDouble().withSign(sign.toDouble()).toFloat()\n\n\n/**\n * Rounds this [Float] value to the nearest integer and converts the result to [Int].\n * Ties are rounded towards positive infinity.\n *\n * Special cases:\n *   - `x.roundToInt() == Int.MAX_VALUE` when `x > Int.MAX_VALUE`\n *   - `x.roundToInt() == Int.MIN_VALUE` when `x < Int.MIN_VALUE`\n *\n * @throws IllegalArgumentException when this value is `NaN`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun Float.roundToInt(): Int = toDouble().roundToInt()\n\n/**\n * Rounds this [Float] value to the nearest integer and converts the result to [Long].\n * Ties are rounded towards positive infinity.\n *\n * Special cases:\n *   - `x.roundToLong() == Long.MAX_VALUE` when `x > Long.MAX_VALUE`\n *   - `x.roundToLong() == Long.MIN_VALUE` when `x < Long.MIN_VALUE`\n *\n * @throws IllegalArgumentException when this value is `NaN`\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun Float.roundToLong(): Long = toDouble().roundToLong()\n\n\n// endregion\n\n// region ================ Integer Math ========================================\n\n\n/**\n * Returns the absolute value of the given value [n].\n *\n * Special cases:\n *   - `abs(Int.MIN_VALUE)` is `Int.MIN_VALUE` due to an overflow\n *\n * @see absoluteValue extension property for [Int]\n */\n// TODO: remove manual 'or' when KT-19290 is fixed\n@SinceKotlin(\"1.2\")\npublic actual fun abs(n: Int): Int = if (n < 0) (-n or 0) else n\n\n/**\n * Returns the smaller of two values.\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun min(a: Int, b: Int): Int = nativeMath.min(a, b)\n\n/**\n * Returns the greater of two values.\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline fun max(a: Int, b: Int): Int = nativeMath.max(a, b)\n\n/**\n * Returns the absolute value of this value.\n *\n * Special cases:\n *   - `Int.MIN_VALUE.absoluteValue` is `Int.MIN_VALUE` due to an overflow\n *\n * @see abs function\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline val Int.absoluteValue: Int get() = abs(this)\n\n/**\n * Returns the sign of this value:\n *   - `-1` if the value is negative,\n *   - `0` if the value is zero,\n *   - `1` if the value is positive\n */\n@SinceKotlin(\"1.2\")\npublic actual val Int.sign: Int get() = when {\n    this < 0 -> -1\n    this > 0 -> 1\n    else -> 0\n}\n\n\n\n/**\n * Returns the absolute value of the given value [n].\n *\n * Special cases:\n *   - `abs(Long.MIN_VALUE)` is `Long.MIN_VALUE` due to an overflow\n *\n * @see absoluteValue extension property for [Long]\n */\n@SinceKotlin(\"1.2\")\npublic actual fun abs(n: Long): Long = if (n < 0) -n else n\n\n/**\n * Returns the smaller of two values.\n */\n@SinceKotlin(\"1.2\")\n@Suppress(\"NOTHING_TO_INLINE\")\npublic actual inline fun min(a: Long, b: Long): Long = if (a <= b) a else b\n\n/**\n * Returns the greater of two values.\n */\n@SinceKotlin(\"1.2\")\n@Suppress(\"NOTHING_TO_INLINE\")\npublic actual inline fun max(a: Long, b: Long): Long = if (a >= b) a else b\n\n/**\n * Returns the absolute value of this value.\n *\n * Special cases:\n *   - `Long.MIN_VALUE.absoluteValue` is `Long.MIN_VALUE` due to an overflow\n *\n * @see abs function\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\npublic actual inline val Long.absoluteValue: Long get() = abs(this)\n\n/**\n * Returns the sign of this value:\n *   - `-1` if the value is negative,\n *   - `0` if the value is zero,\n *   - `1` if the value is positive\n */\n@SinceKotlin(\"1.2\")\npublic actual val Long.sign: Int get() = when {\n    this
```

< 0 -> -1\n   this > 0 -> 1\n   else -> 0\n}\n\n\n// endregion\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin\n\n/**\n * Returns `true` if the specified number is a\n * Not-a-Number (NaN) value, `false` otherwise.\n */\npublic actual fun Double.isNaN(): Boolean = this != this\n\n/**\n * Returns `true` if the specified number is a\n * Not-a-Number (NaN) value, `false` otherwise.\n */\npublic actual fun Float.isNaN(): Boolean = this != this\n\n/**\n * Returns `true` if this value is infinitely large in magnitude.\n */\npublic actual fun Double.isInfinite(): Boolean = this == Double.POSITIVE_INFINITY || this == Double.NEGATIVE_INFINITY\n\n/**\n * Returns `true` if this value is infinitely large in magnitude.\n */\npublic actual fun Float.isInfinite(): Boolean = this == Float.POSITIVE_INFINITY || this == Float.NEGATIVE_INFINITY\n\n/**\n * Returns `true` if the argument is a finite floating-point value; returns `false` otherwise (for `NaN` and infinity arguments).\n */\npublic actual fun Double.isFinite(): Boolean = !isInfinite() && !isNaN()\n\n/**\n * Returns `true` if the argument is a finite floating-point value; returns `false` otherwise (for `NaN` and infinity arguments).\n */\npublic actual fun Float.isFinite(): Boolean = !isInfinite() && !isNaN()\n\n/**\n * Returns a bit representation of the specified floating-point value as [Long]\n * according to the IEEE 754 floating-point \"double format\" bit layout.\n */\n@SinceKotlin(\"1.2\")\n@library(\"doubleToBits\")\npublic actual fun Double.toBits(): Long = definedExternally\n\n/**\n * Returns a bit representation of the specified floating-point value as [Long]\n * according to the IEEE 754 floating-point \"double format\" bit layout,\n * preserving `NaN` values exact layout.\n */\n@SinceKotlin(\"1.2\")\n@library(\"doubleToRawBits\")\npublic actual fun Double.toRawBits(): Long = definedExternally\n\n/**\n * Returns the [Double] value corresponding to a given bit representation.\n */\n@SinceKotlin(\"1.2\")\n@kotlin.internal.InlineOnly\npublic actual inline fun Double.Companion.fromBits(bits: Long): Double = js(\"Kotlin\").doubleFromBits(bits).unsafeCast<Double>()\n\n/**\n * Returns a bit representation of the specified floating-point value as [Int]\n * according to the IEEE 754 floating-point \"single format\" bit layout.\n *\n * Note that in Kotlin/JS [Float] range is wider than \"single format\" bit layout can represent,\n * so some [Float] values may overflow, underflow or loose their accuracy after conversion to bits and back.\n */\n@SinceKotlin(\"1.2\")\n@library(\"floatToBits\")\npublic actual fun Float.toBits(): Int = definedExternally\n\n/**\n * Returns a bit representation of the specified floating-point value as [Int]\n * according to the IEEE 754 floating-point \"single format\" bit layout,\n * preserving `NaN` values exact layout.\n *\n * Note that in Kotlin/JS [Float] range is wider than \"single format\" bit layout can represent,\n * so some [Float] values may overflow, underflow or loose their accuracy after conversion to bits and back.\n */\n@SinceKotlin(\"1.2\")\n@library(\"floatToRawBits\")\npublic actual fun Float.toRawBits(): Int = definedExternally\n\n/**\n * Returns the [Float] value corresponding to a given bit representation.\n */\n@SinceKotlin(\"1.2\")\n@kotlin.internal.InlineOnly\npublic actual inline fun Float.Companion.fromBits(bits: Int): Float = js(\"Kotlin\").floatFromBits(bits).unsafeCast<Float>()","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.text\n\n\n/**\n * Returns `true` if the contents of this string is equal to the word \"true\", ignoring case, and `false` otherwise.\n */\npublic actual fun String.toBoolean(): Boolean = toLowerCase() == \"true\"\n\n/**\n * Parses the string as a signed [Byte] number and returns the result.\n * @throws NumberFormatException if the string is not a valid representation of a number.\n */\npublic actual fun String.toByte(): Byte = toByteOrNull() ?: numberFormatError(this)\n\n/**\n * Parses the string as a signed [Byte] number and returns the result.\n * @throws NumberFormatException if the string is not a valid representation of a number.\n * @throws IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n */\npublic actual fun String.toByte(radix: Int): Byte = toByteOrNull(radix) ?: numberFormatError(this)\n\n\n/**\n * Parses the string as a [Short] number and returns the result.\n * @throws NumberFormatException if the string is not a valid representation of a number.\n */\npublic actual fun String.toShort(): Short = toShortOrNull() ?: numberFormatError(this)\n\n/**\n * Parses the string as a [Short] number and returns the result.\n * @throws NumberFormatException if the string is not a valid representation of a

number.\n * @throws IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n */\npublic actual fun String.toShort(radix: Int): Short = toShortOrNull(radix)
?: numberFormatError(this)\n\n/**\n * Parses the string as an [Int] number and returns the result.\n * @throws NumberFormatException if the string is not a valid representation of a number.\n */\npublic actual fun String.toInt(): Int = toIntOrNull() ?: numberFormatError(this)\n\n/**\n * Parses the string as an [Int] number and returns the result.\n * @throws NumberFormatException if the string is not a valid representation of a number.\n * @throws IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n */\npublic actual fun String.toInt(radix: Int): Int = toIntOrNull(radix) ?: numberFormatError(this)\n\n/**\n * Parses the string as a [Long] number and returns the result.\n * @throws NumberFormatException if the string is not a valid representation of a number.\n */\npublic actual fun String.toLong(): Long = toLongOrNull() ?: numberFormatError(this)\n\n/**\n * Parses the string as a [Long] number and returns the result.\n * @throws NumberFormatException
if the string is not a valid representation of a number.\n * @throws IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n */\npublic actual fun String.toLong(radix: Int): Long = toLongOrNull(radix) ?: numberFormatError(this)\n\n/**\n * Parses the string as a [Double] number and returns the result.\n * @throws NumberFormatException if the string is not a valid representation of a number.\n */\npublic actual fun String.toDouble(): Double = (+(this.asDynamic())).unsafeCast<Double>().also {\n if (it.isNaN() && !this.isNaN() || it == 0.0 && this.isBlank())\n numberFormatError(this)\n}\n\n/**\n * Parses the string as a [Float] number and returns the result.\n * @throws NumberFormatException if the string is not a valid representation of a number.\n */\n@kotlin.internal.InlineOnly\npublic actual inline fun String.toFloat(): Float = toDouble().unsafeCast<Float>()\n\n/**\n * Parses the string as a [Double] number and returns the result\n * or `null` if the string is not a valid representation of a number.\n */\npublic actual fun String.toDoubleOrNull(): Double? = (+(this.asDynamic())).unsafeCast<Double>().takeIf {\n !(it.isNaN() && !this.isNaN() || it == 0.0 && this.isBlank())\n}\n\n/**\n * Parses the string as a [Float] number and returns the result\n * or `null` if the string is not a valid representation of a number.\n */\n@kotlin.internal.InlineOnly\npublic actual inline fun String.toFloatOrNull(): Float? = toDoubleOrNull().unsafeCast<Float?>()\n\n/**\n * Returns a string representation of this [Byte] value in the specified [radix].\n *\n * @throws IllegalArgumentException when [radix] is not a valid radix for number to string conversion.\n */\n@SinceKotlin(\"1.2\")\n@kotlin.internal.InlineOnly\npublic actual inline fun Byte.toString(radix: Int): String = this.toInt().toString(radix)\n\n/**\n * Returns a string representation of this [Short] value in the specified [radix].\n *\n * @throws IllegalArgumentException
when [radix] is not a valid radix for number to string conversion.\n */\n@SinceKotlin(\"1.2\")\n@kotlin.internal.InlineOnly\npublic actual inline fun Short.toString(radix: Int): String = this.toInt().toString(radix)\n\n/**\n * Returns a string representation of this [Long] value in the specified [radix].\n *\n * @throws IllegalArgumentException when [radix] is not a valid radix for number to string conversion.\n */\n@SinceKotlin(\"1.2\")\npublic actual fun Long.toString(radix: Int): String = asDynamic().toString(checkRadix(radix))\n\n/**\n * Returns a string representation of this [Int] value in the specified [radix].\n *\n * @throws IllegalArgumentException when [radix] is not a valid radix for number to string conversion.\n */\n@SinceKotlin(\"1.2\")\npublic actual fun Int.toString(radix: Int): String = asDynamic().toString(checkRadix(radix))\n\nprivate fun String.isNaN(): Boolean = when (this.toLowerCase()) {\n \"nan\", \"+nan\", \"-nan\" -> true\n else -> false\n}\n\n/**\n
* Checks whether the given [radix] is valid radix for string to number and number to string conversion.\n */\n@PublishedApi\ninternal actual fun checkRadix(radix: Int): Int {\n if (radix !in 2..36) {\n throw IllegalArgumentException(\"radix $radix was not in valid range 2..36\")\n }\n return radix\n}\n\ninternal actual fun digitOf(char: Char, radix: Int): Int = when {\n char >= '0' && char <= '9' -> char - '0'\n char >= 'A' && char <= 'Z' -> char - 'A' + 10\n char >= 'a' && char <= 'z' -> char - 'a' + 10\n else -> -1\n}.let { if (it >= radix) -1 else it }\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.js\n\nimport kotlin.internal.LowPriorityInOverloadResolution\n\n/**\n * Exposes the JavaScript [Promise

object](https://developer.mozilla.org/en/docs/Web/JavaScript/Reference/Global_Objects/Promise) to Kotlin.\n */\n@Suppress(\"NOT_DOCUMENTED\")\npublic
 open external class Promise<out T>(executor: (resolve: (T) -> Unit, reject: (Throwable) -> Unit) -> Unit) {\n @LowPriorityInOverloadResolution\n   public open fun <S> then(onFulfilled: ((T) -> S)?): Promise<S>\n\n @LowPriorityInOverloadResolution\n   public open fun <S> then(onFulfilled: ((T) -> S)?, onRejected: ((Throwable) -> S)?): Promise<S>\n\n   public open fun <S> catch(onRejected: (Throwable) -> S): Promise<S>\n\n companion object {\n   public fun <S> all(promise: Array<out Promise<S>>): Promise<Array<out S>>\n\n public fun <S> race(promise: Array<out Promise<S>>): Promise<S>\n\n   public fun reject(e: Throwable): Promise<Nothing>\n\n   public fun <S> resolve(e: S): Promise<S>\n   public fun <S> resolve(e: Promise<S>): Promise<S>\n   }\n}\n\n// It's workaround for KT-19672 since we can fix it properly until KT-11265 isn't fixed.\ninline fun <T, S> Promise<Promise<T>>.then(\n   noinline onFulfilled: ((T)
 -> S)?\n): Promise<S> {\n   return this.unsafeCast<Promise<T>>().then(onFulfilled)\n}\n\ninline fun <T, S> Promise<Promise<T>>.then(\n   noinline onFulfilled: ((T) -> S)?,\n   noinline onRejected: ((Throwable) -> S)?\n): Promise<S> {\n   return this.unsafeCast<Promise<T>>().then(onFulfilled, onRejected)\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.random\n\nimport kotlin.math.pow\n\ninternal actual fun defaultPlatformRandom(): Random =\n   Random(js(\"(Math.random() * Math.pow(2, 32)) | 0\").unsafeCast<Int>())\n\n\ninternal actual fun fastLog2(value: Int): Int {\n   // TODO: not so fast, make faster\n var v = value\n   var log = -1\n   while (v != 0) {\n   v = v.ushr(1)\n   log++\n   }\n   return log\n}\n\nprivate val INV_2_26: Double = 2.0.pow(-26)\nprivate val INV_2_53: Double = 2.0.pow(-53)\ninternal actual fun doubleFromParts(hi26:
 Int, low27: Int): Double =\n   hi26 * INV_2_26 + low27 * INV_2_53","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.js\n\nimport getKClass\nimport kotlin.reflect.KClass\nimport kotlin.reflect.js.internal.KClassImpl\n\n/**\n * Represents the constructor of a class. Instances of `JsClass` can be passed to JavaScript APIs that expect a constructor reference.\n */\nexternal interface JsClass<T : Any> {\n   /**\n * Returns the unqualified name of the class represented by this instance.\n   */\n   val name: String\n}\n\n@Deprecated(\"Use class literal and extension property `js` instead.\", replaceWith = ReplaceWith(\"T::class.js\"), level = DeprecationLevel.ERROR)\nexternal fun <T : Any> jsClass(): JsClass<T>\n\n@Deprecated(\"Use class literal and extension property `js` instead.\", replaceWith = ReplaceWith(\"this::class.js\"), level
 = DeprecationLevel.ERROR)\nval <T : Any> T.jsClass: JsClass<T>\n   get() = when (jsTypeOf(this)) {\n \"string\" -> js(\"String\")\n   \"number\" -> js(\"Number\")\n   \"boolean\" -> js(\"Boolean\")\n   else -> js(\"Object\").getPrototypeOf(this).constructor\n   }\n\n/**\n * Obtains a constructor reference for the given `KClass`.\n */\nval <T : Any> KClass<T>.js: JsClass<T>\n   get() = (this as KClassImpl<T>).jClass\n\n/**\n * Obtains a `KClass` instance for the given constructor reference.\n */\nval <T : Any> JsClass<T>.kotlin: KClass<T>\n   get() = getKClass(this)\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.reflect.js.internal\n\nimport kotlin.reflect.*\n\ninternal abstract class KClassImpl<T : Any>(\n   internal open val jClass: JsClass<T>\n) : KClass<T> {\n   override val annotations: List<Annotation>\n get() = TODO()\n   override val constructors: Collection<KFunction<T>>\n   get() = TODO()\n   override val isAbstract: Boolean\n   get() = TODO()\n   override val isCompanion: Boolean\n   get() = TODO()\n override val isData: Boolean\n   get() = TODO()\n   override val isFinal: Boolean\n   get() = TODO()\n override val isInner: Boolean\n   get() = TODO()\n   override val isOpen: Boolean\n   get() = TODO()\n override val isSealed: Boolean\n   get() = TODO()\n   override val members: Collection<KCallable<*>>\n get() = TODO()\n   override val nestedClasses: Collection<KClass<*>>\n   get() = TODO()\n   override val objectInstance: T?\n   get() = TODO()\n   override val qualifiedName: String?\n   get() = TODO()\n override val supertypes: List<KType>\n   get() = TODO()\n   override val typeParameters:

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List<KTypeParameter>\n        get() = TODO()\n    override val sealedSubclasses: List<KClass<out T>>\n
        get() = TODO()\n    override val visibility: KVisibility?\n        get() = TODO()\n\n    override fun equals(other:
Any?): Boolean {\n        return other is KClassImpl<*> && jClass == other.jClass\n    }\n\n    // TODO: use FQN\n
override fun hashCode(): Int = simpleName?.hashCode() ?: 0\n\n    override fun toString(): String {\n        // TODO:
use FQN\n        return \"class $simpleName\"\n    }\n}\n\ninternal class SimpleKClassImpl<T : Any>(jClass:
JsClass<T>) : KClassImpl<T>(jClass) {\n    override val simpleName: String? =
jClass.asDynamic().`$metadata$`?.simpleName.unsafeCast<String?>()\n\n    override fun isInstance(value: Any?):
Boolean {\n        return jsIsType(value, jClass)\n    }\n}\n\ninternal class PrimitiveKClassImpl<T : Any>(\n
jClass: JsClass<T>,\n    private val givenSimpleName: String,\n    private val isInstanceFunction: (Any?) ->
Boolean\n) : KClassImpl<T>(jClass) {\n    override fun equals(other: Any?): Boolean {\n        if (other !is
PrimitiveKClassImpl<*>)
 return false\n        return super.equals(other) && givenSimpleName == other.givenSimpleName\n    }\n\n
override val simpleName: String? get() = givenSimpleName\n\n    override fun isInstance(value: Any?): Boolean {\n
     return isInstanceFunction(value)\n    }\n}\n\ninternal object NothingKClassImpl :
KClassImpl<Nothing>(js(\"Object\")) {\n    override val simpleName: String = \"Nothing\"\n\n    override fun
isInstance(value: Any?): Boolean = false\n\n    override val jClass: JsClass<Nothing>\n        get() = throw
UnsupportedOperationException(\"There's no native JS class for Nothing type\")\n\n    override fun equals(other:
Any?): Boolean = other === this\n\n    override fun hashCode(): Int = 0\n}","/*\n * Copyright 2010-2018 JetBrains
s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the
license/LICENSE.txt file.\n */\n\npackage kotlin.reflect.js.internal\n\nimport
kotlin.js.JsClass\n\n@JsName(\"PrimitiveClasses\")\ninternal
 object PrimitiveClasses {\n    @JsName(\"anyClass\")\n    val anyClass =
PrimitiveKClassImpl(js(\"Object\").unsafeCast<JsClass<Any>>(), \"Any\", { it is Any })\n\n
@JsName(\"numberClass\")\n    val numberClass =
PrimitiveKClassImpl(js(\"Number\").unsafeCast<JsClass<Number>>(), \"Number\", { it is Number })\n\n
@JsName(\"nothingClass\")\n    val nothingClass = NothingKClassImpl\n\n    @JsName(\"booleanClass\")\n    val
booleanClass = PrimitiveKClassImpl(js(\"Boolean\").unsafeCast<JsClass<Boolean>>(), \"Boolean\", { it is Boolean
})\n\n    @JsName(\"byteClass\")\n    val byteClass =
PrimitiveKClassImpl(js(\"Number\").unsafeCast<JsClass<Byte>>(), \"Byte\", { it is Byte })\n\n
@JsName(\"shortClass\")\n    val shortClass = PrimitiveKClassImpl(js(\"Number\").unsafeCast<JsClass<Short>>(),
\"Short\", { it is Short })\n\n    @JsName(\"intClass\")\n    val intClass =
PrimitiveKClassImpl(js(\"Number\").unsafeCast<JsClass<Int>>(), \"Int\", { it is Int })\n\n
@JsName(\"floatClass\")\n
   val floatClass = PrimitiveKClassImpl(js(\"Number\").unsafeCast<JsClass<Float>>(), \"Float\", { it is Float })\n\n
 @JsName(\"doubleClass\")\n    val doubleClass =
PrimitiveKClassImpl(js(\"Number\").unsafeCast<JsClass<Double>>(), \"Double\", { it is Double })\n\n
@JsName(\"arrayClass\")\n    val arrayClass =
PrimitiveKClassImpl(js(\"Array\").unsafeCast<JsClass<Array<*>>>(), \"Array\", { it is Array<*> })\n\n
@JsName(\"stringClass\")\n    val stringClass = PrimitiveKClassImpl(js(\"String\").unsafeCast<JsClass<String>>(),
\"String\", { it is String })\n\n    @JsName(\"throwableClass\")\n    val throwableClass =
PrimitiveKClassImpl(js(\"Error\").unsafeCast<JsClass<Throwable>>(), \"Throwable\", { it is Throwable })\n\n
@JsName(\"booleanArrayClass\")\n    val booleanArrayClass =
PrimitiveKClassImpl(js(\"Array\").unsafeCast<JsClass<BooleanArray>>(), \"BooleanArray\", { it is BooleanArray
})\n\n    @JsName(\"charArrayClass\")\n    val charArrayClass =
PrimitiveKClassImpl(js(\"Uint16Array\").unsafeCast<JsClass<CharArray>>(),
 \"CharArray\", { it is CharArray })\n\n    @JsName(\"byteArrayClass\")\n    val byteArrayClass =
PrimitiveKClassImpl(js(\"Int8Array\").unsafeCast<JsClass<ByteArray>>(), \"ByteArray\", { it is ByteArray })\n\n
@JsName(\"shortArrayClass\")\n    val shortArrayClass =
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PrimitiveKClassImpl(js(\"Int16Array\").unsafeCast<JsClass<ShortArray>>(), \"ShortArray\", { it is ShortArray })\n\n    @JsName(\"intArrayClass\")\n    val intArrayClass = PrimitiveKClassImpl(js(\"Int32Array\").unsafeCast<JsClass<IntArray>>(), \"IntArray\", { it is IntArray })\n\n    @JsName(\"longArrayClass\")\n    val longArrayClass = PrimitiveKClassImpl(js(\"Array\").unsafeCast<JsClass<LongArray>>(), \"LongArray\", { it is LongArray })\n\n    @JsName(\"floatArrayClass\")\n    val floatArrayClass = PrimitiveKClassImpl(js(\"Float32Array\").unsafeCast<JsClass<FloatArray>>(), \"FloatArray\", { it is FloatArray })\n\n    @JsName(\"doubleArrayClass\")\n    val doubleArrayClass = PrimitiveKClassImpl(js(\"Float64Array\").unsafeCast<JsClass<DoubleArray>>(), \"DoubleArray\", { it is DoubleArray })\n\n    @JsName(\"functionClass\")\n    fun functionClass(arity: Int): KClassImpl<Any> {\n        return functionClasses.get(arity) ?: run {\n            val result = PrimitiveKClassImpl(js(\"Function\").unsafeCast<JsClass<Any>>(), \"Function$arity\",\n                { jsTypeOf(it) === \"function\" && it.asDynamic().length == arity })\n            functionClasses.asDynamic()[arity] = result\n            result\n        }\n    }\n}\n\nprivate val functionClasses = arrayOfNulls<KClassImpl<Any>>(0)","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n// a package is omitted to get declarations directly under the module\n\nimport kotlin.reflect.KClass\nimport kotlin.reflect.js.internal.*\n\n@JsName(\"getKClass\")\ninternal fun <T : Any> getKClass(jClass: JsClass<T>): KClass<T> = getOrCreateKClass(jClass)\n\n@JsName(\"getKClassFromExpression\")\ninternal fun <T : Any> getKClassFromExpression(e: T): KClass<T> =\n    when (jsTypeOf(e)) {\n        \"string\" -> PrimitiveClasses.stringClass\n        \"number\" -> if (js(\"e | 0\") === e) PrimitiveClasses.intClass else PrimitiveClasses.doubleClass\n        \"boolean\" -> PrimitiveClasses.booleanClass\n        \"function\" -> PrimitiveClasses.functionClass(e.asDynamic().length)\n        else -> {\n            when {\n                e is BooleanArray -> PrimitiveClasses.booleanArrayClass\n                e is CharArray -> PrimitiveClasses.charArrayClass\n                e is ByteArray -> PrimitiveClasses.byteArrayClass\n                e is ShortArray -> PrimitiveClasses.shortArrayClass\n                e is IntArray -> PrimitiveClasses.intArrayClass\n                e is LongArray -> PrimitiveClasses.longArrayClass\n                e is FloatArray -> PrimitiveClasses.floatArrayClass\n                e is DoubleArray -> PrimitiveClasses.doubleArrayClass\n                e is KClass<*> -> KClass::class\n                e is Array<*> -> PrimitiveClasses.arrayClass\n                else -> {\n                    val constructor = js(\"Object\").getPrototypeOf(e).constructor\n                    when {\n                        constructor === js(\"Object\") -> PrimitiveClasses.anyClass\n                        constructor === js(\"Error\") -> PrimitiveClasses.throwableClass\n                        else -> {\n                            val jsClass: JsClass<T> = constructor\n                            getOrCreateKClass(jsClass)\n                        }\n                    }\n                }\n            }\n        }\n    }.unsafeCast<KClass<T>>()\n\nprivate fun <T : Any> getOrCreateKClass(jClass: JsClass<T>): KClass<T> {\n    if (jClass === js(\"String\")) return PrimitiveClasses.stringClass.unsafeCast<KClass<T>>()\n\n    val metadata = jClass.asDynamic().`$metadata$`\n\n    return if (metadata != null) {\n        if (metadata.`$kClass$` == null) {\n            val kClass = SimpleKClassImpl(jClass)\n            metadata.`$kClass$` = kClass\n            kClass\n        } else {\n            metadata.`$kClass$`\n        }\n    } else {\n        SimpleKClassImpl(jClass)\n    }\n}\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.text\n\nimport kotlin.js.RegExp\n\n/**\n * Provides enumeration values to use to set regular expression options.\n */\npublic actual enum class RegexOption(val value: String) {\n    /** Enables case-insensitive matching. */\n    IGNORE_CASE(\"i\"),\n    /** Enables multiline mode.\n     *\n     * In multiline mode the expressions `^` and `$` match just after or just before,\n     * respectively, a line terminator or the end of the input sequence. */\n    MULTILINE(\"m\")\n}\n\n\n/**\n * Represents the results from a single capturing group within a [MatchResult] of [Regex].\n *\n * @param value The value of captured group.\n */\npublic actual data class MatchGroup(actual val value: String)\n\n\n/**\n *
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Represents a compiled regular expression.\n * Provides functions to match strings in text with a pattern, replace the found occurrences and split text around matches.\n *\n * For pattern syntax reference see [MDN RegExp](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/RegExp#Special_characters_meaning_in_regular_expressions)\n * and [http://www.w3schools.com/jsref/jsref_obj_regexp.asp](https://www.w3schools.com/jsref/jsref_obj_regexp.asp).\n *\n * @constructor Creates a regular expression from the specified [pattern] string and the specified set of [options].\n */\npublic actual class Regex actual constructor(pattern: String, options: Set<RegexOption>) {\n\n /** Creates a regular expression from the specified [pattern] string and the specified single [option]. */\n public actual constructor(pattern: String, option: RegexOption) : this(pattern, setOf(option))\n\n /** Creates a regular expression from the specified [pattern] string and the default options. */\n public actual constructor(pattern: String) : this(pattern, emptySet())\n\n\n /** The pattern string of this regular expression. */\n public actual val pattern: String = pattern\n /** The set of options that were used to create this regular expression. */\n public actual val options: Set<RegexOption> = options.toSet()\n private val nativePattern: RegExp = RegExp(pattern, options.map { it.value }.joinToString(separator = \"|\") + \"g\")\n\n /** Indicates whether the regular expression matches the entire [input]. */\n public actual infix fun matches(input: CharSequence): Boolean {\n nativePattern.reset()\n val match = nativePattern.exec(input.toString())\n return match != null && match.index == 0 && nativePattern.lastIndex == input.length\n }\n\n /** Indicates whether the regular expression can find at least one match in the specified [input]. */\n public actual fun containsMatchIn(input: CharSequence): Boolean {\n nativePattern.reset()\n return nativePattern.test(input.toString())\n }\n\n /** Returns the first match of a regular expression in the [input], beginning at the specified [startIndex].\n *\n * @param startIndex An index to start search with, by default 0. Must be not less than zero and not greater than `input.length()`\n * @return An instance of [MatchResult] if match was found or `null` otherwise.\n */\n @Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\n public actual fun find(input: CharSequence, startIndex: Int = 0): MatchResult? = nativePattern.findNext(input.toString(), startIndex)\n\n /**\n * Returns a sequence of all occurrences of a regular expression within the [input] string, beginning at the specified [startIndex].\n *\n * @sample samples.text.Regexps.findAll\n */\n @Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\n public actual fun findAll(input: CharSequence, startIndex: Int = 0): Sequence<MatchResult> =\n generateSequence({ find(input, startIndex) }, { match -> match.next() })\n\n /**\n * Attempts to match the entire [input] CharSequence against the pattern.\n *\n * @return An instance of [MatchResult] if the entire input matches or `null` otherwise.\n */\n public actual fun matchEntire(input: CharSequence): MatchResult? {\n if (pattern.startsWith('^') && pattern.endsWith('$'))\n return find(input)\n else\n return Regex(\"^${pattern.trimStart('^').trimEnd('$')}$\", options).find(input)\n }\n\n /**\n * Replaces all occurrences of this regular expression in the specified [input] string with specified [replacement] expression.\n *\n * @param replacement A replacement expression that can include substitutions. See [String.prototype.replace](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/String/replace) function docs for details.\n */\n public actual fun replace(input: CharSequence, replacement: String): String = input.toString().nativeReplace(nativePattern, replacement)\n\n /**\n * Replaces all occurrences of this regular expression in the specified [input] string with the result of\n * the given function [transform] that takes [MatchResult] and returns a string to be used as a\n * replacement for that match.\n */\n public actual inline fun replace(input: CharSequence, transform: (MatchResult) -> CharSequence): String {\n var match = find(input)\n if (match == null) return input.toString()\n\n var lastStart = 0\n val length = input.length\n val sb = StringBuilder(length)\n do {\n val foundMatch = match!!\n sb.append(input, lastStart, foundMatch.range.start)\n sb.append(transform(foundMatch))\n lastStart = foundMatch.range.endInclusive + 1\n match = foundMatch.next()\n } while (lastStart < length && match

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!= null)\n\n        if (lastStart < length) {\n            sb.append(input, lastStart, length)\n        }\n\n        return sb.toString()\n    }\n\n    /**\n     * Replaces the first occurrence of this regular expression in the specified [input] string with specified [replacement] expression.\n     *\n     * @param replacement A replacement expression that can include substitutions. See [String.prototype.replace](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/String/replace) function docs for details.\n     */\n    public actual fun replaceFirst(input: CharSequence, replacement: String): String {\n        val nonGlobalOptions = options.map { it.value }.joinToString(separator = \"\")\n        return input.toString().nativeReplace(RegExp(pattern, nonGlobalOptions), replacement)\n    }\n\n    /**\n     * Splits the [input] CharSequence around matches of this regular expression.\n     *\n     * @param limit Non-negative value specifying the maximum number of substrings the string can be split to.\n     * Zero by default means no limit is set.\n     */\n    @Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\n    public actual fun split(input: CharSequence, limit: Int = 0): List<String> {\n        require(limit >= 0) { \"Limit must be non-negative, but was $limit\" }\n        val matches = findAll(input).let { if (limit == 0) it else it.take(limit - 1) }\n        val result = mutableListOf<String>()\n        var lastStart = 0\n\n        for (match in matches) {\n            result.add(input.subSequence(lastStart, match.range.start).toString())\n            lastStart = match.range.endInclusive + 1\n        }\n        result.add(input.subSequence(lastStart, input.length).toString())\n        return result\n    }\n\n\n    /**\n     * Returns the string representation of this regular expression, namely the [pattern] of this regular expression.\n     *\n     * Note that another regular expression constructed from the same pattern string may have different [options]\n     * and may match strings differently.\n     */\n    public override fun toString(): String = nativePattern.toString()\n\n    actual companion object {\n        /**\n         * Returns a regular expression that matches the specified [literal] string literally.\n         * No characters of that string will have special meaning when searching for an occurrence of the regular expression.\n         */\n        public actual fun fromLiteral(literal: String): Regex = Regex(escape(literal))\n\n        /**\n         * Returns a regular expression pattern string that matches the specified [literal] string literally.\n         * No characters of that string will have special meaning when searching for an occurrence of the regular expression.\n
         */\n        public actual fun escape(literal: String): String = literal.nativeReplace(patternEscape, \"\\\\$&\")\n\n        /**\n         * Returns a literal replacement expression for the specified [literal] string.\n         * No characters of that string will have special meaning when it is used as a replacement string in [Regex.replace] function.\n         */\n        public actual fun escapeReplacement(literal: String): String = literal.nativeReplace(replacementEscape, \"$$$$\")\n\n        private val patternEscape = RegExp(\"\"\"[-\\\\^$*+?.()|[\\]{}]\"\"\", \"g\")\n        private val replacementEscape = RegExp(\"\"\"\\$\"\"\", \"g\")\n    }\n}\n\n/** Creates a regular expression from the specified [pattern] string and the specified single [option].  */\n@Deprecated(\"Provided for binary compatibility\", level = DeprecationLevel.HIDDEN)\n@JsName(\"Regex_sb3q2\\$\")\npublic fun Regex_0(pattern: String, option: RegexOption): Regex = Regex(pattern, setOf(option))\n\n/** Creates
 a regular expression from the specified [pattern] string and the default options.  */\n@Deprecated(\"Provided for binary compatibility\", level = DeprecationLevel.HIDDEN)\n@JsName(\"Regex_61zpoe\\$\")\npublic fun Regex_1(pattern: String): Regex = Regex(pattern, emptySet())\n\n\n\n\nprivate fun RegExp.findNext(input: String, from: Int): MatchResult? {\n    this.lastIndex = from\n    val match = exec(input)\n    if (match == null) return null\n
 val range = match.index..lastIndex - 1\n\n    return object : MatchResult {\n        override val range: IntRange = range\n        override val value: String\n            get() = match[0]!!\n\n        override val groups: MatchGroupCollection = object : MatchGroupCollection, AbstractCollection<MatchGroup?>() {\n            override val size: Int get() = match.length\n            override fun iterator(): Iterator<MatchGroup?> = indices.asSequence().map { this[it] }.iterator()\n            override fun get(index: Int): MatchGroup? = match[index]?.let
 { MatchGroup(it) }\n        }\n\n\n        private var groupValues_: List<String>? = null\n\n        override val groupValues: List<String>\n            get() {\n                if (groupValues_ == null) {\n                    groupValues_ = object : AbstractList<String>() {\n                        override val size: Int get() = match.length\n                        override fun get(index: Int): String = match[index] ?: \"\"\n                    }\n                }\n                return groupValues_!!\n
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}\n\n override fun next(): MatchResult? = this@findNext.findNext(input, if (range.isEmpty()) range.start + 1 else range.endInclusive + 1)\n }\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.js\n\n/**\n * Exposes the JavaScript [RegExp object](https://developer.mozilla.org/en/docs/Web/JavaScript/Reference/Global_Objects/RegExp) to Kotlin.\n */\n@Suppress(\"NOT_DOCUMENTED\")\npublic external class RegExp(pattern: String, flags: String? = definedExternally) {\n\n public fun test(str: String): Boolean\n\n public fun exec(str: String): RegExpMatch?\n\n public override fun toString(): String\n\n /**\n * The lastIndex is a read/write integer property of regular expressions that specifies the index at which to start the next match.\n */\n public var lastIndex: Int\n\n public val global: Boolean\n public val ignoreCase: Boolean\n public val multiline: Boolean\n}\n\n/**\n * Resets the regular expression so that subsequent [RegExp.test] and [RegExp.exec] calls will match starting with the beginning of the input string.\n */\npublic fun RegExp.reset() {\n lastIndex = 0\n}\n\n// TODO: Inherit from array or introduce asArray() extension\n\n/**\n * Represents the return value of [RegExp.exec].\n */\n@Suppress(\"NOT_DOCUMENTED\")\npublic external interface RegExpMatch {\n public val index: Int\n public val input: String\n public val length: Int\n}\n\n/**\n * Returns the entire text matched by [RegExp.exec] if the [index] parameter is 0, or the text matched by the capturing parenthesis\n * at the given index.\n */\npublic inline operator fun RegExpMatch.get(index: Int): String? = asDynamic()[index]\n\n/**\n * Converts the result of [RegExp.exec] to an array where the first element contains the entire matched text and each subsequent\n * element is the text matched by each capturing parenthesis.\n */\npublic inline fun RegExpMatch.asArray(): Array<out String?> = unsafeCast<Array<out String?>>()\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.sequences\n\ninternal actual class ConstrainedOnceSequence<T> actual constructor(sequence: Sequence<T>) : Sequence<T> {\n private var sequenceRef: Sequence<T>? = sequence\n\n override fun iterator(): Iterator<T> {\n val sequence = sequenceRef ?: throw IllegalStateException(\"This sequence can be consumed only once.\")\n sequenceRef = null\n return sequence.iterator()\n }\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.text\n\nimport kotlin.js.RegExp\n\n@kotlin.internal.InlineOnly\ninternal actual inline fun String.nativeIndexOf(ch: Char, fromIndex: Int): Int = nativeIndexOf(ch.toString(), fromIndex)\n\n@kotlin.internal.InlineOnly\ninternal actual inline fun String.nativeLastIndexOf(ch: Char, fromIndex: Int): Int = nativeLastIndexOf(ch.toString(), fromIndex)\n\n/**\n * Returns `true` if this string starts with the specified prefix.\n */\n@Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\npublic actual fun String.startsWith(prefix: String, ignoreCase: Boolean = false): Boolean {\n if (!ignoreCase)\n return nativeStartsWith(prefix, 0)\n else\n return regionMatches(0, prefix, 0, prefix.length, ignoreCase)\n}\n\n/**\n * Returns `true` if a substring of this string starting at the specified offset [startIndex] starts with the specified prefix.\n */\n@Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\npublic actual fun String.startsWith(prefix: String, startIndex: Int, ignoreCase: Boolean = false): Boolean {\n if (!ignoreCase)\n return nativeStartsWith(prefix, startIndex)\n else\n return regionMatches(startIndex, prefix, 0, prefix.length, ignoreCase)\n}\n\n/**\n * Returns `true` if this string ends with the specified suffix.\n */\n@Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\npublic actual fun String.endsWith(suffix: String, ignoreCase: Boolean = false): Boolean {\n if (!ignoreCase)\n return nativeEndsWith(suffix)\n else\n return regionMatches(length - suffix.length, suffix, 0, suffix.length, ignoreCase)\n}\n\n\npublic fun String.matches(regex: String): Boolean {\n val result = this.match(regex)\n return result != null && result.size != 0\n}\n\npublic actual fun CharSequence.isBlank(): Boolean = length == 0 || (if (this is String) this else this.toString()).matches(\"^[\\\\s\\\\xA0]+$\")\n\n@Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGU

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MENTS\")\npublic actual fun String?.equals(other: String?, ignoreCase: Boolean = false): Boolean =\n    if (this == null)\n        other == null\n    else if (!ignoreCase)\n        this == other\n    else\n        other != null && this.toLowerCase() == other.toLowerCase()\n\n\n@Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\npublic actual fun CharSequence.regionMatches(thisOffset: Int, other: CharSequence, otherOffset: Int, length: Int, ignoreCase: Boolean = false): Boolean =\n    regionMatchesImpl(thisOffset, other, otherOffset, length, ignoreCase)\n\n\n/**\n * Returns a copy of this string having its first letter uppercased, or the original string,\n * if it's empty or already starts with an upper case letter.\n *\n * @sample samples.text.Strings.capitalize\n */\npublic actual fun String.capitalize(): String {\n    return if (isNotEmpty()) substring(0, 1).toUpperCase() + substring(1) else this\n}\n\n/**\n * Returns a copy of this string having its first letter lowercased, or the original string,\n * if it's empty or already starts with a lower case letter.\n *\n * @sample samples.text.Strings.decapitalize\n */\npublic actual fun String.decapitalize(): String {\n    return if (isNotEmpty()) substring(0, 1).toLowerCase() + substring(1) else this\n}\n\n/**\n * Returns a string containing this char sequence repeated [n] times.\n * @throws [IllegalArgumentException] when n < 0.\n */\npublic actual fun CharSequence.repeat(n: Int): String {\n    require(n >= 0) { \"Count 'n' must be non-negative, but was $n.\" }\n    return when (n) {\n        0 -> \"\"\n        1 -> this.toString()\n        else -> {\n            var result = \"\"\n            if (!isEmpty()) {\n                var s = this.toString()\n                var count = n\n                while (true) {\n                    if ((count and 1) == 1) {\n                        result += s\n                    }\n                    count = count ushr 1\n                    if (count == 0) {\n                        break\n                    }\n                    s += s\n                }\n            }\n            return result\n        }\n    }\n}\n\n@Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\npublic actual fun String.replace(oldValue: String, newValue: String, ignoreCase: Boolean = false): String =\n    nativeReplace(RegExp(Regex.escape(oldValue), if (ignoreCase) \"gi\" else \"g\"), Regex.escapeReplacement(newValue))\n\n@Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\npublic actual fun String.replace(oldChar: Char, newChar: Char, ignoreCase: Boolean = false): String =\n    nativeReplace(RegExp(Regex.escape(oldChar.toString()),\n        if (ignoreCase) \"gi\" else \"g\"), newChar.toString())\n\n@Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\npublic actual fun String.replaceFirst(oldValue: String, newValue: String, ignoreCase: Boolean = false): String =\n    nativeReplace(RegExp(Regex.escape(oldValue), if (ignoreCase) \"i\" else \"\"), Regex.escapeReplacement(newValue))\n\n@Suppress(\"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS\")\npublic actual fun String.replaceFirst(oldChar: Char, newChar: Char, ignoreCase: Boolean = false): String =\n    nativeReplace(RegExp(Regex.escape(oldChar.toString()), if (ignoreCase) \"i\" else \"\"), newChar.toString())\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.text\n\n\npublic actual interface Appendable {\n    public actual fun append(csq: CharSequence?): Appendable\n    public actual fun append(csq: CharSequence?, start: Int, end: Int): Appendable\n    public actual fun append(c: Char): Appendable\n}\n\npublic actual class StringBuilder(content: String = \"\") : Appendable, CharSequence {\n    actual constructor(capacity: Int) : this() {}\n\n    actual constructor(content: CharSequence) : this(content.toString()) {}\n\n    actual constructor() : this(\"\")\n\n    private var string: String = content\n\n    actual override val length: Int\n        get() = string.asDynamic().length\n\n    actual override fun get(index: Int): Char =\n        string.getOrElse(index) { throw IndexOutOfBoundsException(\"index: $index, length: $length}\") }\n\n    actual override fun subSequence(startIndex: Int, endIndex: Int): CharSequence = string.substring(startIndex, endIndex)\n\n    actual override fun append(c: Char): StringBuilder {\n        string += c\n        return this\n    }\n\n    actual override fun append(csq: CharSequence?): StringBuilder {\n        string += csq.toString()\n        return this\n    }\n\n    actual override
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fun append(csq: CharSequence?, start: Int, end: Int): StringBuilder {\n string += csq.toString().substring(start, end)\n return this\n }\n\n actual fun append(obj: Any?): StringBuilder {\n string += obj.toString()\n return this\n }\n\n actual fun reverse(): StringBuilder {\n string = string.asDynamic().split(\"\").reverse().join(\"\")\n return this\n }\n\n /**\n * Clears the content of this string builder making it empty.\n *\n * @sample samples.text.Strings.clearStringBuilder\n */\n @SinceKotlin(\"1.3\")\n public fun clear(): StringBuilder {\n string = \"\"\n return this\n }\n\n override fun toString(): String = string\n}\n\n\n\n/**\n * Clears the content of this string builder making it empty.\n *\n * @sample samples.text.Strings.clearStringBuilder\n */\n@SinceKotlin(\"1.3\")\n@Suppress(\"EXTENSION_SHADOWED_BY_MEMBER\", \"NOTHING_TO_INLINE\")\npublic actual inline fun StringBuilder.clear(): StringBuilder = this.clear()","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n// NOTE: THIS FILE IS AUTO-GENERATED, DO NOT EDIT!\n// See libraries/tools/idl2k for details\n\n@file:Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npackage org.khronos.webgl\n\nimport kotlin.js.*\nimport org.w3c.css.masking.*\nimport org.w3c.dom.*\nimport org.w3c.dom.clipboard.*\nimport org.w3c.dom.css.*\nimport org.w3c.dom.events.*\nimport org.w3c.dom.mediacapture.*\nimport org.w3c.dom.parsing.*\nimport org.w3c.dom.pointerevents.*\nimport org.w3c.dom.svg.*\nimport org.w3c.dom.url.*\nimport org.w3c.fetch.*\nimport org.w3c.files.*\nimport org.w3c.notifications.*\nimport org.w3c.performance.*\nimport org.w3c.workers.*\nimport org.w3c.xhr.*\n\npublic external interface WebGLContextAttributes {\n var alpha: Boolean? /* = true */\n get() = definedExternally\n set(value) = definedExternally\n var depth: Boolean? /* = true */\n get() = definedExternally\n set(value) = definedExternally\n var stencil: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n var antialias: Boolean? /* = true */\n get() = definedExternally\n set(value) = definedExternally\n var premultipliedAlpha: Boolean? /* = true */\n get() = definedExternally\n set(value) = definedExternally\n var preserveDrawingBuffer: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n var preferLowPowerToHighPerformance: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n var failIfMajorPerformanceCaveat: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun WebGLContextAttributes(alpha: Boolean? = true, depth: Boolean? = true, stencil: Boolean? = false, antialias: Boolean? = true, premultipliedAlpha: Boolean? = true, preserveDrawingBuffer: Boolean? = false, preferLowPowerToHighPerformance: Boolean? = false, failIfMajorPerformanceCaveat: Boolean? = false): WebGLContextAttributes {\n val o = js(\"({})\")\n\n o[\"alpha\"] = alpha\n o[\"depth\"] = depth\n o[\"stencil\"] = stencil\n o[\"antialias\"] = antialias\n o[\"premultipliedAlpha\"] = premultipliedAlpha\n o[\"preserveDrawingBuffer\"] = preserveDrawingBuffer\n o[\"preferLowPowerToHighPerformance\"] = preferLowPowerToHighPerformance\n o[\"failIfMajorPerformanceCaveat\"] = failIfMajorPerformanceCaveat\n\n return o\n}\n\npublic external abstract class WebGLObject {\n}\n\n/**\n * Exposes the JavaScript [WebGLBuffer](https://developer.mozilla.org/en/docs/Web/API/WebGLBuffer) to Kotlin\n */\npublic external abstract class WebGLBuffer : WebGLObject {\n}\n\n/**\n * Exposes the JavaScript [WebGLFramebuffer](https://developer.mozilla.org/en/docs/Web/API/WebGLFramebuffer) to Kotlin\n */\npublic external abstract class WebGLFramebuffer : WebGLObject {\n}\n\n/**\n * Exposes the JavaScript [WebGLProgram](https://developer.mozilla.org/en/docs/Web/API/WebGLProgram) to Kotlin\n */\npublic external abstract class WebGLProgram : WebGLObject {\n}\n\n/**\n * Exposes the JavaScript [WebGLRenderbuffer](https://developer.mozilla.org/en/docs/Web/API/WebGLRenderbuffer) to Kotlin\n */\npublic external abstract class WebGLRenderbuffer : WebGLObject {\n}\n\n/**\n * Exposes the JavaScript [WebGLShader](https://developer.mozilla.org/en/docs/Web/API/WebGLShader) to Kotlin\n */\npublic external abstract class WebGLShader : WebGLObject {\n}\n\n/**\n * Exposes the JavaScript

[WebGLTexture](https://developer.mozilla.org/en/docs/Web/API/WebGLTexture) to Kotlin\n */\npublic external abstract class WebGLTexture : WebGLObject {\n}\n\n/**\n * Exposes the JavaScript [WebGLUniformLocation](https://developer.mozilla.org/en/docs/Web/API/WebGLUniformLocation) to Kotlin\n */\npublic external abstract class WebGLUniformLocation {\n}\n\n/**\n * Exposes the JavaScript [WebGLActiveInfo](https://developer.mozilla.org/en/docs/Web/API/WebGLActiveInfo) to Kotlin\n */\npublic external abstract class WebGLActiveInfo {\n   open val size: Int\n   open val type: Int\n   open val name: String\n}\n\n/**\n * Exposes the JavaScript [WebGLShaderPrecisionFormat](https://developer.mozilla.org/en/docs/Web/API/WebGLShaderPrecisionFormat) to Kotlin\n */\npublic external abstract class WebGLShaderPrecisionFormat {\n   open val rangeMin: Int\n   open val rangeMax: Int\n   open val precision: Int\n}\n\npublic external interface WebGLRenderingContextBase {\n   val canvas: HTMLCanvasElement\n   val drawingBufferWidth: Int\n   val drawingBufferHeight: Int\n   fun getContextAttributes(): WebGLContextAttributes?\n   fun isContextLost(): Boolean\n   fun getSupportedExtensions(): Array<String>?\n   fun getExtension(name: String): dynamic\n   fun activeTexture(texture: Int): Unit\n   fun attachShader(program: WebGLProgram?, shader: WebGLShader?): Unit\n   fun bindAttribLocation(program: WebGLProgram?, index: Int, name: String): Unit\n   fun bindBuffer(target: Int, buffer: WebGLBuffer?): Unit\n   fun bindFramebuffer(target: Int, framebuffer: WebGLFramebuffer?): Unit\n   fun bindRenderbuffer(target: Int, renderbuffer: WebGLRenderbuffer?): Unit\n   fun bindTexture(target: Int, texture: WebGLTexture?): Unit\n   fun blendColor(red: Float, green: Float, blue: Float, alpha: Float): Unit\n   fun blendEquation(mode: Int): Unit\n   fun blendEquationSeparate(modeRGB: Int, modeAlpha: Int): Unit\n   fun blendFunc(sfactor: Int, dfactor: Int): Unit\n   fun blendFuncSeparate(srcRGB: Int, dstRGB: Int, srcAlpha: Int, dstAlpha: Int): Unit\n   fun bufferData(target: Int, size: Int, usage: Int): Unit\n   fun bufferData(target: Int, data: BufferDataSource?, usage: Int): Unit\n   fun bufferSubData(target: Int, offset: Int, data: BufferDataSource?): Unit\n   fun checkFramebufferStatus(target: Int): Int\n   fun clear(mask: Int): Unit\n   fun clearColor(red: Float, green: Float, blue: Float, alpha: Float): Unit\n   fun clearDepth(depth: Float): Unit\n   fun clearStencil(s: Int): Unit\n   fun colorMask(red: Boolean, green: Boolean, blue: Boolean, alpha: Boolean): Unit\n   fun compileShader(shader: WebGLShader?): Unit\n   fun compressedTexImage2D(target: Int, level: Int, internalformat: Int, width: Int, height: Int, border: Int, data: ArrayBufferView): Unit\n   fun compressedTexSubImage2D(target: Int, level: Int, xoffset: Int, yoffset: Int, width: Int, height: Int, format: Int, data: ArrayBufferView): Unit\n   fun copyTexImage2D(target: Int, level: Int, internalformat: Int, x: Int, y: Int, width: Int, height: Int, border: Int): Unit\n   fun copyTexSubImage2D(target: Int, level: Int, xoffset: Int, yoffset: Int, x: Int, y: Int, width: Int, height: Int): Unit\n   fun createBuffer(): WebGLBuffer?\n   fun createFramebuffer(): WebGLFramebuffer?\n   fun createProgram(): WebGLProgram?\n   fun createRenderbuffer(): WebGLRenderbuffer?\n   fun createShader(type: Int): WebGLShader?\n   fun createTexture(): WebGLTexture?\n   fun cullFace(mode: Int): Unit\n   fun deleteBuffer(buffer: WebGLBuffer?): Unit\n   fun deleteFramebuffer(framebuffer: WebGLFramebuffer?): Unit\n   fun deleteProgram(program: WebGLProgram?): Unit\n   fun deleteRenderbuffer(renderbuffer: WebGLRenderbuffer?): Unit\n   fun deleteShader(shader: WebGLShader?): Unit\n   fun deleteTexture(texture: WebGLTexture?): Unit\n   fun depthFunc(func: Int): Unit\n   fun depthMask(flag: Boolean): Unit\n   fun depthRange(zNear: Float, zFar: Float): Unit\n   fun detachShader(program: WebGLProgram?, shader: WebGLShader?): Unit\n   fun disable(cap: Int): Unit\n   fun disableVertexAttribArray(index: Int): Unit\n   fun drawArrays(mode: Int, first: Int, count: Int): Unit\n   fun drawElements(mode: Int, count: Int, type: Int, offset: Int): Unit\n   fun enable(cap: Int): Unit\n   fun enableVertexAttribArray(index: Int): Unit\n   fun finish(): Unit\n   fun flush(): Unit\n   fun framebufferRenderbuffer(target: Int, attachment: Int, renderbuffertarget: Int, renderbuffer: WebGLRenderbuffer?): Unit\n   fun framebufferTexture2D(target: Int, attachment: Int, textarget: Int, texture: WebGLTexture?, level: Int): Unit\n   fun frontFace(mode: Int): Unit\n   fun generateMipmap(target: Int): Unit\n   fun getActiveAttrib(program: WebGLProgram?, index: Int): WebGLActiveInfo?\n   fun getActiveUniform(program: WebGLProgram?, index: Int): WebGLActiveInfo?\n   fun getAttachedShaders(program: WebGLProgram?): Array<WebGLShader>?\n   fun getAttribLocation(program:

WebGLProgram?, name: String): Int\n fun getBufferParameter(target: Int, pname: Int): Any?\n fun getParameter(pname: Int): Any?\n fun getError(): Int\n fun getFramebufferAttachmentParameter(target: Int, attachment: Int, pname: Int):
Any?\n fun getProgramParameter(program: WebGLProgram?, pname: Int): Any?\n fun getProgramInfoLog(program: WebGLProgram?): String?\n fun getRenderbufferParameter(target: Int, pname: Int): Any?\n fun getShaderParameter(shader: WebGLShader?, pname: Int): Any?\n fun getShaderPrecisionFormat(shadertype: Int, precisiontype: Int): WebGLShaderPrecisionFormat?\n fun getShaderInfoLog(shader: WebGLShader?): String?\n fun getShaderSource(shader: WebGLShader?): String?\n fun getTexParameter(target: Int, pname: Int): Any?\n fun getUniform(program: WebGLProgram?, location: WebGLUniformLocation?): Any?\n fun getUniformLocation(program: WebGLProgram?, name: String): WebGLUniformLocation?\n fun getVertexAttrib(index: Int, pname: Int): Any?\n fun getVertexAttribOffset(index: Int, pname: Int): Int\n fun hint(target: Int, mode: Int): Unit\n fun isBuffer(buffer: WebGLBuffer?): Boolean\n fun isEnabled(cap: Int): Boolean\n fun isFramebuffer(framebuffer: WebGLFramebuffer?):
Boolean\n fun isProgram(program: WebGLProgram?): Boolean\n fun isRenderbuffer(renderbuffer: WebGLRenderbuffer?): Boolean\n fun isShader(shader: WebGLShader?): Boolean\n fun isTexture(texture: WebGLTexture?): Boolean\n fun lineWidth(width: Float): Unit\n fun linkProgram(program: WebGLProgram?): Unit\n fun pixelStorei(pname: Int, param: Int): Unit\n fun polygonOffset(factor: Float, units: Float): Unit\n fun readPixels(x: Int, y: Int, width: Int, height: Int, format: Int, type: Int, pixels: ArrayBufferView?): Unit\n fun renderbufferStorage(target: Int, internalformat: Int, width: Int, height: Int): Unit\n fun sampleCoverage(value: Float, invert: Boolean): Unit\n fun scissor(x: Int, y: Int, width: Int, height: Int): Unit\n fun shaderSource(shader: WebGLShader?, source: String): Unit\n fun stencilFunc(func: Int, ref: Int, mask: Int): Unit\n fun stencilFuncSeparate(face: Int, func: Int, ref: Int, mask: Int): Unit\n fun stencilMask(mask:
Int): Unit\n fun stencilMaskSeparate(face: Int, mask: Int): Unit\n fun stencilOp(fail: Int, zfail: Int, zpass: Int): Unit\n fun stencilOpSeparate(face: Int, fail: Int, zfail: Int, zpass: Int): Unit\n fun texImage2D(target: Int, level: Int, internalformat: Int, width: Int, height: Int, border: Int, format: Int, type: Int, pixels: ArrayBufferView?): Unit\n fun texImage2D(target: Int, level: Int, internalformat: Int, format: Int, type: Int, source: TexImageSource?): Unit\n fun texParameterf(target: Int, pname: Int, param: Float): Unit\n fun texParameteri(target: Int, pname: Int, param: Int): Unit\n fun texSubImage2D(target: Int, level: Int, xoffset: Int, yoffset: Int, width: Int, height: Int, format: Int, type: Int, pixels: ArrayBufferView?): Unit\n fun texSubImage2D(target: Int, level: Int, xoffset: Int, yoffset: Int, format: Int, type: Int, source: TexImageSource?): Unit\n fun uniform1f(location: WebGLUniformLocation?, x: Float): Unit\n fun uniform1fv(location:
WebGLUniformLocation?, v: Float32Array): Unit\n fun uniform1fv(location: WebGLUniformLocation?, v: Array<Float>): Unit\n fun uniform1i(location: WebGLUniformLocation?, x: Int): Unit\n fun uniform1iv(location: WebGLUniformLocation?, v: Int32Array): Unit\n fun uniform1iv(location: WebGLUniformLocation?, v: Array<Int>): Unit\n fun uniform2f(location: WebGLUniformLocation?, x: Float, y: Float): Unit\n fun uniform2fv(location: WebGLUniformLocation?, v: Float32Array): Unit\n fun uniform2fv(location: WebGLUniformLocation?, v: Array<Float>): Unit\n fun uniform2i(location: WebGLUniformLocation?, x: Int, y: Int): Unit\n fun uniform2iv(location: WebGLUniformLocation?, v: Int32Array): Unit\n fun uniform2iv(location: WebGLUniformLocation?, v: Array<Int>): Unit\n fun uniform3f(location: WebGLUniformLocation?, x: Float, y: Float, z: Float): Unit\n fun uniform3fv(location: WebGLUniformLocation?, v: Float32Array): Unit\n fun uniform3fv(location: WebGLUniformLocation?,
v: Array<Float>): Unit\n fun uniform3i(location: WebGLUniformLocation?, x: Int, y: Int, z: Int): Unit\n fun uniform3iv(location: WebGLUniformLocation?, v: Int32Array): Unit\n fun uniform3iv(location: WebGLUniformLocation?, v: Array<Int>): Unit\n fun uniform4f(location: WebGLUniformLocation?, x: Float, y: Float, z: Float, w: Float): Unit\n fun uniform4fv(location: WebGLUniformLocation?, v: Float32Array): Unit\n fun uniform4fv(location: WebGLUniformLocation?, v: Array<Float>): Unit\n fun uniform4i(location: WebGLUniformLocation?, x: Int, y: Int, z: Int, w: Int): Unit\n fun uniform4iv(location:

WebGLUniformLocation?, v: Int32Array): Unit\n fun uniform4iv(location: WebGLUniformLocation?, v: Array<Int>): Unit\n fun uniformMatrix2fv(location: WebGLUniformLocation?, transpose: Boolean, value: Float32Array): Unit\n fun uniformMatrix2fv(location: WebGLUniformLocation?, transpose: Boolean, value: Array<Float>): Unit\n fun uniformMatrix3fv(location:
WebGLUniformLocation?, transpose: Boolean, value: Float32Array): Unit\n fun uniformMatrix3fv(location: WebGLUniformLocation?, transpose: Boolean, value: Array<Float>): Unit\n fun uniformMatrix4fv(location: WebGLUniformLocation?, transpose: Boolean, value: Float32Array): Unit\n fun uniformMatrix4fv(location: WebGLUniformLocation?, transpose: Boolean, value: Array<Float>): Unit\n fun useProgram(program: WebGLProgram?): Unit\n fun validateProgram(program: WebGLProgram?): Unit\n fun vertexAttrib1f(index: Int, x: Float): Unit\n fun vertexAttrib1fv(index: Int, values: dynamic): Unit\n fun vertexAttrib2f(index: Int, x: Float, y: Float): Unit\n fun vertexAttrib2fv(index: Int, values: dynamic): Unit\n fun vertexAttrib3f(index: Int, x: Float, y: Float, z: Float): Unit\n fun vertexAttrib3fv(index: Int, values: dynamic): Unit\n fun vertexAttrib4f(index: Int, x: Float, y: Float, z: Float, w: Float): Unit\n fun vertexAttrib4fv(index: Int, values: dynamic):
Unit\n fun vertexAttribPointer(index: Int, size: Int, type: Int, normalized: Boolean, stride: Int, offset: Int): Unit\n fun viewport(x: Int, y: Int, width: Int, height: Int): Unit\n\n companion object {\n val DEPTH_BUFFER_BIT: Int\n val STENCIL_BUFFER_BIT: Int\n val COLOR_BUFFER_BIT: Int\n val POINTS: Int\n val LINES: Int\n val LINE_LOOP: Int\n val LINE_STRIP: Int\n val TRIANGLES: Int\n val TRIANGLE_STRIP: Int\n val TRIANGLE_FAN: Int\n val ZERO: Int\n val ONE: Int\n val SRC_COLOR: Int\n val ONE_MINUS_SRC_COLOR: Int\n val SRC_ALPHA: Int\n val ONE_MINUS_SRC_ALPHA: Int\n val DST_ALPHA: Int\n val ONE_MINUS_DST_ALPHA: Int\n val DST_COLOR: Int\n val ONE_MINUS_DST_COLOR: Int\n val SRC_ALPHA_SATURATE: Int\n val FUNC_ADD: Int\n val BLEND_EQUATION: Int\n val BLEND_EQUATION_RGB: Int\n val BLEND_EQUATION_ALPHA:
Int\n val FUNC_SUBTRACT: Int\n val FUNC_REVERSE_SUBTRACT: Int\n val BLEND_DST_RGB: Int\n val BLEND_SRC_RGB: Int\n val BLEND_DST_ALPHA: Int\n val BLEND_SRC_ALPHA: Int\n val CONSTANT_COLOR: Int\n val ONE_MINUS_CONSTANT_COLOR: Int\n val CONSTANT_ALPHA: Int\n val ONE_MINUS_CONSTANT_ALPHA: Int\n val BLEND_COLOR: Int\n val ARRAY_BUFFER: Int\n val ELEMENT_ARRAY_BUFFER: Int\n val ARRAY_BUFFER_BINDING: Int\n val ELEMENT_ARRAY_BUFFER_BINDING: Int\n val STREAM_DRAW: Int\n val STATIC_DRAW: Int\n val DYNAMIC_DRAW: Int\n val BUFFER_SIZE: Int\n val BUFFER_USAGE: Int\n val CURRENT_VERTEX_ATTRIB: Int\n val FRONT: Int\n val BACK: Int\n val FRONT_AND_BACK: Int\n val CULL_FACE: Int\n val BLEND: Int\n val DITHER: Int\n val STENCIL_TEST: Int\n val DEPTH_TEST: Int\n val SCISSOR_TEST: Int\n val POLYGON_OFFSET_FILL:
Int\n val SAMPLE_ALPHA_TO_COVERAGE: Int\n val SAMPLE_COVERAGE: Int\n val NO_ERROR: Int\n val INVALID_ENUM: Int\n val INVALID_VALUE: Int\n val INVALID_OPERATION: Int\n val OUT_OF_MEMORY: Int\n val CW: Int\n val CCW: Int\n val LINE_WIDTH: Int\n val ALIASED_POINT_SIZE_RANGE: Int\n val ALIASED_LINE_WIDTH_RANGE: Int\n val CULL_FACE_MODE: Int\n val FRONT_FACE: Int\n val DEPTH_RANGE: Int\n val DEPTH_WRITEMASK: Int\n val DEPTH_CLEAR_VALUE: Int\n val DEPTH_FUNC: Int\n val STENCIL_CLEAR_VALUE: Int\n val STENCIL_FUNC: Int\n val STENCIL_FAIL: Int\n val STENCIL_PASS_DEPTH_FAIL: Int\n val STENCIL_PASS_DEPTH_PASS: Int\n val STENCIL_REF: Int\n val STENCIL_VALUE_MASK: Int\n val STENCIL_WRITEMASK: Int\n val STENCIL_BACK_FUNC: Int\n val STENCIL_BACK_FAIL: Int\n val STENCIL_BACK_PASS_DEPTH_FAIL:
Int\n val STENCIL_BACK_PASS_DEPTH_PASS: Int\n val STENCIL_BACK_REF: Int\n val STENCIL_BACK_VALUE_MASK: Int\n val STENCIL_BACK_WRITEMASK: Int\n val VIEWPORT:

Int\n val SCISSOR_BOX: Int\n val COLOR_CLEAR_VALUE: Int\n val COLOR_WRITEMASK: Int\n val UNPACK_ALIGNMENT: Int\n val PACK_ALIGNMENT: Int\n val MAX_TEXTURE_SIZE: Int\n val MAX_VIEWPORT_DIMS: Int\n val SUBPIXEL_BITS: Int\n val RED_BITS: Int\n val GREEN_BITS: Int\n val BLUE_BITS: Int\n val ALPHA_BITS: Int\n val DEPTH_BITS: Int\n val STENCIL_BITS: Int\n val POLYGON_OFFSET_UNITS: Int\n val POLYGON_OFFSET_FACTOR: Int\n val TEXTURE_BINDING_2D: Int\n val SAMPLE_BUFFERS: Int\n val SAMPLES: Int\n val SAMPLE_COVERAGE_VALUE: Int\n val SAMPLE_COVERAGE_INVERT: Int\n val COMPRESSED_TEXTURE_FORMATS: Int\n val DONT_CARE: Int\n val FASTEST:
Int\n val NICEST: Int\n val GENERATE_MIPMAP_HINT: Int\n val BYTE: Int\n val UNSIGNED_BYTE: Int\n val SHORT: Int\n val UNSIGNED_SHORT: Int\n val INT: Int\n val UNSIGNED_INT: Int\n val FLOAT: Int\n val DEPTH_COMPONENT: Int\n val ALPHA: Int\n val RGB: Int\n val RGBA: Int\n val LUMINANCE: Int\n val LUMINANCE_ALPHA: Int\n val UNSIGNED_SHORT_4_4_4_4: Int\n val UNSIGNED_SHORT_5_5_5_1: Int\n val UNSIGNED_SHORT_5_6_5: Int\n val FRAGMENT_SHADER: Int\n val VERTEX_SHADER: Int\n val MAX_VERTEX_ATTRIBS: Int\n val MAX_VERTEX_UNIFORM_VECTORS: Int\n val MAX_VARYING_VECTORS: Int\n val MAX_COMBINED_TEXTURE_IMAGE_UNITS: Int\n val MAX_VERTEX_TEXTURE_IMAGE_UNITS: Int\n val MAX_TEXTURE_IMAGE_UNITS: Int\n val MAX_FRAGMENT_UNIFORM_VECTORS: Int\n val SHADER_TYPE: Int\n val DELETE_STATUS: Int\n val LINK_STATUS:
Int\n val VALIDATE_STATUS: Int\n val ATTACHED_SHADERS: Int\n val ACTIVE_UNIFORMS: Int\n val ACTIVE_ATTRIBUTES: Int\n val SHADING_LANGUAGE_VERSION: Int\n val CURRENT_PROGRAM: Int\n val NEVER: Int\n val LESS: Int\n val EQUAL: Int\n val LEQUAL: Int\n val GREATER: Int\n val NOTEQUAL: Int\n val GEQUAL: Int\n val ALWAYS: Int\n val KEEP: Int\n val REPLACE: Int\n val INCR: Int\n val DECR: Int\n val INVERT: Int\n val INCR_WRAP: Int\n val DECR_WRAP: Int\n val VENDOR: Int\n val RENDERER: Int\n val VERSION: Int\n val NEAREST: Int\n val LINEAR: Int\n val NEAREST_MIPMAP_NEAREST: Int\n val LINEAR_MIPMAP_NEAREST: Int\n val NEAREST_MIPMAP_LINEAR: Int\n val LINEAR_MIPMAP_LINEAR: Int\n val TEXTURE_MAG_FILTER: Int\n val TEXTURE_MIN_FILTER: Int\n val TEXTURE_WRAP_S: Int\n val TEXTURE_WRAP_T: Int\n val TEXTURE_2D: Int\n val TEXTURE: Int\n val TEXTURE_CUBE_MAP: Int\n val TEXTURE_BINDING_CUBE_MAP: Int\n val TEXTURE_CUBE_MAP_POSITIVE_X: Int\n val TEXTURE_CUBE_MAP_NEGATIVE_X: Int\n val TEXTURE_CUBE_MAP_POSITIVE_Y: Int\n val TEXTURE_CUBE_MAP_NEGATIVE_Y: Int\n val TEXTURE_CUBE_MAP_POSITIVE_Z: Int\n val TEXTURE_CUBE_MAP_NEGATIVE_Z: Int\n val MAX_CUBE_MAP_TEXTURE_SIZE: Int\n val TEXTURE0: Int\n val TEXTURE1: Int\n val TEXTURE2: Int\n val TEXTURE3: Int\n val TEXTURE4: Int\n val TEXTURE5: Int\n val TEXTURE6: Int\n val TEXTURE7: Int\n val TEXTURE8: Int\n val TEXTURE9: Int\n val TEXTURE10: Int\n val TEXTURE11: Int\n val TEXTURE12: Int\n val TEXTURE13: Int\n val TEXTURE14: Int\n val TEXTURE15: Int\n val TEXTURE16: Int\n val TEXTURE17: Int\n val TEXTURE18:
Int\n val TEXTURE19: Int\n val TEXTURE20: Int\n val TEXTURE21: Int\n val TEXTURE22: Int\n val TEXTURE23: Int\n val TEXTURE24: Int\n val TEXTURE25: Int\n val TEXTURE26: Int\n val TEXTURE27: Int\n val TEXTURE28: Int\n val TEXTURE29: Int\n val TEXTURE30: Int\n val TEXTURE31: Int\n val ACTIVE_TEXTURE: Int\n val REPEAT: Int\n val CLAMP_TO_EDGE: Int\n val MIRRORED_REPEAT: Int\n val FLOAT_VEC2: Int\n val FLOAT_VEC3: Int\n val FLOAT_VEC4: Int\n val INT_VEC2: Int\n val INT_VEC3: Int\n val INT_VEC4: Int\n val BOOL: Int\n val BOOL_VEC2: Int\n val BOOL_VEC3: Int\n val

BOOL_VEC4: Int\n val FLOAT_MAT2: Int\n val FLOAT_MAT3: Int\n val FLOAT_MAT4: Int\n val SAMPLER_2D: Int\n val SAMPLER_CUBE: Int\n val VERTEX_ATTRIB_ARRAY_ENABLED: Int\n val VERTEX_ATTRIB_ARRAY_SIZE: Int\n val VERTEX_ATTRIB_ARRAY_STRIDE: Int\n val VERTEX_ATTRIB_ARRAY_TYPE: Int\n val VERTEX_ATTRIB_ARRAY_NORMALIZED: Int\n val VERTEX_ATTRIB_ARRAY_POINTER: Int\n val VERTEX_ATTRIB_ARRAY_BUFFER_BINDING: Int\n val IMPLEMENTATION_COLOR_READ_TYPE: Int\n val IMPLEMENTATION_COLOR_READ_FORMAT: Int\n val COMPILE_STATUS: Int\n val LOW_FLOAT: Int\n val MEDIUM_FLOAT: Int\n val HIGH_FLOAT: Int\n val LOW_INT: Int\n val MEDIUM_INT: Int\n val HIGH_INT: Int\n val FRAMEBUFFER: Int\n val RENDERBUFFER: Int\n val RGBA4: Int\n val RGB5_A1: Int\n val RGB565: Int\n val DEPTH_COMPONENT16: Int\n val STENCIL_INDEX: Int\n val STENCIL_INDEX8: Int\n val DEPTH_STENCIL: Int\n val RENDERBUFFER_WIDTH: Int\n val RENDERBUFFER_HEIGHT: Int\n val RENDERBUFFER_INTERNAL_FORMAT: Int\n val RENDERBUFFER_RED_SIZE: Int\n val RENDERBUFFER_GREEN_SIZE: Int\n val RENDERBUFFER_BLUE_SIZE: Int\n val RENDERBUFFER_ALPHA_SIZE: Int\n val RENDERBUFFER_DEPTH_SIZE: Int\n val RENDERBUFFER_STENCIL_SIZE: Int\n val FRAMEBUFFER_ATTACHMENT_OBJECT_TYPE: Int\n val FRAMEBUFFER_ATTACHMENT_OBJECT_NAME: Int\n val FRAMEBUFFER_ATTACHMENT_TEXTURE_LEVEL: Int\n val FRAMEBUFFER_ATTACHMENT_TEXTURE_CUBE_MAP_FACE: Int\n val COLOR_ATTACHMENT0: Int\n val DEPTH_ATTACHMENT: Int\n val STENCIL_ATTACHMENT: Int\n val DEPTH_STENCIL_ATTACHMENT: Int\n val NONE: Int\n val FRAMEBUFFER_COMPLETE: Int\n val FRAMEBUFFER_INCOMPLETE_ATTACHMENT: Int\n val FRAMEBUFFER_INCOMPLETE_MISSING_ATTACHMENT: Int\n val FRAMEBUFFER_INCOMPLETE_DIMENSIONS: Int\n val FRAMEBUFFER_UNSUPPORTED: Int\n val FRAMEBUFFER_BINDING: Int\n val RENDERBUFFER_BINDING: Int\n val MAX_RENDERBUFFER_SIZE: Int\n val INVALID_FRAMEBUFFER_OPERATION: Int\n val UNPACK_FLIP_Y_WEBGL: Int\n val UNPACK_PREMULTIPLY_ALPHA_WEBGL: Int\n val CONTEXT_LOST_WEBGL: Int\n val UNPACK_COLORSPACE_CONVERSION_WEBGL: Int\n val BROWSER_DEFAULT_WEBGL: Int\n }\n}\n\n/**\n * Exposes the JavaScript [WebGLRenderingContext](https://developer.mozilla.org/en/docs/Web/API/WebGLRenderingContext) to Kotlin\n */\npublic external abstract class WebGLRenderingContext : WebGLRenderingContextBase, RenderingContext {\n\n companion object {\n val DEPTH_BUFFER_BIT: Int\n val STENCIL_BUFFER_BIT: Int\n val COLOR_BUFFER_BIT: Int\n val POINTS: Int\n val LINES: Int\n val LINE_LOOP: Int\n val LINE_STRIP: Int\n val TRIANGLES: Int\n val TRIANGLE_STRIP: Int\n val TRIANGLE_FAN: Int\n val ZERO: Int\n val ONE: Int\n val SRC_COLOR: Int\n val ONE_MINUS_SRC_COLOR: Int\n val SRC_ALPHA: Int\n val ONE_MINUS_SRC_ALPHA: Int\n val DST_ALPHA: Int\n val ONE_MINUS_DST_ALPHA: Int\n val DST_COLOR: Int\n val ONE_MINUS_DST_COLOR: Int\n val SRC_ALPHA_SATURATE: Int\n val FUNC_ADD: Int\n val BLEND_EQUATION: Int\n val BLEND_EQUATION_RGB: Int\n val BLEND_EQUATION_ALPHA: Int\n val FUNC_SUBTRACT: Int\n val FUNC_REVERSE_SUBTRACT: Int\n val BLEND_DST_RGB: Int\n val BLEND_SRC_RGB: Int\n val BLEND_DST_ALPHA: Int\n val BLEND_SRC_ALPHA: Int\n val CONSTANT_COLOR: Int\n val ONE_MINUS_CONSTANT_COLOR: Int\n val CONSTANT_ALPHA: Int\n val ONE_MINUS_CONSTANT_ALPHA: Int\n val BLEND_COLOR: Int\n val ARRAY_BUFFER: Int\n val ELEMENT_ARRAY_BUFFER: Int\n val ARRAY_BUFFER_BINDING: Int\n val ELEMENT_ARRAY_BUFFER_BINDING: Int\n val STREAM_DRAW: Int\n val STATIC_DRAW: Int\n val DYNAMIC_DRAW: Int\n val BUFFER_SIZE: Int\n val BUFFER_USAGE: Int\n val CURRENT_VERTEX_ATTRIB:

Int\n val FRONT: Int\n val BACK: Int\n val FRONT_AND_BACK: Int\n val CULL_FACE: Int\n val BLEND: Int\n val DITHER: Int\n val STENCIL_TEST: Int\n val DEPTH_TEST: Int\n val SCISSOR_TEST: Int\n val POLYGON_OFFSET_FILL: Int\n val SAMPLE_ALPHA_TO_COVERAGE: Int\n val SAMPLE_COVERAGE: Int\n val NO_ERROR: Int\n val INVALID_ENUM: Int\n val INVALID_VALUE: Int\n val INVALID_OPERATION: Int\n val OUT_OF_MEMORY: Int\n val CW: Int\n val CCW: Int\n val LINE_WIDTH: Int\n val ALIASED_POINT_SIZE_RANGE: Int\n val ALIASED_LINE_WIDTH_RANGE: Int\n val CULL_FACE_MODE: Int\n val FRONT_FACE: Int\n val DEPTH_RANGE: Int\n val DEPTH_WRITEMASK: Int\n val DEPTH_CLEAR_VALUE: Int\n val DEPTH_FUNC: Int\n val STENCIL_CLEAR_VALUE: Int\n val STENCIL_FUNC: Int\n val STENCIL_FAIL: Int\n val STENCIL_PASS_DEPTH_FAIL: Int\n val STENCIL_PASS_DEPTH_PASS: Int\n val STENCIL_REF: Int\n val STENCIL_VALUE_MASK: Int\n val STENCIL_WRITEMASK: Int\n val STENCIL_BACK_FUNC: Int\n val STENCIL_BACK_FAIL: Int\n val STENCIL_BACK_PASS_DEPTH_FAIL: Int\n val STENCIL_BACK_PASS_DEPTH_PASS: Int\n val STENCIL_BACK_REF: Int\n val STENCIL_BACK_VALUE_MASK: Int\n val STENCIL_BACK_WRITEMASK: Int\n val VIEWPORT: Int\n val SCISSOR_BOX: Int\n val COLOR_CLEAR_VALUE: Int\n val COLOR_WRITEMASK: Int\n val UNPACK_ALIGNMENT: Int\n val PACK_ALIGNMENT: Int\n val MAX_TEXTURE_SIZE: Int\n val MAX_VIEWPORT_DIMS: Int\n val SUBPIXEL_BITS: Int\n val RED_BITS: Int\n val GREEN_BITS: Int\n val BLUE_BITS: Int\n val ALPHA_BITS: Int\n val DEPTH_BITS: Int\n val STENCIL_BITS: Int\n val POLYGON_OFFSET_UNITS: Int\n val POLYGON_OFFSET_FACTOR: Int\n val TEXTURE_BINDING_2D: Int\n val SAMPLE_BUFFERS: Int\n val SAMPLES: Int\n val SAMPLE_COVERAGE_VALUE: Int\n val SAMPLE_COVERAGE_INVERT: Int\n val COMPRESSED_TEXTURE_FORMATS: Int\n val DONT_CARE: Int\n val FASTEST: Int\n val NICEST: Int\n val GENERATE_MIPMAP_HINT: Int\n val BYTE: Int\n val UNSIGNED_BYTE: Int\n val SHORT: Int\n val UNSIGNED_SHORT: Int\n val INT: Int\n val UNSIGNED_INT: Int\n val FLOAT: Int\n val DEPTH_COMPONENT: Int\n val ALPHA: Int\n val RGB: Int\n val RGBA: Int\n val LUMINANCE: Int\n val LUMINANCE_ALPHA: Int\n val UNSIGNED_SHORT_4_4_4_4: Int\n val UNSIGNED_SHORT_5_5_5_1: Int\n val UNSIGNED_SHORT_5_6_5: Int\n val FRAGMENT_SHADER: Int\n val VERTEX_SHADER: Int\n val MAX_VERTEX_ATTRIBS: Int\n val MAX_VERTEX_UNIFORM_VECTORS: Int\n val MAX_VARYING_VECTORS: Int\n val MAX_COMBINED_TEXTURE_IMAGE_UNITS: Int\n val MAX_VERTEX_TEXTURE_IMAGE_UNITS: Int\n val MAX_TEXTURE_IMAGE_UNITS: Int\n val MAX_FRAGMENT_UNIFORM_VECTORS: Int\n val SHADER_TYPE: Int\n val DELETE_STATUS: Int\n val LINK_STATUS: Int\n val VALIDATE_STATUS: Int\n val ATTACHED_SHADERS: Int\n val ACTIVE_UNIFORMS: Int\n val ACTIVE_ATTRIBUTES: Int\n val SHADING_LANGUAGE_VERSION: Int\n val CURRENT_PROGRAM: Int\n val NEVER: Int\n val LESS: Int\n val EQUAL: Int\n val LEQUAL: Int\n val GREATER: Int\n val NOTEQUAL: Int\n val GEQUAL: Int\n val ALWAYS: Int\n val KEEP: Int\n val REPLACE: Int\n val INCR: Int\n val DECR: Int\n val INVERT: Int\n val INCR_WRAP: Int\n val DECR_WRAP: Int\n val VENDOR: Int\n val RENDERER: Int\n val VERSION: Int\n val NEAREST: Int\n val LINEAR: Int\n val NEAREST_MIPMAP_NEAREST: Int\n val LINEAR_MIPMAP_NEAREST: Int\n val NEAREST_MIPMAP_LINEAR: Int\n val LINEAR_MIPMAP_LINEAR: Int\n val TEXTURE_MAG_FILTER: Int\n val TEXTURE_MIN_FILTER: Int\n val TEXTURE_WRAP_S: Int\n val TEXTURE_WRAP_T: Int\n val TEXTURE_2D: Int\n val TEXTURE: Int\n val TEXTURE_CUBE_MAP: Int\n val TEXTURE_BINDING_CUBE_MAP: Int\n val TEXTURE_CUBE_MAP_POSITIVE_X: Int\n val TEXTURE_CUBE_MAP_NEGATIVE_X: Int\n val

TEXTURE_CUBE_MAP_POSITIVE_Y: Int\n val TEXTURE_CUBE_MAP_NEGATIVE_Y: Int\n val TEXTURE_CUBE_MAP_POSITIVE_Z: Int\n val TEXTURE_CUBE_MAP_NEGATIVE_Z: Int\n val MAX_CUBE_MAP_TEXTURE_SIZE: Int\n val TEXTURE0: Int\n val TEXTURE1: Int\n val TEXTURE2: Int\n val TEXTURE3: Int\n val TEXTURE4: Int\n val TEXTURE5: Int\n val TEXTURE6: Int\n val TEXTURE7: Int\n val TEXTURE8: Int\n val TEXTURE9: Int\n val TEXTURE10: Int\n val TEXTURE11: Int\n val TEXTURE12: Int\n val TEXTURE13: Int\n val TEXTURE14: Int\n val TEXTURE15: Int\n val TEXTURE16: Int\n val TEXTURE17: Int\n val TEXTURE18: Int\n val TEXTURE19: Int\n val TEXTURE20: Int\n val TEXTURE21: Int\n val TEXTURE22: Int\n val TEXTURE23: Int\n val TEXTURE24: Int\n val TEXTURE25: Int\n val TEXTURE26: Int\n val TEXTURE27: Int\n val TEXTURE28: Int\n val TEXTURE29: Int\n val TEXTURE30: Int\n val TEXTURE31: Int\n val ACTIVE_TEXTURE: Int\n val REPEAT: Int\n val CLAMP_TO_EDGE: Int\n val MIRRORED_REPEAT: Int\n val FLOAT_VEC2: Int\n val FLOAT_VEC3: Int\n val FLOAT_VEC4: Int\n val INT_VEC2: Int\n val INT_VEC3: Int\n val INT_VEC4: Int\n val BOOL: Int\n val BOOL_VEC2: Int\n val BOOL_VEC3: Int\n val BOOL_VEC4: Int\n val FLOAT_MAT2: Int\n val FLOAT_MAT3: Int\n val FLOAT_MAT4: Int\n val SAMPLER_2D: Int\n val SAMPLER_CUBE: Int\n val VERTEX_ATTRIB_ARRAY_ENABLED: Int\n val VERTEX_ATTRIB_ARRAY_SIZE: Int\n val VERTEX_ATTRIB_ARRAY_STRIDE: Int\n val VERTEX_ATTRIB_ARRAY_TYPE: Int\n val VERTEX_ATTRIB_ARRAY_NORMALIZED: Int\n val VERTEX_ATTRIB_ARRAY_POINTER: Int\n val VERTEX_ATTRIB_ARRAY_BUFFER_BINDING: Int\n val IMPLEMENTATION_COLOR_READ_TYPE: Int\n val IMPLEMENTATION_COLOR_READ_FORMAT: Int\n val COMPILE_STATUS: Int\n val LOW_FLOAT: Int\n val MEDIUM_FLOAT: Int\n val HIGH_FLOAT: Int\n val LOW_INT: Int\n val MEDIUM_INT: Int\n val HIGH_INT: Int\n val FRAMEBUFFER: Int\n val RENDERBUFFER: Int\n val RGBA4: Int\n val RGB5_A1: Int\n val RGB565: Int\n val DEPTH_COMPONENT16: Int\n val STENCIL_INDEX: Int\n val STENCIL_INDEX8: Int\n val DEPTH_STENCIL: Int\n val RENDERBUFFER_WIDTH: Int\n val RENDERBUFFER_HEIGHT: Int\n val RENDERBUFFER_INTERNAL_FORMAT: Int\n val RENDERBUFFER_RED_SIZE: Int\n val RENDERBUFFER_GREEN_SIZE: Int\n val RENDERBUFFER_BLUE_SIZE: Int\n val RENDERBUFFER_ALPHA_SIZE: Int\n val RENDERBUFFER_DEPTH_SIZE: Int\n val RENDERBUFFER_STENCIL_SIZE: Int\n val FRAMEBUFFER_ATTACHMENT_OBJECT_TYPE: Int\n val FRAMEBUFFER_ATTACHMENT_OBJECT_NAME: Int\n val FRAMEBUFFER_ATTACHMENT_TEXTURE_LEVEL: Int\n val FRAMEBUFFER_ATTACHMENT_TEXTURE_CUBE_MAP_FACE: Int\n val COLOR_ATTACHMENT0: Int\n val DEPTH_ATTACHMENT: Int\n val STENCIL_ATTACHMENT: Int\n val DEPTH_STENCIL_ATTACHMENT: Int\n val NONE: Int\n val FRAMEBUFFER_COMPLETE: Int\n val FRAMEBUFFER_INCOMPLETE_ATTACHMENT: Int\n val FRAMEBUFFER_INCOMPLETE_MISSING_ATTACHMENT: Int\n val FRAMEBUFFER_INCOMPLETE_DIMENSIONS: Int\n val FRAMEBUFFER_UNSUPPORTED: Int\n val FRAMEBUFFER_BINDING: Int\n val RENDERBUFFER_BINDING: Int\n val MAX_RENDERBUFFER_SIZE: Int\n val INVALID_FRAMEBUFFER_OPERATION: Int\n val UNPACK_FLIP_Y_WEBGL: Int\n val UNPACK_PREMULTIPLY_ALPHA_WEBGL: Int\n val CONTEXT_LOST_WEBGL: Int\n val UNPACK_COLORSPACE_CONVERSION_WEBGL: Int\n val BROWSER_DEFAULT_WEBGL: Int\n }\n}\n\n/**\n * Exposes the JavaScript [WebGLContextEvent](https://developer.mozilla.org/en/docs/Web/API/WebGLContextEvent) to Kotlin\n */\npublic external open class WebGLContextEvent(type: String, eventInit: WebGLContextEventInit = definedExternally) : Event {\n open val statusMessage: String\n}\n\npublic external interface

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WebGLContextEventInit : EventInit {\n    var statusMessage: String? /* = \"\" */\n        get() = definedExternally\n    set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic
 inline fun WebGLContextEventInit(statusMessage: String? = \"\", bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): WebGLContextEventInit {\n    val o = js(\"({})\")\n\n    o[\"statusMessage\"] = statusMessage\n    o[\"bubbles\"] = bubbles\n    o[\"cancelable\"] = cancelable\n    o[\"composed\"] = composed\n\n    return o\n}\n\n/**\n * Exposes the JavaScript [ArrayBuffer](https://developer.mozilla.org/en/docs/Web/API/ArrayBuffer) to Kotlin\n */\npublic external open class ArrayBuffer(length: Int) : BufferDataSource {\n    open val byteLength: Int\n    fun slice(begin: Int, end: Int = definedExternally): ArrayBuffer\n\n    companion object {\n        fun isView(value: Any?): Boolean\n    }\n}\n\n/**\n * Exposes the JavaScript [ArrayBufferView](https://developer.mozilla.org/en/docs/Web/API/ArrayBufferView) to Kotlin\n */\npublic external interface ArrayBufferView : BufferDataSource {\n    val buffer: ArrayBuffer\n    val byteOffset: Int\n    val byteLength: Int\n}\n\n/**\n * Exposes the JavaScript [Int8Array](https://developer.mozilla.org/en/docs/Web/API/Int8Array) to Kotlin\n */\npublic external open class Int8Array : ArrayBufferView {\n    constructor(length: Int)\n    constructor(array: Int8Array)\n    constructor(array: Array<Byte>)\n    constructor(buffer: ArrayBuffer, byteOffset: Int = definedExternally, length: Int = definedExternally)\n    open val length: Int\n    override val buffer: ArrayBuffer\n    override val byteOffset: Int\n    override val byteLength: Int\n    fun set(array: Int8Array, offset: Int = definedExternally): Unit\n    fun set(array: Array<Byte>, offset: Int = definedExternally): Unit\n    fun subarray(start: Int, end: Int): Int8Array\n\n    companion object {\n        val BYTES_PER_ELEMENT: Int\n    }\n}\n@kotlin.internal.InlineOnly inline operator fun Int8Array.get(index: Int): Byte = asDynamic()[index]\n@kotlin.internal.InlineOnly inline operator fun Int8Array.set(index: Int, value: Byte):
 Unit { asDynamic()[index] = value; }\n\n/**\n * Exposes the JavaScript [Uint8Array](https://developer.mozilla.org/en/docs/Web/API/Uint8Array) to Kotlin\n */\npublic external open class Uint8Array : ArrayBufferView {\n    constructor(length: Int)\n    constructor(array: Uint8Array)\n    constructor(array: Array<Byte>)\n    constructor(buffer: ArrayBuffer, byteOffset: Int = definedExternally, length: Int = definedExternally)\n    open val length: Int\n    override val buffer: ArrayBuffer\n    override val byteOffset: Int\n    override val byteLength: Int\n    fun set(array: Uint8Array, offset: Int = definedExternally): Unit\n    fun set(array: Array<Byte>, offset: Int = definedExternally): Unit\n    fun subarray(start: Int, end: Int): Uint8Array\n\n    companion object {\n        val BYTES_PER_ELEMENT: Int\n    }\n}\n@kotlin.internal.InlineOnly inline operator fun Uint8Array.get(index: Int): Byte = asDynamic()[index]\n@kotlin.internal.InlineOnly inline operator fun Uint8Array.set(index:
 Int, value: Byte): Unit { asDynamic()[index] = value; }\n\n/**\n * Exposes the JavaScript [Uint8ClampedArray](https://developer.mozilla.org/en/docs/Web/API/Uint8ClampedArray) to Kotlin\n */\npublic external open class Uint8ClampedArray : ArrayBufferView {\n    constructor(length: Int)\n    constructor(array: Uint8ClampedArray)\n    constructor(array: Array<Byte>)\n    constructor(buffer: ArrayBuffer, byteOffset: Int = definedExternally, length: Int = definedExternally)\n    open val length: Int\n    override val buffer: ArrayBuffer\n    override val byteOffset: Int\n    override val byteLength: Int\n    fun set(array: Uint8ClampedArray, offset: Int = definedExternally): Unit\n    fun set(array: Array<Byte>, offset: Int = definedExternally): Unit\n    fun subarray(start: Int, end: Int): Uint8ClampedArray\n\n    companion object {\n        val BYTES_PER_ELEMENT: Int\n    }\n}\n@kotlin.internal.InlineOnly inline operator fun Uint8ClampedArray.get(index: Int): Byte = asDynamic()[index]\n@kotlin.internal.InlineOnly
 inline operator fun Uint8ClampedArray.set(index: Int, value: Byte): Unit { asDynamic()[index] = value; }\n\n/**\n * Exposes the JavaScript [Int16Array](https://developer.mozilla.org/en/docs/Web/API/Int16Array) to Kotlin\n */\npublic external open class Int16Array : ArrayBufferView {\n    constructor(length: Int)\n    constructor(array: Int16Array)\n    constructor(array: Array<Short>)\n    constructor(buffer: ArrayBuffer, byteOffset: Int = definedExternally, length: Int = definedExternally)\n    open val length: Int\n    override val buffer: ArrayBuffer\n    override val byteOffset: Int\n    override val byteLength: Int\n    fun set(array: Int16Array, offset: Int =
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definedExternally): Unit\n   fun set(array: Array<Short>, offset: Int = definedExternally): Unit\n   fun subarray(start: Int, end: Int): Int16Array\n\n   companion object {\n   val BYTES_PER_ELEMENT: Int\n   }\n}\n@kotlin.internal.InlineOnly inline operator fun Int16Array.get(index: Int): Short = asDynamic()[index]\n@kotlin.internal.InlineOnly inline operator fun Int16Array.set(index: Int, value: Short): Unit { asDynamic()[index] = value; }\n\n/**\n * Exposes the JavaScript [Uint16Array](https://developer.mozilla.org/en/docs/Web/API/Uint16Array) to Kotlin\n */\npublic external open class Uint16Array : ArrayBufferView {\n   constructor(length: Int)\n   constructor(array: Uint16Array)\n   constructor(array: Array<Short>)\n   constructor(buffer: ArrayBuffer, byteOffset: Int = definedExternally, length: Int = definedExternally)\n   open val length: Int\n   override val buffer: ArrayBuffer\n   override val byteOffset: Int\n   override val byteLength: Int\n   fun set(array: Uint16Array, offset: Int = definedExternally): Unit\n   fun set(array: Array<Short>, offset: Int = definedExternally): Unit\n   fun subarray(start: Int, end: Int): Uint16Array\n\n   companion object {\n   val BYTES_PER_ELEMENT: Int\n   }\n}\n@kotlin.internal.InlineOnly inline operator fun Uint16Array.get(index: Int): Short = asDynamic()[index]\n@kotlin.internal.InlineOnly inline operator fun Uint16Array.set(index: Int, value: Short): Unit { asDynamic()[index] = value; }\n\n/**\n * Exposes the JavaScript [Int32Array](https://developer.mozilla.org/en/docs/Web/API/Int32Array) to Kotlin\n */\npublic external open class Int32Array : ArrayBufferView {\n   constructor(length: Int)\n   constructor(array: Int32Array)\n   constructor(array: Array<Int>)\n   constructor(buffer: ArrayBuffer, byteOffset: Int = definedExternally, length: Int = definedExternally)\n   open val length: Int\n   override val buffer: ArrayBuffer\n   override val byteOffset: Int\n   override val byteLength: Int\n   fun set(array: Int32Array, offset: Int = definedExternally): Unit\n   fun set(array: Array<Int>, offset: Int = definedExternally): Unit\n   fun subarray(start: Int, end: Int): Int32Array\n\n   companion object {\n   val BYTES_PER_ELEMENT: Int\n   }\n}\n@kotlin.internal.InlineOnly inline operator fun Int32Array.get(index: Int): Int = asDynamic()[index]\n@kotlin.internal.InlineOnly inline operator fun Int32Array.set(index: Int, value: Int): Unit { asDynamic()[index] = value; }\n\n/**\n * Exposes the JavaScript [Uint32Array](https://developer.mozilla.org/en/docs/Web/API/Uint32Array) to Kotlin\n */\npublic external open class Uint32Array : ArrayBufferView {\n   constructor(length: Int)\n   constructor(array: Uint32Array)\n   constructor(array: Array<Int>)\n   constructor(buffer: ArrayBuffer, byteOffset: Int = definedExternally, length: Int = definedExternally)\n   open val length: Int\n   override val buffer: ArrayBuffer\n   override val byteOffset: Int\n   override val byteLength: Int\n   fun set(array: Uint32Array, offset: Int = definedExternally): Unit\n   fun set(array: Array<Int>, offset: Int = definedExternally): Unit\n   fun subarray(start: Int, end: Int): Uint32Array\n\n   companion object {\n   val BYTES_PER_ELEMENT: Int\n   }\n}\n@kotlin.internal.InlineOnly inline operator fun Uint32Array.get(index: Int): Int = asDynamic()[index]\n@kotlin.internal.InlineOnly inline operator fun Uint32Array.set(index: Int, value: Int): Unit { asDynamic()[index] = value; }\n\n/**\n * Exposes the JavaScript [Float32Array](https://developer.mozilla.org/en/docs/Web/API/Float32Array) to Kotlin\n */\npublic external open class Float32Array : ArrayBufferView {\n   constructor(length: Int)\n   constructor(array: Float32Array)\n   constructor(array: Array<Float>)\n   constructor(buffer: ArrayBuffer, byteOffset: Int = definedExternally, length: Int = definedExternally)\n   open val length: Int\n   override val buffer: ArrayBuffer\n   override val byteOffset: Int\n   override val byteLength: Int\n   fun set(array: Float32Array, offset: Int = definedExternally): Unit\n   fun set(array: Array<Float>, offset: Int = definedExternally): Unit\n   fun subarray(start: Int, end: Int): Float32Array\n\n   companion object {\n   val BYTES_PER_ELEMENT: Int\n   }\n}\n@kotlin.internal.InlineOnly inline operator fun Float32Array.get(index: Int): Float = asDynamic()[index]\n@kotlin.internal.InlineOnly inline operator fun Float32Array.set(index: Int, value: Float): Unit { asDynamic()[index] = value; }\n\n/**\n * Exposes the JavaScript [Float64Array](https://developer.mozilla.org/en/docs/Web/API/Float64Array) to Kotlin\n */\npublic external open class Float64Array : ArrayBufferView {\n   constructor(length: Int)\n   constructor(array: Float64Array)\n   constructor(array: Array<Double>)\n   constructor(buffer: ArrayBuffer, byteOffset: Int = definedExternally, length: Int = definedExternally)\n   open val length: Int\n   override val buffer: ArrayBuffer\n   override val byteOffset: Int\n   override val byteLength: Int\n   fun set(array: Float64Array, offset: Int = definedExternally): Unit\n   fun

set(array: Array<Double>, offset: Int = definedExternally): Unit\n   fun subarray(start: Int, end: Int): Float64Array\n\n
    companion object {\n   val BYTES_PER_ELEMENT: Int\n   }\n}\n@kotlin.internal.InlineOnly inline operator fun Float64Array.get(index: Int): Double = asDynamic()[index]\n@kotlin.internal.InlineOnly inline operator fun Float64Array.set(index: Int, value: Double): Unit { asDynamic()[index] = value; }\n\n/**\n * Exposes the JavaScript [DataView](https://developer.mozilla.org/en/docs/Web/API/DataView) to Kotlin\n */\npublic external open class DataView(buffer: ArrayBuffer, byteOffset: Int = definedExternally, byteLength: Int = definedExternally) : ArrayBufferView {\n   override val buffer: ArrayBuffer\n   override val byteOffset: Int\n   override val byteLength: Int\n   fun getInt8(byteOffset: Int): Byte\n   fun getUint8(byteOffset: Int): Byte\n   fun getInt16(byteOffset: Int, littleEndian: Boolean = definedExternally): Short\n   fun getUint16(byteOffset: Int, littleEndian: Boolean = definedExternally): Short\n   fun getInt32(byteOffset: Int, littleEndian: Boolean = definedExternally):
 Int\n   fun getUint32(byteOffset: Int, littleEndian: Boolean = definedExternally): Int\n   fun getFloat32(byteOffset: Int, littleEndian: Boolean = definedExternally): Float\n   fun getFloat64(byteOffset: Int, littleEndian: Boolean = definedExternally): Double\n   fun setInt8(byteOffset: Int, value: Byte): Unit\n   fun setUint8(byteOffset: Int, value: Byte): Unit\n   fun setInt16(byteOffset: Int, value: Short, littleEndian: Boolean = definedExternally): Unit\n   fun setUint16(byteOffset: Int, value: Short, littleEndian: Boolean = definedExternally): Unit\n   fun setInt32(byteOffset: Int, value: Int, littleEndian: Boolean = definedExternally): Unit\n   fun setUint32(byteOffset: Int, value: Int, littleEndian: Boolean = definedExternally): Unit\n   fun setFloat32(byteOffset: Int, value: Float, littleEndian: Boolean = definedExternally): Unit\n   fun setFloat64(byteOffset: Int, value: Double, littleEndian: Boolean = definedExternally): Unit\n}\n\npublic external @marker
 interface BufferDataSource {\n}\n\npublic external @marker interface TexImageSource {\n}\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n// NOTE: THIS FILE IS AUTO-GENERATED, DO NOT EDIT!\n// See libraries/tools/idl2k for details\n\n@file:Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npackage org.w3c.dom.clipboard\n\nimport kotlin.js.*\nimport org.khronos.webgl.*\nimport org.w3c.css.masking.*\nimport org.w3c.dom.*\nimport org.w3c.dom.css.*\nimport org.w3c.dom.events.*\nimport org.w3c.dom.mediacapture.*\nimport org.w3c.dom.parsing.*\nimport org.w3c.dom.pointerevents.*\nimport org.w3c.dom.svg.*\nimport org.w3c.dom.url.*\nimport org.w3c.fetch.*\nimport org.w3c.files.*\nimport org.w3c.notifications.*\nimport org.w3c.performance.*\nimport org.w3c.workers.*\nimport org.w3c.xhr.*\n\npublic external interface ClipboardEventInit : EventInit {\n   var clipboardData:
 DataTransfer? /* = null */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun ClipboardEventInit(clipboardData: DataTransfer? = null, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): ClipboardEventInit {\n   val o = js(\"({})\")\n\n   o[\"clipboardData\"] = clipboardData\n   o[\"bubbles\"] = bubbles\n   o[\"cancelable\"] = cancelable\n   o[\"composed\"] = composed\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [ClipboardEvent](https://developer.mozilla.org/en/docs/Web/API/ClipboardEvent) to Kotlin\n */\npublic external open class ClipboardEvent(type: String, eventInitDict: ClipboardEventInit = definedExternally) : Event {\n
 open val clipboardData: DataTransfer?\n}\n\n/**\n * Exposes the JavaScript [Clipboard](https://developer.mozilla.org/en/docs/Web/API/Clipboard) to Kotlin\n */\npublic external abstract class Clipboard : EventTarget {\n   fun read():
 Promise<DataTransfer>\n   fun readText(): Promise<String>\n   fun write(data: DataTransfer): Promise<Unit>\n   fun writeText(data: String): Promise<Unit>\n}\n\npublic external interface ClipboardPermissionDescriptor {\n   var allowWithoutGesture: Boolean? /* = false */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun ClipboardPermissionDescriptor(allowWithoutGesture: Boolean? = false): ClipboardPermissionDescriptor {\n   val o = js(\"({})\")\n\n   o[\"allowWithoutGesture\"] = allowWithoutGesture\n\n   return o\n}\n\n","/*\n * Copyright

2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n// NOTE: THIS FILE IS AUTO-GENERATED, DO NOT EDIT!\n// See libraries/tools/idl2k for details\n\n@file:Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npackage org.w3c.dom.css\n\nimport kotlin.js.*\nimport org.khronos.webgl.*\nimport org.w3c.css.masking.*\nimport org.w3c.dom.*\nimport org.w3c.dom.clipboard.*\nimport org.w3c.dom.events.*\nimport org.w3c.dom.mediacapture.*\nimport org.w3c.dom.parsing.*\nimport org.w3c.dom.pointerevents.*\nimport org.w3c.dom.svg.*\nimport org.w3c.dom.url.*\nimport org.w3c.fetch.*\nimport org.w3c.files.*\nimport org.w3c.notifications.*\nimport org.w3c.performance.*\nimport org.w3c.workers.*\nimport org.w3c.xhr.*\n\n/**\n * Exposes the JavaScript [CSSStyleDeclaration](https://developer.mozilla.org/en/docs/Web/API/CSSStyleDeclaration) to Kotlin\n */\npublic external abstract class CSSStyleDeclaration : ItemArrayLike<String> {\n   open var cssText: String\n   override val length: Int\n   open val parentRule: CSSRule?\n   open var cssFloat: String\n   open var _dashed_attribute: String\n   open var _camel_cased_attribute: String\n   open var _webkit_cased_attribute: String\n   open var alignContent: String\n   open var alignItems: String\n   open var alignSelf: String\n   open var animation: String\n   open var animationDelay: String\n   open var animationDirection: String\n   open var animationDuration: String\n   open var animationFillMode: String\n   open var animationIterationCount: String\n   open var animationName: String\n   open var animationPlayState: String\n   open var animationTimingFunction: String\n   open var backfaceVisibility: String\n   open var background: String\n   open var backgroundAttachment: String\n   open var backgroundClip: String\n   open var backgroundColor: String\n   open var backgroundImage: String\n   open var backgroundOrigin: String\n   open var backgroundPosition: String\n   open var backgroundRepeat: String\n   open var backgroundSize: String\n   open var border: String\n   open var borderBottom: String\n   open var borderBottomColor: String\n   open var borderBottomLeftRadius: String\n   open var borderBottomRightRadius: String\n   open var borderBottomStyle: String\n   open var borderBottomWidth: String\n   open var borderCollapse: String\n   open var borderColor: String\n   open var borderImage: String\n   open var borderImageOutset: String\n   open var borderImageRepeat: String\n   open var borderImageSlice: String\n   open var borderImageSource: String\n   open var borderImageWidth: String\n   open var borderLeft: String\n   open var borderLeftColor: String\n   open var borderLeftStyle: String\n   open var borderLeftWidth: String\n   open var borderRadius: String\n   open var borderRight: String\n   open var borderRightColor: String\n   open var borderRightStyle: String\n   open var borderRightWidth: String\n   open var borderSpacing: String\n   open var borderStyle: String\n   open var borderTop: String\n   open var borderTopColor: String\n   open var borderTopLeftRadius: String\n   open var borderTopRightRadius: String\n   open var borderTopStyle: String\n   open var borderTopWidth: String\n   open var borderWidth: String\n   open var bottom: String\n   open var boxDecorationBreak: String\n   open var boxShadow: String\n   open var boxSizing: String\n   open var breakAfter: String\n   open var breakBefore: String\n   open var breakInside: String\n   open var captionSide: String\n   open var clear: String\n   open var clip: String\n   open var color: String\n   open var columnCount: String\n   open var columnFill: String\n   open var columnGap: String\n   open var columnRule: String\n   open var columnRuleColor: String\n   open var columnRuleStyle: String\n   open var columnRuleWidth: String\n   open var columnSpan: String\n   open var columnWidth: String\n   open var columns: String\n   open var content: String\n   open var counterIncrement: String\n   open var counterReset: String\n   open var cursor: String\n   open var direction: String\n   open var display: String\n   open var emptyCells: String\n   open var filter: String\n   open var flex: String\n   open var flexBasis: String\n   open var flexDirection: String\n   open var flexFlow: String\n   open var flexGrow: String\n   open var flexShrink: String\n   open var flexWrap: String\n   open var font: String\n   open var fontFamily: String\n   open var fontFeatureSettings: String\n   open var fontKerning: String\n   open var fontLanguageOverride: String\n   open var fontSize: String\n   open var fontSizeAdjust: String\n   open var fontStretch: String\n   open var fontStyle: String\n   open var fontSynthesis: String\n   open var fontVariant: String\n   open var fontVariantAlternates: String\n   open var fontVariantCaps: String\n   open var fontVariantEastAsian: String\n

open var fontVariantLigatures: String\n open var fontVariantNumeric: String\n open var fontVariantPosition: String\n open var fontWeight: String\n open var hangingPunctuation: String\n open var height: String\n open var hyphens: String\n open var imageOrientation: String\n open var imageRendering: String\n open var imageResolution: String\n open var imeMode: String\n open var justifyContent: String\n open var left: String\n open var letterSpacing: String\n open var lineBreak: String\n open var lineHeight: String\n open var listStyle: String\n open var listStyleImage: String\n open var listStylePosition: String\n open var listStyleType: String\n open var margin: String\n open var marginBottom: String\n open var marginLeft: String\n open var marginRight: String\n open var marginTop: String\n open var mark: String\n open var markAfter: String\n open var markBefore: String\n open var marks: String\n open var marqueeDirection: String\n open var marqueePlayCount: String\n open var marqueeSpeed: String\n open var marqueeStyle: String\n open var mask: String\n open var maskType: String\n open var maxHeight: String\n open var maxWidth: String\n open var minHeight: String\n open var minWidth: String\n open var navDown: String\n open var navIndex: String\n open var navLeft: String\n open var navRight: String\n open var navUp: String\n open var objectFit: String\n open var objectPosition: String\n open var opacity: String\n open var order: String\n open var orphans: String\n open var outline: String\n open var outlineColor: String\n open var outlineOffset: String\n open var outlineStyle: String\n open var outlineWidth: String\n open var overflowWrap: String\n open var overflowX: String\n open var overflowY: String\n open var padding: String\n open var paddingBottom: String\n open var paddingLeft: String\n open var paddingRight: String\n open var paddingTop: String\n open var pageBreakAfter: String\n open var pageBreakBefore: String\n open var pageBreakInside: String\n open var perspective: String\n open var perspectiveOrigin: String\n open var phonemes: String\n open var position: String\n open var quotes: String\n open var resize: String\n open var rest: String\n open var restAfter: String\n open var restBefore: String\n open var right: String\n open var tabSize: String\n open var tableLayout: String\n open var textAlign: String\n open var textAlignLast: String\n open var textCombineUpright: String\n open var textDecoration: String\n open var textDecorationColor: String\n open var textDecorationLine: String\n open var textDecorationStyle: String\n open var textIndent: String\n open var textJustify: String\n open var textOrientation: String\n open var textOverflow: String\n open var textShadow: String\n open var textTransform: String\n open var textUnderlinePosition: String\n open var top: String\n open var transform: String\n open var transformOrigin: String\n open var transformStyle: String\n open var transition: String\n open var transitionDelay: String\n open var transitionDuration: String\n open var transitionProperty: String\n open var transitionTimingFunction: String\n open var unicodeBidi: String\n open var verticalAlign: String\n open var visibility: String\n open var voiceBalance: String\n open var voiceDuration: String\n open var voicePitch: String\n open var voicePitchRange: String\n open var voiceRate: String\n open var voiceStress: String\n open var voiceVolume: String\n open var whiteSpace: String\n open var widows: String\n open var width: String\n open var wordBreak: String\n open var wordSpacing: String\n open var wordWrap: String\n open var writingMode: String\n open var zIndex: String\n override fun item(index: Int): String\n fun getPropertyValue(property: String): String\n fun getPropertyPriority(property: String): String\n fun setProperty(property: String, value: String, priority: String = definedExternally): Unit\n fun setPropertyValue(property: String, value: String): Unit\n fun setPropertyPriority(property: String, priority: String): Unit\n fun removeProperty(property: String): String\n}\n@kotlin.internal.InlineOnly inline operator fun CSSStyleDeclaration.get(index: Int): String? = asDynamic()[index]\n\npublic external abstract class MediaList : ItemArrayLike<String> {\n open var mediaText: String\n override val length: Int\n override fun item(index: Int): String?\n fun appendMedium(medium: String): Unit\n fun deleteMedium(medium: String): Unit\n}\n@kotlin.internal.InlineOnly inline operator fun MediaList.get(index: Int): String? = asDynamic()[index]\n\n/**\n * Exposes the JavaScript [StyleSheet](https://developer.mozilla.org/en/docs/Web/API/StyleSheet) to Kotlin\n */\npublic external abstract class StyleSheet {\n open val type: String\n open val href: String?\n open val ownerNode: UnionElementOrProcessingInstruction?\n open val parentStyleSheet: StyleSheet?\n open val title: String?\n

open val media: MediaList\n
open var disabled: Boolean\n}\n\n/**\n * Exposes the JavaScript [CSSStyleSheet](https://developer.mozilla.org/en/docs/Web/API/CSSStyleSheet) to Kotlin\n */\npublic external abstract class CSSStyleSheet : StyleSheet {\n open val ownerRule: CSSRule?\n open val cssRules: CSSRuleList\n fun insertRule(rule: String, index: Int): Int\n fun deleteRule(index: Int): Unit\n}\n\n/**\n * Exposes the JavaScript [StyleSheetList](https://developer.mozilla.org/en/docs/Web/API/StyleSheetList) to Kotlin\n */\npublic external abstract class StyleSheetList : ItemArrayLike<StyleSheet> {\n override val length: Int\n override fun item(index: Int): StyleSheet?\n}\n@kotlin.internal.InlineOnly inline operator fun StyleSheetList.get(index: Int): StyleSheet? = asDynamic()[index]\n\n/**\n * Exposes the JavaScript [LinkStyle](https://developer.mozilla.org/en/docs/Web/API/LinkStyle) to Kotlin\n */\npublic external interface LinkStyle {\n val sheet: StyleSheet?\n}\n\n/**\n * Exposes the JavaScript [CSSRuleList](https://developer.mozilla.org/en/docs/Web/API/CSSRuleList) to Kotlin\n */\npublic external abstract class CSSRuleList : ItemArrayLike<CSSRule> {\n override val length: Int\n override fun item(index: Int): CSSRule?\n}\n@kotlin.internal.InlineOnly inline operator fun CSSRuleList.get(index: Int): CSSRule? = asDynamic()[index]\n\n/**\n * Exposes the JavaScript [CSSRule](https://developer.mozilla.org/en/docs/Web/API/CSSRule) to Kotlin\n */\npublic external abstract class CSSRule {\n open val type: Short\n open var cssText: String\n open val parentRule: CSSRule?\n open val parentStyleSheet: CSSStyleSheet?\n\n companion object {\n val STYLE_RULE: Short\n val CHARSET_RULE: Short\n val IMPORT_RULE: Short\n val MEDIA_RULE: Short\n val FONT_FACE_RULE: Short\n val PAGE_RULE: Short\n val MARGIN_RULE: Short\n val NAMESPACE_RULE: Short\n }\n}\n\n/**\n * Exposes the JavaScript [CSSStyleRule](https://developer.mozilla.org/en/docs/Web/API/CSSStyleRule) to Kotlin\n */\npublic external abstract class CSSStyleRule : CSSRule {\n open var selectorText: String\n open val style: CSSStyleDeclaration\n}\n\npublic external abstract class CSSImportRule : CSSRule {\n open val href: String\n open val media: MediaList\n open val styleSheet: CSSStyleSheet\n}\n\n/**\n * Exposes the JavaScript [CSSGroupingRule](https://developer.mozilla.org/en/docs/Web/API/CSSGroupingRule) to Kotlin\n */\npublic external abstract class CSSGroupingRule : CSSRule {\n open val cssRules: CSSRuleList\n fun insertRule(rule: String, index: Int): Int\n fun deleteRule(index: Int): Unit\n}\n\n/**\n * Exposes the JavaScript [CSSMediaRule](https://developer.mozilla.org/en/docs/Web/API/CSSMediaRule) to Kotlin\n */\npublic external abstract class CSSMediaRule : CSSGroupingRule {\n open val media: MediaList\n}\n\n/**\n * Exposes the JavaScript [CSSPageRule](https://developer.mozilla.org/en/docs/Web/API/CSSPageRule) to Kotlin\n */\npublic external abstract class CSSPageRule : CSSGroupingRule {\n open var selectorText: String\n open val style: CSSStyleDeclaration\n}\n\npublic external abstract class CSSMarginRule : CSSRule {\n open val name: String\n open val style: CSSStyleDeclaration\n}\n\n/**\n * Exposes the JavaScript [CSSNamespaceRule](https://developer.mozilla.org/en/docs/Web/API/CSSNamespaceRule) to Kotlin\n */\npublic external abstract class CSSNamespaceRule : CSSRule {\n open val namespaceURI: String\n open val prefix: String\n}\n\npublic external interface ElementCSSInlineStyle {\n val style: CSSStyleDeclaration\n}\n\n/**\n * Exposes the JavaScript [CSS](https://developer.mozilla.org/en/docs/Web/API/CSS) to Kotlin\n */\npublic external abstract class CSS {\n\n companion object {\n fun escape(ident: String): String\n }\n}\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n// NOTE: THIS FILE IS AUTO-GENERATED, DO NOT EDIT!\n// See libraries/tools/idl2k for details\n\n@file:Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npackage org.w3c.dom.events\n\nimport kotlin.js.*\nimport org.khronos.webgl.*\nimport org.w3c.css.masking.*\nimport org.w3c.dom.*\nimport org.w3c.dom.clipboard.*\nimport org.w3c.dom.css.*\nimport org.w3c.dom.mediacapture.*\nimport org.w3c.dom.parsing.*\nimport org.w3c.dom.pointerevents.*\nimport org.w3c.dom.svg.*\nimport org.w3c.dom.url.*\nimport org.w3c.fetch.*\nimport org.w3c.files.*\nimport org.w3c.notifications.*\nimport org.w3c.performance.*\nimport org.w3c.workers.*\nimport org.w3c.xhr.*\n\n/**\n

* Exposes the JavaScript [UIEvent](https://developer.mozilla.org/en/docs/Web/API/UIEvent) to Kotlin\n */\npublic external open class UIEvent(type: String, eventInitDict: UIEventInit = definedExternally) : Event {\n open val view: Window?\n open val detail: Int\n}\n\npublic external interface UIEventInit : EventInit {\n var view: Window? /* = null */\n get() = definedExternally\n set(value) = definedExternally\n var detail: Int? /* = 0 */\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun UIEventInit(view: Window? = null, detail: Int? = 0, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): UIEventInit {\n val o = js(\"({})\")\n\n o[\"view\"] = view\n o[\"detail\"] = detail\n o[\"bubbles\"] = bubbles\n o[\"cancelable\"] = cancelable\n o[\"composed\"] = composed\n\n return o\n}\n\n/**\n * Exposes the JavaScript [FocusEvent](https://developer.mozilla.org/en/docs/Web/API/FocusEvent) to Kotlin\n */\npublic external open class FocusEvent(type: String, eventInitDict: FocusEventInit = definedExternally) : UIEvent {\n open val relatedTarget: EventTarget?\n}\n\npublic external interface FocusEventInit : UIEventInit {\n var relatedTarget: EventTarget? /* = null */\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun FocusEventInit(relatedTarget: EventTarget? = null, view: Window? = null, detail: Int? = 0, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): FocusEventInit {\n val o = js(\"({})\")\n\n o[\"relatedTarget\"] = relatedTarget\n o[\"view\"] = view\n o[\"detail\"] = detail\n o[\"bubbles\"] = bubbles\n o[\"cancelable\"] = cancelable\n o[\"composed\"] = composed\n\n return o\n}\n\n/**\n * Exposes the JavaScript [MouseEvent](https://developer.mozilla.org/en/docs/Web/API/MouseEvent) to Kotlin\n */\npublic external open class MouseEvent(type: String, eventInitDict: MouseEventInit = definedExternally) : UIEvent, UnionElementOrMouseEvent {\n open val region: String?\n open val screenX: Int\n open val screenY: Int\n open val pageX: Double\n open val pageY: Double\n open val clientX: Int\n open val clientY: Int\n open val offsetX: Double\n open val offsetY: Double\n open val ctrlKey: Boolean\n open val shiftKey: Boolean\n open val altKey: Boolean\n open val metaKey: Boolean\n open val button: Short\n open val buttons: Short\n open val relatedTarget: EventTarget?\n fun getModifierState(keyArg: String): Boolean\n}\n\npublic external interface MouseEventInit : EventModifierInit {\n var screenX: Int? /* = 0 */\n get() = definedExternally\n set(value) = definedExternally\n var screenY: Int? /* = 0 */\n get() = definedExternally\n set(value) = definedExternally\n var clientX: Int? /* = 0 */\n get() = definedExternally\n set(value) = definedExternally\n var clientY: Int? /* = 0 */\n get() = definedExternally\n set(value) = definedExternally\n var button: Short? /* = 0 */\n get() = definedExternally\n set(value) = definedExternally\n var buttons: Short? /* = 0 */\n get() = definedExternally\n set(value) = definedExternally\n var relatedTarget: EventTarget? /* = null */\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun MouseEventInit(screenX: Int? = 0, screenY: Int? = 0, clientX: Int? = 0, clientY: Int? = 0, button: Short? = 0, buttons: Short? = 0, relatedTarget: EventTarget? = null, ctrlKey: Boolean? = false, shiftKey: Boolean? = false, altKey: Boolean? = false, metaKey: Boolean? = false, modifierAltGraph: Boolean? = false, modifierCapsLock: Boolean? = false, modifierFn: Boolean? = false, modifierFnLock: Boolean? = false, modifierHyper: Boolean? = false, modifierNumLock: Boolean? = false, modifierScrollLock: Boolean? = false, modifierSuper: Boolean? = false, modifierSymbol: Boolean? = false, modifierSymbolLock: Boolean? = false, view: Window? = null, detail: Int? = 0, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): MouseEventInit {\n val o = js(\"({})\")\n\n o[\"screenX\"] = screenX\n o[\"screenY\"] = screenY\n o[\"clientX\"] = clientX\n o[\"clientY\"] = clientY\n o[\"button\"] = button\n o[\"buttons\"] = buttons\n o[\"relatedTarget\"] = relatedTarget\n o[\"ctrlKey\"] = ctrlKey\n o[\"shiftKey\"] = shiftKey\n o[\"altKey\"] = altKey\n o[\"metaKey\"] = metaKey\n o[\"modifierAltGraph\"] = modifierAltGraph\n o[\"modifierCapsLock\"] = modifierCapsLock\n o[\"modifierFn\"] = modifierFn\n o[\"modifierFnLock\"] = modifierFnLock\n o[\"modifierHyper\"] = modifierHyper\n o[\"modifierNumLock\"] = modifierNumLock\n o[\"modifierScrollLock\"] = modifierScrollLock\n o[\"modifierSuper\"] = modifierSuper\n

o[\"modifierSymbol\"] = modifierSymbol\n o[\"modifierSymbolLock\"] = modifierSymbolLock\n o[\"view\"] = view\n o[\"detail\"] = detail\n o[\"bubbles\"] = bubbles\n o[\"cancelable\"] = cancelable\n o[\"composed\"] = composed\n\n return o\n}\n\npublic external interface EventModifierInit : UIEventInit {\n var ctrlKey: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n var shiftKey: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n var altKey: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n var metaKey: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n var modifierAltGraph: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n var modifierCapsLock: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n var modifierFn: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n var modifierFnLock: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n var modifierHyper: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n var modifierNumLock: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n var modifierScrollLock: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n var modifierSuper: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n var modifierSymbol: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n var modifierSymbolLock: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun EventModifierInit(ctrlKey: Boolean? = false, shiftKey: Boolean? = false, altKey: Boolean? = false, metaKey: Boolean? = false, modifierAltGraph: Boolean? = false, modifierCapsLock: Boolean? = false, modifierFn: Boolean? = false, modifierFnLock: Boolean? = false, modifierHyper: Boolean? = false, modifierNumLock: Boolean? = false, modifierScrollLock: Boolean? = false, modifierSuper: Boolean? = false, modifierSymbol: Boolean? = false, modifierSymbolLock: Boolean? = false, view: Window? = null, detail: Int? = 0, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): EventModifierInit {\n val o = js(\"({})\")\n\n o[\"ctrlKey\"] = ctrlKey\n o[\"shiftKey\"] = shiftKey\n o[\"altKey\"] = altKey\n o[\"metaKey\"] = metaKey\n o[\"modifierAltGraph\"] = modifierAltGraph\n o[\"modifierCapsLock\"] = modifierCapsLock\n o[\"modifierFn\"] = modifierFn\n o[\"modifierFnLock\"] = modifierFnLock\n o[\"modifierHyper\"] = modifierHyper\n o[\"modifierNumLock\"] = modifierNumLock\n o[\"modifierScrollLock\"] = modifierScrollLock\n o[\"modifierSuper\"] = modifierSuper\n o[\"modifierSymbol\"] = modifierSymbol\n o[\"modifierSymbolLock\"] = modifierSymbolLock\n o[\"view\"] = view\n o[\"detail\"] = detail\n o[\"bubbles\"] = bubbles\n o[\"cancelable\"] = cancelable\n o[\"composed\"] = composed\n\n return o\n}\n\n/**\n * Exposes the JavaScript [WheelEvent](https://developer.mozilla.org/en/docs/Web/API/WheelEvent) to Kotlin\n */\npublic external open class WheelEvent(type: String, eventInitDict: WheelEventInit = definedExternally) : MouseEvent {\n open val deltaX: Double\n open val deltaY: Double\n open val deltaZ: Double\n open val deltaMode: Int\n\n companion object {\n val DOM_DELTA_PIXEL: Int\n val DOM_DELTA_LINE: Int\n val DOM_DELTA_PAGE: Int\n }\n}\n\npublic external interface WheelEventInit : MouseEventInit {\n var deltaX: Double? /* = 0.0 */\n get() = definedExternally\n set(value) = definedExternally\n var deltaY: Double? /* = 0.0 */\n get() = definedExternally\n set(value) = definedExternally\n var deltaZ: Double? /* = 0.0 */\n get() = definedExternally\n set(value) = definedExternally\n var deltaMode: Int? /* = 0 */\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun WheelEventInit(deltaX: Double? = 0.0, deltaY: Double? = 0.0, deltaZ: Double? = 0.0, deltaMode: Int? = 0, screenX: Int? = 0, screenY: Int? = 0, clientX: Int? = 0, clientY: Int? = 0, button: Short? = 0, buttons: Short? = 0, relatedTarget: EventTarget? = null, ctrlKey: Boolean? = false, shiftKey: Boolean? = false, altKey: Boolean? = false, metaKey: Boolean? = false, modifierAltGraph: Boolean? = false, modifierCapsLock: Boolean? = false, modifierFn: Boolean? = false, modifierFnLock: Boolean? = false, modifierHyper: Boolean? = false, modifierNumLock: Boolean? = false,

modifierScrollLock: Boolean? = false, modifierSuper: Boolean? = false, modifierSymbol: Boolean? = false, modifierSymbolLock:
Boolean? = false, view: Window? = null, detail: Int? = 0, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): WheelEventInit {\n val o = js(\"({})\")\n\n o[\"deltaX\"] = deltaX\n o[\"deltaY\"] = deltaY\n o[\"deltaZ\"] = deltaZ\n o[\"deltaMode\"] = deltaMode\n o[\"screenX\"] = screenX\n o[\"screenY\"] = screenY\n o[\"clientX\"] = clientX\n o[\"clientY\"] = clientY\n o[\"button\"] = button\n o[\"buttons\"] = buttons\n o[\"relatedTarget\"] = relatedTarget\n o[\"ctrlKey\"] = ctrlKey\n o[\"shiftKey\"] = shiftKey\n o[\"altKey\"] = altKey\n o[\"metaKey\"] = metaKey\n o[\"modifierAltGraph\"] = modifierAltGraph\n o[\"modifierCapsLock\"] = modifierCapsLock\n o[\"modifierFn\"] = modifierFn\n o[\"modifierFnLock\"] = modifierFnLock\n o[\"modifierHyper\"] = modifierHyper\n o[\"modifierNumLock\"] = modifierNumLock\n o[\"modifierScrollLock\"] = modifierScrollLock\n o[\"modifierSuper\"] = modifierSuper\n o[\"modifierSymbol\"] = modifierSymbol\n o[\"modifierSymbolLock\"] = modifierSymbolLock\n o[\"view\"] = view\n o[\"detail\"] = detail\n o[\"bubbles\"] = bubbles\n o[\"cancelable\"] = cancelable\n o[\"composed\"] = composed\n\n return o\n}\n\n/**\n * Exposes the JavaScript [InputEvent](https://developer.mozilla.org/en/docs/Web/API/InputEvent) to Kotlin\n */\npublic external open class InputEvent(type: String, eventInitDict: InputEventInit = definedExternally) : UIEvent {\n open val data: String\n open val isComposing: Boolean\n}\n\npublic external interface InputEventInit : UIEventInit {\n var data: String? /* = \"\" */\n get() = definedExternally\n set(value) = definedExternally\n var isComposing: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun InputEventInit(data: String? = \"\", isComposing: Boolean? = false, view: Window?
= null, detail: Int? = 0, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): InputEventInit {\n val o = js(\"({})\")\n\n o[\"data\"] = data\n o[\"isComposing\"] = isComposing\n o[\"view\"] = view\n o[\"detail\"] = detail\n o[\"bubbles\"] = bubbles\n o[\"cancelable\"] = cancelable\n o[\"composed\"] = composed\n\n return o\n}\n\n/**\n * Exposes the JavaScript [KeyboardEvent](https://developer.mozilla.org/en/docs/Web/API/KeyboardEvent) to Kotlin\n */\npublic external open class KeyboardEvent(type: String, eventInitDict: KeyboardEventInit = definedExternally) : UIEvent {\n open val key: String\n open val code: String\n open val location: Int\n open val ctrlKey: Boolean\n open val shiftKey: Boolean\n open val altKey: Boolean\n open val metaKey: Boolean\n open val repeat: Boolean\n open val isComposing: Boolean\n open val charCode: Int\n open val keyCode: Int\n open val which: Int\n fun getModifierState(keyArg:
String): Boolean\n\n companion object {\n val DOM_KEY_LOCATION_STANDARD: Int\n val DOM_KEY_LOCATION_LEFT: Int\n val DOM_KEY_LOCATION_RIGHT: Int\n val DOM_KEY_LOCATION_NUMPAD: Int\n }\n}\n\npublic external interface KeyboardEventInit : EventModifierInit {\n var key: String? /* = \"\" */\n get() = definedExternally\n set(value) = definedExternally\n var code: String? /* = \"\" */\n get() = definedExternally\n set(value) = definedExternally\n var location: Int? /* = 0 */\n get() = definedExternally\n set(value) = definedExternally\n var repeat: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n var isComposing: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun KeyboardEventInit(key: String? = \"\", code: String? = \"\", location: Int?
= 0, repeat: Boolean? = false, isComposing: Boolean? = false, ctrlKey: Boolean? = false, shiftKey: Boolean? = false, altKey: Boolean? = false, metaKey: Boolean? = false, modifierAltGraph: Boolean? = false, modifierCapsLock: Boolean? = false, modifierFn: Boolean? = false, modifierFnLock: Boolean? = false, modifierHyper: Boolean? = false, modifierNumLock: Boolean? = false, modifierScrollLock: Boolean? = false, modifierSuper: Boolean? = false, modifierSymbol: Boolean? = false, modifierSymbolLock: Boolean? = false, view: Window? = null, detail: Int? = 0, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): KeyboardEventInit {\n val o = js(\"({})\")\n\n o[\"key\"] = key\n o[\"code\"] = code\n o[\"location\"]

= location\n   o[\"repeat\"] = repeat\n   o[\"isComposing\"] = isComposing\n   o[\"ctrlKey\"] = ctrlKey\n   o[\"shiftKey\"] = shiftKey\n   o[\"altKey\"] = altKey\n   o[\"metaKey\"] = metaKey\n   o[\"modifierAltGraph\"] = modifierAltGraph\n   o[\"modifierCapsLock\"] = modifierCapsLock\n   o[\"modifierFn\"] = modifierFn\n   o[\"modifierFnLock\"] = modifierFnLock\n   o[\"modifierHyper\"] = modifierHyper\n   o[\"modifierNumLock\"] = modifierNumLock\n   o[\"modifierScrollLock\"] = modifierScrollLock\n   o[\"modifierSuper\"] = modifierSuper\n   o[\"modifierSymbol\"] = modifierSymbol\n   o[\"modifierSymbolLock\"] = modifierSymbolLock\n   o[\"view\"] = view\n   o[\"detail\"] = detail\n   o[\"bubbles\"] = bubbles\n   o[\"cancelable\"] = cancelable\n   o[\"composed\"] = composed\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [CompositionEvent](https://developer.mozilla.org/en/docs/Web/API/CompositionEvent) to Kotlin\n */\npublic external open class CompositionEvent(type: String, eventInitDict: CompositionEventInit = definedExternally) : UIEvent {\n   open val data: String\n}\n\npublic external interface CompositionEventInit : UIEventInit {\n   var data: String? /* = \"\" */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun CompositionEventInit(data: String? = \"\", view: Window? = null, detail: Int? = 0, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): CompositionEventInit {\n   val o = js(\"({})\")\n\n   o[\"data\"] = data\n   o[\"view\"] = view\n   o[\"detail\"] = detail\n   o[\"bubbles\"] = bubbles\n   o[\"cancelable\"] = cancelable\n   o[\"composed\"] = composed\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [Event](https://developer.mozilla.org/en/docs/Web/API/Event) to Kotlin\n */\npublic external open class Event(type: String, eventInitDict: EventInit = definedExternally) {\n   open val type: String\n   open val target: EventTarget?\n   open val currentTarget: EventTarget?\n   open val eventPhase: Short\n   open val bubbles: Boolean\n   open val cancelable: Boolean\n   open val defaultPrevented: Boolean\n   open val composed: Boolean\n   open val isTrusted: Boolean\n   open val timeStamp: Number\n   fun composedPath(): Array<EventTarget>\n   fun stopPropagation(): Unit\n   fun stopImmediatePropagation(): Unit\n   fun preventDefault(): Unit\n   fun initEvent(type: String, bubbles: Boolean, cancelable: Boolean): Unit\n\n   companion object {\n   val NONE: Short\n   val CAPTURING_PHASE: Short\n   val AT_TARGET: Short\n   val BUBBLING_PHASE: Short\n   }\n}\n\n/**\n * Exposes the JavaScript [EventTarget](https://developer.mozilla.org/en/docs/Web/API/EventTarget) to Kotlin\n */\npublic external abstract class EventTarget {\n   fun addEventListener(type: String, callback: EventListener?, options: dynamic = definedExternally): Unit\n   fun addEventListener(type: String, callback: ((Event) -> Unit)?, options: dynamic = definedExternally): Unit\n   fun removeEventListener(type: String, callback: EventListener?, options: dynamic = definedExternally): Unit\n   fun removeEventListener(type: String, callback: ((Event) -> Unit)?, options: dynamic = definedExternally): Unit\n   fun dispatchEvent(event: Event): Boolean\n}\n\n/**\n * Exposes the JavaScript [EventListener](https://developer.mozilla.org/en/docs/Web/API/EventListener) to Kotlin\n */\npublic external interface EventListener {\n   fun handleEvent(event: Event): Unit\n}\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n// NOTE: THIS FILE IS AUTO-GENERATED, DO NOT EDIT!\n// See libraries/tools/idl2k for details\n\n@file:Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npackage org.w3c.dom\n\nimport kotlin.js.*\nimport org.khronos.webgl.*\nimport org.w3c.css.masking.*\nimport org.w3c.dom.clipboard.*\nimport org.w3c.dom.css.*\nimport org.w3c.dom.events.*\nimport org.w3c.dom.mediacapture.*\nimport org.w3c.dom.parsing.*\nimport org.w3c.dom.pointerevents.*\nimport org.w3c.dom.svg.*\nimport org.w3c.dom.url.*\nimport org.w3c.fetch.*\nimport org.w3c.files.*\nimport org.w3c.notifications.*\nimport org.w3c.performance.*\nimport org.w3c.workers.*\nimport org.w3c.xhr.*\n\n/**\n * Exposes the JavaScript [Navigator](https://developer.mozilla.org/en/docs/Web/API/Navigator) to Kotlin\n */\npublic external abstract class Navigator : NavigatorID, NavigatorLanguage, NavigatorOnLine, NavigatorContentUtils, NavigatorCookies,

NavigatorPlugins, NavigatorConcurrentHardware {\n   open val serviceWorker: ServiceWorkerContainer\n   open val maxTouchPoints: Int\n   open val mediaDevices: MediaDevices\n   open val clipboard: Clipboard\n   fun vibrate(pattern: dynamic): Boolean\n   fun getUserMedia(constraints: MediaStreamConstraints, successCallback: (MediaStream) -> Unit, errorCallback: (dynamic) -> Unit): Unit\n}\n\n/**\n * Exposes the JavaScript [Document](https://developer.mozilla.org/en/docs/Web/API/Document) to Kotlin\n */\npublic external open class Document : Node, GlobalEventHandlers, DocumentAndElementEventHandlers,
 NonElementParentNode, DocumentOrShadowRoot, ParentNode, GeometryUtils {\n   open val fullscreenEnabled: Boolean\n   open val fullscreen: Boolean\n   var onfullscreenchange: ((Event) -> dynamic)?\n   var onfullscreenerror: ((Event) -> dynamic)?\n   open val rootElement: SVGSVGElement?\n   var title: String\n   open val referrer: String\n   var domain: String\n   open val activeElement: Element?\n   open val location: Location?\n   var cookie: String\n   open val lastModified: String\n   open val readyState: DocumentReadyState\n   var dir: String\n   var body: HTMLElement?\n   open val head: HTMLHeadElement?\n   open val images: HTMLCollection\n   open val embeds: HTMLCollection\n   open val plugins: HTMLCollection\n   open val links: HTMLCollection\n   open val forms: HTMLCollection\n   open val scripts: HTMLCollection\n   open val currentScript: HTMLOrSVGScriptElement?\n   open val defaultView: Window?\n   var designMode: String\n   var
 onreadystatechange: ((Event) -> dynamic)?\n   var fgColor: String\n   var linkColor: String\n   var vlinkColor: String\n   var alinkColor: String\n   var bgColor: String\n   open val anchors: HTMLCollection\n   open val applets: HTMLCollection\n   open val all: HTMLAllCollection\n   open val implementation: DOMImplementation\n   open val URL: String\n   open val documentURI: String\n   open val origin: String\n   open val compatMode: String\n   open val characterSet: String\n   open val charset: String\n   open val inputEncoding: String\n   open val contentType: String\n   open val doctype: DocumentType?\n   open val documentElement: Element?\n   open val scrollingElement: Element?\n   open val styleSheets: StyleSheetList\n   override var ongotpointercapture: ((PointerEvent) -> dynamic)?\n   override var onlostpointercapture: ((PointerEvent) -> dynamic)?\n   override var onpointerdown: ((PointerEvent) -> dynamic)?\n   override var onpointermove: ((PointerEvent)
 -> dynamic)?\n   override var onpointerup: ((PointerEvent) -> dynamic)?\n   override var onpointercancel: ((PointerEvent) -> dynamic)?\n   override var onpointerover: ((PointerEvent) -> dynamic)?\n   override var onpointerout: ((PointerEvent) -> dynamic)?\n   override var onpointerenter: ((PointerEvent) -> dynamic)?\n   override var onpointerleave: ((PointerEvent) -> dynamic)?\n   override var onabort: ((Event) -> dynamic)?\n   override var onblur: ((FocusEvent) -> dynamic)?\n   override var oncancel: ((Event) -> dynamic)?\n   override var oncanplay: ((Event) -> dynamic)?\n   override var oncanplaythrough: ((Event) -> dynamic)?\n   override var onchange: ((Event) -> dynamic)?\n   override var onclick: ((MouseEvent) -> dynamic)?\n   override var onclose: ((Event) -> dynamic)?\n   override var oncontextmenu: ((MouseEvent) -> dynamic)?\n   override var oncuechange: ((Event) -> dynamic)?\n   override var ondblclick: ((MouseEvent) -> dynamic)?\n   override var ondrag: ((DragEvent)
 -> dynamic)?\n   override var ondragend: ((DragEvent) -> dynamic)?\n   override var ondragenter: ((DragEvent) -> dynamic)?\n   override var ondragexit: ((DragEvent) -> dynamic)?\n   override var ondragleave: ((DragEvent) -> dynamic)?\n   override var ondragover: ((DragEvent) -> dynamic)?\n   override var ondragstart: ((DragEvent) -> dynamic)?\n   override var ondrop: ((DragEvent) -> dynamic)?\n   override var ondurationchange: ((Event) -> dynamic)?\n   override var onemptied: ((Event) -> dynamic)?\n   override var onended: ((Event) -> dynamic)?\n   override var onerror: ((dynamic, String, Int, Int, Any?) -> dynamic)?\n   override var onfocus: ((FocusEvent) -> dynamic)?\n   override var oninput: ((InputEvent) -> dynamic)?\n   override var oninvalid: ((Event) -> dynamic)?\n   override var onkeydown: ((KeyboardEvent) -> dynamic)?\n   override var onkeypress: ((KeyboardEvent) -> dynamic)?\n   override var onkeyup: ((KeyboardEvent) -> dynamic)?\n   override var onload: ((Event) -> dynamic)?\n   override var onloadeddata: ((Event) -> dynamic)?\n   override var onloadedmetadata: ((Event) -> dynamic)?\n   override var onloadend: ((Event) -> dynamic)?\n   override var onloadstart: ((ProgressEvent) -> dynamic)?\n   override var onmousedown: ((MouseEvent) -> dynamic)?\n   override var

onmouseenter: ((MouseEvent) -> dynamic)?\n override var onmouseleave: ((MouseEvent) -> dynamic)?\n override var onmousemove: ((MouseEvent) -> dynamic)?\n override var onmouseout: ((MouseEvent) -> dynamic)?\n override var onmouseover: ((MouseEvent) -> dynamic)?\n override var onmouseup: ((MouseEvent) -> dynamic)?\n override var onwheel: ((WheelEvent) -> dynamic)?\n override var onpause: ((Event) -> dynamic)?\n override var onplay: ((Event) -> dynamic)?\n override var onplaying: ((Event) -> dynamic)?\n override var onprogress: ((ProgressEvent) -> dynamic)?\n override var onratechange: ((Event) -> dynamic)?\n override var onreset:
((Event) -> dynamic)?\n override var onresize: ((Event) -> dynamic)?\n override var onscroll: ((Event) -> dynamic)?\n override var onseeked: ((Event) -> dynamic)?\n override var onseeking: ((Event) -> dynamic)?\n override var onselect: ((Event) -> dynamic)?\n override var onshow: ((Event) -> dynamic)?\n override var onstalled: ((Event) -> dynamic)?\n override var onsubmit: ((Event) -> dynamic)?\n override var onsuspend: ((Event) -> dynamic)?\n override var ontimeupdate: ((Event) -> dynamic)?\n override var ontoggle: ((Event) -> dynamic)?\n override var onvolumechange: ((Event) -> dynamic)?\n override var onwaiting: ((Event) -> dynamic)?\n override var oncopy: ((ClipboardEvent) -> dynamic)?\n override var oncut: ((ClipboardEvent) -> dynamic)?\n override var onpaste: ((ClipboardEvent) -> dynamic)?\n override val fullscreenElement: Element?\n override val children: HTMLCollection\n override val firstElementChild: Element?\n override val lastElementChild: Element?\n override val childElementCount: Int\n fun exitFullscreen(): Promise<Unit>\n fun getElementsByName(elementName: String): NodeList\n fun open(type: String = definedExternally, replace: String = definedExternally): Document\n fun open(url: String, name: String, features: String): Window\n fun close(): Unit\n fun write(vararg text: String): Unit\n fun writeln(vararg text: String): Unit\n fun hasFocus(): Boolean\n fun execCommand(commandId: String, showUI: Boolean = definedExternally, value: String = definedExternally): Boolean\n fun queryCommandEnabled(commandId: String): Boolean\n fun queryCommandIndeterm(commandId: String): Boolean\n fun queryCommandState(commandId: String): Boolean\n fun queryCommandSupported(commandId: String): Boolean\n fun queryCommandValue(commandId: String): String\n fun clear(): Unit\n fun captureEvents(): Unit\n fun releaseEvents(): Unit\n fun getElementsByTagName(qualifiedName:
String): HTMLCollection\n fun getElementsByTagNameNS(namespace: String?, localName: String): HTMLCollection\n fun getElementsByClassName(classNames: String): HTMLCollection\n fun createElement(localName: String, options: ElementCreationOptions = definedExternally): Element\n fun createElementNS(namespace: String?, qualifiedName: String, options: ElementCreationOptions = definedExternally): Element\n fun createDocumentFragment(): DocumentFragment\n fun createTextNode(data: String): Text\n fun createCDATASection(data: String): CDATASection\n fun createComment(data: String): Comment\n fun createProcessingInstruction(target: String, data: String): ProcessingInstruction\n fun importNode(node: Node, deep: Boolean = definedExternally): Node\n fun adoptNode(node: Node): Node\n fun createAttribute(localName: String): Attr\n fun createAttributeNS(namespace: String?, qualifiedName: String): Attr\n fun createEvent(interface_: String): Event\n
fun createRange(): Range\n fun createNodeIterator(root: Node, whatToShow: Int = definedExternally, filter: NodeFilter? = definedExternally): NodeIterator\n fun createNodeIterator(root: Node, whatToShow: Int = definedExternally, filter: ((Node) -> Short)? = definedExternally): NodeIterator\n fun createTreeWalker(root: Node, whatToShow: Int = definedExternally, filter: NodeFilter? = definedExternally): TreeWalker\n fun createTreeWalker(root: Node, whatToShow: Int = definedExternally, filter: ((Node) -> Short)? = definedExternally): TreeWalker\n fun elementFromPoint(x: Double, y: Double): Element?\n fun elementsFromPoint(x: Double, y: Double): Array<Element>\n fun caretPositionFromPoint(x: Double, y: Double): CaretPosition?\n override fun getElementById(elementId: String): Element?\n override fun prepend(vararg nodes: dynamic): Unit\n override fun append(vararg nodes: dynamic): Unit\n override fun querySelector(selectors: String): Element?\n override fun
querySelectorAll(selectors: String): NodeList\n override fun getBoxQuads(options: BoxQuadOptions /* = definedExternally */): Array<DOMQuad>\n override fun convertQuadFromNode(quad: dynamic, from: dynamic,

options: ConvertCoordinateOptions /* = definedExternally */): DOMQuad\n   override fun convertRectFromNode(rect: DOMRectReadOnly, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMQuad\n   override fun convertPointFromNode(point: DOMPointInit, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMPoint\n}\n@kotlin.internal.InlineOnly inline operator fun Document.get(name: String): dynamic = asDynamic()[name]\n\n/**\n * Exposes the JavaScript [Window](https://developer.mozilla.org/en/docs/Web/API/Window) to Kotlin\n */\npublic external abstract class Window : EventTarget, GlobalEventHandlers, WindowEventHandlers, WindowOrWorkerGlobalScope, WindowSessionStorage, WindowLocalStorage, GlobalPerformance, UnionMessagePortOrWindow {\n   override val performance: Performance\n   open val window: Window\n   open val self: Window\n   open val document: Document\n   open var name: String\n   open val location: Location\n   open val history: History\n   open val customElements: CustomElementRegistry\n   open val locationbar: BarProp\n   open val menubar: BarProp\n   open val personalbar: BarProp\n   open val scrollbars: BarProp\n   open val statusbar: BarProp\n   open val toolbar: BarProp\n   open var status: String\n   open val closed: Boolean\n   open val frames: Window\n   open val length: Int\n   open val top: Window\n   open var opener: Any?\n   open val parent: Window\n   open val frameElement: Element?\n   open val navigator: Navigator\n   open val applicationCache: ApplicationCache\n   open val external: External\n   open val screen: Screen\n   open val innerWidth: Int\n   open val innerHeight: Int\n   open val scrollX: Double\n   open val pageXOffset: Double\n   open val scrollY: Double\n   open val pageYOffset: Double\n   open val screenX: Int\n   open val screenY: Int\n   open val outerWidth: Int\n   open val outerHeight: Int\n   open val devicePixelRatio: Double\n   fun close(): Unit\n   fun stop(): Unit\n   fun focus(): Unit\n   fun blur(): Unit\n   fun open(url: String = definedExternally, target: String = definedExternally, features: String = definedExternally): Window?\n   fun alert(): Unit\n   fun alert(message: String): Unit\n   fun confirm(message: String = definedExternally): Boolean\n   fun prompt(message: String = definedExternally, default: String = definedExternally): String?\n   fun print(): Unit\n   fun requestAnimationFrame(callback: (Double) -> Unit): Int\n   fun cancelAnimationFrame(handle: Int): Unit\n   fun postMessage(message: Any?, targetOrigin: String, transfer: Array<dynamic> = definedExternally): Unit\n   fun captureEvents(): Unit\n   fun releaseEvents(): Unit\n   fun matchMedia(query: String): MediaQueryList\n   fun moveTo(x: Int, y: Int): Unit\n   fun moveBy(x: Int, y: Int): Unit\n   fun resizeTo(x: Int, y: Int): Unit\n   fun resizeBy(x: Int, y: Int): Unit\n   fun scroll(options: ScrollToOptions = definedExternally): Unit\n   fun scroll(x: Double, y: Double): Unit\n   fun scrollTo(options: ScrollToOptions = definedExternally): Unit\n   fun scrollTo(x: Double, y: Double): Unit\n   fun scrollBy(options: ScrollToOptions = definedExternally): Unit\n   fun scrollBy(x: Double, y: Double): Unit\n   fun getComputedStyle(elt: Element, pseudoElt: String? = definedExternally): CSSStyleDeclaration\n}\n@kotlin.internal.InlineOnly inline operator fun Window.get(name: String): dynamic = asDynamic()[name]\n\npublic external abstract class HTMLAllCollection {\n   open val length: Int\n//   fun namedItem(name: String): UnionElementOrHTMLCollection?\n   fun item(nameOrIndex: String = definedExternally): UnionElementOrHTMLCollection?\n}\n//@kotlin.internal.InlineOnly inline operator fun HTMLAllCollection.get(index: Int): Element? = asDynamic()[index]\n//@kotlin.internal.InlineOnly inline operator fun HTMLAllCollection.get(name: String): UnionElementOrHTMLCollection? = asDynamic()[name]\n\n/**\n * Exposes the JavaScript [HTMLFormControlsCollection](https://developer.mozilla.org/en/docs/Web/API/HTMLFormControlsCollection) to Kotlin\n */\npublic external abstract class HTMLFormControlsCollection : HTMLCollection {\n//   override fun namedItem(name: String): UnionElementOrRadioNodeList?\n}\n//@kotlin.internal.InlineOnly override inline operator fun HTMLFormControlsCollection.get(name: String): UnionElementOrRadioNodeList? = asDynamic()[name]\n\n/**\n * Exposes the JavaScript [RadioNodeList](https://developer.mozilla.org/en/docs/Web/API/RadioNodeList) to Kotlin\n */\npublic external abstract class RadioNodeList : NodeList, UnionElementOrRadioNodeList {\n   open var value: String\n}\n\n/**\n * Exposes the JavaScript [HTMLOptionsCollection](https://developer.mozilla.org/en/docs/Web/API/HTMLOptionsCollection)

to Kotlin\n */\npublic external abstract class HTMLOptionsCollection : HTMLCollection {\n override var length: Int\n open var selectedIndex: Int\n fun add(element: UnionHTMLOptGroupElementOrHTMLOptionElement, before: dynamic = definedExternally): Unit\n fun remove(index: Int): Unit\n}\n@kotlin.internal.InlineOnly inline operator fun HTMLOptionsCollection.set(index: Int, option: HTMLOptionElement?): Unit { asDynamic()[index] = option; }\n\n/**\n * Exposes the JavaScript [HTMLElement](https://developer.mozilla.org/en/docs/Web/API/HTMLElement) to Kotlin\n */\npublic external abstract class HTMLElement : Element, ElementCSSInlineStyle, GlobalEventHandlers, DocumentAndElementEventHandlers, ElementContentEditable {\n open var title: String\n open var lang: String\n open var translate: Boolean\n open var dir: String\n open val dataset: DOMStringMap\n open var hidden: Boolean\n open var tabIndex: Int\n open var accessKey: String\n open val accessKeyLabel: String\n open var draggable: Boolean\n open val dropzone: DOMTokenList\n open var contextMenu: HTMLMenuElement?\n open var spellcheck: Boolean\n open var innerText: String\n open val offsetParent: Element?\n open val offsetTop: Int\n open val offsetLeft: Int\n open val offsetWidth: Int\n open val offsetHeight: Int\n fun click(): Unit\n fun focus(): Unit\n fun blur(): Unit\n fun forceSpellCheck(): Unit\n}\n\n/**\n * Exposes the JavaScript [HTMLUnknownElement](https://developer.mozilla.org/en/docs/Web/API/HTMLUnknownElement) to Kotlin\n */\npublic external abstract class HTMLUnknownElement : HTMLElement {\n}\n\n/**\n * Exposes the JavaScript [DOMStringMap](https://developer.mozilla.org/en/docs/Web/API/DOMStringMap) to Kotlin\n */\npublic external abstract class DOMStringMap {\n}\n@kotlin.internal.InlineOnly inline operator fun DOMStringMap.get(name: String): String? = asDynamic()[name]\n@kotlin.internal.InlineOnly inline operator fun DOMStringMap.set(name: String, value: String): Unit { asDynamic()[name] = value; }\n\n/**\n * Exposes the JavaScript [HTMLHtmlElement](https://developer.mozilla.org/en/docs/Web/API/HTMLHtmlElement) to Kotlin\n */\npublic external abstract class HTMLHtmlElement : HTMLElement {\n open var version: String\n}\n\n/**\n * Exposes the JavaScript [HTMLHeadElement](https://developer.mozilla.org/en/docs/Web/API/HTMLHeadElement) to Kotlin\n */\npublic external abstract class HTMLHeadElement : HTMLElement {\n}\n\n/**\n * Exposes the JavaScript [HTMLTitleElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTitleElement) to Kotlin\n */\npublic external abstract class HTMLTitleElement : HTMLElement {\n open var text: String\n}\n\n/**\n * Exposes the JavaScript [HTMLBaseElement](https://developer.mozilla.org/en/docs/Web/API/HTMLBaseElement) to Kotlin\n */\npublic external abstract class HTMLBaseElement : HTMLElement {\n open var href: String\n open var target: String\n}\n\n/**\n * Exposes the JavaScript [HTMLLinkElement](https://developer.mozilla.org/en/docs/Web/API/HTMLLinkElement) to Kotlin\n */\npublic external abstract class HTMLLinkElement : HTMLElement, LinkStyle {\n open var scope: String\n open var workerType: WorkerType\n open var href: String\n open var crossOrigin: String?\n open var rel: String\n @JsName(\"as\") open var as_: RequestDestination\n open val relList: DOMTokenList\n open var media: String\n open var nonce: String\n open var hreflang: String\n open var type: String\n open val sizes: DOMTokenList\n open var referrerPolicy: String\n open var charset: String\n open var rev: String\n open var target: String\n}\n\n/**\n * Exposes the JavaScript [HTMLMetaElement](https://developer.mozilla.org/en/docs/Web/API/HTMLMetaElement) to Kotlin\n */\npublic external abstract class HTMLMetaElement : HTMLElement {\n open var name: String\n open var httpEquiv: String\n open var content: String\n open var scheme: String\n}\n\n/**\n * Exposes the JavaScript [HTMLStyleElement](https://developer.mozilla.org/en/docs/Web/API/HTMLStyleElement) to Kotlin\n */\npublic external abstract class HTMLStyleElement : HTMLElement, LinkStyle {\n open var media: String\n open var nonce: String\n open var type: String\n}\n\n/**\n * Exposes the JavaScript [HTMLBodyElement](https://developer.mozilla.org/en/docs/Web/API/HTMLBodyElement) to Kotlin\n */\npublic external abstract class HTMLBodyElement : HTMLElement, WindowEventHandlers {\n open var text: String\n

open var link: String\n   open var vLink: String\n   open var aLink: String\n   open var bgColor: String\n   open var background: String\n}\n\n/**\n * Exposes the JavaScript [HTMLHeadingElement](https://developer.mozilla.org/en/docs/Web/API/HTMLHeadingElement) to Kotlin\n */\npublic external abstract class HTMLHeadingElement : HTMLElement {\n   open var align: String\n}\n\n/**\n * Exposes the JavaScript [HTMLParagraphElement](https://developer.mozilla.org/en/docs/Web/API/HTMLParagraphElement) to Kotlin\n */\npublic external abstract class HTMLParagraphElement : HTMLElement {\n   open var align: String\n}\n\n/**\n * Exposes the JavaScript [HTMLHRElement](https://developer.mozilla.org/en/docs/Web/API/HTMLHRElement) to Kotlin\n */\npublic external abstract class HTMLHRElement : HTMLElement {\n   open var align: String\n   open var color: String\n   open var noShade: Boolean\n   open var size: String\n   open var width: String\n}\n\n/**\n * Exposes the JavaScript [HTMLPreElement](https://developer.mozilla.org/en/docs/Web/API/HTMLPreElement) to Kotlin\n */\npublic external abstract class HTMLPreElement : HTMLElement {\n   open var width: Int\n}\n\n/**\n * Exposes the JavaScript [HTMLQuoteElement](https://developer.mozilla.org/en/docs/Web/API/HTMLQuoteElement) to Kotlin\n */\npublic external abstract class HTMLQuoteElement : HTMLElement {\n   open var cite: String\n}\n\n/**\n * Exposes the JavaScript [HTMLOListElement](https://developer.mozilla.org/en/docs/Web/API/HTMLOListElement) to Kotlin\n */\npublic external abstract class HTMLOListElement : HTMLElement {\n   open var reversed: Boolean\n   open var start: Int\n   open var type: String\n   open var compact: Boolean\n}\n\n/**\n * Exposes the JavaScript [HTMLUListElement](https://developer.mozilla.org/en/docs/Web/API/HTMLUListElement) to Kotlin\n */\npublic external abstract class HTMLUListElement : HTMLElement {\n   open var compact: Boolean\n   open var type: String\n}\n\n/**\n * Exposes the JavaScript [HTMLLIElement](https://developer.mozilla.org/en/docs/Web/API/HTMLLIElement) to Kotlin\n */\npublic external abstract class HTMLLIElement : HTMLElement {\n   open var value: Int\n   open var type: String\n}\n\n/**\n * Exposes the JavaScript [HTMLDListElement](https://developer.mozilla.org/en/docs/Web/API/HTMLDListElement) to Kotlin\n */\npublic external abstract class HTMLDListElement : HTMLElement {\n   open var compact: Boolean\n}\n\n/**\n * Exposes the JavaScript [HTMLDivElement](https://developer.mozilla.org/en/docs/Web/API/HTMLDivElement) to Kotlin\n */\npublic external abstract class HTMLDivElement : HTMLElement {\n   open var align: String\n}\n\n/**\n * Exposes the JavaScript [HTMLAnchorElement](https://developer.mozilla.org/en/docs/Web/API/HTMLAnchorElement) to Kotlin\n */\npublic external abstract class HTMLAnchorElement : HTMLElement, HTMLHyperlinkElementUtils {\n   open var target: String\n   open var download: String\n   open var ping: String\n   open var rel: String\n   open val relList: DOMTokenList\n   open var hreflang: String\n   open var type: String\n   open var text: String\n   open var referrerPolicy: String\n   open var coords: String\n   open var charset: String\n   open var name: String\n   open var rev: String\n   open var shape: String\n}\n\n/**\n * Exposes the JavaScript [HTMLDataElement](https://developer.mozilla.org/en/docs/Web/API/HTMLDataElement) to Kotlin\n */\npublic external abstract class HTMLDataElement : HTMLElement {\n   open var value: String\n}\n\n/**\n * Exposes the JavaScript [HTMLTimeElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTimeElement) to Kotlin\n */\npublic external abstract class HTMLTimeElement : HTMLElement {\n   open var dateTime: String\n}\n\n/**\n * Exposes the JavaScript [HTMLSpanElement](https://developer.mozilla.org/en/docs/Web/API/HTMLSpanElement) to Kotlin\n */\npublic external abstract class HTMLSpanElement : HTMLElement {\n}\n\n/**\n * Exposes the JavaScript [HTMLBRElement](https://developer.mozilla.org/en/docs/Web/API/HTMLBRElement) to Kotlin\n */\npublic external abstract class HTMLBRElement : HTMLElement {\n   open var clear: String\n}\n\n/**\n * Exposes the JavaScript [HTMLHyperlinkElementUtils](https://developer.mozilla.org/en/docs/Web/API/HTMLHyperlinkElementUtils) to Kotlin\n */\npublic external interface HTMLHyperlinkElementUtils {\n   var href: String\n   val origin:

String\n var protocol: String\n var username: String\n var password: String\n var host: String\n var hostname: String\n var port: String\n var pathname: String\n var search: String\n var hash: String\n}\n\n/**\n * Exposes the JavaScript [HTMLModElement](https://developer.mozilla.org/en/docs/Web/API/HTMLModElement) to Kotlin\n */\npublic external abstract class HTMLModElement : HTMLElement {\n open var cite: String\n open var dateTime: String\n}\n\n/**\n * Exposes the JavaScript [HTMLPictureElement](https://developer.mozilla.org/en/docs/Web/API/HTMLPictureElement) to Kotlin\n */\npublic external abstract class HTMLPictureElement : HTMLElement {\n}\n\n/**\n * Exposes the JavaScript [HTMLSourceElement](https://developer.mozilla.org/en/docs/Web/API/HTMLSourceElement) to Kotlin\n */\npublic external abstract class HTMLSourceElement : HTMLElement {\n open var src: String\n open var type: String\n open var srcset: String\n open var sizes: String\n open var media: String\n}\n\n/**\n * Exposes the JavaScript [HTMLImageElement](https://developer.mozilla.org/en/docs/Web/API/HTMLImageElement) to Kotlin\n */\npublic external abstract class HTMLImageElement : HTMLElement, TexImageSource, HTMLOrSVGImageElement {\n open var alt: String\n open var src: String\n open var srcset: String\n open var sizes: String\n open var crossOrigin: String?\n open var useMap: String\n open var isMap: Boolean\n open var width: Int\n open var height: Int\n open val naturalWidth: Int\n open val naturalHeight: Int\n open val complete: Boolean\n open val currentSrc: String\n open var referrerPolicy: String\n open var name: String\n open var lowsrc: String\n open var align: String\n open var hspace: Int\n open var vspace: Int\n open var longDesc: String\n open var border: String\n open val x: Int\n open val y: Int\n}\n\n/**\n * Exposes the JavaScript [Image](https://developer.mozilla.org/en/docs/Web/API/Image) to Kotlin\n */\npublic external open class Image(width: Int = definedExternally, height: Int = definedExternally) : HTMLImageElement {\n override val children: HTMLCollection\n override val firstElementChild: Element?\n override val lastElementChild: Element?\n override val childElementCount: Int\n override val previousElementSibling: Element?\n override val nextElementSibling: Element?\n override val assignedSlot: HTMLSlotElement?\n override val style: CSSStyleDeclaration\n override var ongotpointercapture: ((PointerEvent) -> dynamic)?\n override var onlostpointercapture: ((PointerEvent) -> dynamic)?\n override var onpointerdown: ((PointerEvent) -> dynamic)?\n override var onpointermove: ((PointerEvent) -> dynamic)?\n override var onpointerup: ((PointerEvent) -> dynamic)?\n override var onpointercancel: ((PointerEvent) -> dynamic)?\n override var onpointerover: ((PointerEvent) -> dynamic)?\n override var onpointerout: ((PointerEvent) -> dynamic)?\n override var onpointerenter: ((PointerEvent) -> dynamic)?\n override var onpointerleave: ((PointerEvent) -> dynamic)?\n override var onabort: ((Event) -> dynamic)?\n override var onblur: ((FocusEvent) -> dynamic)?\n override var oncancel: ((Event) -> dynamic)?\n override var oncanplay: ((Event) -> dynamic)?\n override var oncanplaythrough: ((Event) -> dynamic)?\n override var onchange: ((Event) -> dynamic)?\n override var onclick: ((MouseEvent) -> dynamic)?\n override var onclose: ((Event) -> dynamic)?\n override var oncontextmenu: ((MouseEvent) -> dynamic)?\n override var oncuechange: ((Event) -> dynamic)?\n override var ondblclick: ((MouseEvent) -> dynamic)?\n override var ondrag: ((DragEvent) -> dynamic)?\n override var ondragend: ((DragEvent) -> dynamic)?\n override var ondragenter: ((DragEvent) -> dynamic)?\n override var ondragexit: ((DragEvent) -> dynamic)?\n override var ondragleave: ((DragEvent) -> dynamic)?\n override var ondragover: ((DragEvent) -> dynamic)?\n override var ondragstart: ((DragEvent) -> dynamic)?\n override var ondrop: ((DragEvent) -> dynamic)?\n override var ondurationchange: ((Event) -> dynamic)?\n override var onemptied: ((Event) -> dynamic)?\n override var onended: ((Event) -> dynamic)?\n override var onerror: ((dynamic, String, Int, Int, Any?) -> dynamic)?\n override var onfocus: ((FocusEvent) -> dynamic)?\n override var oninput: ((InputEvent) -> dynamic)?\n override var oninvalid: ((Event) -> dynamic)?\n override var onkeydown: ((KeyboardEvent) -> dynamic)?\n override var onkeypress: ((KeyboardEvent) -> dynamic)?\n override var onkeyup: ((KeyboardEvent) -> dynamic)?\n override var onload: ((Event) -> dynamic)?\n override var onloadeddata: ((Event) -> dynamic)?\n override var onloadedmetadata: ((Event) -> dynamic)?\n override var onloadend: ((Event) -> dynamic)?\n override var onloadstart:

((ProgressEvent) -> dynamic)?\n   override var onmousedown: ((MouseEvent) -> dynamic)?\n   override var onmouseenter: ((MouseEvent) -> dynamic)?\n   override var onmouseleave: ((MouseEvent) -> dynamic)?\n override var onmousemove: ((MouseEvent) -> dynamic)?\n   override var onmouseout: ((MouseEvent) -> dynamic)?\n   override var onmouseover: ((MouseEvent) -> dynamic)?\n   override var onmouseup: ((MouseEvent) -> dynamic)?\n   override var onwheel: ((WheelEvent) -> dynamic)?\n   override var onpause: ((Event) -> dynamic)?\n   override var onplay: ((Event) -> dynamic)?\n   override var onplaying: ((Event) -> dynamic)?\n override var onprogress: ((ProgressEvent) -> dynamic)?\n   override var onratechange: ((Event) -> dynamic)?\n override var onreset: ((Event) -> dynamic)?\n   override var onresize: ((Event) -> dynamic)?\n   override var onscroll: ((Event) -> dynamic)?\n   override var onseeked: ((Event) -> dynamic)?\n   override var onseeking: ((Event) -> dynamic)?\n
    override var onselect: ((Event) -> dynamic)?\n   override var onshow: ((Event) -> dynamic)?\n   override var onstalled: ((Event) -> dynamic)?\n   override var onsubmit: ((Event) -> dynamic)?\n   override var onsuspend: ((Event) -> dynamic)?\n   override var ontimeupdate: ((Event) -> dynamic)?\n   override var ontoggle: ((Event) -> dynamic)?\n   override var onvolumechange: ((Event) -> dynamic)?\n   override var onwaiting: ((Event) -> dynamic)?\n   override var oncopy: ((ClipboardEvent) -> dynamic)?\n   override var oncut: ((ClipboardEvent) -> dynamic)?\n   override var onpaste: ((ClipboardEvent) -> dynamic)?\n   override var contentEditable: String\n override val isContentEditable: Boolean\n   override fun prepend(vararg nodes: dynamic): Unit\n   override fun append(vararg nodes: dynamic): Unit\n   override fun querySelector(selectors: String): Element?\n   override fun querySelectorAll(selectors: String): NodeList\n   override fun before(vararg nodes: dynamic): Unit\n   override fun after(vararg nodes: dynamic): Unit\n   override fun replaceWith(vararg nodes: dynamic): Unit\n   override fun remove(): Unit\n   override fun getBoxQuads(options: BoxQuadOptions /* = definedExternally */): Array<DOMQuad>\n   override fun convertQuadFromNode(quad: dynamic, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMQuad\n   override fun convertRectFromNode(rect: DOMRectReadOnly, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMQuad\n   override fun convertPointFromNode(point: DOMPointInit, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMPoint\n}\n\n/**\n * Exposes the JavaScript [HTMLIFrameElement](https://developer.mozilla.org/en/docs/Web/API/HTMLIFrameElement) to Kotlin\n */\npublic external abstract class HTMLIFrameElement : HTMLElement {\n   open var src: String\n   open var srcdoc: String\n   open var name: String\n   open val sandbox: DOMTokenList\n
    open var allowFullscreen: Boolean\n   open var allowUserMedia: Boolean\n   open var width: String\n   open var height: String\n   open var referrerPolicy: String\n   open val contentDocument: Document?\n   open val contentWindow: Window?\n   open var align: String\n   open var scrolling: String\n   open var frameBorder: String\n   open var longDesc: String\n   open var marginHeight: String\n   open var marginWidth: String\n   fun getSVGDocument(): Document?\n}\n\n/**\n * Exposes the JavaScript [HTMLEmbedElement](https://developer.mozilla.org/en/docs/Web/API/HTMLEmbedElement) to Kotlin\n */\npublic external abstract class HTMLEmbedElement : HTMLElement {\n   open var src: String\n   open var type: String\n   open var width: String\n   open var height: String\n   open var align: String\n   open var name: String\n   fun getSVGDocument(): Document?\n}\n\n/**\n * Exposes the JavaScript [HTMLObjectElement](https://developer.mozilla.org/en/docs/Web/API/HTMLObjectElement) to Kotlin\n */\npublic external abstract class HTMLObjectElement : HTMLElement {\n   open var data: String\n   open var type: String\n   open var typeMustMatch: Boolean\n   open var name: String\n   open var useMap: String\n   open val form: HTMLFormElement?\n   open var width: String\n   open var height: String\n   open val contentDocument: Document?\n   open val contentWindow: Window?\n   open val willValidate: Boolean\n   open val validity: ValidityState\n   open val validationMessage: String\n   open var align: String\n   open var archive: String\n   open var code: String\n   open var declare: Boolean\n   open var hspace: Int\n   open var standby: String\n   open var vspace: Int\n   open var codeBase: String\n   open var codeType: String\n   open var border: String\n   fun getSVGDocument(): Document?\n   fun checkValidity(): Boolean\n   fun reportValidity(): Boolean\n   fun setCustomValidity(error: String): Unit\n}\n\n/**\n * Exposes the JavaScript

[HTMLParamElement](https://developer.mozilla.org/en/docs/Web/API/HTMLParamElement)
to Kotlin\n */\npublic external abstract class HTMLParamElement : HTMLElement {\n open var name: String\n open var value: String\n open var type: String\n open var valueType: String\n}\n\n/**\n * Exposes the JavaScript [HTMLVideoElement](https://developer.mozilla.org/en/docs/Web/API/HTMLVideoElement) to Kotlin\n */\npublic external abstract class HTMLVideoElement : HTMLMediaElement, TexImageSource {\n open var width: Int\n open var height: Int\n open val videoWidth: Int\n open val videoHeight: Int\n open var poster: String\n open var playsInline: Boolean\n}\n\n/**\n * Exposes the JavaScript [HTMLAudioElement](https://developer.mozilla.org/en/docs/Web/API/HTMLAudioElement) to Kotlin\n */\npublic external abstract class HTMLAudioElement : HTMLMediaElement {\n}\n\npublic external open class Audio(src: String = definedExternally) : HTMLAudioElement {\n override val children: HTMLCollection\n override val firstElementChild: Element?\n override val lastElementChild: Element?\n override val childElementCount: Int\n override val previousElementSibling: Element?\n override val nextElementSibling: Element?\n override val assignedSlot: HTMLSlotElement?\n override val style: CSSStyleDeclaration\n override var ongotpointercapture: ((PointerEvent) -> dynamic)?\n override var onlostpointercapture: ((PointerEvent) -> dynamic)?\n override var onpointerdown: ((PointerEvent) -> dynamic)?\n override var onpointermove: ((PointerEvent) -> dynamic)?\n override var onpointerup: ((PointerEvent) -> dynamic)?\n override var onpointercancel: ((PointerEvent) -> dynamic)?\n override var onpointerover: ((PointerEvent) -> dynamic)?\n override var onpointerout: ((PointerEvent) -> dynamic)?\n override var onpointerenter: ((PointerEvent) -> dynamic)?\n override var onpointerleave: ((PointerEvent) -> dynamic)?\n override var onabort: ((Event)
-> dynamic)?\n override var onblur: ((FocusEvent) -> dynamic)?\n override var oncancel: ((Event) -> dynamic)?\n override var oncanplay: ((Event) -> dynamic)?\n override var oncanplaythrough: ((Event) -> dynamic)?\n override var onchange: ((Event) -> dynamic)?\n override var onclick: ((MouseEvent) -> dynamic)?\n override var onclose: ((Event) -> dynamic)?\n override var oncontextmenu: ((MouseEvent) -> dynamic)?\n override var oncuechange: ((Event) -> dynamic)?\n override var ondblclick: ((MouseEvent) -> dynamic)?\n override var ondrag: ((DragEvent) -> dynamic)?\n override var ondragend: ((DragEvent) -> dynamic)?\n override var ondragenter: ((DragEvent) -> dynamic)?\n override var ondragexit: ((DragEvent) -> dynamic)?\n override var ondragleave: ((DragEvent) -> dynamic)?\n override var ondragover: ((DragEvent) -> dynamic)?\n override var ondragstart: ((DragEvent) -> dynamic)?\n override var ondrop: ((DragEvent) -> dynamic)?\n
override var ondurationchange: ((Event) -> dynamic)?\n override var onemptied: ((Event) -> dynamic)?\n override var onended: ((Event) -> dynamic)?\n override var onerror: ((dynamic, String, Int, Int, Any?) -> dynamic)?\n override var onfocus: ((FocusEvent) -> dynamic)?\n override var oninput: ((InputEvent) -> dynamic)?\n override var oninvalid: ((Event) -> dynamic)?\n override var onkeydown: ((KeyboardEvent) -> dynamic)?\n override var onkeypress: ((KeyboardEvent) -> dynamic)?\n override var onkeyup: ((KeyboardEvent) -> dynamic)?\n override var onload: ((Event) -> dynamic)?\n override var onloadeddata: ((Event) -> dynamic)?\n override var onloadedmetadata: ((Event) -> dynamic)?\n override var onloadend: ((Event) -> dynamic)?\n override var onloadstart: ((ProgressEvent) -> dynamic)?\n override var onmousedown: ((MouseEvent) -> dynamic)?\n override var onmouseenter: ((MouseEvent) -> dynamic)?\n override var onmouseleave: ((MouseEvent)
-> dynamic)?\n override var onmousemove: ((MouseEvent) -> dynamic)?\n override var onmouseout: ((MouseEvent) -> dynamic)?\n override var onmouseover: ((MouseEvent) -> dynamic)?\n override var onmouseup: ((MouseEvent) -> dynamic)?\n override var onwheel: ((WheelEvent) -> dynamic)?\n override var onpause: ((Event) -> dynamic)?\n override var onplay: ((Event) -> dynamic)?\n override var onplaying: ((Event) -> dynamic)?\n override var onprogress: ((ProgressEvent) -> dynamic)?\n override var onratechange: ((Event) -> dynamic)?\n override var onreset: ((Event) -> dynamic)?\n override var onresize: ((Event) -> dynamic)?\n override var onscroll: ((Event) -> dynamic)?\n override var onseeked: ((Event) -> dynamic)?\n override var onseeking: ((Event) -> dynamic)?\n override var onselect: ((Event) -> dynamic)?\n override var onshow:

((Event) -> dynamic)?\n   override var onstalled: ((Event) -> dynamic)?\n   override var onsubmit: ((Event) -> dynamic)?\n
    override var onsuspend: ((Event) -> dynamic)?\n   override var ontimeupdate: ((Event) -> dynamic)?\n   override var ontoggle: ((Event) -> dynamic)?\n   override var onvolumechange: ((Event) -> dynamic)?\n   override var onwaiting: ((Event) -> dynamic)?\n   override var oncopy: ((ClipboardEvent) -> dynamic)?\n   override var oncut: ((ClipboardEvent) -> dynamic)?\n   override var onpaste: ((ClipboardEvent) -> dynamic)?\n   override var contentEditable: String\n   override val isContentEditable: Boolean\n   override fun prepend(vararg nodes: dynamic): Unit\n   override fun append(vararg nodes: dynamic): Unit\n   override fun querySelector(selectors: String): Element?\n   override fun querySelectorAll(selectors: String): NodeList\n   override fun before(vararg nodes: dynamic): Unit\n   override fun after(vararg nodes: dynamic): Unit\n   override fun replaceWith(vararg nodes: dynamic): Unit\n   override fun remove(): Unit\n   override fun getBoxQuads(options:
 BoxQuadOptions /* = definedExternally */): Array<DOMQuad>\n   override fun convertQuadFromNode(quad: dynamic, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMQuad\n   override fun convertRectFromNode(rect: DOMRectReadOnly, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMQuad\n   override fun convertPointFromNode(point: DOMPointInit, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMPoint\n}\n\n/**\n * Exposes the JavaScript [HTMLTrackElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTrackElement) to Kotlin\n */\npublic external abstract class HTMLTrackElement : HTMLElement {\n   open var kind: String\n   open var src: String\n   open var srclang: String\n   open var label: String\n   open var default: Boolean\n   open val readyState: Short\n   open val track: TextTrack\n\n   companion object {\n   val NONE: Short\n   val LOADING: Short\n   val LOADED: Short\n
        val ERROR: Short\n   }\n}\n\n/**\n * Exposes the JavaScript [HTMLMediaElement](https://developer.mozilla.org/en/docs/Web/API/HTMLMediaElement) to Kotlin\n */\npublic external abstract class HTMLMediaElement : HTMLElement {\n   open val error: MediaError?\n   open var src: String\n   open var srcObject: dynamic\n   open val currentSrc: String\n   open var crossOrigin: String?\n   open val networkState: Short\n   open var preload: String\n   open val buffered: TimeRanges\n   open val readyState: Short\n   open val seeking: Boolean\n   open var currentTime: Double\n   open val duration: Double\n   open val paused: Boolean\n   open var defaultPlaybackRate: Double\n   open var playbackRate: Double\n   open val played: TimeRanges\n   open val seekable: TimeRanges\n   open val ended: Boolean\n   open var autoplay: Boolean\n   open var loop: Boolean\n   open var controls: Boolean\n   open var volume: Double\n   open var muted: Boolean\n   open var defaultMuted:
 Boolean\n   open val audioTracks: AudioTrackList\n   open val videoTracks: VideoTrackList\n   open val textTracks: TextTrackList\n   fun load(): Unit\n   fun canPlayType(type: String): CanPlayTypeResult\n   fun fastSeek(time: Double): Unit\n   fun getStartDate(): dynamic\n   fun play(): Promise<Unit>\n   fun pause(): Unit\n
 fun addTextTrack(kind: TextTrackKind, label: String = definedExternally, language: String = definedExternally): TextTrack\n\n   companion object {\n   val NETWORK_EMPTY: Short\n   val NETWORK_IDLE: Short\n
  val NETWORK_LOADING: Short\n   val NETWORK_NO_SOURCE: Short\n   val HAVE_NOTHING: Short\n   val HAVE_METADATA: Short\n   val HAVE_CURRENT_DATA: Short\n   val HAVE_FUTURE_DATA: Short\n   val HAVE_ENOUGH_DATA: Short\n   }\n}\n\n/**\n * Exposes the JavaScript [MediaError](https://developer.mozilla.org/en/docs/Web/API/MediaError) to Kotlin\n */\npublic external abstract class MediaError {\n   open val code:
 Short\n\n   companion object {\n   val MEDIA_ERR_ABORTED: Short\n   val MEDIA_ERR_NETWORK: Short\n   val MEDIA_ERR_DECODE: Short\n   val MEDIA_ERR_SRC_NOT_SUPPORTED: Short\n   }\n}\n\n/**\n * Exposes the JavaScript [AudioTrackList](https://developer.mozilla.org/en/docs/Web/API/AudioTrackList) to Kotlin\n */\npublic external abstract class AudioTrackList : EventTarget {\n   open val length: Int\n   open var onchange: ((Event) -> dynamic)?\n   open var onaddtrack: ((TrackEvent) -> dynamic)?\n   open var onremovetrack: ((TrackEvent) -> dynamic)?\n   fun getTrackById(id: String): AudioTrack?\n}\n\n@kotlin.internal.InlineOnly inline operator fun

AudioTrackList.get(index: Int): AudioTrack? = asDynamic()[index]\n\n/**\n * Exposes the JavaScript [AudioTrack](https://developer.mozilla.org/en/docs/Web/API/AudioTrack) to Kotlin\n */\npublic external abstract class AudioTrack : UnionAudioTrackOrTextTrackOrVideoTrack {\n   open val id: String\n   open val kind: String\n
    open val label: String\n   open val language: String\n   open var enabled: Boolean\n}\n\n/**\n * Exposes the JavaScript [VideoTrackList](https://developer.mozilla.org/en/docs/Web/API/VideoTrackList) to Kotlin\n */\npublic external abstract class VideoTrackList : EventTarget {\n   open val length: Int\n   open val selectedIndex: Int\n   open var onchange: ((Event) -> dynamic)?\n   open var onaddtrack: ((TrackEvent) -> dynamic)?\n   open var onremovetrack: ((TrackEvent) -> dynamic)?\n   fun getTrackById(id: String): VideoTrack?\n}\n@kotlin.internal.InlineOnly inline operator fun VideoTrackList.get(index: Int): VideoTrack? = asDynamic()[index]\n\n/**\n * Exposes the JavaScript [VideoTrack](https://developer.mozilla.org/en/docs/Web/API/VideoTrack) to Kotlin\n */\npublic external abstract class VideoTrack : UnionAudioTrackOrTextTrackOrVideoTrack {\n   open val id: String\n   open val kind: String\n   open val label: String\n   open val language: String\n   open var selected: Boolean\n}\n\npublic external abstract class TextTrackList : EventTarget {\n   open val length: Int\n   open var onchange: ((Event) -> dynamic)?\n   open var onaddtrack: ((TrackEvent) -> dynamic)?\n   open var onremovetrack: ((TrackEvent) -> dynamic)?\n   fun getTrackById(id: String): TextTrack?\n}\n@kotlin.internal.InlineOnly inline operator fun TextTrackList.get(index: Int): TextTrack? = asDynamic()[index]\n\n/**\n * Exposes the JavaScript [TextTrack](https://developer.mozilla.org/en/docs/Web/API/TextTrack) to Kotlin\n */\npublic external abstract class TextTrack : EventTarget, UnionAudioTrackOrTextTrackOrVideoTrack {\n   open val kind: TextTrackKind\n   open val label: String\n   open val language: String\n   open val id: String\n   open val inBandMetadataTrackDispatchType: String\n   open var mode: TextTrackMode\n   open val cues: TextTrackCueList?\n   open val activeCues: TextTrackCueList?\n   open var oncuechange: ((Event) -> dynamic)?\n   fun addCue(cue: TextTrackCue): Unit\n   fun removeCue(cue: TextTrackCue): Unit\n}\n\npublic external abstract class TextTrackCueList {\n   open val length: Int\n   fun getCueById(id: String): TextTrackCue?\n}\n@kotlin.internal.InlineOnly inline operator fun TextTrackCueList.get(index: Int): TextTrackCue? = asDynamic()[index]\n\n/**\n * Exposes the JavaScript [TextTrackCue](https://developer.mozilla.org/en/docs/Web/API/TextTrackCue) to Kotlin\n */\npublic external abstract class TextTrackCue : EventTarget {\n   open val track: TextTrack?\n   open var id: String\n   open var startTime: Double\n   open var endTime: Double\n   open var pauseOnExit: Boolean\n   open var onenter: ((Event) -> dynamic)?\n   open var onexit: ((Event) -> dynamic)?\n}\n\n/**\n * Exposes the JavaScript [TimeRanges](https://developer.mozilla.org/en/docs/Web/API/TimeRanges) to Kotlin\n */\npublic external abstract class TimeRanges {\n   open val length: Int\n   fun start(index: Int): Double\n   fun end(index: Int): Double\n}\n\n/**\n
 * Exposes the JavaScript [TrackEvent](https://developer.mozilla.org/en/docs/Web/API/TrackEvent) to Kotlin\n */\npublic external open class TrackEvent(type: String, eventInitDict: TrackEventInit = definedExternally) : Event {\n   open val track: UnionAudioTrackOrTextTrackOrVideoTrack?\n}\n\npublic external interface TrackEventInit : EventInit {\n   var track: UnionAudioTrackOrTextTrackOrVideoTrack? /* = null */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun TrackEventInit(track: UnionAudioTrackOrTextTrackOrVideoTrack? = null, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): TrackEventInit {\n   val o = js(\"({})\")\n\n   o[\"track\"] = track\n   o[\"bubbles\"] = bubbles\n   o[\"cancelable\"] = cancelable\n   o[\"composed\"] = composed\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [HTMLMapElement](https://developer.mozilla.org/en/docs/Web/API/HTMLMapElement)
 to Kotlin\n */\npublic external abstract class HTMLMapElement : HTMLElement {\n   open var name: String\n   open val areas: HTMLCollection\n}\n\n/**\n * Exposes the JavaScript [HTMLAreaElement](https://developer.mozilla.org/en/docs/Web/API/HTMLAreaElement) to Kotlin\n */\npublic

external abstract class HTMLAreaElement : HTMLElement, HTMLHyperlinkElementUtils {\n   open var alt: String\n   open var coords: String\n   open var shape: String\n   open var target: String\n   open var download: String\n   open var ping: String\n   open var rel: String\n   open val relList: DOMTokenList\n   open var referrerPolicy: String\n   open var noHref: Boolean\n}\n\n/**\n * Exposes the JavaScript [HTMLTableElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTableElement) to Kotlin\n */\npublic external abstract class HTMLTableElement : HTMLElement {\n   open var caption: HTMLTableCaptionElement?\n   open var tHead: HTMLTableSectionElement?\n   open var tFoot: HTMLTableSectionElement?\n
    open val tBodies: HTMLCollection\n   open val rows: HTMLCollection\n   open var align: String\n   open var border: String\n   open var frame: String\n   open var rules: String\n   open var summary: String\n   open var width: String\n   open var bgColor: String\n   open var cellPadding: String\n   open var cellSpacing: String\n   fun createCaption(): HTMLTableCaptionElement\n   fun deleteCaption(): Unit\n   fun createTHead(): HTMLTableSectionElement\n   fun deleteTHead(): Unit\n   fun createTFoot(): HTMLTableSectionElement\n   fun deleteTFoot(): Unit\n   fun createTBody(): HTMLTableSectionElement\n   fun insertRow(index: Int = definedExternally): HTMLTableRowElement\n   fun deleteRow(index: Int): Unit\n}\n\n/**\n * Exposes the JavaScript [HTMLTableCaptionElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTableCaptionElement) to Kotlin\n */\npublic external abstract class HTMLTableCaptionElement : HTMLElement {\n   open var align: String\n}\n\n/**\n
 * Exposes the JavaScript [HTMLTableColElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTableColElement) to Kotlin\n */\npublic external abstract class HTMLTableColElement : HTMLElement {\n   open var span: Int\n   open var align: String\n   open var ch: String\n   open var chOff: String\n   open var vAlign: String\n   open var width: String\n}\n\n/**\n * Exposes the JavaScript [HTMLTableSectionElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTableSectionElement) to Kotlin\n */\npublic external abstract class HTMLTableSectionElement : HTMLElement {\n   open val rows: HTMLCollection\n   open var align: String\n   open var ch: String\n   open var chOff: String\n   open var vAlign: String\n   fun insertRow(index: Int = definedExternally): HTMLElement\n   fun deleteRow(index: Int): Unit\n}\n\n/**\n * Exposes the JavaScript [HTMLTableRowElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTableRowElement) to Kotlin\n */\npublic external abstract
 class HTMLTableRowElement : HTMLElement {\n   open val rowIndex: Int\n   open val sectionRowIndex: Int\n   open val cells: HTMLCollection\n   open var align: String\n   open var ch: String\n   open var chOff: String\n   open var vAlign: String\n   open var bgColor: String\n   fun insertCell(index: Int = definedExternally): HTMLElement\n   fun deleteCell(index: Int): Unit\n}\n\n/**\n * Exposes the JavaScript [HTMLTableCellElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTableCellElement) to Kotlin\n */\npublic external abstract class HTMLTableCellElement : HTMLElement {\n   open var colSpan: Int\n   open var rowSpan: Int\n   open var headers: String\n   open val cellIndex: Int\n   open var scope: String\n   open var abbr: String\n   open var align: String\n   open var axis: String\n   open var height: String\n   open var width: String\n   open var ch: String\n   open var chOff: String\n   open var noWrap: Boolean\n   open var vAlign: String\n   open
 var bgColor: String\n}\n\n/**\n * Exposes the JavaScript [HTMLFormElement](https://developer.mozilla.org/en/docs/Web/API/HTMLFormElement) to Kotlin\n */\npublic external abstract class HTMLFormElement : HTMLElement {\n   open var acceptCharset: String\n   open var action: String\n   open var autocomplete: String\n   open var enctype: String\n   open var encoding: String\n   open var method: String\n   open var name: String\n   open var noValidate: Boolean\n   open var target: String\n   open val elements: HTMLFormControlsCollection\n   open val length: Int\n   fun submit(): Unit\n   fun reset(): Unit\n   fun checkValidity(): Boolean\n   fun reportValidity(): Boolean\n}\n@kotlin.internal.InlineOnly inline operator fun HTMLFormElement.get(index: Int): Element? = asDynamic()[index]\n@kotlin.internal.InlineOnly inline operator

fun HTMLFormElement.get(name: String): UnionElementOrRadioNodeList? = asDynamic()[name]\n\n/**\n * Exposes the JavaScript [HTMLLabelElement](https://developer.mozilla.org/en/docs/Web/API/HTMLLabelElement) to Kotlin\n */\npublic external abstract class HTMLLabelElement : HTMLElement {\n open val form: HTMLFormElement?\n open var htmlFor: String\n open val control: HTMLElement?\n}\n\n/**\n * Exposes the JavaScript [HTMLInputElement](https://developer.mozilla.org/en/docs/Web/API/HTMLInputElement) to Kotlin\n */\npublic external abstract class HTMLInputElement : HTMLElement {\n open var accept: String\n open var alt: String\n open var autocomplete: String\n open var autofocus: Boolean\n open var defaultChecked: Boolean\n open var checked: Boolean\n open var dirName: String\n open var disabled: Boolean\n open val form: HTMLFormElement?\n open val files: FileList?\n open var formAction: String\n open var formEnctype: String\n open var formMethod: String\n open var formNoValidate: Boolean\n open var formTarget: String\n open var height: Int\n open var indeterminate: Boolean\n open var inputMode: String\n open val list: HTMLElement?\n open var max: String\n open var maxLength: Int\n open var min: String\n open var minLength: Int\n open var multiple: Boolean\n open var name: String\n open var pattern: String\n open var placeholder: String\n open var readOnly: Boolean\n open var required: Boolean\n open var size: Int\n open var src: String\n open var step: String\n open var type: String\n open var defaultValue: String\n open var value: String\n open var valueAsDate: dynamic\n open var valueAsNumber: Double\n open var width: Int\n open val willValidate: Boolean\n open val validity: ValidityState\n open val validationMessage: String\n open val labels: NodeList\n open var selectionStart: Int?\n open var selectionEnd: Int?\n open var selectionDirection: String?\n open var align: String\n open var useMap: String\n fun stepUp(n: Int = definedExternally): Unit\n fun stepDown(n: Int = definedExternally): Unit\n fun checkValidity(): Boolean\n fun reportValidity(): Boolean\n fun setCustomValidity(error: String): Unit\n fun select(): Unit\n fun setRangeText(replacement: String): Unit\n fun setRangeText(replacement: String, start: Int, end: Int, selectionMode: SelectionMode = definedExternally): Unit\n fun setSelectionRange(start: Int, end: Int, direction: String = definedExternally): Unit\n}\n\n/**\n * Exposes the JavaScript [HTMLButtonElement](https://developer.mozilla.org/en/docs/Web/API/HTMLButtonElement) to Kotlin\n */\npublic external abstract class HTMLButtonElement : HTMLElement {\n open var autofocus: Boolean\n open var disabled: Boolean\n open val form: HTMLFormElement?\n open var formAction: String\n open var formEnctype: String\n open var formMethod: String\n open var formNoValidate: Boolean\n open var formTarget: String\n open var name: String\n open var type: String\n open var value: String\n open var menu: HTMLMenuElement?\n open val willValidate: Boolean\n open val validity: ValidityState\n open val validationMessage: String\n open val labels: NodeList\n fun checkValidity(): Boolean\n fun reportValidity(): Boolean\n fun setCustomValidity(error: String): Unit\n}\n\n/**\n * Exposes the JavaScript [HTMLSelectElement](https://developer.mozilla.org/en/docs/Web/API/HTMLSelectElement) to Kotlin\n */\npublic external abstract class HTMLSelectElement : HTMLElement, ItemArrayLike<Element> {\n open var autocomplete: String\n open var autofocus: Boolean\n open var disabled: Boolean\n open val form: HTMLFormElement?\n open var multiple: Boolean\n open var name: String\n open var required: Boolean\n open var size: Int\n open val type: String\n open val options: HTMLOptionsCollection\n override var length: Int\n open val selectedOptions: HTMLCollection\n open var selectedIndex: Int\n open var value: String\n open val willValidate: Boolean\n open val validity: ValidityState\n open val validationMessage: String\n open val labels: NodeList\n override fun item(index: Int): Element?\n fun namedItem(name: String): HTMLOptionElement?\n fun add(element: UnionHTMLOptGroupElementOrHTMLOptionElement, before: dynamic = definedExternally): Unit\n fun remove(index: Int): Unit\n fun checkValidity(): Boolean\n fun reportValidity(): Boolean\n fun setCustomValidity(error: String): Unit\n}\n@kotlin.internal.InlineOnly inline operator fun HTMLSelectElement.get(index: Int): Element? = asDynamic()[index]\n@kotlin.internal.InlineOnly inline operator fun HTMLSelectElement.set(index: Int, option: HTMLOptionElement?): Unit { asDynamic()[index] = option;

}\n\n/**\n * Exposes the JavaScript
[HTMLDataListElement](https://developer.mozilla.org/en/docs/Web/API/HTMLDataListElement) to Kotlin\n
*/\npublic external abstract class HTMLDataListElement : HTMLElement {\n   open val options:
HTMLCollection\n}\n\n/**\n
 * Exposes the JavaScript
[HTMLOptGroupElement](https://developer.mozilla.org/en/docs/Web/API/HTMLOptGroupElement) to Kotlin\n
*/\npublic external abstract class HTMLOptGroupElement : HTMLElement,
UnionHTMLOptGroupElementOrHTMLOptionElement {\n   open var disabled: Boolean\n   open var label:
String\n}\n\n/**\n * Exposes the JavaScript
[HTMLOptionElement](https://developer.mozilla.org/en/docs/Web/API/HTMLOptionElement) to Kotlin\n
*/\npublic external abstract class HTMLOptionElement : HTMLElement,
UnionHTMLOptGroupElementOrHTMLOptionElement {\n   open var disabled: Boolean\n   open val form:
HTMLFormElement?\n   open var label: String\n   open var defaultSelected: Boolean\n   open var selected:
Boolean\n   open var value: String\n   open var text: String\n   open val index: Int\n}\n\n/**\n * Exposes the
JavaScript [Option](https://developer.mozilla.org/en/docs/Web/API/Option) to Kotlin\n */\npublic external open
class Option(text: String = definedExternally, value: String
 = definedExternally, defaultSelected: Boolean = definedExternally, selected: Boolean = definedExternally) :
HTMLOptionElement {\n   override val children: HTMLCollection\n   override val firstElementChild: Element?\n
 override val lastElementChild: Element?\n   override val childElementCount: Int\n   override val
previousElementSibling: Element?\n   override val nextElementSibling: Element?\n   override val assignedSlot:
HTMLSlotElement?\n   override val style: CSSStyleDeclaration\n   override var ongotpointercapture:
((PointerEvent) -> dynamic)?\n   override var onlostpointercapture: ((PointerEvent) -> dynamic)?\n   override var
onpointerdown: ((PointerEvent) -> dynamic)?\n   override var onpointermove: ((PointerEvent) -> dynamic)?\n
override var onpointerup: ((PointerEvent) -> dynamic)?\n   override var onpointercancel: ((PointerEvent) ->
dynamic)?\n   override var onpointerover: ((PointerEvent) -> dynamic)?\n   override var onpointerout:
((PointerEvent) -> dynamic)?\n
    override var onpointerenter: ((PointerEvent) -> dynamic)?\n   override var onpointerleave: ((PointerEvent) ->
dynamic)?\n   override var onabort: ((Event) -> dynamic)?\n   override var onblur: ((FocusEvent) -> dynamic)?\n
override var oncancel: ((Event) -> dynamic)?\n   override var oncanplay: ((Event) -> dynamic)?\n   override var
oncanplaythrough: ((Event) -> dynamic)?\n   override var onchange: ((Event) -> dynamic)?\n   override var
onclick: ((MouseEvent) -> dynamic)?\n   override var onclose: ((Event) -> dynamic)?\n   override var
oncontextmenu: ((MouseEvent) -> dynamic)?\n   override var oncuechange: ((Event) -> dynamic)?\n   override var
ondblclick: ((MouseEvent) -> dynamic)?\n   override var ondrag: ((DragEvent) -> dynamic)?\n   override var
ondragend: ((DragEvent) -> dynamic)?\n   override var ondragenter: ((DragEvent) -> dynamic)?\n   override var
ondragexit: ((DragEvent) -> dynamic)?\n   override var ondragleave: ((DragEvent) -> dynamic)?\n
 override var ondragover: ((DragEvent) -> dynamic)?\n   override var ondragstart: ((DragEvent) -> dynamic)?\n
override var ondrop: ((DragEvent) -> dynamic)?\n   override var ondurationchange: ((Event) -> dynamic)?\n
override var onemptied: ((Event) -> dynamic)?\n   override var onended: ((Event) -> dynamic)?\n   override var
onerror: ((dynamic, String, Int, Int, Any?) -> dynamic)?\n   override var onfocus: ((FocusEvent) -> dynamic)?\n
override var oninput: ((InputEvent) -> dynamic)?\n   override var oninvalid: ((Event) -> dynamic)?\n   override var
onkeydown: ((KeyboardEvent) -> dynamic)?\n   override var onkeypress: ((KeyboardEvent) -> dynamic)?\n
override var onkeyup: ((KeyboardEvent) -> dynamic)?\n   override var onload: ((Event) -> dynamic)?\n   override
var onloadeddata: ((Event) -> dynamic)?\n   override var onloadedmetadata: ((Event) -> dynamic)?\n   override var
onloadend: ((Event) -> dynamic)?\n   override var onloadstart: ((ProgressEvent) -> dynamic)?\n
    override var onmousedown: ((MouseEvent) -> dynamic)?\n   override var onmouseenter: ((MouseEvent) ->
dynamic)?\n   override var onmouseleave: ((MouseEvent) -> dynamic)?\n   override var onmousemove:
((MouseEvent) -> dynamic)?\n   override var onmouseout: ((MouseEvent) -> dynamic)?\n   override var
onmouseover: ((MouseEvent) -> dynamic)?\n   override var onmouseup: ((MouseEvent) -> dynamic)?\n   override

var onwheel: ((WheelEvent) -> dynamic)?\n   override var onpause: ((Event) -> dynamic)?\n   override var onplay: ((Event) -> dynamic)?\n   override var onplaying: ((Event) -> dynamic)?\n   override var onprogress: ((ProgressEvent) -> dynamic)?\n   override var onratechange: ((Event) -> dynamic)?\n   override var onreset: ((Event) -> dynamic)?\n   override var onresize: ((Event) -> dynamic)?\n   override var onscroll: ((Event) -> dynamic)?\n   override var onseeked: ((Event) -> dynamic)?\n   override var onseeking: ((Event) -> dynamic)?\n   override var onselect:
((Event) -> dynamic)?\n   override var onshow: ((Event) -> dynamic)?\n   override var onstalled: ((Event) -> dynamic)?\n   override var onsubmit: ((Event) -> dynamic)?\n   override var onsuspend: ((Event) -> dynamic)?\n   override var ontimeupdate: ((Event) -> dynamic)?\n   override var ontoggle: ((Event) -> dynamic)?\n   override var onvolumechange: ((Event) -> dynamic)?\n   override var onwaiting: ((Event) -> dynamic)?\n   override var oncopy: ((ClipboardEvent) -> dynamic)?\n   override var oncut: ((ClipboardEvent) -> dynamic)?\n   override var onpaste: ((ClipboardEvent) -> dynamic)?\n   override var contentEditable: String\n   override val isContentEditable: Boolean\n   override fun prepend(vararg nodes: dynamic): Unit\n   override fun append(vararg nodes: dynamic): Unit\n   override fun querySelector(selectors: String): Element?\n   override fun querySelectorAll(selectors: String): NodeList\n   override fun before(vararg nodes: dynamic): Unit\n   override fun after(vararg
nodes: dynamic): Unit\n   override fun replaceWith(vararg nodes: dynamic): Unit\n   override fun remove(): Unit\n   override fun getBoxQuads(options: BoxQuadOptions /* = definedExternally */): Array<DOMQuad>\n   override fun convertQuadFromNode(quad: dynamic, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMQuad\n   override fun convertRectFromNode(rect: DOMRectReadOnly, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMQuad\n   override fun convertPointFromNode(point: DOMPointInit, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMPoint\n}\n\n/**\n * Exposes the JavaScript [HTMLTextAreaElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTextAreaElement) to Kotlin\n */\npublic external abstract class HTMLTextAreaElement : HTMLElement {\n   open var autocomplete: String\n   open var autofocus: Boolean\n   open var cols: Int\n   open var dirName: String\n   open var disabled:
Boolean\n   open val form: HTMLFormElement?\n   open var inputMode: String\n   open var maxLength: Int\n   open var minLength: Int\n   open var name: String\n   open var placeholder: String\n   open var readOnly: Boolean\n   open var required: Boolean\n   open var rows: Int\n   open var wrap: String\n   open val type: String\n   open var defaultValue: String\n   open var value: String\n   open val textLength: Int\n   open val willValidate: Boolean\n   open val validity: ValidityState\n   open val validationMessage: String\n   open val labels: NodeList\n   open var selectionStart: Int?\n   open var selectionEnd: Int?\n   open var selectionDirection: String?\n   fun checkValidity(): Boolean\n   fun reportValidity(): Boolean\n   fun setCustomValidity(error: String): Unit\n   fun select(): Unit\n   fun setRangeText(replacement: String): Unit\n   fun setRangeText(replacement: String, start: Int, end: Int, selectionMode: SelectionMode = definedExternally): Unit\n
    fun setSelectionRange(start: Int, end: Int, direction: String = definedExternally): Unit\n}\n\n/**\n * Exposes the JavaScript [HTMLKeygenElement](https://developer.mozilla.org/en/docs/Web/API/HTMLKeygenElement) to Kotlin\n */\npublic external abstract class HTMLKeygenElement : HTMLElement {\n   open var autofocus: Boolean\n   open var challenge: String\n   open var disabled: Boolean\n   open val form: HTMLFormElement?\n   open var keytype: String\n   open var name: String\n   open val type: String\n   open val willValidate: Boolean\n   open val validity: ValidityState\n   open val validationMessage: String\n   open val labels: NodeList\n   fun checkValidity(): Boolean\n   fun reportValidity(): Boolean\n   fun setCustomValidity(error: String): Unit\n}\n\n/**\n * Exposes the JavaScript [HTMLOutputElement](https://developer.mozilla.org/en/docs/Web/API/HTMLOutputElement) to Kotlin\n */\npublic external abstract class HTMLOutputElement : HTMLElement {\n   open val htmlFor:
DOMTokenList\n   open val form: HTMLFormElement?\n   open var name: String\n   open val type: String\n   open var defaultValue: String\n   open var value: String\n   open val willValidate: Boolean\n   open val validity: ValidityState\n   open val validationMessage: String\n   open val labels: NodeList\n   fun checkValidity(): Boolean\n   fun reportValidity(): Boolean\n   fun setCustomValidity(error: String): Unit\n}\n\n/**\n * Exposes the

JavaScript [HTMLProgressElement](https://developer.mozilla.org/en/docs/Web/API/HTMLProgressElement) to Kotlin\n */\npublic external abstract class HTMLProgressElement : HTMLElement {\n open var value: Double\n open var max: Double\n open val position: Double\n open val labels: NodeList\n}\n\n/**\n * Exposes the JavaScript [HTMLMeterElement](https://developer.mozilla.org/en/docs/Web/API/HTMLMeterElement) to Kotlin\n */\npublic external abstract class HTMLMeterElement : HTMLElement {\n open var value: Double\n open var min: Double\n open var max: Double\n open var low: Double\n open var high: Double\n open var optimum: Double\n open val labels: NodeList\n}\n\n/**\n * Exposes the JavaScript [HTMLFieldSetElement](https://developer.mozilla.org/en/docs/Web/API/HTMLFieldSetElement) to Kotlin\n */\npublic external abstract class HTMLFieldSetElement : HTMLElement {\n open var disabled: Boolean\n open val form: HTMLFormElement?\n open var name: String\n open val type: String\n open val elements: HTMLCollection\n open val willValidate: Boolean\n open val validity: ValidityState\n open val validationMessage: String\n fun checkValidity(): Boolean\n fun reportValidity(): Boolean\n fun setCustomValidity(error: String): Unit\n}\n\n/**\n * Exposes the JavaScript [HTMLLegendElement](https://developer.mozilla.org/en/docs/Web/API/HTMLLegendElement) to Kotlin\n */\npublic external abstract class HTMLLegendElement : HTMLElement {\n open val form: HTMLFormElement?\n open var align: String\n}\n\n/**\n * Exposes the JavaScript [ValidityState](https://developer.mozilla.org/en/docs/Web/API/ValidityState) to Kotlin\n */\npublic external abstract class ValidityState {\n open val valueMissing: Boolean\n open val typeMismatch: Boolean\n open val patternMismatch: Boolean\n open val tooLong: Boolean\n open val tooShort: Boolean\n open val rangeUnderflow: Boolean\n open val rangeOverflow: Boolean\n open val stepMismatch: Boolean\n open val badInput: Boolean\n open val customError: Boolean\n open val valid: Boolean\n}\n\n/**\n * Exposes the JavaScript [HTMLDetailsElement](https://developer.mozilla.org/en/docs/Web/API/HTMLDetailsElement) to Kotlin\n */\npublic external abstract class HTMLDetailsElement : HTMLElement {\n open var open: Boolean\n}\n\npublic external abstract class HTMLMenuElement : HTMLElement {\n open var type: String\n open var label: String\n open var compact: Boolean\n}\n\npublic external abstract class HTMLMenuItemElement : HTMLElement {\n open var type: String\n open var label: String\n open var icon: String\n open var disabled: Boolean\n open var checked: Boolean\n open var radiogroup: String\n open var default: Boolean\n}\n\npublic external open class RelatedEvent(type: String, eventInitDict: RelatedEventInit = definedExternally) : Event {\n open val relatedTarget: EventTarget?\n}\n\npublic external interface RelatedEventInit : EventInit {\n var relatedTarget: EventTarget? /* = null */\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun RelatedEventInit(relatedTarget: EventTarget? = null, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): RelatedEventInit {\n val o = js(\"({})\")\n\n o[\"relatedTarget\"] = relatedTarget\n o[\"bubbles\"] = bubbles\n o[\"cancelable\"] = cancelable\n o[\"composed\"] = composed\n\n return o\n}\n\n/**\n * Exposes the JavaScript [HTMLDialogElement](https://developer.mozilla.org/en/docs/Web/API/HTMLDialogElement) to Kotlin\n */\npublic external abstract class HTMLDialogElement : HTMLElement {\n open var open: Boolean\n open var returnValue: String\n fun show(anchor: UnionElementOrMouseEvent = definedExternally): Unit\n fun showModal(anchor: UnionElementOrMouseEvent = definedExternally): Unit\n fun close(returnValue: String = definedExternally): Unit\n}\n\n/**\n * Exposes the JavaScript [HTMLScriptElement](https://developer.mozilla.org/en/docs/Web/API/HTMLScriptElement) to Kotlin\n */\npublic external abstract class HTMLScriptElement : HTMLElement, HTMLOrSVGScriptElement {\n open var src: String\n open var type: String\n open var charset: String\n open var async: Boolean\n open var defer: Boolean\n open var crossOrigin: String?\n open var text: String\n open var nonce: String\n open var event: String\n open var htmlFor: String\n}\n\n/**\n * Exposes the JavaScript [HTMLTemplateElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTemplateElement) to Kotlin\n

*/\npublic external abstract class HTMLTemplateElement : HTMLElement {\n   open val content: DocumentFragment\n}\n\n/**\n * Exposes the JavaScript [HTMLSlotElement](https://developer.mozilla.org/en/docs/Web/API/HTMLSlotElement) to Kotlin\n */\npublic external abstract class HTMLSlotElement : HTMLElement {\n   open var name: String\n   fun assignedNodes(options: AssignedNodesOptions = definedExternally): Array<Node>\n}\n\npublic external interface AssignedNodesOptions {\n   var flatten: Boolean? /* = false */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun AssignedNodesOptions(flatten: Boolean? = false): AssignedNodesOptions {\n   val o = js(\"({})\")\n\n   o[\"flatten\"] = flatten\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [HTMLCanvasElement](https://developer.mozilla.org/en/docs/Web/API/HTMLCanvasElement) to Kotlin\n */\npublic external abstract class HTMLCanvasElement : HTMLElement, TexImageSource {\n   open var width: Int\n   open var height: Int\n   fun getContext(contextId: String, vararg arguments: Any?): RenderingContext?\n   fun toDataURL(type: String = definedExternally, quality: Any? = definedExternally): String\n   fun toBlob(_callback: (Blob?) -> Unit, type: String = definedExternally, quality: Any? = definedExternally): Unit\n}\n\npublic external interface CanvasRenderingContext2DSettings {\n   var alpha: Boolean? /* = true */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun CanvasRenderingContext2DSettings(alpha: Boolean? = true): CanvasRenderingContext2DSettings {\n   val o = js(\"({})\")\n\n   o[\"alpha\"] = alpha\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [CanvasRenderingContext2D](https://developer.mozilla.org/en/docs/Web/API/CanvasRenderingContext2D) to Kotlin\n */\npublic external abstract class CanvasRenderingContext2D : CanvasState, CanvasTransform, CanvasCompositing, CanvasImageSmoothing, CanvasFillStrokeStyles, CanvasShadowStyles, CanvasFilters, CanvasRect, CanvasDrawPath, CanvasUserInterface, CanvasText, CanvasDrawImage, CanvasHitRegion, CanvasImageData, CanvasPathDrawingStyles, CanvasTextDrawingStyles, CanvasPath, RenderingContext {\n   open val canvas: HTMLCanvasElement\n}\n\npublic external interface CanvasState {\n   fun save(): Unit\n   fun restore(): Unit\n}\n\npublic external interface CanvasTransform {\n   fun scale(x: Double, y: Double): Unit\n   fun rotate(angle: Double): Unit\n   fun translate(x: Double, y: Double): Unit\n   fun transform(a: Double, b: Double, c: Double, d: Double, e: Double, f: Double): Unit\n   fun getTransform(): DOMMatrix\n   fun setTransform(a: Double, b: Double, c: Double, d: Double, e: Double, f: Double): Unit\n   fun setTransform(transform: dynamic = definedExternally): Unit\n   fun resetTransform(): Unit\n}\n\npublic external interface CanvasCompositing {\n   var globalAlpha: Double\n   var globalCompositeOperation: String\n}\n\npublic external interface CanvasImageSmoothing {\n   var imageSmoothingEnabled: Boolean\n   var imageSmoothingQuality: ImageSmoothingQuality\n}\n\npublic external interface CanvasFillStrokeStyles {\n   var strokeStyle: dynamic\n   var fillStyle: dynamic\n   fun createLinearGradient(x0: Double, y0: Double, x1: Double, y1: Double): CanvasGradient\n   fun createRadialGradient(x0: Double, y0: Double, r0: Double, x1: Double, y1: Double, r1: Double): CanvasGradient\n   fun createPattern(image: dynamic, repetition: String): CanvasPattern?\n}\n\npublic external interface CanvasShadowStyles {\n   var shadowOffsetX: Double\n   var shadowOffsetY: Double\n   var shadowBlur: Double\n   var shadowColor: String\n}\n\npublic external interface CanvasFilters {\n   var filter: String\n}\n\npublic external interface CanvasRect {\n   fun clearRect(x: Double, y: Double, w: Double, h: Double): Unit\n   fun fillRect(x: Double, y: Double, w: Double, h: Double): Unit\n   fun strokeRect(x: Double, y: Double, w: Double, h: Double): Unit\n}\n\npublic external interface CanvasDrawPath {\n   fun beginPath(): Unit\n   fun fill(fillRule: CanvasFillRule = definedExternally): Unit\n   fun fill(path: Path2D, fillRule: CanvasFillRule = definedExternally): Unit\n   fun stroke(): Unit\n   fun stroke(path: Path2D): Unit\n   fun clip(fillRule: CanvasFillRule = definedExternally): Unit\n   fun clip(path: Path2D, fillRule: CanvasFillRule = definedExternally): Unit\n   fun resetClip(): Unit\n   fun isPointInPath(x: Double, y: Double, fillRule: CanvasFillRule = definedExternally): Boolean\n   fun isPointInPath(path: Path2D, x: Double, y: Double, fillRule: CanvasFillRule = definedExternally):

Boolean\n   fun isPointInStroke(x: Double, y: Double): Boolean\n   fun isPointInStroke(path: Path2D, x: Double, y:
Double): Boolean\n}\n\npublic external interface CanvasUserInterface {\n   fun drawFocusIfNeeded(element: Element): Unit\n   fun drawFocusIfNeeded(path: Path2D, element: Element): Unit\n   fun scrollPathIntoView(): Unit\n   fun scrollPathIntoView(path: Path2D): Unit\n}\n\npublic external interface CanvasText {\n   fun fillText(text: String, x: Double, y: Double, maxWidth: Double = definedExternally): Unit\n   fun strokeText(text: String, x: Double, y: Double, maxWidth: Double = definedExternally): Unit\n   fun measureText(text: String): TextMetrics\n}\n\npublic external interface CanvasDrawImage {\n   fun drawImage(image: dynamic, dx: Double, dy: Double): Unit\n   fun drawImage(image: dynamic, dx: Double, dy: Double, dw: Double, dh: Double): Unit\n   fun drawImage(image: dynamic, sx: Double, sy: Double, sw: Double, sh: Double, dx: Double, dy: Double, dw: Double, dh: Double): Unit\n}\n\npublic external interface CanvasHitRegion {\n   fun addHitRegion(options: HitRegionOptions
= definedExternally): Unit\n   fun removeHitRegion(id: String): Unit\n   fun clearHitRegions(): Unit\n}\n\npublic external interface CanvasImageData {\n   fun createImageData(sw: Double, sh: Double): ImageData\n   fun createImageData(imagedata: ImageData): ImageData\n   fun getImageData(sx: Double, sy: Double, sw: Double, sh: Double): ImageData\n   fun putImageData(imagedata: ImageData, dx: Double, dy: Double): Unit\n   fun putImageData(imagedata: ImageData, dx: Double, dy: Double, dirtyX: Double, dirtyY: Double, dirtyWidth: Double, dirtyHeight: Double): Unit\n}\n\npublic external interface CanvasPathDrawingStyles {\n   var lineWidth: Double\n   var lineCap: CanvasLineCap\n   var lineJoin: CanvasLineJoin\n   var miterLimit: Double\n   var lineDashOffset: Double\n   fun setLineDash(segments: Array<Double>): Unit\n   fun getLineDash(): Array<Double>\n}\n\npublic external interface CanvasTextDrawingStyles {\n   var font: String\n   var textAlign: CanvasTextAlign\n   var textBaseline: CanvasTextBaseline\n   var direction: CanvasDirection\n}\n\npublic external interface CanvasPath {\n   fun closePath(): Unit\n   fun moveTo(x: Double, y: Double): Unit\n   fun lineTo(x: Double, y: Double): Unit\n   fun quadraticCurveTo(cpx: Double, cpy: Double, x: Double, y: Double): Unit\n   fun bezierCurveTo(cp1x: Double, cp1y: Double, cp2x: Double, cp2y: Double, x: Double, y: Double): Unit\n   fun arcTo(x1: Double, y1: Double, x2: Double, y2: Double, radius: Double): Unit\n   fun arcTo(x1: Double, y1: Double, x2: Double, y2: Double, radiusX: Double, radiusY: Double, rotation: Double): Unit\n   fun rect(x: Double, y: Double, w: Double, h: Double): Unit\n   fun arc(x: Double, y: Double, radius: Double, startAngle: Double, endAngle: Double, anticlockwise: Boolean = definedExternally): Unit\n   fun ellipse(x: Double, y: Double, radiusX: Double, radiusY: Double, rotation: Double, startAngle: Double, endAngle: Double, anticlockwise: Boolean = definedExternally): Unit\n}\n\n/**\n * Exposes the JavaScript
[CanvasGradient](https://developer.mozilla.org/en/docs/Web/API/CanvasGradient) to Kotlin\n */\npublic external abstract class CanvasGradient {\n   fun addColorStop(offset: Double, color: String): Unit\n}\n\n/**\n * Exposes the JavaScript [CanvasPattern](https://developer.mozilla.org/en/docs/Web/API/CanvasPattern) to Kotlin\n */\npublic external abstract class CanvasPattern {\n   fun setTransform(transform: dynamic = definedExternally): Unit\n}\n\n/**\n * Exposes the JavaScript
[TextMetrics](https://developer.mozilla.org/en/docs/Web/API/TextMetrics) to Kotlin\n */\npublic external abstract class TextMetrics {\n   open val width: Double\n   open val actualBoundingBoxLeft: Double\n   open val actualBoundingBoxRight: Double\n   open val fontBoundingBoxAscent: Double\n   open val fontBoundingBoxDescent: Double\n   open val actualBoundingBoxAscent: Double\n   open val actualBoundingBoxDescent: Double\n   open val emHeightAscent: Double\n   open val emHeightDescent: Double\n   open val hangingBaseline: Double\n   open val alphabeticBaseline: Double\n   open val ideographicBaseline: Double\n}\n\npublic external interface HitRegionOptions {\n   var path: Path2D? /* = null */\n   get() = definedExternally\n   set(value) = definedExternally\n   var fillRule: CanvasFillRule? /* = CanvasFillRule.NONZERO */\n   get() = definedExternally\n   set(value) = definedExternally\n   var id: String? /* = \"\" */\n   get() = definedExternally\n   set(value) = definedExternally\n   var parentID: String? /* = null */\n   get() = definedExternally\n   set(value) = definedExternally\n   var cursor: String? /* = \"inherit\" */\n   get() = definedExternally\n   set(value) =

definedExternally\n   var control: Element? /* = null */\n   get() = definedExternally\n   set(value) = definedExternally\n   var label: String? /* = null */\n   get() = definedExternally\n   set(value) = definedExternally\n   var role: String? /* = null */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun HitRegionOptions(path: Path2D? = null, fillRule: CanvasFillRule? = CanvasFillRule.NONZERO, id: String? = \"\", parentID: String? = null, cursor: String? = \"inherit\", control: Element? = null, label: String? = null, role: String? = null): HitRegionOptions {\n   val o = js(\"({})\")\n\n   o[\"path\"] = path\n   o[\"fillRule\"] = fillRule\n   o[\"id\"] = id\n   o[\"parentID\"] = parentID\n   o[\"cursor\"] = cursor\n   o[\"control\"] = control\n   o[\"label\"] = label\n   o[\"role\"] = role\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [ImageData](https://developer.mozilla.org/en/docs/Web/API/ImageData) to Kotlin\n */\npublic external open class ImageData : TexImageSource {\n   constructor(sw: Int, sh: Int)\n   constructor(data: Uint8ClampedArray, sw: Int, sh: Int = definedExternally)\n   open val width: Int\n   open val height: Int\n   open val data: Uint8ClampedArray\n}\n\n/**\n * Exposes the JavaScript [Path2D](https://developer.mozilla.org/en/docs/Web/API/Path2D) to Kotlin\n */\npublic external open class Path2D() : CanvasPath {\n   constructor(path: Path2D)\n   constructor(paths: Array<Path2D>, fillRule: CanvasFillRule = definedExternally)\n   constructor(d: String)\n   fun addPath(path: Path2D, transform: dynamic = definedExternally): Unit\n   override fun closePath(): Unit\n   override fun moveTo(x: Double, y: Double): Unit\n   override fun lineTo(x: Double, y: Double): Unit\n   override fun quadraticCurveTo(cpx: Double, cpy: Double, x: Double, y: Double): Unit\n   override fun bezierCurveTo(cp1x: Double, cp1y: Double, cp2x: Double, cp2y: Double, x: Double, y: Double): Unit\n   override fun arcTo(x1: Double, y1: Double, x2: Double, y2: Double, radius: Double): Unit\n   override fun arcTo(x1: Double, y1: Double, x2: Double, y2: Double, radiusX: Double, radiusY: Double, rotation: Double): Unit\n   override fun rect(x: Double, y: Double, w: Double, h: Double): Unit\n   override fun arc(x: Double, y: Double, radius: Double, startAngle: Double, endAngle: Double, anticlockwise: Boolean /* = definedExternally */): Unit\n   override fun ellipse(x: Double, y: Double, radiusX: Double, radiusY: Double, rotation: Double, startAngle: Double, endAngle: Double, anticlockwise: Boolean /* = definedExternally */): Unit\n}\n\n/**\n * Exposes the JavaScript [Touch](https://developer.mozilla.org/en/docs/Web/API/Touch) to Kotlin\n */\npublic external abstract class Touch {\n   open val region: String?\n}\n\n/**\n * Exposes the JavaScript [ImageBitmapRenderingContext](https://developer.mozilla.org/en/docs/Web/API/ImageBitmapRenderingContext) to Kotlin\n */\npublic external abstract class ImageBitmapRenderingContext {\n   open val canvas: HTMLCanvasElement\n   fun transferFromImageBitmap(bitmap: ImageBitmap?): Unit\n}\n\npublic external interface ImageBitmapRenderingContextSettings {\n   var alpha: Boolean? /* = true */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun ImageBitmapRenderingContextSettings(alpha: Boolean? = true): ImageBitmapRenderingContextSettings {\n   val o = js(\"({})\")\n\n   o[\"alpha\"] = alpha\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [CustomElementRegistry](https://developer.mozilla.org/en/docs/Web/API/CustomElementRegistry) to Kotlin\n */\npublic external abstract class CustomElementRegistry {\n   fun define(name: String, constructor: () -> dynamic, options: ElementDefinitionOptions = definedExternally): Unit\n   fun get(name: String): Any?\n   fun whenDefined(name: String): Promise<Unit>\n}\n\npublic external interface ElementDefinitionOptions {\n   var extends: String?\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun ElementDefinitionOptions(extends: String? = undefined): ElementDefinitionOptions {\n   val o = js(\"({})\")\n\n   o[\"extends\"] = extends\n\n   return o\n}\n\npublic external interface ElementContentEditable {\n   var contentEditable: String\n   val isContentEditable: Boolean\n}\n\n/**\n * Exposes the JavaScript [DataTransfer](https://developer.mozilla.org/en/docs/Web/API/DataTransfer) to Kotlin\n */\npublic external abstract class DataTransfer {\n   open var dropEffect: String\n   open var effectAllowed: String\n   open val items: DataTransferItemList\n   open val types: Array<out String>\n   open val files: FileList\n   fun setDragImage(image: Element, x: Int, y: Int): Unit\n   fun getData(format: String): String\n   fun setData(format:

String, data: String): Unit\n   fun clearData(format: String = definedExternally): Unit\n}\n\n/**\n * Exposes the JavaScript [DataTransferItemList](https://developer.mozilla.org/en/docs/Web/API/DataTransferItemList) to Kotlin\n */\npublic
external abstract class DataTransferItemList {\n   open val length: Int\n   fun add(data: String, type: String): DataTransferItem?\n   fun add(data: File): DataTransferItem?\n   fun remove(index: Int): Unit\n   fun clear(): Unit\n}\n@kotlin.internal.InlineOnly inline operator fun DataTransferItemList.get(index: Int): DataTransferItem? = asDynamic()[index]\n\n/**\n * Exposes the JavaScript [DataTransferItem](https://developer.mozilla.org/en/docs/Web/API/DataTransferItem) to Kotlin\n */\npublic external abstract class DataTransferItem {\n   open val kind: String\n   open val type: String\n   fun getAsString(_callback: ((String) -> Unit)?): Unit\n   fun getAsFile(): File?\n}\n\n/**\n * Exposes the JavaScript [DragEvent](https://developer.mozilla.org/en/docs/Web/API/DragEvent) to Kotlin\n */\npublic external open class DragEvent(type: String, eventInitDict: DragEventInit = definedExternally) : MouseEvent {\n   open val dataTransfer: DataTransfer?\n}\n\npublic external interface
DragEventInit : MouseEventInit {\n   var dataTransfer: DataTransfer? /* = null */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun DragEventInit(dataTransfer: DataTransfer? = null, screenX: Int? = 0, screenY: Int? = 0, clientX: Int? = 0, clientY: Int? = 0, button: Short? = 0, buttons: Short? = 0, relatedTarget: EventTarget? = null, ctrlKey: Boolean? = false, shiftKey: Boolean? = false, altKey: Boolean? = false, metaKey: Boolean? = false, modifierAltGraph: Boolean? = false, modifierCapsLock: Boolean? = false, modifierFn: Boolean? = false, modifierFnLock: Boolean? = false, modifierHyper: Boolean? = false, modifierNumLock: Boolean? = false, modifierScrollLock: Boolean? = false, modifierSuper: Boolean? = false, modifierSymbol: Boolean? = false, modifierSymbolLock: Boolean? = false, view: Window? = null, detail: Int? = 0, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): DragEventInit
{\n   val o = js(\"({})\")\n\n   o[\"dataTransfer\"] = dataTransfer\n   o[\"screenX\"] = screenX\n   o[\"screenY\"] = screenY\n   o[\"clientX\"] = clientX\n   o[\"clientY\"] = clientY\n   o[\"button\"] = button\n   o[\"buttons\"] = buttons\n   o[\"relatedTarget\"] = relatedTarget\n   o[\"ctrlKey\"] = ctrlKey\n   o[\"shiftKey\"] = shiftKey\n   o[\"altKey\"] = altKey\n   o[\"metaKey\"] = metaKey\n   o[\"modifierAltGraph\"] = modifierAltGraph\n   o[\"modifierCapsLock\"] = modifierCapsLock\n   o[\"modifierFn\"] = modifierFn\n   o[\"modifierFnLock\"] = modifierFnLock\n   o[\"modifierHyper\"] = modifierHyper\n   o[\"modifierNumLock\"] = modifierNumLock\n   o[\"modifierScrollLock\"] = modifierScrollLock\n   o[\"modifierSuper\"] = modifierSuper\n   o[\"modifierSymbol\"] = modifierSymbol\n   o[\"modifierSymbolLock\"] = modifierSymbolLock\n   o[\"view\"] = view\n   o[\"detail\"] = detail\n   o[\"bubbles\"] = bubbles\n   o[\"cancelable\"] = cancelable\n   o[\"composed\"] = composed\n\n   return o\n}\n\npublic external abstract class BarProp {\n   open val visible: Boolean\n}\n\n/**\n * Exposes the JavaScript [History](https://developer.mozilla.org/en/docs/Web/API/History) to Kotlin\n */\npublic external abstract class History {\n   open val length: Int\n   open var scrollRestoration: ScrollRestoration\n   open val state: Any?\n   fun go(delta: Int = definedExternally): Unit\n   fun back(): Unit\n   fun forward(): Unit\n   fun pushState(data: Any?, title: String, url: String? = definedExternally): Unit\n   fun replaceState(data: Any?, title: String, url: String? = definedExternally): Unit\n}\n\n/**\n * Exposes the JavaScript [Location](https://developer.mozilla.org/en/docs/Web/API/Location) to Kotlin\n */\npublic external abstract class Location {\n   open var href: String\n   open val origin: String\n   open var protocol: String\n   open var host: String\n   open var hostname: String\n   open var port: String\n   open var pathname:
String\n   open var search: String\n   open var hash: String\n   open val ancestorOrigins: Array<out String>\n   fun assign(url: String): Unit\n   fun replace(url: String): Unit\n   fun reload(): Unit\n}\n\n/**\n * Exposes the JavaScript [PopStateEvent](https://developer.mozilla.org/en/docs/Web/API/PopStateEvent) to Kotlin\n */\npublic external open class PopStateEvent(type: String, eventInitDict: PopStateEventInit = definedExternally) : Event {\n   open val state: Any?\n}\n\npublic external interface PopStateEventInit : EventInit {\n   var state: Any? /* = null */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun PopStateEventInit(state: Any? = null, bubbles: Boolean? = false, cancelable: Boolean? = false, composed:

Boolean? = false): PopStateEventInit {\n   val o = js(\"({})\")\n\n   o[\"state\"] = state\n   o[\"bubbles\"] = bubbles\n   o[\"cancelable\"] = cancelable\n   o[\"composed\"]
 = composed\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [HashChangeEvent](https://developer.mozilla.org/en/docs/Web/API/HashChangeEvent) to Kotlin\n */\npublic external open class HashChangeEvent(type: String, eventInitDict: HashChangeEventInit = definedExternally) : Event {\n   open val oldURL: String\n   open val newURL: String\n}\n\npublic external interface HashChangeEventInit : EventInit {\n   var oldURL: String? /* = \"\" */\n   get() = definedExternally\n   set(value) = definedExternally\n   var newURL: String? /* = \"\" */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun HashChangeEventInit(oldURL: String? = \"\", newURL: String? = \"\", bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): HashChangeEventInit {\n   val o = js(\"({})\")\n\n   o[\"oldURL\"] = oldURL\n   o[\"newURL\"] = newURL\n   o[\"bubbles\"] = bubbles\n   o[\"cancelable\"]
 = cancelable\n   o[\"composed\"] = composed\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [PageTransitionEvent](https://developer.mozilla.org/en/docs/Web/API/PageTransitionEvent) to Kotlin\n */\npublic external open class PageTransitionEvent(type: String, eventInitDict: PageTransitionEventInit = definedExternally) : Event {\n   open val persisted: Boolean\n}\n\npublic external interface PageTransitionEventInit : EventInit {\n   var persisted: Boolean? /* = false */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun PageTransitionEventInit(persisted: Boolean? = false, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): PageTransitionEventInit {\n   val o = js(\"({})\")\n\n   o[\"persisted\"] = persisted\n   o[\"bubbles\"] = bubbles\n   o[\"cancelable\"] = cancelable\n   o[\"composed\"] = composed\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [BeforeUnloadEvent](https://developer.mozilla.org/en/docs/Web/API/BeforeUnloadEvent)
 to Kotlin\n */\npublic external open class BeforeUnloadEvent : Event {\n   var returnValue: String\n}\n\npublic external abstract class ApplicationCache : EventTarget {\n   open val status: Short\n   open var onchecking: ((Event) -> dynamic)?\n   open var onerror: ((Event) -> dynamic)?\n   open var onnoupdate: ((Event) -> dynamic)?\n   open var ondownloading: ((Event) -> dynamic)?\n   open var onprogress: ((ProgressEvent) -> dynamic)?\n   open var onupdateready: ((Event) -> dynamic)?\n   open var oncached: ((Event) -> dynamic)?\n   open var onobsolete: ((Event) -> dynamic)?\n   fun update(): Unit\n   fun abort(): Unit\n   fun swapCache(): Unit\n\n   companion object {\n   val UNCACHED: Short\n   val IDLE: Short\n   val CHECKING: Short\n   val DOWNLOADING: Short\n   val UPDATEREADY: Short\n   val OBSOLETE: Short\n   }\n}\n\n/**\n * Exposes the JavaScript [NavigatorOnLine](https://developer.mozilla.org/en/docs/Web/API/NavigatorOnLine)
 to Kotlin\n */\npublic external interface NavigatorOnLine {\n   val onLine: Boolean\n}\n\n/**\n * Exposes the JavaScript [ErrorEvent](https://developer.mozilla.org/en/docs/Web/API/ErrorEvent) to Kotlin\n */\npublic external open class ErrorEvent(type: String, eventInitDict: ErrorEventInit = definedExternally) : Event {\n   open val message: String\n   open val filename: String\n   open val lineno: Int\n   open val colno: Int\n   open val error: Any?\n}\n\npublic external interface ErrorEventInit : EventInit {\n   var message: String? /* = \"\" */\n   get() = definedExternally\n   set(value) = definedExternally\n   var filename: String? /* = \"\" */\n   get() = definedExternally\n   set(value) = definedExternally\n   var lineno: Int? /* = 0 */\n   get() = definedExternally\n   set(value) = definedExternally\n   var colno: Int? /* = 0 */\n   get() = definedExternally\n   set(value)
 = definedExternally\n   var error: Any? /* = null */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun ErrorEventInit(message: String? = \"\", filename: String? = \"\", lineno: Int? = 0, colno: Int? = 0, error: Any? = null, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): ErrorEventInit {\n   val o = js(\"({})\")\n\n   o[\"message\"] = message\n   o[\"filename\"] = filename\n   o[\"lineno\"] = lineno\n   o[\"colno\"] = colno\n   o[\"error\"] = error\n   o[\"bubbles\"] = bubbles\n   o[\"cancelable\"] = cancelable\n   o[\"composed\"] = composed\n\n   return o\n}\n\n/**\n * Exposes the JavaScript

[PromiseRejectionEvent](https://developer.mozilla.org/en/docs/Web/API/PromiseRejectionEvent) to Kotlin\n */\npublic external open class PromiseRejectionEvent(type: String, eventInitDict: PromiseRejectionEventInit) : Event {\n open val promise: Promise<Any?>\n
open val reason: Any?\n}\n\npublic external interface PromiseRejectionEventInit : EventInit {\n var promise: Promise<Any?>?\n get() = definedExternally\n set(value) = definedExternally\n var reason: Any?\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun PromiseRejectionEventInit(promise: Promise<Any?>?, reason: Any? = undefined, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): PromiseRejectionEventInit {\n val o = js(\"({})\")\n\n o[\"promise\"] = promise\n o[\"reason\"] = reason\n o[\"bubbles\"] = bubbles\n o[\"cancelable\"] = cancelable\n o[\"composed\"] = composed\n\n return o\n}\n\n/**\n * Exposes the JavaScript [GlobalEventHandlers](https://developer.mozilla.org/en/docs/Web/API/GlobalEventHandlers) to Kotlin\n */\npublic external interface GlobalEventHandlers {\n var ongotpointercapture: ((PointerEvent) -> dynamic)?\n var
onlostpointercapture: ((PointerEvent) -> dynamic)?\n var onpointerdown: ((PointerEvent) -> dynamic)?\n var onpointermove: ((PointerEvent) -> dynamic)?\n var onpointerup: ((PointerEvent) -> dynamic)?\n var onpointercancel: ((PointerEvent) -> dynamic)?\n var onpointerover: ((PointerEvent) -> dynamic)?\n var onpointerout: ((PointerEvent) -> dynamic)?\n var onpointerenter: ((PointerEvent) -> dynamic)?\n var onpointerleave: ((PointerEvent) -> dynamic)?\n var onabort: ((Event) -> dynamic)?\n var onblur: ((FocusEvent) -> dynamic)?\n var oncancel: ((Event) -> dynamic)?\n var oncanplay: ((Event) -> dynamic)?\n var oncanplaythrough: ((Event) -> dynamic)?\n var onchange: ((Event) -> dynamic)?\n var onclick: ((MouseEvent) -> dynamic)?\n var onclose: ((Event) -> dynamic)?\n var oncontextmenu: ((MouseEvent) -> dynamic)?\n var oncuechange: ((Event) -> dynamic)?\n var ondblclick: ((MouseEvent) -> dynamic)?\n var ondrag: ((DragEvent) -> dynamic)?\n
var ondragend: ((DragEvent) -> dynamic)?\n var ondragenter: ((DragEvent) -> dynamic)?\n var ondragexit: ((DragEvent) -> dynamic)?\n var ondragleave: ((DragEvent) -> dynamic)?\n var ondragover: ((DragEvent) -> dynamic)?\n var ondragstart: ((DragEvent) -> dynamic)?\n var ondrop: ((DragEvent) -> dynamic)?\n var ondurationchange: ((Event) -> dynamic)?\n var onemptied: ((Event) -> dynamic)?\n var onended: ((Event) -> dynamic)?\n var onerror: ((dynamic, String, Int, Int, Any?) -> dynamic)?\n var onfocus: ((FocusEvent) -> dynamic)?\n var oninput: ((InputEvent) -> dynamic)?\n var oninvalid: ((Event) -> dynamic)?\n var onkeydown: ((KeyboardEvent) -> dynamic)?\n var onkeypress: ((KeyboardEvent) -> dynamic)?\n var onkeyup: ((KeyboardEvent) -> dynamic)?\n var onload: ((Event) -> dynamic)?\n var onloadeddata: ((Event) -> dynamic)?\n var onloadedmetadata: ((Event) -> dynamic)?\n var onloadend: ((Event) -> dynamic)?\n var onloadstart:
((ProgressEvent) -> dynamic)?\n var onmousedown: ((MouseEvent) -> dynamic)?\n var onmouseenter: ((MouseEvent) -> dynamic)?\n var onmouseleave: ((MouseEvent) -> dynamic)?\n var onmousemove: ((MouseEvent) -> dynamic)?\n var onmouseout: ((MouseEvent) -> dynamic)?\n var onmouseover: ((MouseEvent) -> dynamic)?\n var onmouseup: ((MouseEvent) -> dynamic)?\n var onwheel: ((WheelEvent) -> dynamic)?\n var onpause: ((Event) -> dynamic)?\n var onplay: ((Event) -> dynamic)?\n var onplaying: ((Event) -> dynamic)?\n var onprogress: ((ProgressEvent) -> dynamic)?\n var onratechange: ((Event) -> dynamic)?\n var onreset: ((Event) -> dynamic)?\n var onresize: ((Event) -> dynamic)?\n var onscroll: ((Event) -> dynamic)?\n var onseeked: ((Event) -> dynamic)?\n var onseeking: ((Event) -> dynamic)?\n var onselect: ((Event) -> dynamic)?\n var onshow: ((Event) -> dynamic)?\n var onstalled: ((Event) -> dynamic)?\n var onsubmit: ((Event) ->
dynamic)?\n var onsuspend: ((Event) -> dynamic)?\n var ontimeupdate: ((Event) -> dynamic)?\n var ontoggle: ((Event) -> dynamic)?\n var onvolumechange: ((Event) -> dynamic)?\n var onwaiting: ((Event) -> dynamic)?\n}\n\n/**\n * Exposes the JavaScript [WindowEventHandlers](https://developer.mozilla.org/en/docs/Web/API/WindowEventHandlers) to Kotlin\n */\npublic external interface WindowEventHandlers {\n var onafterprint: ((Event) -> dynamic)?\n var

onbeforeprint: ((Event) -> dynamic)?\n   var onbeforeunload: ((BeforeUnloadEvent) -> String?)?\n   var onhashchange: ((HashChangeEvent) -> dynamic)?\n   var onlanguagechange: ((Event) -> dynamic)?\n   var onmessage: ((MessageEvent) -> dynamic)?\n   var onoffline: ((Event) -> dynamic)?\n   var ononline: ((Event) -> dynamic)?\n   var onpagehide: ((PageTransitionEvent) -> dynamic)?\n   var onpageshow: ((PageTransitionEvent) -> dynamic)?\n   var onpopstate: ((PopStateEvent) -> dynamic)?\n   var onrejectionhandled: ((Event) -> dynamic)?\n   var onstorage: ((StorageEvent) -> dynamic)?\n   var onunhandledrejection: ((PromiseRejectionEvent) -> dynamic)?\n   var onunload: ((Event) -> dynamic)?\n}\n\npublic external interface DocumentAndElementEventHandlers {\n   var oncopy: ((ClipboardEvent) -> dynamic)?\n   var oncut: ((ClipboardEvent) -> dynamic)?\n   var onpaste: ((ClipboardEvent) -> dynamic)?\n}\n\n/**\n * Exposes the JavaScript [WindowOrWorkerGlobalScope](https://developer.mozilla.org/en/docs/Web/API/WindowOrWorkerGlobalScope) to Kotlin\n */\npublic external interface WindowOrWorkerGlobalScope {\n   val caches: CacheStorage\n   val origin: String\n   fun fetch(input: dynamic, init: RequestInit = definedExternally): Promise<Response>\n   fun btoa(data: String): String\n   fun atob(data: String): String\n   fun setTimeout(handler: dynamic, timeout: Int = definedExternally, vararg arguments: Any?): Int\n   fun clearTimeout(handle: Int = definedExternally): Unit\n   fun setInterval(handler: dynamic, timeout: Int = definedExternally, vararg arguments: Any?): Int\n   fun clearInterval(handle: Int = definedExternally): Unit\n   fun createImageBitmap(image: dynamic, options: ImageBitmapOptions = definedExternally): Promise<ImageBitmap>\n   fun createImageBitmap(image: dynamic, sx: Int, sy: Int, sw: Int, sh: Int, options: ImageBitmapOptions = definedExternally): Promise<ImageBitmap>\n}\n\n/**\n * Exposes the JavaScript [NavigatorID](https://developer.mozilla.org/en/docs/Web/API/NavigatorID) to Kotlin\n */\npublic external interface NavigatorID {\n   val appCodeName: String\n   val appName: String\n   val appVersion: String\n   val platform: String\n   val product: String\n   val productSub: String\n   val userAgent: String\n   val vendor: String\n   val vendorSub: String\n   val oscpu: String\n   fun taintEnabled(): Boolean\n}\n\n/**\n * Exposes the JavaScript [NavigatorLanguage](https://developer.mozilla.org/en/docs/Web/API/NavigatorLanguage) to Kotlin\n */\npublic external interface NavigatorLanguage {\n   val language: String\n   val languages: Array<out String>\n}\n\npublic external interface NavigatorContentUtils {\n   fun registerProtocolHandler(scheme: String, url: String, title: String): Unit\n   fun registerContentHandler(mimeType: String, url: String, title: String): Unit\n   fun isProtocolHandlerRegistered(scheme: String, url: String): String\n   fun isContentHandlerRegistered(mimeType: String, url: String): String\n   fun unregisterProtocolHandler(scheme: String, url: String): Unit\n   fun unregisterContentHandler(mimeType: String, url: String): Unit\n}\n\npublic external interface NavigatorCookies {\n   val cookieEnabled: Boolean\n}\n\n/**\n * Exposes the JavaScript [NavigatorPlugins](https://developer.mozilla.org/en/docs/Web/API/NavigatorPlugins) to Kotlin\n */\npublic external interface NavigatorPlugins {\n   val plugins: PluginArray\n   val mimeTypes: MimeTypeArray\n   fun javaEnabled(): Boolean\n}\n\n/**\n * Exposes the JavaScript [PluginArray](https://developer.mozilla.org/en/docs/Web/API/PluginArray) to Kotlin\n */\npublic external abstract class PluginArray : ItemArrayLike<Plugin> {\n   override val length: Int\n   fun refresh(reload: Boolean = definedExternally): Unit\n   override fun item(index: Int): Plugin?\n   fun namedItem(name: String): Plugin?\n}\n@kotlin.internal.InlineOnly inline operator fun PluginArray.get(index: Int): Plugin? = asDynamic()[index]\n@kotlin.internal.InlineOnly inline operator fun PluginArray.get(name: String): Plugin? = asDynamic()[name]\n\n/**\n * Exposes the JavaScript [MimeTypeArray](https://developer.mozilla.org/en/docs/Web/API/MimeTypeArray) to Kotlin\n */\npublic external abstract class MimeTypeArray : ItemArrayLike<MimeType> {\n   override val length: Int\n   override fun item(index: Int): MimeType?\n   fun namedItem(name: String): MimeType?\n}\n@kotlin.internal.InlineOnly inline operator fun MimeTypeArray.get(index: Int): MimeType? = asDynamic()[index]\n@kotlin.internal.InlineOnly inline operator fun MimeTypeArray.get(name: String): MimeType? = asDynamic()[name]\n\n/**\n * Exposes the JavaScript [Plugin](https://developer.mozilla.org/en/docs/Web/API/Plugin) to Kotlin\n */\npublic external abstract

class Plugin : ItemArrayLike<MimeType> {\n   open val name: String\n   open val description: String\n   open val filename: String\n   override val length: Int\n   override fun item(index: Int): MimeType?\n   fun namedItem(name: String): MimeType?\n}\n@kotlin.internal.InlineOnly inline operator fun Plugin.get(index: Int): MimeType? = asDynamic()[index]\n@kotlin.internal.InlineOnly inline operator fun Plugin.get(name: String): MimeType? = asDynamic()[name]\n\n/**\n * Exposes the JavaScript [MimeType](https://developer.mozilla.org/en/docs/Web/API/MimeType) to Kotlin\n */\npublic external abstract class MimeType {\n   open val type: String\n   open val description: String\n   open val suffixes: String\n   open val enabledPlugin: Plugin\n}\n\n/**\n * Exposes the JavaScript [ImageBitmap](https://developer.mozilla.org/en/docs/Web/API/ImageBitmap) to Kotlin\n */\npublic external abstract class ImageBitmap : TexImageSource {\n   open val width: Int\n   open val height: Int\n   fun close(): Unit\n}\n\npublic external interface ImageBitmapOptions {\n   var imageOrientation: ImageOrientation? /* = ImageOrientation.NONE */\n   get() = definedExternally\n   set(value) = definedExternally\n   var premultiplyAlpha: PremultiplyAlpha? /* = PremultiplyAlpha.DEFAULT */\n   get() = definedExternally\n   set(value) = definedExternally\n   var colorSpaceConversion: ColorSpaceConversion? /* = ColorSpaceConversion.DEFAULT */\n   get() = definedExternally\n   set(value) = definedExternally\n   var resizeWidth: Int?\n   get() = definedExternally\n   set(value) = definedExternally\n   var resizeHeight: Int?\n   get() = definedExternally\n   set(value) = definedExternally\n   var resizeQuality: ResizeQuality? /* = ResizeQuality.LOW */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun ImageBitmapOptions(imageOrientation: ImageOrientation? = ImageOrientation.NONE, premultiplyAlpha: PremultiplyAlpha? = PremultiplyAlpha.DEFAULT, colorSpaceConversion: ColorSpaceConversion? = ColorSpaceConversion.DEFAULT, resizeWidth: Int? = undefined, resizeHeight: Int? = undefined, resizeQuality: ResizeQuality? = ResizeQuality.LOW): ImageBitmapOptions {\n   val o = js(\"({})\")\n\n   o[\"imageOrientation\"] = imageOrientation\n   o[\"premultiplyAlpha\"] = premultiplyAlpha\n   o[\"colorSpaceConversion\"] = colorSpaceConversion\n   o[\"resizeWidth\"] = resizeWidth\n   o[\"resizeHeight\"] = resizeHeight\n   o[\"resizeQuality\"] = resizeQuality\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [MessageEvent](https://developer.mozilla.org/en/docs/Web/API/MessageEvent) to Kotlin\n */\npublic external open class MessageEvent(type: String, eventInitDict: MessageEventInit = definedExternally) : Event {\n   open val data: Any?\n   open val origin: String\n   open val lastEventId: String\n   open val source: UnionMessagePortOrWindow?\n   open val ports: Array<out MessagePort>\n   fun initMessageEvent(type: String, bubbles: Boolean, cancelable: Boolean, data: Any?, origin: String, lastEventId: String, source: UnionMessagePortOrWindow?, ports: Array<MessagePort>): Unit\n}\n\npublic external interface MessageEventInit : EventInit {\n   var data: Any? /* = null */\n   get() = definedExternally\n   set(value) = definedExternally\n   var origin: String? /* = \"\" */\n   get() = definedExternally\n   set(value) = definedExternally\n   var lastEventId: String? /* = \"\" */\n   get() = definedExternally\n   set(value) = definedExternally\n   var source: UnionMessagePortOrWindow? /* = null */\n   get() = definedExternally\n   set(value) = definedExternally\n   var ports: Array<MessagePort>? /* = arrayOf() */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun MessageEventInit(data: Any? = null, origin: String? = \"\", lastEventId: String? = \"\", source: UnionMessagePortOrWindow? = null, ports: Array<MessagePort>? = arrayOf(), bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): MessageEventInit {\n   val o = js(\"({})\")\n\n   o[\"data\"] = data\n   o[\"origin\"] = origin\n   o[\"lastEventId\"] = lastEventId\n   o[\"source\"] = source\n   o[\"ports\"] = ports\n   o[\"bubbles\"] = bubbles\n   o[\"cancelable\"] = cancelable\n   o[\"composed\"] = composed\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [EventSource](https://developer.mozilla.org/en/docs/Web/API/EventSource) to Kotlin\n */\npublic external open class EventSource(url: String, eventSourceInitDict: EventSourceInit = definedExternally) : EventTarget

{\n open val url: String\n open val withCredentials: Boolean\n open val readyState: Short\n var onopen: ((Event) -> dynamic)?\n var onmessage: ((MessageEvent) -> dynamic)?\n var onerror: ((Event) -> dynamic)?\n fun close(): Unit\n\n companion object {\n val CONNECTING: Short\n val OPEN: Short\n val CLOSED: Short\n }\n}\n\npublic external interface EventSourceInit {\n var withCredentials: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun EventSourceInit(withCredentials: Boolean? = false): EventSourceInit {\n val o = js(\"({})\")\n\n o[\"withCredentials\"] = withCredentials\n\n return o\n}\n\n/**\n * Exposes the JavaScript [WebSocket](https://developer.mozilla.org/en/docs/Web/API/WebSocket) to Kotlin\n */\npublic external open class WebSocket(url: String, protocols: dynamic = definedExternally) : EventTarget {\n open val url: String\n open val readyState: Short\n open val bufferedAmount: Int\n var onopen: ((Event) -> dynamic)?\n var onerror: ((Event) -> dynamic)?\n var onclose: ((Event) -> dynamic)?\n open val extensions: String\n open val protocol: String\n var onmessage: ((MessageEvent) -> dynamic)?\n var binaryType: BinaryType\n fun close(code: Short = definedExternally, reason: String = definedExternally): Unit\n fun send(data: String): Unit\n fun send(data: Blob): Unit\n fun send(data: ArrayBuffer): Unit\n fun send(data: ArrayBufferView): Unit\n\n companion object {\n val CONNECTING: Short\n val OPEN: Short\n val CLOSING: Short\n val CLOSED: Short\n }\n}\n\n/**\n * Exposes the JavaScript [CloseEvent](https://developer.mozilla.org/en/docs/Web/API/CloseEvent) to Kotlin\n */\npublic external open class CloseEvent(type: String, eventInitDict: CloseEventInit = definedExternally) : Event {\n open val wasClean: Boolean\n open val code: Short\n open val reason: String\n}\n\npublic external interface CloseEventInit : EventInit {\n var wasClean: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n var code: Short? /* = 0 */\n get() = definedExternally\n set(value) = definedExternally\n var reason: String? /* = \"\" */\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun CloseEventInit(wasClean: Boolean? = false, code: Short? = 0, reason: String? = \"\", bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): CloseEventInit {\n val o = js(\"({})\")\n\n o[\"wasClean\"] = wasClean\n o[\"code\"] = code\n o[\"reason\"] = reason\n o[\"bubbles\"] = bubbles\n o[\"cancelable\"] = cancelable\n o[\"composed\"] = composed\n\n return o\n}\n\n/**\n * Exposes the JavaScript [MessageChannel](https://developer.mozilla.org/en/docs/Web/API/MessageChannel) to Kotlin\n */\npublic external open class MessageChannel {\n open val port1: MessagePort\n open val port2: MessagePort\n}\n\n/**\n * Exposes the JavaScript [MessagePort](https://developer.mozilla.org/en/docs/Web/API/MessagePort) to Kotlin\n */\npublic external abstract class MessagePort : EventTarget, UnionMessagePortOrWindow, UnionMessagePortOrServiceWorker, UnionClientOrMessagePortOrServiceWorker {\n open var onmessage: ((MessageEvent) -> dynamic)?\n fun postMessage(message: Any?, transfer: Array<dynamic> = definedExternally): Unit\n fun start(): Unit\n fun close(): Unit\n}\n\n/**\n * Exposes the JavaScript [BroadcastChannel](https://developer.mozilla.org/en/docs/Web/API/BroadcastChannel) to Kotlin\n */\npublic external open class BroadcastChannel(name: String) : EventTarget {\n open val name: String\n var onmessage: ((MessageEvent) -> dynamic)?\n fun postMessage(message: Any?): Unit\n fun close(): Unit\n}\n\n/**\n * Exposes the JavaScript [WorkerGlobalScope](https://developer.mozilla.org/en/docs/Web/API/WorkerGlobalScope) to Kotlin\n */\npublic external abstract class WorkerGlobalScope : EventTarget, WindowOrWorkerGlobalScope, GlobalPerformance {\n open val self: WorkerGlobalScope\n open val location: WorkerLocation\n open val navigator: WorkerNavigator\n open var onerror: ((dynamic, String, Int, Int, Any?) -> dynamic)?\n open var onlanguagechange: ((Event) -> dynamic)?\n open var onoffline: ((Event) -> dynamic)?\n open var ononline: ((Event) -> dynamic)?\n open var onrejectionhandled: ((Event) -> dynamic)?\n open var onunhandledrejection: ((PromiseRejectionEvent) -> dynamic)?\n fun importScripts(vararg urls: String): Unit\n}\n\n/**\n * Exposes the JavaScript

[DedicatedWorkerGlobalScope](https://developer.mozilla.org/en/docs/Web/API/DedicatedWorkerGlobalScope) to Kotlin\n */\npublic external abstract class DedicatedWorkerGlobalScope : WorkerGlobalScope {\n open var onmessage:
((MessageEvent) -> dynamic)?\n fun postMessage(message: Any?, transfer: Array<dynamic> = definedExternally): Unit\n fun close(): Unit\n}\n\n/**\n * Exposes the JavaScript [SharedWorkerGlobalScope](https://developer.mozilla.org/en/docs/Web/API/SharedWorkerGlobalScope) to Kotlin\n */\npublic external abstract class SharedWorkerGlobalScope : WorkerGlobalScope {\n open val name: String\n open val applicationCache: ApplicationCache\n open var onconnect: ((Event) -> dynamic)?\n fun close(): Unit\n}\n\n/**\n * Exposes the JavaScript [AbstractWorker](https://developer.mozilla.org/en/docs/Web/API/AbstractWorker) to Kotlin\n */\npublic external interface AbstractWorker {\n var onerror: ((Event) -> dynamic)?\n}\n\n/**\n * Exposes the JavaScript [Worker](https://developer.mozilla.org/en/docs/Web/API/Worker) to Kotlin\n */\npublic external open class Worker(scriptURL: String, options: WorkerOptions = definedExternally) : EventTarget, AbstractWorker {\n var onmessage:
((MessageEvent) -> dynamic)?\n override var onerror: ((Event) -> dynamic)?\n fun terminate(): Unit\n fun postMessage(message: Any?, transfer: Array<dynamic> = definedExternally): Unit\n}\n\npublic external interface WorkerOptions {\n var type: WorkerType? /* = WorkerType.CLASSIC */\n get() = definedExternally\n set(value) = definedExternally\n var credentials: RequestCredentials? /* = RequestCredentials.OMIT */\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun WorkerOptions(type: WorkerType? = WorkerType.CLASSIC, credentials: RequestCredentials? = RequestCredentials.OMIT): WorkerOptions {\n val o = js(\"({})\")\n\n o[\"type\"] = type\n o[\"credentials\"] = credentials\n\n return o\n}\n\n/**\n * Exposes the JavaScript [SharedWorker](https://developer.mozilla.org/en/docs/Web/API/SharedWorker) to Kotlin\n */\npublic external open class SharedWorker(scriptURL: String, name:
String = definedExternally, options: WorkerOptions = definedExternally) : EventTarget, AbstractWorker {\n open val port: MessagePort\n override var onerror: ((Event) -> dynamic)?\n}\n\n/**\n * Exposes the JavaScript [NavigatorConcurrentHardware](https://developer.mozilla.org/en/docs/Web/API/NavigatorConcurrentHardware) to Kotlin\n */\npublic external interface NavigatorConcurrentHardware {\n val hardwareConcurrency: Int\n}\n\n/**\n * Exposes the JavaScript [WorkerNavigator](https://developer.mozilla.org/en/docs/Web/API/WorkerNavigator) to Kotlin\n */\npublic external abstract class WorkerNavigator : NavigatorID, NavigatorLanguage, NavigatorOnLine, NavigatorConcurrentHardware {\n open val serviceWorker: ServiceWorkerContainer\n}\n\n/**\n * Exposes the JavaScript [WorkerLocation](https://developer.mozilla.org/en/docs/Web/API/WorkerLocation) to Kotlin\n */\npublic external abstract class WorkerLocation {\n open var href: String\n open val origin: String\n open val protocol: String\n open val host: String\n open val hostname: String\n open val port: String\n open val pathname: String\n open val search: String\n open val hash: String\n}\n\n/**\n * Exposes the JavaScript [Storage](https://developer.mozilla.org/en/docs/Web/API/Storage) to Kotlin\n */\npublic external abstract class Storage {\n open val length: Int\n fun key(index: Int): String?\n fun getItem(key: String): String?\n fun setItem(key: String, value: String): Unit\n fun removeItem(key: String): Unit\n fun clear(): Unit\n}\n@kotlin.internal.InlineOnly inline operator fun Storage.get(key: String): String? = asDynamic()[key]\n@kotlin.internal.InlineOnly inline operator fun Storage.set(key: String, value: String): Unit { asDynamic()[key] = value; }\n\n/**\n * Exposes the JavaScript [WindowSessionStorage](https://developer.mozilla.org/en/docs/Web/API/WindowSessionStorage) to Kotlin\n */\npublic external interface WindowSessionStorage {\n val sessionStorage:
Storage\n}\n\n/**\n * Exposes the JavaScript [WindowLocalStorage](https://developer.mozilla.org/en/docs/Web/API/WindowLocalStorage) to Kotlin\n */\npublic external interface WindowLocalStorage {\n val localStorage: Storage\n}\n\n/**\n * Exposes the JavaScript [StorageEvent](https://developer.mozilla.org/en/docs/Web/API/StorageEvent) to Kotlin\n */\npublic

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external open class StorageEvent(type: String, eventInitDict: StorageEventInit = definedExternally) : Event {\n
open val key: String?\n    open val oldValue: String?\n    open val newValue: String?\n    open val url: String\n
open val storageArea: Storage?\n}\n\npublic external interface StorageEventInit : EventInit {\n    var key: String? /*
= null */\n        get() = definedExternally\n        set(value) = definedExternally\n    var oldValue: String? /* = null
*/\n        get() = definedExternally\n        set(value) = definedExternally\n    var newValue: String? /* = null */\n
get() = definedExternally\n
  set(value) = definedExternally\n    var url: String? /* = \"\" */\n        get() = definedExternally\n        set(value) =
definedExternally\n    var storageArea: Storage? /* = null */\n        get() = definedExternally\n        set(value) =
definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun StorageEventInit(key: String? = null,
oldValue: String? = null, newValue: String? = null, url: String? = \"\", storageArea: Storage? = null, bubbles:
Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): StorageEventInit {\n    val o =
js(\"({})\")\n\n    o[\"key\"] = key\n    o[\"oldValue\"] = oldValue\n    o[\"newValue\"] = newValue\n    o[\"url\"] =
url\n    o[\"storageArea\"] = storageArea\n    o[\"bubbles\"] = bubbles\n    o[\"cancelable\"] = cancelable\n
o[\"composed\"] = composed\n\n    return o\n}\n\npublic external abstract class HTMLAppletElement :
HTMLElement {\n    open var align: String\n    open var alt: String\n    open var archive: String\n
   open var code: String\n    open var codeBase: String\n    open var height: String\n    open var hspace: Int\n    open
var name: String\n    open var _object: String\n    open var vspace: Int\n    open var width: String\n}\n\n/**\n *
Exposes the JavaScript
[HTMLMarqueeElement](https://developer.mozilla.org/en/docs/Web/API/HTMLMarqueeElement) to Kotlin\n
*/\npublic external abstract class HTMLMarqueeElement : HTMLElement {\n    open var behavior: String\n    open
var bgColor: String\n    open var direction: String\n    open var height: String\n    open var hspace: Int\n    open var
loop: Int\n    open var scrollAmount: Int\n    open var scrollDelay: Int\n    open var trueSpeed: Boolean\n    open var
vspace: Int\n    open var width: String\n    open var onbounce: ((Event) -> dynamic)?\n    open var onfinish: ((Event)
-> dynamic)?\n    open var onstart: ((Event) -> dynamic)?\n    fun start(): Unit\n    fun stop(): Unit\n}\n\n/**\n *
Exposes the JavaScript
[HTMLFrameSetElement](https://developer.mozilla.org/en/docs/Web/API/HTMLFrameSetElement)
 to Kotlin\n */\npublic external abstract class HTMLFrameSetElement : HTMLElement, WindowEventHandlers {\n
 open var cols: String\n    open var rows: String\n}\n\npublic external abstract class HTMLFrameElement :
HTMLElement {\n    open var name: String\n    open var scrolling: String\n    open var src: String\n    open var
frameBorder: String\n    open var longDesc: String\n    open var noResize: Boolean\n    open val contentDocument:
Document?\n    open val contentWindow: Window?\n    open var marginHeight: String\n    open var marginWidth:
String\n}\n\npublic external abstract class HTMLDirectoryElement : HTMLElement {\n    open var compact:
Boolean\n}\n\n/**\n * Exposes the JavaScript
[HTMLFontElement](https://developer.mozilla.org/en/docs/Web/API/HTMLFontElement) to Kotlin\n */\npublic
external abstract class HTMLFontElement : HTMLElement {\n    open var color: String\n    open var face: String\n
open var size: String\n}\n\npublic
 external interface External {\n    fun AddSearchProvider(): Unit\n    fun IsSearchProviderInstalled():
Unit\n}\n\npublic external interface EventInit {\n    var bubbles: Boolean? /* = false */\n        get() =
definedExternally\n        set(value) = definedExternally\n    var cancelable: Boolean? /* = false */\n        get() =
definedExternally\n        set(value) = definedExternally\n    var composed: Boolean? /* = false */\n        get() =
definedExternally\n        set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun
EventInit(bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): EventInit {\n    val
o = js(\"({})\")\n\n    o[\"bubbles\"] = bubbles\n    o[\"cancelable\"] = cancelable\n    o[\"composed\"] =
composed\n\n    return o\n}\n\n/**\n * Exposes the JavaScript
[CustomEvent](https://developer.mozilla.org/en/docs/Web/API/CustomEvent) to Kotlin\n */\npublic external open
class CustomEvent(type: String,
 eventInitDict: CustomEventInit = definedExternally) : Event {\n    open val detail: Any?\n    fun
initCustomEvent(type: String, bubbles: Boolean, cancelable: Boolean, detail: Any?): Unit\n}\n\npublic external
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interface CustomEventInit : EventInit {\n   var detail: Any? /* = null */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun CustomEventInit(detail: Any? = null, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): CustomEventInit {\n   val o = js(\"({})\")\n\n   o[\"detail\"] = detail\n   o[\"bubbles\"] = bubbles\n   o[\"cancelable\"] = cancelable\n   o[\"composed\"] = composed\n\n   return o\n}\n\npublic external interface EventListenerOptions {\n   var capture: Boolean? /* = false */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun EventListenerOptions(capture: Boolean? = false):
EventListenerOptions {\n   val o = js(\"({})\")\n\n   o[\"capture\"] = capture\n\n   return o\n}\n\npublic external interface AddEventListenerOptions : EventListenerOptions {\n   var passive: Boolean? /* = false */\n   get() = definedExternally\n   set(value) = definedExternally\n   var once: Boolean? /* = false */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun AddEventListenerOptions(passive: Boolean? = false, once: Boolean? = false, capture: Boolean? = false): AddEventListenerOptions {\n   val o = js(\"({})\")\n\n   o[\"passive\"] = passive\n   o[\"once\"] = once\n   o[\"capture\"] = capture\n\n   return o\n}\n\npublic external interface NonElementParentNode {\n   fun getElementById(elementId: String): Element?\n}\n\n/**\n * Exposes the JavaScript [DocumentOrShadowRoot](https://developer.mozilla.org/en/docs/Web/API/DocumentOrShadowRoot) to Kotlin\n */\npublic external interface DocumentOrShadowRoot
{\n   val fullscreenElement: Element?\n}\n\n/**\n * Exposes the JavaScript [ParentNode](https://developer.mozilla.org/en/docs/Web/API/ParentNode) to Kotlin\n */\npublic external interface ParentNode {\n   val children: HTMLCollection\n   val firstElementChild: Element?\n   val lastElementChild: Element?\n   val childElementCount: Int\n   fun prepend(vararg nodes: dynamic): Unit\n   fun append(vararg nodes: dynamic): Unit\n   fun querySelector(selectors: String): Element?\n   fun querySelectorAll(selectors: String): NodeList\n}\n\n/**\n * Exposes the JavaScript [NonDocumentTypeChildNode](https://developer.mozilla.org/en/docs/Web/API/NonDocumentTypeChildNode) to Kotlin\n */\npublic external interface NonDocumentTypeChildNode {\n   val previousElementSibling: Element?\n   val nextElementSibling: Element?\n}\n\n/**\n * Exposes the JavaScript [ChildNode](https://developer.mozilla.org/en/docs/Web/API/ChildNode) to Kotlin\n */\npublic external interface ChildNode {\n
    fun before(vararg nodes: dynamic): Unit\n   fun after(vararg nodes: dynamic): Unit\n   fun replaceWith(vararg nodes: dynamic): Unit\n   fun remove(): Unit\n}\n\n/**\n * Exposes the JavaScript [Slotable](https://developer.mozilla.org/en/docs/Web/API/Slotable) to Kotlin\n */\npublic external interface Slotable {\n   val assignedSlot: HTMLSlotElement?\n}\n\n/**\n * Exposes the JavaScript [NodeList](https://developer.mozilla.org/en/docs/Web/API/NodeList) to Kotlin\n */\npublic external abstract class NodeList : ItemArrayLike<Node> {\n   override val length: Int\n   override fun item(index: Int): Node?\n}\n@kotlin.internal.InlineOnly inline operator fun NodeList.get(index: Int): Node? = asDynamic()[index]\n\n/**\n * Exposes the JavaScript [HTMLCollection](https://developer.mozilla.org/en/docs/Web/API/HTMLCollection) to Kotlin\n */\npublic external abstract class HTMLCollection : UnionElementOrHTMLCollection, ItemArrayLike<Element> {\n   override val length: Int\n   override fun
item(index: Int): Element?\n   fun namedItem(name: String): Element?\n}\n@kotlin.internal.InlineOnly inline operator fun HTMLCollection.get(index: Int): Element? = asDynamic()[index]\n@kotlin.internal.InlineOnly inline operator fun HTMLCollection.get(name: String): Element? = asDynamic()[name]\n\n/**\n * Exposes the JavaScript [MutationObserver](https://developer.mozilla.org/en/docs/Web/API/MutationObserver) to Kotlin\n */\npublic external open class MutationObserver(callback: (Array<MutationRecord>, MutationObserver) -> Unit) {\n   fun observe(target: Node, options: MutationObserverInit = definedExternally): Unit\n   fun disconnect(): Unit\n   fun takeRecords(): Array<MutationRecord>\n}\n\n/**\n * Exposes the JavaScript [MutationObserverInit](https://developer.mozilla.org/en/docs/Web/API/MutationObserverInit) to Kotlin\n

/\npublic external interface MutationObserverInit {\n   var childList: Boolean? / = false */\n   get() = definedExternally\n   set(value) = definedExternally\n
    var attributes: Boolean?\n   get() = definedExternally\n   set(value) = definedExternally\n   var characterData: Boolean?\n   get() = definedExternally\n   set(value) = definedExternally\n   var subtree: Boolean? /* = false */\n   get() = definedExternally\n   set(value) = definedExternally\n   var attributeOldValue: Boolean?\n   get() = definedExternally\n   set(value) = definedExternally\n   var characterDataOldValue: Boolean?\n   get() = definedExternally\n   set(value) = definedExternally\n   var attributeFilter: Array<String>?\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun MutationObserverInit(childList: Boolean? = false, attributes: Boolean? = undefined, characterData: Boolean? = undefined, subtree: Boolean? = false, attributeOldValue: Boolean? = undefined, characterDataOldValue: Boolean? = undefined, attributeFilter: Array<String>?
 = undefined): MutationObserverInit {\n   val o = js(\"({})\")\n\n   o[\"childList\"] = childList\n   o[\"attributes\"] = attributes\n   o[\"characterData\"] = characterData\n   o[\"subtree\"] = subtree\n   o[\"attributeOldValue\"] = attributeOldValue\n   o[\"characterDataOldValue\"] = characterDataOldValue\n   o[\"attributeFilter\"] = attributeFilter\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [MutationRecord](https://developer.mozilla.org/en/docs/Web/API/MutationRecord) to Kotlin\n */\npublic external abstract class MutationRecord {\n   open val type: String\n   open val target: Node\n   open val addedNodes: NodeList\n   open val removedNodes: NodeList\n   open val previousSibling: Node?\n   open val nextSibling: Node?\n   open val attributeName: String?\n   open val attributeNamespace: String?\n   open val oldValue: String?\n}\n\n/**\n * Exposes the JavaScript [Node](https://developer.mozilla.org/en/docs/Web/API/Node) to Kotlin\n */\npublic external abstract
 class Node : EventTarget {\n   open val nodeType: Short\n   open val nodeName: String\n   open val baseURI: String\n   open val isConnected: Boolean\n   open val ownerDocument: Document?\n   open val parentNode: Node?\n   open val parentElement: Element?\n   open val childNodes: NodeList\n   open val firstChild: Node?\n   open val lastChild: Node?\n   open val previousSibling: Node?\n   open val nextSibling: Node?\n   open var nodeValue: String?\n   open var textContent: String?\n   fun getRootNode(options: GetRootNodeOptions = definedExternally): Node\n   fun hasChildNodes(): Boolean\n   fun normalize(): Unit\n   fun cloneNode(deep: Boolean = definedExternally): Node\n   fun isEqualNode(otherNode: Node?): Boolean\n   fun isSameNode(otherNode: Node?): Boolean\n   fun compareDocumentPosition(other: Node): Short\n   fun contains(other: Node?): Boolean\n   fun lookupPrefix(namespace: String?): String?\n   fun lookupNamespaceURI(prefix: String?): String?\n   fun
 isDefaultNamespace(namespace: String?): Boolean\n   fun insertBefore(node: Node, child: Node?): Node\n   fun appendChild(node: Node): Node\n   fun replaceChild(node: Node, child: Node): Node\n   fun removeChild(child: Node): Node\n\n   companion object {\n   val ELEMENT_NODE: Short\n   val ATTRIBUTE_NODE: Short\n   val TEXT_NODE: Short\n   val CDATA_SECTION_NODE: Short\n   val ENTITY_REFERENCE_NODE: Short\n   val ENTITY_NODE: Short\n   val PROCESSING_INSTRUCTION_NODE: Short\n   val COMMENT_NODE: Short\n   val DOCUMENT_NODE: Short\n   val DOCUMENT_TYPE_NODE: Short\n   val DOCUMENT_FRAGMENT_NODE: Short\n   val NOTATION_NODE: Short\n   val DOCUMENT_POSITION_DISCONNECTED: Short\n   val DOCUMENT_POSITION_PRECEDING: Short\n   val DOCUMENT_POSITION_FOLLOWING: Short\n   val DOCUMENT_POSITION_CONTAINS: Short\n   val DOCUMENT_POSITION_CONTAINED_BY: Short\n   val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC:
 Short\n   }\n}\n\npublic external interface GetRootNodeOptions {\n   var composed: Boolean? /* = false */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun GetRootNodeOptions(composed: Boolean? = false): GetRootNodeOptions {\n   val o = js(\"({})\")\n\n   o[\"composed\"] = composed\n\n   return o\n}\n\n/**\n * Exposes the JavaScript

[XMLDocument](https://developer.mozilla.org/en/docs/Web/API/XMLDocument) to Kotlin\n */\npublic external open class XMLDocument : Document {\n override fun getElementById(elementId: String): Element?\n override fun prepend(vararg nodes: dynamic): Unit\n override fun append(vararg nodes: dynamic): Unit\n override fun querySelector(selectors: String): Element?\n override fun querySelectorAll(selectors: String): NodeList\n override fun getBoxQuads(options: BoxQuadOptions /* = definedExternally */): Array<DOMQuad>\n override fun convertQuadFromNode(quad:
dynamic, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMQuad\n override fun convertRectFromNode(rect: DOMRectReadOnly, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMQuad\n override fun convertPointFromNode(point: DOMPointInit, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMPoint\n}\n\npublic external interface ElementCreationOptions {\n @JsName(\"is\") var is_: String?\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun ElementCreationOptions(is_: String? = undefined): ElementCreationOptions {\n val o = js(\"({})\")\n\n o[\"is\"] = is_\n\n return o\n}\n\n/**\n * Exposes the JavaScript
[DOMImplementation](https://developer.mozilla.org/en/docs/Web/API/DOMImplementation) to Kotlin\n */\npublic external abstract class DOMImplementation {\n fun createDocumentType(qualifiedName: String, publicId: String,
systemId: String): DocumentType\n fun createDocument(namespace: String?, qualifiedName: String, doctype: DocumentType? = definedExternally): XMLDocument\n fun createHTMLDocument(title: String = definedExternally): Document\n fun hasFeature(): Boolean\n}\n\n/**\n * Exposes the JavaScript
[DocumentType](https://developer.mozilla.org/en/docs/Web/API/DocumentType) to Kotlin\n */\npublic external abstract class DocumentType : Node, ChildNode {\n open val name: String\n open val publicId: String\n open val systemId: String\n}\n\n/**\n * Exposes the JavaScript
[DocumentFragment](https://developer.mozilla.org/en/docs/Web/API/DocumentFragment) to Kotlin\n */\npublic external open class DocumentFragment : Node, NonElementParentNode, ParentNode {\n override val children: HTMLCollection\n override val firstElementChild: Element?\n override val lastElementChild: Element?\n override val childElementCount: Int\n override fun getElementById(elementId: String): Element?\n override fun prepend(vararg nodes: dynamic): Unit\n override fun append(vararg nodes: dynamic): Unit\n override fun querySelector(selectors: String): Element?\n override fun querySelectorAll(selectors: String): NodeList\n}\n\n/**\n * Exposes the JavaScript
[ShadowRoot](https://developer.mozilla.org/en/docs/Web/API/ShadowRoot) to Kotlin\n */\npublic external open class ShadowRoot : DocumentFragment, DocumentOrShadowRoot {\n open val mode: ShadowRootMode\n open val host: Element\n override val fullscreenElement: Element?\n override fun getElementById(elementId: String): Element?\n override fun prepend(vararg nodes: dynamic): Unit\n override fun append(vararg nodes: dynamic): Unit\n override fun querySelector(selectors: String): Element?\n override fun querySelectorAll(selectors: String): NodeList\n}\n\n/**\n * Exposes the JavaScript
[Element](https://developer.mozilla.org/en/docs/Web/API/Element) to Kotlin\n */\npublic external abstract class Element : Node, ParentNode, NonDocumentTypeChildNode, ChildNode, Slotable, GeometryUtils, UnionElementOrProcessingInstruction, UnionElementOrHTMLCollection, UnionElementOrRadioNodeList, UnionElementOrMouseEvent {\n open var innerHTML: String\n open var outerHTML: String\n open val namespaceURI: String?\n open val prefix: String?\n open val localName: String\n open val tagName: String\n open var id: String\n open var className: String\n open val classList: DOMTokenList\n open var slot: String\n open val attributes: NamedNodeMap\n open val shadowRoot: ShadowRoot?\n open var scrollTop: Double\n open var scrollLeft: Double\n open val scrollWidth: Int\n open val scrollHeight: Int\n open val clientTop: Int\n open val clientLeft: Int\n open val clientWidth: Int\n open val clientHeight: Int\n fun requestFullscreen(): Promise<Unit>\n fun setPointerCapture(pointerId: Int): Unit\n fun releasePointerCapture(pointerId: Int): Unit\n

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    fun hasPointerCapture(pointerId: Int): Boolean\n    fun insertAdjacentHTML(position: String, text: String): Unit\n
  fun hasAttributes(): Boolean\n    fun getAttributeNames(): Array<String>\n    fun getAttribute(qualifiedName:
String): String?\n    fun getAttributeNS(namespace: String?, localName: String): String?\n    fun
setAttribute(qualifiedName: String, value: String): Unit\n    fun setAttributeNS(namespace: String?, qualifiedName:
String, value: String): Unit\n    fun removeAttribute(qualifiedName: String): Unit\n    fun
removeAttributeNS(namespace: String?, localName: String): Unit\n    fun hasAttribute(qualifiedName: String):
Boolean\n    fun hasAttributeNS(namespace: String?, localName: String): Boolean\n    fun
getAttributeNode(qualifiedName: String): Attr?\n    fun getAttributeNodeNS(namespace: String?, localName:
String): Attr?\n    fun setAttributeNode(attr: Attr): Attr?\n    fun setAttributeNodeNS(attr: Attr): Attr?\n    fun
removeAttributeNode(attr: Attr): Attr\n
    fun attachShadow(init: ShadowRootInit): ShadowRoot\n    fun closest(selectors: String): Element?\n    fun
matches(selectors: String): Boolean\n    fun webkitMatchesSelector(selectors: String): Boolean\n    fun
getElementsByTagName(qualifiedName: String): HTMLCollection\n    fun
getElementsByTagNameNS(namespace: String?, localName: String): HTMLCollection\n    fun
getElementsByClassName(classNames: String): HTMLCollection\n    fun insertAdjacentElement(where: String,
element: Element): Element?\n    fun insertAdjacentText(where: String, data: String): Unit\n    fun getClientRects():
Array<DOMRect>\n    fun getBoundingClientRect(): DOMRect\n    fun scrollIntoView(): Unit\n    fun
scrollIntoView(arg: dynamic): Unit\n    fun scroll(options: ScrollToOptions = definedExternally): Unit\n    fun
scroll(x: Double, y: Double): Unit\n    fun scrollTo(options: ScrollToOptions = definedExternally): Unit\n    fun
scrollTo(x: Double, y: Double): Unit\n    fun scrollBy(options: ScrollToOptions = definedExternally):
 Unit\n    fun scrollBy(x: Double, y: Double): Unit\n}\n\npublic external interface ShadowRootInit {\n    var mode:
ShadowRootMode?\n        get() = definedExternally\n        set(value) =
definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun ShadowRootInit(mode:
ShadowRootMode?): ShadowRootInit {\n    val o = js(\"({})\")\n\n    o[\"mode\"] = mode\n\n    return o\n}\n\n/**\n
* Exposes the JavaScript [NamedNodeMap](https://developer.mozilla.org/en/docs/Web/API/NamedNodeMap) to
Kotlin\n */\npublic external abstract class NamedNodeMap : ItemArrayLike<Attr> {\n    override val length: Int\n
override fun item(index: Int): Attr?\n    fun getNamedItem(qualifiedName: String): Attr?\n    fun
getNamedItemNS(namespace: String?, localName: String): Attr?\n    fun setNamedItem(attr: Attr): Attr?\n    fun
setNamedItemNS(attr: Attr): Attr?\n    fun removeNamedItem(qualifiedName: String): Attr\n    fun
removeNamedItemNS(namespace: String?, localName: String): Attr\n}\n@kotlin.internal.InlineOnly
 inline operator fun NamedNodeMap.get(index: Int): Attr? = asDynamic()[index]\n@kotlin.internal.InlineOnly
inline operator fun NamedNodeMap.get(qualifiedName: String): Attr? = asDynamic()[qualifiedName]\n\n/**\n *
Exposes the JavaScript [Attr](https://developer.mozilla.org/en/docs/Web/API/Attr) to Kotlin\n */\npublic external
abstract class Attr : Node {\n    open val namespaceURI: String?\n    open val prefix: String?\n    open val
localName: String\n    open val name: String\n    open var value: String\n    open val ownerElement: Element?\n
open val specified: Boolean\n}\n\n/**\n * Exposes the JavaScript
[CharacterData](https://developer.mozilla.org/en/docs/Web/API/CharacterData) to Kotlin\n */\npublic external
abstract class CharacterData : Node, NonDocumentTypeChildNode, ChildNode {\n    open var data: String\n    open
val length: Int\n    fun substringData(offset: Int, count: Int): String\n    fun appendData(data: String): Unit\n    fun
insertData(offset:
 Int, data: String): Unit\n    fun deleteData(offset: Int, count: Int): Unit\n    fun replaceData(offset: Int, count: Int,
data: String): Unit\n}\n\n/**\n * Exposes the JavaScript
[Text](https://developer.mozilla.org/en/docs/Web/API/Text) to Kotlin\n */\npublic external open class Text(data:
String = definedExternally) : CharacterData, Slotable, GeometryUtils {\n    open val wholeText: String\n    override
val previousElementSibling: Element?\n    override val nextElementSibling: Element?\n    override val assignedSlot:
HTMLSlotElement?\n    fun splitText(offset: Int): Text\n    override fun before(vararg nodes: dynamic): Unit\n
override fun after(vararg nodes: dynamic): Unit\n    override fun replaceWith(vararg nodes: dynamic): Unit\n
override fun remove(): Unit\n    override fun getBoxQuads(options: BoxQuadOptions /* = definedExternally */):
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Array<DOMQuad>\n   override fun convertQuadFromNode(quad: dynamic, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally
/): DOMQuad\n   override fun convertRectFromNode(rect: DOMRectReadOnly, from: dynamic, options: ConvertCoordinateOptions / = definedExternally */): DOMQuad\n   override fun convertPointFromNode(point: DOMPointInit, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMPoint\n}\n\n/**\n * Exposes the JavaScript [CDATASection](https://developer.mozilla.org/en/docs/Web/API/CDATASection) to Kotlin\n */\npublic external open class CDATASection : Text {\n   override fun before(vararg nodes: dynamic): Unit\n   override fun after(vararg nodes: dynamic): Unit\n   override fun replaceWith(vararg nodes: dynamic): Unit\n   override fun remove(): Unit\n   override fun getBoxQuads(options: BoxQuadOptions /* = definedExternally */): Array<DOMQuad>\n   override fun convertQuadFromNode(quad: dynamic, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMQuad\n   override fun convertRectFromNode(rect: DOMRectReadOnly, from: dynamic,
options: ConvertCoordinateOptions /* = definedExternally */): DOMQuad\n   override fun convertPointFromNode(point: DOMPointInit, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMPoint\n}\n\n/**\n * Exposes the JavaScript [ProcessingInstruction](https://developer.mozilla.org/en/docs/Web/API/ProcessingInstruction) to Kotlin\n */\npublic external abstract class ProcessingInstruction : CharacterData, LinkStyle, UnionElementOrProcessingInstruction {\n   open val target: String\n}\n\n/**\n * Exposes the JavaScript [Comment](https://developer.mozilla.org/en/docs/Web/API/Comment) to Kotlin\n */\npublic external open class Comment(data: String = definedExternally) : CharacterData {\n   override val previousElementSibling: Element?\n   override val nextElementSibling: Element?\n   override fun before(vararg nodes: dynamic): Unit\n   override fun after(vararg nodes: dynamic): Unit\n   override fun replaceWith(vararg nodes: dynamic): Unit\n   override fun remove(): Unit\n}\n\n/**\n * Exposes the JavaScript [Range](https://developer.mozilla.org/en/docs/Web/API/Range) to Kotlin\n */\npublic external open class Range {\n   open val startContainer: Node\n   open val startOffset: Int\n   open val endContainer: Node\n   open val endOffset: Int\n   open val collapsed: Boolean\n   open val commonAncestorContainer: Node\n   fun createContextualFragment(fragment: String): DocumentFragment\n   fun setStart(node: Node, offset: Int): Unit\n   fun setEnd(node: Node, offset: Int): Unit\n   fun setStartBefore(node: Node): Unit\n   fun setStartAfter(node: Node): Unit\n   fun setEndBefore(node: Node): Unit\n   fun setEndAfter(node: Node): Unit\n   fun collapse(toStart: Boolean = definedExternally): Unit\n   fun selectNode(node: Node): Unit\n   fun selectNodeContents(node: Node): Unit\n   fun compareBoundaryPoints(how: Short, sourceRange: Range): Short\n   fun deleteContents(): Unit\n   fun extractContents(): DocumentFragment\n   fun cloneContents(): DocumentFragment\n   fun insertNode(node: Node): Unit\n   fun surroundContents(newParent: Node): Unit\n   fun cloneRange(): Range\n   fun detach(): Unit\n   fun isPointInRange(node: Node, offset: Int): Boolean\n   fun comparePoint(node: Node, offset: Int): Short\n   fun intersectsNode(node: Node): Boolean\n   fun getClientRects(): Array<DOMRect>\n   fun getBoundingClientRect(): DOMRect\n\n   companion object {\n   val START_TO_START: Short\n   val START_TO_END: Short\n   val END_TO_END: Short\n   val END_TO_START: Short\n   }\n}\n\n/**\n * Exposes the JavaScript [NodeIterator](https://developer.mozilla.org/en/docs/Web/API/NodeIterator) to Kotlin\n */\npublic external abstract class NodeIterator {\n   open val root: Node\n   open val referenceNode: Node\n   open val pointerBeforeReferenceNode: Boolean\n   open val whatToShow: Int\n   open val filter: NodeFilter?\n   fun nextNode(): Node?\n   fun previousNode(): Node?\n   fun detach():
Unit\n}\n\n/**\n * Exposes the JavaScript [TreeWalker](https://developer.mozilla.org/en/docs/Web/API/TreeWalker) to Kotlin\n */\npublic external abstract class TreeWalker {\n   open val root: Node\n   open val whatToShow: Int\n   open val filter: NodeFilter?\n   open var currentNode: Node\n   fun parentNode(): Node?\n   fun firstChild(): Node?\n   fun lastChild(): Node?\n   fun previousSibling(): Node?\n   fun nextSibling(): Node?\n   fun previousNode(): Node?\n   fun nextNode():

Node?\n}\n\n/**\n * Exposes the JavaScript [NodeFilter](https://developer.mozilla.org/en/docs/Web/API/NodeFilter) to Kotlin\n */\npublic external interface NodeFilter {\n fun acceptNode(node: Node): Short\n\n companion object {\n val FILTER_ACCEPT: Short\n val FILTER_REJECT: Short\n val FILTER_SKIP: Short\n val SHOW_ALL: Int\n val SHOW_ELEMENT: Int\n val SHOW_ATTRIBUTE: Int\n val SHOW_TEXT: Int\n val SHOW_CDATA_SECTION: Int\n val SHOW_ENTITY_REFERENCE: Int\n val SHOW_ENTITY: Int\n val SHOW_PROCESSING_INSTRUCTION: Int\n val SHOW_COMMENT: Int\n val SHOW_DOCUMENT: Int\n val SHOW_DOCUMENT_TYPE: Int\n val SHOW_DOCUMENT_FRAGMENT: Int\n val SHOW_NOTATION: Int\n }\n}\n\n/**\n * Exposes the JavaScript [DOMTokenList](https://developer.mozilla.org/en/docs/Web/API/DOMTokenList) to Kotlin\n */\npublic external abstract class DOMTokenList : ItemArrayLike<String> {\n override val length: Int\n open var value: String\n override fun item(index: Int): String?\n fun contains(token: String): Boolean\n fun add(vararg tokens: String): Unit\n fun remove(vararg tokens: String): Unit\n fun toggle(token: String, force: Boolean = definedExternally): Boolean\n fun replace(token: String, newToken: String): Unit\n fun supports(token: String): Boolean\n}\n@kotlin.internal.InlineOnly inline operator fun DOMTokenList.get(index: Int): String? = asDynamic()[index]\n\n/**\n * Exposes the JavaScript [DOMPointReadOnly](https://developer.mozilla.org/en/docs/Web/API/DOMPointReadOnly) to Kotlin\n */\npublic external open class DOMPointReadOnly(x: Double, y: Double, z: Double, w: Double) {\n open val x: Double\n open val y: Double\n open val z: Double\n open val w: Double\n fun matrixTransform(matrix: DOMMatrixReadOnly): DOMPoint\n}\n\n/**\n * Exposes the JavaScript [DOMPoint](https://developer.mozilla.org/en/docs/Web/API/DOMPoint) to Kotlin\n */\npublic external open class DOMPoint : DOMPointReadOnly {\n constructor(point: DOMPointInit)\n constructor(x: Double = definedExternally, y: Double = definedExternally, z: Double = definedExternally, w: Double = definedExternally)\n override var x: Double\n override var y: Double\n override var z: Double\n override var w: Double\n}\n\n/**\n * Exposes the JavaScript [DOMPointInit](https://developer.mozilla.org/en/docs/Web/API/DOMPointInit) to Kotlin\n */\npublic external interface DOMPointInit {\n var x: Double? /* = 0.0 */\n get() = definedExternally\n set(value) = definedExternally\n var y: Double? /* = 0.0 */\n get() = definedExternally\n set(value) = definedExternally\n var z: Double? /* = 0.0 */\n get() = definedExternally\n set(value) = definedExternally\n var w: Double? /* = 1.0 */\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun DOMPointInit(x: Double? = 0.0, y: Double? = 0.0, z: Double? = 0.0, w: Double? = 1.0): DOMPointInit {\n val o = js(\"({})\")\n\n o[\"x\"] = x\n o[\"y\"] = y\n o[\"z\"] = z\n o[\"w\"] = w\n\n return o\n}\n\n/**\n * Exposes the JavaScript [DOMRect](https://developer.mozilla.org/en/docs/Web/API/DOMRect) to Kotlin\n */\npublic external open class DOMRect(x: Double = definedExternally, y: Double = definedExternally, width: Double = definedExternally, height: Double = definedExternally)\n : DOMRectReadOnly {\n override var x: Double\n override var y: Double\n override var width: Double\n override var height: Double\n}\n\n/**\n * Exposes the JavaScript [DOMRectReadOnly](https://developer.mozilla.org/en/docs/Web/API/DOMRectReadOnly) to Kotlin\n */\npublic external open class DOMRectReadOnly(x: Double, y: Double, width: Double, height: Double) {\n open val x: Double\n open val y: Double\n open val width: Double\n open val height: Double\n open val top: Double\n open val right: Double\n open val bottom: Double\n open val left: Double\n}\n\npublic external interface DOMRectInit {\n var x: Double? /* = 0.0 */\n get() = definedExternally\n set(value) = definedExternally\n var y: Double? /* = 0.0 */\n get() = definedExternally\n set(value) = definedExternally\n var width: Double? /* = 0.0 */\n get() = definedExternally\n set(value) =

definedExternally\n   var height: Double? /* = 0.0 */\n
    get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun DOMRectInit(x: Double? = 0.0, y: Double? = 0.0, width: Double? = 0.0, height: Double? = 0.0): DOMRectInit {\n   val o = js(\"({})\")\n\n   o[\"x\"] = x\n   o[\"y\"] = y\n   o[\"width\"] = width\n   o[\"height\"] = height\n\n   return o\n}\n\npublic external interface DOMRectList : ItemArrayLike<DOMRect> {\n   override fun item(index: Int): DOMRect?\n}\n\n@kotlin.internal.InlineOnly inline operator fun DOMRectList.get(index: Int): DOMRect? = asDynamic()[index]\n\n/**\n * Exposes the JavaScript [DOMQuad](https://developer.mozilla.org/en/docs/Web/API/DOMQuad) to Kotlin\n */\npublic external open class DOMQuad {\n   constructor(p1: DOMPointInit = definedExternally, p2: DOMPointInit = definedExternally, p3: DOMPointInit = definedExternally, p4: DOMPointInit = definedExternally)\n   constructor(rect: DOMRectInit)\n   open val p1: DOMPoint\n   open val p2: DOMPoint\n
    open val p3: DOMPoint\n   open val p4: DOMPoint\n   open val bounds: DOMRectReadOnly\n}\n\n/**\n * Exposes the JavaScript [DOMMatrixReadOnly](https://developer.mozilla.org/en/docs/Web/API/DOMMatrixReadOnly) to Kotlin\n */\npublic external open class DOMMatrixReadOnly(numberSequence: Array<Double>) {\n   open val a: Double\n   open val b: Double\n   open val c: Double\n   open val d: Double\n   open val e: Double\n   open val f: Double\n   open val m11: Double\n   open val m12: Double\n   open val m13: Double\n   open val m14: Double\n   open val m21: Double\n   open val m22: Double\n   open val m23: Double\n   open val m24: Double\n   open val m31: Double\n   open val m32: Double\n   open val m33: Double\n   open val m34: Double\n   open val m41: Double\n   open val m42: Double\n   open val m43: Double\n   open val m44: Double\n   open val is2D: Boolean\n   open val isIdentity: Boolean\n   fun translate(tx: Double, ty: Double, tz: Double = definedExternally): DOMMatrix\n   fun scale(scale: Double, originX: Double = definedExternally, originY: Double = definedExternally): DOMMatrix\n   fun scale3d(scale: Double, originX: Double = definedExternally, originY: Double = definedExternally, originZ: Double = definedExternally): DOMMatrix\n   fun scaleNonUniform(scaleX: Double, scaleY: Double = definedExternally, scaleZ: Double = definedExternally, originX: Double = definedExternally, originY: Double = definedExternally, originZ: Double = definedExternally): DOMMatrix\n   fun rotate(angle: Double, originX: Double = definedExternally, originY: Double = definedExternally): DOMMatrix\n   fun rotateFromVector(x: Double, y: Double): DOMMatrix\n   fun rotateAxisAngle(x: Double, y: Double, z: Double, angle: Double): DOMMatrix\n   fun skewX(sx: Double): DOMMatrix\n   fun skewY(sy: Double): DOMMatrix\n   fun multiply(other: DOMMatrix): DOMMatrix\n   fun flipX(): DOMMatrix\n   fun flipY(): DOMMatrix\n   fun inverse(): DOMMatrix\n   fun transformPoint(point: DOMPointInit = definedExternally): DOMPoint\n   fun toFloat32Array(): Float32Array\n   fun toFloat64Array(): Float64Array\n}\n\n/**\n * Exposes the JavaScript [DOMMatrix](https://developer.mozilla.org/en/docs/Web/API/DOMMatrix) to Kotlin\n */\npublic external open class DOMMatrix() : DOMMatrixReadOnly {\n   constructor(transformList: String)\n   constructor(other: DOMMatrixReadOnly)\n   constructor(array32: Float32Array)\n   constructor(array64: Float64Array)\n   constructor(numberSequence: Array<Double>)\n   override var a: Double\n   override var b: Double\n   override var c: Double\n   override var d: Double\n   override var e: Double\n   override var f: Double\n   override var m11: Double\n   override var m12: Double\n   override var m13: Double\n   override var m14: Double\n   override var m21: Double\n   override var m22: Double\n   override var m23: Double\n   override var m24: Double\n   override var m31: Double\n   override var m32: Double\n   override var m33: Double\n   override var m34: Double\n   override var m41: Double\n   override var m42: Double\n   override var m43: Double\n   override var m44: Double\n   fun multiplySelf(other: DOMMatrix): DOMMatrix\n   fun preMultiplySelf(other: DOMMatrix): DOMMatrix\n   fun translateSelf(tx: Double, ty: Double, tz: Double = definedExternally): DOMMatrix\n   fun scaleSelf(scale: Double, originX: Double = definedExternally, originY: Double = definedExternally): DOMMatrix\n   fun scale3dSelf(scale: Double, originX: Double = definedExternally, originY: Double = definedExternally, originZ: Double = definedExternally): DOMMatrix\n   fun scaleNonUniformSelf(scaleX: Double, scaleY: Double = definedExternally, scaleZ: Double = definedExternally,

originX: Double = definedExternally, originY: Double = definedExternally, originZ: Double = definedExternally): DOMMatrix\n   fun rotateSelf(angle: Double, originX: Double = definedExternally, originY: Double = definedExternally):
 DOMMatrix\n   fun rotateFromVectorSelf(x: Double, y: Double): DOMMatrix\n   fun rotateAxisAngleSelf(x: Double, y: Double, z: Double, angle: Double): DOMMatrix\n   fun skewXSelf(sx: Double): DOMMatrix\n   fun skewYSelf(sy: Double): DOMMatrix\n   fun invertSelf(): DOMMatrix\n   fun setMatrixValue(transformList: String): DOMMatrix\n}\n\npublic external interface ScrollOptions {\n   var behavior: ScrollBehavior? /* = ScrollBehavior.AUTO */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun ScrollOptions(behavior: ScrollBehavior? = ScrollBehavior.AUTO): ScrollOptions {\n   val o = js(\"({})\")\n\n   o[\"behavior\"] = behavior\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [ScrollToOptions](https://developer.mozilla.org/en/docs/Web/API/ScrollToOptions) to Kotlin\n */\npublic external interface ScrollToOptions : ScrollOptions {\n   var left: Double?\n   get() = definedExternally\n   set(value) = definedExternally\n   var top: Double?\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun ScrollToOptions(left: Double? = undefined, top: Double? = undefined, behavior: ScrollBehavior? = ScrollBehavior.AUTO): ScrollToOptions {\n   val o = js(\"({})\")\n\n   o[\"left\"] = left\n   o[\"top\"] = top\n   o[\"behavior\"] = behavior\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [MediaQueryList](https://developer.mozilla.org/en/docs/Web/API/MediaQueryList) to Kotlin\n */\npublic external abstract class MediaQueryList : EventTarget {\n   open val media: String\n   open val matches: Boolean\n   open var onchange: ((Event) -> dynamic)?\n   fun addListener(listener: EventListener?): Unit\n   fun addListener(listener: ((Event) -> Unit)?): Unit\n   fun removeListener(listener: EventListener?): Unit\n   fun removeListener(listener: ((Event) -> Unit)?): Unit\n}\n\n/**\n * Exposes the JavaScript [MediaQueryListEvent](https://developer.mozilla.org/en/docs/Web/API/MediaQueryListEvent) to Kotlin\n */\npublic external open class MediaQueryListEvent(type: String, eventInitDict: MediaQueryListEventInit = definedExternally) : Event {\n   open val media: String\n   open val matches: Boolean\n}\n\npublic external interface MediaQueryListEventInit : EventInit {\n   var media: String? /* = \"\" */\n   get() = definedExternally\n   set(value) = definedExternally\n   var matches: Boolean? /* = false */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun MediaQueryListEventInit(media: String? = \"\", matches: Boolean? = false, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): MediaQueryListEventInit {\n   val o = js(\"({})\")\n\n   o[\"media\"] = media\n   o[\"matches\"] = matches\n   o[\"bubbles\"] = bubbles\n   o[\"cancelable\"] = cancelable\n   o[\"composed\"]
 = composed\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [Screen](https://developer.mozilla.org/en/docs/Web/API/Screen) to Kotlin\n */\npublic external abstract class Screen {\n   open val availWidth: Int\n   open val availHeight: Int\n   open val width: Int\n   open val height: Int\n   open val colorDepth: Int\n   open val pixelDepth: Int\n}\n\n/**\n * Exposes the JavaScript [CaretPosition](https://developer.mozilla.org/en/docs/Web/API/CaretPosition) to Kotlin\n */\npublic external abstract class CaretPosition {\n   open val offsetNode: Node\n   open val offset: Int\n   fun getClientRect(): DOMRect?\n}\n\npublic external interface ScrollIntoViewOptions : ScrollOptions {\n   var block: ScrollLogicalPosition? /* = ScrollLogicalPosition.CENTER */\n   get() = definedExternally\n   set(value) = definedExternally\n   var inline: ScrollLogicalPosition? /* = ScrollLogicalPosition.CENTER */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic
 inline fun ScrollIntoViewOptions(block: ScrollLogicalPosition? = ScrollLogicalPosition.CENTER, inline: ScrollLogicalPosition? = ScrollLogicalPosition.CENTER, behavior: ScrollBehavior? = ScrollBehavior.AUTO): ScrollIntoViewOptions {\n   val o = js(\"({})\")\n\n   o[\"block\"] = block\n   o[\"inline\"] = inline\n   o[\"behavior\"] = behavior\n\n   return o\n}\n\npublic external interface BoxQuadOptions {\n   var box: CSSBoxType? /* = CSSBoxType.BORDER */\n   get() = definedExternally\n   set(value) = definedExternally\n   var relativeTo: dynamic\n   get() = definedExternally\n   set(value) =

definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun BoxQuadOptions(box: CSSBoxType? = CSSBoxType.BORDER, relativeTo: dynamic = undefined): BoxQuadOptions {\n   val o = js(\"({})\")\n\n   o[\"box\"] = box\n   o[\"relativeTo\"] = relativeTo\n\n   return o\n}\n\npublic external interface ConvertCoordinateOptions
{\n   var fromBox: CSSBoxType? /* = CSSBoxType.BORDER */\n   get() = definedExternally\n   set(value) = definedExternally\n   var toBox: CSSBoxType? /* = CSSBoxType.BORDER */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun ConvertCoordinateOptions(fromBox: CSSBoxType? = CSSBoxType.BORDER, toBox: CSSBoxType? = CSSBoxType.BORDER): ConvertCoordinateOptions {\n   val o = js(\"({})\")\n\n   o[\"fromBox\"] = fromBox\n   o[\"toBox\"] = toBox\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [GeometryUtils](https://developer.mozilla.org/en/docs/Web/API/GeometryUtils) to Kotlin\n */\npublic external interface GeometryUtils {\n   fun getBoxQuads(options: BoxQuadOptions = definedExternally): Array<DOMQuad>\n   fun convertQuadFromNode(quad: dynamic, from: dynamic, options: ConvertCoordinateOptions = definedExternally): DOMQuad\n   fun convertRectFromNode(rect: DOMRectReadOnly, from: dynamic,
options: ConvertCoordinateOptions = definedExternally): DOMQuad\n   fun convertPointFromNode(point: DOMPointInit, from: dynamic, options: ConvertCoordinateOptions = definedExternally): DOMPoint\n}\n\npublic external @marker interface UnionElementOrProcessingInstruction {\n}\n\npublic external @marker interface UnionElementOrHTMLCollection {\n}\n\npublic external @marker interface UnionElementOrRadioNodeList {\n}\n\npublic external @marker interface UnionHTMLOptGroupElementOrHTMLOptionElement {\n}\n\npublic external @marker interface UnionAudioTrackOrTextTrackOrVideoTrack {\n}\n\npublic external @marker interface UnionElementOrMouseEvent {\n}\n\npublic external @marker interface UnionMessagePortOrWindow {\n}\n\npublic external @marker interface UnionMessagePortOrServiceWorker {\n}\n\npublic external @marker interface HTMLOrSVGScriptElement {\n}\n\npublic external @marker interface RenderingContext {\n}\n\npublic external @marker interface HTMLOrSVGImageElement {\n}\n\n/* please, don't
implement this interface! */\npublic external interface DocumentReadyState {\n   companion object\n}\npublic inline val DocumentReadyState.Companion.LOADING: DocumentReadyState get() = \"loading\".asDynamic().unsafeCast<DocumentReadyState>()\npublic inline val DocumentReadyState.Companion.INTERACTIVE: DocumentReadyState get() = \"interactive\".asDynamic().unsafeCast<DocumentReadyState>()\npublic inline val DocumentReadyState.Companion.COMPLETE: DocumentReadyState get() = \"complete\".asDynamic().unsafeCast<DocumentReadyState>()\n\n/* please, don't implement this interface! */\npublic external interface CanPlayTypeResult {\n   companion object\n}\npublic inline val CanPlayTypeResult.Companion.EMPTY: CanPlayTypeResult get() = \"\".asDynamic().unsafeCast<CanPlayTypeResult>()\npublic inline val CanPlayTypeResult.Companion.MAYBE: CanPlayTypeResult get() = \"maybe\".asDynamic().unsafeCast<CanPlayTypeResult>()\npublic inline val CanPlayTypeResult.Companion.PROBABLY: CanPlayTypeResult get()
= \"probably\".asDynamic().unsafeCast<CanPlayTypeResult>()\n\n/* please, don't implement this interface! */\npublic external interface TextTrackMode {\n   companion object\n}\npublic inline val TextTrackMode.Companion.DISABLED: TextTrackMode get() = \"disabled\".asDynamic().unsafeCast<TextTrackMode>()\npublic inline val TextTrackMode.Companion.HIDDEN: TextTrackMode get() = \"hidden\".asDynamic().unsafeCast<TextTrackMode>()\npublic inline val TextTrackMode.Companion.SHOWING: TextTrackMode get() = \"showing\".asDynamic().unsafeCast<TextTrackMode>()\n\n/* please, don't implement this interface! */\npublic external interface TextTrackKind {\n   companion object\n}\npublic inline val TextTrackKind.Companion.SUBTITLES: TextTrackKind get() = \"subtitles\".asDynamic().unsafeCast<TextTrackKind>()\npublic inline val TextTrackKind.Companion.CAPTIONS: TextTrackKind get() = \"captions\".asDynamic().unsafeCast<TextTrackKind>()\npublic inline val

TextTrackKind.Companion.DESCRIPTIONS: TextTrackKind
get() = \"descriptions\".asDynamic().unsafeCast<TextTrackKind>()\npublic inline val
TextTrackKind.Companion.CHAPTERS: TextTrackKind get() =
\"chapters\".asDynamic().unsafeCast<TextTrackKind>()\npublic inline val
TextTrackKind.Companion.METADATA: TextTrackKind get() =
\"metadata\".asDynamic().unsafeCast<TextTrackKind>()\n\n/* please, don't implement this interface! */\npublic
external interface SelectionMode {\n   companion object\n}\npublic inline val
SelectionMode.Companion.SELECT: SelectionMode get() =
\"select\".asDynamic().unsafeCast<SelectionMode>()\npublic inline val SelectionMode.Companion.START:
SelectionMode get() = \"start\".asDynamic().unsafeCast<SelectionMode>()\npublic inline val
SelectionMode.Companion.END: SelectionMode get() =
\"end\".asDynamic().unsafeCast<SelectionMode>()\npublic inline val SelectionMode.Companion.PRESERVE:
SelectionMode get() = \"preserve\".asDynamic().unsafeCast<SelectionMode>()\n\n/* please, don't implement this
interface! */\npublic external interface
CanvasFillRule {\n   companion object\n}\npublic inline val CanvasFillRule.Companion.NONZERO:
CanvasFillRule get() = \"nonzero\".asDynamic().unsafeCast<CanvasFillRule>()\npublic inline val
CanvasFillRule.Companion.EVENODD: CanvasFillRule get() =
\"evenodd\".asDynamic().unsafeCast<CanvasFillRule>()\n\n/* please, don't implement this interface! */\npublic
external interface ImageSmoothingQuality {\n   companion object\n}\npublic inline val
ImageSmoothingQuality.Companion.LOW: ImageSmoothingQuality get() =
\"low\".asDynamic().unsafeCast<ImageSmoothingQuality>()\npublic inline val
ImageSmoothingQuality.Companion.MEDIUM: ImageSmoothingQuality get() =
\"medium\".asDynamic().unsafeCast<ImageSmoothingQuality>()\npublic inline val
ImageSmoothingQuality.Companion.HIGH: ImageSmoothingQuality get() =
\"high\".asDynamic().unsafeCast<ImageSmoothingQuality>()\n\n/* please, don't implement this interface!
*/\npublic external interface CanvasLineCap {\n   companion object\n}\npublic inline val
CanvasLineCap.Companion.BUTT: CanvasLineCap get() =
\"butt\".asDynamic().unsafeCast<CanvasLineCap>()\npublic inline val CanvasLineCap.Companion.ROUND:
CanvasLineCap get() = \"round\".asDynamic().unsafeCast<CanvasLineCap>()\npublic inline val
CanvasLineCap.Companion.SQUARE: CanvasLineCap get() =
\"square\".asDynamic().unsafeCast<CanvasLineCap>()\n\n/* please, don't implement this interface! */\npublic
external interface CanvasLineJoin {\n   companion object\n}\npublic inline val
CanvasLineJoin.Companion.ROUND: CanvasLineJoin get() =
\"round\".asDynamic().unsafeCast<CanvasLineJoin>()\npublic inline val CanvasLineJoin.Companion.BEVEL:
CanvasLineJoin get() = \"bevel\".asDynamic().unsafeCast<CanvasLineJoin>()\npublic inline val
CanvasLineJoin.Companion.MITER: CanvasLineJoin get() =
\"miter\".asDynamic().unsafeCast<CanvasLineJoin>()\n\n/* please, don't implement this interface! */\npublic
external interface CanvasTextAlign {\n   companion object\n}\npublic inline val
CanvasTextAlign.Companion.START:
CanvasTextAlign get() = \"start\".asDynamic().unsafeCast<CanvasTextAlign>()\npublic inline val
CanvasTextAlign.Companion.END: CanvasTextAlign get() =
\"end\".asDynamic().unsafeCast<CanvasTextAlign>()\npublic inline val CanvasTextAlign.Companion.LEFT:
CanvasTextAlign get() = \"left\".asDynamic().unsafeCast<CanvasTextAlign>()\npublic inline val
CanvasTextAlign.Companion.RIGHT: CanvasTextAlign get() =
\"right\".asDynamic().unsafeCast<CanvasTextAlign>()\npublic inline val CanvasTextAlign.Companion.CENTER:
CanvasTextAlign get() = \"center\".asDynamic().unsafeCast<CanvasTextAlign>()\n\n/* please, don't implement this
interface! */\npublic external interface CanvasTextBaseline {\n   companion object\n}\npublic inline val
CanvasTextBaseline.Companion.TOP: CanvasTextBaseline get() =

\"top\".asDynamic().unsafeCast<CanvasTextBaseline>()\npublic inline val CanvasTextBaseline.Companion.HANGING: CanvasTextBaseline get() = \"hanging\".asDynamic().unsafeCast<CanvasTextBaseline>()\npublic inline val CanvasTextBaseline.Companion.MIDDLE: CanvasTextBaseline get() = \"middle\".asDynamic().unsafeCast<CanvasTextBaseline>()\npublic inline val CanvasTextBaseline.Companion.ALPHABETIC: CanvasTextBaseline get() = \"alphabetic\".asDynamic().unsafeCast<CanvasTextBaseline>()\npublic inline val CanvasTextBaseline.Companion.IDEOGRAPHIC: CanvasTextBaseline get() = \"ideographic\".asDynamic().unsafeCast<CanvasTextBaseline>()\npublic inline val CanvasTextBaseline.Companion.BOTTOM: CanvasTextBaseline get() = \"bottom\".asDynamic().unsafeCast<CanvasTextBaseline>()\n\n/* please, don't implement this interface! */\npublic external interface CanvasDirection {\n companion object\n}\npublic inline val CanvasDirection.Companion.LTR: CanvasDirection get() = \"ltr\".asDynamic().unsafeCast<CanvasDirection>()\npublic inline val CanvasDirection.Companion.RTL: CanvasDirection get() = \"rtl\".asDynamic().unsafeCast<CanvasDirection>()\npublic inline val CanvasDirection.Companion.INHERIT: CanvasDirection get() = \"inherit\".asDynamic().unsafeCast<CanvasDirection>()\n\n/* please, don't implement this interface! */\npublic external interface ScrollRestoration {\n companion object\n}\npublic inline val ScrollRestoration.Companion.AUTO: ScrollRestoration get() = \"auto\".asDynamic().unsafeCast<ScrollRestoration>()\npublic inline val ScrollRestoration.Companion.MANUAL: ScrollRestoration get() = \"manual\".asDynamic().unsafeCast<ScrollRestoration>()\n\n/* please, don't implement this interface! */\npublic external interface ImageOrientation {\n companion object\n}\npublic inline val ImageOrientation.Companion.NONE: ImageOrientation get() = \"none\".asDynamic().unsafeCast<ImageOrientation>()\npublic inline val ImageOrientation.Companion.FLIPY: ImageOrientation get() = \"flipY\".asDynamic().unsafeCast<ImageOrientation>()\n\n/* please, don't implement this interface! */\npublic external interface PremultiplyAlpha {\n companion object\n}\npublic inline val PremultiplyAlpha.Companion.NONE: PremultiplyAlpha get() = \"none\".asDynamic().unsafeCast<PremultiplyAlpha>()\npublic inline val PremultiplyAlpha.Companion.PREMULTIPLY: PremultiplyAlpha get() = \"premultiply\".asDynamic().unsafeCast<PremultiplyAlpha>()\npublic inline val PremultiplyAlpha.Companion.DEFAULT: PremultiplyAlpha get() = \"default\".asDynamic().unsafeCast<PremultiplyAlpha>()\n\n/* please, don't implement this interface! */\npublic external interface ColorSpaceConversion {\n companion object\n}\npublic inline val ColorSpaceConversion.Companion.NONE: ColorSpaceConversion get() = \"none\".asDynamic().unsafeCast<ColorSpaceConversion>()\npublic inline val ColorSpaceConversion.Companion.DEFAULT: ColorSpaceConversion get() = \"default\".asDynamic().unsafeCast<ColorSpaceConversion>()\n\n/* please, don't implement this interface! */\npublic external interface ResizeQuality {\n companion object\n}\npublic inline val ResizeQuality.Companion.PIXELATED: ResizeQuality get() = \"pixelated\".asDynamic().unsafeCast<ResizeQuality>()\npublic inline val ResizeQuality.Companion.LOW: ResizeQuality get() = \"low\".asDynamic().unsafeCast<ResizeQuality>()\npublic inline val ResizeQuality.Companion.MEDIUM: ResizeQuality get() = \"medium\".asDynamic().unsafeCast<ResizeQuality>()\npublic inline val ResizeQuality.Companion.HIGH: ResizeQuality get() = \"high\".asDynamic().unsafeCast<ResizeQuality>()\n\n/* please, don't implement this interface! */\npublic external interface BinaryType {\n companion object\n}\npublic inline val BinaryType.Companion.BLOB: BinaryType get() = \"blob\".asDynamic().unsafeCast<BinaryType>()\npublic inline val BinaryType.Companion.ARRAYBUFFER: BinaryType get() = \"arraybuffer\".asDynamic().unsafeCast<BinaryType>()\n\n/* please, don't implement this

interface! */\npublic external interface WorkerType {\n   companion object\n}\npublic inline val WorkerType.Companion.CLASSIC: WorkerType get() = \"classic\".asDynamic().unsafeCast<WorkerType>()\npublic inline val WorkerType.Companion.MODULE: WorkerType get() = \"module\".asDynamic().unsafeCast<WorkerType>()\n\n/* please, don't implement this interface! */\npublic external interface ShadowRootMode {\n   companion object\n}\npublic inline val ShadowRootMode.Companion.OPEN: ShadowRootMode get() = \"open\".asDynamic().unsafeCast<ShadowRootMode>()\npublic inline val ShadowRootMode.Companion.CLOSED: ShadowRootMode get() = \"closed\".asDynamic().unsafeCast<ShadowRootMode>()\n\n/* please, don't implement this interface! */\npublic external interface ScrollBehavior {\n   companion object\n}\npublic inline val ScrollBehavior.Companion.AUTO: ScrollBehavior get() = \"auto\".asDynamic().unsafeCast<ScrollBehavior>()\npublic inline val ScrollBehavior.Companion.INSTANT: ScrollBehavior get() = \"instant\".asDynamic().unsafeCast<ScrollBehavior>()\npublic inline val ScrollBehavior.Companion.SMOOTH: ScrollBehavior get() = \"smooth\".asDynamic().unsafeCast<ScrollBehavior>()\n\n/* please, don't implement this interface! */\npublic
 external interface ScrollLogicalPosition {\n   companion object\n}\npublic inline val ScrollLogicalPosition.Companion.START: ScrollLogicalPosition get() = \"start\".asDynamic().unsafeCast<ScrollLogicalPosition>()\npublic inline val ScrollLogicalPosition.Companion.CENTER: ScrollLogicalPosition get() = \"center\".asDynamic().unsafeCast<ScrollLogicalPosition>()\npublic inline val ScrollLogicalPosition.Companion.END: ScrollLogicalPosition get() = \"end\".asDynamic().unsafeCast<ScrollLogicalPosition>()\npublic inline val ScrollLogicalPosition.Companion.NEAREST: ScrollLogicalPosition get() = \"nearest\".asDynamic().unsafeCast<ScrollLogicalPosition>()\n\n/* please, don't implement this interface! */\npublic external interface CSSBoxType {\n   companion object\n}\npublic inline val CSSBoxType.Companion.MARGIN: CSSBoxType get() = \"margin\".asDynamic().unsafeCast<CSSBoxType>()\npublic inline val CSSBoxType.Companion.BORDER: CSSBoxType get() = \"border\".asDynamic().unsafeCast<CSSBoxType>()\npublic
 inline val CSSBoxType.Companion.PADDING: CSSBoxType get() = \"padding\".asDynamic().unsafeCast<CSSBoxType>()\npublic inline val CSSBoxType.Companion.CONTENT: CSSBoxType get() = \"content\".asDynamic().unsafeCast<CSSBoxType>()\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n// NOTE: THIS FILE IS AUTO-GENERATED, DO NOT EDIT!\n// See libraries/tools/idl2k for details\n\n@file:Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npackage org.w3c.fetch\n\nimport kotlin.js.*\nimport org.khronos.webgl.*\nimport org.w3c.css.masking.*\nimport org.w3c.dom.*\nimport org.w3c.dom.clipboard.*\nimport org.w3c.dom.css.*\nimport org.w3c.dom.events.*\nimport org.w3c.dom.mediacapture.*\nimport org.w3c.dom.parsing.*\nimport org.w3c.dom.pointerevents.*\nimport org.w3c.dom.svg.*\nimport org.w3c.dom.url.*\nimport org.w3c.files.*\nimport org.w3c.notifications.*\nimport org.w3c.performance.*\nimport
 org.w3c.workers.*\nimport org.w3c.xhr.*\n\n/**\n * Exposes the JavaScript [Headers](https://developer.mozilla.org/en/docs/Web/API/Headers) to Kotlin\n */\npublic external open class Headers(init: dynamic = definedExternally) {\n   fun append(name: String, value: String): Unit\n   fun delete(name: String): Unit\n   fun get(name: String): String?\n   fun has(name: String): Boolean\n   fun set(name: String, value: String): Unit\n}\n\n/**\n * Exposes the JavaScript [Body](https://developer.mozilla.org/en/docs/Web/API/Body) to Kotlin\n */\npublic external interface Body {\n   val bodyUsed: Boolean\n   fun arrayBuffer(): Promise<ArrayBuffer>\n   fun blob(): Promise<Blob>\n   fun formData(): Promise<FormData>\n   fun json(): Promise<Any?>\n   fun text(): Promise<String>\n}\n\n/**\n * Exposes the JavaScript [Request](https://developer.mozilla.org/en/docs/Web/API/Request) to Kotlin\n */\npublic external open class

Request(input: dynamic, init: RequestInit = definedExternally)
: Body {\n   open val method: String\n   open val url: String\n   open val headers: Headers\n   open val type: RequestType\n   open val destination: RequestDestination\n   open val referrer: String\n   open val referrerPolicy: dynamic\n   open val mode: RequestMode\n   open val credentials: RequestCredentials\n   open val cache: RequestCache\n   open val redirect: RequestRedirect\n   open val integrity: String\n   open val keepalive: Boolean\n   override val bodyUsed: Boolean\n   fun clone(): Request\n   override fun arrayBuffer(): Promise<ArrayBuffer>\n   override fun blob(): Promise<Blob>\n   override fun formData(): Promise<FormData>\n   override fun json(): Promise<Any?>\n   override fun text(): Promise<String>\n}\n\npublic external interface RequestInit {\n   var method: String?\n   get() = definedExternally\n   set(value) = definedExternally\n   var headers: dynamic\n   get() = definedExternally\n   set(value) = definedExternally\n   var body: dynamic\n   get() = definedExternally\n   set(value) = definedExternally\n   var referrer: String?\n   get() = definedExternally\n   set(value) = definedExternally\n   var referrerPolicy: dynamic\n   get() = definedExternally\n   set(value) = definedExternally\n   var mode: RequestMode?\n   get() = definedExternally\n   set(value) = definedExternally\n   var credentials: RequestCredentials?\n   get() = definedExternally\n   set(value) = definedExternally\n   var cache: RequestCache?\n   get() = definedExternally\n   set(value) = definedExternally\n   var redirect: RequestRedirect?\n   get() = definedExternally\n   set(value) = definedExternally\n   var integrity: String?\n   get() = definedExternally\n   set(value) = definedExternally\n   var keepalive: Boolean?\n   get() = definedExternally\n   set(value) = definedExternally\n   var window: Any?\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun RequestInit(method: String? = undefined, headers: dynamic = undefined, body: dynamic = undefined, referrer: String? = undefined, referrerPolicy: dynamic = undefined, mode: RequestMode? = undefined, credentials: RequestCredentials? = undefined, cache: RequestCache? = undefined, redirect: RequestRedirect? = undefined, integrity: String? = undefined, keepalive: Boolean? = undefined, window: Any? = undefined): RequestInit {\n   val o = js(\"({})\")\n\n   o[\"method\"] = method\n   o[\"headers\"] = headers\n   o[\"body\"] = body\n   o[\"referrer\"] = referrer\n   o[\"referrerPolicy\"] = referrerPolicy\n   o[\"mode\"] = mode\n   o[\"credentials\"] = credentials\n   o[\"cache\"] = cache\n   o[\"redirect\"] = redirect\n   o[\"integrity\"] = integrity\n   o[\"keepalive\"] = keepalive\n   o[\"window\"] = window\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [Response](https://developer.mozilla.org/en/docs/Web/API/Response)
to Kotlin\n */\npublic external open class Response(body: dynamic = definedExternally, init: ResponseInit = definedExternally) : Body {\n   open val type: ResponseType\n   open val url: String\n   open val redirected: Boolean\n   open val status: Short\n   open val ok: Boolean\n   open val statusText: String\n   open val headers: Headers\n   open val body: dynamic\n   open val trailer: Promise<Headers>\n   override val bodyUsed: Boolean\n   fun clone(): Response\n   override fun arrayBuffer(): Promise<ArrayBuffer>\n   override fun blob(): Promise<Blob>\n   override fun formData(): Promise<FormData>\n   override fun json(): Promise<Any?>\n   override fun text(): Promise<String>\n\n   companion object {\n   fun error(): Response\n   fun redirect(url: String, status: Short = definedExternally): Response\n   }\n}\n\npublic external interface ResponseInit {\n   var status: Short? /* = 200 */\n   get() = definedExternally\n   set(value) = definedExternally\n   var statusText: String? /* = \"OK\" */\n   get() = definedExternally\n   set(value) = definedExternally\n   var headers: dynamic\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun ResponseInit(status: Short? = 200, statusText: String? = \"OK\", headers: dynamic = undefined): ResponseInit {\n   val o = js(\"({})\")\n\n   o[\"status\"] = status\n   o[\"statusText\"] = statusText\n   o[\"headers\"] = headers\n\n   return o\n}\n\n/* please, don't implement this interface! */\npublic external interface RequestType {\n   companion object\n}\npublic inline val RequestType.Companion.EMPTY: RequestType get() = \"\".asDynamic().unsafeCast<RequestType>()\npublic inline val RequestType.Companion.AUDIO: RequestType get() = \"audio\".asDynamic().unsafeCast<RequestType>()\npublic inline val RequestType.Companion.FONT: RequestType get() = \"font\".asDynamic().unsafeCast<RequestType>()\npublic

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 inline val RequestType.Companion.IMAGE: RequestType get() =
\"image\".asDynamic().unsafeCast<RequestType>()\npublic inline val RequestType.Companion.SCRIPT:
RequestType get() = \"script\".asDynamic().unsafeCast<RequestType>()\npublic inline val
RequestType.Companion.STYLE: RequestType get() = \"style\".asDynamic().unsafeCast<RequestType>()\npublic
inline val RequestType.Companion.TRACK: RequestType get() =
\"track\".asDynamic().unsafeCast<RequestType>()\npublic inline val RequestType.Companion.VIDEO:
RequestType get() = \"video\".asDynamic().unsafeCast<RequestType>()\n\n/* please, don't implement this
interface! */\npublic external interface RequestDestination {\n    companion object\n}\npublic inline val
RequestDestination.Companion.EMPTY: RequestDestination get() =
\"\".asDynamic().unsafeCast<RequestDestination>()\npublic inline val
RequestDestination.Companion.DOCUMENT: RequestDestination get() =
\"document\".asDynamic().unsafeCast<RequestDestination>()\npublic
 inline val RequestDestination.Companion.EMBED: RequestDestination get() =
\"embed\".asDynamic().unsafeCast<RequestDestination>()\npublic inline val
RequestDestination.Companion.FONT: RequestDestination get() =
\"font\".asDynamic().unsafeCast<RequestDestination>()\npublic inline val RequestDestination.Companion.IMAGE:
RequestDestination get() = \"image\".asDynamic().unsafeCast<RequestDestination>()\npublic inline val
RequestDestination.Companion.MANIFEST: RequestDestination get() =
\"manifest\".asDynamic().unsafeCast<RequestDestination>()\npublic inline val
RequestDestination.Companion.MEDIA: RequestDestination get() =
\"media\".asDynamic().unsafeCast<RequestDestination>()\npublic inline val
RequestDestination.Companion.OBJECT: RequestDestination get() =
\"object\".asDynamic().unsafeCast<RequestDestination>()\npublic inline val
RequestDestination.Companion.REPORT: RequestDestination get() =
\"report\".asDynamic().unsafeCast<RequestDestination>()\npublic inline val
 RequestDestination.Companion.SCRIPT: RequestDestination get() =
\"script\".asDynamic().unsafeCast<RequestDestination>()\npublic inline val
RequestDestination.Companion.SERVICEWORKER: RequestDestination get() =
\"serviceworker\".asDynamic().unsafeCast<RequestDestination>()\npublic inline val
RequestDestination.Companion.SHAREDWORKER: RequestDestination get() =
\"sharedworker\".asDynamic().unsafeCast<RequestDestination>()\npublic inline val
RequestDestination.Companion.STYLE: RequestDestination get() =
\"style\".asDynamic().unsafeCast<RequestDestination>()\npublic inline val
RequestDestination.Companion.WORKER: RequestDestination get() =
\"worker\".asDynamic().unsafeCast<RequestDestination>()\npublic inline val
RequestDestination.Companion.XSLT: RequestDestination get() =
\"xslt\".asDynamic().unsafeCast<RequestDestination>()\n\n/* please, don't implement this interface! */\npublic
external interface RequestMode {\n    companion object\n}\npublic inline val
RequestMode.Companion.NAVIGATE:
 RequestMode get() = \"navigate\".asDynamic().unsafeCast<RequestMode>()\npublic inline val
RequestMode.Companion.SAME_ORIGIN: RequestMode get() = \"same-
origin\".asDynamic().unsafeCast<RequestMode>()\npublic inline val RequestMode.Companion.NO_CORS:
RequestMode get() = \"no-cors\".asDynamic().unsafeCast<RequestMode>()\npublic inline val
RequestMode.Companion.CORS: RequestMode get() = \"cors\".asDynamic().unsafeCast<RequestMode>()\n\n/*
please, don't implement this interface! */\npublic external interface RequestCredentials {\n    companion
object\n}\npublic inline val RequestCredentials.Companion.OMIT: RequestCredentials get() =
\"omit\".asDynamic().unsafeCast<RequestCredentials>()\npublic inline val
RequestCredentials.Companion.SAME_ORIGIN: RequestCredentials get() = \"same-
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origin\".asDynamic().unsafeCast<RequestCredentials>()\npublic inline val RequestCredentials.Companion.INCLUDE: RequestCredentials get() = \"include\".asDynamic().unsafeCast<RequestCredentials>()\n\n/* please, don't implement this interface! */\npublic external interface RequestCache {\n companion object\n}\npublic inline val RequestCache.Companion.DEFAULT: RequestCache get() = \"default\".asDynamic().unsafeCast<RequestCache>()\npublic inline val RequestCache.Companion.NO_STORE: RequestCache get() = \"no-store\".asDynamic().unsafeCast<RequestCache>()\npublic inline val RequestCache.Companion.RELOAD: RequestCache get() = \"reload\".asDynamic().unsafeCast<RequestCache>()\npublic inline val RequestCache.Companion.NO_CACHE: RequestCache get() = \"no-cache\".asDynamic().unsafeCast<RequestCache>()\npublic inline val RequestCache.Companion.FORCE_CACHE: RequestCache get() = \"force-cache\".asDynamic().unsafeCast<RequestCache>()\npublic inline val RequestCache.Companion.ONLY_IF_CACHED: RequestCache get() = \"only-if-cached\".asDynamic().unsafeCast<RequestCache>()\n\n/* please, don't implement this interface! */\npublic external interface RequestRedirect {\n companion object\n}\npublic inline val RequestRedirect.Companion.FOLLOW: RequestRedirect get() = \"follow\".asDynamic().unsafeCast<RequestRedirect>()\npublic inline val RequestRedirect.Companion.ERROR: RequestRedirect get() = \"error\".asDynamic().unsafeCast<RequestRedirect>()\npublic inline val RequestRedirect.Companion.MANUAL: RequestRedirect get() = \"manual\".asDynamic().unsafeCast<RequestRedirect>()\n\n/* please, don't implement this interface! */\npublic external interface ResponseType {\n companion object\n}\npublic inline val ResponseType.Companion.BASIC: ResponseType get() = \"basic\".asDynamic().unsafeCast<ResponseType>()\npublic inline val ResponseType.Companion.CORS: ResponseType get() = \"cors\".asDynamic().unsafeCast<ResponseType>()\npublic inline val ResponseType.Companion.DEFAULT: ResponseType get() = \"default\".asDynamic().unsafeCast<ResponseType>()\npublic inline val ResponseType.Companion.ERROR: ResponseType get() = \"error\".asDynamic().unsafeCast<ResponseType>()\npublic inline val ResponseType.Companion.OPAQUE: ResponseType get() = \"opaque\".asDynamic().unsafeCast<ResponseType>()\npublic inline val ResponseType.Companion.OPAQUEREDIRECT: ResponseType get() = \"opaqueredirect\".asDynamic().unsafeCast<ResponseType>()\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n// NOTE: THIS FILE IS AUTO-GENERATED, DO NOT EDIT!\n// See libraries/tools/idl2k for details\n\n@file:Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npackage org.w3c.dom.mediacapture\n\nimport kotlin.js.*\nimport org.khronos.webgl.*\nimport org.w3c.css.masking.*\nimport org.w3c.dom.*\nimport org.w3c.dom.clipboard.*\nimport org.w3c.dom.css.*\nimport org.w3c.dom.events.*\nimport org.w3c.dom.parsing.*\nimport org.w3c.dom.pointerevents.*\nimport org.w3c.dom.svg.*\nimport org.w3c.dom.url.*\nimport org.w3c.fetch.*\nimport org.w3c.files.*\nimport org.w3c.notifications.*\nimport org.w3c.performance.*\nimport org.w3c.workers.*\nimport org.w3c.xhr.*\n\n/**\n * Exposes the JavaScript [MediaStream](https://developer.mozilla.org/en/docs/Web/API/MediaStream) to Kotlin\n */\npublic external open class MediaStream() : EventTarget {\n constructor(stream: MediaStream)\n constructor(tracks: Array<MediaStreamTrack>)\n open val id: String\n open val active: Boolean\n var onaddtrack: ((MediaStreamTrackEvent) -> dynamic)?\n var onremovetrack: ((MediaStreamTrackEvent) -> dynamic)?\n fun getAudioTracks(): Array<MediaStreamTrack>\n fun getVideoTracks(): Array<MediaStreamTrack>\n fun getTracks(): Array<MediaStreamTrack>\n fun getTrackById(trackId: String): MediaStreamTrack?\n fun addTrack(track: MediaStreamTrack): Unit\n fun removeTrack(track: MediaStreamTrack): Unit\n fun clone(): MediaStream\n}\n\n/**\n * Exposes the JavaScript [MediaStreamTrack](https://developer.mozilla.org/en/docs/Web/API/MediaStreamTrack) to Kotlin\n */\npublic

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external abstract class MediaStreamTrack
 : EventTarget {\n    open val kind: String\n    open val id: String\n    open val label: String\n    open var enabled:
Boolean\n    open val muted: Boolean\n    open var onmute: ((Event) -> dynamic)?\n    open var onunmute: ((Event)
-> dynamic)?\n    open val readyState: MediaStreamTrackState\n    open var onended: ((Event) -> dynamic)?\n
open var onoverconstrained: ((Event) -> dynamic)?\n    fun clone(): MediaStreamTrack\n    fun stop(): Unit\n    fun
getCapabilities(): MediaTrackCapabilities\n    fun getConstraints(): MediaTrackConstraints\n    fun getSettings():
MediaTrackSettings\n    fun applyConstraints(constraints: MediaTrackConstraints = definedExternally):
Promise<Unit>\n}\n\n/**\n * Exposes the JavaScript
[MediaTrackSupportedConstraints](https://developer.mozilla.org/en/docs/Web/API/MediaTrackSupportedConstrain
ts) to Kotlin\n */\npublic external interface MediaTrackSupportedConstraints {\n    var width: Boolean? /* = true
*/\n        get() = definedExternally\n
      set(value) = definedExternally\n    var height: Boolean? /* = true */\n        get() = definedExternally\n
set(value) = definedExternally\n    var aspectRatio: Boolean? /* = true */\n        get() = definedExternally\n
set(value) = definedExternally\n    var frameRate: Boolean? /* = true */\n        get() = definedExternally\n
set(value) = definedExternally\n    var facingMode: Boolean? /* = true */\n        get() = definedExternally\n
set(value) = definedExternally\n    var resizeMode: Boolean? /* = true */\n        get() = definedExternally\n
set(value) = definedExternally\n    var volume: Boolean? /* = true */\n        get() = definedExternally\n
set(value) = definedExternally\n    var sampleRate: Boolean? /* = true */\n        get() = definedExternally\n
set(value) = definedExternally\n    var sampleSize: Boolean? /* = true */\n        get() = definedExternally\n
set(value) = definedExternally\n    var echoCancellation:
 Boolean? /* = true */\n        get() = definedExternally\n        set(value) = definedExternally\n    var
autoGainControl: Boolean? /* = true */\n        get() = definedExternally\n        set(value) = definedExternally\n    var
noiseSuppression: Boolean? /* = true */\n        get() = definedExternally\n        set(value) = definedExternally\n
var latency: Boolean? /* = true */\n        get() = definedExternally\n        set(value) = definedExternally\n    var
channelCount: Boolean? /* = true */\n        get() = definedExternally\n        set(value) = definedExternally\n    var
deviceId: Boolean? /* = true */\n        get() = definedExternally\n        set(value) = definedExternally\n    var
groupId: Boolean? /* = true */\n        get() = definedExternally\n        set(value) =
definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun MediaTrackSupportedConstraints(width:
Boolean? = true, height: Boolean? = true, aspectRatio: Boolean? = true, frameRate: Boolean? = true,
 facingMode: Boolean? = true, resizeMode: Boolean? = true, volume: Boolean? = true, sampleRate: Boolean? =
true, sampleSize: Boolean? = true, echoCancellation: Boolean? = true, autoGainControl: Boolean? = true,
noiseSuppression: Boolean? = true, latency: Boolean? = true, channelCount: Boolean? = true, deviceId: Boolean? =
true, groupId: Boolean? = true): MediaTrackSupportedConstraints {\n    val o = js(\"({})\")\n\n    o[\"width\"] =
width\n    o[\"height\"] = height\n    o[\"aspectRatio\"] = aspectRatio\n    o[\"frameRate\"] = frameRate\n
o[\"facingMode\"] = facingMode\n    o[\"resizeMode\"] = resizeMode\n    o[\"volume\"] = volume\n
o[\"sampleRate\"] = sampleRate\n    o[\"sampleSize\"] = sampleSize\n    o[\"echoCancellation\"] =
echoCancellation\n    o[\"autoGainControl\"] = autoGainControl\n    o[\"noiseSuppression\"] = noiseSuppression\n
o[\"latency\"] = latency\n    o[\"channelCount\"] = channelCount\n    o[\"deviceId\"] = deviceId\n    o[\"groupId\"] =
groupId\n\n    return
 o\n}\n\npublic external interface MediaTrackCapabilities {\n    var width: ULongRange?\n        get() =
definedExternally\n        set(value) = definedExternally\n    var height: ULongRange?\n        get() =
definedExternally\n        set(value) = definedExternally\n    var aspectRatio: DoubleRange?\n        get() =
definedExternally\n        set(value) = definedExternally\n    var frameRate: DoubleRange?\n        get() =
definedExternally\n        set(value) = definedExternally\n    var facingMode: Array<String>?\n        get() =
definedExternally\n        set(value) = definedExternally\n    var resizeMode: Array<String>?\n        get() =
definedExternally\n        set(value) = definedExternally\n    var volume: DoubleRange?\n        get() =
definedExternally\n        set(value) = definedExternally\n    var sampleRate: ULongRange?\n        get() =
definedExternally\n        set(value) = definedExternally\n    var sampleSize: ULongRange?\n        get() =
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definedExternally\n
set(value) = definedExternally\n var echoCancellation: Array<Boolean>?\n get() = definedExternally\n
set(value) = definedExternally\n var autoGainControl: Array<Boolean>?\n get() = definedExternally\n
set(value) = definedExternally\n var noiseSuppression: Array<Boolean>?\n get() = definedExternally\n
set(value) = definedExternally\n var latency: DoubleRange?\n get() = definedExternally\n set(value) =
definedExternally\n var channelCount: ULongRange?\n get() = definedExternally\n set(value) =
definedExternally\n var deviceId: String?\n get() = definedExternally\n set(value) = definedExternally\n
var groupId: String?\n get() = definedExternally\n set(value) =
definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun MediaTrackCapabilities(width:
ULongRange? = undefined, height: ULongRange? = undefined, aspectRatio: DoubleRange? = undefined,
frameRate: DoubleRange?
= undefined, facingMode: Array<String>? = undefined, resizeMode: Array<String>? = undefined, volume:
DoubleRange? = undefined, sampleRate: ULongRange? = undefined, sampleSize: ULongRange? = undefined,
echoCancellation: Array<Boolean>? = undefined, autoGainControl: Array<Boolean>? = undefined,
noiseSuppression: Array<Boolean>? = undefined, latency: DoubleRange? = undefined, channelCount:
ULongRange? = undefined, deviceId: String? = undefined, groupId: String? = undefined): MediaTrackCapabilities
{\n val o = js(\"({})\")\n\n o[\"width\"] = width\n o[\"height\"] = height\n o[\"aspectRatio\"] = aspectRatio\n
o[\"frameRate\"] = frameRate\n o[\"facingMode\"] = facingMode\n o[\"resizeMode\"] = resizeMode\n
o[\"volume\"] = volume\n o[\"sampleRate\"] = sampleRate\n o[\"sampleSize\"] = sampleSize\n
o[\"echoCancellation\"] = echoCancellation\n o[\"autoGainControl\"] = autoGainControl\n
o[\"noiseSuppression\"] = noiseSuppression\n o[\"latency\"] = latency\n
o[\"channelCount\"] = channelCount\n o[\"deviceId\"] = deviceId\n o[\"groupId\"] = groupId\n\n return
o\n}\n\n/**\n * Exposes the JavaScript
[MediaTrackConstraints](https://developer.mozilla.org/en/docs/Web/API/MediaTrackConstraints) to Kotlin\n
*/\npublic external interface MediaTrackConstraints : MediaTrackConstraintSet {\n var advanced:
Array<MediaTrackConstraintSet>?\n get() = definedExternally\n set(value) =
definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun MediaTrackConstraints(advanced:
Array<MediaTrackConstraintSet>? = undefined, width: dynamic = undefined, height: dynamic = undefined,
aspectRatio: dynamic = undefined, frameRate: dynamic = undefined, facingMode: dynamic = undefined,
resizeMode: dynamic = undefined, volume: dynamic = undefined, sampleRate: dynamic = undefined, sampleSize:
dynamic = undefined, echoCancellation: dynamic = undefined, autoGainControl: dynamic = undefined,
noiseSuppression: dynamic = undefined,
latency: dynamic = undefined, channelCount: dynamic = undefined, deviceId: dynamic = undefined, groupId:
dynamic = undefined): MediaTrackConstraints {\n val o = js(\"({})\")\n\n o[\"advanced\"] = advanced\n
o[\"width\"] = width\n o[\"height\"] = height\n o[\"aspectRatio\"] = aspectRatio\n o[\"frameRate\"] =
frameRate\n o[\"facingMode\"] = facingMode\n o[\"resizeMode\"] = resizeMode\n o[\"volume\"] = volume\n
o[\"sampleRate\"] = sampleRate\n o[\"sampleSize\"] = sampleSize\n o[\"echoCancellation\"] =
echoCancellation\n o[\"autoGainControl\"] = autoGainControl\n o[\"noiseSuppression\"] = noiseSuppression\n
o[\"latency\"] = latency\n o[\"channelCount\"] = channelCount\n o[\"deviceId\"] = deviceId\n o[\"groupId\"] =
groupId\n\n return o\n}\n\npublic external interface MediaTrackConstraintSet {\n var width: dynamic\n
get() = definedExternally\n set(value) = definedExternally\n var height: dynamic\n get() =
definedExternally\n set(value) = definedExternally\n var aspectRatio: dynamic\n get() =
definedExternally\n set(value) = definedExternally\n var frameRate: dynamic\n get() =
definedExternally\n set(value) = definedExternally\n var facingMode: dynamic\n get() =
definedExternally\n set(value) = definedExternally\n var resizeMode: dynamic\n get() =
definedExternally\n set(value) = definedExternally\n var volume: dynamic\n get() = definedExternally\n
set(value) = definedExternally\n var sampleRate: dynamic\n get() = definedExternally\n set(value) =
definedExternally\n var sampleSize: dynamic\n get() = definedExternally\n set(value) =

definedExternally\n   var echoCancellation: dynamic\n   get() = definedExternally\n   set(value) = definedExternally\n   var autoGainControl: dynamic\n   get() = definedExternally\n   set(value) = definedExternally\n
    var noiseSuppression: dynamic\n   get() = definedExternally\n   set(value) = definedExternally\n   var latency: dynamic\n   get() = definedExternally\n   set(value) = definedExternally\n   var channelCount: dynamic\n   get() = definedExternally\n   set(value) = definedExternally\n   var deviceId: dynamic\n   get() = definedExternally\n   set(value) = definedExternally\n   var groupId: dynamic\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun MediaTrackConstraintSet(width: dynamic = undefined, height: dynamic = undefined, aspectRatio: dynamic = undefined, frameRate: dynamic = undefined, facingMode: dynamic = undefined, resizeMode: dynamic = undefined, volume: dynamic = undefined, sampleRate: dynamic = undefined, sampleSize: dynamic = undefined, echoCancellation: dynamic = undefined, autoGainControl: dynamic = undefined, noiseSuppression: dynamic = undefined, latency:
 dynamic = undefined, channelCount: dynamic = undefined, deviceId: dynamic = undefined, groupId: dynamic = undefined): MediaTrackConstraintSet {\n   val o = js(\"({})\")\n\n   o[\"width\"] = width\n   o[\"height\"] = height\n   o[\"aspectRatio\"] = aspectRatio\n   o[\"frameRate\"] = frameRate\n   o[\"facingMode\"] = facingMode\n   o[\"resizeMode\"] = resizeMode\n   o[\"volume\"] = volume\n   o[\"sampleRate\"] = sampleRate\n   o[\"sampleSize\"] = sampleSize\n   o[\"echoCancellation\"] = echoCancellation\n   o[\"autoGainControl\"] = autoGainControl\n   o[\"noiseSuppression\"] = noiseSuppression\n   o[\"latency\"] = latency\n   o[\"channelCount\"] = channelCount\n   o[\"deviceId\"] = deviceId\n   o[\"groupId\"] = groupId\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [MediaTrackSettings](https://developer.mozilla.org/en/docs/Web/API/MediaTrackSettings) to Kotlin\n */\npublic external interface MediaTrackSettings {\n   var width: Int?\n   get() = definedExternally\n   set(value) = definedExternally\n   var height: Int?\n   get() = definedExternally\n   set(value) = definedExternally\n   var aspectRatio: Double?\n   get() = definedExternally\n   set(value) = definedExternally\n   var frameRate: Double?\n   get() = definedExternally\n   set(value) = definedExternally\n   var facingMode: String?\n   get() = definedExternally\n   set(value) = definedExternally\n   var resizeMode: String?\n   get() = definedExternally\n   set(value) = definedExternally\n   var volume: Double?\n   get() = definedExternally\n   set(value) = definedExternally\n   var sampleRate: Int?\n   get() = definedExternally\n   set(value) = definedExternally\n   var sampleSize: Int?\n   get() = definedExternally\n   set(value) = definedExternally\n   var echoCancellation: Boolean?\n   get() = definedExternally\n   set(value) = definedExternally\n   var autoGainControl:
 Boolean?\n   get() = definedExternally\n   set(value) = definedExternally\n   var noiseSuppression: Boolean?\n   get() = definedExternally\n   set(value) = definedExternally\n   var latency: Double?\n   get() = definedExternally\n   set(value) = definedExternally\n   var channelCount: Int?\n   get() = definedExternally\n   set(value) = definedExternally\n   var deviceId: String?\n   get() = definedExternally\n   set(value) = definedExternally\n   var groupId: String?\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun MediaTrackSettings(width: Int? = undefined, height: Int? = undefined, aspectRatio: Double? = undefined, frameRate: Double? = undefined, facingMode: String? = undefined, resizeMode: String? = undefined, volume: Double? = undefined, sampleRate: Int? = undefined, sampleSize: Int? = undefined, echoCancellation: Boolean? = undefined, autoGainControl:
 Boolean? = undefined, noiseSuppression: Boolean? = undefined, latency: Double? = undefined, channelCount: Int? = undefined, deviceId: String? = undefined, groupId: String? = undefined): MediaTrackSettings {\n   val o = js(\"({})\")\n\n   o[\"width\"] = width\n   o[\"height\"] = height\n   o[\"aspectRatio\"] = aspectRatio\n   o[\"frameRate\"] = frameRate\n   o[\"facingMode\"] = facingMode\n   o[\"resizeMode\"] = resizeMode\n   o[\"volume\"] = volume\n   o[\"sampleRate\"] = sampleRate\n   o[\"sampleSize\"] = sampleSize\n   o[\"echoCancellation\"] = echoCancellation\n   o[\"autoGainControl\"] = autoGainControl\n   o[\"noiseSuppression\"] = noiseSuppression\n   o[\"latency\"] = latency\n   o[\"channelCount\"] = channelCount\n

o[\"deviceId\"] = deviceId\n   o[\"groupId\"] = groupId\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [MediaStreamTrackEvent](https://developer.mozilla.org/en/docs/Web/API/MediaStreamTrackEvent) to Kotlin\n */\npublic external open class MediaStreamTrackEvent(type: String, eventInitDict: MediaStreamTrackEventInit) : Event {\n   open val track: MediaStreamTrack\n}\n\npublic external interface MediaStreamTrackEventInit : EventInit {\n   var track: MediaStreamTrack?\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun MediaStreamTrackEventInit(track: MediaStreamTrack?, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): MediaStreamTrackEventInit {\n   val o = js(\"({})\")\n\n   o[\"track\"] = track\n   o[\"bubbles\"] = bubbles\n   o[\"cancelable\"] = cancelable\n   o[\"composed\"] = composed\n\n   return o\n}\n\npublic external open class OverconstrainedErrorEvent(type: String, eventInitDict: OverconstrainedErrorEventInit) : Event {\n   open val error: dynamic\n}\n\npublic external interface OverconstrainedErrorEventInit : EventInit {\n   var error: dynamic /* = null */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun OverconstrainedErrorEventInit(error: dynamic = null, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): OverconstrainedErrorEventInit {\n   val o = js(\"({})\")\n\n   o[\"error\"] = error\n   o[\"bubbles\"] = bubbles\n   o[\"cancelable\"] = cancelable\n   o[\"composed\"] = composed\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [MediaDevices](https://developer.mozilla.org/en/docs/Web/API/MediaDevices) to Kotlin\n */\npublic external abstract class MediaDevices : EventTarget {\n   open var ondevicechange: ((Event) -> dynamic)?\n   fun enumerateDevices(): Promise<dynamic>\n   fun getSupportedConstraints(): MediaTrackSupportedConstraints\n   fun getUserMedia(constraints: MediaStreamConstraints = definedExternally): Promise<MediaStream>\n}\n\n/**\n * Exposes the JavaScript [MediaDeviceInfo](https://developer.mozilla.org/en/docs/Web/API/MediaDeviceInfo) to Kotlin\n */\npublic external abstract class MediaDeviceInfo {\n   open val deviceId: String\n   open val kind: MediaDeviceKind\n   open val label: String\n   open val groupId: String\n   fun toJSON(): dynamic\n}\n\npublic external abstract class InputDeviceInfo : MediaDeviceInfo {\n   fun getCapabilities(): MediaTrackCapabilities\n}\n\n/**\n * Exposes the JavaScript [MediaStreamConstraints](https://developer.mozilla.org/en/docs/Web/API/MediaStreamConstraints) to Kotlin\n */\npublic external interface MediaStreamConstraints {\n   var video: dynamic /* = false */\n   get() = definedExternally\n   set(value) = definedExternally\n   var audio: dynamic /* = false */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun MediaStreamConstraints(video: dynamic = false, audio: dynamic = false): MediaStreamConstraints {\n   val o = js(\"({})\")\n\n   o[\"video\"] = video\n   o[\"audio\"] = audio\n\n   return o\n}\n\npublic external interface ConstrainablePattern {\n   var onoverconstrained: ((Event) -> dynamic)?\n   fun getCapabilities(): Capabilities\n   fun getConstraints(): Constraints\n   fun getSettings(): Settings\n   fun applyConstraints(constraints: Constraints = definedExternally): Promise<Unit>\n}\n\n/**\n * Exposes the JavaScript [DoubleRange](https://developer.mozilla.org/en/docs/Web/API/DoubleRange) to Kotlin\n */\npublic external interface DoubleRange {\n   var max: Double?\n   get() = definedExternally\n   set(value) = definedExternally\n   var min: Double?\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun DoubleRange(max: Double? = undefined, min: Double? = undefined): DoubleRange {\n   val o = js(\"({})\")\n\n   o[\"max\"] = max\n   o[\"min\"] = min\n\n   return o\n}\n\npublic external interface ConstrainDoubleRange : DoubleRange {\n   var exact: Double?\n   get() = definedExternally\n   set(value) = definedExternally\n   var ideal: Double?\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun ConstrainDoubleRange(exact: Double? = undefined, ideal: Double? = undefined, max: Double? = undefined, min: Double? = undefined): ConstrainDoubleRange {\n   val o = js(\"({})\")\n\n   o[\"exact\"] = exact\n   o[\"ideal\"] = ideal\n   o[\"max\"] = max\n   o[\"min\"] = min\n\n   return o\n}\n\npublic external interface ULongRange {\n   var max: Int?\n   get() = definedExternally\n   set(value) = definedExternally\n   var min: Int?\n   get() =

definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun ULongRange(max: Int? = undefined, min: Int? = undefined): ULongRange {\n   val o = js(\"({})\")\n\n   o[\"max\"] = max\n   o[\"min\"] = min\n\n   return o\n}\n\npublic external interface ConstrainULongRange : ULongRange {\n   var exact: Int?\n   get() = definedExternally\n   set(value) = definedExternally\n   var ideal: Int?\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun ConstrainULongRange(exact: Int? = undefined, ideal: Int? = undefined, max: Int? = undefined, min: Int? = undefined): ConstrainULongRange {\n   val o = js(\"({})\")\n\n   o[\"exact\"] = exact\n   o[\"ideal\"] = ideal\n   o[\"max\"] = max\n   o[\"min\"] = min\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [ConstrainBooleanParameters](https://developer.mozilla.org/en/docs/Web/API/ConstrainBooleanParameters) to Kotlin\n */\npublic external interface ConstrainBooleanParameters {\n   var exact: Boolean?\n   get() = definedExternally\n   set(value) = definedExternally\n   var ideal: Boolean?\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun ConstrainBooleanParameters(exact: Boolean? = undefined, ideal: Boolean? = undefined): ConstrainBooleanParameters {\n   val o = js(\"({})\")\n\n   o[\"exact\"] = exact\n   o[\"ideal\"] = ideal\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [ConstrainDOMStringParameters](https://developer.mozilla.org/en/docs/Web/API/ConstrainDOMStringParameters) to Kotlin\n */\npublic external interface ConstrainDOMStringParameters {\n   var exact: dynamic\n   get() = definedExternally\n   set(value) = definedExternally\n   var ideal: dynamic\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun ConstrainDOMStringParameters(exact: dynamic = undefined, ideal: dynamic = undefined): ConstrainDOMStringParameters {\n   val o = js(\"({})\")\n\n   o[\"exact\"] = exact\n   o[\"ideal\"] = ideal\n\n   return o\n}\n\npublic external interface Capabilities {\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun Capabilities(): Capabilities {\n   val o = js(\"({})\")\n\n\n   return o\n}\n\npublic external interface Settings {\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun Settings(): Settings {\n   val o = js(\"({})\")\n\n\n   return o\n}\n\npublic external interface ConstraintSet {\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun ConstraintSet(): ConstraintSet {\n   val o = js(\"({})\")\n\n\n   return o\n}\n\npublic external interface Constraints : ConstraintSet {\n   var advanced: Array<ConstraintSet>?\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun Constraints(advanced: Array<ConstraintSet>? = undefined): Constraints {\n   val o = js(\"({})\")\n\n   o[\"advanced\"] = advanced\n\n   return o\n}\n\n/* please, don't implement this interface! */\npublic external interface MediaStreamTrackState {\n   companion object\n}\npublic inline val MediaStreamTrackState.Companion.LIVE: MediaStreamTrackState get() = \"live\".asDynamic().unsafeCast<MediaStreamTrackState>()\npublic inline val MediaStreamTrackState.Companion.ENDED: MediaStreamTrackState get() = \"ended\".asDynamic().unsafeCast<MediaStreamTrackState>()\n\n/* please, don't implement this interface! */\npublic external interface VideoFacingModeEnum {\n   companion object\n}\npublic inline val VideoFacingModeEnum.Companion.USER: VideoFacingModeEnum get() = \"user\".asDynamic().unsafeCast<VideoFacingModeEnum>()\npublic inline val VideoFacingModeEnum.Companion.ENVIRONMENT: VideoFacingModeEnum get() = \"environment\".asDynamic().unsafeCast<VideoFacingModeEnum>()\npublic inline val VideoFacingModeEnum.Companion.LEFT: VideoFacingModeEnum get() = \"left\".asDynamic().unsafeCast<VideoFacingModeEnum>()\npublic inline val VideoFacingModeEnum.Companion.RIGHT: VideoFacingModeEnum get() = \"right\".asDynamic().unsafeCast<VideoFacingModeEnum>()\n\n/* please, don't implement this interface! */\npublic external interface VideoResizeModeEnum {\n   companion object\n}\npublic inline val VideoResizeModeEnum.Companion.NONE: VideoResizeModeEnum get() = \"none\".asDynamic().unsafeCast<VideoResizeModeEnum>()\npublic inline val VideoResizeModeEnum.Companion.CROP_AND_SCALE: VideoResizeModeEnum get() = \"crop-and-

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scale\".asDynamic().unsafeCast<VideoResizeModeEnum>()\n\n/* please, don't implement this interface! */\npublic external interface MediaDeviceKind {\n    companion object\n}\npublic inline val MediaDeviceKind.Companion.AUDIOINPUT: MediaDeviceKind get() = \"audioinput\".asDynamic().unsafeCast<MediaDeviceKind>()\npublic inline val MediaDeviceKind.Companion.AUDIOOUTPUT: MediaDeviceKind get() = \"audiooutput\".asDynamic().unsafeCast<MediaDeviceKind>()\npublic inline val MediaDeviceKind.Companion.VIDEOINPUT: MediaDeviceKind get() = \"videoinput\".asDynamic().unsafeCast<MediaDeviceKind>()\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found
 in the license/LICENSE.txt file.\n */\n\n// NOTE: THIS FILE IS AUTO-GENERATED, DO NOT EDIT!\n// See libraries/tools/idl2k for details\n\n@file:Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npackage org.w3c.dom.pointerevents\n\nimport kotlin.js.*\nimport org.khronos.webgl.*\nimport org.w3c.css.masking.*\nimport org.w3c.dom.*\nimport org.w3c.dom.clipboard.*\nimport org.w3c.dom.css.*\nimport org.w3c.dom.events.*\nimport org.w3c.dom.mediacapture.*\nimport org.w3c.dom.parsing.*\nimport org.w3c.dom.svg.*\nimport org.w3c.dom.url.*\nimport org.w3c.fetch.*\nimport org.w3c.files.*\nimport org.w3c.notifications.*\nimport org.w3c.performance.*\nimport org.w3c.workers.*\nimport org.w3c.xhr.*\n\npublic external interface PointerEventInit : MouseEventInit {\n    var pointerId: Int? /* = 0 */\n        get() = definedExternally\n        set(value) = definedExternally\n    var width: Double? /* = 1.0 */\n        get() = definedExternally\n        set(value) = definedExternally\n    var height: Double?
 /* = 1.0 */\n        get() = definedExternally\n        set(value) = definedExternally\n    var pressure: Float? /* = 0f */\n        get() = definedExternally\n        set(value) = definedExternally\n    var tangentialPressure: Float? /* = 0f */\n        get() = definedExternally\n        set(value) = definedExternally\n    var tiltX: Int? /* = 0 */\n        get() = definedExternally\n        set(value) = definedExternally\n    var tiltY: Int? /* = 0 */\n        get() = definedExternally\n        set(value) = definedExternally\n    var twist: Int? /* = 0 */\n        get() = definedExternally\n        set(value) = definedExternally\n    var pointerType: String? /* = \"\" */\n        get() = definedExternally\n        set(value) = definedExternally\n    var isPrimary: Boolean? /* = false */\n        get() = definedExternally\n        set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun PointerEventInit(pointerId: Int? = 0, width: Double? = 1.0, height: Double?
 = 1.0, pressure: Float? = 0f, tangentialPressure: Float? = 0f, tiltX: Int? = 0, tiltY: Int? = 0, twist: Int? = 0, pointerType: String? = \"\", isPrimary: Boolean? = false, screenX: Int? = 0, screenY: Int? = 0, clientX: Int? = 0, clientY: Int? = 0, button: Short? = 0, buttons: Short? = 0, relatedTarget: EventTarget? = null, ctrlKey: Boolean? = false, shiftKey: Boolean? = false, altKey: Boolean? = false, metaKey: Boolean? = false, modifierAltGraph: Boolean? = false, modifierCapsLock: Boolean? = false, modifierFn: Boolean? = false, modifierFnLock: Boolean? = false, modifierHyper: Boolean? = false, modifierNumLock: Boolean? = false, modifierScrollLock: Boolean? = false, modifierSuper: Boolean? = false, modifierSymbol: Boolean? = false, modifierSymbolLock: Boolean? = false, view: Window? = null, detail: Int? = 0, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): PointerEventInit {\n    val o = js(\"({})\")\n\n    o[\"pointerId\"] = pointerId\n    o[\"width\"]
 = width\n    o[\"height\"] = height\n    o[\"pressure\"] = pressure\n    o[\"tangentialPressure\"] = tangentialPressure\n    o[\"tiltX\"] = tiltX\n    o[\"tiltY\"] = tiltY\n    o[\"twist\"] = twist\n    o[\"pointerType\"] = pointerType\n    o[\"isPrimary\"] = isPrimary\n    o[\"screenX\"] = screenX\n    o[\"screenY\"] = screenY\n    o[\"clientX\"] = clientX\n    o[\"clientY\"] = clientY\n    o[\"button\"] = button\n    o[\"buttons\"] = buttons\n    o[\"relatedTarget\"] = relatedTarget\n    o[\"ctrlKey\"] = ctrlKey\n    o[\"shiftKey\"] = shiftKey\n    o[\"altKey\"] = altKey\n    o[\"metaKey\"] = metaKey\n    o[\"modifierAltGraph\"] = modifierAltGraph\n    o[\"modifierCapsLock\"] = modifierCapsLock\n    o[\"modifierFn\"] = modifierFn\n    o[\"modifierFnLock\"] = modifierFnLock\n    o[\"modifierHyper\"] = modifierHyper\n    o[\"modifierNumLock\"] = modifierNumLock\n    o[\"modifierScrollLock\"] = modifierScrollLock\n    o[\"modifierSuper\"] = modifierSuper\n    o[\"modifierSymbol\"]
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= modifierSymbol\n o[\"modifierSymbolLock\"] = modifierSymbolLock\n o[\"view\"] = view\n o[\"detail\"] = detail\n o[\"bubbles\"] = bubbles\n o[\"cancelable\"] = cancelable\n o[\"composed\"] = composed\n\n return o\n}\n\n/**\n * Exposes the JavaScript [PointerEvent](https://developer.mozilla.org/en/docs/Web/API/PointerEvent) to Kotlin\n */\npublic external open class PointerEvent(type: String, eventInitDict: PointerEventInit = definedExternally) : MouseEvent {\n open val pointerId: Int\n open val width: Double\n open val height: Double\n open val pressure: Float\n open val tangentialPressure: Float\n open val tiltX: Int\n open val tiltY: Int\n open val twist: Int\n open val pointerType: String\n open val isPrimary: Boolean\n}\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n// NOTE: THIS FILE IS AUTO-GENERATED,
DO NOT EDIT!\n// See libraries/tools/idl2k for details\n\n@file:Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npackage org.w3c.dom.svg\n\nimport kotlin.js.*\nimport org.khronos.webgl.*\nimport org.w3c.css.masking.*\nimport org.w3c.dom.*\nimport org.w3c.dom.clipboard.*\nimport org.w3c.dom.css.*\nimport org.w3c.dom.events.*\nimport org.w3c.dom.mediacapture.*\nimport org.w3c.dom.parsing.*\nimport org.w3c.dom.pointerevents.*\nimport org.w3c.dom.url.*\nimport org.w3c.fetch.*\nimport org.w3c.files.*\nimport org.w3c.notifications.*\nimport org.w3c.performance.*\nimport org.w3c.workers.*\nimport org.w3c.xhr.*\n\n/**\n * Exposes the JavaScript [SVGElement](https://developer.mozilla.org/en/docs/Web/API/SVGElement) to Kotlin\n */\npublic external abstract class SVGElement : Element, ElementCSSInlineStyle, GlobalEventHandlers, SVGElementInstance {\n open val dataset: DOMStringMap\n open val ownerSVGElement: SVGSVGElement?\n open val viewportElement: SVGElement?\n open var tabIndex: Int\n fun focus(): Unit\n fun blur(): Unit\n}\n\npublic external interface SVGBoundingBoxOptions {\n var fill: Boolean? /* = true */\n get() = definedExternally\n set(value) = definedExternally\n var stroke: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n var markers: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n var clipped: Boolean? /* = false */\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun SVGBoundingBoxOptions(fill: Boolean? = true, stroke: Boolean? = false, markers: Boolean? = false, clipped: Boolean? = false): SVGBoundingBoxOptions {\n val o = js(\"({})\")\n\n o[\"fill\"] = fill\n o[\"stroke\"] = stroke\n o[\"markers\"] = markers\n o[\"clipped\"] = clipped\n\n return o\n}\n\n/**\n * Exposes the JavaScript [SVGGraphicsElement](https://developer.mozilla.org/en/docs/Web/API/SVGGraphicsElement) to Kotlin\n */\npublic external abstract class SVGGraphicsElement : SVGElement, SVGTests {\n open val transform: SVGAnimatedTransformList\n fun getBBox(options: SVGBoundingBoxOptions = definedExternally): DOMRect\n fun getCTM(): DOMMatrix?\n fun getScreenCTM(): DOMMatrix?\n}\n\n/**\n * Exposes the JavaScript [SVGGeometryElement](https://developer.mozilla.org/en/docs/Web/API/SVGGeometryElement) to Kotlin\n */\npublic external abstract class SVGGeometryElement : SVGGraphicsElement {\n open val pathLength: SVGAnimatedNumber\n fun isPointInFill(point: DOMPoint): Boolean\n fun isPointInStroke(point: DOMPoint): Boolean\n fun getTotalLength(): Float\n fun getPointAtLength(distance: Float): DOMPoint\n}\n\n/**\n * Exposes the JavaScript [SVGNumber](https://developer.mozilla.org/en/docs/Web/API/SVGNumber) to Kotlin\n */\npublic external abstract class SVGNumber {\n open var value: Float\n}\n\n/**\n * Exposes the JavaScript [SVGLength](https://developer.mozilla.org/en/docs/Web/API/SVGLength) to Kotlin\n */\npublic external abstract class SVGLength {\n open val unitType: Short\n open var value: Float\n open var valueInSpecifiedUnits: Float\n open var valueAsString: String\n fun newValueSpecifiedUnits(unitType: Short, valueInSpecifiedUnits: Float): Unit\n fun convertToSpecifiedUnits(unitType: Short): Unit\n\n companion object {\n val SVG_LENGTHTYPE_UNKNOWN: Short\n val SVG_LENGTHTYPE_NUMBER: Short\n val SVG_LENGTHTYPE_PERCENTAGE: Short\n val SVG_LENGTHTYPE_EMS: Short\n val SVG_LENGTHTYPE_EXS: Short\n val SVG_LENGTHTYPE_PX: Short\n val

SVG_LENGTHTYPE_CM: Short\n val SVG_LENGTHTYPE_MM: Short\n val SVG_LENGTHTYPE_IN: Short\n val SVG_LENGTHTYPE_PT: Short\n val SVG_LENGTHTYPE_PC: Short\n }\n}\n\n/**\n * Exposes the JavaScript [SVGAngle](https://developer.mozilla.org/en/docs/Web/API/SVGAngle) to Kotlin\n */\npublic external abstract class SVGAngle {\n open val unitType: Short\n open var value: Float\n open var valueInSpecifiedUnits: Float\n open var valueAsString: String\n fun newValueSpecifiedUnits(unitType: Short, valueInSpecifiedUnits: Float): Unit\n fun convertToSpecifiedUnits(unitType: Short): Unit\n\n companion object {\n val SVG_ANGLETYPE_UNKNOWN: Short\n val SVG_ANGLETYPE_UNSPECIFIED: Short\n val SVG_ANGLETYPE_DEG: Short\n val SVG_ANGLETYPE_RAD: Short\n val SVG_ANGLETYPE_GRAD: Short\n }\n}\n\npublic external abstract class SVGNameList {\n open val length: Int\n open val numberOfItems: Int\n fun clear(): Unit\n fun initialize(newItem: dynamic): dynamic\n fun getItem(index: Int): dynamic\n fun insertItemBefore(newItem: dynamic, index: Int): dynamic\n fun replaceItem(newItem: dynamic, index: Int): dynamic\n fun removeItem(index: Int): dynamic\n fun appendItem(newItem: dynamic): dynamic\n}\n@kotlin.internal.InlineOnly inline operator fun SVGNameList.get(index: Int): dynamic = asDynamic()[index]\n@kotlin.internal.InlineOnly inline operator fun SVGNameList.set(index: Int, newItem: dynamic): Unit { asDynamic()[index] = newItem; }\n\n/**\n * Exposes the JavaScript [SVGNumberList](https://developer.mozilla.org/en/docs/Web/API/SVGNumberList) to Kotlin\n */\npublic external abstract class SVGNumberList {\n open val length: Int\n open val numberOfItems: Int\n fun clear(): Unit\n fun initialize(newItem: SVGNumber): SVGNumber\n fun getItem(index: Int): SVGNumber\n fun insertItemBefore(newItem: SVGNumber, index: Int): SVGNumber\n fun replaceItem(newItem: SVGNumber, index: Int): SVGNumber\n fun removeItem(index: Int): SVGNumber\n fun appendItem(newItem: SVGNumber): SVGNumber\n}\n@kotlin.internal.InlineOnly inline operator fun SVGNumberList.get(index: Int): SVGNumber? = asDynamic()[index]\n@kotlin.internal.InlineOnly inline operator fun SVGNumberList.set(index: Int, newItem: SVGNumber): Unit { asDynamic()[index] = newItem; }\n\n/**\n * Exposes the JavaScript [SVGLengthList](https://developer.mozilla.org/en/docs/Web/API/SVGLengthList) to Kotlin\n */\npublic external abstract class SVGLengthList {\n open val length: Int\n open val numberOfItems: Int\n fun clear(): Unit\n fun initialize(newItem: SVGLength): SVGLength\n fun getItem(index: Int): SVGLength\n fun insertItemBefore(newItem: SVGLength, index: Int): SVGLength\n fun replaceItem(newItem: SVGLength, index: Int): SVGLength\n fun removeItem(index: Int): SVGLength\n fun appendItem(newItem: SVGLength): SVGLength\n}\n@kotlin.internal.InlineOnly inline operator fun SVGLengthList.get(index: Int): SVGLength? = asDynamic()[index]\n@kotlin.internal.InlineOnly inline operator fun SVGLengthList.set(index: Int, newItem: SVGLength): Unit { asDynamic()[index] = newItem; }\n\n/**\n * Exposes the JavaScript [SVGAnimatedBoolean](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedBoolean) to Kotlin\n */\npublic external abstract class SVGAnimatedBoolean {\n open var baseVal: Boolean\n open val animVal: Boolean\n}\n\n/**\n * Exposes the JavaScript [SVGAnimatedEnumeration](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedEnumeration) to Kotlin\n */\npublic external abstract class SVGAnimatedEnumeration {\n open var baseVal: Short\n open val animVal: Short\n}\n\n/**\n * Exposes the JavaScript [SVGAnimatedInteger](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedInteger) to Kotlin\n */\npublic external abstract class SVGAnimatedInteger {\n open var baseVal: Int\n open val animVal: Int\n}\n\n/**\n * Exposes the JavaScript [SVGAnimatedNumber](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedNumber) to Kotlin\n */\npublic external abstract class SVGAnimatedNumber {\n open var baseVal: Float\n open val animVal: Float\n}\n\n/**\n * Exposes the JavaScript [SVGAnimatedLength](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedLength) to Kotlin\n */\npublic external abstract class SVGAnimatedLength {\n open val baseVal: SVGLength\n open val animVal: SVGLength\n}\n\n/**\n * Exposes the JavaScript

[SVGAnimatedAngle](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedAngle) to Kotlin\n */\npublic external abstract class SVGAnimatedAngle {\n open val baseVal: SVGAngle\n open val animVal: SVGAngle\n}\n\n/**\n * Exposes the JavaScript [SVGAnimatedString](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedString) to Kotlin\n */\npublic external abstract class SVGAnimatedString {\n open var baseVal: String\n open val animVal: String\n}\n\n/**\n * Exposes the JavaScript [SVGAnimatedRect](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedRect) to Kotlin\n */\npublic external abstract class SVGAnimatedRect {\n open val baseVal: DOMRect\n open val animVal: DOMRectReadOnly\n}\n\n/**\n * Exposes the JavaScript [SVGAnimatedNumberList](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedNumberList) to Kotlin\n */\npublic external abstract class SVGAnimatedNumberList {\n open val baseVal: SVGNumberList\n open val animVal: SVGNumberList\n}\n\n/**\n * Exposes the JavaScript [SVGAnimatedLengthList](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedLengthList) to Kotlin\n */\npublic external abstract class SVGAnimatedLengthList {\n open val baseVal: SVGLengthList\n open val animVal: SVGLengthList\n}\n\n/**\n * Exposes the JavaScript [SVGStringList](https://developer.mozilla.org/en/docs/Web/API/SVGStringList) to Kotlin\n */\npublic external abstract class SVGStringList {\n open val length: Int\n open val numberOfItems: Int\n fun clear(): Unit\n fun initialize(newItem: String): String\n fun getItem(index: Int): String\n fun insertItemBefore(newItem: String, index: Int): String\n fun replaceItem(newItem: String, index: Int): String\n fun removeItem(index: Int): String\n fun appendItem(newItem: String): String\n}\n@kotlin.internal.InlineOnly inline operator fun SVGStringList.get(index: Int): String? = asDynamic()[index]\n@kotlin.internal.InlineOnly inline operator fun SVGStringList.set(index: Int, newItem: String): Unit { asDynamic()[index] = newItem; }\n\n/**\n * Exposes the JavaScript [SVGUnitTypes](https://developer.mozilla.org/en/docs/Web/API/SVGUnitTypes) to Kotlin\n */\npublic external interface SVGUnitTypes {\n\n companion object {\n val SVG_UNIT_TYPE_UNKNOWN: Short\n val SVG_UNIT_TYPE_USERSPACEONUSE: Short\n val SVG_UNIT_TYPE_OBJECTBOUNDINGBOX: Short\n }\n}\n\n/**\n * Exposes the JavaScript [SVGTests](https://developer.mozilla.org/en/docs/Web/API/SVGTests) to Kotlin\n */\npublic external interface SVGTests {\n val requiredExtensions: SVGStringList\n val systemLanguage: SVGStringList\n}\n\npublic external interface SVGFitToViewBox {\n val viewBox: SVGAnimatedRect\n val preserveAspectRatio: SVGAnimatedPreserveAspectRatio\n}\n\n/**\n * Exposes the JavaScript [SVGZoomAndPan](https://developer.mozilla.org/en/docs/Web/API/SVGZoomAndPan) to Kotlin\n */\npublic external interface SVGZoomAndPan {\n var zoomAndPan: Short\n\n companion object {\n val SVG_ZOOMANDPAN_UNKNOWN: Short\n val SVG_ZOOMANDPAN_DISABLE: Short\n val SVG_ZOOMANDPAN_MAGNIFY: Short\n }\n}\n\n/**\n * Exposes the JavaScript [SVGURIReference](https://developer.mozilla.org/en/docs/Web/API/SVGURIReference) to Kotlin\n */\npublic external interface SVGURIReference {\n val href: SVGAnimatedString\n}\n\n/**\n * Exposes the JavaScript [SVGSVGElement](https://developer.mozilla.org/en/docs/Web/API/SVGSVGElement) to Kotlin\n */\npublic external abstract class SVGSVGElement : SVGGraphicsElement, SVGFitToViewBox, SVGZoomAndPan, WindowEventHandlers {\n open val x: SVGAnimatedLength\n open val y: SVGAnimatedLength\n open val width: SVGAnimatedLength\n open val height: SVGAnimatedLength\n open var currentScale: Float\n open val currentTranslate: DOMPointReadOnly\n fun getIntersectionList(rect: DOMRectReadOnly, referenceElement: SVGElement?): NodeList\n fun getEnclosureList(rect: DOMRectReadOnly, referenceElement: SVGElement?): NodeList\n fun checkIntersection(element: SVGElement, rect: DOMRectReadOnly): Boolean\n fun checkEnclosure(element: SVGElement, rect: DOMRectReadOnly): Boolean\n fun deselectAll(): Unit\n fun createSVGNumber(): SVGNumber\n fun createSVGLength(): SVGLength\n fun createSVGAngle(): SVGAngle\n fun createSVGPoint(): DOMPoint\n fun createSVGMatrix(): DOMMatrix\n fun createSVGRect(): DOMRect\n fun createSVGTransform(): SVGTransform\n fun createSVGTransformFromMatrix(matrix:

DOMMatrixReadOnly): SVGTransform\n fun getElementById(elementId: String): Element\n fun suspendRedraw(maxWaitMilliseconds: Int): Int\n fun unsuspendRedraw(suspendHandleID: Int): Unit\n fun unsuspendRedrawAll(): Unit\n fun forceRedraw(): Unit\n\n companion object {\n val SVG_ZOOMANDPAN_UNKNOWN: Short\n val SVG_ZOOMANDPAN_DISABLE: Short\n val SVG_ZOOMANDPAN_MAGNIFY: Short\n }\n}\n\n/**\n * Exposes the JavaScript [SVGGElement](https://developer.mozilla.org/en/docs/Web/API/SVGGElement) to Kotlin\n */\npublic external abstract class SVGGElement : SVGGraphicsElement {\n}\n\npublic external abstract class SVGUnknownElement : SVGGraphicsElement {\n}\n\n/**\n * Exposes the JavaScript [SVGDefsElement](https://developer.mozilla.org/en/docs/Web/API/SVGDefsElement) to Kotlin\n */\npublic external abstract class SVGDefsElement : SVGGraphicsElement {\n}\n\n/**\n * Exposes the JavaScript [SVGDescElement](https://developer.mozilla.org/en/docs/Web/API/SVGDescElement) to Kotlin\n */\npublic external abstract class SVGDescElement : SVGElement {\n}\n\n/**\n * Exposes the JavaScript [SVGMetadataElement](https://developer.mozilla.org/en/docs/Web/API/SVGMetadataElement) to Kotlin\n */\npublic external abstract class SVGMetadataElement : SVGElement {\n}\n\n/**\n * Exposes the JavaScript [SVGTitleElement](https://developer.mozilla.org/en/docs/Web/API/SVGTitleElement) to Kotlin\n */\npublic external abstract class SVGTitleElement : SVGElement {\n}\n\n/**\n * Exposes the JavaScript [SVGSymbolElement](https://developer.mozilla.org/en/docs/Web/API/SVGSymbolElement) to Kotlin\n */\npublic external abstract class SVGSymbolElement : SVGGraphicsElement, SVGFitToViewBox {\n}\n\n/**\n * Exposes the JavaScript [SVGUseElement](https://developer.mozilla.org/en/docs/Web/API/SVGUseElement) to Kotlin\n */\npublic external abstract class SVGUseElement : SVGGraphicsElement, SVGURIReference {\n open val x: SVGAnimatedLength\n open val y: SVGAnimatedLength\n open val width: SVGAnimatedLength\n open val height: SVGAnimatedLength\n open val instanceRoot: SVGElement?\n open val animatedInstanceRoot: SVGElement?\n}\n\npublic external open class SVGUseElementShadowRoot : ShadowRoot {\n override fun getElementById(elementId: String): Element?\n override fun prepend(vararg nodes: dynamic): Unit\n override fun append(vararg nodes: dynamic): Unit\n override fun querySelector(selectors: String): Element?\n override fun querySelectorAll(selectors: String): NodeList\n}\n\npublic external interface SVGElementInstance {\n val correspondingElement: SVGElement?\n val correspondingUseElement: SVGUseElement?\n}\n\npublic external open class ShadowAnimation(source: dynamic, newTarget: dynamic) {\n open val sourceAnimation: dynamic\n}\n\n/**\n * Exposes the JavaScript [SVGSwitchElement](https://developer.mozilla.org/en/docs/Web/API/SVGSwitchElement) to Kotlin\n */\npublic external abstract class SVGSwitchElement : SVGGraphicsElement {\n}\n\npublic external interface GetSVGDocument {\n fun getSVGDocument(): Document\n}\n\n/**\n * Exposes the JavaScript [SVGStyleElement](https://developer.mozilla.org/en/docs/Web/API/SVGStyleElement) to Kotlin\n */\npublic external abstract class SVGStyleElement : SVGElement, LinkStyle {\n open var type: String\n open var media: String\n open var title: String\n}\n\n/**\n * Exposes the JavaScript [SVGTransform](https://developer.mozilla.org/en/docs/Web/API/SVGTransform) to Kotlin\n */\npublic external abstract class SVGTransform {\n open val type: Short\n open val matrix: DOMMatrix\n open val angle: Float\n fun setMatrix(matrix: DOMMatrixReadOnly): Unit\n fun setTranslate(tx: Float, ty: Float): Unit\n fun setScale(sx: Float, sy: Float): Unit\n fun setRotate(angle: Float, cx: Float, cy: Float): Unit\n fun setSkewX(angle: Float): Unit\n fun setSkewY(angle: Float): Unit\n\n companion object {\n val SVG_TRANSFORM_UNKNOWN: Short\n val SVG_TRANSFORM_MATRIX: Short\n val SVG_TRANSFORM_TRANSLATE: Short\n val SVG_TRANSFORM_SCALE: Short\n val SVG_TRANSFORM_ROTATE: Short\n val SVG_TRANSFORM_SKEWX: Short\n val SVG_TRANSFORM_SKEWY: Short\n }\n}\n\n/**\n * Exposes the JavaScript [SVGTransformList](https://developer.mozilla.org/en/docs/Web/API/SVGTransformList) to Kotlin\n */\npublic external abstract class SVGTransformList {\n open val length: Int\n open val numberOfItems: Int\n fun clear(): Unit\n fun initialize(newItem: SVGTransform): SVGTransform\n fun getItem(index: Int): SVGTransform\n fun insertItemBefore(newItem: SVGTransform, index: Int):

SVGTransform\n   fun replaceItem(newItem: SVGTransform, index: Int): SVGTransform\n   fun removeItem(index: Int): SVGTransform\n   fun appendItem(newItem: SVGTransform): SVGTransform\n   fun createSVGTransformFromMatrix(matrix: DOMMatrixReadOnly): SVGTransform\n   fun consolidate(): SVGTransform?\n}\n@kotlin.internal.InlineOnly inline operator fun SVGTransformList.get(index: Int): SVGTransform? = asDynamic()[index]\n@kotlin.internal.InlineOnly inline operator fun SVGTransformList.set(index: Int, newItem: SVGTransform): Unit { asDynamic()[index] = newItem; }\n\n/**\n * Exposes the JavaScript [SVGAnimatedTransformList](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedTransformList) to Kotlin\n */\npublic external abstract class SVGAnimatedTransformList {\n   open val baseVal: SVGTransformList\n   open val animVal: SVGTransformList\n}\n\n/**\n * Exposes the JavaScript [SVGPreserveAspectRatio](https://developer.mozilla.org/en/docs/Web/API/SVGPreserveAspectRatio) to Kotlin\n */\npublic external abstract class SVGPreserveAspectRatio {\n   open var align: Short\n   open var meetOrSlice: Short\n\n   companion object {\n   val SVG_PRESERVEASPECTRATIO_UNKNOWN: Short\n   val SVG_PRESERVEASPECTRATIO_NONE: Short\n   val SVG_PRESERVEASPECTRATIO_XMINYMIN: Short\n   val SVG_PRESERVEASPECTRATIO_XMIDYMIN: Short\n   val SVG_PRESERVEASPECTRATIO_XMAXYMIN: Short\n   val SVG_PRESERVEASPECTRATIO_XMINYMID: Short\n   val SVG_PRESERVEASPECTRATIO_XMIDYMID: Short\n   val SVG_PRESERVEASPECTRATIO_XMAXYMID: Short\n   val SVG_PRESERVEASPECTRATIO_XMINYMAX: Short\n   val SVG_PRESERVEASPECTRATIO_XMIDYMAX: Short\n   val SVG_PRESERVEASPECTRATIO_XMAXYMAX: Short\n   val SVG_MEETORSLICE_UNKNOWN: Short\n   val SVG_MEETORSLICE_MEET: Short\n   val SVG_MEETORSLICE_SLICE: Short\n   }\n}\n\n/**\n * Exposes the JavaScript [SVGAnimatedPreserveAspectRatio](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedPreserveAspectRatio) to Kotlin\n */\npublic external abstract class SVGAnimatedPreserveAspectRatio {\n   open val baseVal: SVGPreserveAspectRatio\n   open val animVal: SVGPreserveAspectRatio\n}\n\n/**\n * Exposes the JavaScript [SVGPathElement](https://developer.mozilla.org/en/docs/Web/API/SVGPathElement) to Kotlin\n */\npublic external abstract class SVGPathElement : SVGGeometryElement {\n}\n\n/**\n * Exposes the JavaScript [SVGRectElement](https://developer.mozilla.org/en/docs/Web/API/SVGRectElement) to Kotlin\n */\npublic external abstract class SVGRectElement : SVGGeometryElement {\n   open val x: SVGAnimatedLength\n   open val y: SVGAnimatedLength\n   open val width: SVGAnimatedLength\n   open val height: SVGAnimatedLength\n   open val rx: SVGAnimatedLength\n   open val ry: SVGAnimatedLength\n}\n\n/**\n * Exposes the JavaScript [SVGCircleElement](https://developer.mozilla.org/en/docs/Web/API/SVGCircleElement) to Kotlin\n */\npublic external abstract class SVGCircleElement : SVGGeometryElement {\n   open val cx: SVGAnimatedLength\n   open val cy: SVGAnimatedLength\n   open val r: SVGAnimatedLength\n}\n\n/**\n * Exposes the JavaScript [SVGEllipseElement](https://developer.mozilla.org/en/docs/Web/API/SVGEllipseElement) to Kotlin\n */\npublic external abstract class SVGEllipseElement : SVGGeometryElement {\n   open val cx: SVGAnimatedLength\n   open val cy: SVGAnimatedLength\n   open val rx: SVGAnimatedLength\n   open val ry: SVGAnimatedLength\n}\n\n/**\n * Exposes the JavaScript [SVGLineElement](https://developer.mozilla.org/en/docs/Web/API/SVGLineElement) to Kotlin\n */\npublic external abstract class SVGLineElement : SVGGeometryElement {\n   open val x1: SVGAnimatedLength\n   open val y1: SVGAnimatedLength\n   open val x2: SVGAnimatedLength\n   open val y2: SVGAnimatedLength\n}\n\n/**\n * Exposes the JavaScript [SVGMeshElement](https://developer.mozilla.org/en/docs/Web/API/SVGMeshElement) to Kotlin\n */\npublic external abstract class SVGMeshElement : SVGGeometryElement, SVGURIReference {\n}\n\n/**\n * Exposes the JavaScript [SVGAnimatedPoints](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedPoints) to Kotlin\n */\npublic

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external interface SVGAnimatedPoints {\n    val points: SVGPointList\n    val animatedPoints:
SVGPointList\n}\n\npublic external abstract class SVGPointList {\n    open val length: Int\n    open val
numberOfItems: Int\n    fun clear(): Unit\n    fun initialize(newItem: DOMPoint): DOMPoint\n    fun getItem(index:
Int): DOMPoint\n    fun insertItemBefore(newItem: DOMPoint, index: Int): DOMPoint\n    fun
replaceItem(newItem: DOMPoint,
 index: Int): DOMPoint\n    fun removeItem(index: Int): DOMPoint\n    fun appendItem(newItem: DOMPoint):
DOMPoint\n}\n@kotlin.internal.InlineOnly inline operator fun SVGPointList.get(index: Int): DOMPoint? =
asDynamic()[index]\n@kotlin.internal.InlineOnly inline operator fun SVGPointList.set(index: Int, newItem:
DOMPoint): Unit { asDynamic()[index] = newItem; }\n\n/**\n * Exposes the JavaScript
[SVGPolylineElement](https://developer.mozilla.org/en/docs/Web/API/SVGPolylineElement) to Kotlin\n
*/\npublic external abstract class SVGPolylineElement : SVGGeometryElement, SVGAnimatedPoints {\n}\n\n/**\n
* Exposes the JavaScript
[SVGPolygonElement](https://developer.mozilla.org/en/docs/Web/API/SVGPolygonElement) to Kotlin\n
*/\npublic external abstract class SVGPolygonElement : SVGGeometryElement, SVGAnimatedPoints {\n}\n\n/**\n
* Exposes the JavaScript
[SVGTextContentElement](https://developer.mozilla.org/en/docs/Web/API/SVGTextContentElement) to Kotlin\n
*/\npublic external abstract class SVGTextContentElement
 : SVGGraphicsElement {\n    open val textLength: SVGAnimatedLength\n    open val lengthAdjust:
SVGAnimatedEnumeration\n    fun getNumberOfChars(): Int\n    fun getComputedTextLength(): Float\n    fun
getSubStringLength(charnum: Int, nchars: Int): Float\n    fun getStartPositionOfChar(charnum: Int): DOMPoint\n
fun getEndPositionOfChar(charnum: Int): DOMPoint\n    fun getExtentOfChar(charnum: Int): DOMRect\n    fun
getRotationOfChar(charnum: Int): Float\n    fun getCharNumAtPosition(point: DOMPoint): Int\n    fun
selectSubString(charnum: Int, nchars: Int): Unit\n\n    companion object {\n        val
LENGTHADJUST_UNKNOWN: Short\n        val LENGTHADJUST_SPACING: Short\n        val
LENGTHADJUST_SPACINGANDGLYPHS: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[SVGTextPositioningElement](https://developer.mozilla.org/en/docs/Web/API/SVGTextPositioningElement) to
Kotlin\n */\npublic external abstract class SVGTextPositioningElement : SVGTextContentElement {\n    open
 val x: SVGAnimatedLengthList\n    open val y: SVGAnimatedLengthList\n    open val dx:
SVGAnimatedLengthList\n    open val dy: SVGAnimatedLengthList\n    open val rotate:
SVGAnimatedNumberList\n}\n\n/**\n * Exposes the JavaScript
[SVGTextElement](https://developer.mozilla.org/en/docs/Web/API/SVGTextElement) to Kotlin\n */\npublic
external abstract class SVGTextElement : SVGTextPositioningElement {\n}\n\n/**\n * Exposes the JavaScript
[SVGTSpanElement](https://developer.mozilla.org/en/docs/Web/API/SVGTSpanElement) to Kotlin\n */\npublic
external abstract class SVGTSpanElement : SVGTextPositioningElement {\n}\n\n/**\n * Exposes the JavaScript
[SVGTextPathElement](https://developer.mozilla.org/en/docs/Web/API/SVGTextPathElement) to Kotlin\n
*/\npublic external abstract class SVGTextPathElement : SVGTextContentElement, SVGURIReference {\n    open
val startOffset: SVGAnimatedLength\n    open val method: SVGAnimatedEnumeration\n    open val spacing:
SVGAnimatedEnumeration\n\n    companion object
 {\n        val TEXTPATH_METHODTYPE_UNKNOWN: Short\n        val TEXTPATH_METHODTYPE_ALIGN:
Short\n        val TEXTPATH_METHODTYPE_STRETCH: Short\n        val
TEXTPATH_SPACINGTYPE_UNKNOWN: Short\n        val TEXTPATH_SPACINGTYPE_AUTO: Short\n
val TEXTPATH_SPACINGTYPE_EXACT: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[SVGImageElement](https://developer.mozilla.org/en/docs/Web/API/SVGImageElement) to Kotlin\n */\npublic
external abstract class SVGImageElement : SVGGraphicsElement, SVGURIReference,
HTMLOrSVGImageElement {\n    open val x: SVGAnimatedLength\n    open val y: SVGAnimatedLength\n    open
val width: SVGAnimatedLength\n    open val height: SVGAnimatedLength\n    open val preserveAspectRatio:
SVGAnimatedPreserveAspectRatio\n    open var crossOrigin: String?\n}\n\n/**\n * Exposes the JavaScript
[SVGForeignObjectElement](https://developer.mozilla.org/en/docs/Web/API/SVGForeignObjectElement) to
```

Kotlin\n */\npublic external abstract class SVGForeignObjectElement :
SVGGraphicsElement {\n open val x: SVGAnimatedLength\n open val y: SVGAnimatedLength\n open val
width: SVGAnimatedLength\n open val height: SVGAnimatedLength\n}\n\npublic external abstract class
SVGMarkerElement : SVGElement, SVGFitToViewBox {\n open val refX: SVGAnimatedLength\n open val
refY: SVGAnimatedLength\n open val markerUnits: SVGAnimatedEnumeration\n open val markerWidth:
SVGAnimatedLength\n open val markerHeight: SVGAnimatedLength\n open val orientType:
SVGAnimatedEnumeration\n open val orientAngle: SVGAnimatedAngle\n open var orient: String\n fun
setOrientToAuto(): Unit\n fun setOrientToAngle(angle: SVGAngle): Unit\n\n companion object {\n val
SVG_MARKERUNITS_UNKNOWN: Short\n val SVG_MARKERUNITS_USERSPACEONUSE: Short\n
val SVG_MARKERUNITS_STROKEWIDTH: Short\n val SVG_MARKER_ORIENT_UNKNOWN: Short\n
val SVG_MARKER_ORIENT_AUTO: Short\n val SVG_MARKER_ORIENT_ANGLE: Short\n
}\n}\n\n/**\n *
Exposes the JavaScript
[SVGSolidcolorElement](https://developer.mozilla.org/en/docs/Web/API/SVGSolidcolorElement) to Kotlin\n
*/\npublic external abstract class SVGSolidcolorElement : SVGElement {\n}\n\n/**\n * Exposes the JavaScript
[SVGGradientElement](https://developer.mozilla.org/en/docs/Web/API/SVGGradientElement) to Kotlin\n
*/\npublic external abstract class SVGGradientElement : SVGElement, SVGURIReference, SVGUnitTypes {\n
open val gradientUnits: SVGAnimatedEnumeration\n open val gradientTransform: SVGAnimatedTransformList\n
open val spreadMethod: SVGAnimatedEnumeration\n\n companion object {\n val
SVG_SPREADMETHOD_UNKNOWN: Short\n val SVG_SPREADMETHOD_PAD: Short\n val
SVG_SPREADMETHOD_REFLECT: Short\n val SVG_SPREADMETHOD_REPEAT: Short\n val
SVG_UNIT_TYPE_UNKNOWN: Short\n val SVG_UNIT_TYPE_USERSPACEONUSE: Short\n val
SVG_UNIT_TYPE_OBJECTBOUNDINGBOX: Short\n }\n}\n\n/**\n * Exposes the JavaScript
[SVGLinearGradientElement](https://developer.mozilla.org/en/docs/Web/API/SVGLinearGradientElement)
to Kotlin\n */\npublic external abstract class SVGLinearGradientElement : SVGGradientElement {\n open val x1:
SVGAnimatedLength\n open val y1: SVGAnimatedLength\n open val x2: SVGAnimatedLength\n open val
y2: SVGAnimatedLength\n}\n\n/**\n * Exposes the JavaScript
[SVGRadialGradientElement](https://developer.mozilla.org/en/docs/Web/API/SVGRadialGradientElement) to
Kotlin\n */\npublic external abstract class SVGRadialGradientElement : SVGGradientElement {\n open val cx:
SVGAnimatedLength\n open val cy: SVGAnimatedLength\n open val r: SVGAnimatedLength\n open val fx:
SVGAnimatedLength\n open val fy: SVGAnimatedLength\n open val fr: SVGAnimatedLength\n}\n\npublic
external abstract class SVGMeshGradientElement : SVGGradientElement {\n}\n\npublic external abstract class
SVGMeshrowElement : SVGElement {\n}\n\npublic external abstract class SVGMeshpatchElement : SVGElement
{\n}\n\n/**\n
* Exposes the JavaScript [SVGStopElement](https://developer.mozilla.org/en/docs/Web/API/SVGStopElement) to
Kotlin\n */\npublic external abstract class SVGStopElement : SVGElement {\n open val offset:
SVGAnimatedNumber\n}\n\n/**\n * Exposes the JavaScript
[SVGPatternElement](https://developer.mozilla.org/en/docs/Web/API/SVGPatternElement) to Kotlin\n */\npublic
external abstract class SVGPatternElement : SVGElement, SVGFitToViewBox, SVGURIReference,
SVGUnitTypes {\n open val patternUnits: SVGAnimatedEnumeration\n open val patternContentUnits:
SVGAnimatedEnumeration\n open val patternTransform: SVGAnimatedTransformList\n open val x:
SVGAnimatedLength\n open val y: SVGAnimatedLength\n open val width: SVGAnimatedLength\n open val
height: SVGAnimatedLength\n\n companion object {\n val SVG_UNIT_TYPE_UNKNOWN: Short\n
val SVG_UNIT_TYPE_USERSPACEONUSE: Short\n val SVG_UNIT_TYPE_OBJECTBOUNDINGBOX:
Short\n }\n}\n\npublic external abstract class
SVGHatchElement : SVGElement {\n}\n\npublic external abstract class SVGHatchpathElement : SVGElement
{\n}\n\n/**\n * Exposes the JavaScript
[SVGCursorElement](https://developer.mozilla.org/en/docs/Web/API/SVGCursorElement) to Kotlin\n */\npublic

external abstract class SVGCursorElement : SVGElement, SVGURIReference {\n   open val x: SVGAnimatedLength\n   open val y: SVGAnimatedLength\n}\n\n/**\n * Exposes the JavaScript [SVGScriptElement](https://developer.mozilla.org/en/docs/Web/API/SVGScriptElement) to Kotlin\n */\npublic external abstract class SVGScriptElement : SVGElement, SVGURIReference, HTMLOrSVGScriptElement {\n   open var type: String\n   open var crossOrigin: String?\n}\n\n/**\n * Exposes the JavaScript [SVGAElement](https://developer.mozilla.org/en/docs/Web/API/SVGAElement) to Kotlin\n */\npublic external abstract class SVGAElement : SVGGraphicsElement, SVGURIReference {\n   open val target: SVGAnimatedString\n   open val download: SVGAnimatedString\n   open val rel: SVGAnimatedString\n   open val relList: SVGAnimatedString\n   open val hreflang: SVGAnimatedString\n   open val type: SVGAnimatedString\n}\n\n/**\n * Exposes the JavaScript [SVGViewElement](https://developer.mozilla.org/en/docs/Web/API/SVGViewElement) to Kotlin\n */\npublic external abstract class SVGViewElement : SVGElement, SVGFitToViewBox, SVGZoomAndPan {\n\n   companion object {\n   val SVG_ZOOMANDPAN_UNKNOWN: Short\n   val SVG_ZOOMANDPAN_DISABLE: Short\n   val SVG_ZOOMANDPAN_MAGNIFY: Short\n   }\n}\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n// NOTE: THIS FILE IS AUTO-GENERATED, DO NOT EDIT!\n// See libraries/tools/idl2k for details\n\n@file:Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npackage org.w3c.files\n\nimport kotlin.js.*\nimport org.khronos.webgl.*\nimport org.w3c.css.masking.*\nimport org.w3c.dom.*\nimport org.w3c.dom.clipboard.*\nimport org.w3c.dom.css.*\nimport org.w3c.dom.events.*\nimport org.w3c.dom.mediacapture.*\nimport org.w3c.dom.parsing.*\nimport org.w3c.dom.pointerevents.*\nimport org.w3c.dom.svg.*\nimport org.w3c.dom.url.*\nimport org.w3c.fetch.*\nimport org.w3c.notifications.*\nimport org.w3c.performance.*\nimport org.w3c.workers.*\nimport org.w3c.xhr.*\n\n/**\n * Exposes the JavaScript [Blob](https://developer.mozilla.org/en/docs/Web/API/Blob) to Kotlin\n */\npublic external open class Blob(blobParts: Array<dynamic> = definedExternally, options: BlobPropertyBag = definedExternally) {\n   open val size: Int\n   open val type: String\n   open val isClosed: Boolean\n   fun slice(start: Int = definedExternally, end: Int = definedExternally, contentType: String = definedExternally): Blob\n   fun close(): Unit\n}\n\npublic external interface BlobPropertyBag {\n   var type: String? /* = \"\" */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun BlobPropertyBag(type: String? = \"\"): BlobPropertyBag {\n   val o = js(\"({})\")\n\n   o[\"type\"] = type\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [File](https://developer.mozilla.org/en/docs/Web/API/File) to Kotlin\n */\npublic external open class File(fileBits: Array<dynamic>, fileName: String, options: FilePropertyBag = definedExternally) : Blob {\n   open val name: String\n   open val lastModified: Int\n}\n\npublic external interface FilePropertyBag : BlobPropertyBag {\n   var lastModified: Int?\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun FilePropertyBag(lastModified: Int? = undefined, type: String? = \"\"): FilePropertyBag {\n   val o = js(\"({})\")\n\n   o[\"lastModified\"] = lastModified\n   o[\"type\"] = type\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [FileList](https://developer.mozilla.org/en/docs/Web/API/FileList) to Kotlin\n */\npublic external abstract class FileList : ItemArrayLike<File> {\n   override val length: Int\n   override fun item(index: Int): File?\n}\n\n@kotlin.internal.InlineOnly inline operator fun FileList.get(index: Int): File? = asDynamic()[index]\n\n/**\n * Exposes the JavaScript [FileReader](https://developer.mozilla.org/en/docs/Web/API/FileReader) to Kotlin\n */\npublic external open class FileReader : EventTarget {\n   open val readyState: Short\n   open val result: dynamic\n   open val error: dynamic\n   var onloadstart: ((ProgressEvent) -> dynamic)?\n   var onprogress: ((ProgressEvent) -> dynamic)?\n   var onload: ((Event) -> dynamic)?\n   var onabort: ((Event) -> dynamic)?\n   var onerror: ((Event) -> dynamic)?\n   var onloadend: ((Event) -> dynamic)?\n   fun readAsArrayBuffer(blob: Blob): Unit\n   fun readAsBinaryString(blob: Blob): Unit\n   fun readAsText(blob: Blob, label: String = definedExternally): Unit\n

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fun readAsDataURL(blob: Blob): Unit\n    fun abort():
 Unit\n\n    companion object {\n        val EMPTY: Short\n        val LOADING: Short\n        val DONE: Short\n
}\n}\n\n/**\n * Exposes the JavaScript
[FileReaderSync](https://developer.mozilla.org/en/docs/Web/API/FileReaderSync) to Kotlin\n */\npublic external
open class FileReaderSync {\n    fun readAsArrayBuffer(blob: Blob): ArrayBuffer\n    fun readAsBinaryString(blob:
Blob): String\n    fun readAsText(blob: Blob, label: String = definedExternally): String\n    fun
readAsDataURL(blob: Blob): String\n}\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is
governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n// NOTE: THIS
FILE IS AUTO-GENERATED, DO NOT EDIT!\n// See libraries/tools/idl2k for
details\n\n@file:Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npackage
org.w3c.notifications\n\nimport kotlin.js.*\nimport org.khronos.webgl.*\nimport org.w3c.css.masking.*\nimport
org.w3c.dom.*\nimport org.w3c.dom.clipboard.*\nimport
 org.w3c.dom.css.*\nimport org.w3c.dom.events.*\nimport org.w3c.dom.mediacapture.*\nimport
org.w3c.dom.parsing.*\nimport org.w3c.dom.pointerevents.*\nimport org.w3c.dom.svg.*\nimport
org.w3c.dom.url.*\nimport org.w3c.fetch.*\nimport org.w3c.files.*\nimport org.w3c.performance.*\nimport
org.w3c.workers.*\nimport org.w3c.xhr.*\n\n/**\n * Exposes the JavaScript
[Notification](https://developer.mozilla.org/en/docs/Web/API/Notification) to Kotlin\n */\npublic external open
class Notification(title: String, options: NotificationOptions = definedExternally) : EventTarget {\n    var onclick:
((MouseEvent) -> dynamic)?\n    var onerror: ((Event) -> dynamic)?\n    open val title: String\n    open val dir:
NotificationDirection\n    open val lang: String\n    open val body: String\n    open val tag: String\n    open val
image: String\n    open val icon: String\n    open val badge: String\n    open val sound: String\n    open val vibrate:
Array<out Int>\n    open val timestamp: Number\n
    open val renotify: Boolean\n    open val silent: Boolean\n    open val noscreen: Boolean\n    open val
requireInteraction: Boolean\n    open val sticky: Boolean\n    open val data: Any?\n    open val actions: Array<out
NotificationAction>\n    fun close(): Unit\n\n    companion object {\n        var permission: NotificationPermission\n
    var maxActions: Int\n        fun requestPermission(deprecatedCallback: (NotificationPermission) -> Unit =
definedExternally): Promise<NotificationPermission>\n    }\n}\n\npublic external interface NotificationOptions {\n
var dir: NotificationDirection? /* = NotificationDirection.AUTO */\n        get() = definedExternally\n        set(value)
= definedExternally\n    var lang: String? /* = \"\" */\n        get() = definedExternally\n        set(value) =
definedExternally\n    var body: String? /* = \"\" */\n        get() = definedExternally\n        set(value) =
definedExternally\n    var tag: String? /* = \"\" */\n        get() = definedExternally\n
        set(value) = definedExternally\n    var image: String?\n        get() = definedExternally\n        set(value) =
definedExternally\n    var icon: String?\n        get() = definedExternally\n        set(value) = definedExternally\n    var
badge: String?\n        get() = definedExternally\n        set(value) = definedExternally\n    var sound: String?\n
get() = definedExternally\n        set(value) = definedExternally\n    var vibrate: dynamic\n        get() =
definedExternally\n        set(value) = definedExternally\n    var timestamp: Number?\n        get() =
definedExternally\n        set(value) = definedExternally\n    var renotify: Boolean? /* = false */\n        get() =
definedExternally\n        set(value) = definedExternally\n    var silent: Boolean? /* = false */\n        get() =
definedExternally\n        set(value) = definedExternally\n    var noscreen: Boolean? /* = false */\n        get() =
definedExternally\n        set(value) = definedExternally\n
    var requireInteraction: Boolean? /* = false */\n        get() = definedExternally\n        set(value) =
definedExternally\n    var sticky: Boolean? /* = false */\n        get() = definedExternally\n        set(value) =
definedExternally\n    var data: Any? /* = null */\n        get() = definedExternally\n        set(value) =
definedExternally\n    var actions: Array<NotificationAction>? /* = arrayOf() */\n        get() = definedExternally\n
    set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun NotificationOptions(dir:
NotificationDirection? = NotificationDirection.AUTO, lang: String? = \"\", body: String? = \"\", tag: String? = \"\",
image: String? = undefined, icon: String? = undefined, badge: String? = undefined, sound: String? = undefined,
vibrate: dynamic = undefined, timestamp: Number? = undefined, renotify: Boolean? = false, silent: Boolean? =
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false, noscreen: Boolean? = false, requireInteraction: Boolean? = false, sticky: Boolean? = false,
data: Any? = null, actions: Array<NotificationAction>? = arrayOf()): NotificationOptions {\n val o = js(\"({})\")\n\n o[\"dir\"] = dir\n o[\"lang\"] = lang\n o[\"body\"] = body\n o[\"tag\"] = tag\n o[\"image\"] = image\n o[\"icon\"] = icon\n o[\"badge\"] = badge\n o[\"sound\"] = sound\n o[\"vibrate\"] = vibrate\n o[\"timestamp\"] = timestamp\n o[\"renotify\"] = renotify\n o[\"silent\"] = silent\n o[\"noscreen\"] = noscreen\n o[\"requireInteraction\"] = requireInteraction\n o[\"sticky\"] = sticky\n o[\"data\"] = data\n o[\"actions\"] = actions\n\n return o\n}\n\npublic external interface NotificationAction {\n var action: String?\n get() = definedExternally\n set(value) = definedExternally\n var title: String?\n get() = definedExternally\n set(value) = definedExternally\n var icon: String?\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic
inline fun NotificationAction(action: String?, title: String?, icon: String? = undefined): NotificationAction {\n val o = js(\"({})\")\n\n o[\"action\"] = action\n o[\"title\"] = title\n o[\"icon\"] = icon\n\n return o\n}\n\npublic external interface GetNotificationOptions {\n var tag: String? /* = \"\" */\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun GetNotificationOptions(tag: String? = \"\"): GetNotificationOptions {\n val o = js(\"({})\")\n\n o[\"tag\"] = tag\n\n return o\n}\n\n/**\n * Exposes the JavaScript [NotificationEvent](https://developer.mozilla.org/en/docs/Web/API/NotificationEvent) to Kotlin\n */\npublic external open class NotificationEvent(type: String, eventInitDict: NotificationEventInit) : ExtendableEvent {\n open val notification: Notification\n open val action: String\n}\n\npublic external interface NotificationEventInit : ExtendableEventInit
{\n var notification: Notification?\n get() = definedExternally\n set(value) = definedExternally\n var action: String? /* = \"\" */\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun NotificationEventInit(notification: Notification?, action: String? = \"\", bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): NotificationEventInit {\n val o = js(\"({})\")\n\n o[\"notification\"] = notification\n o[\"action\"] = action\n o[\"bubbles\"] = bubbles\n o[\"cancelable\"] = cancelable\n o[\"composed\"] = composed\n\n return o\n}\n\n/* please, don't implement this interface! */\npublic external interface NotificationPermission {\n companion object\n}\npublic inline val NotificationPermission.Companion.DEFAULT: NotificationPermission get() = \"default\".asDynamic().unsafeCast<NotificationPermission>()\npublic inline val NotificationPermission.Companion.DENIED:
NotificationPermission get() = \"denied\".asDynamic().unsafeCast<NotificationPermission>()\npublic inline val NotificationPermission.Companion.GRANTED: NotificationPermission get() = \"granted\".asDynamic().unsafeCast<NotificationPermission>()\n\n/* please, don't implement this interface! */\npublic external interface NotificationDirection {\n companion object\n}\npublic inline val NotificationDirection.Companion.AUTO: NotificationDirection get() = \"auto\".asDynamic().unsafeCast<NotificationDirection>()\npublic inline val NotificationDirection.Companion.LTR: NotificationDirection get() = \"ltr\".asDynamic().unsafeCast<NotificationDirection>()\npublic inline val NotificationDirection.Companion.RTL: NotificationDirection get() = \"rtl\".asDynamic().unsafeCast<NotificationDirection>()\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n// NOTE:
THIS FILE IS AUTO-GENERATED, DO NOT EDIT!\n// See libraries/tools/idl2k for details\n\n@file:Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npackage org.w3c.workers\n\nimport kotlin.js.*\nimport org.khronos.webgl.*\nimport org.w3c.css.masking.*\nimport org.w3c.dom.*\nimport org.w3c.dom.clipboard.*\nimport org.w3c.dom.css.*\nimport org.w3c.dom.events.*\nimport org.w3c.dom.mediacapture.*\nimport org.w3c.dom.parsing.*\nimport org.w3c.dom.pointerevents.*\nimport org.w3c.dom.svg.*\nimport org.w3c.dom.url.*\nimport org.w3c.fetch.*\nimport org.w3c.files.*\nimport org.w3c.notifications.*\nimport org.w3c.performance.*\nimport org.w3c.xhr.*\n\n/**\n * Exposes the JavaScript

[ServiceWorkerRegistration](https://developer.mozilla.org/en/docs/Web/API/ServiceWorkerRegistration) to Kotlin\n */\npublic external abstract class ServiceWorkerRegistration : EventTarget {\n open val installing: ServiceWorker?\n open val waiting: ServiceWorker?\n open val active: ServiceWorker?\n open val scope: String\n open var onupdatefound: ((Event) -> dynamic)?\n open val APISpace: dynamic\n fun update(): Promise<Unit>\n fun unregister(): Promise<Boolean>\n fun methodName(): Promise<dynamic>\n fun showNotification(title: String, options: NotificationOptions = definedExternally): Promise<Unit>\n fun getNotifications(filter: GetNotificationOptions = definedExternally): Promise<dynamic>\n}\n\n/**\n * Exposes the JavaScript [ServiceWorkerGlobalScope](https://developer.mozilla.org/en/docs/Web/API/ServiceWorkerGlobalScope) to Kotlin\n */\npublic external abstract class ServiceWorkerGlobalScope : WorkerGlobalScope {\n open val clients: Clients\n open val registration: ServiceWorkerRegistration\n open var oninstall: ((Event) -> dynamic)?\n open var onactivate: ((Event) -> dynamic)?\n open var onfetch: ((FetchEvent) -> dynamic)?\n open var onforeignfetch: ((Event) -> dynamic)?\n open var onmessage: ((MessageEvent) -> dynamic)?\n open var onfunctionalevent: ((Event) -> dynamic)?\n open var onnotificationclick: ((NotificationEvent) -> dynamic)?\n open var onnotificationclose: ((NotificationEvent) -> dynamic)?\n fun skipWaiting(): Promise<Unit>\n}\n\n/**\n * Exposes the JavaScript [ServiceWorker](https://developer.mozilla.org/en/docs/Web/API/ServiceWorker) to Kotlin\n */\npublic external abstract class ServiceWorker : EventTarget, AbstractWorker, UnionMessagePortOrServiceWorker, UnionClientOrMessagePortOrServiceWorker {\n open val scriptURL: String\n open val state: ServiceWorkerState\n open var onstatechange: ((Event) -> dynamic)?\n fun postMessage(message: Any?, transfer: Array<dynamic> = definedExternally): Unit\n}\n\n/**\n * Exposes the JavaScript [ServiceWorkerContainer](https://developer.mozilla.org/en/docs/Web/API/ServiceWorkerContainer) to Kotlin\n */\npublic external abstract class ServiceWorkerContainer : EventTarget {\n open val controller: ServiceWorker?\n open val ready: Promise<ServiceWorkerRegistration>\n open var oncontrollerchange: ((Event) -> dynamic)?\n open var onmessage: ((MessageEvent) -> dynamic)?\n fun register(scriptURL: String, options: RegistrationOptions = definedExternally): Promise<ServiceWorkerRegistration>\n fun getRegistration(clientURL: String = definedExternally): Promise<Any?>\n fun getRegistrations(): Promise<dynamic>\n fun startMessages(): Unit\n}\n\npublic external interface RegistrationOptions {\n var scope: String?\n get() = definedExternally\n set(value) = definedExternally\n var type: WorkerType? /* = WorkerType.CLASSIC */\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun RegistrationOptions(scope: String? = undefined, type: WorkerType? = WorkerType.CLASSIC): RegistrationOptions {\n val o = js(\"({})\")\n\n o[\"scope\"] = scope\n o[\"type\"] = type\n\n return o\n}\n\n/**\n * Exposes the JavaScript [ServiceWorkerMessageEvent](https://developer.mozilla.org/en/docs/Web/API/ServiceWorkerMessageEvent) to Kotlin\n */\npublic external open class ServiceWorkerMessageEvent(type: String, eventInitDict: ServiceWorkerMessageEventInit = definedExternally) : Event {\n open val data: Any?\n open val origin: String\n open val lastEventId: String\n open val source: UnionMessagePortOrServiceWorker?\n open val ports: Array<out MessagePort>?\n}\n\npublic external interface ServiceWorkerMessageEventInit : EventInit {\n var data: Any?\n get() = definedExternally\n set(value) = definedExternally\n var origin: String?\n get() = definedExternally\n set(value) = definedExternally\n var lastEventId: String?\n get() = definedExternally\n set(value) = definedExternally\n var source: UnionMessagePortOrServiceWorker?\n get() = definedExternally\n set(value) = definedExternally\n var ports: Array<MessagePort>?\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun ServiceWorkerMessageEventInit(data: Any? = undefined, origin: String? = undefined, lastEventId: String? = undefined, source: UnionMessagePortOrServiceWorker? = undefined, ports: Array<MessagePort>? = undefined, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): ServiceWorkerMessageEventInit {\n val o = js(\"({})\")\n\n o[\"data\"] = data\n o[\"origin\"] = origin\n

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o[\"lastEventId\"] = lastEventId\n    o[\"source\"] = source\n    o[\"ports\"] = ports\n    o[\"bubbles\"] = bubbles\n
o[\"cancelable\"] = cancelable\n    o[\"composed\"] = composed\n\n    return o\n}\n\n/**\n * Exposes the JavaScript
[Client](https://developer.mozilla.org/en/docs/Web/API/Client) to Kotlin\n */\npublic external abstract class Client :
UnionClientOrMessagePortOrServiceWorker {\n    open val url: String\n    open val frameType: FrameType\n
open val id: String\n    fun postMessage(message:
 Any?, transfer: Array<dynamic> = definedExternally): Unit\n}\n\n/**\n * Exposes the JavaScript
[WindowClient](https://developer.mozilla.org/en/docs/Web/API/WindowClient) to Kotlin\n */\npublic external
abstract class WindowClient : Client {\n    open val visibilityState: dynamic\n    open val focused: Boolean\n    fun
focus(): Promise<WindowClient>\n    fun navigate(url: String): Promise<WindowClient>\n}\n\n/**\n * Exposes the
JavaScript [Clients](https://developer.mozilla.org/en/docs/Web/API/Clients) to Kotlin\n */\npublic external abstract
class Clients {\n    fun get(id: String): Promise<Any?>\n    fun matchAll(options: ClientQueryOptions =
definedExternally): Promise<dynamic>\n    fun openWindow(url: String): Promise<WindowClient?>\n    fun
claim(): Promise<Unit>\n}\n\npublic external interface ClientQueryOptions {\n    var includeUncontrolled:
Boolean? /* = false */\n        get() = definedExternally\n        set(value) = definedExternally\n    var type:
ClientType?
 /* = ClientType.WINDOW */\n        get() = definedExternally\n        set(value) =
definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun ClientQueryOptions(includeUncontrolled:
Boolean? = false, type: ClientType? = ClientType.WINDOW): ClientQueryOptions {\n    val o = js(\"({})\")\n\n
o[\"includeUncontrolled\"] = includeUncontrolled\n    o[\"type\"] = type\n\n    return o\n}\n\n/**\n * Exposes the
JavaScript [ExtendableEvent](https://developer.mozilla.org/en/docs/Web/API/ExtendableEvent) to Kotlin\n
*/\npublic external open class ExtendableEvent(type: String, eventInitDict: ExtendableEventInit =
definedExternally) : Event {\n    fun waitUntil(f: Promise<Any?>): Unit\n}\n\npublic external interface
ExtendableEventInit : EventInit {\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun
ExtendableEventInit(bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false):
ExtendableEventInit {\n    val o = js(\"({})\")\n\n    o[\"bubbles\"] = bubbles\n
   o[\"cancelable\"] = cancelable\n    o[\"composed\"] = composed\n\n    return o\n}\n\n/**\n * Exposes the
JavaScript [InstallEvent](https://developer.mozilla.org/en/docs/Web/API/InstallEvent) to Kotlin\n */\npublic
external open class InstallEvent(type: String, eventInitDict: ExtendableEventInit = definedExternally) :
ExtendableEvent {\n    fun registerForeignFetch(options: ForeignFetchOptions): Unit\n}\n\npublic external interface
ForeignFetchOptions {\n    var scopes: Array<String>?\n        get() = definedExternally\n        set(value) =
definedExternally\n    var origins: Array<String>?\n        get() = definedExternally\n        set(value) =
definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun ForeignFetchOptions(scopes:
Array<String>?, origins: Array<String>?): ForeignFetchOptions {\n    val o = js(\"({})\")\n\n    o[\"scopes\"] =
scopes\n    o[\"origins\"] = origins\n\n    return o\n}\n\n/**\n * Exposes the JavaScript
[FetchEvent](https://developer.mozilla.org/en/docs/Web/API/FetchEvent)
 to Kotlin\n */\npublic external open class FetchEvent(type: String, eventInitDict: FetchEventInit) :
ExtendableEvent {\n    open val request: Request\n    open val clientId: String?\n    open val isReload: Boolean\n
fun respondWith(r: Promise<Response>): Unit\n}\n\npublic external interface FetchEventInit : ExtendableEventInit
{\n    var request: Request?\n        get() = definedExternally\n        set(value) = definedExternally\n    var clientId:
String? /* = null */\n        get() = definedExternally\n        set(value) = definedExternally\n    var isReload: Boolean?
/* = false */\n        get() = definedExternally\n        set(value) =
definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun FetchEventInit(request: Request?, clientId:
String? = null, isReload: Boolean? = false, bubbles: Boolean? = false, cancelable: Boolean? = false, composed:
Boolean? = false): FetchEventInit {\n    val o = js(\"({})\")\n\n    o[\"request\"] =
 request\n    o[\"clientId\"] = clientId\n    o[\"isReload\"] = isReload\n    o[\"bubbles\"] = bubbles\n
o[\"cancelable\"] = cancelable\n    o[\"composed\"] = composed\n\n    return o\n}\n\npublic external open class
ForeignFetchEvent(type: String, eventInitDict: ForeignFetchEventInit) : ExtendableEvent {\n    open val request:
Request\n    open val origin: String\n    fun respondWith(r: Promise<ForeignFetchResponse>): Unit\n}\n\npublic
```

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external interface ForeignFetchEventInit : ExtendableEventInit {\n    var request: Request?\n        get() = definedExternally\n        set(value) = definedExternally\n    var origin: String? /* = \"null\" */\n        get() = definedExternally\n        set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun ForeignFetchEventInit(request: Request?, origin: String? = \"null\", bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): ForeignFetchEventInit {\n    val o = js(\"({})\")\n\n    o[\"request\"] = request\n    o[\"origin\"] = origin\n    o[\"bubbles\"] = bubbles\n    o[\"cancelable\"] = cancelable\n    o[\"composed\"] = composed\n\n    return o\n}\n\npublic external interface ForeignFetchResponse {\n    var response: Response?\n        get() = definedExternally\n        set(value) = definedExternally\n    var origin: String?\n        get() = definedExternally\n        set(value) = definedExternally\n    var headers: Array<String>?\n        get() = definedExternally\n        set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun ForeignFetchResponse(response: Response?, origin: String? = undefined, headers: Array<String>? = undefined): ForeignFetchResponse {\n    val o = js(\"({})\")\n\n    o[\"response\"] = response\n    o[\"origin\"] = origin\n    o[\"headers\"] = headers\n\n    return o\n}\n\n/**\n * Exposes the JavaScript [ExtendableMessageEvent](https://developer.mozilla.org/en/docs/Web/API/ExtendableMessageEvent) to Kotlin\n */\npublic
 external open class ExtendableMessageEvent(type: String, eventInitDict: ExtendableMessageEventInit = definedExternally) : ExtendableEvent {\n    open val data: Any?\n    open val origin: String\n    open val lastEventId: String\n    open val source: UnionClientOrMessagePortOrServiceWorker?\n    open val ports: Array<out MessagePort>?\n}\n\npublic external interface ExtendableMessageEventInit : ExtendableEventInit {\n    var data: Any?\n        get() = definedExternally\n        set(value) = definedExternally\n    var origin: String?\n        get() = definedExternally\n        set(value) = definedExternally\n    var lastEventId: String?\n        get() = definedExternally\n        set(value) = definedExternally\n    var source: UnionClientOrMessagePortOrServiceWorker?\n        get() = definedExternally\n        set(value) = definedExternally\n    var ports: Array<MessagePort>?\n        get() = definedExternally\n        set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic
 inline fun ExtendableMessageEventInit(data: Any? = undefined, origin: String? = undefined, lastEventId: String? = undefined, source: UnionClientOrMessagePortOrServiceWorker? = undefined, ports: Array<MessagePort>? = undefined, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): ExtendableMessageEventInit {\n    val o = js(\"({})\")\n\n    o[\"data\"] = data\n    o[\"origin\"] = origin\n    o[\"lastEventId\"] = lastEventId\n    o[\"source\"] = source\n    o[\"ports\"] = ports\n    o[\"bubbles\"] = bubbles\n    o[\"cancelable\"] = cancelable\n    o[\"composed\"] = composed\n\n    return o\n}\n\n/**\n * Exposes the JavaScript [Cache](https://developer.mozilla.org/en/docs/Web/API/Cache) to Kotlin\n */\npublic external abstract class Cache {\n    fun match(request: dynamic, options: CacheQueryOptions = definedExternally): Promise<Any?>\n    fun matchAll(request: dynamic = definedExternally, options: CacheQueryOptions = definedExternally): Promise<dynamic>\n
    fun add(request: dynamic): Promise<Unit>\n    fun addAll(requests: Array<dynamic>): Promise<Unit>\n    fun put(request: dynamic, response: Response): Promise<Unit>\n    fun delete(request: dynamic, options: CacheQueryOptions = definedExternally): Promise<Boolean>\n    fun keys(request: dynamic = definedExternally, options: CacheQueryOptions = definedExternally): Promise<dynamic>\n}\n\npublic external interface CacheQueryOptions {\n    var ignoreSearch: Boolean? /* = false */\n        get() = definedExternally\n        set(value) = definedExternally\n    var ignoreMethod: Boolean? /* = false */\n        get() = definedExternally\n        set(value) = definedExternally\n    var ignoreVary: Boolean? /* = false */\n        get() = definedExternally\n        set(value) = definedExternally\n    var cacheName: String?\n        get() = definedExternally\n        set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun CacheQueryOptions(ignoreSearch: Boolean?
 = false, ignoreMethod: Boolean? = false, ignoreVary: Boolean? = false, cacheName: String? = undefined): CacheQueryOptions {\n    val o = js(\"({})\")\n\n    o[\"ignoreSearch\"] = ignoreSearch\n    o[\"ignoreMethod\"] = ignoreMethod\n    o[\"ignoreVary\"] = ignoreVary\n    o[\"cacheName\"] = cacheName\n\n    return o\n}\n\npublic
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external interface CacheBatchOperation {\n   var type: String?\n   get() = definedExternally\n   set(value) = definedExternally\n   var request: Request?\n   get() = definedExternally\n   set(value) = definedExternally\n   var response: Response?\n   get() = definedExternally\n   set(value) = definedExternally\n   var options: CacheQueryOptions?\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun CacheBatchOperation(type: String? = undefined, request: Request? = undefined, response: Response? = undefined, options: CacheQueryOptions? = undefined): CacheBatchOperation
 {\n   val o = js(\"({})\")\n\n   o[\"type\"] = type\n   o[\"request\"] = request\n   o[\"response\"] = response\n   o[\"options\"] = options\n\n   return o\n}\n\n/**\n * Exposes the JavaScript [CacheStorage](https://developer.mozilla.org/en/docs/Web/API/CacheStorage) to Kotlin\n */\npublic external abstract class CacheStorage {\n   fun match(request: dynamic, options: CacheQueryOptions = definedExternally): Promise<Any?>\n   fun has(cacheName: String): Promise<Boolean>\n   fun open(cacheName: String): Promise<Cache>\n   fun delete(cacheName: String): Promise<Boolean>\n   fun keys(): Promise<dynamic>\n}\n\npublic external open class FunctionalEvent : ExtendableEvent {\n}\n\npublic external @marker interface UnionClientOrMessagePortOrServiceWorker {\n}\n\n/* please, don't implement this interface! */\npublic external interface ServiceWorkerState {\n   companion object\n}\npublic inline val ServiceWorkerState.Companion.INSTALLING: ServiceWorkerState get() = \"installing\".asDynamic().unsafeCast<ServiceWorkerState>()\npublic
 inline val ServiceWorkerState.Companion.INSTALLED: ServiceWorkerState get() = \"installed\".asDynamic().unsafeCast<ServiceWorkerState>()\npublic inline val ServiceWorkerState.Companion.ACTIVATING: ServiceWorkerState get() = \"activating\".asDynamic().unsafeCast<ServiceWorkerState>()\npublic inline val ServiceWorkerState.Companion.ACTIVATED: ServiceWorkerState get() = \"activated\".asDynamic().unsafeCast<ServiceWorkerState>()\npublic inline val ServiceWorkerState.Companion.REDUNDANT: ServiceWorkerState get() = \"redundant\".asDynamic().unsafeCast<ServiceWorkerState>()\n\n/* please, don't implement this interface! */\npublic external interface FrameType {\n   companion object\n}\npublic inline val FrameType.Companion.AUXILIARY: FrameType get() = \"auxiliary\".asDynamic().unsafeCast<FrameType>()\npublic inline val FrameType.Companion.TOP_LEVEL: FrameType get() = \"top-level\".asDynamic().unsafeCast<FrameType>()\npublic inline
 val FrameType.Companion.NESTED: FrameType get() = \"nested\".asDynamic().unsafeCast<FrameType>()\npublic inline val FrameType.Companion.NONE: FrameType get() = \"none\".asDynamic().unsafeCast<FrameType>()\n\n/* please, don't implement this interface! */\npublic external interface ClientType {\n   companion object\n}\npublic inline val ClientType.Companion.WINDOW: ClientType get() = \"window\".asDynamic().unsafeCast<ClientType>()\npublic inline val ClientType.Companion.WORKER: ClientType get() = \"worker\".asDynamic().unsafeCast<ClientType>()\npublic inline val ClientType.Companion.SHAREDWORKER: ClientType get() = \"sharedworker\".asDynamic().unsafeCast<ClientType>()\npublic inline val ClientType.Companion.ALL: ClientType get() = \"all\".asDynamic().unsafeCast<ClientType>()\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n// NOTE: THIS FILE IS AUTO-GENERATED,
 DO NOT EDIT!\n// See libraries/tools/idl2k for details\n\n@file:Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npackage org.w3c.xhr\n\nimport kotlin.js.*\nimport org.khronos.webgl.*\nimport org.w3c.css.masking.*\nimport org.w3c.dom.*\nimport org.w3c.dom.clipboard.*\nimport org.w3c.dom.css.*\nimport org.w3c.dom.events.*\nimport org.w3c.dom.mediacapture.*\nimport org.w3c.dom.parsing.*\nimport org.w3c.dom.pointerevents.*\nimport org.w3c.dom.svg.*\nimport org.w3c.dom.url.*\nimport org.w3c.fetch.*\nimport org.w3c.files.*\nimport org.w3c.notifications.*\nimport org.w3c.performance.*\nimport org.w3c.workers.*\n\n/**\n * Exposes the

JavaScript
[XMLHttpRequestEventTarget](https://developer.mozilla.org/en/docs/Web/API/XMLHttpRequestEventTarget) to Kotlin\n */\npublic external abstract class XMLHttpRequestEventTarget : EventTarget {\n   open var onloadstart: ((ProgressEvent) -> dynamic)?\n   open var onprogress: ((ProgressEvent) -> dynamic)?\n   open var onabort: ((Event) -> dynamic)?\n
 open var onerror: ((Event) -> dynamic)?\n   open var onload: ((Event) -> dynamic)?\n   open var ontimeout: ((Event) -> dynamic)?\n   open var onloadend: ((Event) -> dynamic)?\n}\n\npublic external abstract class XMLHttpRequestUpload : XMLHttpRequestEventTarget {\n}\n\n/**\n * Exposes the JavaScript [XMLHttpRequest](https://developer.mozilla.org/en/docs/Web/API/XMLHttpRequest) to Kotlin\n */\npublic external open class XMLHttpRequest : XMLHttpRequestEventTarget {\n   var onreadystatechange: ((Event) -> dynamic)?\n   open val readyState: Short\n   var timeout: Int\n   var withCredentials: Boolean\n   open val upload: XMLHttpRequestUpload\n   open val responseURL: String\n   open val status: Short\n   open val statusText: String\n   var responseType: XMLHttpRequestResponseType\n   open val response: Any?\n   open val responseText: String\n   open val responseXML: Document?\n   fun open(method: String, url: String): Unit\n   fun open(method: String, url: String, async: Boolean,
 username: String? = definedExternally, password: String? = definedExternally): Unit\n   fun setRequestHeader(name: String, value: String): Unit\n   fun send(body: dynamic = definedExternally): Unit\n   fun abort(): Unit\n   fun getResponseHeader(name: String): String?\n   fun getAllResponseHeaders(): String\n   fun overrideMimeType(mime: String): Unit\n\n   companion object {\n   val UNSENT: Short\n   val OPENED: Short\n   val HEADERS_RECEIVED: Short\n   val LOADING: Short\n   val DONE: Short\n   }\n}\n\n/**\n * Exposes the JavaScript [FormData](https://developer.mozilla.org/en/docs/Web/API/FormData) to Kotlin\n */\npublic external open class FormData(form: HTMLFormElement = definedExternally) {\n   fun append(name: String, value: String): Unit\n   fun append(name: String, value: Blob, filename: String = definedExternally): Unit\n   fun delete(name: String): Unit\n   fun get(name: String): dynamic\n   fun getAll(name: String): Array<dynamic>\n
    fun has(name: String): Boolean\n   fun set(name: String, value: String): Unit\n   fun set(name: String, value: Blob, filename: String = definedExternally): Unit\n}\n\n/**\n * Exposes the JavaScript [ProgressEvent](https://developer.mozilla.org/en/docs/Web/API/ProgressEvent) to Kotlin\n */\npublic external open class ProgressEvent(type: String, eventInitDict: ProgressEventInit = definedExternally) : Event {\n   open val lengthComputable: Boolean\n   open val loaded: Int\n   open val total: Int\n}\n\npublic external interface ProgressEventInit : EventInit {\n   var lengthComputable: Boolean? /* = false */\n   get() = definedExternally\n
    set(value) = definedExternally\n   var loaded: Int? /* = 0 */\n   get() = definedExternally\n   set(value) = definedExternally\n   var total: Int? /* = 0 */\n   get() = definedExternally\n   set(value) = definedExternally\n}\n\n@kotlin.internal.InlineOnly\npublic inline fun ProgressEventInit(lengthComputable: Boolean?
 = false, loaded: Int? = 0, total: Int? = 0, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): ProgressEventInit {\n   val o = js(\"({})\")\n\n   o[\"lengthComputable\"] = lengthComputable\n
 o[\"loaded\"] = loaded\n   o[\"total\"] = total\n   o[\"bubbles\"] = bubbles\n   o[\"cancelable\"] = cancelable\n   o[\"composed\"] = composed\n\n   return o\n}\n\n/* please, don't implement this interface! */\npublic external interface XMLHttpRequestResponseType {\n   companion object\n}\npublic inline val XMLHttpRequestResponseType.Companion.EMPTY: XMLHttpRequestResponseType get() = \"\".asDynamic().unsafeCast<XMLHttpRequestResponseType>()\npublic inline val XMLHttpRequestResponseType.Companion.ARRAYBUFFER: XMLHttpRequestResponseType get() = \"arraybuffer\".asDynamic().unsafeCast<XMLHttpRequestResponseType>()\npublic inline val XMLHttpRequestResponseType.Companion.BLOB: XMLHttpRequestResponseType get() = \"blob\".asDynamic().unsafeCast<XMLHttpRequestResponseType>()\npublic
 inline val XMLHttpRequestResponseType.Companion.DOCUMENT: XMLHttpRequestResponseType get() = \"document\".asDynamic().unsafeCast<XMLHttpRequestResponseType>()\npublic inline val

XMLHttpRequestResponseType.Companion.JSON: XMLHttpRequestResponseType get() = \"json\".asDynamic().unsafeCast<XMLHttpRequestResponseType>()\npublic inline val XMLHttpRequestResponseType.Companion.TEXT: XMLHttpRequestResponseType get() = \"text\".asDynamic().unsafeCast<XMLHttpRequestResponseType>()\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin\n\nimport kotlin.annotation.AnnotationRetention.BINARY\nimport kotlin.annotation.AnnotationRetention.SOURCE\nimport kotlin.annotation.AnnotationTarget.*\nimport kotlin.internal.RequireKotlin\nimport kotlin.internal.RequireKotlinVersionKind\nimport kotlin.reflect.KClass\n\n/**\n * Signals that the annotated annotation class is a marker of an experimental API.\n *\n * Any declaration annotated with that marker is considered an experimental declaration\n * and its call sites should accept the experimental aspect of it either by using [UseExperimental],\n * or by being annotated with that marker themselves, effectively causing further propagation of that experimental aspect.\n *\n * This class is experimental itself and can only be used with the compiler argument `-Xuse-experimental=kotlin.Experimental`.\n */\n@Target(ANNOTATION_CLASS)\n@Retention(BINARY)\n@SinceKotlin(\"1.2\")\n@RequireKotlin(\"1.2.50\", versionKind = RequireKotlinVersionKind.COMPILER_VERSION)\n@Suppress(\"ANNOTATION_CLASS_MEMBER\")\npublic annotation class Experimental(val level: Level = Level.ERROR) {\n   /**\n   * Severity of the diagnostic that should be reported on usages of experimental API which did not explicitly accept the experimental aspect\n   * of that API either by using [UseExperimental] or by being annotated with the corresponding marker annotation.\n   */\n   public enum class Level {\n   /** Specifies that a warning should be reported on incorrect usages of this experimental API. */\n   WARNING,\n   /** Specifies that an error should be reported on incorrect usages of this experimental API. */\n   ERROR,\n   }\n}\n\n/**\n * Allows to use experimental API denoted by the given markers in the annotated file, declaration, or expression.\n * If a declaration is annotated with [UseExperimental], its usages are **not** required to opt-in to that experimental API.\n *\n * This class is experimental itself and can only be used with the compiler argument `-Xuse-experimental=kotlin.Experimental`.\n */\n@Target(\n   CLASS, PROPERTY, LOCAL_VARIABLE, VALUE_PARAMETER, CONSTRUCTOR, FUNCTION, PROPERTY_GETTER, PROPERTY_SETTER, EXPRESSION, FILE,\n   TYPEALIAS\n)\n@Retention(SOURCE)\n@SinceKotlin(\"1.2\")\n@RequireKotlin(\"1.2.50\", versionKind = RequireKotlinVersionKind.COMPILER_VERSION)\npublic annotation class UseExperimental(\n   vararg val markerClass: KClass<out Annotation>\n)\n\n\n@Target(CLASS, PROPERTY, CONSTRUCTOR, FUNCTION, TYPEALIAS)\n@Retention(BINARY)\ninternal annotation class WasExperimental(\n   vararg val markerClass: KClass<out Annotation>\n)\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin\n\nimport kotlin.annotation.AnnotationTarget.*\nimport kotlin.experimental.ExperimentalTypeInference\n\n/**\n * Allows to infer generic type arguments of a function from the calls in the annotated function parameter of that function.\n *\n * When this annotation is placed on a generic function parameter of a function,\n * it enables to infer the type arguments of that generic function from the lambda body passed to that parameter.\n *\n * The calls that affect inference are either members of the receiver type of an annotated function parameter or\n * extensions for that type. The extensions must be themselves annotated with `@BuilderInference`.\n *\n * Example: we declare\n * ```\n * fun <T> sequence(@BuilderInference block: suspend SequenceScope<T>.() -> Unit): Sequence<T>\n * ```\n * and use it like\n * ```\n * val result = sequence { yield(\"result\") }\n * ```\n * Here the type argument of the resulting sequence is inferred to `String` from\n * the argument of the [SequenceScope.yield] function, that is called inside the lambda passed to [sequence].\n *\n * Note: this annotation is experimental, see [ExperimentalTypeInference] on how to opt-in for it.\n */\n@Target(VALUE_PARAMETER, FUNCTION,

PROPERTY)\n@Retention(AnnotationRetention.BINARY)\n@SinceKotlin(\"1.3\")\n@ExperimentalTypeInferenc e\npublic annotation class BuilderInference\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin\n\nimport kotlin.annotation.AnnotationTarget.*\nimport kotlin.internal.RequireKotlin\nimport kotlin.internal.RequireKotlinVersionKind\n\n/**\n * The experimental multiplatform support API marker.\n *\n * Any usage of a declaration annotated with `@ExperimentalMultiplatform` must be accepted either by\n * annotating that usage with the [UseExperimental] annotation, e.g. `@UseExperimental(ExperimentalMultiplatform::class)`,\n * or by using the compiler argument `-Xuse-experimental=kotlin.ExperimentalMultiplatform`.\n */\n@Experimental\n@Target(\n CLASS,\n ANNOTATION_CLASS,\n PROPERTY,\n FIELD,\n LOCAL_VARIABLE,\n VALUE_PARAMETER,\n CONSTRUCTOR,\n FUNCTION,\n PROPERTY_GETTER,\n PROPERTY_SETTER,\n TYPEALIAS\n)\n@Retention(AnnotationRetention.BINARY)\n@RequireKotlin(\"1.2.50\", versionKind = RequireKotlinVersionKind.COMPILER_VERSION)\npublic annotation class ExperimentalMultiplatform\n\n/**\n * Marks an expected annotation class that it isn't required to have actual counterparts in all platforms.\n *\n * This annotation is only applicable to `expect` annotation classes in multi-platform projects and marks that class as \"optional\".\n * Optional expected class is allowed to have no corresponding actual class on the platform. Optional annotations can only be used\n * to annotate something, not as types in signatures. If an optional annotation has no corresponding actual class on a platform,\n * the annotation entries where it's used are simply erased when compiling code on that platform.\n *\n * Note: this annotation is experimental, see [ExperimentalMultiplatform] on how to opt-in for it.\n */\n@Target(ANNOTATION_CLASS)\n@Retention(AnnotationRetention.BINARY)\n@ExperimentalMultiplatfor m\n@RequireKotlin(\"1.2.50\", versionKind = RequireKotlinVersionKind.COMPILER_VERSION)\npublic annotation class OptionalExpectation\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\npackage kotlin.collections\n\n/**\n * Provides a skeletal implementation of the read-only [Collection] interface.\n *\n * @param E the type of elements contained in the collection. The collection is covariant on its element type.\n */\n@SinceKotlin(\"1.1\")\npublic abstract class AbstractCollection<out E> protected constructor() : Collection<E> {\n abstract override val size: Int\n abstract override fun iterator(): Iterator<E>\n\n override fun contains(element: @UnsafeVariance E): Boolean = any { it == element }\n\n override fun containsAll(elements: Collection<@UnsafeVariance E>): Boolean =\n elements.all { contains(it) } // use when js will support bound refs: elements.all(this::contains)\n\n override fun isEmpty(): Boolean = size == 0\n\n override fun toString(): String = joinToString(\", \", \"[\", \"]\") {\n if (it === this) \"(this Collection)\" else it.toString()\n }\n\n /**\n * Returns new array of type `Array<Any?>` with the elements of this collection.\n */\n protected open fun toArray(): Array<Any?> = copyToArrayImpl(this)\n\n /**\n * Fills the provided [array] or creates new array of the same type\n * and fills it with the elements of this collection.\n */\n protected open fun <T> toArray(array: Array<T>): Array<T> = copyToArrayImpl(this, array)\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\n\nprivate enum class State {\n Ready,\n NotReady,\n Done,\n Failed\n}\n\n/**\n * A base class to simplify implementing iterators so that implementations only have to implement [computeNext]\n * to implement the iterator, calling [done] when the iteration is complete.\n */\npublic abstract class AbstractIterator<T> : Iterator<T> {\n private var state = State.NotReady\n\n private var nextValue: T? = null\n\n override fun hasNext(): Boolean {\n require(state != State.Failed)\n return when (state) {\n State.Done -> false\n State.Ready -> true\n else -> tryToComputeNext()\n }\n }\n\n override fun next(): T {\n if (!hasNext()) throw NoSuchElementException()\n state = State.NotReady\n @Suppress(\"UNCHECKED_CAST\")\n return nextValue as T\n }\n\n private fun tryToComputeNext(): Boolean {\n state = State.Failed\n

computeNext()\n return state == State.Ready\n }\n\n /**\n * Computes the next item in the iterator.\n *\n * This callback method should call one of these two methods:\n *\n * * [setNext] with the next value of the iteration\n * * [done] to indicate there are no more elements\n *\n * Failure to call either method will result in the iteration terminating with a failed state\n */\n
abstract protected fun computeNext(): Unit\n\n /**\n * Sets the next value in the iteration, called from the [computeNext] function\n */\n protected fun setNext(value: T): Unit {\n nextValue = value\n state = State.Ready\n }\n\n /**\n * Sets the state to done so that the iteration terminates.\n */\n protected fun done() {\n state = State.Done\n }\n}\n\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n/*\n * Based on GWT AbstractList\n * Copyright 2007 Google Inc.\n*/\n\npackage kotlin.collections\n\n/**\n * Provides a skeletal implementation of the read-only [List] interface.\n *\n * This class is intended to help implementing read-only lists so it doesn't support concurrent modification tracking.\n *\n * @param E the type of elements contained in the list. The list is covariant on its element type.\n */\n@SinceKotlin(\"1.1\")\npublic
abstract class AbstractList<out E> protected constructor() : AbstractCollection<E>(), List<E> {\n abstract override val size: Int\n abstract override fun get(index: Int): E\n\n override fun iterator(): Iterator<E> = IteratorImpl()\n\n override fun indexOf(element: @UnsafeVariance E): Int = indexOfFirst { it == element }\n\n override fun lastIndexOf(element: @UnsafeVariance E): Int = indexOfLast { it == element }\n\n override fun listIterator(): ListIterator<E> = ListIteratorImpl(0)\n\n override fun listIterator(index: Int): ListIterator<E> = ListIteratorImpl(index)\n\n override fun subList(fromIndex: Int, toIndex: Int): List<E> = SubList(this, fromIndex, toIndex)\n\n private class SubList<out E>(private val list: AbstractList<E>, private val fromIndex: Int, toIndex: Int) : AbstractList<E>(), RandomAccess {\n private var _size: Int = 0\n\n init {\n checkRangeIndexes(fromIndex, toIndex, list.size)\n
this._size = toIndex - fromIndex\n }\n\n override fun get(index: Int): E {\n checkElementIndex(index, _size)\n\n return list[fromIndex + index]\n }\n\n override val size: Int get() = _size\n }\n\n /**\n * Compares this list with other list instance with the ordered structural equality.\n *\n * @return true, if [other] instance is a [List] of the same size, which contains the same elements in the same order.\n */\n override fun equals(other: Any?): Boolean {\n if (other === this) return true\n if (other !is List<*>) return false\n\n return orderedEquals(this, other)\n }\n\n /**\n * Returns the hash code value for this list.\n */\n override fun hashCode(): Int = orderedHashCode(this)\n\n private open inner class IteratorImpl : Iterator<E> {\n /** the index of the item that will be returned on the next call to [next]`()` */\n protected var index = 0\n\n
override fun hasNext(): Boolean = index < size\n\n override fun next(): E {\n if (!hasNext()) throw NoSuchElementException()\n return get(index++)\n }\n }\n\n /**\n * Implementation of [ListIterator] for abstract lists.\n */\n private open inner class ListIteratorImpl(index: Int) : IteratorImpl(), ListIterator<E> {\n\n init {\n checkPositionIndex(index, this@AbstractList.size)\n this.index = index\n }\n\n override fun hasPrevious(): Boolean = index > 0\n\n override fun nextIndex(): Int = index\n\n override fun previous(): E {\n if (!hasPrevious()) throw NoSuchElementException()\n return get(--index)\n }\n\n override fun previousIndex(): Int = index - 1\n }\n\n internal companion object {\n internal fun checkElementIndex(index: Int, size: Int) {\n if (index < 0 || index >= size) {\n throw IndexOutOfBoundsException(\"index: $index, size: $size\")\n }\n }\n\n internal fun checkPositionIndex(index: Int, size: Int) {\n if (index < 0 || index > size) {\n throw IndexOutOfBoundsException(\"index: $index, size: $size\")\n }\n }\n\n internal fun checkRangeIndexes(fromIndex: Int, toIndex: Int, size: Int) {\n if (fromIndex < 0 || toIndex > size) {\n throw IndexOutOfBoundsException(\"fromIndex: $fromIndex, toIndex: $toIndex, size: $size\")\n }\n if (fromIndex > toIndex) {\n throw IllegalArgumentException(\"fromIndex: $fromIndex > toIndex: $toIndex\")\n }\n }\n\n internal fun orderedHashCode(c: Collection<*>): Int {\n var hashCode = 1\n for (e in c) {\n hashCode = 31 * hashCode + (e?.hashCode() ?: 0)\n }\n return hashCode\n }\n\n internal fun

orderedEquals(c: Collection<*>,
other: Collection<*>): Boolean {\n if (c.size != other.size) return false\n\n val otherIterator = other.iterator()\n for (elem in c) {\n val elemOther = otherIterator.next()\n if (elem != elemOther) {\n return false\n }\n }\n return true\n }\n }\n}","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n/*\n * Based on GWT AbstractMap\n * Copyright 2007 Google Inc.\n */\n\npackage kotlin.collections\n\n/**\n * Provides a skeletal implementation of the read-only [Map] interface.\n *\n * The implementor is required to implement [entries] property, which should return read-only set of map entries.\n *\n * @param K the type of map keys. The map is invariant on its key type.\n * @param V the type of map values. The map is covariant on its value
type.\n */\n@SinceKotlin(\"1.1\")\npublic abstract class AbstractMap<K, out V> protected constructor() : Map<K, V> {\n\n override fun containsKey(key: K): Boolean {\n return implFindEntry(key) != null\n }\n\n override fun containsValue(value: @UnsafeVariance V): Boolean = entries.any { it.value == value }\n\n internal fun containsEntry(entry: Map.Entry<*, *>?): Boolean {\n // since entry comes from @UnsafeVariance parameters it can be virtually anything\n if (entry !is Map.Entry<*, *>) return false\n val key = entry.key\n val value = entry.value\n val ourValue = get(key)\n\n if (value != ourValue) {\n return false\n }\n\n // Perhaps it was null and we don't contain the key?\n if (ourValue == null && !containsKey(key)) {\n return false\n }\n\n return true\n }\n\n /**\n * Compares this map with other instance with the ordered structural equality.\n *\n
* @return true, if [other] instance is a [Map] of the same size, all entries of which are contained in the [entries] set of this map.\n */\n override fun equals(other: Any?): Boolean {\n if (other === this) return true\n if (other !is Map<*, *>) return false\n if (size != other.size) return false\n\n return other.entries.all { containsEntry(it) }\n }\n\n override operator fun get(key: K): V? = implFindEntry(key)?.value\n\n\n /**\n * Returns the hash code value for this map.\n *\n * It is the same as the hashCode of [entries] set.\n */\n override fun hashCode(): Int = entries.hashCode()\n\n override fun isEmpty(): Boolean = size == 0\n override val size: Int get() = entries.size\n\n /**\n * Returns a read-only [Set] of all keys in this map.\n *\n * Accessing this property first time creates a keys view from [entries].\n * All subsequent accesses just return the created instance.\n */\n override
val keys: Set<K>\n get() {\n if (_keys == null) {\n _keys = object : AbstractSet<K>() {\n override operator fun contains(element: K): Boolean = containsKey(element)\n\n override operator fun iterator(): Iterator<K> {\n val entryIterator = entries.iterator()\n return object : Iterator<K> {\n override fun hasNext(): Boolean = entryIterator.hasNext()\n override fun next(): K = entryIterator.next().key\n }\n }\n\n override val size: Int get() = this@AbstractMap.size\n }\n }\n return _keys!!\n }\n\n @kotlin.jvm.Volatile\n private var _keys: Set<K>? = null\n\n\n override fun toString(): String = entries.joinToString(\", \", \"{\", \"}\") { toString(it) }\n\n private fun toString(entry: Map.Entry<K, V>): String = toString(entry.key) + \"=\" + toString(entry.value)\n\n private fun toString(o: Any?): String = if (o === this) \"(this Map)\" else o.toString()\n\n /**\n * Returns a read-only [Collection] of all values in this map.\n *\n * Accessing this property first time creates a values view from [entries].\n * All subsequent accesses just return the created instance.\n */\n override val values: Collection<V>\n get() {\n if (_values == null) {\n _values = object : AbstractCollection<V>() {\n override operator fun contains(element: @UnsafeVariance V): Boolean = containsValue(element)\n\n override operator fun iterator(): Iterator<V> {\n val entryIterator = entries.iterator()\n return object : Iterator<V> {\n override fun hasNext(): Boolean = entryIterator.hasNext()\n override fun next(): V = entryIterator.next().value\n }\n }\n\n override val size: Int get() = this@AbstractMap.size\n }\n }\n return _values!!\n }\n\n @kotlin.jvm.Volatile\n private var _values: Collection<V>? = null\n\n private fun implFindEntry(key: K): Map.Entry<K, V>? = entries.firstOrNull { it.key == key }\n\n internal companion object {\n\n internal fun entryHashCode(e:

Map.Entry<*, *>): Int = with(e) { (key?.hashCode() ?: 0) xor (value?.hashCode() ?: 0) }\n internal fun entryToString(e: Map.Entry<*, *>): String = with(e) { \"$key=$value\" }\n internal fun entryEquals(e: Map.Entry<*, *>, other: Any?): Boolean {\n if (other !is Map.Entry<*, *>) return false\n return e.key == other.key && e.value == other.value\n }\n }\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\npackage kotlin.collections\n\n/**\n * Provides a skeletal implementation of the read-only [Set] interface.\n *\n * This class is intended to help implementing read-only sets so it doesn't support concurrent modification tracking.\n *\n * @param E the type of elements contained in the set. The set is covariant on its element type.\n */\n@SinceKotlin(\"1.1\")\npublic abstract class AbstractSet<out E> protected constructor() : AbstractCollection<E>(), Set<E> {\n\n /**\n * Compares this set with other set instance with the unordered structural equality.\n *\n * @return true, if [other] instance is a [Set] of the same size, all elements of which are contained in this set.\n */\n override fun equals(other: Any?): Boolean {\n if (other === this) return true\n if (other !is Set<*>) return false\n return setEquals(this, other)\n }\n\n /**\n * Returns the hash code value for this set.\n */\n override fun hashCode(): Int = unorderedHashCode(this)\n\n internal companion object {\n internal fun unorderedHashCode(c: Collection<*>): Int {\n var hashCode = 0\n for (element in c) {\n hashCode += (element?.hashCode() ?: 0)\n }\n return hashCode\n }\n\n internal fun setEquals(c: Set<*>, other: Set<*>): Boolean {\n if (c.size != other.size) return false\n return c.containsAll(other)\n }\n }\n\n}","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"ArraysKt\")\n\n\npackage kotlin.collections\n\nimport kotlin.contracts.*\n\n\n/**\n * Returns a single list of all elements from all arrays in the given array.\n * @sample samples.collections.Arrays.Transformations.flattenArray\n */\npublic fun <T> Array<out Array<out T>>.flatten(): List<T> {\n val result = ArrayList<T>(sumBy { it.size })\n for (element in this) {\n result.addAll(element)\n }\n return result\n}\n\n/**\n * Returns a pair of lists, where\n * *first* list is built from the first values of each pair from this array,\n * *second* list is built from the second values of each pair from this array.\n * @sample samples.collections.Arrays.Transformations.unzipArray\n */\npublic fun <T, R> Array<out Pair<T, R>>.unzip(): Pair<List<T>, List<R>> {\n val listT = ArrayList<T>(size)\n val listR = ArrayList<R>(size)\n for (pair in this) {\n listT.add(pair.first)\n listR.add(pair.second)\n }\n return listT to listR\n}\n\n/**\n * Returns `true` if this nullable array is either null or empty.\n * @sample samples.collections.Arrays.Usage.arrayIsNullOrEmpty\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic inline fun Array<*>?.isNullOrEmpty(): Boolean {\n contract {\n returns(false) implies (this@isNullOrEmpty != null)\n }\n\n return this == null || this.isEmpty()\n}\n\n/**\n * Returns this array if it's not empty\n * or the result of calling [defaultValue] function if the array is empty.\n *\n * @sample samples.collections.Arrays.Usage.arrayIfEmpty\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\n@Suppress(\"UPPER_BOUND_CANNOT_BE_ARRAY\")\npublic inline fun <C, R> C.ifEmpty(defaultValue: () -> R): R where C : Array<*>, C : R =\n if (isEmpty()) defaultValue() else this\n\n\n@UseExperimental(ExperimentalUnsignedTypes::class)\n@SinceKotlin(\"1.3\")\n@PublishedApi\n@kotlin.jvm.JvmName(\"contentDeepEquals\")\n@kotlin.js.JsName(\"contentDeepEqualsImpl\")\ninternal fun <T> Array<out T>.contentDeepEqualsImpl(other: Array<out T>): Boolean {\n if (this === other) return true\n if (this.size != other.size) return false\n\n for (i in indices) {\n val v1 = this[i]\n val v2 = other[i]\n\n if (v1 === v2) {\n continue\n } else if (v1 == null || v2 == null) {\n return false\n }\n\n when {\n v1 is Array<*> && v2 is Array<*> -> if (!v1.contentDeepEquals(v2)) return false\n v1 is ByteArray && v2 is ByteArray -> if (!v1.contentEquals(v2)) return false\n v1 is ShortArray && v2 is ShortArray -> if (!v1.contentEquals(v2)) return false\n v1 is IntArray && v2 is IntArray -> if

(!v1.contentEquals(v2)) return false\n v1 is LongArray && v2 is LongArray -> if (!v1.contentEquals(v2)) return false\n v1 is FloatArray && v2 is FloatArray -> if (!v1.contentEquals(v2)) return false\n v1 is DoubleArray && v2 is DoubleArray -> if (!v1.contentEquals(v2)) return false\n v1 is CharArray && v2 is CharArray -> if (!v1.contentEquals(v2)) return false\n v1 is BooleanArray && v2 is BooleanArray -> if (!v1.contentEquals(v2)) return
false\n\n v1 is UByteArray && v2 is UByteArray -> if (!v1.contentEquals(v2)) return false\n v1 is UShortArray && v2 is UShortArray -> if (!v1.contentEquals(v2)) return false\n v1 is UIntArray && v2 is UIntArray -> if (!v1.contentEquals(v2)) return false\n v1 is ULongArray && v2 is ULongArray -> if (!v1.contentEquals(v2)) return false\n\n else -> if (v1 != v2) return false\n }\n\n }\n return true\n}\n\n@SinceKotlin(\"1.3\")\n@PublishedApi\n@kotlin.jvm.JvmName(\"contentDeepToString\")\n@kotlin.js.JsName(\"contentDeepToStringImpl\")\ninternal fun <T> Array<out T>.contentDeepToStringImpl(): String {\n val length = size.coerceAtMost((Int.MAX_VALUE - 2) / 5) * 5 + 2 // in order not to overflow Int.MAX_VALUE\n return buildString(length) {\n contentDeepToStringInternal(this, mutableListOf())\n }\n}\n\n@UseExperimental(ExperimentalUnsignedTypes::class)\nprivate fun <T> Array<out T>.contentDeepToStringInternal(result:
StringBuilder, processed: MutableList<Array<*>>) {\n if (this in processed) {\n result.append(\"[...]\")\n return\n }\n processed.add(this)\n result.append('[')\n\n for (i in indices) {\n if (i != 0) {\n result.append(\", \")\n }\n val element = this[i]\n when (element) {\n null -> result.append(\"null\")\n is Array<*> -> element.contentDeepToStringInternal(result, processed)\n is ByteArray -> result.append(element.contentToString())\n is ShortArray -> result.append(element.contentToString())\n is IntArray -> result.append(element.contentToString())\n is LongArray -> result.append(element.contentToString())\n is FloatArray -> result.append(element.contentToString())\n is DoubleArray -> result.append(element.contentToString())\n is CharArray -> result.append(element.contentToString())\n
is BooleanArray -> result.append(element.contentToString())\n\n is UByteArray -> result.append(element.contentToString())\n is UShortArray -> result.append(element.contentToString())\n is UIntArray -> result.append(element.contentToString())\n is ULongArray -> result.append(element.contentToString())\n\n else -> result.append(element.toString())\n }\n }\n\n result.append(']')\n processed.removeAt(processed.lastIndex)\n}","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\n/**\n * Data class representing a value from a collection or sequence, along with its index in that collection or sequence.\n *\n * @property value the underlying value.\n * @property index the index of the value in the collection or sequence.\n */\npublic
data class IndexedValue<out T>(public val index: Int, public val value: T)\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmName(\"MapAccessorsKt\")\n\npackage kotlin.collections\n\nimport kotlin.reflect.KProperty\nimport kotlin.internal.Exact\n\n/**\n * Returns the value of the property for the given object from this read-only map.\n * @param thisRef the object for which the value is requested (not used).\n * @param property the metadata for the property, used to get the name of property and lookup the value corresponding to this name in the map.\n * @return the property value.\n *\n * @throws NoSuchElementException when the map doesn't contain value for the property name and doesn't provide an implicit default (see [withDefault]).\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <V, V1 : V> Map<in String, @Exact V>.getValue(thisRef:
Any?, property: KProperty<*>): V1 =\n @Suppress(\"UNCHECKED_CAST\")
(getOrImplicitDefault(property.name) as V1)\n\n/**\n * Returns the value of the property for the given object from this mutable map.\n * @param thisRef the object for which the value is requested (not used).\n * @param property the metadata for the property, used to get the name of property and lookup the value corresponding to this name in the map.\n * @return the property value.\n *\n * @throws NoSuchElementException when the map doesn't contain

value for the property name and doesn't provide an implicit default (see [withDefault]).\n */\n@kotlin.jvm.JvmName(\"getVar\")\n@kotlin.internal.InlineOnly\npublic inline operator fun <V, V1 : V> MutableMap<in String, out @Exact V>.getValue(thisRef: Any?, property: KProperty<*>): V1 =\n @Suppress(\"UNCHECKED_CAST\") (getOrImplicitDefault(property.name) as V1)\n\n@Deprecated(\"Use getValue() with two type parameters instead\", level = DeprecationLevel.ERROR)\n@kotlin.jvm.JvmName(\"getVarContravariant\")\n@kotlin.internal.LowPriorityInOverloadResolution\n@kotlin.internal.InlineOnly\npublic
 inline fun <V> MutableMap<in String, in V>.getValue(thisRef: Any?, property: KProperty<*>): V =\n @Suppress(\"UNCHECKED_CAST\") (getOrImplicitDefault(property.name) as V)\n\n/**\n * Stores the value of the property for the given object in this mutable map.\n * @param thisRef the object for which the value is requested (not used).\n * @param property the metadata for the property, used to get the name of property and store the value associated with that name in the map.\n * @param value the value to set.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <V> MutableMap<in String, in V>.setValue(thisRef: Any?, property: KProperty<*>, value: V) {\n this.put(property.name, value)\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"MapsKt\")\n\npackage
 kotlin.collections\n\n/**\n * Returns the value for the given key, or the implicit default value for this map.\n * By default no implicit value is provided for maps and a [NoSuchElementException] is thrown.\n * To create a map with implicit default value use [withDefault] method.\n *\n * @throws NoSuchElementException when the map doesn't contain a value for the specified key and no implicit default was provided for that map.\n */\n@kotlin.jvm.JvmName(\"getOrImplicitDefaultNullable\")\n@PublishedApi\ninternal fun <K, V> Map<K, V>.getOrImplicitDefault(key: K): V {\n if (this is MapWithDefault)\n return this.getOrImplicitDefault(key)\n\n return getOrElseNullable(key, { throw NoSuchElementException(\"Key $key is missing in the map.\") })\n}\n\n/**\n * Returns a wrapper of this read-only map, having the implicit default value provided with the specified function [defaultValue].\n *\n * This
 implicit default value is used when the original map doesn't contain a value for the key specified\n * and a value is obtained with [Map.getValue] function, for example when properties are delegated to the map.\n *\n * When this map already has an implicit default value provided with a former call to [withDefault], it is being replaced by this call.\n */\npublic fun <K, V> Map<K, V>.withDefault(defaultValue: (key: K) -> V): Map<K, V> =\n when (this) {\n is MapWithDefault -> this.map.withDefault(defaultValue)\n else -> MapWithDefaultImpl(this, defaultValue)\n }\n\n/**\n * Returns a wrapper of this mutable map, having the implicit default value provided with the specified function [defaultValue].\n *\n * This implicit default value is used when the original map doesn't contain a value for the key specified\n * and a value is obtained with [Map.getValue] function, for example when properties are delegated to the map.\n *\n * When this map already has an implicit default
 value provided with a former call to [withDefault], it is being replaced by this call.\n */\n@kotlin.jvm.JvmName(\"withDefaultMutable\")\npublic fun <K, V> MutableMap<K, V>.withDefault(defaultValue: (key: K) -> V): MutableMap<K, V> =\n when (this) {\n is MutableMapWithDefault -> this.map.withDefault(defaultValue)\n else -> MutableMapWithDefaultImpl(this, defaultValue)\n }\n\n\nprivate interface MapWithDefault<K, out V> : Map<K, V> {\n public val map: Map<K, V>\n public fun getOrImplicitDefault(key: K): V\n}\n\nprivate interface MutableMapWithDefault<K, V> : MutableMap<K, V>, MapWithDefault<K, V> {\n public override val map: MutableMap<K, V>\n}\n\n\nprivate class MapWithDefaultImpl<K, out V>(public override val map: Map<K, V>, private val default: (key: K) -> V) : MapWithDefault<K, V> {\n override fun equals(other: Any?): Boolean = map.equals(other)\n override fun hashCode(): Int = map.hashCode()\n override fun toString(): String = map.toString()\n
 override val size: Int get() = map.size\n override fun isEmpty(): Boolean = map.isEmpty()\n override fun containsKey(key: K): Boolean = map.containsKey(key)\n override fun containsValue(value: @UnsafeVariance V): Boolean = map.containsValue(value)\n override fun get(key: K): V? = map.get(key)\n override val keys:

Set<K> get() = map.keys\n   override val values: Collection<V> get() = map.values\n   override val entries: Set<Map.Entry<K, V>> get() = map.entries\n\n   override fun getOrImplicitDefault(key: K): V = map.getOrElseNullable(key, { default(key) })\n}\n\nprivate class MutableMapWithDefaultImpl<K, V>(public override val map: MutableMap<K, V>, private val default: (key: K) -> V) : MutableMapWithDefault<K, V> {\n override fun equals(other: Any?): Boolean = map.equals(other)\n   override fun hashCode(): Int = map.hashCode()\n   override fun toString(): String = map.toString()\n   override val size: Int get() = map.size\n override fun isEmpty(): Boolean
= map.isEmpty()\n   override fun containsKey(key: K): Boolean = map.containsKey(key)\n   override fun containsValue(value: @UnsafeVariance V): Boolean = map.containsValue(value)\n   override fun get(key: K): V? = map.get(key)\n   override val keys: MutableSet<K> get() = map.keys\n   override val values: MutableCollection<V> get() = map.values\n   override val entries: MutableSet<MutableMap.MutableEntry<K, V>> get() = map.entries\n\n   override fun put(key: K, value: V): V? = map.put(key, value)\n   override fun remove(key: K): V? = map.remove(key)\n   override fun putAll(from: Map<out K, V>) = map.putAll(from)\n override fun clear() = map.clear()\n\n   override fun getOrImplicitDefault(key: K): V = map.getOrElseNullable(key, { default(key) })\n}\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"CollectionsKt\")\n\npackage kotlin.collections\n\nimport kotlin.random.Random\n\n/**\n * Removes a single instance of the specified element from this\n * collection, if it is present.\n *\n * Allows to overcome type-safety restriction of `remove` that requires to pass an element of type `E`.\n *\n * @return `true` if the element has been successfully removed; `false` if it was not present in the collection.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <@kotlin.internal.OnlyInputTypes T> MutableCollection<out T>.remove(element: T): Boolean =\n   @Suppress(\"UNCHECKED_CAST\") (this as MutableCollection<T>).remove(element)\n\n/**\n * Removes all of this collection's elements that are also contained in the specified collection.\n\n * Allows to overcome type-safety restriction of `removeAll` that requires to pass a collection of type `Collection<E>`.\n *\n * @return `true` if any of the specified elements was removed from the collection, `false` if the collection was not
modified.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <@kotlin.internal.OnlyInputTypes T> MutableCollection<out T>.removeAll(elements: Collection<T>): Boolean =\n@Suppress(\"UNCHECKED_CAST\") (this as MutableCollection<T>).removeAll(elements)\n\n/**\n * Retains only the elements in this collection that are contained in the specified collection.\n *\n * Allows to overcome type-safety restriction of `retainAll` that requires to pass a collection of type `Collection<E>`.\n *\n * @return `true` if any element was removed from the collection, `false` if the collection was not modified.\n */\n@kotlin.internal.InlineOnly\npublic inline fun <@kotlin.internal.OnlyInputTypes T> MutableCollection<out T>.retainAll(elements: Collection<T>): Boolean =\n   @Suppress(\"UNCHECKED_CAST\") (this as MutableCollection<T>).retainAll(elements)\n\n/**\n * Removes the element at the specified [index] from this list.\n * In Kotlin one should use the [MutableList.removeAt] function instead.\n */\n@Deprecated(\"Use removeAt(index) instead.\", ReplaceWith(\"removeAt(index)\"), level = DeprecationLevel.ERROR)\n@kotlin.internal.InlineOnly\npublic inline fun <T> MutableList<T>.remove(index: Int): T = removeAt(index)\n\n/**\n * Adds the specified [element] to this mutable collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> MutableCollection<in T>.plusAssign(element: T) {\n   this.add(element)\n}\n\n/**\n * Adds all elements of the given [elements] collection to this mutable collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> MutableCollection<in T>.plusAssign(elements: Iterable<T>) {\n   this.addAll(elements)\n}\n\n/**\n * Adds all elements of the given [elements] array to this mutable collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> MutableCollection<in T>.plusAssign(elements: Array<T>) {\n   this.addAll(elements)\n}\n\n/**\n * Adds all elements of the given [elements] sequence to this mutable collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> MutableCollection<in T>.plusAssign(elements: Sequence<T>) {\n   this.addAll(elements)\n}\n\n/**\n * Removes a single instance of the specified [element] from

this mutable collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> MutableCollection<in T>.minusAssign(element: T) {\n   this.remove(element)\n}\n\n/**\n * Removes all elements contained in the given [elements] collection from this mutable collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> MutableCollection<in T>.minusAssign(elements: Iterable<T>) {\n   this.removeAll(elements)\n}\n\n/**\n * Removes all elements contained in the given [elements] array from this mutable collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> MutableCollection<in T>.minusAssign(elements: Array<T>) {\n   this.removeAll(elements)\n}\n\n/**\n * Removes all elements contained in the given [elements] sequence
 from this mutable collection.\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> MutableCollection<in T>.minusAssign(elements: Sequence<T>) {\n   this.removeAll(elements)\n}\n\n/**\n * Adds all elements of the given [elements] collection to this [MutableCollection].\n */\npublic fun <T> MutableCollection<in T>.addAll(elements: Iterable<T>): Boolean {\n   when (elements) {\n   is Collection -> return addAll(elements)\n   else -> {\n   var result: Boolean = false\n   for (item in elements)\n   if (add(item)) result = true\n   return result\n   }\n   }\n}\n\n/**\n * Adds all elements of the given [elements] sequence to this [MutableCollection].\n */\npublic fun <T> MutableCollection<in T>.addAll(elements: Sequence<T>): Boolean {\n   var result: Boolean = false\n   for (item in elements) {\n   if (add(item)) result = true\n   }\n   return result\n}\n\n/**\n * Adds all elements of the given [elements] array
 to this [MutableCollection].\n */\npublic fun <T> MutableCollection<in T>.addAll(elements: Array<out T>): Boolean {\n   return addAll(elements.asList())\n}\n\n/**\n * Removes all elements from this [MutableIterable] that match the given [predicate].\n */\npublic fun <T> MutableIterable<T>.removeAll(predicate: (T) -> Boolean): Boolean = filterInPlace(predicate, true)\n\n/**\n * Retains only elements of this [MutableIterable] that match the given [predicate].\n */\npublic fun <T> MutableIterable<T>.retainAll(predicate: (T) -> Boolean): Boolean = filterInPlace(predicate, false)\n\nprivate fun <T> MutableIterable<T>.filterInPlace(predicate: (T) -> Boolean, predicateResultToRemove: Boolean): Boolean {\n   var result = false\n   with(iterator()) {\n   while (hasNext())\n   if (predicate(next()) == predicateResultToRemove) {\n   remove()\n   result = true\n   }\n   }\n   return result\n}\n\n/**\n * Removes all elements from this [MutableList]
 that match the given [predicate].\n */\npublic fun <T> MutableList<T>.removeAll(predicate: (T) -> Boolean): Boolean = filterInPlace(predicate, true)\n\n/**\n * Retains only elements of this [MutableList] that match the given [predicate].\n */\npublic fun <T> MutableList<T>.retainAll(predicate: (T) -> Boolean): Boolean = filterInPlace(predicate, false)\n\nprivate fun <T> MutableList<T>.filterInPlace(predicate: (T) -> Boolean, predicateResultToRemove: Boolean): Boolean {\n   if (this !is RandomAccess)\n   return (this as MutableIterable<T>).filterInPlace(predicate, predicateResultToRemove)\n\n   var writeIndex: Int = 0\n   for (readIndex in 0..lastIndex) {\n   val element = this[readIndex]\n   if (predicate(element) == predicateResultToRemove)\n   continue\n\n   if (writeIndex != readIndex)\n   this[writeIndex] = element\n\n   writeIndex++\n   }\n   if (writeIndex < size) {\n   for (removeIndex in lastIndex downTo writeIndex)\n
        removeAt(removeIndex)\n\n   return true\n   } else {\n   return false\n   }\n}\n\n/**\n * Removes all elements from this [MutableCollection] that are also contained in the given [elements] collection.\n */\npublic fun <T> MutableCollection<in T>.removeAll(elements: Iterable<T>): Boolean {\n   return removeAll(elements.convertToSetForSetOperationWith(this))\n}\n\n/**\n * Removes all elements from this [MutableCollection] that are also contained in the given [elements] sequence.\n */\npublic fun <T> MutableCollection<in T>.removeAll(elements: Sequence<T>): Boolean {\n   val set = elements.toHashSet()\n   return set.isNotEmpty() && removeAll(set)\n}\n\n/**\n * Removes all elements from this [MutableCollection] that are also contained in the given [elements] array.\n */\npublic fun <T> MutableCollection<in T>.removeAll(elements: Array<out T>): Boolean {\n   return elements.isNotEmpty() && removeAll(elements.toHashSet())\n}\n\n/**\n * Retains only elements of this [MutableCollection]
 that are contained in the given [elements] collection.\n */\npublic fun <T> MutableCollection<in T>.retainAll(elements: Iterable<T>): Boolean {\n   return

retainAll(elements.convertToSetForSetOperationWith(this))\n}\n\n/**\n * Retains only elements of this [MutableCollection] that are contained in the given [elements] array.\n */\npublic fun <T> MutableCollection<in T>.retainAll(elements: Array<out T>): Boolean {\n   if (elements.isNotEmpty())\n   return retainAll(elements.toHashSet())\n   else\n   return retainNothing()\n}\n\n/**\n * Retains only elements of this [MutableCollection] that are contained in the given [elements] sequence.\n */\npublic fun <T> MutableCollection<in T>.retainAll(elements: Sequence<T>): Boolean {\n   val set = elements.toHashSet()\n   if (set.isNotEmpty())\n   return retainAll(set)\n   else\n   return retainNothing()\n}\n\nprivate fun MutableCollection<*>.retainNothing(): Boolean {\n   val result = isNotEmpty()\n   clear()\n   return result\n}\n\n/**\n * Randomly shuffles elements in this mutable list using the specified [random] instance as the source of randomness.\n *\n * See: https://en.wikipedia.org/wiki/Fisher%E2%80%93Yates_shuffle#The_modern_algorithm\n */\n@SinceKotlin(\"1.3\")\npublic fun <T> MutableList<T>.shuffle(random: Random): Unit {\n   for (i in lastIndex downTo 1) {\n   val j = random.nextInt(i + 1)\n   val copy = this[i]\n   this[i] = this[j]\n   this[j] = copy\n   }\n}\n\n/**\n * Returns a new list with the elements of this list randomly shuffled\n * using the specified [random] instance as the source of randomness.\n */\n@SinceKotlin(\"1.3\")\npublic fun <T> Iterable<T>.shuffled(random: Random): List<T> = toMutableList().apply { shuffle(random) }\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"CollectionsKt\")\n\npackage kotlin.collections\n\nprivate open class ReversedListReadOnly<out T>(private val delegate: List<T>) : AbstractList<T>() {\n   override val size: Int get() = delegate.size\n   override fun get(index: Int): T = delegate[reverseElementIndex(index)]\n}\n\nprivate class ReversedList<T>(private val delegate: MutableList<T>) : AbstractMutableList<T>() {\n   override val size: Int get() = delegate.size\n   override fun get(index: Int): T = delegate[reverseElementIndex(index)]\n\n   override fun clear() = delegate.clear()\n   override fun removeAt(index: Int): T = delegate.removeAt(reverseElementIndex(index))\n\n   override fun set(index: Int, element: T): T = delegate.set(reverseElementIndex(index), element)\n   override fun add(index: Int, element: T) {\n   delegate.add(reversePositionIndex(index), element)\n   }\n}\n\nprivate fun List<*>.reverseElementIndex(index: Int) =\n   if (index in 0..lastIndex) lastIndex - index else throw IndexOutOfBoundsException(\"Element index $index must be in range [${0..lastIndex}].\")\n\nprivate fun List<*>.reversePositionIndex(index: Int) =\n   if (index in 0..size) size - index else throw IndexOutOfBoundsException(\"Position index $index must be in range [${0..size}].\")\n\n\n/**\n * Returns a reversed read-only view of the original List.\n * All changes made in the original list will be reflected in the reversed one.\n * @sample samples.collections.ReversedViews.asReversedList\n */\npublic fun <T> List<T>.asReversed(): List<T> = ReversedListReadOnly(this)\n\n/**\n * Returns a reversed mutable view of the original mutable List.\n * All changes made in the original list will be reflected in the reversed one and vice versa.\n * @sample samples.collections.ReversedViews.asReversedMutableList\n */\n@kotlin.jvm.JvmName(\"asReversedMutable\")\npublic fun <T> MutableList<T>.asReversed(): MutableList<T> = ReversedList(this)\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"SequencesKt\")\n@file:UseExperimental(ExperimentalTypeInference::class)\n\npackage kotlin.sequences\n\nimport kotlin.coroutines.*\nimport kotlin.coroutines.intrinsics.*\nimport kotlin.experimental.ExperimentalTypeInference\n\n/**\n * Builds a [Sequence] lazily yielding values one by one.\n *\n * @see kotlin.sequences.generateSequence\n *\n * @sample samples.collections.Sequences.Building.buildSequenceYieldAll\n * @sample samples.collections.Sequences.Building.buildFibonacciSequence\n */\n@SinceKotlin(\"1.3\")\npublic fun <T> sequence(@BuilderInference block: suspend SequenceScope<T>.() -> Unit): Sequence<T> = Sequence { iterator(block) }\n\n@SinceKotlin(\"1.3\")\n@Deprecated(\"Use 'sequence { }' function instead.\", ReplaceWith(\"sequence(builderAction)\"), level = DeprecationLevel.ERROR)\n@kotlin.internal.InlineOnly\npublic

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 inline fun <T> buildSequence(@BuilderInference noinline builderAction: suspend SequenceScope<T>.() -> Unit): Sequence<T> = Sequence { iterator(builderAction) }\n\n/**\n * Builds an [Iterator] lazily yielding values one by one.\n *\n * @sample samples.collections.Sequences.Building.buildIterator\n * @sample samples.collections.Iterables.Building.iterable\n */\n@SinceKotlin(\"1.3\")\npublic fun <T> iterator(@BuilderInference block: suspend SequenceScope<T>.() -> Unit): Iterator<T> {\n    val iterator = SequenceBuilderIterator<T>()\n    iterator.nextStep = block.createCoroutineUnintercepted(receiver = iterator, completion = iterator)\n    return iterator\n}\n\n@SinceKotlin(\"1.3\")\n@Deprecated(\"Use 'iterator { }' function instead.\", ReplaceWith(\"iterator(builderAction)\"), level = DeprecationLevel.ERROR)\n@kotlin.internal.InlineOnly\npublic inline fun <T> buildIterator(@BuilderInference noinline builderAction: suspend SequenceScope<T>.() -> Unit): Iterator<T> =
 iterator(builderAction)\n\n/**\n * The scope for yielding values of a [Sequence] or an [Iterator], provides [yield] and [yieldAll] suspension functions.\n *\n * @see sequence\n * @see iterator\n *\n * @sample samples.collections.Sequences.Building.buildSequenceYieldAll\n * @sample samples.collections.Sequences.Building.buildFibonacciSequence\n */\n@RestrictsSuspension\n@SinceKotlin(\"1.3\")\npublic abstract class SequenceScope<in T> internal constructor() {\n    /**\n     * Yields a value to the [Iterator] being built and suspends\n     * until the next value is requested.\n     *\n     * @sample samples.collections.Sequences.Building.buildSequenceYieldAll\n     * @sample samples.collections.Sequences.Building.buildFibonacciSequence\n     */\n    public abstract suspend fun yield(value: T)\n\n    /**\n     * Yields all values from the `iterator` to the [Iterator] being built\n     * and suspends until all these values are iterated and the next one is requested.\n     *\n     * The sequence
 of values returned by the given iterator can be potentially infinite.\n     *\n     * @sample samples.collections.Sequences.Building.buildSequenceYieldAll\n     */\n    public abstract suspend fun yieldAll(iterator: Iterator<T>)\n\n    /**\n     * Yields a collections of values to the [Iterator] being built\n     * and suspends until all these values are iterated and the next one is requested.\n     *\n     * @sample samples.collections.Sequences.Building.buildSequenceYieldAll\n     */\n    public suspend fun yieldAll(elements: Iterable<T>) {\n        if (elements is Collection && elements.isEmpty()) return\n        return yieldAll(elements.iterator())\n    }\n\n    /**\n     * Yields potentially infinite sequence of values  to the [Iterator] being built\n     * and suspends until all these values are iterated and the next one is requested.\n     *\n     * The sequence can be potentially infinite.\n     *\n     * @sample samples.collections.Sequences.Building.buildSequenceYieldAll\n
     */\n    public suspend fun yieldAll(sequence: Sequence<T>) = yieldAll(sequence.iterator())\n}\n\n@Deprecated(\"Use SequenceScope class instead.\", ReplaceWith(\"SequenceScope<T>\"), level = DeprecationLevel.ERROR)\npublic typealias SequenceBuilder<T> = SequenceScope<T>\n\nprivate typealias State = Int\n\nprivate const val State_NotReady: State = 0\nprivate const val State_ManyNotReady: State = 1\nprivate const val State_ManyReady: State = 2\nprivate const val State_Ready: State = 3\nprivate const val State_Done: State = 4\nprivate const val State_Failed: State = 5\n\nprivate class SequenceBuilderIterator<T> : SequenceScope<T>(), Iterator<T>, Continuation<Unit> {\n    private var state = State_NotReady\n    private var nextValue: T? = null\n    private var nextIterator: Iterator<T>? = null\n    var nextStep: Continuation<Unit>? = null\n\n    override fun hasNext(): Boolean {\n        while (true) {\n            when (state) {\n                State_NotReady -> {}\n
  State_ManyNotReady ->\n                    if (nextIterator!!.hasNext()) {\n                        state = State_ManyReady\n                        return true\n                    } else {\n                        nextIterator = null\n                    }\n
State_Done -> return false\n                State_Ready, State_ManyReady -> return true\n                else -> throw exceptionalState()\n            }\n\n            state = State_Failed\n            val step = nextStep!!\n            nextStep = null\n            step.resume(Unit)\n        }\n    }\n\n    override fun next(): T {\n        when (state) {\n            State_NotReady, State_ManyNotReady -> return nextNotReady()\n            State_ManyReady -> {\n                state = State_ManyNotReady\n                return nextIterator!!.next()\n            }\n            State_Ready -> {\n                state = State_NotReady\n                @Suppress(\"UNCHECKED_CAST\")\n                val result = nextValue
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as T\n                nextValue = null\n                return result\n            }\n            else -> throw exceptionalState()\n        }\n    }\n\n    private fun nextNotReady(): T {\n        if (!hasNext()) throw NoSuchElementException() else return next()\n    }\n\n    private fun exceptionalState(): Throwable = when (state) {\n        State_Done -> NoSuchElementException()\n        State_Failed -> IllegalStateException(\"Iterator has failed.\")\n        else -> IllegalStateException(\"Unexpected state of the iterator: $state\")\n    }\n\n\n    override suspend fun yield(value: T) {\n        nextValue = value\n        state = State_Ready\n        return suspendCoroutineUninterceptedOrReturn { c ->\n            nextStep = c\n            COROUTINE_SUSPENDED\n        }\n    }\n\n    override suspend fun yieldAll(iterator: Iterator<T>) {\n        if (!iterator.hasNext()) return\n        nextIterator = iterator\n        state = State_ManyReady\n        return suspendCoroutineUninterceptedOrReturn { c ->\n            nextStep = c\n            COROUTINE_SUSPENDED\n        }\n    }\n\n    // Completion continuation implementation\n    override fun resumeWith(result: Result<Unit>) {\n        result.getOrThrow() // just rethrow exception if it is there\n        state = State_Done\n    }\n\n    override val context: CoroutineContext\n        get() = EmptyCoroutineContext\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\ninternal fun checkWindowSizeStep(size: Int, step: Int) {\n    require(size > 0 && step > 0) {\n        if (size != step)\n            \"Both size $size and step $step must be greater than zero.\"\n        else\n            \"size $size must be greater than zero.\"\n    }\n}\n\ninternal fun <T> Sequence<T>.windowedSequence(size: Int, step: Int, partialWindows: Boolean, reuseBuffer: Boolean): Sequence<List<T>> {\n    checkWindowSizeStep(size, step)\n    return Sequence { windowedIterator(iterator(), size, step, partialWindows, reuseBuffer) }\n}\n\ninternal fun <T> windowedIterator(iterator: Iterator<T>, size: Int, step: Int, partialWindows: Boolean, reuseBuffer: Boolean): Iterator<List<T>> {\n    if (!iterator.hasNext()) return EmptyIterator\n    return iterator<List<T>> {\n        val gap = step - size\n        if (gap >= 0) {\n            var buffer = ArrayList<T>(size)\n            var skip = 0\n            for (e in iterator) {\n                if (skip > 0) { skip -= 1; continue }\n                buffer.add(e)\n                if (buffer.size == size) {\n                    yield(buffer)\n                    if (reuseBuffer) buffer.clear() else buffer = ArrayList(size)\n                    skip = gap\n                }\n            }\n            if (buffer.isNotEmpty()) {\n                if (partialWindows || buffer.size == size) yield(buffer)\n            }\n        } else {\n            val buffer = RingBuffer<T>(size)\n            for (e in iterator) {\n                buffer.add(e)\n                if (buffer.isFull()) {\n                    yield(if (reuseBuffer) buffer else ArrayList(buffer))\n                    buffer.removeFirst(step)\n                }\n            }\n            if (partialWindows) {\n                while (buffer.size > step) {\n                    yield(if (reuseBuffer) buffer else ArrayList(buffer))\n                    buffer.removeFirst(step)\n                }\n                if (buffer.isNotEmpty()) yield(buffer)\n            }\n        }\n    }\n}\n\ninternal class MovingSubList<out E>(private val list: List<E>) : AbstractList<E>(), RandomAccess {\n    private var fromIndex: Int = 0\n    private var _size: Int = 0\n\n    fun move(fromIndex: Int, toIndex: Int) {\n        checkRangeIndexes(fromIndex, toIndex, list.size)\n        this.fromIndex = fromIndex\n        this._size = toIndex - fromIndex\n    }\n\n    override fun get(index: Int): E {\n        checkElementIndex(index, _size)\n\n        return list[fromIndex + index]\n    }\n\n    override val size: Int get() = _size\n}\n\n\n/**\n * Provides ring buffer implementation.\n *\n * Buffer overflow is not allowed so [add] doesn't overwrite tail but raises an exception.\n */\nprivate class RingBuffer<T>(val capacity: Int) : AbstractList<T>(), RandomAccess {\n    init {\n        require(capacity >= 0) { \"ring buffer capacity should not be negative but it is $capacity\" }\n    }\n\n    private val buffer = arrayOfNulls<Any?>(capacity)\n    private var startIndex: Int = 0\n\n    override var size: Int = 0\n        private set\n\n    override fun get(index: Int): T {\n        checkElementIndex(index, size)\n        @Suppress(\"UNCHECKED_CAST\")\n        return buffer[startIndex.forward(index)] as T\n    }\n\n    fun isFull() = size == capacity\n\n    override fun iterator(): Iterator<T> = object : AbstractIterator<T>() {\n        private var count = size\n        private var index = startIndex\n\n        override fun computeNext() {\n            if (count == 0) {\n                done()\n            } else {\n                @Suppress(\"UNCHECKED_CAST\")\n                setNext(buffer[index] as T)\n                index = index.forward(1)\n                count--\n            }\n        }\n    }\n\n    @Suppress(\"UNCHECKED_CAST\")\n    override fun <T> toArray(array: Array<T>): Array<T> {\n        val result: Array<T?> =\n            if (array.size < this.size) array.copyOf(this.size) else array as Array<T?>\n\n        val
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size = this.size\n\n        var widx = 0\n        var idx = startIndex\n\n        while (widx < size && idx < capacity) {\n
    result[widx] = buffer[idx] as T\n            widx++\n            idx++\n        }\n\n        idx = 0\n        while (widx <
size) {\n            result[widx] = buffer[idx] as T\n            widx++\n            idx++\n        }\n        if (result.size >
this.size) result[this.size]
 = null\n\n        return result as Array<T>\n    }\n\n    override fun toArray(): Array<Any?> {\n        return
toArray(arrayOfNulls(size))\n    }\n\n    /**\n     * Add [element] to the buffer or fail with [IllegalStateException] if
no free space available in the buffer\n     */\n    fun add(element: T) {\n        if (isFull()) {\n            throw
IllegalStateException(\"ring buffer is full\")\n        }\n\n        buffer[startIndex.forward(size)] = element\n
size++\n    }\n\n    /**\n     * Removes [n] first elements from the buffer or fails with [IllegalArgumentException] if
not enough elements in the buffer to remove\n     */\n    fun removeFirst(n: Int) {\n        require(n >= 0) { \"n
shouldn't be negative but it is $n\" }\n        require(n <= size) { \"n shouldn't be greater than the buffer size: n = $n,
size = $size\" }\n\n        if (n > 0) {\n            val start = startIndex\n            val end = start.forward(n)\n\n            if
(start > end) {\n
    buffer.fill(null, start, capacity)\n                buffer.fill(null, 0, end)\n            } else {\n                buffer.fill(null,
start, end)\n            }\n\n            startIndex = end\n            size -= n\n        }\n    }\n\n\n
@Suppress(\"NOTHING_TO_INLINE\")\n    private inline fun Int.forward(n: Int): Int = (this + n) % capacity\n\n
// TODO: replace with Array.fill from stdlib when available in common\n    private fun <T> Array<T>.fill(element:
T, fromIndex: Int = 0, toIndex: Int = size): Unit {\n        for (idx in fromIndex until toIndex) {\n            this[idx] =
element\n        }\n    }\n}\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the
Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\n//
UByteArray
================================================================================\n@Exp
erimentalUnsignedTypes\nprivate fun partition(\n    array: UByteArray,
 left: Int, right: Int): Int {\n    var i = left\n    var j = right\n    val pivot = array[(left + right) / 2]\n    while (i <= j) {\n
    while (array[i] < pivot)\n            i++\n        while (array[j] > pivot)\n            j--\n        if (i <= j) {\n            val tmp
= array[i]\n            array[i] = array[j]\n            array[j] = tmp\n            i++\n            j--\n        }\n    }\n    return
i\n}\n\n@ExperimentalUnsignedTypes\nprivate fun quickSort(\n    array: UByteArray, left: Int, right: Int) {\n    val
index = partition(array, left, right)\n    if (left < index - 1)\n        quickSort(array, left, index - 1)\n    if (index <
right)\n        quickSort(array, index, right)\n}\n\n// UShortArray
================================================================================\n@Exp
erimentalUnsignedTypes\nprivate fun partition(\n    array: UShortArray, left: Int, right: Int): Int {\n    var i = left\n
var j = right\n    val pivot = array[(left + right) / 2]\n
  while (i <= j) {\n        while (array[i] < pivot)\n            i++\n        while (array[j] > pivot)\n            j--\n        if (i <=
j) {\n            val tmp = array[i]\n            array[i] = array[j]\n            array[j] = tmp\n            i++\n            j--\n        }\n
 }\n    return i\n}\n\n@ExperimentalUnsignedTypes\nprivate fun quickSort(\n    array: UShortArray, left: Int, right:
Int) {\n    val index = partition(array, left, right)\n    if (left < index - 1)\n        quickSort(array, left, index - 1)\n    if
(index < right)\n        quickSort(array, index, right)\n}\n\n// UIntArray
================================================================================\n@Exp
erimentalUnsignedTypes\nprivate fun partition(\n    array: UIntArray, left: Int, right: Int): Int {\n    var i = left\n
var j = right\n    val pivot = array[(left + right) / 2]\n    while (i <= j) {\n        while (array[i] < pivot)\n            i++\n
  while (array[j] > pivot)\n            j--\n
      if (i <= j) {\n            val tmp = array[i]\n            array[i] = array[j]\n            array[j] = tmp\n            i++\n
j--\n        }\n    }\n    return i\n}\n\n@ExperimentalUnsignedTypes\nprivate fun quickSort(\n    array: UIntArray, left:
Int, right: Int) {\n    val index = partition(array, left, right)\n    if (left < index - 1)\n        quickSort(array, left, index -
1)\n    if (index < right)\n        quickSort(array, index, right)\n}\n\n// ULongArray
================================================================================\n@Exp
erimentalUnsignedTypes\nprivate fun partition(\n    array: ULongArray, left: Int, right: Int): Int {\n    var i = left\n
var j = right\n    val pivot = array[(left + right) / 2]\n    while (i <= j) {\n        while (array[i] < pivot)\n            i++\n
```

```
  while (array[j] > pivot)\n            j--\n        if (i <= j) {\n            val tmp = array[i]\n            array[i] = array[j]\n
 array[j] = tmp\n
        i++\n            j--\n        }\n    }\n    return i\n}\n\n@ExperimentalUnsignedTypes\nprivate fun quickSort(\n
array: ULongArray, left: Int, right: Int) {\n    val index = partition(array, left, right)\n    if (left < index - 1)\n
quickSort(array, left, index - 1)\n    if (index < right)\n        quickSort(array, index, right)\n}\n\n\n// Interfaces
==========================================================================\n/**\n
* Sorts the given array using qsort algorithm.\n */\n@ExperimentalUnsignedTypes\ninternal fun sortArray(array:
UByteArray)    = quickSort(array, 0, array.size - 1)\n@ExperimentalUnsignedTypes\ninternal fun sortArray(array:
UShortArray)   = quickSort(array, 0, array.size - 1)\n@ExperimentalUnsignedTypes\ninternal fun sortArray(array:
UIntArray)     = quickSort(array, 0, array.size - 1)\n@ExperimentalUnsignedTypes\ninternal fun sortArray(array:
ULongArray)    = quickSort(array, 0, array.size - 1)","/*\n * Copyright 2010-2018 JetBrains s.r.o.
 Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt
file.\n */\n\npackage kotlin.contracts\n\nimport kotlin.internal.ContractsDsl\nimport
kotlin.internal.InlineOnly\n\n/**\n * This marker distinguishes the experimental contract declaration API and is
used to opt-in for that feature\n * when declaring contracts of user functions.\n *\n * Any usage of a declaration
annotated with `@ExperimentalContracts` must be accepted either by\n * annotating that usage with the
[UseExperimental] annotation, e.g. `@UseExperimental(ExperimentalContracts::class)`,\n * or by using the
compiler argument `-Xuse-experimental=kotlin.contracts.ExperimentalContracts`.\n
*/\n@Retention(AnnotationRetention.BINARY)\n@SinceKotlin(\"1.3\")\n@Experimental\npublic annotation class
ExperimentalContracts\n\n/**\n * Provides a scope, where the functions of the contract DSL, such as [returns],
[callsInPlace], etc.,\n * can be used to describe the contract of
 a function.\n *\n * This type is used as a receiver type of the lambda function passed to the [contract] function.\n
*\n * @see contract\n */\n@ContractsDsl\n@ExperimentalContracts\n@SinceKotlin(\"1.3\")\npublic interface
ContractBuilder {\n    /**\n     * Describes a situation when a function returns normally, without any exceptions
thrown.\n     *\n     * Use [SimpleEffect.implies] function to describe a conditional effect that happens in such
case.\n     *\n     */\n    // @sample samples.contracts.returnsContract\n    @ContractsDsl public fun returns():
Returns\n\n    /**\n     * Describes a situation when a function returns normally with the specified return [value].\n
*\n     * The possible values of [value] are limited to `true`, `false` or `null`.\n     *\n     * Use [SimpleEffect.implies]
function to describe a conditional effect that happens in such case.\n     *\n     */\n    // @sample
samples.contracts.returnsTrueContract\n    // @sample samples.contracts.returnsFalseContract\n
   // @sample samples.contracts.returnsNullContract\n    @ContractsDsl public fun returns(value: Any?):
Returns\n\n    /**\n     * Describes a situation when a function returns normally with any value that is not `null`.\n
*\n     * Use [SimpleEffect.implies] function to describe a conditional effect that happens in such case.\n     *\n
*/\n    // @sample samples.contracts.returnsNotNullContract\n    @ContractsDsl public fun returnsNotNull():
ReturnsNotNull\n\n    /**\n     * Specifies that the function parameter [lambda] is invoked in place.\n     *\n     * This
contract specifies that:\n     * 1. the function [lambda] can only be invoked during the call of the owner function,\n
*  and it won't be invoked after that owner function call is completed;\n     * 2. _(optionally)_ the function [lambda]
is invoked the amount of times specified by the [kind] parameter,\n     *  see the [InvocationKind] enum for possible
values.\n     *\n     * A function declaring the `callsInPlace`
 effect must be _inline_.\n     *\n     */\n    /* @sample samples.contracts.callsInPlaceAtMostOnceContract\n    *
@sample samples.contracts.callsInPlaceAtLeastOnceContract\n    * @sample
samples.contracts.callsInPlaceExactlyOnceContract\n    * @sample
samples.contracts.callsInPlaceUnknownContract\n    */\n    @ContractsDsl public fun <R> callsInPlace(lambda:
Function<R>, kind: InvocationKind = InvocationKind.UNKNOWN): CallsInPlace\n}\n\n/**\n * Specifies how
many times a function invokes its function parameter in place.\n *\n * See [ContractBuilder.callsInPlace] for the
details of the call-in-place function contract.\n
*/\n@ContractsDsl\n@ExperimentalContracts\n@SinceKotlin(\"1.3\")\npublic enum class InvocationKind {\n
/**\n     * A function parameter will be invoked one time or not invoked at all.\n     */\n    // @sample
```

samples.contracts.callsInPlaceAtMostOnceContract\n   @ContractsDsl AT_MOST_ONCE,\n\n   /**\n   * A function parameter will be invoked one or more
 times.\n   *\n   */\n   // @sample samples.contracts.callsInPlaceAtLeastOnceContract\n   @ContractsDsl AT_LEAST_ONCE,\n\n   /**\n   * A function parameter will be invoked exactly one time.\n   *\n   */\n   // @sample samples.contracts.callsInPlaceExactlyOnceContract\n   @ContractsDsl EXACTLY_ONCE,\n\n   /**\n * A function parameter is called in place, but it's unknown how many times it can be called.\n   *\n   */\n   // @sample samples.contracts.callsInPlaceUnknownContract\n   @ContractsDsl UNKNOWN\n}\n\n/**\n * Specifies the contract of a function.\n *\n * The contract description must be at the beginning of a function and have at least one effect.\n *\n * Only the top-level functions can have a contract for now.\n *\n * @param builder the lambda where the contract of a function is described with the help of the [ContractBuilder] members.\n *\n */\n/* @sample samples.contracts.returnsContract\n* @sample samples.contracts.returnsTrueContract\n* @sample samples.contracts.returnsFalseContract\n*
 @sample samples.contracts.returnsNullContract\n* @sample samples.contracts.returnsNotNullContract\n* @sample samples.contracts.callsInPlaceAtMostOnceContract\n* @sample samples.contracts.callsInPlaceAtLeastOnceContract\n* @sample samples.contracts.callsInPlaceExactlyOnceContract\n* @sample samples.contracts.callsInPlaceUnknownContract\n*/\n@ContractsDsl\n@ExperimentalContracts\n@InlineOnly\n@SinceKotlin(\"1.3\")\n@Suppress(\"UNUSED_PARAMETER\")\npublic inline fun contract(builder: ContractBuilder.() -> Unit) { }","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.coroutines\n\n/**\n * Marks coroutine context element that intercepts coroutine continuations.\n * The coroutines framework uses [ContinuationInterceptor.Key] to retrieve the interceptor and\n * intercepts all coroutine continuations with [interceptContinuation]
 invocations.\n */\n@SinceKotlin(\"1.3\")\npublic interface ContinuationInterceptor : CoroutineContext.Element {\n   /**\n   * The key that defines *the* context interceptor.\n   */\n   companion object Key : CoroutineContext.Key<ContinuationInterceptor>\n\n   /**\n   * Returns continuation that wraps the original [continuation], thus intercepting all resumptions.\n   * This function is invoked by coroutines framework when needed and the resulting continuations are\n   * cached internally per each instance of the original [continuation].\n   *\n   * This function may simply return original [continuation] if it does not want to intercept this particular continuation.\n   *\n   * When the original [continuation] completes, coroutine framework invokes [releaseInterceptedContinuation]\n   * with the resulting continuation if it was intercepted, that is if `interceptContinuation` had previously\n   * returned a different continuation instance.\n   */\n   public fun <T> interceptContinuation(continuation: Continuation<T>): Continuation<T>\n\n   /**\n   * Invoked for the continuation instance returned by [interceptContinuation] when the original\n   * continuation completes and will not be used anymore. This function is invoked only if [interceptContinuation]\n   * had returned a different continuation instance from the one it was invoked with.\n   *\n   * Default implementation does nothing.\n   *\n * @param continuation Continuation instance returned by this interceptor's [interceptContinuation] invocation.\n */\n   public fun releaseInterceptedContinuation(continuation: Continuation<*>) {\n   /* do nothing by default */\n   }\n\n   // Performance optimization for a singleton Key\n   public override operator fun <E : CoroutineContext.Element> get(key: CoroutineContext.Key<E>): E? =\n   @Suppress(\"UNCHECKED_CAST\")\n   if (key === Key) this as E else null\n\n   // Performance optimization to a singleton
 Key\n   public override fun minusKey(key: CoroutineContext.Key<*>): CoroutineContext =\n   if (key === Key) EmptyCoroutineContext else this\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.coroutines\n\n/**\n * Persistent context for the coroutine. It is an indexed set of [Element] instances.\n * An indexed set is a mix between a set and a map.\n * Every element in this set has a unique [Key]. Keys are compared _by reference_.\n */\n@SinceKotlin(\"1.3\")\npublic interface CoroutineContext {\n   /**\n   * Returns the element

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with the given [key] from this context or `null`.\n     * Keys are compared _by reference_, that is to get an element from the context the reference to its actual key\n     * object must be presented to this function.\n     */\n    public operator fun <E : Element> get(key: Key<E>): E?\n\n    /**\n     * Accumulates entries of this context starting with [initial] value and applying [operation]\n     * from left to right to current accumulator value and each element of this context.\n     */\n    public fun <R> fold(initial: R, operation: (R, Element) -> R): R\n\n    /**\n     * Returns a context containing elements from this context and elements from  other [context].\n     * The elements from this context with the same key as in the other one are dropped.\n     */\n    public operator fun plus(context: CoroutineContext): CoroutineContext =\n        if (context === EmptyCoroutineContext) this else // fast path -- avoid lambda creation\n            context.fold(this) { acc, element ->\n                val removed = acc.minusKey(element.key)\n                if (removed === EmptyCoroutineContext) element else {\n                    // make sure interceptor is always last in the context (and thus is fast to get when present)\n                    val interceptor = removed[ContinuationInterceptor]\n                    if (interceptor == null) CombinedContext(removed, element) else {\n                        val left = removed.minusKey(ContinuationInterceptor)\n                        if (left === EmptyCoroutineContext) CombinedContext(element, interceptor) else\n                            CombinedContext(CombinedContext(left, element), interceptor)\n                    }\n                }\n            }\n\n    /**\n     * Returns a context containing elements from this context, but without an element with\n     * the specified [key]. Keys are compared _by reference_, that is to remove an element from the context\n     * the reference to its actual key object must be presented to this function.\n     */\n    public fun minusKey(key: Key<*>): CoroutineContext\n\n    /**\n     * Key for the elements of [CoroutineContext]. [E] is a type of element with this key.\n     * Keys in the context are compared _by reference_.\n     */\n    public interface Key<E : Element>\n\n    /**\n     * An element of the [CoroutineContext]. An element of the coroutine context is a singleton context by itself.\n     */\n    public interface Element : CoroutineContext {\n        /**\n         * A key of this coroutine context element.\n         */\n        public val key: Key<*>\n\n        public override operator fun <E : Element> get(key: Key<E>): E? =\n            @Suppress(\"UNCHECKED_CAST\")\n            if (this.key == key) this as E else null\n\n        public override fun <R> fold(initial: R, operation: (R, Element) -> R): R =\n            operation(initial, this)\n\n        public override fun minusKey(key: Key<*>): CoroutineContext =\n            if (this.key == key) EmptyCoroutineContext else this\n    }\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.coroutines\n\nimport kotlin.coroutines.CoroutineContext.*\nimport kotlin.io.Serializable\n\n/**\n * Base class for [CoroutineContext.Element] implementations.\n */\n@SinceKotlin(\"1.3\")\npublic abstract class AbstractCoroutineContextElement(public override val key: Key<*>) : Element\n\n/**\n * An empty coroutine context.\n */\n@SinceKotlin(\"1.3\")\npublic object EmptyCoroutineContext : CoroutineContext, Serializable {\n    private const val serialVersionUID: Long = 0\n    private fun readResolve(): Any = EmptyCoroutineContext\n\n    public override fun <E : Element> get(key: Key<E>): E? = null\n    public override fun <R> fold(initial: R, operation: (R, Element) -> R): R = initial\n    public override fun plus(context: CoroutineContext): CoroutineContext = context\n    public override fun minusKey(key: Key<*>): CoroutineContext = this\n    public override fun hashCode(): Int = 0\n    public override fun toString(): String = \"EmptyCoroutineContext\"\n}\n\n//------------------------ internal impl ----------------------\n\n// this class is not exposed, but is hidden inside implementations\n// this is a left-biased list, so that `plus` works naturally\n@SinceKotlin(\"1.3\")\ninternal class CombinedContext(\n    private val left: CoroutineContext,\n    private val element: Element\n) : CoroutineContext, Serializable {\n\n    override fun <E : Element> get(key: Key<E>): E? {\n        var cur = this\n        while (true) {\n            cur.element[key]?.let { return it }\n            val next = cur.left\n            if (next is CombinedContext) {\n                cur = next\n            } else {\n                return next[key]\n            }\n        }\n    }\n\n    public override fun <R> fold(initial: R, operation: (R, Element) -> R): R =\n        operation(left.fold(initial, operation), element)\n\n    public override fun minusKey(key: Key<*>): CoroutineContext {\n        element[key]?.let { return left }\n        val newLeft = left.minusKey(key)\n        return when {\n            newLeft === left -> this\n            newLeft === EmptyCoroutineContext
```

-> element\n   else -> CombinedContext(newLeft, element)\n   }\n   }\n\n   private fun size(): Int {\n   var cur = this\n   var size = 2\n   while (true) {\n   cur = cur.left as? CombinedContext ?: return size\n   size++\n   }\n   }\n\n   private fun contains(element: Element): Boolean =\n   get(element.key) == element\n\n   private fun containsAll(context: CombinedContext): Boolean {\n   var cur = context\n   while (true) {\n   if (!contains(cur.element)) return false\n   val next = cur.left\n   if (next is CombinedContext) {\n   cur = next\n   } else {\n   return contains(next as Element)\n   }\n   }\n   }\n\n   override fun equals(other: Any?): Boolean =\n   this === other || other is CombinedContext && other.size() == size() && other.containsAll(this)\n\n   override fun hashCode(): Int = left.hashCode() + element.hashCode()\n\n
    override fun toString(): String =\n   \"[\" + fold(\"\") { acc, element ->\n   if (acc.isEmpty()) element.toString() else \"$acc, $element\"\n   } + \"]\"\n\n   private fun writeReplace(): Any {\n   val n = size()\n   val elements = arrayOfNulls<CoroutineContext>(n)\n   var index = 0\n   fold(Unit) { _, element -> elements[index++] = element }\n   check(index == n)\n   @Suppress(\"UNCHECKED_CAST\")\n   return Serialized(elements as Array<CoroutineContext>)\n   }\n\n   private class Serialized(val elements: Array<CoroutineContext>) : Serializable {\n   companion object {\n   private const val serialVersionUID: Long = 0L\n   }\n\n   private fun readResolve(): Any = elements.fold(EmptyCoroutineContext, CoroutineContext::plus)\n   }\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmName(\"IntrinsicsKt\")\n@file:kotlin.jvm.JvmMultifileClass\n\npackage kotlin.coroutines.intrinsics\n\nimport kotlin.coroutines.*\nimport kotlin.internal.InlineOnly\n\n/**\n * Obtains the current continuation instance inside suspend functions and either suspends\n * currently running coroutine or returns result immediately without suspension.\n *\n * If the [block] returns the special [COROUTINE_SUSPENDED] value, it means that suspend function did suspend the execution and will\n * not return any result immediately. In this case, the [Continuation] provided to the [block] shall be\n * resumed by invoking [Continuation.resumeWith] at some moment in the\n * future when the result becomes available to resume the computation.\n *\n * Otherwise, the return value of the [block] must have a type assignable to [T] and represents the result of this suspend function.\n * It means that the execution was not suspended and the [Continuation] provided to the [block] shall not be invoked.\n * As the result type of the [block] is declared as `Any?` and cannot be correctly type-checked,\n * its proper return type remains on the conscience of the suspend function's author.\n *\n * Invocation of [Continuation.resumeWith] resumes coroutine directly in the invoker's thread without going through the\n * [ContinuationInterceptor] that might be present in the coroutine's [CoroutineContext].\n * It is invoker's responsibility to ensure that the proper invocation context is established.\n * [Continuation.intercepted] can be used to acquire the intercepted continuation.\n *\n * Note that it is not recommended to call either [Continuation.resume] nor [Continuation.resumeWithException] functions synchronously\n * in the same stackframe where suspension function is run. Use [suspendCoroutine] as a safer way to obtain current\n * continuation instance.\n */\n@SinceKotlin(\"1.3\")\n@InlineOnly\n@Suppress(\"UNUSED_PARAMETER\", \"RedundantSuspendModifier\")\npublic suspend inline fun <T> suspendCoroutineUninterceptedOrReturn(crossinline block: (Continuation<T>) -> Any?): T =\n   throw NotImplementedError(\"Implementation of suspendCoroutineUninterceptedOrReturn is intrinsic\")\n\n/**\n * This value is used as a return value of [suspendCoroutineUninterceptedOrReturn] `block` argument to state that\n * the execution was suspended and will not return any result immediately.\n *\n * **Note: this value should not be used in general code.** Using it outside of the context of\n * `suspendCoroutineUninterceptedOrReturn` function return value (including, but not limited to,\n * storing this value in other properties, returning it from other functions, etc)\n * can lead to unspecified behavior of the code.\n */\n// It is implemented as property with getter to avoid ProGuard <clinit> problem with multifile IntrinsicsKt class\n@SinceKotlin(\"1.3\")\npublic val COROUTINE_SUSPENDED: Any get() = CoroutineSingletons.COROUTINE_SUSPENDED\n\n// Using enum here ensures two important

properties:\n// 1. It makes SafeContinuation serializable with all kinds of serialization frameworks (since all of them natively support enums)\n// 2. It improves debugging experience, since you clearly see toString() value of those objects and what package they come from\n@SinceKotlin(\"1.3\")\n@PublishedApi // This class is Published API via serialized representation of SafeContinuation, don't rename/move\ninternal enum class CoroutineSingletons { COROUTINE_SUSPENDED, UNDECIDED, RESUMED }\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.experimental\n\n/** Performs a bitwise AND operation between the two values. */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic inline infix fun Byte.and(other: Byte): Byte = (this.toInt() and other.toInt()).toByte()\n\n/** Performs a bitwise OR operation between the two values. */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic
 inline infix fun Byte.or(other: Byte): Byte = (this.toInt() or other.toInt()).toByte()\n\n/** Performs a bitwise XOR operation between the two values. */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic inline infix fun Byte.xor(other: Byte): Byte = (this.toInt() xor other.toInt()).toByte()\n\n/** Inverts the bits in this value. */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic inline fun Byte.inv(): Byte = (this.toInt().inv()).toByte()\n\n\n/** Performs a bitwise AND operation between the two values. */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic inline infix fun Short.and(other: Short): Short = (this.toInt() and other.toInt()).toShort()\n\n/** Performs a bitwise OR operation between the two values. */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic inline infix fun Short.or(other: Short): Short = (this.toInt() or other.toInt()).toShort()\n\n/** Performs a bitwise XOR operation between
 the two values. */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic inline infix fun Short.xor(other: Short): Short = (this.toInt() xor other.toInt()).toShort()\n\n/** Inverts the bits in this value. */\n@SinceKotlin(\"1.1\")\n@kotlin.internal.InlineOnly\npublic inline fun Short.inv(): Short = (this.toInt().inv()).toShort()\n\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.experimental\n\n/**\n * The experimental type inference augmenting annotations marker.\n *\n * Any usage of a declaration annotated with `@ExperimentalTypeInference` must be accepted either by\n * annotating that usage with the [UseExperimental] annotation, e.g. `@UseExperimental(ExperimentalTypeInference::class)`,\n * or by using the compiler argument `-Xuse-experimental=kotlin.experimental.ExperimentalTypeInference`.\n */\n@Experimental(level =
Experimental.Level.ERROR)\n@Retention(AnnotationRetention.BINARY)\n@Target(AnnotationTarget.ANNOTATION_CLASS)\n@SinceKotlin(\"1.3\")\npublic
 annotation class ExperimentalTypeInference\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.internal\n\n/**\n * Specifies that the corresponding type should be ignored during type inference.\n */\n@Target(AnnotationTarget.TYPE)\n@Retention(AnnotationRetention.BINARY)\ninternal annotation class NoInfer\n\n/**\n * Specifies that the constraint built for the type during type inference should be an equality one.\n */\n@Target(AnnotationTarget.TYPE)\n@Retention(AnnotationRetention.BINARY)\ninternal annotation class Exact\n\n/**\n * Specifies that a corresponding member has the lowest priority in overload resolution.\n */\n@Target(AnnotationTarget.FUNCTION,
AnnotationTarget.PROPERTY)\n@Retention(AnnotationRetention.BINARY)\ninternal annotation
 class LowPriorityInOverloadResolution\n\n/**\n * Specifies that the corresponding member has the highest priority in overload resolution. Effectively this means that\n * an extension annotated with this annotation will win in overload resolution over a member with the same signature.\n */\n@Target(AnnotationTarget.FUNCTION, AnnotationTarget.PROPERTY)\n@Retention(AnnotationRetention.BINARY)\ninternal annotation class HidesMembers\n\n/**\n * The value of this type parameter should be mentioned in input types (argument types, receiver type or expected type).\n
*/\n@Target(AnnotationTarget.TYPE_PARAMETER)\n@Retention(AnnotationRetention.BINARY)\ninternal annotation class OnlyInputTypes\n\n/**\n * Specifies that this function should not be called directly without

inlining\n */\n@Target(AnnotationTarget.FUNCTION, AnnotationTarget.PROPERTY, AnnotationTarget.PROPERTY_GETTER, AnnotationTarget.PROPERTY_SETTER)\n@Retention(AnnotationRetention.BINARY)\ninternal annotation class InlineOnly\n\n/**\n * Specifies that this declaration can have dynamic receiver type.\n */\n@Target(AnnotationTarget.FUNCTION, AnnotationTarget.PROPERTY)\n@Retention(AnnotationRetention.BINARY)\ninternal annotation class DynamicExtension\n\n/**\n * The value of this parameter should be a property reference expression (`this::foo`), referencing a `lateinit` property,\n * the backing field of which is accessible at the point where the corresponding argument is passed.\n */\n@Target(AnnotationTarget.VALUE_PARAMETER)\n@Retention(AnnotationRetention.BINARY)\n@SinceKotlin(\"1.2\")\ninternal annotation class AccessibleLateinitPropertyLiteral\n\n/**\n * Specifies that this declaration is only completely supported since the specified version.\n *\n * The Kotlin compiler of an earlier version is going to report a diagnostic on usages of this declaration.\n * The diagnostic message can be specified with [message], or via [errorCode] (takes less space, but might not be immediately clear\n * to the user). The diagnostic severity can be specified with [level]: WARNING/ERROR mean that either a warning or an error\n * is going to be reported, HIDDEN means that the declaration is going to be removed from resolution completely.\n *\n * [versionKind] specifies which version should be compared with the [version] value, when compiling the usage of the annotated declaration.\n * Note that prior to 1.2, only [RequireKotlinVersionKind.LANGUAGE_VERSION] was supported, so the Kotlin compiler before 1.2 is going to\n * treat any [RequireKotlin] as if it requires the language version. Since 1.2, the Kotlin compiler supports\n * [RequireKotlinVersionKind.LANGUAGE_VERSION], [RequireKotlinVersionKind.COMPILER_VERSION] and [RequireKotlinVersionKind.API_VERSION].\n * If the actual value of [versionKind] is something different (e.g. a new version kind, added in future versions of Kotlin),\n * Kotlin 1.2 is going to ignore this [RequireKotlin] altogether, where as Kotlin before 1.2 is going to treat this as a requirement\n * on the language version.\n *\n * This annotation is erased at compile time; its arguments are stored in a more compact form in the Kotlin metadata.\n */\n@Target(AnnotationTarget.CLASS, AnnotationTarget.FUNCTION, AnnotationTarget.PROPERTY, AnnotationTarget.CONSTRUCTOR, AnnotationTarget.TYPEALIAS)\n@Retention(AnnotationRetention.SOURCE)\n@Repeatable\n@SinceKotlin(\"1.2\")\ninternal annotation class RequireKotlin(\n   val version: String,\n   val message: String = \"\",\n   val level: DeprecationLevel = DeprecationLevel.ERROR,\n   val versionKind: RequireKotlinVersionKind = RequireKotlinVersionKind.LANGUAGE_VERSION,\n   val errorCode: Int = -1)\n\n/**\n * The kind of the version that is required by [RequireKotlin].\n */\n@SinceKotlin(\"1.2\")\ninternal enum class RequireKotlinVersionKind {\n   LANGUAGE_VERSION,\n   COMPILER_VERSION,\n   API_VERSION,\n}\n\n/**\n * Specifies that this declaration is a part of special DSL, used for constructing function's contract.\n */\n@Retention(AnnotationRetention.BINARY)\n@SinceKotlin(\"1.2\")\ninternal annotation class ContractsDsl\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.properties\n\nimport kotlin.reflect.KProperty\n\n/**\n * Standard property delegates.\n */\npublic object Delegates {\n   /**\n   * Returns a property delegate for a read/write property with a non-`null` value that is initialized not during\n   * object construction time but at a later time. Trying to read the property before the initial value has been\n   * assigned results in an exception.\n   *\n   * @sample samples.properties.Delegates.notNullDelegate\n   */\n   public fun <T : Any> notNull(): ReadWriteProperty<Any?, T> = NotNullVar()\n\n   /**\n   * Returns a property delegate for a read/write property that calls a specified callback function when changed.\n   * @param initialValue the initial value of the property.\n   * @param onChange the callback which is called after the change of the property is made. The value of the property\n   * has already been changed when this callback is invoked.\n   *\n   * @sample samples.properties.Delegates.observableDelegate\n   */\n   public inline fun <T> observable(initialValue: T, crossinline onChange: (property: KProperty<*>, oldValue: T, newValue: T) -> Unit):\n

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ReadWriteProperty<Any?, T> =\n        object : ObservableProperty<T>(initialValue) {\n            override fun afterChange(property: KProperty<*>, oldValue: T, newValue: T) = onChange(property, oldValue, newValue)\n    }\n\n    /**\n     * Returns a property delegate for a read/write property that calls a specified callback function when changed,\n     * allowing the callback to veto the modification.\n     * @param initialValue the initial value of the property.\n     * @param onChange the callback which is called before a
 change to the property value is attempted.\n     *  The value of the property hasn't been changed yet, when this callback is invoked.\n     *  If the callback returns `true` the value of the property is being set to the new value,\n     * and if the callback returns `false` the new value is discarded and the property remains its old value.\n     *\n     * @sample samples.properties.Delegates.vetoableDelegate\n     *  @sample samples.properties.Delegates.throwVetoableDelegate\n     */\n    public inline fun <T> vetoable(initialValue: T, crossinline onChange: (property: KProperty<*>, oldValue: T, newValue: T) -> Boolean):\n ReadWriteProperty<Any?, T> =\n        object : ObservableProperty<T>(initialValue) {\n            override fun beforeChange(property: KProperty<*>, oldValue: T, newValue: T): Boolean = onChange(property, oldValue, newValue)\n        }\n\n}\n\n\nprivate class NotNullVar<T : Any>() : ReadWriteProperty<Any?, T> {\n    private var value: T? = null\n\n    public
 override fun getValue(thisRef: Any?, property: KProperty<*>): T {\n        return value ?: throw IllegalStateException(\"Property ${property.name} should be initialized before get.\")\n    }\n\n    public override fun setValue(thisRef: Any?, property: KProperty<*>, value: T) {\n        this.value = value\n    }\n}\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.properties\n\nimport kotlin.reflect.KProperty\n\n/**\n * Implements the core logic of a property delegate for a read/write property that calls callback functions when changed.\n * @param initialValue the initial value of the property.\n */\npublic abstract class ObservableProperty<T>(initialValue: T) : ReadWriteProperty<Any?, T> {\n    private var value = initialValue\n\n    /**\n     *  The callback which is called before a change to the property value is attempted.\n     *  The value
 of the property hasn't been changed yet, when this callback is invoked.\n     *  If the callback returns `true` the value of the property is being set to the new value,\n     *  and if the callback returns `false` the new value is discarded and the property remains its old value.\n     */\n    protected open fun beforeChange(property: KProperty<*>, oldValue: T, newValue: T): Boolean = true\n\n    /**\n     * The callback which is called after the change of the property is made. The value of the property\n     * has already been changed when this callback is invoked.\n     */\n    protected open fun afterChange(property: KProperty<*>, oldValue: T, newValue: T): Unit {}\n\n    public override fun getValue(thisRef: Any?, property: KProperty<*>): T {\n        return value\n    }\n\n    public override fun setValue(thisRef: Any?, property: KProperty<*>, value: T) {\n        val oldValue = this.value\n        if (!beforeChange(property, oldValue, value)) {\n            return\n        }\n
        this.value = value\n        afterChange(property, oldValue, value)\n    }\n}","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.random\n\nimport kotlin.math.nextDown\n\n/**\n * An abstract class that is implemented by random number generator algorithms.\n *\n * The companion object [Random.Default] is the default instance of [Random].\n *\n * To get a seeded instance of random generator use [Random] function.\n *\n * @sample samples.random.Randoms.defaultRandom\n */\n@SinceKotlin(\"1.3\")\npublic abstract class Random {\n\n    /**\n     * Gets the next random [bitCount] number of bits.\n     *\n     * Generates an `Int` whose lower [bitCount] bits are filled with random values and the remaining upper bits are zero.\n     *\n     * @param bitCount number of bits to generate, must be in range 0..32, otherwise the behavior is unspecified.\n     */\n
    public abstract fun nextBits(bitCount: Int): Int\n\n    /**\n     * Gets the next random `Int` from the random number generator.\n     *\n     * Generates an `Int` random value uniformly distributed between `Int.MIN_VALUE` and `Int.MAX_VALUE` (inclusive).\n     */\n    public open fun nextInt(): Int = nextBits(32)\n\n    /**\n     * Gets the next random non-negative `Int` from the random number generator less than the specified [until] bound.\n     *\n
     * Generates an `Int` random value uniformly distributed between `0` (inclusive) and the specified [until] bound (exclusive).\n     *\n     * @param until must be positive.\n     *\n     * @throws IllegalArgumentException if [until]
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is negative or zero.\n     */\n    public open fun nextInt(until: Int): Int = nextInt(0, until)\n\n    /**\n     * Gets the next random `Int` from the random number generator in the specified range.\n     *\n     * Generates an `Int` random value uniformly distributed between the specified [from] (inclusive)
 and [until] (exclusive) bounds.\n     *\n     * @throws IllegalArgumentException if [from] is greater than or equal to [until].\n     */\n    public open fun nextInt(from: Int, until: Int): Int {\n        checkRangeBounds(from, until)\n        val n = until - from\n        if (n > 0 || n == Int.MIN_VALUE) {\n            val rnd = if (n and -n == n) {\n                val bitCount = fastLog2(n)\n                nextBits(bitCount)\n            } else {\n                var v: Int\n                do {\n                    val bits = nextInt().ushr(1)\n                    v = bits % n\n                } while (bits - v + (n - 1) < 0)\n                v\n            }\n            return from + rnd\n        } else {\n            while (true) {\n                val rnd = nextInt()\n                if (rnd in from until until) return rnd\n            }\n        }\n    }\n\n    /**\n     * Gets the next random `Long` from the random number generator.\n     *\n     * Generates a `Long` random
 value uniformly distributed between `Long.MIN_VALUE` and `Long.MAX_VALUE` (inclusive).\n     */\n    public open fun nextLong(): Long = nextInt().toLong().shl(32) + nextInt()\n\n    /**\n     * Gets the next random non-negative `Long` from the random number generator less than the specified [until] bound.\n     *\n     * Generates a `Long` random value uniformly distributed between `0` (inclusive) and the specified [until] bound (exclusive).\n     *\n     * @param until must be positive.\n     *\n     * @throws IllegalArgumentException if [until] is negative or zero.\n     */\n    public open fun nextLong(until: Long): Long = nextLong(0, until)\n\n    /**\n     * Gets the next random `Long` from the random number generator in the specified range.\n     *\n     * Generates a `Long` random value uniformly distributed between the specified [from] (inclusive) and [until] (exclusive) bounds.\n     *\n     * @throws IllegalArgumentException if [from] is greater than or equal to [until].\n
     */\n    public open fun nextLong(from: Long, until: Long): Long {\n        checkRangeBounds(from, until)\n        val n = until - from\n        if (n > 0) {\n            val rnd: Long\n            if (n and -n == n) {\n                val nLow = n.toInt()\n                val nHigh = (n ushr 32).toInt()\n                rnd = when {\n                    nLow != 0 -> {\n                        val bitCount = fastLog2(nLow)\n                        // toUInt().toLong()\n                        nextBits(bitCount).toLong() and 0xFFFF_FFFF\n                    }\n                    nHigh == 1 ->\n                        // toUInt().toLong()\n                        nextInt().toLong() and 0xFFFF_FFFF\n                    else -> {\n                        val bitCount = fastLog2(nHigh)\n                        nextBits(bitCount).toLong().shl(32) + nextInt()\n                    }\n                }\n            } else {\n                var v: Long\n                do {\n                    val bits = nextLong().ushr(1)\n                    v = bits % n\n                } while (bits - v + (n - 1) < 0)\n                rnd = v\n            }\n            return from + rnd\n        } else {\n            while (true) {\n                val rnd = nextLong()\n                if (rnd in from until until) return rnd\n            }\n        }\n    }\n\n    /**\n     * Gets the next random [Boolean] value.\n     */\n    public open fun nextBoolean(): Boolean = nextBits(1) != 0\n\n    /**\n     * Gets the next random [Double] value uniformly distributed between 0 (inclusive) and 1 (exclusive).\n     */\n    public open fun nextDouble(): Double = doubleFromParts(nextBits(26), nextBits(27))\n\n    /**\n     * Gets the next random non-negative `Double` from the random number generator less than the specified [until] bound.\n     *\n     * Generates a `Double` random value uniformly distributed between 0 (inclusive) and [until] (exclusive).\n     *\n     * @throws IllegalArgumentException
 if [until] is negative or zero.\n     */\n    public open fun nextDouble(until: Double): Double = nextDouble(0.0, until)\n\n    /**\n     * Gets the next random `Double` from the random number generator in the specified range.\n     *\n     * Generates a `Double` random value uniformly distributed between the specified [from] (inclusive) and [until] (exclusive) bounds.\n     *\n     * [from] and [until] must be finite otherwise the behavior is unspecified.\n     *\n     * @throws IllegalArgumentException if [from] is greater than or equal to [until].\n     */\n    public open fun nextDouble(from: Double, until: Double): Double {\n        checkRangeBounds(from, until)\n        val size = until - from\n        val r = if (size.isInfinite() && from.isFinite() && until.isFinite()) {\n            val r1 = nextDouble() * (until / 2 - from / 2)\n            from + r1 + r1\n        } else {\n            from + nextDouble() * size\n        }\n        return if (r >= until) until.nextDown()
 else r\n    }\n\n    /**\n     * Gets the next random [Float] value uniformly distributed between 0 (inclusive) and 1 (exclusive).\n     */\n    public open fun nextFloat(): Float = nextBits(24) / (1 shl 24).toFloat()\n\n    /**\n     * Fills a
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subrange of the specified byte [array] starting from [fromIndex] inclusive and ending [toIndex] exclusive\n     * with random bytes.\n     *\n     * @return [array] with the subrange filled with random bytes.\n     */\n    public open fun nextBytes(array: ByteArray, fromIndex: Int = 0, toIndex: Int = array.size): ByteArray {\n        require(fromIndex in 0..array.size && toIndex in 0..array.size) { \"fromIndex ($fromIndex) or toIndex ($toIndex) are out of range: 0..${array.size}.\" }\n        require(fromIndex <= toIndex) { \"fromIndex ($fromIndex) must be not greater than toIndex ($toIndex).\" }\n\n        val steps = (toIndex - fromIndex) / 4\n\n        var position = fromIndex\n        repeat(steps) {\n            val v = nextInt()\n            array[position] = v.toByte()\n            array[position + 1] = v.ushr(8).toByte()\n            array[position + 2] = v.ushr(16).toByte()\n            array[position + 3] = v.ushr(24).toByte()\n            position += 4\n        }\n\n        val remainder = toIndex - position\n        val vr = nextBits(remainder * 8)\n        for (i in 0 until remainder) {\n            array[position + i] = vr.ushr(i * 8).toByte()\n        }\n\n        return array\n    }\n\n    /**\n     * Fills the specified byte [array] with random bytes and returns it.\n     *\n     * @return [array] filled with random bytes.\n     */\n    public open fun nextBytes(array: ByteArray): ByteArray = nextBytes(array, 0, array.size)\n\n    /**\n     * Creates a byte array of the specified [size], filled with random bytes.\n     */\n    public open fun nextBytes(size: Int): ByteArray = nextBytes(ByteArray(size))\n\n\n    /**\n     * The default random number generator.\n     *\n     * On JVM this generator is
     thread-safe, its methods can be invoked from multiple threads.\n     *\n     * @sample samples.random.Randoms.defaultRandom\n     */\n    companion object Default : Random() {\n\n        private val defaultRandom: Random = defaultPlatformRandom()\n\n        override fun nextBits(bitCount: Int): Int = defaultRandom.nextBits(bitCount)\n        override fun nextInt(): Int = defaultRandom.nextInt()\n        override fun nextInt(until: Int): Int = defaultRandom.nextInt(until)\n        override fun nextInt(from: Int, until: Int): Int = defaultRandom.nextInt(from, until)\n\n        override fun nextLong(): Long = defaultRandom.nextLong()\n        override fun nextLong(until: Long): Long = defaultRandom.nextLong(until)\n        override fun nextLong(from: Long, until: Long): Long = defaultRandom.nextLong(from, until)\n\n        override fun nextBoolean(): Boolean = defaultRandom.nextBoolean()\n\n        override fun nextDouble(): Double = defaultRandom.nextDouble()\n        override fun nextDouble(until:
     Double): Double = defaultRandom.nextDouble(until)\n        override fun nextDouble(from: Double, until: Double): Double = defaultRandom.nextDouble(from, until)\n\n        override fun nextFloat(): Float = defaultRandom.nextFloat()\n\n        override fun nextBytes(array: ByteArray): ByteArray = defaultRandom.nextBytes(array)\n        override fun nextBytes(size: Int): ByteArray = defaultRandom.nextBytes(size)\n        override fun nextBytes(array: ByteArray, fromIndex: Int, toIndex: Int): ByteArray = defaultRandom.nextBytes(array, fromIndex, toIndex)\n\n        @Deprecated(\"Use Default companion object instead\", level = DeprecationLevel.HIDDEN)\n        @Suppress(\"DEPRECATION_ERROR\")\n        @kotlin.jvm.JvmField\n        public val Companion: Random.Companion = Random.Companion\n    }\n\n    @Deprecated(\"Use Default companion object instead\", level = DeprecationLevel.HIDDEN)\n    public object Companion : Random() {\n        override fun nextBits(bitCount: Int): Int
     = Default.nextBits(bitCount)\n    }\n}\n\n/**\n * Returns a repeatable random number generator seeded with the given [seed] `Int` value.\n *\n * Two generators with the same seed produce the same sequence of values within the same version of Kotlin runtime.\n *\n * *Note:* Future versions of Kotlin may change the algorithm of this seeded number generator so that it will return\n * a sequence of values different from the current one for a given seed.\n *\n * @sample samples.random.Randoms.seededRandom\n */\n@SinceKotlin(\"1.3\")\npublic fun Random(seed: Int): Random = XorWowRandom(seed, seed.shr(31))\n\n/**\n * Returns a repeatable random number generator seeded with the given [seed] `Long` value.\n *\n * Two generators with the same seed produce the same sequence of values within the same version of Kotlin runtime.\n *\n * *Note:* Future versions of Kotlin may change the algorithm of this seeded number generator so that it will return\n * a sequence of values different from the current
     one for a given seed.\n *\n * @sample samples.random.Randoms.seededRandom\n */\n@SinceKotlin(\"1.3\")\npublic fun Random(seed: Long): Random = XorWowRandom(seed.toInt(), seed.shr(32).toInt())\n\n\n\n/**\n * Gets the next random `Int` from the random number generator in the specified
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[range].\n *\n * Generates an `Int` random value uniformly distributed in the specified [range]:\n * from `range.start` inclusive to `range.endInclusive` inclusive.\n *\n * @throws IllegalArgumentException if [range] is empty.\n */\n@SinceKotlin(\"1.3\")\npublic fun Random.nextInt(range: IntRange): Int = when {\n range.isEmpty() -> throw IllegalArgumentException(\"Cannot get random in empty range: $range\")\n range.last < Int.MAX_VALUE -> nextInt(range.first, range.last + 1)\n range.first > Int.MIN_VALUE -> nextInt(range.first - 1, range.last) + 1\n else -> nextInt()\n}\n\n/**\n * Gets the next random `Long` from the random number generator in the specified [range].\n *\n * Generates a `Long`
random value uniformly distributed in the specified [range]:\n * from `range.start` inclusive to `range.endInclusive` inclusive.\n *\n * @throws IllegalArgumentException if [range] is empty.\n */\n@SinceKotlin(\"1.3\")\npublic fun Random.nextLong(range: LongRange): Long = when {\n range.isEmpty() -> throw IllegalArgumentException(\"Cannot get random in empty range: $range\")\n range.last < Long.MAX_VALUE -> nextLong(range.start, range.endInclusive + 1)\n range.start > Long.MIN_VALUE -> nextLong(range.start - 1, range.endInclusive) + 1\n else -> nextLong()\n}\n\n\ninternal expect fun defaultPlatformRandom(): Random\ninternal expect fun fastLog2(value: Int): Int // 31 - Integer.numberOfLeadingZeros(value)\ninternal expect fun doubleFromParts(hi26: Int, low27: Int): Double\n\n/** Takes upper [bitCount] bits (0..32) from this number. */\ninternal fun Int.takeUpperBits(bitCount: Int): Int =\n this.ushr(32 - bitCount) and (-bitCount).shr(31)\n\ninternal fun checkRangeBounds(from:
Int, until: Int) = require(until > from) { boundsErrorMessage(from, until) }\ninternal fun checkRangeBounds(from: Long, until: Long) = require(until > from) { boundsErrorMessage(from, until) }\ninternal fun checkRangeBounds(from: Double, until: Double) = require(until > from) { boundsErrorMessage(from, until) }\n\ninternal fun boundsErrorMessage(from: Any, until: Any) = \"Random range is empty: [$from, $until).\"\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.random\n\n\n/**\n * Gets the next random [UInt] from the random number generator.\n *\n * Generates a [UInt] random value uniformly distributed between [UInt.MIN_VALUE] and [UInt.MAX_VALUE] (inclusive).\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Random.nextUInt(): UInt = nextInt().toUInt()\n\n/**\n * Gets the next random [UInt] from the random number generator less
than the specified [until] bound.\n *\n * Generates a [UInt] random value uniformly distributed between `0` (inclusive) and the specified [until] bound (exclusive).\n *\n * @throws IllegalArgumentException if [until] is zero.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Random.nextUInt(until: UInt): UInt = nextUInt(0u, until)\n\n/**\n * Gets the next random [UInt] from the random number generator in the specified range.\n *\n * Generates a [UInt] random value uniformly distributed between the specified [from] (inclusive) and [until] (exclusive) bounds.\n *\n * @throws IllegalArgumentException if [from] is greater than or equal to [until].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Random.nextUInt(from: UInt, until: UInt): UInt {\n checkUIntRangeBounds(from, until)\n\n val signedFrom = from.toInt() xor Int.MIN_VALUE\n val signedUntil = until.toInt() xor Int.MIN_VALUE\n\n val signedResult = nextInt(signedFrom, signedUntil) xor Int.MIN_VALUE\n return signedResult.toUInt()\n}\n\n/**\n * Gets the next random [UInt] from the random number generator in the specified [range].\n *\n * Generates a [UInt] random value uniformly distributed in the specified [range]:\n * from `range.start` inclusive to `range.endInclusive` inclusive.\n *\n * @throws IllegalArgumentException if [range] is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Random.nextUInt(range: UIntRange): UInt = when {\n range.isEmpty() -> throw IllegalArgumentException(\"Cannot get random in empty range: $range\")\n range.last < UInt.MAX_VALUE -> nextUInt(range.first, range.last + 1u)\n range.first > UInt.MIN_VALUE -> nextUInt(range.first - 1u, range.last) + 1u\n else -> nextUInt()\n}\n\n/**\n * Gets the next random [ULong] from the random number generator.\n *\n * Generates a [ULong] random value uniformly distributed between [ULong.MIN_VALUE] and [ULong.MAX_VALUE] (inclusive).\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic
fun Random.nextULong(): ULong = nextLong().toULong()\n\n/**\n * Gets the next random [ULong] from the random number generator less than the specified [until] bound.\n *\n * Generates a [ULong] random value

uniformly distributed between `0` (inclusive) and the specified [until] bound (exclusive).\n *\n * @throws IllegalArgumentException if [until] is zero.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Random.nextULong(until: ULong): ULong = nextULong(0uL, until)\n\n/**\n * Gets the next random [ULong] from the random number generator in the specified range.\n *\n * Generates a [ULong] random value uniformly distributed between the specified [from] (inclusive) and [until] (exclusive) bounds.\n *\n * @throws IllegalArgumentException if [from] is greater than or equal to [until].\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Random.nextULong(from: ULong, until: ULong): ULong {\n checkULongRangeBounds(from, until)\n\n val signedFrom = from.toLong() xor Long.MIN_VALUE\n val signedUntil = until.toLong() xor Long.MIN_VALUE\n\n val signedResult = nextLong(signedFrom, signedUntil) xor Long.MIN_VALUE\n return signedResult.toULong()\n}\n\n/**\n * Gets the next random [ULong] from the random number generator in the specified [range].\n *\n * Generates a [ULong] random value uniformly distributed in the specified [range]:\n * from `range.start` inclusive to `range.endInclusive` inclusive.\n *\n * @throws IllegalArgumentException if [range] is empty.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Random.nextULong(range: ULongRange): ULong = when {\n range.isEmpty() -> throw IllegalArgumentException(\"Cannot get random in empty range: $range\")\n range.last < ULong.MAX_VALUE -> nextULong(range.first, range.last + 1u)\n range.first > ULong.MIN_VALUE -> nextULong(range.first - 1u, range.last) + 1u\n else -> nextULong()\n}\n\n/**\n * Fills the specified unsigned
byte [array] with random bytes and returns it.\n *\n * @return [array] filled with random bytes.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Random.nextUBytes(array: UByteArray): UByteArray {\n nextBytes(array.asByteArray())\n return array\n}\n\n/**\n * Creates an unsigned byte array of the specified [size], filled with random bytes.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Random.nextUBytes(size: Int): UByteArray = nextBytes(size).asUByteArray()\n\n/**\n * Fills a subrange of the specified `UByte` [array] starting from [fromIndex] inclusive and ending [toIndex] exclusive with random UBytes.\n *\n * @return [array] with the subrange filled with random bytes.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun Random.nextUBytes(array: UByteArray, fromIndex: Int = 0, toIndex: Int = array.size): UByteArray {\n nextBytes(array.asByteArray(), fromIndex, toIndex)\n return array\n}\n\n\n@ExperimentalUnsignedTypes\ninternal
fun checkUIntRangeBounds(from: UInt, until: UInt) = require(until > from) { boundsErrorMessage(from, until) }\n@ExperimentalUnsignedTypes\ninternal fun checkULongRangeBounds(from: ULong, until: ULong) = require(until > from) { boundsErrorMessage(from, until) }\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.random\n\n/**\n * Random number generator, algorithm \"xorwow\" from p. 5 of Marsaglia, \"Xorshift RNGs\".\n *\n * Cycles after 2^160 * (2^32-1) repetitions.\n *\n * See http://www.jstatsoft.org/v08/i14/paper for details.\n */\ninternal class XorWowRandom\ninternal constructor(\n private var x: Int,\n private var y: Int,\n private var z: Int,\n private var w: Int,\n private var v: Int,\n private var addend: Int\n) : Random() {\n\n internal constructor(seed1: Int, seed2: Int) :\n this(seed1, seed2, 0, 0, seed1.inv(),
(seed1 shl 10) xor (seed2 ushr 4))\n\n init {\n require((x or y or z or w or v) != 0) { \"Initial state must have at least one non-zero element.\" }\n\n // some trivial seeds can produce several values with zeroes in upper bits, so we discard first 64\n repeat(64) { nextInt() }\n }\n\n override fun nextInt(): Int {\n var t = x\n t = t xor (t ushr 2)\n x = y\n y = z\n z = w\n val v0 = v\n w = v0\n t = (t xor (t shl 1)) xor v0 xor (v0 shl 4)\n v = t\n addend += 362437\n return t + addend\n }\n\n override fun nextBits(bitCount: Int): Int =\n nextInt().takeUpperBits(bitCount)\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"RangesKt\")\n\npackage kotlin.ranges\n\n/**\n * Represents

a range of floating point numbers.\n * Extends [ClosedRange] interface providing custom operation [lessThanOrEquals] for comparing values of range domain type.\n *\n * This interface is implemented by floating point ranges returned by [Float.rangeTo] and [Double.rangeTo] operators to\n * achieve IEEE-754 comparison order instead of total order of floating point numbers.\n */\n@SinceKotlin(\"1.1\")\npublic interface ClosedFloatingPointRange<T : Comparable<T>> : ClosedRange<T> {\n override fun contains(value: T): Boolean = lessThanOrEquals(start, value) && lessThanOrEquals(value, endInclusive)\n override fun isEmpty(): Boolean = !lessThanOrEquals(start, endInclusive)\n\n /**\n * Compares two values of range domain type and returns true if first is less than or equal to second.\n */\n fun lessThanOrEquals(a: T, b: T): Boolean\n}\n\n/**\n * Represents a range of [Comparable] values.\n */\nprivate open class ComparableRange<T : Comparable<T>>(\n override val
start: T,\n override val endInclusive: T\n) : ClosedRange<T> {\n\n override fun equals(other: Any?): Boolean {\n return other is ComparableRange<*> && (isEmpty() && other.isEmpty() ||\n start == other.start && endInclusive == other.endInclusive)\n }\n\n override fun hashCode(): Int {\n return if (isEmpty()) -1 else 31 * start.hashCode() + endInclusive.hashCode()\n }\n\n override fun toString(): String = \"$start..$endInclusive\"\n}\n\n/**\n * A closed range of values of type `Double`.\n *\n * Numbers are compared with the ends of this range according to IEEE-754.\n */\nprivate class ClosedDoubleRange(\n start: Double,\n endInclusive: Double\n) : ClosedFloatingPointRange<Double> {\n private val _start = start\n private val _endInclusive = endInclusive\n override val start: Double get() = _start\n override val endInclusive: Double get() = _endInclusive\n\n override fun lessThanOrEquals(a: Double, b: Double): Boolean = a
<= b\n\n override fun contains(value: Double): Boolean = value >= _start && value <= _endInclusive\n override fun isEmpty(): Boolean = !(_start <= _endInclusive)\n\n override fun equals(other: Any?): Boolean {\n return other is ClosedDoubleRange && (isEmpty() && other.isEmpty() ||\n _start == other._start && _endInclusive == other._endInclusive)\n }\n\n override fun hashCode(): Int {\n return if (isEmpty()) -1 else 31 * _start.hashCode() + _endInclusive.hashCode()\n }\n\n override fun toString(): String = \"$_start..$_endInclusive\"\n}\n\n\n/**\n * Creates a range from this [Comparable] value to the specified [that] value.\n *\n * This value needs to be smaller than [that] value, otherwise the returned range will be empty.\n * @sample samples.ranges.Ranges.rangeFromComparable\n */\npublic operator fun <T : Comparable<T>> T.rangeTo(that: T): ClosedRange<T> = ComparableRange(this, that)\n\n/**\n * Creates a range from this [Double] value
to the specified [that] value.\n *\n * Numbers are compared with the ends of this range according to IEEE-754.\n * @sample samples.ranges.Ranges.rangeFromDouble\n */\n@SinceKotlin(\"1.1\")\npublic operator fun Double.rangeTo(that: Double): ClosedFloatingPointRange<Double> = ClosedDoubleRange(this, that)\n\n\n/**\n * Returns `true` if this iterable range contains the specified [element].\n *\n * Always returns `false` if the [element] is `null`.\n */\n@SinceKotlin(\"1.3\")\n@kotlin.internal.InlineOnly\npublic inline operator fun <T, R> R.contains(element: T?): Boolean where T : Any, R : Iterable<T>, R : ClosedRange<T> =\n element != null && contains(element)\n\n\ninternal fun checkStepIsPositive(isPositive: Boolean, step: Number) {\n if (!isPositive) throw IllegalArgumentException(\"Step must be positive, was: $step.\")\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n
*/\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"CharsKt\")\n\npackage kotlin.text\n\n/**\n * Concatenates this Char and a String.\n *\n * @sample samples.text.Chars.plus\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun Char.plus(other: String): String = this.toString() + other\n\n/**\n * Returns `true` if this character is equal to the [other] character, optionally ignoring character case.\n *\n * @param ignoreCase `true` to ignore character case when comparing characters. By default `false`.\n *\n * Two characters are considered the same ignoring case if at least one of the following is `true`:\n * - The two characters are the same (as compared by the == operator)\n * - Applying the method [toUpperCase] to each character produces the same result\n * - Applying the method [toLowerCase] to each character produces the same result\n *\n * @sample samples.text.Chars.equals\n */\npublic fun Char.equals(other: Char, ignoreCase: Boolean = false):

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Boolean {\n    if (this == other) return true\n    if (!ignoreCase) return false\n\n    if (this.toUpperCase() == other.toUpperCase()) return true\n    if (this.toLowerCase() == other.toLowerCase()) return true\n    return false\n}\n\n/**\n * Returns `true` if this character is a Unicode surrogate code unit.\n */\npublic fun Char.isSurrogate(): Boolean = this in Char.MIN_SURROGATE..Char.MAX_SURROGATE\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"StringsKt\")\n\npackage kotlin.text\n\n/**\n * Trims leading whitespace characters followed by [marginPrefix] from every line of a source string and removes\n * the first and the last lines if they are blank (notice difference blank vs empty).\n *\n * Doesn't affect a line if it doesn't contain [marginPrefix] except the first and the last blank lines.\n *\n * Doesn't preserve the original line endings.\n *\n * @param marginPrefix non-blank string, which is used as a margin delimiter. Default is `|` (pipe character).\n *\n * @sample samples.text.Strings.trimMargin\n * @see trimIndent\n * @see kotlin.text.isWhitespace\n */\npublic fun String.trimMargin(marginPrefix: String = \"|\"): String =\n    replaceIndentByMargin(\"\", marginPrefix)\n\n/**\n * Detects indent by [marginPrefix] as it does [trimMargin] and replace it with [newIndent].\n *\n * @param marginPrefix non-blank string, which is used as a margin delimiter. Default is `|` (pipe character).\n */\npublic fun String.replaceIndentByMargin(newIndent: String = \"\", marginPrefix: String = \"|\"): String {\n    require(marginPrefix.isNotBlank()) { \"marginPrefix must be non-blank string.\" }\n    val lines = lines()\n\n    return lines.reindent(length + newIndent.length * lines.size, getIndentFunction(newIndent), { line ->\n        val firstNonWhitespaceIndex = line.indexOfFirst { !it.isWhitespace() }\n\n        when {\n            firstNonWhitespaceIndex == -1 -> null\n            line.startsWith(marginPrefix, firstNonWhitespaceIndex) -> line.substring(firstNonWhitespaceIndex + marginPrefix.length)\n            else -> null\n        }\n    })\n}\n\n/**\n * Detects a common minimal indent of all the input lines, removes it from every line and also removes the first and the last\n * lines if they are blank (notice difference blank vs empty).\n *\n * Note that blank lines do not affect the detected indent level.\n *\n * In case if there are non-blank lines with no leading whitespace characters (no indent at all) then the\n * common indent is 0, and therefore this function doesn't change the indentation.\n *\n * Doesn't preserve the original line endings.\n *\n * @sample samples.text.Strings.trimIndent\n * @see trimMargin\n * @see kotlin.text.isBlank\n */\npublic fun String.trimIndent(): String = replaceIndent(\"\")\n\n/**\n * Detects a common minimal indent like it does [trimIndent] and replaces it with the specified [newIndent].\n */\npublic fun String.replaceIndent(newIndent: String = \"\"): String {\n    val lines = lines()\n\n    val minCommonIndent = lines\n        .filter(String::isNotBlank)\n        .map(String::indentWidth)\n        .min() ?: 0\n\n    return lines.reindent(length + newIndent.length * lines.size, getIndentFunction(newIndent), { line -> line.drop(minCommonIndent) })\n}\n\n/**\n * Prepends [indent] to every line of the original string.\n *\n * Doesn't preserve the original line endings.\n */\npublic fun String.prependIndent(indent: String = \"    \"): String =\n    lineSequence()\n        .map {\n            when {\n                it.isBlank() -> {\n                    when {\n                        it.length < indent.length -> indent\n                        else -> it\n                    }\n                }\n                else -> indent + it\n            }\n        }\n        .joinToString(\"\\n\")\n\nprivate fun String.indentWidth():
 Int = indexOfFirst { !it.isWhitespace() }.let { if (it == -1) length else it }\n\nprivate fun getIndentFunction(indent: String) = when {\n    indent.isEmpty() -> { line: String -> line }\n    else -> { line: String -> indent + line }\n}\n\nprivate inline fun List<String>.reindent(\n    resultSizeEstimate: Int,\n    indentAddFunction: (String) -> String,\n    indentCutFunction: (String) -> String?\n): String {\n    val lastIndex = lastIndex\n    return mapIndexedNotNull { index, value ->\n        if ((index == 0 || index == lastIndex) && value.isBlank())\n            null\n        else\n            indentCutFunction(value)?.let(indentAddFunction) ?: value\n    }\n        .joinTo(StringBuilder(resultSizeEstimate), \"\\n\")\n        .toString()\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.text\n\n/**\n * Defines names for Unicode symbols used in proper Typography.\n */\npublic object Typography {\n    /** The character &#x22; \u2013 quotation mark */\n    public const val quote: Char = '\\u0022'\n    /** The character &#x24; \u2013 dollar sign */\n
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public const val dollar: Char = '\\u0024'\n   /** The character & \u2013 ampersand */\n   public const val amp: Char = '\\u0026'\n   /** The character < \u2013 less-than sign */\n   public const val less: Char = '\\u003C'\n   /** The character > \u2013 greater-than sign */\n   public const val greater: Char = '\\u003E'\n   /** The non-breaking space character */\n   public const val nbsp: Char = '\\u00A0'\n   /** The character × */\n   public const val times: Char = '\\u00D7'\n   /** The character ¢ */\n   public const val cent: Char = '\\u00A2'\n   /** The character £ */\n   public const val pound: Char = '\\u00A3'\n   /** The character § */\n   public const val section: Char = '\\u00A7'\n   /** The character © */\n   public const val copyright: Char = '\\u00A9'\n   /** The character « */\n   public const val leftGuillemete: Char = '\\u00AB'\n   /** The character » */\n   public const val rightGuillemete: Char = '\\u00BB'\n   /** The character ® */\n   public const val registered: Char = '\\u00AE'\n   /** The character ° */\n   public const val degree: Char = '\\u00B0'\n   /** The character ± */\n   public const val plusMinus: Char = '\\u00B1'\n   /** The character ¶ */\n   public const val paragraph: Char = '\\u00B6'\n   /** The character · */\n   public const val middleDot: Char = '\\u00B7'\n   /** The character ½ */\n   public const val half: Char = '\\u00BD'\n   /** The character – */\n   public const val ndash: Char = '\\u2013'\n   /** The character — */\n   public const val mdash: Char = '\\u2014'\n   /** The character ‘ */\n   public const val leftSingleQuote: Char = '\\u2018'\n   /** The character ’ */\n   public const val rightSingleQuote: Char = '\\u2019'\n   /** The character ‚ */\n   public const val lowSingleQuote: Char = '\\u201A'\n   /** The character “ */\n   public const val leftDoubleQuote: Char = '\\u201C'\n   /** The character ” */\n   public const val rightDoubleQuote: Char = '\\u201D'\n   /** The character „ */\n   public const val lowDoubleQuote: Char = '\\u201E'\n   /** The character † */\n   public const val dagger: Char = '\\u2020'\n   /** The character ‡ */\n   public const val doubleDagger: Char = '\\u2021'\n   /** The character • */\n   public const val bullet: Char = '\\u2022'\n   /** The character … */\n   public const val ellipsis: Char = '\\u2026'\n   /** The character ′ */\n   public const val prime: Char = '\\u2032'\n   /** The character ″ */\n   public const val doublePrime: Char = '\\u2033'\n   /** The character € */\n   public const val euro: Char = '\\u20AC'\n   /** The character ™ */\n   public const val tm: Char = '\\u2122'\n   /** The character ≈ */\n   public const val almostEqual: Char = '\\u2248'\n   /** The character ≠ */\n   public const val notEqual: Char = '\\u2260'\n   /** The character ≤ */\n   public const val lessOrEqual: Char = '\\u2264'\n   /** The character ≥ */\n   public const val greaterOrEqual: Char = '\\u2265'\n}","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.text\n\n/**\n * Represents a collection of captured groups in a single match of a regular expression.\n *\n * This collection has size of `groupCount + 1` where `groupCount` is the count of groups in the regular expression.\n * Groups are indexed from 1 to `groupCount` and group with the index 0 corresponds to the entire match.\n *\n * An element of the collection at the particular index can be `null`,\n * if the corresponding group in the regular expression is optional and\n * there was no match captured by that group.\n */\npublic interface MatchGroupCollection : Collection<MatchGroup?> {\n\n   /** Returns a group with the specified [index].\n   *\n   * @return An instance of [MatchGroup] if the group with the specified [index] was matched or `null` otherwise.\n   *\n   * Groups are indexed from 1 to the count of groups in the regular expression. A group with the index 0\n   * corresponds to the entire match.\n   */\n   public operator fun get(index: Int): MatchGroup?\n}\n\n/**\n * Extends [MatchGroupCollection] by introducing a way to get matched groups by name, when regex supports it.\n */\n@SinceKotlin(\"1.1\")\npublic interface MatchNamedGroupCollection : MatchGroupCollection {\n   /**\n   * Returns a named group with the specified [name].\n   * @return An instance of [MatchGroup] if the group with the specified [name] was matched or `null` otherwise.\n   * @throws IllegalArgumentException if there is no group with the specified [name] defined in the regex pattern.\n   * @throws UnsupportedOperationException if getting named groups isn't supported on the current platform.\n   */\n   public operator fun get(name: String): MatchGroup?\n}\n\n/**\n * Represents the results from a single regular expression match.\n */\npublic interface MatchResult {\n   /** The

range of indices in the original string where match was captured. */\n public val range: IntRange\n /** The substring from the input string captured by this match. */\n public val value: String\n /**\n * A collection of groups matched by the regular expression.\n *\n * This collection has size of `groupCount + 1` where `groupCount` is the count of groups in the regular expression.\n * Groups are indexed from 1 to `groupCount` and group with the index 0 corresponds to the entire match.\n */\n public val groups: MatchGroupCollection\n /**\n * A list of matched indexed group values.\n *\n * This list has size of `groupCount + 1` where `groupCount` is the count of groups in the regular expression.\n * Groups are indexed from 1 to `groupCount` and group with the index 0 corresponds to the entire match.\n *\n * If the group in the regular expression is optional and there were no match captured by that group,\n * corresponding item in [groupValues] is an empty string.\n *\n * @sample samples.text.Regexps.matchDestructuringToGroupValues\n */\n public val groupValues: List<String>\n\n /**\n * An instance of [MatchResult.Destructured] wrapper providing components for destructuring assignment of group values.\n *\n * component1 corresponds to the value of the first group, component2 \u2014 of the second, and so on.\n *\n * @sample samples.text.Regexps.matchDestructuringToGroupValues\n */\n public val destructured: Destructured get() = Destructured(this)\n\n /** Returns a new [MatchResult] with the results for the next match, starting at the position\n * at which the last match ended (at the character after the last matched character).\n */\n public fun next(): MatchResult?\n\n /**\n * Provides components for destructuring assignment of group values.\n *\n * [component1] corresponds to the value of the first group, [component2] \u2014 of the second, and so on.\n *\n * If the group in the regular expression is optional and there were no match captured by that group,\n * corresponding component value is an empty string.\n *\n * @sample samples.text.Regexps.matchDestructuringToGroupValues\n */\n public class Destructured internal constructor(public val match: MatchResult) {\n @kotlin.internal.InlineOnly\n public operator inline fun component1(): String = match.groupValues[1]\n @kotlin.internal.InlineOnly\n public operator inline fun component2(): String = match.groupValues[2]\n @kotlin.internal.InlineOnly\n public operator inline fun component3(): String = match.groupValues[3]\n @kotlin.internal.InlineOnly\n public operator inline fun component4(): String = match.groupValues[4]\n @kotlin.internal.InlineOnly\n public operator inline fun component5(): String = match.groupValues[5]\n @kotlin.internal.InlineOnly\n public operator inline fun component6(): String = match.groupValues[6]\n @kotlin.internal.InlineOnly\n public operator inline fun component7(): String = match.groupValues[7]\n @kotlin.internal.InlineOnly\n public operator inline fun component8(): String = match.groupValues[8]\n @kotlin.internal.InlineOnly\n public operator inline fun component9(): String = match.groupValues[9]\n @kotlin.internal.InlineOnly\n public operator inline fun component10(): String = match.groupValues[10]\n\n /**\n * Returns destructured group values as a list of strings.\n * First value in the returned list corresponds to the value of the first group, and so on.\n *\n * @sample samples.text.Regexps.matchDestructuringToGroupValues\n */\n public fun toList(): List<String> = match.groupValues.subList(1, match.groupValues.size)\n }\n}","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin\n\nimport kotlin.internal.InlineOnly\n\n\n/**\n * Returns a hash code value for the object or zero if the object is `null`.\n *\n * @see Any.hashCode\n */\n@SinceKotlin(\"1.3\")\n@InlineOnly\npublic inline fun Any?.hashCode(): Int = this?.hashCode() ?: 0\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin\n\n/**\n * Represents a version of the Kotlin standard library.\n *\n * [major], [minor] and [patch] are integer components of a version,\n * they must be non-negative and not greater than 255 ([MAX_COMPONENT_VALUE]).\n *\n * @constructor Creates a version from all three components.\n */\n@SinceKotlin(\"1.1\")\npublic class KotlinVersion(val major: Int, val minor: Int, val patch: Int) : Comparable<KotlinVersion> {\n /**\n * Creates a version from [major] and [minor] components, leaving [patch] component zero.\n */\n public constructor(major: Int, minor: Int) : this(major, minor, 0)\n\n private val

version = versionOf(major, minor, patch)\n\n   private fun versionOf(major: Int, minor: Int, patch: Int): Int {\n require(major in 0..MAX_COMPONENT_VALUE && minor in 0..MAX_COMPONENT_VALUE && patch in 0..MAX_COMPONENT_VALUE) {\n \"Version components are out of range: $major.$minor.$patch\"\n }\n return major.shl(16) + minor.shl(8)
+ patch\n }\n\n /**\n * Returns the string representation of this version\n */\n override fun toString(): String = \"$major.$minor.$patch\"\n\n override fun equals(other: Any?): Boolean {\n if (this === other) return true\n val otherVersion = (other as? KotlinVersion) ?: return false\n return this.version == otherVersion.version\n }\n\n override fun hashCode(): Int = version\n\n override fun compareTo(other: KotlinVersion): Int = version - other.version\n\n /**\n * Returns `true` if this version is not less than the version specified\n * with the provided [major] and [minor] components.\n */\n public fun isAtLeast(major: Int, minor: Int): Boolean = // this.version >= versionOf(major, minor, 0)\n this.major > major || (this.major == major &&\n this.minor >= minor)\n\n /**\n * Returns `true` if this version is not less than the version specified\n * with the provided [major], [minor]
and [patch] components.\n */\n public fun isAtLeast(major: Int, minor: Int, patch: Int): Boolean = // this.version >= versionOf(major, minor, patch)\n this.major > major || (this.major == major &&\n (this.minor > minor || this.minor == minor &&\n this.patch >= patch))\n\n companion object {\n /**\n * Maximum value a version component can have, a constant value 255.\n */\n // NOTE: Must be placed before CURRENT because its initialization requires this field being initialized in JS\n public const val MAX_COMPONENT_VALUE = 255\n\n /**\n * Returns the current version of the Kotlin standard library.\n */\n @kotlin.jvm.JvmField\n public val CURRENT: KotlinVersion = KotlinVersion(1, 3, 31) // value is written here automatically during build\n }\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n
* that can be found in the license/LICENSE.txt file.\n
*/\n\n@file:kotlin.jvm.JvmName(\"LateinitKt\")\n@file:Suppress(\"unused\")\n\npackage kotlin\n\nimport kotlin.internal.InlineOnly\nimport kotlin.internal.AccessibleLateinitPropertyLiteral\nimport kotlin.reflect.KProperty0\n\n/**\n * Returns `true` if this lateinit property has been assigned a value, and `false` otherwise.\n *\n * Cannot be used in an inline function, to avoid binary compatibility issues.\n */\n@SinceKotlin(\"1.2\")\n@InlineOnly\ninline val @receiver:AccessibleLateinitPropertyLiteral KProperty0<*>.isInitialized: Boolean\n get() = throw NotImplementedError(\"Implementation is intrinsic\")\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmName(\"LazyKt\")\n@file:kotlin.jvm.JvmMultifileClass\n\npackage kotlin\n\nimport kotlin.reflect.KProperty\n\n/**\n * Represents a value
with lazy initialization.\n *\n * To create an instance of [Lazy] use the [lazy] function.\n */\npublic interface Lazy<out T> {\n /**\n * Gets the lazily initialized value of the current Lazy instance.\n * Once the value was initialized it must not change during the rest of lifetime of this Lazy instance.\n */\n public val value: T\n\n /**\n * Returns `true` if a value for this Lazy instance has been already initialized, and `false` otherwise.\n * Once this function has returned `true` it stays `true` for the rest of lifetime of this Lazy instance.\n */\n public fun isInitialized(): Boolean\n}\n\n/**\n * Creates a new instance of the [Lazy] that is already initialized with the specified [value].\n */\npublic fun <T> lazyOf(value: T): Lazy<T> = InitializedLazyImpl(value)\n\n/**\n * An extension to delegate a read-only property of type [T] to an instance of [Lazy].\n *\n * This extension allows to use instances of Lazy for property delegation:\n * `val
property: String by lazy { initializer }`\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> Lazy<T>.getValue(thisRef: Any?, property: KProperty<*>): T = value\n\n/**\n * Specifies how a [Lazy] instance synchronizes initialization among multiple threads.\n */\npublic enum class LazyThreadSafetyMode {\n\n /**\n * Locks are used to ensure that only a single thread can initialize the [Lazy] instance.\n */\n SYNCHRONIZED,\n\n /**\n * Initializer function can be called several times on concurrent access to uninitialized [Lazy] instance value,\n * but only the first returned value will be used as the value of [Lazy]

instance.\n */\n PUBLICATION,\n\n /**\n * No locks are used to synchronize an access to the [Lazy] instance value; if the instance is accessed from multiple threads, its behavior is undefined.\n *\n * This mode should not be used unless the [Lazy] instance is guaranteed never to be initialized from more than one thread.\n */\n NONE,\n}\n\n\ninternal object UNINITIALIZED_VALUE\n\n// internal to be called from lazy in JS\ninternal class UnsafeLazyImpl<out T>(initializer: () -> T) : Lazy<T>, Serializable {\n private var initializer: (() -> T)? = initializer\n private var _value: Any? = UNINITIALIZED_VALUE\n\n override val value: T\n get() {\n if (_value === UNINITIALIZED_VALUE) {\n _value = initializer!!()\n initializer = null\n }\n @Suppress(\"UNCHECKED_CAST\")\n return _value as T\n }\n\n override fun isInitialized(): Boolean = _value !== UNINITIALIZED_VALUE\n\n override fun toString(): String = if (isInitialized()) value.toString() else \"Lazy value not initialized yet.\"\n\n private fun writeReplace(): Any = InitializedLazyImpl(value)\n}\n\n\ninternal class InitializedLazyImpl<out T>(override val value: T) : Lazy<T>, Serializable {\n\n override fun isInitialized(): Boolean = true\n\n override fun toString(): String = value.toString()\n\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin\nimport kotlin.internal.RequireKotlin\nimport kotlin.internal.RequireKotlinVersionKind\n\n@kotlin.internal.InlineOnly\n@SinceKotlin(\"1.2\")\n@Suppress(\"INVISIBLE_MEMBER\", \"INVISIBLE_REFERENCE\")\n@RequireKotlin(\"1.2.30\", level = DeprecationLevel.HIDDEN, versionKind = RequireKotlinVersionKind.COMPILER_VERSION)\npublic inline fun <R> suspend(noinline block: suspend () -> R): suspend () -> R = block\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmName(\"TuplesKt\")\n\npackage kotlin\n\n\n/**\n * Represents a generic pair of two values.\n *\n * There is no meaning attached to values in this class, it can be used for any purpose.\n * Pair exhibits value semantics, i.e. two pairs are equal if both components are equal.\n *\n * An example of decomposing it into values:\n * @sample samples.misc.Tuples.pairDestructuring\n *\n * @param A type of the first value.\n * @param B type of the second value.\n * @property first First value.\n * @property second Second value.\n * @constructor Creates a new instance of Pair.\n */\npublic data class Pair<out A, out B>(\n public val first: A,\n public val second: B\n) : Serializable {\n\n /**\n * Returns string representation of the [Pair] including its [first] and [second] values.\n */\n public override fun toString(): String = \"($first, $second)\"\n}\n\n/**\n * Creates a tuple of type [Pair] from this and [that].\n *\n * This can be useful for creating [Map] literals with less noise, for example:\n * @sample samples.collections.Maps.Instantiation.mapFromPairs\n */\npublic infix fun <A, B> A.to(that: B): Pair<A, B> = Pair(this, that)\n\n/**\n * Converts this pair into a list.\n * @sample samples.misc.Tuples.pairToList\n */\npublic fun <T> Pair<T, T>.toList(): List<T> = listOf(first, second)\n\n/**\n * Represents a triad of values\n *\n * There is no meaning attached to values in this class, it can be used for any purpose.\n * Triple exhibits value semantics, i.e. two triples are equal if all three components are equal.\n * An example of decomposing it into values:\n * @sample samples.misc.Tuples.tripleDestructuring\n *\n * @param A type of the first value.\n * @param B type of the second value.\n * @param C type of the third value.\n * @property first First value.\n * @property second Second value.\n * @property third Third value.\n */\npublic data class Triple<out A, out B, out C>(\n public val first: A,\n public val second: B,\n public val third: C\n) : Serializable {\n\n /**\n * Returns string representation of the [Triple] including its [first], [second] and [third] values.\n */\n public override fun toString(): String = \"($first, $second, $third)\"\n}\n\n/**\n * Converts this triple into a list.\n * @sample samples.misc.Tuples.tripleToList\n */\npublic fun <T> Triple<T, T, T>.toList(): List<T> = listOf(first, second, third)\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n// Auto-generated file. DO NOT EDIT!\n\npackage kotlin.ranges\n\n\n\nimport kotlin.internal.*\n\n/**\n * A range of values of type `UInt`.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic class UIntRange(start: UInt, endInclusive: UInt) : UIntProgression(start, endInclusive, 1), ClosedRange<UInt> {\n override val start: UInt get() = first\n override

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val endInclusive: UInt get() = last\n\n    override fun contains(value: UInt): Boolean = first <= value && value <= last\n\n    override fun isEmpty(): Boolean = first > last\n\n    override fun equals(other: Any?): Boolean =\n        other is UIntRange && (isEmpty() && other.isEmpty() ||\n                first == other.first && last == other.last)\n\n    override fun hashCode(): Int =\n        if (isEmpty()) -1 else (31 * first.toInt() + last.toInt())\n\n    override fun toString(): String = \"$first..$last\"\n\n    companion object {\n        /** An empty range of values of type UInt. */\n        public val EMPTY: UIntRange = UIntRange(UInt.MAX_VALUE, UInt.MIN_VALUE)\n    }\n}\n\n/**\n * A progression of values of type `UInt`.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic open class UIntProgression\ninternal constructor(\n    start: UInt,\n    endInclusive: UInt,\n    step: Int\n) : Iterable<UInt> {\n    init {\n        if (step == 0.toInt()) throw kotlin.IllegalArgumentException(\"Step must be non-zero.\")\n        if (step == Int.MIN_VALUE) throw kotlin.IllegalArgumentException(\"Step must be greater than Int.MIN_VALUE to avoid overflow on negation.\")\n    }\n\n    /**\n     * The first element in the progression.\n     */\n    public val first: UInt = start\n\n    /**\n     * The last element in the progression.\n     */\n    public val last: UInt = getProgressionLastElement(start, endInclusive, step)\n\n    /**\n     * The step of the progression.\n     */\n    public val step: Int = step\n\n    override fun iterator(): UIntIterator = UIntProgressionIterator(first, last, step)\n\n    /** Checks if the progression is empty. */\n    public open fun isEmpty(): Boolean = if (step > 0) first > last else first < last\n\n    override fun equals(other: Any?): Boolean =\n        other is UIntProgression && (isEmpty() && other.isEmpty() ||\n                first == other.first && last == other.last && step == other.step)\n\n    override fun hashCode(): Int =\n        if (isEmpty()) -1 else (31 * (31 * first.toInt() + last.toInt()) + step.toInt())\n\n    override fun toString(): String = if (step > 0) \"$first..$last step $step\" else \"$first downTo $last step ${-step}\"\n\n    companion object {\n        /**\n         * Creates UIntProgression within the specified bounds of a closed range.\n\n         * The progression starts with the [rangeStart] value and goes toward the [rangeEnd] value not excluding it, with the specified [step].\n         * In order to go backwards the [step] must be negative.\n         *\n         * [step] must be greater than `Int.MIN_VALUE` and not equal to zero.\n         */\n        public fun fromClosedRange(rangeStart: UInt, rangeEnd: UInt, step: Int): UIntProgression = UIntProgression(rangeStart, rangeEnd, step)\n    }\n}\n\n\n/**\n * An iterator over a progression of values of type `UInt`.\n * @property step the number by which the value is incremented on each step.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\nprivate class UIntProgressionIterator(first: UInt, last: UInt, step: Int) : UIntIterator() {\n    private val finalElement = last\n    private var hasNext: Boolean = if (step > 0) first <= last else first >= last\n    private val step = step.toUInt() // use 2-complement math for negative steps\n    private var next = if (hasNext) first else finalElement\n\n    override fun hasNext(): Boolean = hasNext\n\n    override fun nextUInt(): UInt {\n        val value = next\n        if (value == finalElement) {\n            if (!hasNext) throw kotlin.NoSuchElementException()\n            hasNext = false\n        } else {\n            next += step\n        }\n        return value\n    }\n}\n\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n// Auto-generated file. DO NOT EDIT!\n\npackage kotlin.collections\n\n/** An iterator over a sequence of values of type `UByte`. */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic abstract class UByteIterator : Iterator<UByte> {\n    override final fun next() = nextUByte()\n\n    /** Returns the next value in the sequence without boxing. */\n    public abstract fun nextUByte(): UByte\n}\n\n/** An iterator over a sequence of values of type `UShort`. */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic abstract class UShortIterator : Iterator<UShort> {\n    override final fun next() = nextUShort()\n\n    /** Returns the next value in the sequence without boxing. */\n    public abstract fun nextUShort(): UShort\n}\n\n/** An iterator over a sequence of values of type `UInt`. */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic abstract class UIntIterator : Iterator<UInt> {\n    override final fun next() = nextUInt()\n\n    /** Returns the next value in the sequence without boxing. */\n    public abstract fun nextUInt(): UInt\n}\n\n/** An iterator over a sequence of values of type `ULong`. */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic abstract class ULongIterator : Iterator<ULong> {\n    override final fun next() = nextULong()\n\n    /** Returns the next
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value in the sequence without boxing. */\n   public abstract fun nextULong(): ULong\n}\n\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license \n * that can be found in the license/LICENSE.txt file.\n */\n\n// Auto-generated file. DO NOT EDIT!\n\npackage kotlin.ranges\n\n\n\nimport kotlin.internal.*\n\n/**\n * A range of values of type `ULong`.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic class ULongRange(start: ULong, endInclusive: ULong) : ULongProgression(start, endInclusive, 1), ClosedRange<ULong> {\n   override val start: ULong get() = first\n   override val endInclusive: ULong get() = last\n\n   override fun contains(value: ULong): Boolean = first <= value && value <= last\n\n   override fun isEmpty(): Boolean = first > last\n\n   override fun equals(other: Any?): Boolean =\n   other is ULongRange && (isEmpty() && other.isEmpty() ||\n   first == other.first && last == other.last)\n\n   override fun hashCode(): Int =\n   if (isEmpty()) -1 else (31 * (first xor (first shr 32)).toInt() + (last xor (last shr 32)).toInt())\n\n   override fun toString(): String = \"$first..$last\"\n\n   companion object {\n   /** An empty range of values of type ULong. */\n   public val EMPTY: ULongRange = ULongRange(ULong.MAX_VALUE, ULong.MIN_VALUE)\n   }\n}\n\n/**\n * A progression of values of type `ULong`.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic open class ULongProgression\ninternal constructor(\n   start: ULong,\n   endInclusive: ULong,\n   step: Long\n) : Iterable<ULong> {\n   init {\n   if (step == 0.toLong()) throw kotlin.IllegalArgumentException(\"Step must be non-zero.\")\n   if (step == Long.MIN_VALUE) throw kotlin.IllegalArgumentException(\"Step must be greater than Long.MIN_VALUE to avoid overflow on negation.\")\n   }\n\n   /**\n   * The first element in the progression.\n   */\n   public val first: ULong =
    start\n\n   /**\n   * The last element in the progression.\n   */\n   public val last: ULong = getProgressionLastElement(start, endInclusive, step)\n\n   /**\n   * The step of the progression.\n   */\n   public val step: Long = step\n\n   override fun iterator(): ULongIterator = ULongProgressionIterator(first, last, step)\n\n   /** Checks if the progression is empty. */\n   public open fun isEmpty(): Boolean = if (step > 0) first > last else first < last\n\n   override fun equals(other: Any?): Boolean =\n   other is ULongProgression && (isEmpty() && other.isEmpty() ||\n   first == other.first && last == other.last && step == other.step)\n\n   override fun hashCode(): Int =\n   if (isEmpty()) -1 else (31 * (31 * (first xor (first shr 32)).toInt() + (last xor (last shr 32)).toInt()) + (step xor (step ushr 32)).toInt())\n\n   override fun toString(): String = if (step > 0) \"$first..$last step $step\" else \"$first downTo $last step ${-step}\"\n\n
    companion object {\n   /**\n   * Creates ULongProgression within the specified bounds of a closed range.\n\n   * The progression starts with the [rangeStart] value and goes toward the [rangeEnd] value not excluding it, with the specified [step].\n   * In order to go backwards the [step] must be negative.\n   *\n   * [step] must be greater than `Long.MIN_VALUE` and not equal to zero.\n   */\n   public fun fromClosedRange(rangeStart: ULong, rangeEnd: ULong, step: Long): ULongProgression = ULongProgression(rangeStart, rangeEnd, step)\n   }\n}\n\n\n\n/**\n * An iterator over a progression of values of type `ULong`.\n * @property step the number by which the value is incremented on each step.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\nprivate class ULongProgressionIterator(first: ULong, last: ULong, step: Long) : ULongIterator() {\n   private val finalElement = last\n   private var hasNext: Boolean = if (step > 0) first <= last
    else first >= last\n   private val step = step.toULong() // use 2-complement math for negative steps\n   private var next = if (hasNext) first else finalElement\n\n   override fun hasNext(): Boolean = hasNext\n\n   override fun nextULong(): ULong {\n   val value = next\n   if (value == finalElement) {\n   if (!hasNext) throw kotlin.NoSuchElementException()\n   hasNext = false\n   } else {\n   next += step\n   }\n   return value\n   }\n}\n\n","/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.math\n\n/**\n * Returns the smaller of two values.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun min(a: UInt, b: UInt): UInt {\n   return minOf(a, b)\n}\n\n/**\n * Returns the smaller of two values.\n

*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun min(a: ULong, b: ULong): ULong {\n   return minOf(a, b)\n}\n\n/**\n * Returns the greater of two values.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun max(a: UInt, b: UInt): UInt {\n   return maxOf(a, b)\n}\n\n/**\n * Returns the greater of two values.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun max(a: ULong, b: ULong): ULong {\n   return maxOf(a, b)\n}","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:UseExperimental(ExperimentalUnsignedTypes::class)\npackage kotlin.internal\n\n// (a - b) mod c\nprivate fun differenceModulo(a: UInt, b: UInt, c: UInt): UInt {\n   val ac = a % c\n   val bc = b % c\n   return if (ac >= bc) ac - bc else ac - bc + c\n}\n\nprivate fun differenceModulo(a: ULong, b: ULong, c: ULong): ULong {\n   val ac = a % c\n   val bc = b % c\n   return if (ac >= bc) ac - bc else ac - bc + c\n}\n\n/**\n * Calculates the final element of a bounded arithmetic progression, i.e. the last element of the progression which is in the range\n * from [start] to [end] in case of a positive [step], or from [end] to [start] in case of a negative\n * [step].\n *\n * No validation on passed parameters is performed. The given parameters should satisfy the condition:\n *\n * - either `step > 0` and `start <= end`,\n * - or `step < 0` and `start >= end`.\n *\n * @param start first element of the progression\n * @param end ending bound for the progression\n * @param step increment, or difference of successive elements in the progression\n * @return the final element of the progression\n * @suppress\n */\n@PublishedApi\n@SinceKotlin(\"1.3\")\ninternal fun getProgressionLastElement(start: UInt, end: UInt, step: Int): UInt = when {\n   step > 0 -> if (start >= end) end else end - differenceModulo(end, start, step.toUInt())\n   step < 0 -> if (start <= end) end else end + differenceModulo(start, end, (-step).toUInt())\n   else -> throw kotlin.IllegalArgumentException(\"Step is zero.\")\n}\n\n/**\n * Calculates the final element of a bounded arithmetic progression, i.e. the last element of the progression which is in the range\n * from [start] to [end] in case of a positive [step], or from [end] to [start] in case of a negative\n * [step].\n *\n * No validation on passed parameters is performed. The given parameters should satisfy the condition:\n *\n * - either `step > 0` and `start <= end`,\n * - or `step < 0` and `start >= end`.\n *\n * @param start first element of the progression\n * @param end ending bound for the progression\n * @param step increment, or difference of successive elements in the progression\n * @return the final element of the progression\n * @suppress\n */\n@PublishedApi\n@SinceKotlin(\"1.3\")\ninternal fun getProgressionLastElement(start: ULong, end: ULong, step: Long): ULong = when {\n   step > 0 -> if (start >= end) end else end - differenceModulo(end, start, step.toULong())\n   step < 0 -> if (start <= end) end else end + differenceModulo(start, end, (-step).toULong())\n   else -> throw kotlin.IllegalArgumentException(\"Step is zero.\")\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmName(\"UStringsKt\") // string representation of unsigned numbers\n\npackage kotlin.text\n\n/**\n * Returns a string representation of this [Byte] value in the specified [radix].\n *\n * @throws IllegalArgumentException when [radix] is not a valid radix for number to string conversion.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n//@kotlin.internal.InlineOnly\npublic /*inline*/ fun UByte.toString(radix: Int): String = this.toInt().toString(radix)\n\n/**\n * Returns a string representation of this [Short] value in the specified [radix].\n *\n * @throws IllegalArgumentException when [radix] is not a valid radix for number to string conversion.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n//@kotlin.internal.InlineOnly\npublic /*inline*/ fun UShort.toString(radix: Int): String = this.toInt().toString(radix)\n\n\n/**\n * Returns a string representation of this [Int] value in the specified [radix].\n *\n * @throws IllegalArgumentException when [radix] is not a valid radix for number to string conversion.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n//@kotlin.internal.InlineOnly\npublic /*inline*/ fun UInt.toString(radix: Int): String = this.toLong().toString(radix)\n\n/**\n * Returns a string representation of this [Long] value in the specified [radix].\n *\n * @throws IllegalArgumentException when [radix] is not a valid radix for number to string conversion.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun ULong.toString(radix:

Int): String = ulongToString(this.toLong(), checkRadix(radix))\n\n\n/**\n * Parses the string as a signed [UByte] number and returns the result.\n * @throws NumberFormatException if the string is not a valid representation of a number.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun String.toUByte(): UByte = toUByteOrNull() ?: numberFormatError(this)\n\n/**\n * Parses the string as a signed [UByte] number and returns the result.\n * @throws NumberFormatException if the string is not a valid representation of a number.\n * @throws IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun String.toUByte(radix: Int): UByte = toUByteOrNull(radix) ?: numberFormatError(this)\n\n\n/**\n * Parses the string as a [UShort] number and returns the result.\n * @throws NumberFormatException if the string is not a valid representation of a number.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic
fun String.toUShort(): UShort = toUShortOrNull() ?: numberFormatError(this)\n\n/**\n * Parses the string as a [UShort] number and returns the result.\n * @throws NumberFormatException if the string is not a valid representation of a number.\n * @throws IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun String.toUShort(radix: Int): UShort = toUShortOrNull(radix) ?: numberFormatError(this)\n\n/**\n * Parses the string as an [UInt] number and returns the result.\n * @throws NumberFormatException if the string is not a valid representation of a number.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun String.toUInt(): UInt = toUIntOrNull() ?: numberFormatError(this)\n\n/**\n * Parses the string as an [UInt] number and returns the result.\n * @throws NumberFormatException if the string is not a valid representation of
a number.\n * @throws IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun String.toUInt(radix: Int): UInt = toUIntOrNull(radix) ?: numberFormatError(this)\n\n/**\n * Parses the string as a [ULong] number and returns the result.\n * @throws NumberFormatException if the string is not a valid representation of a number.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun String.toULong(): ULong = toULongOrNull() ?: numberFormatError(this)\n\n/**\n * Parses the string as a [ULong] number and returns the result.\n * @throws NumberFormatException if the string is not a valid representation of a number.\n * @throws IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun String.toULong(radix: Int): ULong = toULongOrNull(radix) ?: numberFormatError(this)\n\n\n\n\n\n/**\n
* Parses the string as an [UByte] number and returns the result\n * or `null` if the string is not a valid representation of a number.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun String.toUByteOrNull(): UByte? = toUByteOrNull(radix = 10)\n\n/**\n * Parses the string as an [UByte] number and returns the result\n * or `null` if the string is not a valid representation of a number.\n *\n * @throws IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun String.toUByteOrNull(radix: Int): UByte? {\n   val int = this.toUIntOrNull(radix) ?: return null\n   if (int > UByte.MAX_VALUE) return null\n   return int.toUByte()\n}\n\n/**\n * Parses the string as an [UShort] number and returns the result\n * or `null` if the string is not a valid representation of a number.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun String.toUShortOrNull(): UShort?
= toUShortOrNull(radix = 10)\n\n/**\n * Parses the string as an [UShort] number and returns the result\n * or `null` if the string is not a valid representation of a number.\n *\n * @throws IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun String.toUShortOrNull(radix: Int): UShort? {\n   val int = this.toUIntOrNull(radix) ?: return null\n   if (int > UShort.MAX_VALUE) return null\n   return int.toUShort()\n}\n\n/**\n * Parses the string as an [UInt] number and returns the result\n * or `null` if the string is not a valid representation of a number.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun String.toUIntOrNull(): UInt? = toUIntOrNull(radix = 10)\n\n/**\n * Parses the string as an [UInt] number and returns the result\n * or `null` if the string is not a valid representation of a number.\n *\n * @throws

IllegalArgumentException when [radix] is not a valid
radix for string to number conversion.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun String.toUIntOrNull(radix: Int): UInt? {\n checkRadix(radix)\n\n val length = this.length\n if (length == 0) return null\n\n val limit: UInt = UInt.MAX_VALUE\n val start: Int\n\n val firstChar = this[0]\n if (firstChar < '0') {\n if (length == 1 || firstChar != '+') return null\n start = 1\n } else {\n start = 0\n }\n\n val uradix = radix.toUInt()\n val limitBeforeMul = limit / uradix\n var result = 0u\n for (i in start until length) {\n val digit = digitOf(this[i], radix)\n\n if (digit < 0) return null\n if (result > limitBeforeMul) return null\n\n result *= uradix\n\n val beforeAdding = result\n result += digit.toUInt()\n if (result < beforeAdding) return null // overflow has happened\n }\n\n return result\n}\n\n/**\n * Parses the string as an [ULong] number and
returns the result\n * or `null` if the string is not a valid representation of a number.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun String.toULongOrNull(): ULong? = toULongOrNull(radix = 10)\n\n/**\n * Parses the string as an [ULong] number and returns the result\n * or `null` if the string is not a valid representation of a number.\n *\n * @throws IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n */\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\npublic fun String.toULongOrNull(radix: Int): ULong? {\n checkRadix(radix)\n\n val length = this.length\n if (length == 0) return null\n\n val limit: ULong = ULong.MAX_VALUE\n val start: Int\n\n val firstChar = this[0]\n if (firstChar < '0') {\n if (length == 1 || firstChar != '+') return null\n start = 1\n } else {\n start = 0\n }\n\n\n val uradix = radix.toUInt()\n val limitBeforeMul = limit / uradix\n var result
= 0uL\n for (i in start until length) {\n val digit = digitOf(this[i], radix)\n\n if (digit < 0) return null\n if (result > limitBeforeMul) return null\n\n result *= uradix\n\n val beforeAdding = result\n result += digit.toUInt()\n if (result < beforeAdding) return null // overflow has happened\n }\n\n return result\n}\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:Suppress(\"INVISIBLE_REFERENCE\", \"INVISIBLE_MEMBER\")\npackage kotlin\n\nimport kotlin.annotation.AnnotationTarget.*\nimport kotlin.internal.RequireKotlin\nimport kotlin.internal.RequireKotlinVersionKind\n\n/**\n * Marks the API that is dependent on the experimental unsigned types, including those types themselves.\n *\n * Usages of such API will be reported as warnings unless an explicit opt-in with\n * the [UseExperimental] annotation,
e.g. `@UseExperimental(ExperimentalUnsignedTypes::class)`,\n * or with the `-Xuse-experimental=kotlin.ExperimentalUnsignedTypes` compiler option is given.\n *\n * It's recommended to propagate the experimental status to the API that depends on unsigned types by annotating it with this annotation.\n */\n@Experimental(level = Experimental.Level.WARNING)\n@Target(CLASS, ANNOTATION_CLASS, PROPERTY, FIELD, LOCAL_VARIABLE, VALUE_PARAMETER, CONSTRUCTOR, FUNCTION, PROPERTY_GETTER, PROPERTY_SETTER, TYPEALIAS)\n@Retention(AnnotationRetention.BINARY)\n@RequireKotlin(\"1.2.50\", versionKind = RequireKotlinVersionKind.COMPILER_VERSION)\npublic annotation class ExperimentalUnsignedTypes\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. Use of this source code is governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"MathKt\")\n\n\npackage kotlin.math\n\n\n\n// constants, can't use them from nativeMath
as they are not constants there\n\n/** Ratio of the circumference of a circle to its diameter, approximately 3.14159. */\n@SinceKotlin(\"1.2\")\npublic const val PI: Double = 3.141592653589793\n/** Base of the natural logarithms, approximately 2.71828. */\n@SinceKotlin(\"1.2\")\npublic const val E: Double = 2.718281828459045\n\n// region ================ Double Math ====================================\n\n/** Computes the sine of the angle [x] given in radians.\n *\n * Special cases:\n * - `sin(NaN|+Inf|-Inf)` is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun sin(x: Double): Double\n\n/** Computes the cosine of the angle [x] given in radians.\n *\n * Special cases:\n * - `cos(NaN|+Inf|-Inf)` is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic

expect fun cos(x: Double): Double\n\n/** Computes the tangent of the angle [x] given in radians.\n *\n * Special cases:\n * - `tan(NaN|+Inf|-Inf)` is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun tan(x: Double): Double\n\n/**\n
 * Computes the arc sine of the value [x];\n * the returned value is an angle in the range from `-PI/2` to `PI/2` radians.\n *\n * Special cases:\n * - `asin(x)` is `NaN`, when `abs(x) > 1` or x is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun asin(x: Double): Double\n\n/**\n * Computes the arc cosine of the value [x];\n * the returned value is an angle in the range from `0.0` to `PI` radians.\n *\n * Special cases:\n * - `acos(x)` is `NaN`, when `abs(x) > 1` or x is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun acos(x: Double): Double\n\n/**\n * Computes the arc tangent of the value [x];\n * the returned value is an angle in the range from `-PI/2` to `PI/2` radians.\n *\n * Special cases:\n * - `atan(NaN)` is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun atan(x: Double): Double\n\n/**\n * Returns the angle `theta` of the polar coordinates `(r, theta)` that correspond\n * to the rectangular coordinates `(x, y)` by computing the arc tangent of the value
 [y] / [x];\n * the returned value is an angle in the range from `-PI` to `PI` radians.\n *\n * Special cases:\n * - `atan2(0.0, 0.0)` is `0.0`\n * - `atan2(0.0, x)` is `0.0` for `x > 0` and `PI` for `x < 0`\n * - `atan2(-0.0, x)` is `-0.0` for 'x > 0` and `-PI` for `x < 0`\n *  - `atan2(y, +Inf)` is `0.0` for `0 < y < +Inf` and `-0.0` for '-Inf < y < 0`\n * - `atan2(y, -Inf)` is `PI` for `0 < y < +Inf` and `-PI` for `-Inf < y < 0`\n * - `atan2(y, 0.0)` is `PI/2` for `y > 0` and `-PI/2` for `y < 0`\n * - `atan2(+Inf, x)` is `PI/2` for finite `x`y\n * - `atan2(-Inf, x)` is `-PI/2` for finite `x`\n * - `atan2(NaN, x)` and `atan2(y, NaN)` is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun atan2(y: Double, x: Double): Double\n\n/**\n * Computes the hyperbolic sine of the value [x].\n *\n * Special cases:\n * - `sinh(NaN)` is `NaN`\n * - `sinh(+Inf)` is `+Inf`\n * - `sinh(-Inf)` is `-Inf`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun sinh(x: Double): Double\n\n/**\n
 * Computes the hyperbolic cosine of the value [x].\n *\n * Special cases:\n * - `cosh(NaN)` is `NaN`\n * - `cosh(+Inf|-Inf)` is `+Inf`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun cosh(x: Double): Double\n\n/**\n * Computes the hyperbolic tangent of the value [x].\n *\n * Special cases:\n * - `tanh(NaN)` is `NaN`\n * - `tanh(+Inf)` is `1.0`\n * - `tanh(-Inf)` is `-1.0`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun tanh(x: Double): Double\n\n/**\n * Computes the inverse hyperbolic sine of the value [x].\n *\n * The returned value is `y` such that `sinh(y) == x`.\n *\n * Special cases:\n * - `asinh(NaN)` is `NaN`\n * - `asinh(+Inf)` is `+Inf`\n * - `asinh(-Inf)` is `-Inf`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun asinh(x: Double): Double\n\n/**\n * Computes the inverse hyperbolic cosine of the value [x].\n *\n * The returned value is positive `y` such that `cosh(y) == x`.\n *\n * Special cases:\n * - `acosh(NaN)` is `NaN`\n * - `acosh(x)` is `NaN` when
 `x < 1`\n * - `acosh(+Inf)` is `+Inf`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun acosh(x: Double): Double\n\n/**\n * Computes the inverse hyperbolic tangent of the value [x].\n *\n * The returned value is `y` such that `tanh(y) == x`.\n *\n * Special cases:\n * - `tanh(NaN)` is `NaN`\n * - `tanh(x)` is `NaN` when `x > 1` or `x < -1`\n * - `tanh(1.0)` is `+Inf`\n * - `tanh(-1.0)` is `-Inf`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun atanh(x: Double): Double\n\n/**\n * Computes `sqrt(x^2 + y^2)` without intermediate overflow or underflow.\n *\n * Special cases:\n * - returns `+Inf` if any of arguments is infinite\n * - returns `NaN` if any of arguments is `NaN` and the other is not infinite\n */\n@SinceKotlin(\"1.2\")\npublic expect fun hypot(x: Double, y: Double): Double\n\n/**\n * Computes the positive square root of the value [x].\n *\n * Special cases:\n * - `sqrt(x)` is `NaN` when `x < 0` or `x` is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun sqrt(x:
 Double): Double\n\n/**\n * Computes Euler's number `e` raised to the power of the value [x].\n *\n * Special cases:\n * - `exp(NaN)` is `NaN`\n * - `exp(+Inf)` is `+Inf`\n * - `exp(-Inf)` is `0.0`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun exp(x: Double): Double\n\n/**\n * Computes `exp(x) - 1`.\n *\n * This function can be implemented to produce more precise result for [x] near zero.\n *\n * Special cases:\n * - `expm1(NaN)` is `NaN`\n * - `expm1(+Inf)` is `+Inf`\n * - `expm1(-Inf)` is `-1.0`\n *\n * @see [exp] function.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun expm1(x: Double): Double\n\n/**\n * Computes the logarithm of the value [x] to the given [base].\n *\n * Special cases:\n * - `log(x, b)` is `NaN` if either `x` or `b` are `NaN`\n * - `log(x, b)` is `NaN` when `x < 0` or `b <= 0` or `b == 1.0`\n * - `log(+Inf, +Inf)` is `NaN`\n * - `log(+Inf, b)` is `+Inf` for `b > 1` and `-Inf` for `b < 1`\n * - `log(0.0, b)` is `-Inf` for `b > 1` and `+Inf` for

`b > 1`\n *\n * See also logarithm functions for common fixed bases: [ln], [log10] and [log2].\n */\n@SinceKotlin(\"1.2\")\npublic expect fun log(x: Double, base: Double): Double\n\n/**\n * Computes the natural logarithm (base `E`) of the value [x].\n *\n * Special cases:\n * - `ln(NaN)` is `NaN`\n * - `ln(x)` is `NaN` when `x < 0.0`\n * - `ln(+Inf)` is `+Inf`\n * - `ln(0.0)` is `-Inf`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun ln(x: Double): Double\n\n/**\n * Computes the common logarithm (base 10) of the value [x].\n *\n * @see [ln] function for special cases.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun log10(x: Double): Double\n\n/**\n * Computes the binary logarithm (base 2) of the value [x].\n *\n * @see [ln] function for special cases.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun log2(x: Double): Double\n\n/**\n * Computes `ln(x + 1)`.\n *\n * This function can be implemented to produce more precise result for [x] near zero.\n *\n * Special cases:\n * - `ln1p(NaN)`
 is `NaN`\n * - `ln1p(x)` is `NaN` where `x < -1.0`\n * - `ln1p(-1.0)` is `-Inf`\n * - `ln1p(+Inf)` is `+Inf`\n *\n * @see [ln] function\n * @see [expm1] function\n */\n@SinceKotlin(\"1.2\")\npublic expect fun ln1p(x: Double): Double\n\n/**\n * Rounds the given value [x] to an integer towards positive infinity.\n\n * @return the smallest double value that is greater than or equal to the given value [x] and is a mathematical integer.\n *\n * Special cases:\n * - `ceil(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun ceil(x: Double): Double\n\n/**\n * Rounds the given value [x] to an integer towards negative infinity.\n\n * @return the largest double value that is smaller than or equal to the given value [x] and is a mathematical integer.\n *\n * Special cases:\n * - `floor(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.\n */\n@SinceKotlin(\"1.2\")\npublic
 expect fun floor(x: Double): Double\n\n/**\n * Rounds the given value [x] to an integer towards zero.\n *\n * @return the value [x] having its fractional part truncated.\n *\n * Special cases:\n * - `truncate(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun truncate(x: Double): Double\n\n/**\n * Rounds the given value [x] towards the closest integer with ties rounded towards even integer.\n *\n * Special cases:\n * - `round(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun round(x: Double): Double\n\n/**\n * Returns the absolute value of the given value [x].\n *\n * Special cases:\n * - `abs(NaN)` is `NaN`\n *\n * @see absoluteValue extension property for [Double]\n */\n@SinceKotlin(\"1.2\")\npublic expect fun abs(x: Double): Double\n\n/**\n * Returns the sign of the given value [x]:\n * - `-1.0` if the value is
 negative,\n * - zero if the value is zero,\n * - `1.0` if the value is positive\n *\n * Special case:\n * - `sign(NaN)` is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun sign(x: Double): Double\n\n\n/**\n * Returns the smaller of two values.\n *\n * If either value is `NaN`, then the result is `NaN`.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun min(a: Double, b: Double): Double\n\n/**\n * Returns the greater of two values.\n *\n * If either value is `NaN`, then the result is `NaN`.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun max(a: Double, b: Double): Double\n\n// extensions\n\n/**\n * Raises this value to the power [x].\n *\n * Special cases:\n * - `b.pow(0.0)` is `1.0`\n * - `b.pow(1.0) == b`\n * - `b.pow(NaN)` is `NaN`\n * - `NaN.pow(x)` is `NaN` for `x != 0.0`\n * - `b.pow(Inf)` is `NaN` for `abs(b) == 1.0`\n * - `b.pow(x)` is `NaN` for `b < 0` and `x` is finite and not an integer\n */\n@SinceKotlin(\"1.2\")\npublic expect fun Double.pow(x: Double): Double\n\n/**\n
 * Raises this value to the integer power [n].\n *\n * See the other overload of [pow] for details.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun Double.pow(n: Int): Double\n\n/**\n * Returns the absolute value of this value.\n *\n * Special cases:\n * - `NaN.absoluteValue` is `NaN`\n *\n * @see abs function\n */\n@SinceKotlin(\"1.2\")\npublic expect val Double.absoluteValue: Double\n\n/**\n * Returns the sign of this value:\n * - `-1.0` if the value is negative,\n * - zero if the value is zero,\n * - `1.0` if the value is positive\n *\n * Special case:\n * - `NaN.sign` is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic expect val Double.sign: Double\n\n/**\n * Returns this value with the sign bit same as of the [sign] value.\n *\n * If [sign] is `NaN` the sign of the result is undefined.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun Double.withSign(sign: Double): Double\n\n/**\n * Returns this value with the sign bit same as of the [sign] value.\n */\n@SinceKotlin(\"1.2\")\npublic

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expect fun Double.withSign(sign: Int): Double\n\n/**\n * Returns the ulp (unit in the last place) of this value.\n *\n * An ulp is a positive distance between this value and the next nearest [Double] value larger in magnitude.\n *\n * Special Cases:\n *  - `NaN.ulp` is `NaN`\n *  - `x.ulp` is `+Inf` when `x` is `+Inf` or `-Inf`\n *  - `0.0.ulp` is `Double.MIN_VALUE`\n */\n@SinceKotlin(\"1.2\")\npublic expect val Double.ulp: Double\n\n/**\n * Returns the [Double] value nearest to this value in direction of positive infinity.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun Double.nextUp(): Double\n\n/**\n * Returns the [Double] value nearest to this value in direction of negative infinity.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun Double.nextDown(): Double\n\n/**\n * Returns the [Double] value nearest to this value in direction from this value towards the value [to].\n *\n * Special cases:\n *  - `x.nextTowards(y)` is `NaN` if either `x` or `y` are `NaN`\n *  - `x.nextTowards(x) == x`\n *\n */\n@SinceKotlin(\"1.2\")\npublic expect fun Double.nextTowards(to: Double): Double\n\n/**\n * Rounds this [Double] value to the nearest integer and converts the result to [Int].\n * Ties are rounded towards positive infinity.\n *\n * Special cases:\n *  - `x.roundToInt() == Int.MAX_VALUE` when `x > Int.MAX_VALUE`\n *  - `x.roundToInt() == Int.MIN_VALUE` when `x < Int.MIN_VALUE`\n *\n * @throws IllegalArgumentException when this value is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun Double.roundToInt(): Int\n\n/**\n * Rounds this [Double] value to the nearest integer and converts the result to [Long].\n * Ties are rounded towards positive infinity.\n *\n * Special cases:\n *  - `x.roundToLong() == Long.MAX_VALUE` when `x > Long.MAX_VALUE`\n *  - `x.roundToLong() == Long.MIN_VALUE` when `x < Long.MIN_VALUE`\n *\n * @throws IllegalArgumentException when this value is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun Double.roundToLong(): Long\n\n//
endregion\n\n\n\n// region ================ Float Math ========================================\n\n/** Computes the sine of the angle [x] given in radians.\n *\n *  Special cases:\n *  - `sin(NaN|+Inf|-Inf)` is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun sin(x: Float): Float\n\n/** Computes the cosine of the angle [x] given in radians.\n *\n *  Special cases:\n *  - `cos(NaN|+Inf|-Inf)` is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun cos(x: Float): Float\n\n/** Computes the tangent of the angle [x] given in radians.\n *\n *  Special cases:\n *  - `tan(NaN|+Inf|-Inf)` is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun tan(x: Float): Float\n\n/**\n * Computes the arc sine of the value [x];\n * the returned value is an angle in the range from `-PI/2` to `PI/2` radians.\n *\n * Special cases:\n *  - `asin(x)` is `NaN`, when `abs(x) > 1` or x is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun asin(x: Float): Float\n\n/**\n * Computes the arc cosine of the
value [x];\n * the returned value is an angle in the range from `0.0` to `PI` radians.\n *\n * Special cases:\n *  - `acos(x)` is `NaN`, when `abs(x) > 1` or x is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun acos(x: Float): Float\n\n/**\n * Computes the arc tangent of the value [x];\n * the returned value is an angle in the range from `-PI/2` to `PI/2` radians.\n *\n * Special cases:\n *  - `atan(NaN)` is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun atan(x: Float): Float\n\n/**\n * Returns the angle `theta` of the polar coordinates `(r, theta)` that correspond\n * to the rectangular coordinates `(x, y)` by computing the arc tangent of the value [y] / [x];\n * the returned value is an angle in the range from `-PI` to `PI` radians.\n *\n * Special cases:\n *  - `atan2(0.0, 0.0)` is `0.0`\n *  - `atan2(0.0, x)` is  `0.0` for `x > 0` and `PI` for `x < 0`\n *  - `atan2(-0.0, x)` is `-0.0` for 'x > 0` and `-PI` for `x < 0`\n *  - `atan2(y, +Inf)` is `0.0` for `0 < y <
+Inf` and `-0.0` for '-Inf < y < 0`\n *  - `atan2(y, -Inf)` is `PI` for `0 < y < +Inf` and `-PI` for `-Inf < y < 0`\n *  - `atan2(y, 0.0)` is `PI/2` for `y > 0` and `-PI/2` for `y < 0`\n *  - `atan2(+Inf, x)` is `PI/2` for finite `x`y\n *  - `atan2(-Inf, x)` is `-PI/2` for finite `x`\n *  - `atan2(NaN, x)` and `atan2(y, NaN)` is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun atan2(y: Float, x: Float): Float\n\n/**\n * Computes the hyperbolic sine of the value [x].\n *\n * Special cases:\n *  - `sinh(NaN)` is `NaN`\n *  - `sinh(+Inf)` is `+Inf`\n *  - `sinh(-Inf)` is `-Inf`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun sinh(x: Float): Float\n\n/**\n * Computes the hyperbolic cosine of the value [x].\n *\n * Special cases:\n *  - `cosh(NaN)` is `NaN`\n *  - `cosh(+Inf|-Inf)` is `+Inf`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun cosh(x: Float): Float\n\n/**\n * Computes the hyperbolic tangent of the value [x].\n *\n * Special cases:\n *  - `tanh(NaN)` is `NaN`\n *
```

- `tanh(+Inf)` is `1.0`\n * - `tanh(-Inf)` is `-1.0`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun tanh(x: Float): Float\n\n/**\n * Computes the inverse hyperbolic sine of the value [x].\n *\n * The returned value is `y` such that `sinh(y) == x`.\n *\n * Special cases:\n * - `asinh(NaN)` is `NaN`\n * - `asinh(+Inf)` is `+Inf`\n * - `asinh(-Inf)` is `-Inf`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun asinh(x: Float): Float\n\n/**\n * Computes the inverse hyperbolic cosine of the value [x].\n *\n * The returned value is positive `y` such that `cosh(y) == x`.\n *\n * Special cases:\n * - `acosh(NaN)` is `NaN`\n * - `acosh(x)` is `NaN` when `x < 1`\n * - `acosh(+Inf)` is `+Inf`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun acosh(x: Float): Float\n\n/**\n * Computes the inverse hyperbolic tangent of the value [x].\n *\n * The returned value is `y` such that `tanh(y) == x`.\n *\n * Special cases:\n * - `tanh(NaN)` is `NaN`\n * - `tanh(x)` is `NaN` when `x > 1` or `x < -1`\n
 * - `tanh(1.0)` is `+Inf`\n * - `tanh(-1.0)` is `-Inf`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun atanh(x: Float): Float\n\n/**\n * Computes `sqrt(x^2 + y^2)` without intermediate overflow or underflow.\n *\n * Special cases:\n * - returns `+Inf` if any of arguments is infinite\n * - returns `NaN` if any of arguments is `NaN` and the other is not infinite\n */\n@SinceKotlin(\"1.2\")\npublic expect fun hypot(x: Float, y: Float): Float\n\n/**\n * Computes the positive square root of the value [x].\n *\n * Special cases:\n * - `sqrt(x)` is `NaN` when `x < 0` or `x` is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun sqrt(x: Float): Float\n\n/**\n * Computes Euler's number `e` raised to the power of the value [x].\n *\n * Special cases:\n * - `exp(NaN)` is `NaN`\n * - `exp(+Inf)` is `+Inf`\n * - `exp(-Inf)` is `0.0`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun exp(x: Float): Float\n\n/**\n * Computes `exp(x) - 1`.\n *\n * This function can be implemented to produce
 more precise result for [x] near zero.\n *\n * Special cases:\n * - `expm1(NaN)` is `NaN`\n * - `expm1(+Inf)` is `+Inf`\n * - `expm1(-Inf)` is `-1.0`\n *\n * @see [exp] function.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun expm1(x: Float): Float\n\n/**\n * Computes the logarithm of the value [x] to the given [base].\n *\n * Special cases:\n * - `log(x, b)` is `NaN` if either `x` or `b` are `NaN`\n * - `log(x, b)` is `NaN` when `x < 0` or `b <= 0` or `b == 1.0`\n * - `log(+Inf, +Inf)` is `NaN`\n * - `log(+Inf, b)` is `+Inf` for `b > 1` and `-Inf` for `b < 1`\n * - `log(0.0, b)` is `-Inf` for `b > 1` and `+Inf` for `b > 1`\n *\n * See also logarithm functions for common fixed bases: [ln], [log10] and [log2].\n */\n@SinceKotlin(\"1.2\")\npublic expect fun log(x: Float, base: Float): Float\n\n/**\n * Computes the natural logarithm (base `E`) of the value [x].\n *\n * Special cases:\n * - `ln(NaN)` is `NaN`\n * - `ln(x)` is `NaN` when `x < 0.0`\n * - `ln(+Inf)`
 is `+Inf`\n * - `ln(0.0)` is `-Inf`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun ln(x: Float): Float\n\n/**\n * Computes the common logarithm (base 10) of the value [x].\n *\n * @see [ln] function for special cases.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun log10(x: Float): Float\n\n/**\n * Computes the binary logarithm (base 2) of the value [x].\n *\n * @see [ln] function for special cases.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun log2(x: Float): Float\n\n/**\n * Computes `ln(a + 1)`.\n *\n * This function can be implemented to produce more precise result for [x] near zero.\n *\n * Special cases:\n * - `ln1p(NaN)` is `NaN`\n * - `ln1p(x)` is `NaN` where `x < -1.0`\n * - `ln1p(-1.0)` is `-Inf`\n * - `ln1p(+Inf)` is `+Inf`\n *\n * @see [ln] function\n * @see [expm1] function\n */\n@SinceKotlin(\"1.2\")\npublic expect fun ln1p(x: Float): Float\n\n/**\n * Rounds the given value [x] to an integer towards positive infinity.\n\n * @return the smallest Float value that
 is greater than or equal to the given value [x] and is a mathematical integer.\n *\n * Special cases:\n * - `ceil(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun ceil(x: Float): Float\n\n/**\n * Rounds the given value [x] to an integer towards negative infinity.\n\n * @return the largest Float value that is smaller than or equal to the given value [x] and is a mathematical integer.\n *\n * Special cases:\n * - `floor(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun floor(x: Float): Float\n\n/**\n * Rounds the given value [x] to an integer towards zero.\n *\n * @return the value [x] having its fractional part truncated.\n *\n * Special cases:\n * - `truncate(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun truncate(x: Float): Float\n\n/**\n
 * Rounds the given value [x] towards the closest integer with ties rounded towards even integer.\n *\n * Special cases:\n * - `round(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun round(x: Float): Float\n\n\n/**\n * Returns the absolute value of the

given value [x].\n *\n * Special cases:\n * - `abs(NaN)` is `NaN`\n *\n * @see absoluteValue extension property for [Float]\n */\n@SinceKotlin(\"1.2\")\npublic expect fun abs(x: Float): Float\n\n/**\n * Returns the sign of the given value [x]:\n * - `-1.0` if the value is negative,\n * - zero if the value is zero,\n * - `1.0` if the value is positive\n *\n * Special case:\n * - `sign(NaN)` is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun sign(x: Float): Float\n\n\n\n/**\n * Returns the smaller of two values.\n *\n * If either value is `NaN`, then the result is `NaN`.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun min(a: Float, b:
Float): Float\n\n/**\n * Returns the greater of two values.\n *\n * If either value is `NaN`, then the result is `NaN`.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun max(a: Float, b: Float): Float\n\n// extensions\n\n\n/**\n * Raises this value to the power [x].\n *\n * Special cases:\n * - `b.pow(0.0)` is `1.0`\n * - `b.pow(1.0) == b`\n * - `b.pow(NaN)` is `NaN`\n * - `NaN.pow(x)` is `NaN` for `x != 0.0`\n * - `b.pow(Inf)` is `NaN` for `abs(b) == 1.0`\n * - `b.pow(x)` is `NaN` for `b < 0` and `x` is finite and not an integer\n */\n@SinceKotlin(\"1.2\")\npublic expect fun Float.pow(x: Float): Float\n\n/**\n * Raises this value to the integer power [n].\n *\n * See the other overload of [pow] for details.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun Float.pow(n: Int): Float\n\n/**\n * Returns the absolute value of this value.\n *\n * Special cases:\n * - `NaN.absoluteValue` is `NaN`\n *\n * @see abs function\n */\n@SinceKotlin(\"1.2\")\npublic expect val Float.absoluteValue:
Float\n\n/**\n * Returns the sign of this value:\n * - `-1.0` if the value is negative,\n * - zero if the value is zero,\n * - `1.0` if the value is positive\n *\n * Special case:\n * - `NaN.sign` is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic expect val Float.sign: Float\n\n/**\n * Returns this value with the sign bit same as of the [sign] value.\n *\n * If [sign] is `NaN` the sign of the result is undefined.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun Float.withSign(sign: Float): Float\n\n/**\n * Returns this value with the sign bit same as of the [sign] value.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun Float.withSign(sign: Int): Float\n\n\n/**\n * Rounds this [Float] value to the nearest integer and converts the result to [Int].\n * Ties are rounded towards positive infinity.\n *\n * Special cases:\n * - `x.roundToInt() == Int.MAX_VALUE` when `x > Int.MAX_VALUE`\n * - `x.roundToInt() == Int.MIN_VALUE` when `x < Int.MIN_VALUE`\n *\n * @throws IllegalArgumentException
when this value is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun Float.roundToInt(): Int\n\n/**\n * Rounds this [Float] value to the nearest integer and converts the result to [Long].\n * Ties are rounded towards positive infinity.\n *\n * Special cases:\n * - `x.roundToLong() == Long.MAX_VALUE` when `x > Long.MAX_VALUE`\n * - `x.roundToLong() == Long.MIN_VALUE` when `x < Long.MIN_VALUE`\n *\n * @throws IllegalArgumentException when this value is `NaN`\n */\n@SinceKotlin(\"1.2\")\npublic expect fun Float.roundToLong(): Long\n\n\n// endregion\n\n// region ================ Integer Math ==\n\n\n/**\n * Returns the absolute value of the given value [n].\n *\n * Special cases:\n * - `abs(Int.MIN_VALUE)` is `Int.MIN_VALUE` due to an overflow\n *\n * @see absoluteValue extension property for [Int]\n */\n@SinceKotlin(\"1.2\")\npublic expect fun abs(n: Int): Int\n\n/**\n * Returns the smaller of two values.\n */\n@SinceKotlin(\"1.2\")\npublic
expect fun min(a: Int, b: Int): Int\n\n/**\n * Returns the greater of two values.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun max(a: Int, b: Int): Int\n\n/**\n * Returns the absolute value of this value.\n *\n * Special cases:\n * - `Int.MIN_VALUE.absoluteValue` is `Int.MIN_VALUE` due to an overflow\n *\n * @see abs function\n */\n@SinceKotlin(\"1.2\")\npublic expect val Int.absoluteValue: Int\n\n/**\n * Returns the sign of this value:\n * - `-1` if the value is negative,\n * - `0` if the value is zero,\n * - `1` if the value is positive\n */\n@SinceKotlin(\"1.2\")\npublic expect val Int.sign: Int\n\n\n\n/**\n * Returns the absolute value of the given value [n].\n *\n * Special cases:\n * - `abs(Long.MIN_VALUE)` is `Long.MIN_VALUE` due to an overflow\n *\n * @see absoluteValue extension property for [Long]\n */\n@SinceKotlin(\"1.2\")\npublic expect fun abs(n: Long): Long\n\n/**\n * Returns the smaller of two values.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun min(a:
Long, b: Long): Long\n\n/**\n * Returns the greater of two values.\n */\n@SinceKotlin(\"1.2\")\npublic expect fun max(a: Long, b: Long): Long\n\n/**\n * Returns the absolute value of this value.\n *\n * Special cases:\n * - `Long.MIN_VALUE.absoluteValue` is `Long.MIN_VALUE` due to an overflow\n *\n * @see abs function\n */\n@SinceKotlin(\"1.2\")\npublic expect val Long.absoluteValue: Long\n\n/**\n * Returns the sign of this value:\n

*   - `-1` if the value is negative,\n *   - `0` if the value is zero,\n *   - `1` if the value is positive\n
*/\n@SinceKotlin(\"1.2\")\npublic expect val Long.sign: Int\n\n\n//
endregion\n",null,null,null,null,null,null,null,null,null],"names":[],"mappings":"AAWC,0B;EAVG,IAAI,OAAO,M
AAO,KAAI,UAAW,IAAG,MAAM,IAA1C,C;IACI,MAAM,CAAC,QAAD,EAAW,CAAC,SAAD,CAAX,EAAwB
,OAAxB,C;;QAEL,IAAI,OAAO,OAAQ,KAAI,QAAvB,C;IACD,OAAO,CAAC,MAAM,QAAP,C;;;IAGP,IAAI,O
AAQ,GAAE,E;IACd,OAAO,CAAC,IAAI,OAAL,C;;AAEf,CAAC,CAAC,IAAD,oB;EACG,IAAI,IAAI,M;ECPZ,
MAAM,eAAgB,gB;IAClB,OAAoD,CAA5C,KAAK,QAAQ,CAAC,CAAD,CAAI,IAAG,CAAE,YAAW,SAAW,K
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gB;IACd,OAAO,CAAE,YAAW,U;EACxB,C;EAEA,MAAM,aAAc,gB;IAChB,OAAO,CAAE,YAAW,Y;EACxB,
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AAJ,C;;QA5QT,OA8QO,W;MA7QX,C;KAVA,C;sFAYA,yB;MAAA,wE;MA8QA,+D;MA9QA,yD;QAUW,kBA
AU,oB;QA8QD,Q;QAAhB,iD;UAAgB,cAAhB,e;UACI,UA/QiD,WA+QvC,CAAY,OAAZ,C;UO5lQP,U;UADP,Y
P8lQe,WO9lQH,WP8lQwB,GO9lQxB,C;UACL,IAAI,aAAJ,C;YACH,aP4lQuC,gB;YAA5B,WO3lQX,aP2lQgC,G
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C;;QAtRT,OAwRO,W;MAvRX,C;KAXA,C;uFAaA,yB;MAAA,wE;MAwRA,+D;MAxRA,yD;QAUW,kBAAU,oB

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X,C;;MAOoB,Q;MADhB,UAAkB,G;MAClB,wBAAgB,SAAhB,gB;QAAgB,cAAA,SAAhB,M;QACI,OAAO,SAA
S,OAAT,C;;MAEX,OAAO,G;IACX,C;;MAOoB,Q;MADhB,UAAkB,G;MAClB,wBAAgB,SAAhB,gB;QAAgB,cA
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,C;;;YAEN,MAAO,WAAI,OAAJ,C;;;QAGf,OAAO,cAAK,KAAL,EAAY,MAAZ,C;MACX,C;KAhBA,C;0FAkBA
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FT,OAgGO,I;IA/FX,C;;MA0GI,WwB/+YO,MAAK,KxB++YK,gBwB/+YL,ExB84YD,KAiGkB,OwB/+YjB,C;Mx
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dW,gBiC8dD,EjC9dC,CiC8dX,C;UAAF,C;QAAA,C;OAAA,C;MAPhC,uC;QAOmB,kBAAR,iB;QAAQ,uB;;UrCi
pBf,0D;YACI,IqClpB0B,UjC9dW,gBJgnCvB,YAAK,KAAL,CIhnCuB,CiC8dX,CrCkpB1B,C;cACI,sBAAO,K;cA
AP,wB;;;UAGR,sBAAO,E;;;QqCtpBP,0B;MACJ,C;KARA,C;+FAUA,yB;MAAA,sC;MrCkwBA,0D;MAAA,oD;M
GxtCA,6B;MkCsdA,yBAO+B,yB;QlC7d/B,6B;;UkC6d+B,qB;YAAE,yBlCndM,ckCmdI,ElCndJ,CkCmdN,C;UAA
F,C;QAAA,C;OAAA,C;MAP/B,uC;QAOmB,kBAAR,iB;QAAQ,sB;;UrC+vBD,Q;UAAA,OAAQ,SAAR,wBAAQ,
CAAR,W;UAAd,OAAc,cAAd,C;YAAc,uB;YACV,IqChwByB,UlCndM,cHmtCjB,YAAK,KAAL,CGntCiB,CkCm
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wBD,Q;UAAA,OAAQ,SAAR,wBAAQ,CAAR,W;UAAd,OAAc,cAAd,C;YAAc,uB;YACV,IqClwByB,UrB9cS,eh
BgtCpB,YAAK,KAAL,CgBhtCoB,CqB8cT,CrCkwBzB,C;cACI,qBAAO,K;cAAP,uB;;;UAGR,qBAAO,E;;;QqCtw
BP,yB;MACJ,C;KARA,C;+FAUA,yB;MAAA,sC;MrCstBA,0D;MAAA,oD;MEluCA,+B;MmC4gBA,yBAO+B,yB
;QnCnhB/B,+B;;UmCmhB+B,qB;YAAE,yBnCzgBS,emCygBC,EnCzgBD,CmCygBT,C;UAAF,C;QAAA,C;OAA
A,C;MAP/B,uC;QAOmB,kBAAR,iB;QAAQ,sB;;UrCmtBD,Q;UAAA,OAAQ,SAAR,wBAAQ,CAAR,W;UAAd,O
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,0D;MAAA,oD;MIjuCA,iC;MiCygBA,yBAO+B,yB;QjChhB/B,iC;;UiCghB+B,qB;YAAE,yBjCtgBY,gBiCsgBF,Ej
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AnB,CAAJ,C;;QAET,OAAO,I;MACX,C;KAjBA,C;+EAmBA,yB;MAAA,gE;MblvLA,iB;MakvLA,8C;QAWI,Wbt
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B,IAAlB,M;UACI,IAAK,WAAI,UAAU,sBAAK,CAAL,CAAV,EAAmB,kBAAM,CAAN,CAAnB,CAAJ,C;;QAE
T,OAAO,I;MACX,C;KAjBA,C;;MA2BoB,Q;MADhB,UAAgB,W;MAChB,wBAAgB,SAAhB,gB;QAAgB,cAAA,
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,MrB/4LmD,UqB+4LnD,GrB/4L8D,KAAK,KqB+4LD,OrB/4LuE,KAAX,CAAhB,C;;MqBi5LvD,OAAO,G;IAC
X,C;;MAUoB,Q;MADhB,UAAgB,W;MAChB,wBAAgB,SAAhB,gB;QAAgB,cAAA,SAAhB,M;QACI,MlCh6LiD,
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kuLA,4B;QAOI,OlC/tLmC,ckC+tLpB,IAAR,iBAAQ,ClC/tLoB,C;MkCguLvC,C;KARA,C;+EAUA,yB;MAAA,0C
;MrB7tLA,+B;MqB6tLA,4B;QAOI,OrB1tLsC,eqB0tLvB,IAAR,iBAAQ,CrB1tLuB,C;MqB2tL1C,C;KARA,C;+EA
UA,yB;MAAA,sC;MA5hBA,wB;MA4hBA,iBAOiB,yB;QnCv0Lb,6B;;UmCu0Le,OnC9zLoB,cmC8zLpB,EnC9zL
8B,KAAL,GAAiB,GAAtB,C;QmC8zLR,C;OAAd,C;MAPjB,4B;QAphBoB,Q;QADhB,UAAgB,W;QACA,2B;QA
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QAOI,OA5AO,G;MA6AX,BX,C;KARA,C;+EAUA,yB;MAAA,0C;MA4AA,8B;QAOI,OAxAO,G;MAyAX,BX,C;KARA,
C;+EAUA,yB;MAAA,0C;MAwAA,8B;QAOI,OApAO,G;MAqAX,BX,C;KARA,C;+EAUA,yB;MAAA,0C;MAoAA,8B;
QAOI,OAhAO,G;MAiAX,BX,C;KARA,C;+EAUA,yB;MAAA,0C;MAgAA,8B;QAOI,OA5ZO,G;MA6ZX,BX,C;KARA,
C;+EAUA,yB;MAAA,0C;MA4ZA,8B;QAOI,OAxZO,G;MAyZX,BX,C;KARA,C;+EAUA,yB;MAAA,0C;MAwZA,8B;
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C;+EAUA,yB;MAAA,0C;MAgZA,8B;QAOI,OA5YO,G;MA6YX,BX,C;KARA,C;+EAUA,yB;MAAA,0C;MA4YA,8B;
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C;+EAUA,yB;MAAA,0C;MAoYA,8B;QAOI,OAhYO,G;MAiYX,BX,C;KARA,C;+EAUA,yB;MAAA,0C;MAgYA,8B;
QAOI,OA5XO,G;MA6XX,BX,C;KARA,C;+EAUA,yB;MAAA,0C;MA4XA,8B;QAOI,OAxXO,G;MAyXX,BX,C;KARA,
C;+EAUA,yB;MAAA,0C;MAwXA,8B;QAOI,OApXO,G;MAqXX,BX,C;KARA,C;+EAUA,yB;MAAA,0C;MAoXA,8B;
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lB,mC;MACA,OAAO,M;IACX,C;;MAGI,oCAAa,2BAAkB,KAAlB,EAAyB,YAAzB,C;MAEb,OAAO,WAAK,aA
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3B,IADoC,KACpC,IAAG,CAAH,IADoC,KACpC,IAAM,sBAAN,C;QAD8B,OACX,gBAAY,MAAK,KAAL,C;;;
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OAAO,yBAAP,C;QACI,sBAAY,mCAAZ,C;;IAER,C;;MAQI,sBAAY,sCAAgB,gBAAe,IAAf,CAA5B,C;MACA,
OAAO,S;IACX,C;;MCb8C,gB;IAAA,C;;MAMwB,OAAK,S;IAAL,C;;MAQG,gB;IAAA,C;;MAmB5D,UAPF,M;
MAFP,QAAc,S;MAGV,cAAK,UAAL,U;QACI,mBAAK,UAAL,G;WACJ,IAAA,MAAa,YAAW,CAAX,CAAb,C;
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;IACV,C;;MAII,MAAM,uBAAmB,cAAnB,C;IACV,C;;MAII,MAAM,6BAAsB,OAAtB,C;IACV,C;;MAII,MAAM
,4CAAqC,uBAAqB,YAArB,8BAArC,C;IACV,C;;;MCH4G,Q;MAAA,+BAAS,I;sCAAlB,O,2DAAA,O;;;;IAApE,
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B,IAAjB,C;MADhC,Y;IAAA,C;;MAIA,iD;MAAuC,oBAAK,OAAL,EAAc,IAAd,C;MACnB,0BAAY,MAAK,KA
AL,EAAW,OAAX,EAAoB,IAApB,C;MADhC,Y;IAAA,C;;MAIA,iD;MAAwC,oBAAK,SAAL,EAAgB,KAAhB,C
;MACpB,0BAAY,MAAK,KAAL,EAAW,SAAX,EAAsB,KAAtB,C;MADhC,Y;IAAA,C;;;MAM4G,Q;MAAA,+B
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Ac,IAAd,C;MACf,4BAAY,MAAK,KAAL,EAAW,OAAX,EAAoB,IAApB,C;MADpC,Y;IAAA,C;;MAIA,mD;MA
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AW,IAAX,C;MAAvB,Y;IAAA,C;;MACA,0D;MAAuC,6BAAK,OAAL,EAAc,IAAd,C;MAAvC,Y;IAAA,C;;MAC
A,0D;MAAwC,6BAAK,SAAL,EAAgB,KAAhB,C;MAAxC,Y;IAAA,C;;MAGwG,4BAAiB,OAAjB,EAA0B,KAA
1B,C;;IAA1D,C;;;MAC9C,kE;MAAuB,qCAAK,IAAL,EAAW,IAAX,C;MAAvB,Y;IAAA,C;;MACA,kE;MAAuC,
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ACA,+D;MAAwC,kCAAK,SAAL,EAAgB,KAAhB,C;MAAxC,Y;IAAA,C;;8BAGuG,O;;IAAxD,C;;;MAC/C,mE;
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AuB,iDAAK,IAAL,EAAW,IAAX,C;MAAvB,Y;IAAA,C;;MACA,8E;MAAuC,iDAAK,OAAL,EAAc,IAAd,C;MA
AvC,Y;IAAA,C;;MACA,8E;MAAwC,iDAAK,SAAL,EAAgB,KAAhB,C;MAAxC,Y;IAAA,C;;MCvEO,kB7FoBiD
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,OAAO,G;IACX,C;;MAGI,IAAI,IAAK,OAAL,KAAkB,SAAtB,C;QACI,YAAc,IAAK,O;;IAE3B,C;;MAE+D,OA
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,C;;MACA,OAAY,W;IAAZ,C;;MAMlB,OAAY,W;IAAZ,C;;MACA,OAAY,W;IAAZ,C;;MACH,OAAS,Q;IAAT,
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CT,OAAM,K;IAAN,C;;MCtX3B,gC;QAAA,mBAA6B,K;MAAO,sB;QAAA,SAAe,C;MAAG,qB;QAAA,QAAc,C;
MAAG,uB;QAAA,UAAoB,K;MAAO,0B;QAAA,aAAuB,K;MAAO,wB;QAAA,WAAqB,K;MACrL,QAAQ,E;MA
ER,EAAE,kBAAF,IAAwB,gB;MACxB,EAAE,QAAF,IAAc,M;MACd,EAAE,OAAF,IAAa,K;MACb,EAAE,SAA

F,IAAe,O;MACf,EAAE,YAAF,IAAkB,U;MAClB,EAAE,UAAF,IAAgB,Q;MAEhB,OAAO,C;IACX,C;;MAMiG,
OAAG,E;IAAH,C;;MACM,OAAc,a;IAAd,C;;MACP,OAAO,M;IAAP,C;;MACI,OAAW,U;IAAX,C;;MACJ,OAA
O,M;IAAP,C;;MACA,OAAO,M;IAAP,C;;MC7G3D,qB;QAAA,8C;MAAA,kB;IAAD,C;;MAChC,e;MAAA,iB;M
AAA,uB;IAAA,C;;MAAA,4C;MAAA,C;MAKI,0E;MAEA,sE;IAPJ,C;;;MAKI,+B;MAAA,0C;IAAA,C;;;MAEA,+
B;MAAA,wC;IAAA,C;;;MAPJ,yF;IAAA,C;;;MAAA,a;aAAA,S;UAAA,+C;aAAA,O;UAAA,6C;gBAAA,8D;;IAA
A,C;;;;MAyBA,8B;IADmC,C;;;MAQnC,8B;IADqC,C;;;IClDzC,C;;;ICCA,C;;;IAyBA,C;;;ICxBgD,C;;MAIiB,c;;Q7
Gk8C7C,Q;QADhB,IAAI,mCAAsB,cAA1B,C;UAAqC,aAAO,K;UAAP,e;;QACrB,sB;QAAhB,OAAgB,cAAhB,C;
UAAgB,2B;UAAM,I6Gl8C6C,O7Gk8C/B,S6Gl8C+B,U7Gk8C7C,C;YAAwB,aAAO,I;YAAP,e;;;QAC9C,aAAO,
K;;;M6Gn8CsD,iB;IAAA,C;;MAGhD,c;;Q7G06CG,Q;QADhB,IAAI,c6Gz6CA,Q7Gy6CA,iB6Gz6CA,Q7Gy6CsB,
UAA1B,C;UAAqC,aAAO,I;UAAP,e;;QACrB,O6G16CZ,Q7G06CY,W;QAAhB,OAAgB,cAAhB,C;UAAgB,yB;U
AAM,IAAI,C6G16CP,oB7G06CkB,O6G16ClB,C7G06CG,C;YAAyB,aAAO,K;YAAP,e;;;QAC/C,aAAO,I;;;M6G3
6CH,iB;IAAA,C;;MAE8B,qBAAQ,C;IAAR,C;;MAE6B,qB;QAC3D,OAAI,OAAO,uBAAX,GAAiB,mBAAjB,GA
A6C,SAAH,EAAG,C;MADc,C;IAAA,C;;MAA7B,4BAAa,IAAb,EAAmB,GAAnB,EAAwB,GAAxB,kBAA6B,wC
AA7B,C;IAAA,C;;MAOU,uBAAgB,IAAhB,C;IAAA,C;;MAMgB,yBAAgB,IAAhB,EAAsB,KAAtB,C;IAAA,C;;;
MC5BhE,e;MAAA,iB;MAAA,uB;IAAA,C;;MAAA,+B;MAAA,C;MACI,4C;MACA,kD;MACA,0C;MACA,8C;IA
JJ,C;;;MACI,kB;MAAA,2B;IAAA,C;;;MACA,kB;MAAA,8B;IAAA,C;;;MACA,kB;MAAA,0B;IAAA,C;;;MACA,
kB;MAAA,4B;IAAA,C;;;MAJJ,sH;IAAA,C;;;MAAA,a;aAAA,O;UAAA,gC;aAAA,U;UAAA,mC;aAAA,M;UAA
A,+B;aAAA,Q;UAAA,iC;gBAAA,6D;;IAAA,C;;;MAYI,mD;MACA,2BAA4B,I;IANhC,C;;MAUqB,IAAN,I;MnH
UX,IAAI,EmHXQ,mDnHWR,CAAJ,C;QACI,cAda,qB;QAeb,MAAM,gCAAyB,OAAQ,WAAjC,C;;MmHZC,QA
AM,oBAAN,M;aACH,M;UAAc,Y;UAAd,K;aACA,O;UAAe,W;UAAf,K;gBACQ,wC;UAHL,K;;MAAP,W;IAKJ,
C;;MAMW,Q;MAHP,IAAI,CAAC,cAAL,C;QAAgB,MAAM,6B;MACtB,mD;MAEA,OAAO,2F;IACX,C;;MAGI,i
D;MACA,kB;MACA,OAAO,kD;IACX,C;;MAkBI,2BAAY,K;MACZ,gD;IACJ,C;;MAMI,+C;IACJ,C;;;MCiCA,oC
;MApFgE,6B;IAA1B,C;;MAIC,0C;IAAA,C;;MAEiB,uB;;Q/GiR3C,Q;QADb,YAAY,C;QACC,sB;QAAb,OAAa,c
AAb,C;UAAa,sB;UACT,I+GlRmE,O/GkRrD,I+GlRqD,U/GkRnE,C;YACI,sBAAO,K;YAAP,wB;;UACJ,qB;;QAE
J,sBAAO,E;;;M+GtRiD,0B;IAAA,C;;MAEI,sB;;Q/G0S5D,eAAoB,0BAAa,SAAb,C;QACpB,OAAO,QAAS,cAAh
B,C;UACI,I+G5SsE,O/G4SxD,QAAS,W+G5S+C,U/G4StE,C;YACI,qBAAO,QAAS,Y;YAAhB,uB;;;QAGR,qBA
AO,E;;;M+GhTqD,yB;IAAA,C;;MAEb,+CAAiB,CAAjB,C;IAAA,C;;MAEU,+CAAiB,KAAjB,C;IAAA,C;;MAEK
,gCAAQ,IAAR,EAAc,SAAd,EAAyB,OAAzB,C;IAAA,C;;MAE8C,uB;MAA/E,kB;MAAmC,4B;MAC5D,eAAyB,
C;MAGrB,+DAAkB,gBAAlB,EAA6B,OAA7B,EAAsC,WAAK,KAA3C,C;MACA,eAAa,UAAU,gBAAV,I;IALO,
C;;MASpB,+DAAkB,KAAlB,EAAyB,YAAzB,C;MAEA,OAAO,wBAAK,mBAAY,KAAZ,IAAL,C;IACX,C;;MA
E+B,mB;IAAA,C;;;MAS/B,IAAI,UAAU,IAAd,C;QAAoB,OAAO,I;MAC3B,IAAI,2BAAJ,C;QAAuB,OAAO,K;M
AE9B,OAAO,2DAAc,IAAd,EAAoB,KAApB,C;IACX,C;;MAK+B,oEAAgB,IAAhB,C;IAAA,C;;MAE/B,oB;MAC
I,eACsB,C;IAF1B,C;;MAIsC,sBAAQ,gB;IAAR,C;;MAInB,gB;MADX,IAAI,CAAC,cAAL,C;QAAgB,MAAM,6B;
MACX,iE;MAAX,OAAO,+B;IACX,C;;;MAGJ,oB;MAGwD,iD;MAGhD,gEAAmB,KAAnB,EAA0B,WAAkB,KA
A5C,C;MACA,eAAa,K;IAJoB,C;;MAOC,sBAAQ,C;IAAR,C;;MAEN,mB;IAAA,C;;MAG5B,IAAI,CAAC,kBAA
L,C;QAAoB,MAAM,6B;MAC1B,OAAO,yBAAI,mCAAJ,EAAI,YAAJ,E;IACX,C;;MAEoC,sBAAQ,CAAR,I;IAA
A,C;;;MAGxC,sC;IAAA,C;;MAEQ,IAAI,QAAQ,CAAR,IAAa,SAAS,IAA1B,C;QACI,MAAM,8BAA0B,YAAS,K
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yB,gBAAa,SAAb,oBAAmC,OAA5D,C;;IAEd,C;;MAIc,UACsB,M;MAFhC,iBAAe,C;MACL,mB;MAAV,OAAU,
cAAV,C;QAAU,mB;QACN,aAAW,MAAK,UAAL,SAAiB,6DAAiB,CAAlC,K;;MAEf,OAAO,U;IACX,C;;MAMi
B,Q;MAHb,IAAI,CAAE,KAAF,KAAU,KAAM,KAApB,C;QAA0B,OAAO,K;MAEjC,oBAAoB,KAAM,W;MACb
,mB;MAAb,OAAa,cAAb,C;QAAa,sB;QACT,gBAAgB,aAAc,O;QAC9B,IAAI,cAAQ,SAAR,CAAJ,C;UACI,OAA
O,K;;;MAGf,OAAO,I;IACX,C;;;;MAzCJ,6C;QAAA,4B;;MAAA,sC;IAAA,C;;;MCsCA,mC;MAzCA,uBAC6B,I;M
AmC7B,yBACsC,I;IArHE,C;;MAGpC,OAAO,6BAAc,GAAd,S;IACX,C;;MAEwE,gBAAR,Y;MAAQ,c;;QhHw7C
xD,Q;QADhB,IAAI,wCAAsB,mBAA1B,C;UAAqC,aAAO,K;UAAP,e;;QACrB,2B;QAAhB,OAAgB,cAAhB,C;U
AAgB,yB;UAAM,IgHx7CwD,OhHw7C1C,OgHx7C6C,MAAH,QhHw7CxD,C;YAAwB,aAAO,I;YAAP,e;;;QAC9

C,aAAO,K;;;MgHz7CyD,iB;IAAA,C;;MAI5D,IAAI,gCAAJ,C;QAA+B,OAAO,K;MACtC,UAAU,KAAM,I;MACh
B,YAAY,KAAM,M;MlI8JO,Q;MkI7JzB,elI6J4C,CAAnB,mDAAmB,YkI7JzB,GlI6JyB,C;MkI3J5C,IAAI,eAAS,Q
AAT,CAAJ,C;QACI,OAAO,K;;MAIP,6B;MAAA,W;QlIuKqB,U;QkIvKD,UlIuKoB,CAAnB,uDAAmB,oBkIvKP,
GlIuKO,C;;MkIvK5C,W;QACI,OAAO,K;;MAGX,OAAO,I;IACX,C;;MASI,IAAI,UAAU,IAAd,C;QAAoB,OAAO
,I;MAC3B,IAAI,0BAAJ,C;QAAyB,OAAO,K;MAChC,IAAI,cAAQ,KAAM,KAAlB,C;QAAwB,OAAO,K;MAEV,
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B,2B;QAAhB,OAAgB,cAAhB,C;UAAgB,yB;UAAM,IAAI,CgHn4CK,2BhHm4CM,OgHn4CN,ChHm4CT,C;YA
AyB,aAAO,K;YAAP,e;;;QAC/C,aAAO,I;;;MgHp4CH,iB;IACJ,C;;MAEwC,Q;MAAA,4CAAc,GAAd,8B;IAAA,C;
;MAQT,OAAQ,SAAR,YAAQ,C;IAAR,C;;MAEG,qBAAQ,C;IAAR,C;;MACH,OAAA,YAAQ,K;IAAR,C;;MAW
X,wC;MAAS,sB;IAAT,C;;MACkD,+CAAY,OAAZ,C;IAAA,C;;MAI3C,kD;IAAA,C;;MAC+B,OAAA,0BAAc,U;I
AAd,C;;MACT,OAAA,0BAAc,OAAO,I;IAArB,C;;;MAH7B,oBAAoB,6BAAQ,W;MAC5B,+F;IAIJ,C;;MAE+B,O
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xB,kBAA6B,iCAA7B,C;IAAR,C;;MAEqB,+BAAS,KAAM,IAAf,IAAsB,GAAtB,GAA4B,wBAAS,KAAM,MAAf,
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S,6B;IAAT,C;;MACgE,iDAAc,OAAd,C;IAAA,C;;MAI3D,kD;IAAA,C;;MAC+B,OAAA,0BAAc,U;IAAd,C;;MA
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C;IAAV,C;;MACG,OAAU,SAAL,CAAO,IAAF,mBAAL,CAAY,MAAP,C;IAAV,C;;MAErD,IAAI,gCAAJ,C;QA
A+B,OAAO,K;MACtC,OAAO,OAAA,CAAE,IAAF,EAAS,KAAM,IAAf,KAAsB,OAAA,CAAE,MAAF,EAAW,
KAAM,MAAjB,C;IACjC,C;;;;MAPJ,4C;QAAA,2B;;MAAA,qC;IAAA,C;;;MC7GA,mC;MAlB+D,6B;IAA1B,C;;
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AU,IAAV,EAAAgB,KAAhB,C;IACX,C;;MAK+B,qEAAkB,IAAlB,C;IAAA,C;;MAE/B,qC;IAAA,C;;MAGwB,Q;M
ADhB,iBAAe,C;MACC,mB;MAAhB,OAAgB,cAAhB,C;QAAgB,yB;QACC,U;QAAb,2BAAa,yEAAuB,CAApC,
K;;MAEJ,OAAO,U;IACX,C;;MAGI,IAAI,CAAE,KAAF,KAAU,KAAM,KAApB,C;QAA0B,OAAO,K;MACjC,O
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EX,OAAO,M;IACX,C;;MAWiB,Q;MAFb,YAAY,iBAAa,gBAAb,C;MACZ,YAAY,iBAAa,gBAAb,C;MACZ,wB
AAa,SAAb,gB;QAAa,WAAA,SAAb,M;QACI,KAAM,WAAI,IAAK,MAAT,C;QACN,KAAM,WAAI,IAAK,OAA
T,C;;MAEV,OAAO,UAAS,KAAT,C;IACX,C;;MAaW,4B;MAAA,U;QAAqB,OAAL,S3IwsMhB,YAAQ,C;;M2Ixs
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;YAA2B,OAAO,K;;cAC9E,+BAAsB,uBAAtB,C;UAA4C,IAAI,CAAI,cAAH,EAAG,EAAc,EAAd,CAAR,C;YAA
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AO,K;;cAC9E,8BAAsB,sBAAtB,C;UAA4C,IAAI,CAAI,cAAH,EAAG,EAAc,EAAd,CAAR,C;YAA2B,OAAO,K;;
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E,gCAAsB,wBAAtB,C;UAA4C,IAAI,CAAI,cAAH,EAAG,EAAc,EAAd,CAAR,C;YAA2B,OAAO,K;;cAC9E,8B
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B,C;UAA4C,IAAI,CAAI,gBAAH,EAAG,EAAc,EAAd,CAAR,C;YAA2B,OAAO,K;;cAC9E,sCAAsB,8BAAtB,C;
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AU,WAAI,SAAJ,C;MACV,MAAO,gBAAO,EAAP,C;MAEP,4C;QACI,IAAI,MAAK,CAAT,C;UACI,MAAO,gB
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B,MAAO,gBAAe,cAAR,OAAQ,CAAf,C;aAC1B,wBAJE,OAIF,E;UAAmB,MAAO,gBAAe,cAAR,OAAQ,CAAf,
C;aAC1B,sBALE,OAKF,E;UAAmB,MAAO,gBAAe,cAAR,OAAQ,CAAf,C;aAC1B,uBANE,OAMF,E;UAAmB,
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;aAC1B,yBARE,OAQF,E;UAAmB,MAAO,gBAAe,cAAR,OAAQ,CAAf,C;aAC1B,uBATE,OASF,E;UAAmB,MA
AO,gBAAe,cAAR,OAAQ,CAAf,C;aAC1B,0BAVE,OAUF,E;UAAmB,MAAO,gBAAe,cAAR,OAAQ,CAAf,C;aA
E1B,kBAZE,OAYF,c;UAAmB,MAAO,gBAAe,kBAAR,OAAQ,CAAf,C;aAC1B,kBAbE,OAaF,e;UAAmB,MAAO
,gBAAe,kBAAR,OAAQ,CAAf,C;aAC1B,kBAdE,OAcF,a;UAAmB,MAAO,gBAAe,gBAAR,OAAQ,CAAf,C;aAC
1B,kBAfE,OAeF,c;UAAmB,MAAO,gBAAe,kBAAR,OAAQ,CAAf,C;;UAEP,MAAO,gBAAO,OAAQ,WAAf,C;;
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C;;MACsC,Y;IAAA,C;;MACI,Y;IAAA,C;;MACN,Q;IAAA,C;;MACI,S;IAAA,C;;MACL,MAAM,6B;IAAN,C;;M
ACI,MAAM,6B;IAAN,C;;;;MANvC,oC;QAAA,mB;;MAAA,6B;IAAA,C;;MASA,yB;MACI,+C;IADJ,C;;MAGgD
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O,sE;;MuInLoC,+B;IAAA,C;;;MvIxFnD,wB;MACI,8C;IADJ,C;;MAGgD,oCAAsB,KAAAM,U;IAA5B,C;;MACb,Q
;IAAA,C;;MACG,W;IAAA,C;;MAEH,Q;IAAA,C;;MACG,W;IAAA,C;;MAEa,Y;IAAA,C;;MACO,Y;IAAA,C;;M
ACd,W;IAAA,C;;MACoB,6B;IAAA,C;;MACvB,6B;IAAA,C;;MACY,8B;IAAA,C;;MAEhB,6B;IAAA,C;;;;MAjBr

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B,C;IAA/D,C;;MAGrC,gBAAe,4BAAS,W;MACxB,YAAW,yB;IAFwB,C;;MAM/B,OAAO,YAAO,CAAP,IAAY,a
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,sC;MAAS,2B;MAC5C,eAAoB,oB;MACpB,eAAoB,4B;IAFe,C;;MASnB,Q;MAJZ,IAAI,iBAAS,CAAb,C;QACI,
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O,C;MACpB,IAAI,SAAJ,C;QAAe,OAAO,E;MACtB,IAAI,SAAJ,C;QAAe,OAAO,C;MAGtB,OAA8B,iBAAtB,m
DAAsB,EAAU,CAAV,C;IAClC,C;;MAYsB,uB;QAAU,2BAAoB,CAApB,EAAuB,CAAvB,EAA0B,iBAA1B,C;M
AAV,C;IAAA,C;;MFvDlB,IAAI,EEsDI,SAAU,OAAV,GAAiB,CFtDrB,CAAJ,C;QACI,cAda,qB;QAeb,MAAM,g
CAAyB,OAAQ,WAAjC,C;;MEqDV,oCAAkB,2BAAlB,C;IACJ,C;0FAGA,yB;MAAA,sC;MJjFA,kC;MAAA,oC;;
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,yB;QArEf,8D;;UAqEe,uB;YAAU,eAAsB,gB;YAAtB,OA5Dd,cAAc,SA4DgB,CA5DhB,CAAd,EAA2B,SA4DM,
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,yB;MJ1FA,kC;MAAA,oC;;QAAsG,4C;MAAtG,C;MAAA,6D;QAC4C,+BAAW,CAAX,EAAc,CAAd,C;MAAA,C
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,CAAR,EAAqB,SA0DC,CA1DD,CAArB,C;QA0DP,C;MAAA,C;MARf,uC;QAQI,oCAAW,sCAAX,C;MAAA,C;
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AX,EAAc,CAAd,C;MAAA,C;MAD5C,kF;MIoGA,iCAOe,yB;QAxFf,8D;;UAwFe,uB;YAAU,eAAsB,gB;YAAtB,
OA/Ed,cAAc,SA+EgB,CA/EhB,CAAd,EAA2B,SA+EM,CA/EN,CAA3B,C;UA+EI,C;QAAA,C;OAAA,C;MAPf,2
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C;IACnB,C;;MAGY,Q;MAA2B,gBAA3B,gE;MAA2B,c;;QWm4CvB,U;QADhB,IAAI,wCAAsB,mBAA1B,C;UA
AqC,aAAO,I;UAAP,e;;QACrB,6B;QAAhB,OAAgB,gBAAhB,C;UAAgB,2B;UXn4C6B,2BWm4CR,OXn4CQ,O;
UAAA,W;YAAsB,oBAAR,YAAQ,EWm4C9B,OtBxvCJ,KW3IkC,C;;UWm4C7C,IAAI,OAAJ,C;YAAyB,aAAO,
K;YAAP,e;;;QAC/C,aAAO,I;;;MXp4CH,iB;IACJ,C;;MAEkC,OAAA,IAAK,QAAQ,OAAb,KAAqB,C;IAArB,C;;;
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;MAAA,c;MAKqB,wD;MALrB,a;IAAA,C;;MAAA,2IAKqB,0CALrB,G;IAAA,C;8EAuDA,yB;MAAA,uC;;QAIo
C,wB;UAAW,OAAA,aAAK,KAAL,CXiIV,K;QWjID,C;MAAA,C;MAJpC,6B;QAII,OAAO,mBAAU,gCAAS,IA
AT,GAAe,sBAAf,CAAV,C;MACX,C;KALA,C;;MAUkE,e;IAAA,C;;M8JvC9D,iC;MAjBsD,2BAAgB,KAAhB,E
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B,KAAjB,EyKvCO,SzKuCsB,KAA7B,CyKvCF,K;;MAAlB,W;IAAA,C;;MAEZ,OzKqCgC,YyKrChC,UzKqCiD,
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,UAAnB,KACf,2CAAS,KAAM,MAAf,cAAwB,6CAAQ,KAAM,KAAd,QAAxB,CADe,CAAvB,C;IAAA,C;;MAI
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,OAAE,UAAF,qBAAU,S;IAAV,C;;MAElC,mC;MACI,aAC8B,cAAU,4BAAK,UAAf,EAA0B,4BAAK,UAA/B,C;I
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,mCAAwB,UAAxB,EAA+B,SAA/B,EAAqC,SAArC,C;IAAA,C;;MAGH,OAAI,YAAO,CAAX,GzKd6B,YyKcf,U
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hD,I;IAAxB,C;;MAE8B,OAAI,YAAO,CAAX,GAAgB,UAAF,qBAAU,SAAV,cAAqB,SAAnC,GAAgD,UAAF,2B
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B,QAA5B,EAAsC,IAAtC,C;IAAA,C;;;;MAT/F,gD;QAAA,+B;;MAAAA,yC;IAAA,C;;;MAoBwE,uB;MACxE,sBA
A2B,I;MAC3B,iBAAmC,OAAO,CAA1C,GzK/CkE,YyK+CrB,KzK/CsC,KAAjB,EyK+CZ,IzK/CyC,KAA7B,CyK
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U,K;;;QAEV,czKzC6C,SyKyC7C,WzKzCuD,KAAK,GyKyCpD,WzKzC+D,KAAX,IAAf,C;;MyK2CjD,OAAO,K;
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D,eAAW,oBc7LyB,Kd6L9B,KAAK,CAAL,UAAN,CcpK4D,MAA9B,C;MAzBT,C;KAN1D,C;sGAQA,yB;MZmL
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W,oBYtL0B,KZsL/B,KAAK,CAAL,YAAN,CYrK4D,MAA9B,C;MAjBR,C;KAN3D,C;sGAQA,yB;MbkLA,kBAS
6D,sB;MAT7D,+B;Ma1KA,gD;MARA,wB;QAMyD,OASU,aAAa,IAAK,KAAlB,EAA8B,Cb4K5D,eAAW,oBarL
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;MAT7D,+B;MczJA,wB;QAEuD,OASA,eAAM,IAAK,KAAK,KAAW,CduJ7C,eAAW,oBchKiB,KdgKtB,KAAK,
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A,wB;QAEwD,OAMD,eAAM,IAAK,KAAK,KAAW,CZwJ7C,eAAW,oBY9JkB,KZ8JvB,KAAK,CAAL,YAAN,C
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K,UAAY,CZ2I/C,eAAW,oBYjJoB,KZiJzB,KAAK,CAAL,YAAN,CY3I+C,MAAZ,CAAhB,C;MANC,C;KAFzD,C
;8FAGA,yB;Mb8IA,kBAS6D,sB;MAT7D,+B;Ma9IA,wB;QAEuD,OAGC,eAAM,IAAK,KAAK,UAAY,CbkJ/C,eA
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+B;MAAA,wB;QAEwD,sBAAM,IAAK,KAAK,UAAM,KAAM,KAAZ,CAAhB,C;MAAA,C;KAFxD,C;8FAIA,yB
;Md+HA,WAS6D,wB;MAT7D,+B;Mc/HA,wB;QAEwD,OASA,eAAM,IAAK,KAAK,UAAY,Cd6H/C,eAAW,oBct
ImB,KdsIxB,KAAK,CAAL,UAAN,Cc7H+C,MAAZ,CAAhB,C;MATA,C;KAFxD,C;8FAGA,yB;MZ6HA,aAS6D,
0B;MAT7D,+B;MY7HA,wB;QAEyD,OAMD,eAAM,IAAK,KAAK,UAAY,CZ8H/C,eAAW,oBYpIoB,KZoIzB,K
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B;MajIA,wB;QAEuD,OAGC,eAAM,IAAK,KAAK,UAAY,CbqI/C,eAAW,oBaxIkB,KbwIvB,KAAK,CAAL,iBAAN,CarI+C,MAAZ,CAAhB,C;MAHD,C;KAFvD,C;8FAGA,yB;MAAA,+B;MAAA,wB;QAEwD,sBAAM,IAAK,KAAK,UAAM,KAAM,KAAZ,CAAhB,C;MAAA,C;KAFxD,C;0FAIA,yB;MdkHA,WAS6D,wB;MAT7D,+B;MczGA,8C;MATA,wB;QAEsD,OASA,YAAY,IAAZ,EdgHjB,eAAW,oBczHe,KdyHpB,KAAK,CAAL,UAAN,CchHiB,C;MATA,C;KAFtD,C;0FAGA,yB;MZgHA,aAS6D,0B;MAT7D,+B;MY1GA,8C;MANA,wB;QAEuD,OAMD,YAAY,IAAZ,EZiHjB,eAAW,oBYvHgB,KZuHrB,KAAK,CAAL,YAAN,CYjHiB,C;MANC,C;KAFvD,C;0FAGA,yB;MboHA,kBAS6D,sB;MAT7D,+B;MajHA,8C;MAHA,wB;QAEqD,OAGC,YAAY,IAAZ,EbwHjB,eAAW,oBa3Hc,Kb2HnB,KAAK,CAAL,iBAAN,CaxHiB,C;MAHD,C;KAFrD,C;0FAGA,yB;MAAA,8C;MAAA,wB;QAEsD,mBAAY,IAAZ,EAAkB,KAAlB,C;MAAA,C;KAFtD,C;0FAIA,yB;MdqGA,WAS6D,wB;MAT7D,+B;Mc5FA,oD;MATA,wB;QAEsD,OASA,eAAe,IAAf,EdmGjB,eAAW,oBc5Ge,Kd4GpB,KAAK,CAAL,UAAN,CcnGiB,C;MATA,C;KAFtD,C;0FAGA,yB;MZmGA,aAS6D,0B;MAT7D,+B;MY7FA,oD;MANA,wB;QAEuD,OAMD,eAAe,IAAf,EZoGjB,eAAW,oBY1GgB,KZ0GrB,KAAK,CAAL,YAAN,CYpGiB,C;MANC,C;KAFvD,C;0FAGA,yB;MbuGA,kBAS6D,sB;MAT7D,+B;MapGA,oD;MAHA,wB;QAEqD,OAGC,eAAe,IAAf,Eb2GjB,eAAW,oBa9Gc,Kb8GnB,KAAK,CAAL,iBAAN,Ca3GiB,C;MAHD,C;KAFrD,C;0FAGA,yB;MAAA,oD;MAAA,wB;QAEsD,sBAAe,IAAf,EAAqB,KAArB,C;MAAA,C;KAFtD,C;0EAIA,yB;MAAA,+B;MAAA,mB;QAE0C,sBAAM,SAAK,MAAX,C;MAAA,C;KAF1C,C;0EAGA,yB;MAAA,+B;MAAA,mB;QAE0C,sBAAM,SAAK,MAAX,C;MAAA,C;KAF1C,C;kGAIA,yB;MAAA,gD;MAAA,wB;QAE+D,2BAAW,IAAX,EAAiB,KAAjB,C;MAAA,C;KAF/D,C;0FAIA,yB;MAAA,+B;MAAA,2B;QAEoD,sBAAM,oBAAS,QAAT,CAAN,C;MAAA,C;KAFpD,C;0FAGA,yB;MAAA,+B;MAAA,2B;QAEoD,sBAAM,6BAAU,QAAV,CAAN,C;MAAA,C;KAFpD,C;0FAGA,yB;MAAA,+B;MAAA,wB;QAEmD,sBAAM,IAAK,KAAL,KAAc,KAAM,KAApB,CAAN,C;MAAA,C;KAFnD,C;wFAGA,yB;MAAA,+B;MAAA,wB;QAEkD,sBAAM,IAAK,KAAL,IAAa,KAAM,KAAnB,CAAN,C;MAAA,C;KAFlD,C;0FAGA,yB;MAAA,+B;MAAA,wB;QAEmD,sBAAM,IAAK,KAAL,KAAc,KAAM,KAApB,CAAN,C;MAAA,C;KAFnD,C;0EAGA,yB;MAAA,+B;MAAA,mB;QAEiC,sBAAM,SAAK,MAAX,C;MAAA,C;KAFjC,C;gFAIA,yB;MAAA,0B;MAAA,mB;QAUmC,OAAAK,OAAAL,SAAAK,S;MAAAL,C;KAVnC,C;kFAWA,yB;MAAA,4B;MAAA,mB;QAUqC,OAAAK,QAAAL,SAAAK,S;MAAAL,C;KAVrC,C;;MAqBiC,OAAAA,SAAAK,Q;IAAAL,C;;MAUE,gB;IAAAA,C;kFAEnC,yB;Md+EJ,0B;MAAAA,+B;Mc/EI,mB;QASqC,OdiFC,eAAW,OcjFZ,SdiFY,SAAX,C;McjFD,C;KATrC,C;oFAUA,yB;MZsEJ,4B;MAAAA,iC;MYtEI,mB;QASuC,OZwEC,gBAAY,QYxEb,SZwEa,SAAZ,C;MYxED,C;KATvC,C;gFAUA,yB;MbqEJ,6B;MarEI,mB;QASmC,ObuEC,cavED,SbuEW,QAAV,C;MavED,C;KATnC,C;;MAYqC,W;IAAA,C;kFAErC,yB;MASA,kD;MATA,mB;QAQqC,OASE,cAAc,SAAd,C;MATF,C;KARrC,C;oFASA,yB;MAAA,kD;MAAA,mB;QAQuC,qBAAc,SAAd,C;MAAA,C;KARvC,C;;MAUyC,qBAAc,SAAd,C;IAAA,C;;;;;;MA5P7C,c;MAG6D,qD;MAH7D,a;IAAA,C;;MAAA,2IAG6D,oCAH7D,G;IAAA,C;wEAgQA,yB;MAAA,+B;MAAA,4B;QAW0C,sBAAW,oBAAL,SAAK,CAAX,C;MAAA,C;KAX1C,C;0EAYA,yB;MAAA,+B;MAAA,4B;QAW2C,sBAAW,oBAAL,SAAK,CAAX,C;MAAA,C;KAX3C,C;0EAYA,yB;MAAA,+B;MAAA,4B;QAWyC,sBAAW,oBAAL,SAAK,CAAX,C;MAAA,C;KAXzC,C;0EAYA,yB;MAAA,+B;MAAA,4B;QAU0C,sBAAM,SAAN,C;MAAA,C;KAV1C,C;yEAYA,yB;MAAA,kD;MAAA,4B;QAS2C,qBAAAmB,SAAAnB,C;MAAA,C;KAT3C,C;0EAUA,yB;MAAA,kD;MAAA,4B;QAS4C,qBAAAc,SAAAd,C;MAAA,C;KAT5C,C;;MDvTqB,sB;IAFrB,C;;MAaiD,OCgSP,UDhSO,aAAQ,KAAR,CCgSP,C;IDhSO,C;;MASzC,aAAQ,KAAR,IAAAiB,KC8Kc,K;ID7KnC,C;;MAGsC,OAAAA,YAAQ,O;IAAR,C;;MAGmB,+BAAS,YAAT,C;IAAA,C;;MAEF,wB;MAAhC,oB;MACnB,eAAoB,C;IADF,C;;MAEO,sBAAQ,YAAM,O;IAAd,C;;MACgC,Q;MAA9B,IAAI,eAAQ,YAAM,OAAlB,C;QAAA,OC2QO,UD3QiB,aAAM,mBAAN,EAAM,2BAAN,OC2QjB,C;;;QD3Q+C,MAAM,2BAAuB,YAAM,WAA7B,C;IAA5D,C;;;MAMtB,Q;MAAL,IAAI,eAAC,0EAAD,QAAJ,C;QAAiC,OAAO,K;MAExC,OAAe,WAAR,YAAQ,EAAS,OC0JO,KD1JhB,C;IACnB,C;;MAGY,Q;MAA2B,gBAA3B,g;MAA2B,c;;QUm4CvB,U;QADhB,IAAI,wCAAsB,mBAA1B,C;UAAqC,aAAO,I;UAAP,e;;QACrB,6B;QAAhB,OAAgB,gBAAhB,C;UAAgB,2B;UVn4C6B,2BUm4CR,OVn4CQ,Q;UAAA,W;YAAAuB,oBAAR,YAAQ,EUm4C/B,OT7uCF,KDtJiC,C;;UUm4C9C,IAAI,OAAJ,C;YAAAyB,aAAO,K;YAAP,e;;;QAC/C,aAAO,I;;;MVp4CH,iB;IACJ,C;;MAEkC,OAAA,IAAAK,QAAAQ,OAAAb,KAAAqB,C;IAArB,C;;;MA7ClC,oD;MACGgC,uBAAAK,iBAAAU,IAAAV,CA AL,C;MADhC,Y;IAAA,C;;;;;MAPJ,OAKqB,qDALrB,M;IAAA,C;;MAAA,c;MAKqB,wD;MALrB,a;IAAA,C;;MAAA,2IAKqB,0CALrB,G;IAAA,C;gFAuDA,yB;MAAA,yC;;QAIsC,wB;UAAAW,OAAAA,aAAAK,KAAAL,CC4IV,K;QD5ID,C;MAAA,C;MAJtC,6B;QAII,OAAAO,oBAAAW,kBAAAU,IAAAV,EAAAgB,uBAAAhB,CAAAX,C;MACX,C;KALA,

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;MACO,gB;IAAA,C;;MAEM,W9J+CoB,a8J/CpB,U9J+CsC,KAAlB,E8J/CX,K9J+CyC,KAA9B,C8J/CpB,K;MAA
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* /opt/cola/permits/1224220415_1636029718.89/0/kotlin-1-3-31-1-tgz/package/kotlin.js.map

1.15 alpine-keys 2.4-r1

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1.16 log4j-api 2.17.1

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1.17 apache-log4j 2.17.1

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1.19 dagger 2.4

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1.20 protobuf-java-format 1.2

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* /opt/cola/permits/1258811491_1643111603.33/0/annotations-4-1-1-4-sources-jar/android/annotation/SuppressLint.java
* /opt/cola/permits/1258811491_1643111603.33/0/annotations-4-1-1-4-sources-jar/android/annotation/TargetApi.java

1.22 error_prone_annotations 2.3.3

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* /opt/cola/permits/1264660152_1643871085.34/0/error-prone-annotations-2-3-3-sources-jar/com/google/errorprone/annotations/FormatMethod.java
* /opt/cola/permits/1264660152_1643871085.34/0/error-prone-annotations-2-3-3-sources-jar/com/google/errorprone/annotations/MustBeClosed.java
*
 /opt/cola/permits/1264660152_1643871085.34/0/error-prone-annotations-2-3-3-sources-jar/com/google/errorprone/annotations/RestrictedApi.java
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* /opt/cola/permits/1264660152_1643871085.34/0/error-prone-annotations-2-3-3-sources-jar/com/google/errorprone/annotations/OverridingMethodsMustInvokeSuper.java

* /opt/cola/permits/1264660152_1643871085.34/0/error-prone-annotations-2-3-3-sources-jar/com/google/errorprone/annotations/DoNotCall.java
* /opt/cola/permits/1264660152_1643871085.34/0/error-prone-annotations-2-3-3-sources-jar/com/google/errorprone/annotations/concurrent/GuardedBy.java
*
 /opt/cola/permits/1264660152_1643871085.34/0/error-prone-annotations-2-3-3-sources-jar/com/google/errorprone/annotations/CheckReturnValue.java
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* /opt/cola/permits/1264660152_1643871085.34/0/error-prone-annotations-2-3-3-sources-jar/com/google/errorprone/annotations/concurrent/LockMethod.java
* /opt/cola/permits/1264660152_1643871085.34/0/error-prone-annotations-2-3-3-sources-jar/com/google/errorprone/annotations/concurrent/UnlockMethod.java
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* /opt/cola/permits/1264660152_1643871085.34/0/error-prone-annotations-2-3-3-sources-jar/com/google/errorprone/annotations/SuppressPackageLocation.java
* /opt/cola/permits/1264660152_1643871085.34/0/error-prone-annotations-2-3-3-sources-jar/com/google/errorprone/annotations/Immutable.java
*
 /opt/cola/permits/1264660152_1643871085.34/0/error-prone-annotations-2-3-3-sources-jar/com/google/errorprone/annotations/RequiredModifiers.java
* /opt/cola/permits/1264660152_1643871085.34/0/error-prone-annotations-2-3-3-sources-jar/com/google/errorprone/annotations/Var.java
* /opt/cola/permits/1264660152_1643871085.34/0/error-prone-annotations-2-3-3-sources-jar/com/google/errorprone/annotations/ForOverride.java
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* /opt/cola/permits/1264660152_1643871085.34/0/error-prone-annotations-2-3-3-sources-jar/com/google/errorprone/annotations/CanIgnoreReturnValue.java
* /opt/cola/permits/1264660152_1643871085.34/0/error-prone-annotations-2-3-3-sources-jar/com/google/errorprone/annotations/IncompatibleModifiers.java

1.23 jzmq-jni 3.1.1-SNAPSHOT

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stand ready to extend this provision to those domains in future versions of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents. States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

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1.27 protobuf-java 3.19.6

1.27.1 Available under license :

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Manifest-Version: 1.0
Automatic-Module-Name: com.google.protobuf
Bnd-LastModified: 1664485905970
Build-Jdk: 1.8.0_181-google-v7
Built-By: mkruskal
Bundle-Description: Core Protocol Buffers library. Protocol Buffers are
a way of encoding structured data in an efficient yet extensible for
mat.
Bundle-DocURL: https://developers.google.com/protocol-buffers/
Bundle-License: https://opensource.org/licenses/BSD-3-Clause
Bundle-ManifestVersion: 2
Bundle-Name: Protocol Buffers [Core]
Bundle-SymbolicName: com.google.protobuf
Bundle-Version: 3.19.6

Created-By: Apache Maven Bundle Plugin
Export-Package: com.google.protobuf;version="3.19.6"
Import-Package: sun.misc;resolution:=optional,com.google.protobuf;versio
n="[3.19,4)"
Require-Capability: osgi.ee;filter:="(&(osgi.ee=JavaSE)(version=1.7))"
Tool: Bnd-3.0.0.201509101326

Found in path(s):
* /opt/cola/permits/1444789790_1666041710.804059/0/protobuf-java-3-19-6-jar/META-INF/MANIFEST.MF
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Found in path(s):
* /opt/cola/permits/1444789790_1666041710.804059/0/protobuf-java-3-19-6-jar/google/protobuf/timestamp.proto
* /opt/cola/permits/1444789790_1666041710.804059/0/protobuf-java-3-19-6-jar/google/protobuf/struct.proto
* /opt/cola/permits/1444789790_1666041710.804059/0/protobuf-java-3-19-6-jar/google/protobuf/wrappers.proto
*
 /opt/cola/permits/1444789790_1666041710.804059/0/protobuf-java-3-19-6-jar/google/protobuf/type.proto
* /opt/cola/permits/1444789790_1666041710.804059/0/protobuf-java-3-19-6-jar/google/protobuf/empty.proto
* /opt/cola/permits/1444789790_1666041710.804059/0/protobuf-java-3-19-6-jar/google/protobuf/any.proto
* /opt/cola/permits/1444789790_1666041710.804059/0/protobuf-java-3-19-6-jar/google/protobuf/descriptor.proto
* /opt/cola/permits/1444789790_1666041710.804059/0/protobuf-java-3-19-6-jar/google/protobuf/duration.proto
* /opt/cola/permits/1444789790_1666041710.804059/0/protobuf-java-3-19-6-jar/google/protobuf/field_mask.proto
* /opt/cola/permits/1444789790_1666041710.804059/0/protobuf-java-3-19-6-
jar/google/protobuf/compiler/plugin.proto
* /opt/cola/permits/1444789790_1666041710.804059/0/protobuf-java-3-19-6-
jar/google/protobuf/source_context.proto
* /opt/cola/permits/1444789790_1666041710.804059/0/protobuf-java-3-19-6-jar/google/protobuf/api.proto

1.28 jctools-core 4.0.1

1.28.1 Available under license :

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Manifest-Version: 1.0
Bnd-LastModified: 1662622707903
Build-Jdk-Spec: 11

Bundle-Description: Java Concurrency Tools Core Library
Bundle-License: http://www.apache.org/licenses/LICENSE-2.0.txt
Bundle-ManifestVersion: 2
Bundle-Name: Java Concurrency Tools Core Library
Bundle-SymbolicName: org.jctools.core
Bundle-Version: 4.0.1
Created-By: Apache Maven Bundle Plugin 5.1.6
Export-Package: org.jctools.maps;version="4.0.1",org.jctools.util;uses
:="sun.misc";version="4.0.1",org.jctools.queues;version="4.0.1",org.j
ctools.queues.atomic;uses:="org.jctools.queues";version="4.0.1",org.j
ctools.queues.unpadded;uses:="org.jctools.queues";version="4.0.1",org
.jctools.counters;version="4.0.1"
Import-Package: sun.misc;resolution:=optional
Require-Capability: osgi.ee;filter:="(&(osgi.ee=JavaSE)(version=1.6))"
Tool: Bnd-6.2.0.202202251641

Found in path(s):
* /opt/cola/permits/1500645298_1670406227.9308958/0/jctools-core-4-0-1-jar/META-INF/MANIFEST.MF
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1.29 httpcomponents-mime 4.5.14

1.29.1 Available under license :

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1.30 gson 2.10.1

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Manifest-Version: 1.0
Created-By: 11.0.16.1 (Azul Systems, Inc.)
Build-Jdk-Spec: 11
Bnd-LastModified: 1673019830620
Bundle-ContactAddress: https://github.com/google/gson
Bundle-Description: Gson JSON library
Bundle-Developers: google;organization=Google;organizationUrl="https://w
ww.google.com"
Bundle-DocURL: https://github.com/google/gson/gson
Bundle-License: "Apache-2.0";link="https://www.apache.org/licenses/LICEN
SE-2.0.txt"
Bundle-ManifestVersion: 2
Bundle-Name: Gson
Bundle-RequiredExecutionEnvironment: JavaSE-1.7, JavaSE-1.8
Bundle-SCM: url="https://github.com/google/gson/gson/",connection="scm:g
it:https://github.com/google/gson.git/gson",developer-connection="scm:g
it:git@github.com:google/gson.git/gson",tag="gson-parent-2.10.1"
Bundle-SymbolicName: com.google.gson
Bundle-Vendor: Google Gson Project
Bundle-Version: 2.10.1
Export-Package: com.google.gson;uses:="com.google.gson.reflect,com.googl
e.gson.stream";version="2.10.1",com.google.gson.annotations;version="2.
 10.1",com.google.gson.reflect;version="2.10.1",com.google.gson.stream;v
ersion="2.10.1"
Import-Package: sun.misc;resolution:=optional,com.google.gson.annotation
s
Require-Capability: osgi.ee;filter:="(&(osgi.ee=JavaSE)(version=1.7))"
Tool: Bnd-6.4.0.202211291949
Multi-Release: true

Found in path(s):
* /opt/cola/permits/1570533427_1676891842.8285189/0/gson-2-10-1-jar/META-INF/MANIFEST.MF

1.31 commons-fileupload 1.5

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1.32 error_prone_annotations 2.18.0

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Found in path(s):
* /opt/cola/permits/1606613656_1679417956.422988/0/error-prone-annotations-2-18-0-1-jar/META-INF/maven/com.google.errorprone/error_prone_annotations/pom.xml

1.33 opentelemetry-proto 0.11.0

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1.34 bridgeutils 1.7.1-r2

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src/base/fthash.c
src/base/md5.c

src/base/md5.h
#
src/bdf/bdf.c
src/bdf/bdf.h
src/bdf/bdfdrivr.c
src/bdf/bdfdrivr.h
src/bdf/bdferror.h
src/bdf/bdflib.c
src/bdf/module.mk
src/bdf/README
src/bdf/rules.mk
#
src/pcf/module.mk
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src/pcf/pcf.h
src/pcf/pcfdrivr.c
src/pcf/pcfdrivr.h
src/pcf/pcferror.h
src/pcf/pcfread.c
src/pcf/pcfread.h
src/pcf/pcfutil.c
src/pcf/pcfutil.h
src/pcf/README
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#
src/gzip/adler32.c
src/gzip/ftzconf.c
src/gzip/infblock.c
src/gzip/infblock.h
src/gzip/infcodes.c
src/gzip/infcodes.h
src/gzip/inffixed.h
src/gzip/inflate.c
src/gzip/inftrees.c
src/gzip/inftrees.h
src/gzip/infutil.c
src/gzip/infutil.h
src/gzip/zconf.h
src/gzip/zlib.h
src/gzip/zutil.c
src/gzip/zutil.h
#
src/tools/apinames.c
src/tools/ftrandom/ftrandom.c
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subprojects/dlg
#
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1.38 j2objc-annotations 2.8

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1.39 tre 0.8.0-r2

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1.40 guava 32.0.1-jre

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1.41 pax-utils 1.3.7-r2

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* /opt/cola/permits/1825538429_1697657800.9267037/0/okio-3-6-0-sources-jar/unixMain/okio/UnixFileHandle.kt
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1.45 guava 32.1.3-jre

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1.46 asm 9.6

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Found in path(s):
* /opt/cola/permits/1880697838_1704469724.6983197/0/error-prone-annotations-2-23-0-jar/META-INF/maven/com.google.errorprone/error_prone_annotations/pom.xml
No license file was found, but licenses were detected in source scan.

Manifest-Version: 1.0
Created-By: Maven JAR Plugin 3.2.2
Build-Jdk-Spec: 17
Automatic-Module-Name: com.google.errorprone.annotations
Bundle-Description: Error Prone is a static analysis tool for Java that
catches common programming mistakes at compile-time.
Bundle-DocURL: https://errorprone.info/error_prone_annotations
Bundle-License: "Apache 2.0";link="http://www.apache.org/licenses/LICENS
E-2.0.txt"
Bundle-ManifestVersion: 2
Bundle-Name: error-prone annotations
Bundle-SCM: url="https://github.com/google/error-prone/error_prone_annot
ations",connection="scm:git:https://github.com/google/error-prone.git/e
rror_prone_annotations",developer-connection="scm:git:git@github.com:go
ogle/error-prone.git/error_prone_annotations",tag=HEAD
Bundle-SymbolicName: com.google.errorprone.annotations
Bundle-Vendor: Google LLC
Bundle-Version: 2.23.0
Export-Package: com.google.errorprone.annotations;uses:="javax.lang.mode
l.element";version="2.23.0",com.google.errorprone.annotations.concurren
t;version="2.23.0"
Import-Package: javax.lang.model.element
Require-Capability: osgi.ee;filter:="(&(osgi.ee=JavaSE)(version=1.8))"

Found in path(s):
* /opt/cola/permits/1880697838_1704469724.6983197/0/error-prone-annotations-2-23-0-jar/META-INF/MANIFEST.MF

1.48 jline 3.22.0

1.48.1 Available under license :

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* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/builtins/Tmux.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/impl/AbstractPty.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/Editor.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/Candidate.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/builtins/ConfigurationPath.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/impl/completer/ArgumentCompleter.java
*
 /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/impl/AbstractWindowsTerminal.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/InfoCmp.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/Status.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/impl/completer/StringsCompleter.java
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* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/impl/CompletionMatcherImpl.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/builtins/ConsoleOptionGetter.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/builtins/Completers.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/builtins/Nano.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/impl/DefaultHighlighter.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/widget/TailTipWidgets.java
*

/opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/impl/history/DefaultHistory.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/PrintAboveWriter.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/builtins/TTop.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/builtins/Styles.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/console/impl/ConsoleEngineImpl.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/AttributedStyle.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/LineReader.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/console/ConsoleEngine.java
*
/opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/Parser.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/TerminalBuilder.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/console/SystemRegistry.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/impl/AbstractTerminal.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/console/ArgDesc.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/AttributedCharSequence.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/Highlighter.java
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* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/impl/jansi/win/WindowsAnsiWriter.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/AnsiWriter.java

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* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/SyntaxError.java
*
 /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/EOFError.java
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* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/impl/exec/ExecTerminalProvider.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/spi/TerminalProvider.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/impl/Diag.java
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#
class = org.jline.terminal.impl.jansi.JansiTerminalProvider
```

Found in path(s):
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/META-INF/services/org/jline/terminal/provider/jansi
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* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/impl/jansi/JansiTerminalProvider.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/Display.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/impl/jna/JnaTerminalProvider.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/console/CommandMethods.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/console/ScriptEngine.java
*
 /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/CompletionMatcher.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/impl/jansi/JansiNativePty.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/console/CmdDesc.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-

jar/org/jline/console/impl/AbstractCommandRegistry.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/widget/Widgets.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-
jar/org/jline/terminal/impl/jna/solaris/SolarisNativePty.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-
jar/org/jline/terminal/impl/jna/freebsd/CLibrary.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/console/CmdLine.java
*
/opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/Log.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-
jar/org/jline/widget/AutosuggestionWidgets.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-
jar/org/jline/console/impl/JlineCommandRegistry.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-
jar/org/jline/console/CommandRegistry.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-
jar/org/jline/reader/impl/ReaderUtils.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-
jar/org/jline/terminal/impl/jna/JnaNativePty.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-
jar/org/jline/reader/EndOfFileException.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-
jar/org/jline/terminal/impl/jna/solaris/CLibrary.java
*
/opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-
jar/org/jline/terminal/impl/jna/linux/CLibrary.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-
jar/org/jline/terminal/impl/jna/win/JnaWinSysTerminal.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/Signals.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-
jar/org/jline/terminal/impl/jansi/win/JansiWinSysTerminal.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-
jar/org/jline/widget/AutopairWidgets.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-
jar/org/jline/terminal/impl/jna/linux/LinuxNativePty.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-
jar/org/jline/reader/LineReaderBuilder.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-
jar/org/jline/reader/impl/DefaultParser.java
*
/opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-
jar/org/jline/terminal/impl/jna/freebsd/FreeBsdNativePty.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-
jar/org/jline/terminal/impl/jna/osx/CLibrary.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/ColorPalette.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-
jar/org/jline/reader/impl/completer/SystemCompleter.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-

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* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/META-INF/maven/org.jline/jline-remote-ssh/pom.xml
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/META-INF/maven/org.jline/jline-remote-telnet/pom.xml
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* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/META-INF/maven/org.jline/jline-terminal-jna/pom.xml
*
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* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/META-INF/maven/org.jline/jline-builtins/pom.xml
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/META-INF/maven/org.jline/jline-style/pom.xml
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* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/impl/jansi/solaris/SolarisNativePty.java

* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/style/StyleResolver.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/impl/AbstractWindowsConsoleWriter.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/NonBlockingPumpReader.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/impl/BufferImpl.java
*
 /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/impl/jansi/freebsd/FreeBsdNativePty.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/style/InterpolationHelper.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/impl/SimpleMaskingCallback.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/builtins/ssh/Ssh.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/WriterOutputStream.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/impl/jansi/linux/LinuxNativePty.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/style/StyledWriter.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/builtins/telnet/Telnet.java
*
 /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/style/MemoryStyleSource.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/NonBlockingPumpInputStream.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/PumpReader.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/Buffer.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/style/StyleColor.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/builtins/ssh/ShellFactoryImpl.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/impl/jansi/osx/OsXNativePty.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/builtins/ssh/ShellCommand.java
*
 /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/style/StyleBundle.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/impl/jna/win/JnaWinConsoleWriter.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/impl/jansi/win/JansiWinConsoleWriter.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/style/StyleBundleInvocationHandler.java
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* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/console/Printer.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/console/impl/SystemHighlighter.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/builtins/Source.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/builtins/Commands.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/console/impl/SystemRegistryImpl.java
*
 /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/builtins/Less.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/console/impl/Builtins.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/impl/LineReaderImpl.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/builtins/SyntaxHighlighter.java
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*
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* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/builtins/telnet/ConnectionData.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/builtins/telnet/PortListener.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/builtins/telnet/ConnectionEvent.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/builtins/telnet/Connection.java
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*
/opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/builtins/telnet/ConnectionListener.java
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#
class = org.jline.terminal.impl.exec.ExecTerminalProvider

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* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/ShutdownHooks.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/UserInterruptException.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/DiffHelper.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/impl/jna/win/WindowsAnsiWriter.java
*
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* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/impl/completer/AggregateCompleter.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/OSUtils.java
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* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/MouseEvent.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/impl/MouseSupport.java
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* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-
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* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-
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* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/impl/package-
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* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/Expander.java
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col_addr_glitch, xhpa, YA
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memory_below, db, db
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bit_image_type, bitype, Yp
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max_micro_jump, mjump, Ye
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micro_line_size, mls, Yg
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output_res_line, orl, Yj
output_res_vert_inch,
orvi, Yl
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clear_margins, mgc, MC
clear_screen, clear, cl
clr_bol, el1, cb
clr_eol, el, ce
clr_eos, ed, cd
column_address, hpa, ch
command_character, cmdch, CC
create_window, cwin, CW
cursor_address, cup, cm
cursor_down, cud1, do
cursor_home, home, ho
cursor_invisible, civis, vi
cursor_left, cub1, le

cursor_mem_address, mrcup, CM
cursor_normal, cnorm, ve
cursor_right, cuf1, nd
cursor_to_ll, ll, ll
cursor_up, cuu1, up
cursor_visible, cvvis, vs
define_char, defc, ZE
delete_character, dch1, dc
delete_line, dl1, dl
dial_phone, dial, DI
dis_status_line, dsl, ds
display_clock, dclk, DK
down_half_line, hd, hd
ena_acs, enacs, eA
enter_alt_charset_mode, smacs, as
enter_am_mode, smam,
SA
enter_blink_mode, blink, mb
enter_bold_mode, bold, md
enter_ca_mode, smcup, ti
enter_delete_mode, smdc, dm
enter_dim_mode, dim, mh
enter_doublewide_mode, swidm, ZF
enter_draft_quality, sdrfq, ZG
enter_insert_mode, smir, im
enter_italics_mode, sitm, ZH
enter_leftward_mode, slm, ZI
enter_micro_mode, smicm, ZJ
enter_near_letter_quality, snlq, ZK
enter_normal_quality, snrmq, ZL
enter_protected_mode, prot, mp
enter_reverse_mode, rev, mr
enter_secure_mode, invis, mk
enter_shadow_mode, sshm, ZM
enter_standout_mode, smso, so
enter_subscript_mode, ssubm, ZN
enter_superscript_mode, ssupm, ZO
enter_underline_mode, smul, us
enter_upward_mode, sum, ZP
enter_xon_mode, smxon, SX
erase_chars, ech, ec
exit_alt_charset_mode, rmacs, ae
exit_am_mode, rmam, RA
exit_attribute_mode, sgr0, me
exit_ca_mode, rmcup, te
exit_delete_mode, rmdc, ed
exit_doublewide_mode, rwidm, ZQ
exit_insert_mode, rmir, ei

exit_italics_mode, ritm, ZR
exit_leftward_mode, rlm, ZS
exit_micro_mode, rmicm, ZT
exit_shadow_mode, rshm,
ZU
exit_standout_mode, rmso, se
exit_subscript_mode, rsubm, ZV
exit_superscript_mode, rsupm, ZW
exit_underline_mode, rmul, ue
exit_upward_mode, rum, ZX
exit_xon_mode, rmxon, RX
fixed_pause, pause, PA
flash_hook, hook, fh
flash_screen, flash, vb
form_feed, ff, ff
from_status_line, fsl, fs
goto_window, wingo, WG
hangup, hup, HU
init_1string, is1, i1
init_2string, is2, is
init_3string, is3, i3
init_file, if, if
init_prog, iprog, iP
initialize_color, initc, Ic
initialize_pair, initp, Ip
insert_character, ich1, ic
insert_line, il1, al
insert_padding, ip, ip
key_a1, ka1, K1
key_a3, ka3, K3
key_b2, kb2, K2
key_backspace, kbs, kb
key_beg, kbeg, @1
key_btab, kcbt, kB
key_c1, kc1, K4
key_c3, kc3, K5
key_cancel, kcan, @2
key_catab, ktbc, ka
key_clear, kclr, kC
key_close, kclo, @3
key_command, kcmd, @4
key_copy, kcpy, @5
key_create, kcrt, @6
key_ctab, kctab, kt
key_dc, kdch1, kD
key_dl, kdl1, kL
key_down, kcud1, kd
key_eic, krmir, kM

key_end, kend, @7
key_enter, kent, @8
key_eol, kel, kE
key_eos,
ked, kS
key_exit, kext, @9
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key_f26, kf26, FG
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key_f29, kf29, FJ
key_f3, kf3, k3
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key_f43, kf43, FX
key_f44, kf44, FY
key_f45, kf45, FZ
key_f46, kf46, Fa

key_f47, kf47, Fb
key_f48, kf48, Fc
key_f49, kf49, Fd
key_f5, kf5, k5
key_f50, kf50, Fe
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key_f54, kf54, Fi
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key_f56, kf56, Fk
key_f57, kf57, Fl
key_f58, kf58,
Fm
key_f59, kf59, Fn
key_f6, kf6, k6
key_f60, kf60, Fo
key_f61, kf61, Fp
key_f62, kf62, Fq
key_f63, kf63, Fr
key_f7, kf7, k7
key_f8, kf8, k8
key_f9, kf9, k9
key_find, kfnd, @0
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key_home, khome, kh
key_ic, kich1, kI
key_il, kil1, kA
key_left, kcub1, kl
key_ll, kll, kH
key_mark, kmrk, %2
key_message, kmsg, %3
key_move, kmov, %4
key_next, knxt, %5
key_npage, knp, kN
key_open, kopn, %6
key_options, kopt, %7
key_ppage, kpp, kP
key_previous, kprv, %8
key_print, kprt, %9
key_redo, krdo, %0
key_reference, kref, &1
key_refresh, krfr, &2
key_replace, krpl, &3
key_restart, krst, &4
key_resume, kres, &5
key_right, kcuf1, kr
key_save, ksav, &6

key_sbeg, kBEG, &9
key_scancel, kCAN, &0
key_scommand, kCMD, *1
key_scopy, kCPY, *2
key_screate, kCRT, *3
key_sdc, kDC, *4
key_sdl, kDL, *5
key_select, kslt, *6
key_send, kEND, *7
key_seol, kEOL, *8
key_sexit, kEXT, *9
key_sf, kind, kF
key_sfind, kFND, *0
key_shelp, kHLP, #1
key_shome, kHOM, #2
key_sic, kIC, #3
key_sleft, kLFT, #4
key_smessage,
kMSG, %a
key_smove, kMOV, %b
key_snext, kNXT, %c
key_soptions, kOPT, %d
key_sprevious, kPRV, %e
key_sprint, kPRT, %f
key_sr, kri, kR
key_sredo, kRDO, %g
key_sreplace, kRPL, %h
key_sright, kRIT, %i
key_srsume, kRES, %j
key_ssave, kSAV, !1
key_ssuspend, kSPD, !2
key_stab, khts, kT
key_sundo, kUND, !3
key_suspend, kspd, &7
key_undo, kund, &8
key_up, kcuu1, ku
keypad_local, rmkx, ke
keypad_xmit, smkx, ks
lab_f0, lf0, l0
lab_f1, lf1, l1
lab_f10, lf10, la
lab_f2, lf2, l2
lab_f3, lf3, l3
lab_f4, lf4, l4
lab_f5, lf5, l5
lab_f6, lf6, l6
lab_f7, lf7, l7
lab_f8, lf8, l8

lab_f9, lf9, l9
label_format, fln, Lf
label_off, rmln, LF
label_on, smln, LO
meta_off, rmm, mo
meta_on, smm, mm
micro_column_address, mhpa, ZY
micro_down, mcud1, ZZ
micro_left, mcub1, Za
micro_right, mcuf1, Zb
micro_row_address, mvpa, Zc
micro_up, mcuu1, Zd
newline, nel, nw
order_of_pins, porder, Ze
orig_colors, oc, oc
orig_pair, op, op
pad_char, pad, pc
parm_dch, dch, DC
parm_delete_line, dl, DL
parm_down_cursor, cud, DO
parm_down_micro,
mcud, Zf
parm_ich, ich, IC
parm_index, indn, SF
parm_insert_line, il, AL
parm_left_cursor, cub, LE
parm_left_micro, mcub, Zg
parm_right_cursor, cuf, RI
parm_right_micro, mcuf, Zh
parm_rindex, rin, SR
parm_up_cursor, cuu, UP
parm_up_micro, mcuu, Zi
pkey_key, pfkey, pk
pkey_local, pfloc, pl
pkey_xmit, pfx, px
plab_norm, pln, pn
print_screen, mc0, ps
prtr_non, mc5p, pO
prtr_off, mc4, pf
prtr_on, mc5, po
pulse, pulse, PU
quick_dial, qdial, QD
remove_clock, rmclk, RC
repeat_char, rep, rp
req_for_input, rfi, RF
reset_1string, rs1, r1
reset_2string, rs2, r2
reset_3string, rs3, r3

reset_file, rf, rf
restore_cursor, rc, rc
row_address, vpa, cv
save_cursor, sc, sc
scroll_forward, ind, sf
scroll_reverse, ri, sr
select_char_set, scs, Zj
set_attributes, sgr, sa
set_background, setb, Sb
set_bottom_margin, smgb, Zk
set_bottom_margin_parm, smgbp, Zl
set_clock, sclk, SC
set_color_pair, scp, sp
set_foreground, setf, Sf
set_left_margin, smgl, ML
set_left_margin_parm, smglp, Zm
set_right_margin,
smgr, MR
set_right_margin_parm, smgrp, Zn
set_tab, hts, st
set_top_margin, smgt, Zo
set_top_margin_parm, smgtp, Zp
set_window, wind, wi
start_bit_image, sbim, Zq
start_char_set_def, scsd, Zr
stop_bit_image, rbim, Zs
stop_char_set_def, rcsd, Zt
subscript_characters, subcs, Zu
superscript_characters, supcs, Zv
tab, ht, ta
these_cause_cr, docr, Zw
to_status_line, tsl, ts
tone, tone, TO
underline_char, uc, uc
up_half_line, hu, hu
user0, u0, u0
user1, u1, u1
user2, u2, u2
user3, u3, u3
user4, u4, u4
user5, u5, u5
user6, u6, u6
user7, u7, u7
user8, u8, u8
user9, u9, u9
wait_tone, wait, WA
xoff_character, xoffc, XF
xon_character, xonc, XN

zero_motion, zerom, Zx
alt_scancode_esc, scesa, S8
bit_image_carriage_return, bicr, Yv
bit_image_newline, binel, Zz
bit_image_repeat, birep, Xy
char_set_names, csnm, Zy
code_set_init, csin, ci
color_names, colornm, Yw
define_bit_image_region, defbi, Yx
device_type, devt, dv
display_pc_char, dispc, S1
end_bit_image_region, endbi, Yy
enter_pc_charset_mode,
smpch, S2
enter_scancode_mode, smsc, S4
exit_pc_charset_mode, rmpch, S3
exit_scancode_mode, rmsc, S5
get_mouse, getm, Gm
key_mouse, kmous, Km
mouse_info, minfo, Mi
pc_term_options, pctrm, S6
pkey_plab, pfxl, xl
req_mouse_pos, reqmp, RQ
scancode_escape, scesc, S7
set0_des_seq, s0ds, s0
set1_des_seq, s1ds, s1
set2_des_seq, s2ds, s2
set3_des_seq, s3ds, s3
set_a_background, setab, AB
set_a_foreground, setaf, AF
set_color_band, setcolor, Yz
set_lr_margin, smglr, ML
set_page_length, slines, YZ
set_tb_margin, smgtb, MT
enter_horizontal_hl_mode, ehhlm, Xh
enter_left_hl_mode, elhlm, Xl
enter_low_hl_mode, elohlm, Xo
enter_right_hl_mode, erhlm, Xr
enter_top_hl_mode, ethlm, Xt
enter_vertical_hl_mode, evhlm, Xv
set_a_attributes, sgr1, sA
set_pglen_inch, slength, sL

Found in path(s):
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/capabilities.txt
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#
class = org.jline.terminal.impl.jna.JnaTerminalProvider

Found in path(s):
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/META-INF/services/org/jline/terminal/provider/jna
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* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/impl/KillRing.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/style/StyleExpression.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/NonBlockingInputStream.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/NonBlocking.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/Curses.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/keymap/BindingReader.java
*
 /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/NonBlockingReaderImpl.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/impl/ExternalTerminal.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/style/StyleSource.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-

jar/org/jline/utils/StyleResolver.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/impl/jna/win/Kernel32.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/impl/PosixSysTerminal.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/impl/PosixPtyTerminal.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/AttributedStringBuilder.java
*
/opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/Completer.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/MaskingCallback.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/NonBlockingReader.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/CompletingParsedLine.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/builtins/InputRC.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/Colors.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/NonBlockingInputStreamImpl.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/Size.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/style/StyleFactory.java
*
/opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/impl/completer/FileNameCompleter.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/utils/Timeout.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/ParsedLine.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/Terminal.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/impl/LineDisciplineTerminal.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/reader/History.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/terminal/impl/DumbTerminal.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/style/Styler.java
* /opt/cola/permits/1881382372_1704719110.3418307/0/jline-3-22-0-sources-8-jar/org/jline/builtins/NfaMatcher.java

1.49 zt 1.16

1.49.1 Available under license :

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* /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/timestamps/TimestampStrategy.java
* /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/Zips.java
* /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/timestamps/Java8TimestampStrategy.java
*
 /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/timestamps/PreJava8TimestampStrategy.java
* /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/ZipEntryUtil.java
* /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/IdentityNameMapper.java
* /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/FileSource.java
* /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/NameMapper.java
* /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/ZipEntrySource.java
* /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/ByteSource.java
* /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/ZipInfoCallback.java
*
 /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/ZipUtil.java
* /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/ZTFileUtil.java
* /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/timestamps/TimestampStrategyFactory.java
* /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/ZipEntryCallback.java
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```

Found in path(s):
* /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/commons/StringBuilderWriter.java
*
 /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/commons/FilenameUtils.java
* /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/commons/FileUtilsV2_2.java
* /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/commons/FileExistsException.java
* /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/commons/IOUtils.java
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Found in path(s):
* /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-

jar/org/zeroturnaround/zip/extra/ZipConstants.java
*
/opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/extra/AsiExtraField.java
* /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/extra/ZipShort.java
* /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/extra/ZipExtraField.java
* /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/extra/ExtraFieldUtils.java
* /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/extra/UnrecognizedExtraField.java
* /opt/cola/permits/1886919998_1705485810.177811/0/zt-zip-1-16-sources-jar/org/zeroturnaround/zip/extra/ZipLong.java

1.50 musl 1.2.5-r0

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The Unicode Standard, Unicode Character Database, Version 10.0.0

Unicode Character Database

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jQuery UI v1.13.2

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 rt/modules/javafx.web/src/main/native/
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File:
Abstract: Part of CoreAudio Utility Classes
Version: 1.1

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</pre>
ASM Bytecode Manipulation Framework v6.0

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</pre>

1.53 alpine-baselayout 3.6.5-r0

1.53.1 Available under license :

```
# Contributor: Carlo Landmeter <clandmeter@alpinelinux.org>
# Maintainer: Kevin Daudt <kdaudt@alpinelinux.org>
pkgname=spdx-licenses
pkgver=3.22
pkgrel=1
pkgdesc="Various data formats for the SPDX License List"
url="https://spdx.org/"
arch="noarch"
options="!check" # no test suite
license="CC-BY-3.0"
source="license-list-data-$pkgver.tar.gz::https://github.com/spdx/license-list-data/archive/v$pkgver.tar.gz"
builddir="$srcdir/license-list-data-$pkgver"
subpackages="$pkgname-list"

_types="html json rdfa rdfnt rdfturtle rdfxml template text"

for type in $_types; do
```

```
 subpackages="$subpackages $pkgname-$type:_subpkg"
done

package() {
 mkdir -p "$pkgdir"
}

_subpkg() {
 local type=${subpkgname/$pkgname-/}
 pkgdesc="$pkgdesc ($type)"
 install_if="$pkgname=$pkgver-r$pkgrel"
 mkdir -p "$subpkgdir"/usr/share/spdx
 cp -r "$builddir"/$type "$subpkgdir"/usr/share/spdx/
}

list() {
 pkgdesc="$pkgdesc (licence list)"
 mkdir -p "$subpkgdir"/usr/share/spdx
 local i; for i in "$builddir"/text/*.txt; do
  local
 license=${i##*/}
  echo ${license%.*} >> "$subpkgdir"/usr/share/spdx/license.lst
 done
}

sha512sums="
b213fe66699770d75a4c994a01a5c08325751423516c2fb871088a47e7e7ce605736064f5ce3a63dc1d3c462271832db
7bc464ac968df1888f9823787964c786  license-list-data-3.22.tar.gz
"
# Contributor: Maxim Karasev <begs@disroot.org>
# Maintainer: mio <miyopan@e.email>
pkgname=bsd-games
pkgver=3.3
pkgrel=1
pkgdesc="traditional text mode games from BSD"
url="https://bsd-games.sourceforge.io/"
arch="all"
license="BSD-3-Clause"
install="$pkgname.post-install"
makedepends="ncurses-dev coreutils" # configure causes busybox expr error
subpackages="$pkgname-doc"
source="https://sourceforge.net/projects/bsd-games/files/bsd-games-$pkgver.tar.gz"
options="!check" # no tests

build() {
 # some GNU autoconf options are ignored, but it works
 ./configure \
  --build=$CBUILD \
```

```
  --host=$CHOST \
  --prefix=/usr \
  --sysconfdir=/etc \
  --mandir=/usr/share/man \
  --localstatedir=/var/lib # it really shouldn't be in /var
 make
}

package() {
 make DESTDIR="$pkgdir" install
 install -Dm644 LICENSE "$pkgdir"/usr/share/licenses/bsd-games/LICENSE
}

sha512sums="
aaf36d09d4fe68514a5c279063d7e77a9a9a84c447037cba974b29faa07eb80c2aab2379d0699c196b5c27ffe1b2bb2c6
8d3390143e0e62d5e3d210ccfb61294
  bsd-games-3.3.tar.gz
"
# Contributor: Dhruvin Gandhi <contact@dhruvin.dev>
# Maintainer: Patrycja Rosa <alpine@ptrcnull.me>
pkgname=py3-license-expression
_pkgname=license-expression
pkgver=30.3.0
pkgrel=1
pkgdesc="Library to parse, compare, simplify and normalize license expressions"
url="https://github.com/nexB/license-expression"
arch="noarch"
license="Apache-2.0"
depends="python3 py3-boolean.py"
makedepends="py3-setuptools py3-setuptools_scm py3-gpep517 py3-wheel"
checkdepends="py3-pytest py3-pytest-xdist"
subpackages="$pkgname-pyc"
source="https://files.pythonhosted.org/packages/source/l/$_pkgname/$_pkgname-$pkgver.tar.gz"
builddir="$srcdir/$_pkgname-$pkgver"

build() {
 gpep517 build-wheel \
  --wheel-dir .dist \
  --output-fd 3 3>&1 >&2
}

check() {
 python3 -m venv --clear --without-pip --system-site-packages .testenv
 .testenv/bin/python3 -m installer .dist/*.whl
 .testenv/bin/python3 -m pytest
}

package() {
```

```
 python3 -m installer -d "$pkgdir" \
  .dist/*.whl
}

sha512sums="
3fe4ac8830085fe38d8ee713a332047941b2a7a8ff5f31810b124c5903335a8343a222926aefe000da66a49b4d6f8b934
af3cc350448b075a4ec6aa1fdb51aef
  license-expression-30.3.0.tar.gz
"
```

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```
# Automatically generated by apkbuild-cpan, template 4
# Contributor: Valery Kartel <valery.kartel@gmail.com>
# Maintainer: Celeste <cielesti@protonmail.com>
pkgname=perl-bsd-resource
pkgver=1.2911
pkgrel=9
#_pkgreal is used by apkbuild-cpan to find modules at MetaCpan
_pkgreal=BSD-Resource
pkgdesc="Perl extension implements the BSD process resource limit functions"
url="https://metacpan.org/release/BSD-Resource/"
arch="all"
license="Artistic-2.0 OR LGPL-2.0"
depends="perl"
makedepends="perl-dev"
subpackages="$pkgname-doc"
source="https://cpan.metacpan.org/authors/id/J/JH/JHI/BSD-Resource-$pkgver.tar.gz"
builddir="$srcdir/$_pkgreal-$pkgver"
```

```
build() {
 export CFLAGS=$(perl -MConfig -E 'say $Config{ccflags}')
 PERL_MM_USE_DEFAULT=1 perl -I. Makefile.PL \
  INSTALLDIRS=vendor \
  NO_PACKLIST=1 \
  NO_PERLLOCAL=1
 make
}

check() {
 export CFLAGS=$(perl -MConfig -E 'say $Config{ccflags}')
 make test
}

package() {
 make DESTDIR="$pkgdir" install
}

sha512sums="
d0032d41c7c0468ed1c6d8f57b885f6cb97a5039d754c8cb60b2067daedaf53bd15fb6561a3d0f828df16dfa5417f663b
8065ba65f4fea16dc9262728b3b6b85
  BSD-Resource-1.2911.tar.gz
"
```

```
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http://www.geocities.com/SiliconValley/Campus/8645/index.html
http://members.nbci.com/silicon39/
http://www.mp3.com/silicon39
https://analoguesque.x10host.com/
mini_sendmail - accept email on behalf of real sendmail

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```
# Maintainer: Natanael Copa <ncopa@alpinelinux.org>
pkgname=libart-lgpl
pkgver=2.3.21
pkgrel=8
pkgdesc="A library for high-performance 2D graphics"
url="https://www.levien.com/libart/"
arch="all"
options="!check"  # No test suite.
license="LGPL-2.0-or-later"
subpackages="$pkgname-dev"
source="https://download.gnome.org/sources/libart_lgpl/2.3/libart_lgpl-$pkgver.tar.bz2
 "

builddir="$srcdir"/libart_lgpl-$pkgver

prepare() {
 update_config_sub
 default_prepare
}

build() {
 ./configure \
  --build=$CBUILD \
  --host=$CHOST \
  --prefix=/usr
```

```
 make
}

package() {
 make DESTDIR="$pkgdir" install
}

sha512sums="8a632a6a4da59e5e8c02ec2f5a57e36d182b325b46513765425e5f171ff9ae326af1b133725beba28f7e7
6654309e001aee9bace727b5b4c8589405256a3c020  libart_lgpl-2.3.21.tar.bz2"
# Automatically generated by apkbuild-cpan, template 3
# Contributor: Valery Kartel <valery.kartel@gmail.com>
# Maintainer: Celeste <cielesti@protonmail.com>
pkgname=perl-bsd-resource
#_pkgreal is used by apkbuild-cpan to find modules at MetaCpan
_pkgreal=BSD-Resource
pkgver=1.2911
pkgrel=9
pkgdesc="Perl extension implements the BSD process resource limit functions"
url="https://metacpan.org/release/BSD-Resource/"
arch="all"
license="Artistic-2.0 OR LGPL-2.0"
depends="perl"
makedepends="perl-dev"
subpackages="$pkgname-doc"
source="https://cpan.metacpan.org/authors/id/J/JH/JHI/BSD-Resource-$pkgver.tar.gz"
builddir="$srcdir/$_pkgreal-$pkgver"

build() {
 export CFLAGS=$(perl -MConfig -E 'say $Config{ccflags}')
 PERL_MM_USE_DEFAULT=1 perl -I. Makefile.PL INSTALLDIRS=vendor
 make
}

check() {
 export CFLAGS=$(perl -MConfig -E 'say $Config{ccflags}')
 make test
}

package() {
 make DESTDIR="$pkgdir" install
 find "$pkgdir" \( -name perllocal.pod -o -name .packlist \) -delete
}

sha512sums="
d0032d41c7c0468ed1c6d8f57b885f6cb97a5039d754c8cb60b2067daedaf53bd15fb6561a3d0f828df16dfa5417f663b
8065ba65f4fea16dc9262728b3b6b85
  BSD-Resource-1.2911.tar.gz
"
```

```
# Contributor: Patrycja Rosa <alpine@ptrcnull.me>
# Maintainer: Patrycja Rosa <alpine@ptrcnull.me>
pkgname=bsd-compat-headers
pkgver=0.7.2
pkgrel=6
pkgdesc="BSD compatibility headers (cdefs, queue, tree)"
url="https://gitlab.alpinelinux.org/alpine/aports"
arch="noarch"
license="BSD-2-Clause AND BSD-3-Clause"
source="
 cdefs.h
 queue.h
 tree.h
"
builddir="$srcdir"
options="!check" # just headers

package() {
 mkdir -p "$pkgdir"
 install -Dm644 -t "$pkgdir"/usr/include/sys \
  cdefs.h queue.h tree.h
}
sha512sums="
37c8fc73c7aea7b490f7850927e2bb91d12137c9e59e22c084146d515696dbc7973b5de92f4c987ba080dd2502ba8312
7006442c3f019b6447a620c0cae73178  cdefs.h
2f0d5e6e4dc3350285cf17009265dddcbe12431c111868eea39bc8cb038ab7c1f2acacbb21735c4e9d4a1fd106a8fc0f86
11ea33987d4faba37dde5ce6da0750  queue.h
d9ac210d81feb8ad2655bc80fb065d3fe20ae4417b32b4a1711e6738a4870140005c13373b5d1846ef3ce5ae6da45f2da
cef2092881eded0a2e94f6a07752ef3  tree.h
"
```

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"X-Splines: A Spline Model Designed for the End User" by C. Blanc and C. Schlick, Proceedings of SIGGRAPH'95
http://dept-info.labri.u-bordeaux.fr/~schlick/DOC/sig1.html
# Contributor: Fabian Affolter <fabian@affolter-engineering.ch>
# Maintainer: Fabian Affolter <fabian@affolter-engineering.ch>
pkgname=py3-flake8-copyright
_pkgname=flake8-copyright
pkgver=0.2.4
pkgrel=3
pkgdesc="Extension for flake8 which checks for copyrights"
options="!check" # No testsuite
url="https://github.com/savoirfairelinux/flake8-copyright"
arch="noarch"
license="MIT"
depends="py3-flake8 py3-setuptools"
makedepends="py3-gpep517 py3-wheel"
subpackages="$pkgname-pyc"
source="https://files.pythonhosted.org/packages/source/${_pkgname:0:1}/$_pkgname/$_pkgname-$pkgver.tar.gz"
builddir="$srcdir"/$_pkgname-$pkgver

replaces="py-flake8-copyright"   # Backwards compatibility
provides="py-flake8-copyright=$pkgver-r$pkgrel" # Backwards compatibility

build() {
 gpep517 build-wheel \
  --wheel-dir .dist \
  --output-fd 3 3>&1 >&2
}

package() {
 gpep517 install-wheel --destdir "$pkgdir" \
  .dist/*.whl
}

sha512sums="
a6ab47e1bb715618f075c51f398e18180404871b3b0faf1c2d30701d5203db6bc23771bf22ffb5bafcd8ee856b9b64237b316bd503ae7dceed6ca284ccd5a74d
  flake8-copyright-0.2.4.tar.gz
"

```
# Maintainer: fossdd <fossdd@pwned.life>
pkgname=cargo-license
pkgver=0.6.1
pkgrel=1
pkgdesc="Cargo subcommand to see license of dependencies"
url="https://github.com/onur/cargo-license"
arch="all"
license="MIT"
makedepends="cargo cargo-auditable"
source="$pkgname-$pkgver.tar.gz::https://crates.io/api/v1/crates/cargo-license/$pkgver/download"

prepare() {
 default_prepare

 cargo fetch --target="$CTARGET" --locked
}

build() {
 cargo auditable build --release --frozen
}

check() {
 cargo test --frozen
}

package() {
 install -Dm755 target/release/cargo-license -t "$pkgdir"/usr/bin
}

sha512sums="
36215145e79965be090ae2f5ce6f5eb208465eb67a94c26bed1fe70a131c46c6dc35695e30852759b7366883fbc3caf00
272d796ac634f0a5e1d49232b6b29d5  cargo-license-0.6.1.tar.gz
"
```

1.54 jsr305 3.0.2

1.54.1 Available under license :

No license file was found, but licenses were detected in source scan.

```
/*
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* Official home: http://www.jcip.net
*/
```

Found in path(s):

* /opt/cola/permits/2035784567_1717163175.5646207/0/jsr305-3-0-2-sources-12-jar/javax/annotation/concurrent/Immutable.java
* /opt/cola/permits/2035784567_1717163175.5646207/0/jsr305-3-0-2-sources-12-jar/javax/annotation/concurrent/GuardedBy.java
* /opt/cola/permits/2035784567_1717163175.5646207/0/jsr305-3-0-2-sources-12-jar/javax/annotation/concurrent/NotThreadSafe.java
* /opt/cola/permits/2035784567_1717163175.5646207/0/jsr305-3-0-2-sources-12-jar/javax/annotation/concurrent/ThreadSafe.java

1.55 servlet-api 3.0.1

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1.58 busybox 1.36.1-r29

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Ext headers GL/glext.h Khronos
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include/GL/wglxext.h :

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The Unicode Standard, Unicode Character Database, Version 10.0.0

Unicode Character Database

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include/GL/glxext.h
include/GL/wglxext.h :

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This is a Java port of Daniel Lemire's fast_float project.
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FastDoubleParser

This is a Java port of Daniel Lemire's fast_float project.
This project provides parsers for double, float, BigDecimal and BigInteger values.

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It was originally written by Tatu Saloranta (tatu.saloranta@iki.fi), and has
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Jackson JSON processor

Jackson is a high-performance, Free/Open Source JSON processing library.
It was originally written by Tatu Saloranta (tatu.saloranta@iki.fi), and has
been in development since 2007.
It is currently developed by a community of developers.

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1.75 jackson-dataformat-yaml 2.17.3

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1.76 appdynamics-alpine-without-jre 24.11.0.7212

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END USER LICENSE AGREEMENT

1. SOFTWARE LICENSE.

1.1 LICENSE GRANT.

This End User License Agreement (this Agreement) between AppDynamics, Inc., a Delaware corporation with its principal place of business located at 303 Second Street, North Tower, 8th Floor, San Francisco, CA 94107 (AppDynamics) and the customer set forth in the Order Form (as defined below) (End User) is effective as of the date the initial Order Form is executed or the date this Agreement is referenced by the applicable purchase order (the Effective Date). This Agreement shall govern each order form, sales quotation, proposal, purchase order or other ordering document that references this Agreement (each an Order Form). Each Order Form will form part of this Agreement. Subject to the terms and conditions of this Agreement, AppDynamics hereby grants to End User, during the License Term (as defined below), a non-exclusive, non-transferable, non-sublicensable right and license to use the software-as-a-service
and/or on-premises version of AppDynamics application intelligence software product, including one Controller, as designated in the Order Forms (the Software) for internal business purposes only for the quantity of units in the Order Form. AppDynamics Test & Dev Edition licenses shall only be used in test-only non-production environments. For purposes hereof, the License Term begins on the date AppDynamics delivers the Software license keys to End User and extends for the period specified in the applicable Order Form (unless earlier terminated in accordance with this Agreement). For the avoidance of doubt, End Users affiliates (and employees thereof) shall not use the Software without AppDynamics prior written consent. Notwithstanding anything to the contrary herein, this Agreement does not supersede a signed agreement between AppDynamics and End User with respect to the Software.

1.2 RESTRICTIONS ON USE.

Except as otherwise expressly provided in this Agreement, End User shall
not (and shall not permit any third party to): (a) sublicense, sell, resell, transfer, assign, distribute, share, lease, rent, make any external commercial use of, outsource, use on a timeshare or service bureau, or use in an application service provider or managed service provider environment, or otherwise generate income from the Software; (b) copy the Software onto any public or distributed network, except for an internal and secure cloud computing environment; (c) cause the decompiling, disassembly, or reverse engineering of any portion of the Software, or attempt to discover any source code or other operational mechanisms of the Software (except where such restriction is expressly prohibited by law without the possibility of waiver, and then only upon prior written notice to AppDynamics); (d) modify, adapt, translate or create derivative works based on all or any part of the Software; (e) use any Third Party Software (as defined below) provided with the Software other than with
the Software; (f) modify any proprietary rights notices that appear in the Software or components thereof; (g) publish the results of any benchmarking tests run on any Third Party Software; (h) use any Software in violation of

any applicable laws and regulations (including any export laws, restrictions, national security controls and regulations) or outside of the license scope set forth in Section 1.1; (i) use the Software in support of any nuclear proliferation, chemical weapon, biological weapon or missile proliferation activity; (j) configure the Software to collect any (1) social security numbers or other government-issued identification numbers, (2) passwords or other authentication credentials, (3) health information, biometric data, genetic data, or payment/financial information, (4) any data relating to a person under the age of 13 years old, or (5) any other data that is subject to regulatory or contractual handling requirements (e.g., PCI, HIPAA, or state and federal data security laws) (collectively, Prohibited Data); or (k) use the Software to (1) store, download or transmit infringing, libelous, or otherwise unlawful or tortious material, or malicious code or malware, or (2) engage in phishing, spamming, denial-of-service attacks or other fraudulent or criminal activity, (3) interfere with or disrupt the integrity or performance of third party systems, or the Software or data contained therein, or (4) attempt to gain unauthorized access to the Software or AppDynamics' systems or networks, or (5) perform, or engage any third party to perform, authenticated or unauthenticated penetration testing, vulnerability assessments or other security assessments on the SaaS version of the Software. End User shall not export or re-export, directly or indirectly, any Software or technical data or any copy, portions or direct product thereof (i) in violation of any applicable laws and regulations, (ii) to any country for which the United States or any other government, or any agency thereof, at the time of export requires an export license or other governmental approval, including Cuba, Libya, North Korea, Iran, Iraq, or Rwanda or any other Group D:1 or E:2 country (or to a national or resident thereof) specified in the then current Supplement No. 1 to part 740 of the U.S. Export Administration Regulations (or any successor supplement or regulations, without first obtaining such license or approval) or (ii) to anyone on the U.S. Treasury Departments list of Specially Designated Nationals or the U.S. Commerce Departments Table of Denial Orders. End User shall, at its own expense, obtain all necessary customs, import, or other governmental authorizations and approvals.

1.3 EVALUATION USE.

If End User accessed the Software pursuant to a no-fee or beta evaluation (Evaluation Use), then the License Term is for the period enabled by the license key for the Software provided by AppDynamics. AppDynamics shall have the right to downgrade, limit or otherwise modify the Software provided for Evaluation Use at any time without notice, and no warranty, indemnity, Maintenance or Support obligations of AppDynamics will apply to Evaluation Use. End User may use the number and type of licenses indicated by AppDynamics in writing prior to End User downloading or accessing the Software, which will be enabled by End Users specific license key. AppDynamics has the right to immediately revoke and terminate any Evaluation Use at any time. End User agrees to provide feedback related to the Software as reasonably requested by AppDynamics. End User grants to AppDynamics, without charge, the fully paid-up, perpetual, sublicensable right to exploit such feedback for any purpose. Evaluation Use is not a guarantee of future product features and should not be relied upon in making any purchasing decisions.

1.4 UNAUTHORIZED USE.

End User shall notify AppDynamics promptly of any unauthorized use of any password or account or any other known or suspected breach of security or misuse of the Software. End User is responsible for use of the Software by any and all employees, contractors, or other users that it allows to access the Software.

1.5 MAINTENANCE AND SUPPORT.

Support is defined as AppDynamics' obligations to respond to support requests as described in Exhibit A (Enterprise

Support). Maintenance means AppDynamics obligations related to error resolution, bug fixes and the provision of updates and upgrades made generally commercially available by AppDynamics in its sole discretion, all as described in Exhibit A. Subject to End Users payment of the fees set forth in the applicable Order Form(s), AppDynamics will (a) provide Maintenance and Support for the Software, and (b) solely if End User has purchased access to the software-as-a-service version of the Software, make the Software available to End User in accordance with Exhibit B (Availability and Security). For time-limited licenses for the Software (as set forth in an Order Form, Subscription Licenses), the fees for Maintenance and Support are included in the fees for the Software. For perpetual licenses, (i) AppDynamics shall invoice End User the applicable fees for Maintenance and Support (Maintenance and Support Fees) upon execution of the Order Form, and (ii) subject to payment of the Maintenance and Support Fees, AppDynamics will provide Support for the Maintenance and Support period set forth in the Order Form, as it may be renewed (the Maintenance and Support Term). If Maintenance and Support terminates with respect to any perpetual licenses, and End User is in good standing under this Agreement, then End User may reinstate Maintenance and Support on payment of the cumulative Maintenance and Support Fees applicable for the period during which Maintenance and Support lapsed, plus Maintenance and Support Fees for the reinstated Maintenance and Support Term. Notwithstanding anything herein to the contrary, if End User receives Support from an authorized
partner of AppDynamics (Partner), then the support terms agreed upon by End User and such Partner shall govern in lieu of those set forth in Exhibit A, and AppDynamics shall have no support obligations to End User.

1.6 SERVICES.

Subject to the terms hereof (including payment of any applicable fees set forth in the Order Form), AppDynamics will provide the training, enablement and/or other services described in an Order Form (or statement of work referencing this Agreement), if any (Services). All Services will be rendered on a time and materials basis. AppDynamics will not exceed the total time purchased without prior written approval from End User. If the Services purchased have been consumed, AppDynamics will stop the Services until additional Services have been purchased. If End User elects not to purchase additional Services, then the Services will be deemed complete. If not used, pre-purchased Services and expenses expire twelve (12) months after the date purchased (unless otherwise
set forth in the applicable Order Form). End User agrees to provide reasonable cooperation and information as necessary to permit AppDynamics to perform the Services. End User will reimburse AppDynamics for travel and expenses (at cost) incurred in connection with the Services (if any) by the Invoice Due Date (as defined below). Services will be performed on business days (a business day means Monday through Friday, excluding national holidays, during working hours, in the location where the Services are delivered). Saturday Services, and hours worked during the week that exceed the local working hours in a week, will be charged at the agreed rate x 1.5. Services performed on Sundays or national holidays will be charged at 2 x the agreed rate. If End User cancels or delays any scheduled Services less than ten (10) business days before the start date of such Services, then AppDynamics will deduct from End User's account (or End User will pay for) the amount of Services that were scheduled
in any of the ten (10) business days following the date of cancellation (or notification of the delay, as applicable), and End User will fully reimburse AppDynamics for any reasonable travel and expenses incurred by AppDynamics for such Services (and for any Services rescheduled by End User) for which AppDynamics is unable to obtain a refund. During the License Term (for Subscription Licenses) or during the Maintenance and Support Term (for perpetual licenses), and in each case for a period of twelve (12) months thereafter, without AppDynamics prior written approval, End User will not solicit for employment or consultancy any AppDynamics employees who participated in the performance of Services.

2. FEES.

2.1 PRICING.

End User will be invoiced for those amounts and at those prices set forth in an Order Form (an Invoice), provided, however, that, for Evaluation Use, End User shall not be billed unless otherwise specified by AppDynamics in writing prior to End User downloading or accessing (as applicable) the Software. Fees do not include any customization of the Software (nor support for any such customizations, unless otherwise agreed in writing). If End Users usage of the Software is in excess of those amounts set forth in the Order Form, End User will be billed for those overages at a pro-rated amount for the remainder of the applicable License Term, based on AppDynamics then-current standard pricing. If AppDynamics believes in good faith that End Users usage of the Software exceeds that set forth on the applicable Order Form, End User agrees to allow AppDynamics to audit End Users use of the Software (not more frequently than twice per calendar year), upon at least twenty-four (24) hours notice, to determine the actual Software use, using a commercially reasonable auditing procedure. End User acknowledges that purchases made under this Agreement are neither contingent on the delivery of any future functionality or features nor dependent on any oral or written public comments made by AppDynamics regarding future functionality or features.

2.2 PAYMENTS.

End User shall pay Invoices within thirty (30) days of the invoice date (the Invoice Due Date). If End User reasonably disputes any Invoice, (i) End User shall provide AppDynamics with written notice of such dispute, including the grounds therefor (a Dispute Notice), prior to the Invoice Due Date, (ii) End User and AppDynamics shall, for a period of fifteen (15) days following AppDynamics receipt of such Dispute Notice, negotiate in good faith to resolve the dispute and (iii) if such dispute remains unresolved at the end of such period, the parties shall retain all of their respective rights under this Agreement (including, without limitation, any action for non-payment of the fees set forth herein). All payment obligations are non-cancelable and all amounts paid are non-refundable, except (a) for amounts paid in error that are not actually due under this Agreement, and (b) as set forth in Sections 6.1 and 7.1. The fees paid by End User are exclusive of all taxes, levies, or duties imposed by taxing authorities, if any, and End User shall be responsible for payment of all such taxes, levies, or duties, excluding taxes based on AppDynamics income. End User represents and warrants that the billing and contact information provided to AppDynamics is complete and accurate, and AppDynamics shall have no responsibility for any Invoices that are not received due to inaccurate or missing information provided by End User. End User shall pay interest on all payments not received by the Invoice Due Date at a rate of one percent (1%) per month or the maximum amount allowed by law, whichever is lesser. All amounts due under this Agreement shall be paid by End User in full without any set-off, counterclaim, deduction or withholding (other than any deduction or withholding of tax as required by law). If requested by AppDynamics, End User will obtain and furnish to AppDynamics tax receipts or other certificates issued by the competent taxation office showing the payments of the withholding tax within a reasonable time after payment. Following written notice, AppDynamics shall be entitled to suspend End Users access to the Software if payments are not received within thirty (30) days of the Invoice Due Date. Notwithstanding anything herein to the contrary, if End User makes its payments pursuant to this Agreement to a Partner, then the payment terms agreed by End User and such Partner shall govern to the extent anything in this Section 2 conflicts with such Partner payment terms.

3. CONFIDENTIALITY

3.1 SCOPE AND RESTRICTIONS.

Confidential Information means all information of a party (Disclosing Party) disclosed to the other party (Receiving Party) that is designated in writing or identified as confidential at the time of disclosure or should be reasonably

known by the Receiving Party to be confidential due to the nature of the information disclosed and the circumstances
surrounding the disclosure. The terms of this Agreement, the Software, any technical or other documentation relating to the Software, logins, passwords and other access codes and any and all information regarding AppDynamics business, products and services are the Confidential Information of AppDynamics. The Receiving Party will: (i) not use the Disclosing Partys Confidential Information for any purpose outside of this Agreement; (ii) not disclose such Confidential Information to any person or entity, other than its affiliates, employees, consultants, agents and professional advisers who have a need to know for the Receiving Party to exercise its rights or perform its obligations hereunder, provided that such employees, consultants, and agents are bound by agreements or, in the case of professional advisers, ethical duties respecting such Confidential Information in accordance with the terms of this Section 3; and (iii) use reasonable measures to protect the confidentiality
of such Confidential Information. If the Receiving Party is required by applicable law or court order to make any disclosure of such Confidential Information, it will first give written notice of such requirement to the Disclosing Party, and, to the extent within its control, permit the Disclosing Party to intervene in any relevant proceedings to protect its interests in its Confidential Information, and provide full cooperation to the Disclosing Party in seeking to obtain such protection. Further, this Section 3 will not apply to information that the Receiving Party can document: (i) was rightfully in its possession or known to it prior to receipt without any restriction on its disclosure; (ii) is or has become public knowledge or publicly available through no fault of the Receiving Party; (iii) is rightfully obtained by the Receiving Party from a third party without breach of any confidentiality obligation; or (iv) is independently developed by employees of the Receiving Party who had
no access to such information.

3.2 EQUITABLE RELIEF.

The Receiving Party acknowledges that unauthorized disclosure of the Disclosing Partys Confidential Information could cause substantial harm to the Disclosing Party for which damages alone might not be a sufficient remedy and, therefore, that upon any such disclosure by the Receiving Party the Disclosing Party will be entitled to seek appropriate equitable relief in addition to whatever other remedies it might have at law or equity.

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5. TERM AND TERMINATION.

The term of this Agreement begins on the Effective Date and will remain in effect until all Subscription Licenses (and Maintenance and Support Terms, if applicable) expire or until this Agreement is otherwise terminated in accordance with the terms

hereof, whichever occurs first (the Term). This Agreement may be renewed at any time by execution of an Order Form referencing this Agreement, and any such renewal will be deemed part of the Term hereunder. If either party commits a material breach of this Agreement, and such breach has not been cured within thirty (30) days after receipt of written notice thereof, the non-breaching party may terminate this Agreement, except that AppDynamics may immediately terminate this Agreement and/or End Users license to the Software upon End Users breach of Section 1.2. Either party may also terminate this Agreement upon written notice if the other party suspends payment of its debts or experiences any other insolvency or bankruptcy-type event. Upon expiration or termination of this Agreement for any reason, (i) with respect to Subscription Licenses, all rights granted to End User shall terminate and End User shall destroy any copies of the Software and Documentation within End Users possession and control; (ii) with respect to perpetual licenses, these will survive termination of this Agreement unless AppDynamics terminates the Agreement for End Users breach of this Agreement in which case all rights granted to End User shall terminate and End User shall destroy any copies of the Software and Documentation within End Users possession and control; and (iii) each Receiving Party will return or destroy, at the Disclosing Partys option, the Disclosing Partys Confidential Information in the Receiving Partys possession or control. All fees that have accrued as of such expiration or termination, and Sections 1.2, 1.3, 1.4, 2, 3, 4, 5, 6.2 and 7 through 12, will survive any expiration or termination hereof.

6. WARRANTIES.

6.1 LIMITED WARRANTY.The limits below will not apply to the extent prohibited by applicable law.

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7.1 BY APPDYNAMICS.

AppDynamics agrees at its expense to defend End User against (or, at AppDynamics option, settle), any third party claim to the extent such claim alleges that the Software infringes or misappropriates any patent, copyright, trademark or trade secret of a third party, and AppDynamics shall pay all costs and damages finally awarded against End User by a court of competent jurisdiction as a result of any such claim. In the event that the use of the Software is, or in AppDynamics sole opinion is likely to become, subject to such a claim, AppDynamics, at its option and expense, may (a) replace the applicable Software with functionally equivalent non-infringing technology, (b) obtain a license for End Users continued use of the applicable Software, or (c) terminate the license and provide a pro-rata refund of the Software license fees (or Maintenance and Support Fees, for perpetual licenses) that have been paid in advance for the remainder of the License Term for the applicable Software (beginning on the date of termination). The foregoing indemnification obligation of AppDynamics will not apply: (1) if the Software is modified by End User or its agent; (2) if the Software is combined with other non-AppDynamics products, applications, or processes, but solely to the extent the alleged infringement is caused by such combination; or (3) to any unauthorized use of the Software. The foregoing shall be End Users sole remedy with respect to any claim of infringement of third party intellectual property rights.

7.2 BY END USER.

End User agrees to defend, at its expense, AppDynamics and its affiliates, its suppliers and its resellers against any third party claim to the extent such claim arises from or is made in connection with End Users breach of Section 1 or End Users negligence or willful misconduct, and End User shall pay all costs and damages finally awarded against AppDynamics by a court of competent jurisdiction as a result of any such claim.

7.3 INDEMNIFICATION REQUIREMENTS.

In connection with any claim for indemnification under this Section 7, the indemnified party must promptly provide the indemnifying party with notice of any claim that the indemnified party believes is within the scope of the obligation to indemnify, provided, however, that the failure to provide such notice shall not relieve the indemnifying party of its obligations under this Section 7, except to the extent that such failure materially prejudices the indemnifying partys defense of such claim. The indemnified party may, at its own expense, assist in the defense if it so chooses, but the indemnifying party shall control the defense and all negotiations related to the settlement of any such claim. Any such settlement intended to bind either party shall not be final without the other partys written consent, which consent shall not

be unreasonably withheld, conditioned or delayed; provided, however, that End Users consent shall not be required when AppDynamics is the indemnifying party if the settlement involves only the payment of money by AppDynamics.

8. LIMITATION OF LIABILITY. The limits below will not apply to the extent prohibited by applicable law.

8.1 EXCEPT FOR LIABILITY ARISING OUT OF END USERS BREACH OF SECTION 1.2 (RESTRICTIONS ON USE), IN NO EVENT SHALL EITHER PARTY BE LIABLE UNDER THIS AGREEMENT FOR ANY INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, INCLUDING DAMAGES FOR LOSS OF REVENUES OR PROFITS, LOSS OF USE, BUSINESS INTERRUPTION, OR LOSS OF DATA, WHETHER IN AN ACTION IN CONTRACT OR TORT, EVEN IF THE OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

8.2 EXCEPT FOR LIABILITY ARISING OUT OF END USERS BREACH OF SECTION 1.2 (RESTRICTIONS ON USE), NEITHER PARTYS LIABILITY FOR ANY DAMAGES (WHETHER FOR BREACH OF CONTRACT, MISREPRESENTATIONS, NEGLIGENCE, STRICT LIABILITY,
OTHER TORTS OR OTHERWISE) UNDER THIS AGREEMENT SHALL EXCEED AN AMOUNT EQUAL TO THE TOTAL FEES PAID (PLUS FEES PAYABLE) TO APPDYNAMICS DURING THE TWELVE (12) MONTHS IMMEDIATELY PRECEDING THE CLAIM GIVING RISE TO SUCH DAMAGES. THESE LIMITATIONS SHALL APPLY NOTWITHSTANDING ANY FAILURE OF ESSENTIAL PURPOSE OF ANY REMEDY.

9. FORCE MAJEURE.

Except for payment obligations, neither party hereto will be liable for defaults or delays due to acts of God, or the public enemy, acts or demands of any government or governmental agency, fires, earthquakes, floods, accidents, or other unforeseeable causes beyond its reasonable control and not due to its fault or negligence.

10. DATA COLLECTION.

End User acknowledges that AppDynamics application server and machine software agents (the Agents) collect metrics that relate to the performance, health and resource of an application, its components (transactions, code libraries) and related infrastructure (nodes, tiers) that service those components.
In addition, AppDynamics collects metrics on End Users activities, such as web pages visited, length of visit, and which features of the Software an End User uses. If End User provides AppDynamics with any personally identifiable information (personal data), End User represents and warrants that such information has been collected by End User in accordance with the provisions of all applicable data protection legislation and that End User has all right and consents necessary to provide such personal data to AppDynamics. End User will indemnify AppDynamics for reasonable costs and other amounts that AppDynamics may incur relating to any breach of this Section.

11. US GOVERNMENT MATTERS.

As defined in FAR section 2.101, the Software and Documentation are commercial items and according to DFAR section 252.227 7014(a)(1) and (5) are deemed to be commercial computer software and commercial computer software documentation. Consistent with DFAR section 227.7202 and FAR section 12.212, any
use modification, reproduction, release, performance, display, or disclosure of such commercial software or commercial software documentation by the U.S. Government will be governed solely by the terms of this

Agreement and will be prohibited except to the extent expressly permitted by the terms of this Agreement.

12. MISCELLANEOUS.

This Agreement shall be governed by and construed under the laws of the State of California, U.S.A. The parties consent to the exclusive jurisdiction and venue of the courts located in and serving San Francisco, California. Failure by either Party to exercise any of its rights under, or to enforce any provision of, this Agreement will not be deemed a waiver or forfeiture of such rights or ability to enforce such provision. If any provision of this Agreement is held by a court of competent jurisdiction to be illegal, invalid or unenforceable, such provision will be amended to achieve as nearly as possible the same economic effect of the original provision
and the remainder of this Agreement will remain in full force and effect. This Agreement and its exhibits, together with the Order Form(s) and any statements of work incorporating this Agreement, if applicable, represent the entire agreement between the parties and supersede any previous or contemporaneous oral or written agreements or communications regarding the subject matter of this Agreement. The person signing or otherwise accepting this Agreement for End User represents that s/he is duly authorized by all necessary and appropriate corporate action to enter this Agreement on behalf of End User. Any modification to this Agreement must be in writing and signed by a duly authorized agent of both parties. The Uniform Computer Information Transactions Act (UCITA) does not apply to this Agreement. This Agreement shall control over additional or different terms of any purchase order, confirmation, invoice, statement of work or similar document (other than an AppDynamics Order Form, which
will take precedence), even if accepted in writing by both parties, and waivers and amendments to this Agreement shall be effective only if made by non-pre-printed agreements clearly understood by both parties to be an amendment or waiver to this Agreement. For purposes of this Agreement, including means including without limitation. The rights and remedies of the parties hereunder will be deemed cumulative and not exclusive of any other right or remedy conferred by this Agreement or by law or equity. No joint venture, partnership, employment, or agency relationship exists between the parties as a result of this Agreement or use of the Software. AppDynamics reserves the right to perform its obligations from locations and/or through use of affiliates and subcontractors, worldwide, provided that AppDynamics will be responsible for such parties. End User may not assign this Agreement without the prior written approval of AppDynamics and any purported assignment in violation of this section
shall be void; AppDynamics may assign, transfer or subcontract this Agreement in whole or in part. Upon any assignment of this Agreement by End User that is approved by AppDynamics, any licenses that contain an unlimited aspect will, with respect to End User or the successor entity, as applicable, be capped at the number of authorized Software units in use immediately prior to such assignment. End User agrees that AppDynamics may refer to End User by its trade name and logo, and may briefly describe End Users business, in AppDynamics marketing materials and website. AppDynamics may give notice to End User by electronic mail to End Users email address on record in End Users account information, or by written communication sent by first class mail or pre-paid post to End Users address on record in End Users account information. End User may give notice to AppDynamics at any time by any letter delivered by nationally recognized overnight delivery service or first class postage prepaid
mail to AppDynamics at the following address or such other address as may be notified to End User from time to time: AppDynamics, Inc., 303 Second Street, North Tower, 8th Floor, San Francisco, CA 94107, Attn: Legal Department. Notice under this Agreement shall be deemed given when received, if personally delivered; when receipt is electronically confirmed, if transmitted by email; the day after it is sent, if sent for next day delivery by recognized overnight delivery service; and upon receipt, if sent by certified or registered mail, return receipt requested.

EXHIBIT A

ENTERPRISE SUPPORT

GENERAL REQUIREMENTS.

AppDynamics will provide access to a ticketing system and email address (help@appdynamics.com), which will be available twenty-four (24) hours per day, seven (7) days per week. The email account will be maintained by qualified support specialists, who shall use commercially reasonable efforts to answer questions and resolve problems regarding the Software.

HOURS OF OPERATION.

Support
is available twenty-four (24) hours per day, seven (7) days per week.

ERROR CLASSIFICATION.

Any reported errors are classified in the following manner, in each case when caused by the Software:

Error Classification Criteria
Urgent End User production application is down or there is a major malfunction, resulting in a business revenue loss and impacting the End User application functionality for a majority of users.
High Critical loss of End User application functionality or performance, impacting the application functionality for a high number of users.
Normal Moderate loss of End User application functionality or performance, impacting multiple users.
Low Minor loss of End User application functionality or product feature in question.

ERROR DEFINITION.

An error means a reproducible malfunction in the Software that is reported by End User through AppDynamics ticketing system that prevents the Software from performing in accordance with the operating specifications described in the then-current Documentation.

AUTHORIZED SUPPORT CONTACTS.

Maintenance and Support will be provided solely to End Users designated support contacts. The Order Form may indicate a maximum number of designated support contacts for End Users service level. End User will provide its designated support contacts, including its primary email address.

END USERS OBLIGATION TO ASSIST.
If End User reports a purported error in the Software to AppDynamics, AppDynamics ticketing system will request the following minimum information:

A general description of the operating environment
A list of all hardware components, operating systems and networks
A reproducible test case
Any log files, trace and systems files

End Users failure to provide this information may prevent or significantly delay AppDynamics ability to identify and fix the reported error. AppDynamics time to respond to any error will begin when AppDynamics has received all requested information
from the End User and is able to reproduce the error.

ERROR RESOLUTION.

If AppDynamics determines there is an error in the Software, AppDynamics may, at its sole option, repair that error in the version of the Software that End User is currently using or instruct End User to install a newer version of the Software with that error repaired. AppDynamics reserves the right to provide End User with a workaround in lieu of fixing an error.

SOFTWARE UPDATES AND UPGRADES. End User must be current on fees in order to receive access to Maintenance.

RESPONSE TIME. AppDynamics shall respond to error tickets in accordance with the tables set forth below. AppDynamics will use reasonable means to repair the error and keep End User informed of progress. AppDynamics makes no representations as to when a full resolution of the error may be made.

Error Initial Response Manager Escalation VP Escalation Email Status Updates
===== ================ ================= ============= ====================
Urgent
1 Hour 1 Business Day 1 Week Daily
High 6 Hours 1 Week 2 Weeks Weekly
Normal 1 Business Day Quarterly Review None None
Low 2 Business Days Semi-Annual Review None None

Maintenance and Support Policy: The Maintenance and Support policy is as follows:

AppDynamics provides Maintenance and Support for each version of the Software for a period of twelve (12) months after the generally available release of the next major version of the Software (a major release is a change in the first number to the right of the decimal point). For example, if version 4.1 is released on January 1, 2015, then AppDynamics will provide Maintenance and Support for version 4.0 until January 1, 2016. AppDynamics does not provide Maintenance or Support for any customized software (or components thereof).

For third party software or technology used by End User with the Software but not included with the Software (a Platform, such as Java Virtual Machines), AppDynamics will follow the end-of-life (EOL) support timeline announced by the third party vendor of such Platform. AppDynamics will stop providing Maintenance and Support for an EOLd Platform version when the Platform vendor stops providing maintenance and support for that Platform version.

EXHIBIT B
AVAILABILITY AND SECURITY

The terms set forth in this Exhibit B apply only if End User has purchased access to the online software-as-a-service (SaaS) version of the Software, as indicated on the Order Form.

AVAILABILITY.

AppDynamics will provide System Availability (as defined below) of ninety-nine and one-half percent (99.5%) (the Availability SLA), excluding situations identified as Exclusions below. For purposes of the Availability SLA, the AppDynamics network extends to, includes and terminates at the data center located router that provides the outside interface of each of AppDynamics WAN connections to its backbone providers (the AppDynamics Network).

Exclusions means any outage that results from any of the following:
a. Any Maintenance performed by AppDynamics during AppDynamics standard Maintenance windows. AppDynamics will notify End User within forty-eight (48) hours of any standard Maintenance and within twenty-four (24) hours for other non-standard emergency Maintenance (collectively referred to herein as Scheduled Maintenance).

b. End User's information content or application programming, or the acts or omissions of End User or its agents, including, without limitation, the following:
1. End Users use of any programs not supplied by AppDynamics;
2. End Users failure to provide AppDynamics with reasonable advance prior notice of any pending unusual large deployments of new nodes (i.e., adding over ten percent (10%) total nodes in less than twenty-four (24) hours);
3. End Users implementation of any significant configuration changes, including changes that lead to a greater than thirty percent (30%) change in a one week period or greater than fifty percent (50%) change in a one month period in the number of key objects in the system including but not limited to metrics, snapshots, nodes, events and business transactions;
4. Any misconfiguration by End User (as determined in AppDynamics sole discretion), including configuration errors and unintended usage of the Software;
5. End Users failure to upgrade the Agents to keep the Agent versions within six (6) months of the Controller version; or
6. End Users implementation of configuration changes in the number of key objects in the Software (including metrics, snapshots, nodes, events and business transactions) that results in, or is likely to result in, an adverse impact on other customers.

c. Force majeure or other circumstances beyond AppDynamics reasonable control that could not be avoided by its exercise of due care.

d. Failures of the Internet backbone itself and the network by which End User connects to the Internet backbone or

any other network unavailability outside of the AppDynamics Network, such as misconfigurations, proxies or firewalls.

e. Any window of time when End User agrees that Software availability/unavailability will not be monitored or counted.

f. Any problems resulting from End User combining or merging the Software with any hardware or software not supplied by AppDynamics or not identified by AppDynamics in the Documentation as being compatible with the Software.

g. End Users or any third partys use of the Software in an unauthorized or unlawful manner.

Remedies for Excessive Downtime:

In the event the availability of the Software falls below the Availability SLA in a given calendar quarter, AppDynamics will pay End User a service credit (Service Credit) as follows, corresponding to the actual Availability of the Software during the applicable calendar quarter (on pro-rated basis for annual or multi-year fees): if the Availability is 99.5% or greater, End User is entitled to receive no credits; if the Availability is 97.0% - 99.49%, then End User is entitled to receive Service Credits equal to five percent of the fees for the applicable calendar quarter (not to exceed $280); if the Availability is 95.0% - 96.9%, then End User is entitled to receive Service Credits equal to ten percent of the fees for the applicable calendar quarter (not to exceed $560); and if the Availability is less than 95.0%, then End User is entitled to receive Service Credits equal to twenty percent of the fees for the applicable calendar quarter (not to exceed $1120). Such Service Credit will be issued as a credit against any fees owed by End User for the next calendar quarter of the Term, or, if End User does not owe any additional fees, then AppDynamics will pay End User the amount of the applicable Service Credit within thirty (30) days after the end of the calendar quarter in which such credit accrued. To receive Service Credits, End User must submit a written request to AppDynamics (to customersuccess@appdynamics.com with a copy to legal@appdynamics.com) within 15 days after the end of the quarter in which the Software was unavailable, or End Users right to receive Service Credits with respect to such unavailability will be waived. The remedies stated in this section are End Users sole and exclusive remedies and AppDynamics sole and exclusive obligations for service interruption or unavailability.

System Availability is measured by the following formula: (n - y) *100 / n
(1) n is the total number of minutes in the given calendar quarter minus the Exclusions (as defined above); and y is the total number of minutes in the given calendar quarter that the Controller is not accessible by End User (as determined by AppDynamics tools).
(2) Specifically excluded from n and y in this calculation are the Exclusions.

SECURITY INFORMATION.

For all End User data stored in the software-as-a-service version of the Software, AppDynamics will satisfy all of its obligations under Section 3 by maintaining the security precautions described below.
Certifications
AppDynamics is SOC 2 Type II compliant, meaning it has been independently audited to verify the validity and functionality of its control activities and processes. Customers may request AppDynamics report at any time. AppDynamics data center provider is also SOC 2 Type II compliant.

Secure Connections
Agents initiate connections to a single Controller, which can either be hosted on-premises by the customer or by AppDynamics via the AppDynamics software-as-a-service platform. The Controller is the central repository and analytics engine where all performance data is stored, baselined, and analyzed. If End User downloads the Agent from End Users controller (ie., using the installation wizard provided by AppDynamics), then transport layer security (TLS) for Agent-to-Controller communication is enabled by default. For other installations, AppDynamics recommends enabling SSL/TLS encryption for Agent communications. For detailed instructions please see docs.appdynamics.com. Agents also support outbound
HTTP proxies for customers using these security mechanisms. For Software user interface access, AppDynamics redirects all traffic to HTTPS.

Access Controls to Data
Access to collected data and data collection features is restricted to authenticated customer users by role-based access controls (RBAC). In addition, customer users do not have native access to run queries on the Controllers MySQL database.

Availability
Servers for the software are operated in fault-tolerant architecture in a manner designed to ensure availability. Data is backed up nightly and stored redundantly. AppDynamics also provides an off-site backup service. Software security updates and patches are evaluated by engineers and are deployed based upon the security risks and stability benefits they offer to the Software and End Users.

Security
Access to the Software platform infrastructure and data by AppDynamics personnel is secured by authentication methods including public key authentication, passwords and
network access control lists. Infrastructure and data access is restricted to AppDynamics employees and contractors subject to confidentiality agreements. System and network activity for the Software are regularly monitored by a team of engineers. Failed authentication attempts are audited and engineers are paged so that intrusions or threats can be investigated. Standard firewall policies are deployed to block access except to ports required for Software and Agent communication.

Sensitive Data
AppDynamics recommends on-premises (rather than software-as-a-service) deployments for customers subject to heightened regulatory oversight of data.

More Information
For more information on data privacy or security processes please contact help@appdynamics.com or your account representative. To report a suspected security breach, contact security@appdynamics.com.
AppDynamics Proprietary and Confidential * Revision 2016.11.01

1.77 appdynamics-without-jre 24.11.0.7212

1.77.1 Available under license :

APPDYNAMICS, INC.

END USER LICENSE AGREEMENT

1. SOFTWARE LICENSE.

1.1 LICENSE GRANT.

This End User License Agreement (this Agreement) between AppDynamics, Inc., a Delaware corporation with its principal place of business located at 303 Second Street, North Tower, 8th Floor, San Francisco, CA 94107 (AppDynamics) and the customer set forth in the Order Form (as defined below) (End User) is effective as of the date the initial Order Form is executed or the date this Agreement is referenced by the applicable purchase order (the Effective Date). This Agreement shall govern each order form, sales quotation, proposal, purchase order or other ordering document that references this Agreement (each an Order Form). Each Order Form will form part of this Agreement. Subject to the terms and conditions of this Agreement, AppDynamics hereby grants to End User, during the License Term (as defined below), a non-exclusive, non-transferable, non-sublicensable right and license to use the software-as-a-service
and/or on-premises version of AppDynamics application intelligence software product, including one Controller, as designated in the Order Forms (the Software) for internal business purposes only for the quantity of units in the Order Form. AppDynamics Test & Dev Edition licenses shall only be used in test-only non-production environments. For purposes hereof, the License Term begins on the date AppDynamics delivers the Software license keys to End User and extends for the period specified in the applicable Order Form (unless earlier terminated in accordance with this Agreement). For the avoidance of doubt, End Users affiliates (and employees thereof) shall not use the Software without AppDynamics prior written consent. Notwithstanding anything to the contrary herein, this Agreement does not supersede a signed agreement between AppDynamics and End User with respect to the Software.

1.2 RESTRICTIONS ON USE.

Except as otherwise expressly provided in this Agreement, End User shall
not (and shall not permit any third party to): (a) sublicense, sell, resell, transfer, assign, distribute, share, lease, rent, make any external commercial use of, outsource, use on a timeshare or service bureau, or use in an application service provider or managed service provider environment, or otherwise generate income from the Software; (b) copy the Software onto any public or distributed network, except for an internal and secure cloud computing environment; (c) cause the decompiling, disassembly, or reverse engineering of any portion of the Software, or attempt to discover any source code or other operational mechanisms of the Software (except where such restriction is expressly prohibited by law without the possibility of waiver, and then only upon prior written notice to AppDynamics); (d) modify, adapt, translate or create derivative works based on all or any part of the Software; (e) use any Third Party Software (as defined below) provided with the Software other than with
the Software; (f) modify any proprietary rights notices that appear in the Software or components thereof; (g) publish the results of any benchmarking tests run on any Third Party Software; (h) use any Software in violation of any applicable laws and regulations (including any export laws, restrictions, national security controls and regulations) or outside of the license scope set forth in Section 1.1; (i) use the Software in support of any nuclear proliferation, chemical weapon, biological weapon or missile proliferation activity; (j) configure the Software to collect any (1) social security numbers or other government-issued identification numbers, (2) passwords or other authentication credentials, (3) health information, biometric data, genetic data, or payment/financial information, (4) any data relating to a person under the age of 13 years old, or (5) any other data that is subject to regulatory or contractual handling requirements (e.g., PCI, HIPAA, or state and federal data security
laws) (collectively, Prohibited Data); or (k) use the Software to (1) store, download or transmit infringing, libelous, or otherwise unlawful or tortious material, or malicious code or malware, or (2) engage in phishing, spamming, denial-of-service attacks or other fraudulent or criminal activity, (3) interfere with or disrupt the integrity or performance of third party systems, or the Software or data contained therein, or (4) attempt to gain unauthorized

access to the Software or AppDynamics' systems or networks, or (5) perform, or engage any third party to perform, authenticated or unauthenticated penetration testing, vulnerability assessments or other security assessments on the SaaS version of the Software. End User shall not export or re-export, directly or indirectly, any Software or technical data or any copy, portions or direct product thereof (i) in violation of any applicable laws and regulations, (ii) to any country for which the United States or any other government,
or any agency thereof, at the time of export requires an export license or other governmental approval, including Cuba, Libya, North Korea, Iran, Iraq, or Rwanda or any other Group D:1 or E:2 country (or to a national or resident thereof) specified in the then current Supplement No. 1 to part 740 of the U.S. Export Administration Regulations (or any successor supplement or regulations, without first obtaining such license or approval) or (ii) to anyone on the U.S. Treasury Departments list of Specially Designated Nationals or the U.S. Commerce Departments Table of Denial Orders. End User shall, at its own expense, obtain all necessary customs, import, or other governmental authorizations and approvals.

1.3 EVALUATION USE.

If End User accessed the Software pursuant to a no-fee or beta evaluation (Evaluation Use), then the License Term is for the period enabled by the license key for the Software provided by AppDynamics. AppDynamics shall have the right to downgrade, limit or otherwise
modify the Software provided for Evaluation Use at any time without notice, and no warranty, indemnity, Maintenance or Support obligations of AppDynamics will apply to Evaluation Use. End User may use the number and type of licenses indicated by AppDynamics in writing prior to End User downloading or accessing the Software, which will be enabled by End Users specific license key. AppDynamics has the right to immediately revoke and terminate any Evaluation Use at any time. End User agrees to provide feedback related to the Software as reasonably requested by AppDynamics. End User grants to AppDynamics, without charge, the fully paid-up, perpetual, sublicensable right to exploit such feedback for any purpose. Evaluation Use is not a guarantee of future product features and should not be relied upon in making any purchasing decisions.

1.4 UNAUTHORIZED USE.

End User shall notify AppDynamics promptly of any unauthorized use of any password or account or any other known or suspected breach
of security or misuse of the Software. End User is responsible for use of the Software by any and all employees, contractors, or other users that it allows to access the Software.

1.5 MAINTENANCE AND SUPPORT.

Support is defined as AppDynamics' obligations to respond to support requests as described in Exhibit A (Enterprise Support). Maintenance means AppDynamics obligations related to error resolution, bug fixes and the provision of updates and upgrades made generally commercially available by AppDynamics in its sole discretion, all as described in Exhibit A. Subject to End Users payment of the fees set forth in the applicable Order Form(s), AppDynamics will (a) provide Maintenance and Support for the Software, and (b) solely if End User has purchased access to the software-as-a-service version of the Software, make the Software available to End User in accordance with Exhibit B (Availability and Security). For time-limited licenses for the Software (as set forth in an Order Form, Subscription Licenses), the fees for Maintenance and Support are included in the fees for the Software. For perpetual licenses, (i) AppDynamics shall invoice End User the applicable fees for Maintenance and Support (Maintenance and Support Fees) upon execution of the Order Form, and (ii) subject to payment of the Maintenance and Support Fees, AppDynamics will provide Support for the Maintenance and Support period set forth in the Order Form, as it may be renewed (the Maintenance and Support Term). If Maintenance and Support terminates with

respect to any perpetual licenses, and End User is in good standing under this Agreement, then End User may reinstate Maintenance and Support on payment of the cumulative Maintenance and Support Fees applicable for the period during which Maintenance and Support lapsed, plus Maintenance and Support Fees for the reinstated Maintenance and Support Term. Notwithstanding anything herein to the contrary, if End User receives Support from an authorized
partner of AppDynamics (Partner), then the support terms agreed upon by End User and such Partner shall govern in lieu of those set forth in Exhibit A, and AppDynamics shall have no support obligations to End User.

1.6 SERVICES.

Subject to the terms hereof (including payment of any applicable fees set forth in the Order Form), AppDynamics will provide the training, enablement and/or other services described in an Order Form (or statement of work referencing this Agreement), if any (Services). All Services will be rendered on a time and materials basis. AppDynamics will not exceed the total time purchased without prior written approval from End User. If the Services purchased have been consumed, AppDynamics will stop the Services until additional Services have been purchased. If End User elects not to purchase additional Services, then the Services will be deemed complete. If not used, pre-purchased Services and expenses expire twelve (12) months after the date purchased (unless otherwise
set forth in the applicable Order Form). End User agrees to provide reasonable cooperation and information as necessary to permit AppDynamics to perform the Services. End User will reimburse AppDynamics for travel and expenses (at cost) incurred in connection with the Services (if any) by the Invoice Due Date (as defined below). Services will be performed on business days (a business day means Monday through Friday, excluding national holidays, during working hours, in the location where the Services are delivered). Saturday Services, and hours worked during the week that exceed the local working hours in a week, will be charged at the agreed rate x 1.5. Services performed on Sundays or national holidays will be charged at 2 x the agreed rate. If End User cancels or delays any scheduled Services less than ten (10) business days before the start date of such Services, then AppDynamics will deduct from End User's account (or End User will pay for) the amount of Services that were scheduled
in any of the ten (10) business days following the date of cancellation (or notification of the delay, as applicable), and End User will fully reimburse AppDynamics for any reasonable travel and expenses incurred by AppDynamics for such Services (and for any Services rescheduled by End User) for which AppDynamics is unable to obtain a refund. During the License Term (for Subscription Licenses) or during the Maintenance and Support Term (for perpetual licenses), and in each case for a period of twelve (12) months thereafter, without AppDynamics prior written approval, End User will not solicit for employment or consultancy any AppDynamics employees who participated in the performance of Services.

2. FEES.

2.1 PRICING.

End User will be invoiced for those amounts and at those prices set forth in an Order Form (an Invoice), provided, however, that, for Evaluation Use, End User shall not be billed unless otherwise specified by AppDynamics in writing prior to End User downloading
or accessing (as applicable) the Software. Fees do not include any customization of the Software (nor support for any such customizations, unless otherwise agreed in writing). If End Users usage of the Software is in excess of those amounts set forth in the Order Form, End User will be billed for those overages at a pro-rated amount for the remainder of the applicable License Term, based on AppDynamics then-current standard pricing. If AppDynamics believes in good faith that End Users usage of the Software exceeds that set forth on the applicable Order Form, End User agrees to allow AppDynamics to audit End Users use of the Software (not more frequently than twice per

calendar year), upon at least twenty-four (24) hours notice, to determine the actual Software use, using a commercially reasonable auditing procedure. End User acknowledges that purchases made under this Agreement are neither contingent on the delivery of any future functionality or features nor dependent on any oral or written public comments made by AppDynamics regarding future functionality or features.

2.2 PAYMENTS.

End User shall pay Invoices within thirty (30) days of the invoice date (the Invoice Due Date). If End User reasonably disputes any Invoice, (i) End User shall provide AppDynamics with written notice of such dispute, including the grounds therefor (a Dispute Notice), prior to the Invoice Due Date, (ii) End User and AppDynamics shall, for a period of fifteen (15) days following AppDynamics receipt of such Dispute Notice, negotiate in good faith to resolve the dispute and (iii) if such dispute remains unresolved at the end of such period, the parties shall retain all of their respective rights under this Agreement (including, without limitation, any action for non-payment of the fees set forth herein). All payment obligations are non-cancelable and all amounts paid are non-refundable, except (a) for amounts paid in error that are not actually due under this Agreement, and (b) as set forth in Sections 6.1 and 7.1. The fees paid by End User are exclusive of all taxes, levies, or duties imposed by taxing authorities, if any, and End User shall be responsible for payment of all such taxes, levies, or duties, excluding taxes based on AppDynamics income. End User represents and warrants that the billing and contact information provided to AppDynamics is complete and accurate, and AppDynamics shall have no responsibility for any Invoices that are not received due to inaccurate or missing information provided by End User. End User shall pay interest on all payments not received by the Invoice Due Date at a rate of one percent (1%) per month or the maximum amount allowed by law, whichever is lesser. All amounts due under this Agreement shall be paid by End User in full without any set-off, counterclaim, deduction or withholding (other than any deduction or withholding of tax as required by law). If requested by AppDynamics, End User will obtain and furnish to AppDynamics tax receipts or other certificates issued by the competent taxation office showing the payments of the withholding tax within a reasonable time after payment. Following written notice, AppDynamics shall be entitled to suspend End Users access to the Software if payments are not received within thirty (30) days of the Invoice Due Date. Notwithstanding anything herein to the contrary, if End User makes its payments pursuant to this Agreement to a Partner, then the payment terms agreed by End User and such Partner shall govern to the extent anything in this Section 2 conflicts with such Partner payment terms.

3. CONFIDENTIALITY

3.1 SCOPE AND RESTRICTIONS.

Confidential Information means all information of a party (Disclosing Party) disclosed to the other party (Receiving Party) that is designated in writing or identified as confidential at the time of disclosure or should be reasonably known by the Receiving Party to be confidential due to the nature of the information disclosed and the circumstances surrounding the disclosure. The terms of this Agreement, the Software, any technical or other documentation relating to the Software, logins, passwords and other access codes and any and all information regarding AppDynamics business, products and services are the Confidential Information of AppDynamics. The Receiving Party will: (i) not use the Disclosing Partys Confidential Information for any purpose outside of this Agreement; (ii) not disclose such Confidential Information to any person or entity, other than its affiliates, employees, consultants, agents and professional advisers who have a need to know for the Receiving Party to exercise its rights or perform its obligations hereunder, provided that such employees, consultants, and agents are bound by agreements or, in the case of professional advisers, ethical duties respecting such Confidential Information in accordance with the terms of this Section 3; and (iii) use reasonable measures to protect the confidentiality

of such Confidential Information. If the Receiving Party is required by applicable law or court order to make any disclosure of such Confidential Information, it will first give written notice of such requirement to the Disclosing Party, and, to the extent within its control, permit the Disclosing Party to intervene in any relevant proceedings to protect its interests in its Confidential Information, and provide full cooperation to the Disclosing Party in seeking to obtain such protection. Further, this Section 3 will not apply to information that the Receiving Party can document: (i) was rightfully in its possession or known to it prior to receipt without any restriction on its disclosure; (ii) is or has become public knowledge or publicly available through no fault of the Receiving Party; (iii) is rightfully obtained by the Receiving Party from a third party without breach of any confidentiality obligation; or (iv) is independently developed by employees of the Receiving Party who had
no access to such information.

3.2 EQUITABLE RELIEF.

The Receiving Party acknowledges that unauthorized disclosure of the Disclosing Partys Confidential Information could cause substantial harm to the Disclosing Party for which damages alone might not be a sufficient remedy and, therefore, that upon any such disclosure by the Receiving Party the Disclosing Party will be entitled to seek appropriate equitable relief in addition to whatever other remedies it might have at law or equity.

4. PROPRIETARY RIGHTS. AppDynamics and its suppliers own and shall retain all proprietary rights, including all copyright, patent, trade secret, trademark and all other intellectual property rights, in and to the Software and the results of any Services. End User acknowledges that the rights granted under this Agreement do not provide End User with title to or ownership of the Software. Certain free or open source based software (the FOSS Software) and third party software included with the Software
(the Third Party Software) is shipped with the Software but is not considered part of the Software hereunder. A list of the FOSS Software and Third Party Software is set forth on the webpage located at https://docs.appdynamics.com/display/DASH/Legal+Notices With respect to Third Party Software included with the Software, such Third Party Software suppliers are third party beneficiaries of this Agreement. End Users use of such FOSS Software is subject to the terms of the licenses set forth on such webpage. The Software and Third Party Software may only be used by End User as prescribed by the AppDynamics documentation located at http://docs.appdynamics.com (as it may be updated from time to time, the Documentation).

5. TERM AND TERMINATION.

The term of this Agreement begins on the Effective Date and will remain in effect until all Subscription Licenses (and Maintenance and Support Terms, if applicable) expire or until this Agreement is otherwise terminated in accordance with the terms
hereof, whichever occurs first (the Term). This Agreement may be renewed at any time by execution of an Order Form referencing this Agreement, and any such renewal will be deemed part of the Term hereunder. If either party commits a material breach of this Agreement, and such breach has not been cured within thirty (30) days after receipt of written notice thereof, the non-breaching party may terminate this Agreement, except that AppDynamics may immediately terminate this Agreement and/or End Users license to the Software upon End Users breach of Section 1.2. Either party may also terminate this Agreement upon written notice if the other party suspends payment of its debts or experiences any other insolvency or bankruptcy-type event. Upon expiration or termination of this Agreement for any reason, (i) with respect to Subscription Licenses, all rights granted to End User shall terminate and End User shall destroy any copies of the Software and Documentation within End Users possession
and control; (ii) with respect to perpetual licenses, these will survive termination of this Agreement unless AppDynamics terminates the Agreement for End Users breach of this Agreement in which case all rights granted to End User shall terminate and End User shall destroy any copies of the Software and Documentation within End

Users possession and control; and (iii) each Receiving Party will return or destroy, at the Disclosing Partys option, the Disclosing Partys Confidential Information in the Receiving Partys possession or control. All fees that have accrued as of such expiration or termination, and Sections 1.2, 1.3, 1.4, 2, 3, 4, 5, 6.2 and 7 through 12, will survive any expiration or termination hereof.

6. WARRANTIES.

6.1 LIMITED WARRANTY.The limits below will not apply to the extent prohibited by applicable law.

AppDynamics warrants that during the first thirty (30) days following the date the Software is purchased, the Software will, in all material respects, conform to the
functionality described in the then-current Documentation for the applicable Software version. AppDynamics sole and exclusive obligation, and End Users sole and exclusive remedy, for a breach of this warranty shall be that AppDynamics shall be required to use commercially reasonable efforts to repair or replace the Software to conform in all material respects to the Documentation, and if AppDynamics is unable to materially restore such functionality within thirty (30) days from the date of written notice of such breach, End User shall be entitled to terminate the license to the affected Software upon written notice and AppDynamics shall promptly provide a pro-rata refund of the Software license fees (or Maintenance and Support Fees, for perpetual licenses) that have been paid in advance for the remainder of the License Term for the applicable Software (beginning on the date of termination). End User must notify AppDynamics in writing of any warranty breaches within such warranty period,
and End User must have installed and configured the Software in accordance with the Documentation to be eligible for the foregoing remedy.

6.2 WARRANTY DISCLAIMER.

EXCEPT AS EXPRESSLY PROVIDED IN THIS SECTION 6, ALL SOFTWARE, DOCUMENTATION, MAINTENANCE AND SUPPORT AND SERVICES ARE PROVIDED AS IS AND APPDYNAMICS AND ITS SUPPLIERS EXPRESSLY DISCLAIM ANY AND ALL OTHER REPRESENTATIONS AND WARRANTIES, EITHER EXPRESS, IMPLIED, STATUTORY, OR OTHERWISE WITH RESPECT THERETO, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, OR THE CONTINUOUS, UNINTERRUPTED, ERROR-FREE, VIRUS-FREE, OR SECURE ACCESS TO OR OPERATION OF THE SOFTWARE. APPDYNAMICS EXPRESSLY DISCLAIMS ANY WARRANTY AS TO THE ACCURACY OR COMPLETENESS OF ANY INFORMATION OR DATA ACCESSED OR USED IN CONNECTION WITH THE SOFTWARE, DOCUMENTATION, MAINTENANCE AND SUPPORT, OR SERVICES. AppDynamics is not responsible for any delays, delivery failures, or any other loss or damage resulting
from the transfer of data over communications networks and facilities, including the Internet, and End User acknowledges that the Software and Documentation may be subject to limitations, delays and other problems inherent in the use of such communications facilities. The Software is not fault-tolerant and is not designed or intended for use in hazardous environments, including without limitation, in the operation of aircraft or other modes of human mass transportation, nuclear or chemical facilities, life support systems, implantable medical equipment, motor vehicles or weaponry systems, or any other application in which failure of the Software could lead to death or serious bodily injury of a person, or to severe physical or environmental damage (each, a High Risk Use). AppDynamics expressly disclaims any express or implied warranty or representation of fitness for High Risk Use. AppDynamics shall not be liable to End User for any loss, damage or harm suffered by End User that
is directly or indirectly caused by End Users unauthorized use of the Software to process Prohibited Data.

7. INDEMNIFICATION.

7.1 BY APPDYNAMICS.

AppDynamics agrees at its expense to defend End User against (or, at AppDynamics option, settle), any third party claim to the extent such claim alleges that the Software infringes or misappropriates any patent, copyright, trademark or trade secret of a third party, and AppDynamics shall pay all costs and damages finally awarded against End User by a court of competent jurisdiction as a result of any such claim. In the event that the use of the Software is, or in AppDynamics sole opinion is likely to become, subject to such a claim, AppDynamics, at its option and expense, may (a) replace the applicable Software with functionally equivalent non-infringing technology, (b) obtain a license for End Users continued use of the applicable Software, or (c) terminate the license and provide a pro-rata refund of the Software license fees (or Maintenance
and Support Fees, for perpetual licenses) that have been paid in advance for the remainder of the License Term for the applicable Software (beginning on the date of termination). The foregoing indemnification obligation of AppDynamics will not apply: (1) if the Software is modified by End User or its agent; (2) if the Software is combined with other non-AppDynamics products, applications, or processes, but solely to the extent the alleged infringement is caused by such combination; or (3) to any unauthorized use of the Software. The foregoing shall be End Users sole remedy with respect to any claim of infringement of third party intellectual property rights.

7.2 BY END USER.

End User agrees to defend, at its expense, AppDynamics and its affiliates, its suppliers and its resellers against any third party claim to the extent such claim arises from or is made in connection with End Users breach of Section 1 or End Users negligence or willful misconduct, and End User shall pay all
costs and damages finally awarded against AppDynamics by a court of competent jurisdiction as a result of any such claim.

7.3 INDEMNIFICATION REQUIREMENTS.

In connection with any claim for indemnification under this Section 7, the indemnified party must promptly provide the indemnifying party with notice of any claim that the indemnified party believes is within the scope of the obligation to indemnify, provided, however, that the failure to provide such notice shall not relieve the indemnifying party of its obligations under this Section 7, except to the extent that such failure materially prejudices the indemnifying partys defense of such claim. The indemnified party may, at its own expense, assist in the defense if it so chooses, but the indemnifying party shall control the defense and all negotiations related to the settlement of any such claim. Any such settlement intended to bind either party shall not be final without the other partys written consent, which consent shall not
be unreasonably withheld, conditioned or delayed; provided, however, that End Users consent shall not be required when AppDynamics is the indemnifying party if the settlement involves only the payment of money by AppDynamics.

8. LIMITATION OF LIABILITY. The limits below will not apply to the extent prohibited by applicable law.

8.1 EXCEPT FOR LIABILITY ARISING OUT OF END USERS BREACH OF SECTION 1.2 (RESTRICTIONS ON USE), IN NO EVENT SHALL EITHER PARTY BE LIABLE UNDER THIS AGREEMENT FOR ANY INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, INCLUDING DAMAGES FOR LOSS OF REVENUES OR PROFITS, LOSS OF USE, BUSINESS INTERRUPTION, OR LOSS OF DATA, WHETHER IN AN ACTION IN CONTRACT OR TORT, EVEN IF THE OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

8.2 EXCEPT FOR LIABILITY ARISING OUT OF END USERS BREACH OF SECTION 1.2 (RESTRICTIONS ON USE), NEITHER PARTYS LIABILITY FOR ANY DAMAGES (WHETHER FOR BREACH OF CONTRACT, MISREPRESENTATIONS, NEGLIGENCE, STRICT LIABILITY, OTHER TORTS OR OTHERWISE) UNDER THIS AGREEMENT SHALL EXCEED AN AMOUNT EQUAL TO THE TOTAL FEES PAID (PLUS FEES PAYABLE) TO APPDYNAMICS DURING THE TWELVE (12) MONTHS IMMEDIATELY PRECEDING THE CLAIM GIVING RISE TO SUCH DAMAGES. THESE LIMITATIONS SHALL APPLY NOTWITHSTANDING ANY FAILURE OF ESSENTIAL PURPOSE OF ANY REMEDY.

9. FORCE MAJEURE.

Except for payment obligations, neither party hereto will be liable for defaults or delays due to acts of God, or the public enemy, acts or demands of any government or governmental agency, fires, earthquakes, floods, accidents, or other unforeseeable causes beyond its reasonable control and not due to its fault or negligence.

10. DATA COLLECTION.

End User acknowledges that AppDynamics application server and machine software agents (the Agents) collect metrics that relate to the performance, health and resource of an application, its components (transactions, code libraries) and related infrastructure (nodes, tiers) that service those components. In addition, AppDynamics collects metrics on End Users activities, such as web pages visited, length of visit, and which features of the Software an End User uses. If End User provides AppDynamics with any personally identifiable information (personal data), End User represents and warrants that such information has been collected by End User in accordance with the provisions of all applicable data protection legislation and that End User has all right and consents necessary to provide such personal data to AppDynamics. End User will indemnify AppDynamics for reasonable costs and other amounts that AppDynamics may incur relating to any breach of this Section.

11. US GOVERNMENT MATTERS.

As defined in FAR section 2.101, the Software and Documentation are commercial items and according to DFAR section 252.227 7014(a)(1) and (5) are deemed to be commercial computer software and commercial computer software documentation. Consistent with DFAR section 227.7202 and FAR section 12.212, any use modification, reproduction, release, performance, display, or disclosure of such commercial software or commercial software documentation by the U.S. Government will be governed solely by the terms of this Agreement and will be prohibited except to the extent expressly permitted by the terms of this Agreement.

12. MISCELLANEOUS.

This Agreement shall be governed by and construed under the laws of the State of California, U.S.A. The parties consent to the exclusive jurisdiction and venue of the courts located in and serving San Francisco, California. Failure by either Party to exercise any of its rights under, or to enforce any provision of, this Agreement will not be deemed a waiver or forfeiture of such rights or ability to enforce such provision. If any provision of this Agreement is held by a court of competent jurisdiction to be illegal, invalid or unenforceable, such provision will be amended to achieve as nearly as possible the same economic effect of the original provision and the remainder of this Agreement will remain in full force and effect. This Agreement and its exhibits, together with the Order Form(s) and any statements of work incorporating this Agreement, if applicable, represent the entire

agreement between the parties and supersede any previous or contemporaneous oral or written agreements or communications regarding the subject matter of this Agreement. The person signing or otherwise accepting this Agreement for End User represents that s/he is duly authorized by all necessary and appropriate corporate action to enter this Agreement on behalf of End User. Any modification to this Agreement must be in writing and signed by a duly authorized agent of both parties. The Uniform Computer Information Transactions Act (UCITA) does not apply to this Agreement. This Agreement shall control over additional or different terms of any purchase order, confirmation, invoice, statement of work or similar document (other than an AppDynamics Order Form, which will take precedence), even if accepted in writing by both parties, and waivers and amendments to this Agreement shall be effective only if made by non-pre-printed agreements clearly understood by both parties to be an amendment or waiver to this Agreement. For purposes of this Agreement, including means including without limitation. The rights and remedies of the parties hereunder will be deemed cumulative and not exclusive of any other right or remedy conferred by this Agreement or by law or equity. No joint venture, partnership, employment, or agency relationship exists between the parties as a result of this Agreement or use of the Software. AppDynamics reserves the right to perform its obligations from locations and/or through use of affiliates and subcontractors, worldwide, provided that AppDynamics will be responsible for such parties. End User may not assign this Agreement without the prior written approval of AppDynamics and any purported assignment in violation of this section
shall be void; AppDynamics may assign, transfer or subcontract this Agreement in whole or in part. Upon any assignment of this Agreement by End User that is approved by AppDynamics, any licenses that contain an unlimited aspect will, with respect to End User or the successor entity, as applicable, be capped at the number of authorized Software units in use immediately prior to such assignment. End User agrees that AppDynamics may refer to End User by its trade name and logo, and may briefly describe End Users business, in AppDynamics marketing materials and website. AppDynamics may give notice to End User by electronic mail to End Users email address on record in End Users account information, or by written communication sent by first class mail or pre-paid post to End Users address on record in End Users account information. End User may give notice to AppDynamics at any time by any letter delivered by nationally recognized overnight delivery service or first class postage prepaid
mail to AppDynamics at the following address or such other address as may be notified to End User from time to time: AppDynamics, Inc., 303 Second Street, North Tower, 8th Floor, San Francisco, CA 94107, Attn: Legal Department. Notice under this Agreement shall be deemed given when received, if personally delivered; when receipt is electronically confirmed, if transmitted by email; the day after it is sent, if sent for next day delivery by recognized overnight delivery service; and upon receipt, if sent by certified or registered mail, return receipt requested.

EXHIBIT A

ENTERPRISE SUPPORT

GENERAL REQUIREMENTS.

AppDynamics will provide access to a ticketing system and email address (help@appdynamics.com), which will be available twenty-four (24) hours per day, seven (7) days per week. The email account will be maintained by qualified support specialists, who shall use commercially reasonable efforts to answer questions and resolve problems regarding the Software.

HOURS OF OPERATION.

Support

is available twenty-four (24) hours per day, seven (7) days per week.

ERROR CLASSIFICATION.

Any reported errors are classified in the following manner, in each case when caused by the Software:

Error Classification Criteria	
Urgent	End User production application is down or there is a major malfunction, resulting in a business revenue loss and impacting the End User application functionality for a majority of users.
High	Critical loss of End User application functionality or performance, impacting the application functionality for a high number of users.
Normal	Moderate loss of End User application functionality or performance, impacting multiple users.
Low	Minor loss of End User application functionality or product feature in question.

ERROR DEFINITION.

An error means a reproducible malfunction in the Software that is reported by End User through AppDynamics ticketing system that prevents the Software from performing in accordance with the operating specifications described in the then-current Documentation.

AUTHORIZED SUPPORT CONTACTS.

Maintenance and Support will be provided solely to End Users designated support contacts. The Order Form may indicate a maximum number of designated support contacts for End Users service level. End User will provide its designated support contacts, including its primary email address.

END USERS OBLIGATION TO ASSIST.

If End User reports a purported error in the Software to AppDynamics, AppDynamics ticketing system will request the following minimum information:

A general description of the operating environment
A list of all hardware components, operating systems and networks
A reproducible test case
Any log files, trace and systems files

End Users failure to provide this information may prevent or significantly delay AppDynamics ability to identify and fix the reported error. AppDynamics time to respond to any error will begin when AppDynamics has received

all requested information
from the End User and is able to reproduce the error.

ERROR RESOLUTION.

If AppDynamics determines there is an error in the Software, AppDynamics may, at its sole option, repair that error in the version of the Software that End User is currently using or instruct End User to install a newer version of the Software with that error repaired. AppDynamics reserves the right to provide End User with a workaround in lieu of fixing an error.

SOFTWARE UPDATES AND UPGRADES. End User must be current on fees in order to receive access to Maintenance.

RESPONSE TIME. AppDynamics shall respond to error tickets in accordance with the tables set forth below. AppDynamics will use reasonable means to repair the error and keep End User informed of progress. AppDynamics makes no representations as to when a full resolution of the error may be made.

Error Initial Response Manager Escalation VP Escalation Email Status Updates
===== ================ ================= ============= ====================
Urgent
1 Hour 1 Business Day 1 Week Daily
High 6 Hours 1 Week 2 Weeks Weekly
Normal 1 Business Day Quarterly Review None None
Low 2 Business Days Semi-Annual Review None None

Maintenance and Support Policy: The Maintenance and Support policy is as follows:

AppDynamics provides Maintenance and Support for each version of the Software for a period of twelve (12) months after the generally available release of the next major version of the Software (a major release is a change in the first number to the right of the decimal point). For example, if version 4.1 is released on January 1, 2015, then AppDynamics will provide Maintenance and Support for version 4.0 until January 1, 2016. AppDynamics does not provide Maintenance or Support for any customized software (or components thereof).

For third party software or technology used by End User with the Software but not included with the Software (a Platform, such as Java Virtual Machines), AppDynamics will follow the end-of-life
(EOL) support timeline announced by the third party vendor of such Platform. AppDynamics will stop providing Maintenance and Support for an EOLd Platform version when the Platform vendor stops providing maintenance and support for that Platform version.

EXHIBIT B
AVAILABILITY AND SECURITY

The terms set forth in this Exhibit B apply only if End User has purchased access to the online software-as-a-service (SaaS) version of the Software, as indicated on the Order Form.

AVAILABILITY.

AppDynamics will provide System Availability (as defined below) of ninety-nine and one-half percent (99.5%) (the Availability SLA), excluding situations identified as Exclusions below. For purposes of the Availability SLA, the AppDynamics network extends to, includes and terminates at the data center located router that provides the outside interface of each of AppDynamics WAN connections to its backbone providers (the AppDynamics Network).

Exclusions means any outage that results from any of the following:
a.
Any Maintenance performed by AppDynamics during AppDynamics standard Maintenance windows. AppDynamics will notify End User within forty-eight (48) hours of any standard Maintenance and within twenty-four (24) hours for other non-standard emergency Maintenance (collectively referred to herein as Scheduled Maintenance).

b. End User's information content or application programming, or the acts or omissions of End User or its agents, including, without limitation, the following:
1. End Users use of any programs not supplied by AppDynamics;
2. End Users failure to provide AppDynamics with reasonable advance prior notice of any pending unusual large deployments of new nodes (i.e., adding over ten percent (10%) total nodes in less than twenty-four (24) hours);
3. End Users implementation of any significant configuration changes, including changes that lead to a greater than thirty percent (30%) change in a one week period or greater than fifty percent (50%) change in a one month period in the number of key
objects in the system including but not limited to metrics, snapshots, nodes, events and business transactions;
4. Any misconfiguration by End User (as determined in AppDynamics sole discretion), including configuration errors and unintended usage of the Software;
5. End Users failure to upgrade the Agents to keep the Agent versions within six (6) months of the Controller version; or
6. End Users implementation of configuration changes in the number of key objects in the Software (including metrics, snapshots, nodes, events and business transactions) that results in, or is likely to result in, an adverse impact on other customers.

c. Force majeure or other circumstances beyond AppDynamics reasonable control that could not be avoided by its exercise of due care.

d. Failures of the Internet backbone itself and the network by which End User connects to the Internet backbone or any other network unavailability outside of the AppDynamics Network, such as misconfigurations, proxies or firewalls.

e. Any window of time when End User agrees that Software availability/unavailability will not be monitored or counted.

f. Any problems resulting from End User combining or merging the Software with any hardware or software not supplied by AppDynamics or not identified by AppDynamics in the Documentation as being compatible with the Software.

g. End Users or any third partys use of the Software in an unauthorized or unlawful manner.

Remedies for Excessive Downtime:

In the event the availability of the Software falls below the Availability SLA in a given calendar quarter, AppDynamics will pay End User a service credit (Service Credit) as follows, corresponding to the actual Availability of the Software during the applicable calendar quarter (on pro-rated basis for annual or multi-year fees): if the Availability is 99.5% or greater, End User is entitled to receive no credits; if the Availability is 97.0% - 99.49%, then End User is entitled to receive
Service Credits equal to five percent of the fees for the applicable calendar quarter (not to exceed $280); if the Availability is 95.0% - 96.9%, then End User is entitled to receive Service Credits equal to ten percent of the fees for the applicable calendar quarter (not to exceed $560); and if the Availability is less than 95.0%, then End User is entitled to receive Service Credits equal to twenty percent of the fees for the applicable calendar quarter (not to exceed $1120). Such Service Credit will be issued as a credit against any fees owed by End User for the next calendar quarter of the Term, or, if End User does not owe any additional fees, then AppDynamics will pay End User the amount of the applicable Service Credit within thirty (30) days after the end of the calendar quarter in which such credit accrued. To receive Service Credits, End User must submit a written request to AppDynamics (to customersuccess@appdynamics.com with a copy to legal@appdynamics.com) within 15 days after
the end of the quarter in which the Software was unavailable, or End Users right to receive Service Credits with respect to such unavailability will be waived. The remedies stated in this section are End Users sole and exclusive remedies and AppDynamics sole and exclusive obligations for service interruption or unavailability.

System Availability is measured by the following formula: (n - y) *100 / n
(1) n is the total number of minutes in the given calendar quarter minus the Exclusions (as defined above); and y is the total number of minutes in the given calendar quarter that the Controller is not accessible by End User (as determined by AppDynamics tools).
(2) Specifically excluded from n and y in this calculation are the Exclusions.

SECURITY INFORMATION.

For all End User data stored in the software-as-a-service version of the Software, AppDynamics will satisfy all of its obligations under Section 3 by maintaining the security precautions described below.
Certifications
AppDynamics
is SOC 2 Type II compliant, meaning it has been independently audited to verify the validity and functionality of its control activities and processes. Customers may request AppDynamics report at any time. AppDynamics data center provider is also SOC 2 Type II compliant.

Secure Connections
Agents initiate connections to a single Controller, which can either be hosted on-premises by the customer or by AppDynamics via the AppDynamics software-as-a-service platform. The Controller is the central repository and analytics engine where all performance data is stored, baselined, and analyzed. If End User downloads the Agent from End Users controller (ie., using the installation wizard provided by AppDynamics), then transport layer security (TLS) for Agent-to-Controller communication is enabled by default. For other installations, AppDynamics recommends enabling SSL/TLS encryption for Agent communications. For detailed instructions please see docs.appdynamics.com. Agents also support outbound
HTTP proxies for customers using these security mechanisms. For Software user interface access, AppDynamics redirects all traffic to HTTPS.

Access Controls to Data

Access to collected data and data collection features is restricted to authenticated customer users by role-based access controls (RBAC). In addition, customer users do not have native access to run queries on the Controllers MySQL database.

Availability
Servers for the software are operated in fault-tolerant architecture in a manner designed to ensure availability. Data is backed up nightly and stored redundantly. AppDynamics also provides an off-site backup service. Software security updates and patches are evaluated by engineers and are deployed based upon the security risks and stability benefits they offer to the Software and End Users.

Security
Access to the Software platform infrastructure and data by AppDynamics personnel is secured by authentication methods including public key authentication, passwords and
network access control lists. Infrastructure and data access is restricted to AppDynamics employees and contractors subject to confidentiality agreements. System and network activity for the Software are regularly monitored by a team of engineers. Failed authentication attempts are audited and engineers are paged so that intrusions or threats can be investigated. Standard firewall policies are deployed to block access except to ports required for Software and Agent communication.

Sensitive Data
AppDynamics recommends on-premises (rather than software-as-a-service) deployments for customers subject to heightened regulatory oversight of data.

More Information
For more information on data privacy or security processes please contact help@appdynamics.com or your account representative. To report a suspected security breach, contact security@appdynamics.com.
AppDynamics Proprietary and Confidential * Revision 2016.11.01

1.78 appdynamics 24.11.0.7212

1.78.1 Available under license :

APPDYNAMICS, INC.

END USER LICENSE AGREEMENT

1. SOFTWARE LICENSE.

1.1 LICENSE GRANT.

This End User License Agreement (this Agreement) between AppDynamics, Inc., a Delaware corporation with its principal place of business located at 303 Second Street, North Tower, 8th Floor, San Francisco, CA 94107 (AppDynamics) and the customer set forth in the Order Form (as defined below) (End User) is effective as of the date the initial Order Form is executed or the date this Agreement is referenced by the applicable purchase order (the Effective Date). This Agreement shall govern each order form, sales quotation, proposal, purchase order or other ordering document that references this Agreement (each an Order Form). Each Order Form will form part of this Agreement. Subject to the terms and conditions of this Agreement, AppDynamics hereby grants to End User, during the License Term (as defined below), a non-exclusive, non-transferable, non-sublicensable right and license to use

the software-as-a-service
and/or on-premises version of AppDynamics application intelligence software product, including one Controller, as designated in the Order Forms (the Software) for internal business purposes only for the quantity of units in the Order Form. AppDynamics Test & Dev Edition licenses shall only be used in test-only non-production environments. For purposes hereof, the License Term begins on the date AppDynamics delivers the Software license keys to End User and extends for the period specified in the applicable Order Form (unless earlier terminated in accordance with this Agreement). For the avoidance of doubt, End Users affiliates (and employees thereof) shall not use the Software without AppDynamics prior written consent. Notwithstanding anything to the contrary herein, this Agreement does not supersede a signed agreement between AppDynamics and End User with respect to the Software.

1.2 RESTRICTIONS ON USE.

Except as otherwise expressly provided in this Agreement, End User shall
not (and shall not permit any third party to): (a) sublicense, sell, resell, transfer, assign, distribute, share, lease, rent, make any external commercial use of, outsource, use on a timeshare or service bureau, or use in an application service provider or managed service provider environment, or otherwise generate income from the Software; (b) copy the Software onto any public or distributed network, except for an internal and secure cloud computing environment; (c) cause the decompiling, disassembly, or reverse engineering of any portion of the Software, or attempt to discover any source code or other operational mechanisms of the Software (except where such restriction is expressly prohibited by law without the possibility of waiver, and then only upon prior written notice to AppDynamics); (d) modify, adapt, translate or create derivative works based on all or any part of the Software; (e) use any Third Party Software (as defined below) provided with the Software other than with
the Software; (f) modify any proprietary rights notices that appear in the Software or components thereof; (g) publish the results of any benchmarking tests run on any Third Party Software; (h) use any Software in violation of any applicable laws and regulations (including any export laws, restrictions, national security controls and regulations) or outside of the license scope set forth in Section 1.1; (i) use the Software in support of any nuclear proliferation, chemical weapon, biological weapon or missile proliferation activity; (j) configure the Software to collect any (1) social security numbers or other government-issued identification numbers, (2) passwords or other authentication credentials, (3) health information, biometric data, genetic data, or payment/financial information, (4) any data relating to a person under the age of 13 years old, or (5) any other data that is subject to regulatory or contractual handling requirements (e.g., PCI, HIPAA, or state and federal data security
laws) (collectively, Prohibited Data); or (k) use the Software to (1) store, download or transmit infringing, libelous, or otherwise unlawful or tortious material, or malicious code or malware, or (2) engage in phishing, spamming, denial-of-service attacks or other fraudulent or criminal activity, (3) interfere with or disrupt the integrity or performance of third party systems, or the Software or data contained therein, or (4) attempt to gain unauthorized access to the Software or AppDynamics' systems or networks, or (5) perform, or engage any third party to perform, authenticated or unauthenticated penetration testing, vulnerability assessments or other security assessments on the SaaS version of the Software. End User shall not export or re-export, directly or indirectly, any Software or technical data or any copy, portions or direct product thereof (i) in violation of any applicable laws and regulations, (ii) to any country for which the United States or any other government,
or any agency thereof, at the time of export requires an export license or other governmental approval, including Cuba, Libya, North Korea, Iran, Iraq, or Rwanda or any other Group D:1 or E:2 country (or to a national or resident thereof) specified in the then current Supplement No. 1 to part 740 of the U.S. Export Administration Regulations (or any successor supplement or regulations, without first obtaining such license or approval) or (ii) to anyone on the U.S. Treasury Departments list of Specially Designated Nationals or the U.S. Commerce Departments Table of Denial Orders. End User shall, at its own expense, obtain all necessary customs, import, or other governmental authorizations and approvals.

1.3 EVALUATION USE.

If End User accessed the Software pursuant to a no-fee or beta evaluation (Evaluation Use), then the License Term is for the period enabled by the license key for the Software provided by AppDynamics. AppDynamics shall have the right to downgrade, limit or otherwise
modify the Software provided for Evaluation Use at any time without notice, and no warranty, indemnity, Maintenance or Support obligations of AppDynamics will apply to Evaluation Use. End User may use the number and type of licenses indicated by AppDynamics in writing prior to End User downloading or accessing the Software, which will be enabled by End Users specific license key. AppDynamics has the right to immediately revoke and terminate any Evaluation Use at any time. End User agrees to provide feedback related to the Software as reasonably requested by AppDynamics. End User grants to AppDynamics, without charge, the fully paid-up, perpetual, sublicensable right to exploit such feedback for any purpose. Evaluation Use is not a guarantee of future product features and should not be relied upon in making any purchasing decisions.

1.4 UNAUTHORIZED USE.

End User shall notify AppDynamics promptly of any unauthorized use of any password or account or any other known or suspected breach
of security or misuse of the Software. End User is responsible for use of the Software by any and all employees, contractors, or other users that it allows to access the Software.

1.5 MAINTENANCE AND SUPPORT.

Support is defined as AppDynamics' obligations to respond to support requests as described in Exhibit A (Enterprise Support). Maintenance means AppDynamics obligations related to error resolution, bug fixes and the provision of updates and upgrades made generally commercially available by AppDynamics in its sole discretion, all as described in Exhibit A. Subject to End Users payment of the fees set forth in the applicable Order Form(s), AppDynamics will (a) provide Maintenance and Support for the Software, and (b) solely if End User has purchased access to the software-as-a-service version of the Software, make the Software available to End User in accordance with Exhibit B (Availability and Security). For time-limited licenses for the Software (as set forth in an Order Form, Subscription Licenses), the fees for Maintenance and Support are included in the fees for the Software. For perpetual licenses, (i) AppDynamics shall invoice End User the applicable fees for Maintenance and Support (Maintenance and Support Fees) upon execution of the Order Form, and (ii) subject to payment of the Maintenance and Support Fees, AppDynamics will provide Support for the Maintenance and Support period set forth in the Order Form, as it may be renewed (the Maintenance and Support Term). If Maintenance and Support terminates with respect to any perpetual licenses, and End User is in good standing under this Agreement, then End User may reinstate Maintenance and Support on payment of the cumulative Maintenance and Support Fees applicable for the period during which Maintenance and Support lapsed, plus Maintenance and Support Fees for the reinstated Maintenance and Support Term. Notwithstanding anything herein to the contrary, if End User receives Support from an authorized
partner of AppDynamics (Partner), then the support terms agreed upon by End User and such Partner shall govern in lieu of those set forth in Exhibit A, and AppDynamics shall have no support obligations to End User.

1.6 SERVICES.

Subject to the terms hereof (including payment of any applicable fees set forth in the Order Form), AppDynamics will provide the training, enablement and/or other services described in an Order Form (or statement of work

referencing this Agreement), if any (Services). All Services will be rendered on a time and materials basis. AppDynamics will not exceed the total time purchased without prior written approval from End User. If the Services purchased have been consumed, AppDynamics will stop the Services until additional Services have been purchased. If End User elects not to purchase additional Services, then the Services will be deemed complete. If not used, pre-purchased Services and expenses expire twelve (12) months after the date purchased (unless otherwise set forth in the applicable Order Form). End User agrees to provide reasonable cooperation and information as necessary to permit AppDynamics to perform the Services. End User will reimburse AppDynamics for travel and expenses (at cost) incurred in connection with the Services (if any) by the Invoice Due Date (as defined below). Services will be performed on business days (a business day means Monday through Friday, excluding national holidays, during working hours, in the location where the Services are delivered). Saturday Services, and hours worked during the week that exceed the local working hours in a week, will be charged at the agreed rate x 1.5. Services performed on Sundays or national holidays will be charged at 2 x the agreed rate. If End User cancels or delays any scheduled Services less than ten (10) business days before the start date of such Services, then AppDynamics will deduct from End User's account (or End User will pay for) the amount of Services that were scheduled in any of the ten (10) business days following the date of cancellation (or notification of the delay, as applicable), and End User will fully reimburse AppDynamics for any reasonable travel and expenses incurred by AppDynamics for such Services (and for any Services rescheduled by End User) for which AppDynamics is unable to obtain a refund. During the License Term (for Subscription Licenses) or during the Maintenance and Support Term (for perpetual licenses), and in each case for a period of twelve (12) months thereafter, without AppDynamics prior written approval, End User will not solicit for employment or consultancy any AppDynamics employees who participated in the performance of Services.

2. FEES.

2.1 PRICING.

End User will be invoiced for those amounts and at those prices set forth in an Order Form (an Invoice), provided, however, that, for Evaluation Use, End User shall not be billed unless otherwise specified by AppDynamics in writing prior to End User downloading or accessing (as applicable) the Software. Fees do not include any customization of the Software (nor support for any such customizations, unless otherwise agreed in writing). If End Users usage of the Software is in excess of those amounts set forth in the Order Form, End User will be billed for those overages at a pro-rated amount for the remainder of the applicable License Term, based on AppDynamics then-current standard pricing. If AppDynamics believes in good faith that End Users usage of the Software exceeds that set forth on the applicable Order Form, End User agrees to allow AppDynamics to audit End Users use of the Software (not more frequently than twice per calendar year), upon at least twenty-four (24) hours notice, to determine the actual Software use, using a commercially reasonable auditing procedure. End User acknowledges that purchases made under this Agreement are neither contingent on the delivery of any future functionality or features nor dependent on any oral or written public comments made by AppDynamics regarding future functionality or features.

2.2 PAYMENTS.

End User shall pay Invoices within thirty (30) days of the invoice date (the Invoice Due Date). If End User reasonably disputes any Invoice, (i) End User shall provide AppDynamics with written notice of such dispute, including the grounds therefor (a Dispute Notice), prior to the Invoice Due Date, (ii) End User and AppDynamics shall, for a period of fifteen (15) days following AppDynamics receipt of such Dispute Notice, negotiate in good faith to resolve the dispute and (iii) if such dispute remains unresolved at the end of such period, the parties shall

retain all of their respective rights under this Agreement (including, without limitation, any action for non-payment of the fees set forth herein). All payment obligations are non-cancelable and all amounts paid are non-refundable, except (a) for amounts paid in error that are not actually due under this Agreement, and (b) as set forth in Sections 6.1 and 7.1. The fees paid by End User are exclusive of all taxes, levies, or duties imposed by taxing authorities, if any, and End User shall be responsible for payment of all such taxes, levies, or duties, excluding taxes based on AppDynamics income. End User represents and warrants that the billing and contact information provided to AppDynamics is complete and accurate, and AppDynamics shall have no responsibility for any Invoices that are not received due to inaccurate or missing information provided by End User. End User shall pay interest on all payments not received by the Invoice Due Date at a rate of one percent (1%) per month or the maximum amount allowed by law, whichever is lesser. All amounts due under this Agreement shall be paid by End User in full without any set-off, counterclaim, deduction or withholding (other than any deduction or withholding of tax as required by law). If requested by AppDynamics, End User will obtain and furnish to AppDynamics tax receipts or other certificates issued by the competent taxation office showing the payments of the withholding tax within a reasonable time after payment. Following written notice, AppDynamics shall be entitled to suspend End Users access to the Software if payments are not received within thirty (30) days of the Invoice Due Date. Notwithstanding anything herein to the contrary, if End User makes its payments pursuant to this Agreement to a Partner, then the payment terms agreed by End User and such Partner shall govern to the extent anything in this Section 2 conflicts with such Partner payment terms.

3. CONFIDENTIALITY

3.1 SCOPE AND RESTRICTIONS.

Confidential Information means all information of a party (Disclosing Party) disclosed to the other party (Receiving Party) that is designated in writing or identified as confidential at the time of disclosure or should be reasonably known by the Receiving Party to be confidential due to the nature of the information disclosed and the circumstances surrounding the disclosure. The terms of this Agreement, the Software, any technical or other documentation relating to the Software, logins, passwords and other access codes and any and all information regarding AppDynamics business, products and services are the Confidential Information of AppDynamics. The Receiving Party will: (i) not use the Disclosing Partys Confidential Information for any purpose outside of this Agreement; (ii) not disclose such Confidential Information to any person or entity, other than its affiliates, employees, consultants, agents and professional advisers who have a need to know for the Receiving Party to exercise its rights or perform its obligations hereunder, provided that such employees, consultants, and agents are bound by agreements or, in the case of professional advisers, ethical duties respecting such Confidential Information in accordance with the terms of this Section 3; and (iii) use reasonable measures to protect the confidentiality of such Confidential Information. If the Receiving Party is required by applicable law or court order to make any disclosure of such Confidential Information, it will first give written notice of such requirement to the Disclosing Party, and, to the extent within its control, permit the Disclosing Party to intervene in any relevant proceedings to protect its interests in its Confidential Information, and provide full cooperation to the Disclosing Party in seeking to obtain such protection. Further, this Section 3 will not apply to information that the Receiving Party can document: (i) was rightfully in its possession or known to it prior to receipt without any restriction on its disclosure; (ii) is or has become public knowledge or publicly available through no fault of the Receiving Party; (iii) is rightfully obtained by the Receiving Party from a third party without breach of any confidentiality obligation; or (iv) is independently developed by employees of the Receiving Party who had no access to such information.

3.2 EQUITABLE RELIEF.

The Receiving Party acknowledges that unauthorized disclosure of the Disclosing Partys Confidential Information could cause substantial harm to the Disclosing Party for which damages alone might not be a sufficient remedy and, therefore, that upon any such disclosure by the Receiving Party the Disclosing Party will be entitled to seek appropriate equitable relief in addition to whatever other remedies it might have at law or equity.

4. PROPRIETARY RIGHTS. AppDynamics and its suppliers own and shall retain all proprietary rights, including all copyright, patent, trade secret, trademark and all other intellectual property rights, in and to the Software and the results of any Services. End User acknowledges that the rights granted under this Agreement do not provide End User with title to or ownership of the Software. Certain free or open source based software (the FOSS Software) and third party software included with the Software
(the Third Party Software) is shipped with the Software but is not considered part of the Software hereunder. A list of the FOSS Software and Third Party Software is set forth on the webpage located at https://docs.appdynamics.com/display/DASH/Legal+Notices With respect to Third Party Software included with the Software, such Third Party Software suppliers are third party beneficiaries of this Agreement. End Users use of such FOSS Software is subject to the terms of the licenses set forth on such webpage. The Software and Third Party Software may only be used by End User as prescribed by the AppDynamics documentation located at http://docs.appdynamics.com (as it may be updated from time to time, the Documentation).

5. TERM AND TERMINATION.

The term of this Agreement begins on the Effective Date and will remain in effect until all Subscription Licenses (and Maintenance and Support Terms, if applicable) expire or until this Agreement is otherwise terminated in accordance with the terms
hereof, whichever occurs first (the Term). This Agreement may be renewed at any time by execution of an Order Form referencing this Agreement, and any such renewal will be deemed part of the Term hereunder. If either party commits a material breach of this Agreement, and such breach has not been cured within thirty (30) days after receipt of written notice thereof, the non-breaching party may terminate this Agreement, except that AppDynamics may immediately terminate this Agreement and/or End Users license to the Software upon End Users breach of Section 1.2. Either party may also terminate this Agreement upon written notice if the other party suspends payment of its debts or experiences any other insolvency or bankruptcy-type event. Upon expiration or termination of this Agreement for any reason, (i) with respect to Subscription Licenses, all rights granted to End User shall terminate and End User shall destroy any copies of the Software and Documentation within End Users possession
and control; (ii) with respect to perpetual licenses, these will survive termination of this Agreement unless AppDynamics terminates the Agreement for End Users breach of this Agreement in which case all rights granted to End User shall terminate and End User shall destroy any copies of the Software and Documentation within End Users possession and control; and (iii) each Receiving Party will return or destroy, at the Disclosing Partys option, the Disclosing Partys Confidential Information in the Receiving Partys possession or control. All fees that have accrued as of such expiration or termination, and Sections 1.2, 1.3, 1.4, 2, 3, 4, 5, 6.2 and 7 through 12, will survive any expiration or termination hereof.

6. WARRANTIES.

6.1 LIMITED WARRANTY.The limits below will not apply to the extent prohibited by applicable law.

AppDynamics warrants that during the first thirty (30) days following the date the Software is purchased, the Software will, in all material respects, conform to the

functionality described in the then-current Documentation for the applicable Software version. AppDynamics sole and exclusive obligation, and End Users sole and exclusive remedy, for a breach of this warranty shall be that AppDynamics shall be required to use commercially reasonable efforts to repair or replace the Software to conform in all material respects to the Documentation, and if AppDynamics is unable to materially restore such functionality within thirty (30) days from the date of written notice of such breach, End User shall be entitled to terminate the license to the affected Software upon written notice and AppDynamics shall promptly provide a pro-rata refund of the Software license fees (or Maintenance and Support Fees, for perpetual licenses) that have been paid in advance for the remainder of the License Term for the applicable Software (beginning on the date of termination). End User must notify AppDynamics in writing of any warranty breaches within such warranty period,
and End User must have installed and configured the Software in accordance with the Documentation to be eligible for the foregoing remedy.

6.2 WARRANTY DISCLAIMER.

EXCEPT AS EXPRESSLY PROVIDED IN THIS SECTION 6, ALL SOFTWARE, DOCUMENTATION, MAINTENANCE AND SUPPORT AND SERVICES ARE PROVIDED AS IS AND APPDYNAMICS AND ITS SUPPLIERS EXPRESSLY DISCLAIM ANY AND ALL OTHER REPRESENTATIONS AND WARRANTIES, EITHER EXPRESS, IMPLIED, STATUTORY, OR OTHERWISE WITH RESPECT THERETO, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, OR THE CONTINUOUS, UNINTERRUPTED, ERROR-FREE, VIRUS-FREE, OR SECURE ACCESS TO OR OPERATION OF THE SOFTWARE. APPDYNAMICS EXPRESSLY DISCLAIMS ANY WARRANTY AS TO THE ACCURACY OR COMPLETENESS OF ANY INFORMATION OR DATA ACCESSED OR USED IN CONNECTION WITH THE SOFTWARE, DOCUMENTATION, MAINTENANCE AND SUPPORT, OR SERVICES. AppDynamics is not responsible for any delays, delivery failures, or any other loss or damage resulting
from the transfer of data over communications networks and facilities, including the Internet, and End User acknowledges that the Software and Documentation may be subject to limitations, delays and other problems inherent in the use of such communications facilities. The Software is not fault-tolerant and is not designed or intended for use in hazardous environments, including without limitation, in the operation of aircraft or other modes of human mass transportation, nuclear or chemical facilities, life support systems, implantable medical equipment, motor vehicles or weaponry systems, or any other application in which failure of the Software could lead to death or serious bodily injury of a person, or to severe physical or environmental damage (each, a High Risk Use). AppDynamics expressly disclaims any express or implied warranty or representation of fitness for High Risk Use. AppDynamics shall not be liable to End User for any loss, damage or harm suffered by End User that
is directly or indirectly caused by End Users unauthorized use of the Software to process Prohibited Data.

7. INDEMNIFICATION.

7.1 BY APPDYNAMICS.

AppDynamics agrees at its expense to defend End User against (or, at AppDynamics option, settle), any third party claim to the extent such claim alleges that the Software infringes or misappropriates any patent, copyright, trademark or trade secret of a third party, and AppDynamics shall pay all costs and damages finally awarded against End User by a court of competent jurisdiction as a result of any such claim. In the event that the use of the Software is, or in AppDynamics sole opinion is likely to become, subject to such a claim, AppDynamics, at its option and expense, may (a) replace the applicable Software with functionally equivalent non-infringing technology, (b) obtain a license for End Users continued use of the applicable Software, or (c) terminate the license and provide a pro-rata refund of the Software license fees (or Maintenance

and Support Fees, for perpetual licenses) that have been paid in advance for the remainder of the License Term for the applicable Software (beginning on the date of termination). The foregoing indemnification obligation of AppDynamics will not apply: (1) if the Software is modified by End User or its agent; (2) if the Software is combined with other non-AppDynamics products, applications, or processes, but solely to the extent the alleged infringement is caused by such combination; or (3) to any unauthorized use of the Software. The foregoing shall be End Users sole remedy with respect to any claim of infringement of third party intellectual property rights.

7.2 BY END USER.

End User agrees to defend, at its expense, AppDynamics and its affiliates, its suppliers and its resellers against any third party claim to the extent such claim arises from or is made in connection with End Users breach of Section 1 or End Users negligence or willful misconduct, and End User shall pay all
costs and damages finally awarded against AppDynamics by a court of competent jurisdiction as a result of any such claim.

7.3 INDEMNIFICATION REQUIREMENTS.

In connection with any claim for indemnification under this Section 7, the indemnified party must promptly provide the indemnifying party with notice of any claim that the indemnified party believes is within the scope of the obligation to indemnify, provided, however, that the failure to provide such notice shall not relieve the indemnifying party of its obligations under this Section 7, except to the extent that such failure materially prejudices the indemnifying partys defense of such claim. The indemnified party may, at its own expense, assist in the defense if it so chooses, but the indemnifying party shall control the defense and all negotiations related to the settlement of any such claim. Any such settlement intended to bind either party shall not be final without the other partys written consent, which consent shall not
be unreasonably withheld, conditioned or delayed; provided, however, that End Users consent shall not be required when AppDynamics is the indemnifying party if the settlement involves only the payment of money by AppDynamics.

8. LIMITATION OF LIABILITY. The limits below will not apply to the extent prohibited by applicable law.

8.1 EXCEPT FOR LIABILITY ARISING OUT OF END USERS BREACH OF SECTION 1.2 (RESTRICTIONS ON USE), IN NO EVENT SHALL EITHER PARTY BE LIABLE UNDER THIS AGREEMENT FOR ANY INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, INCLUDING DAMAGES FOR LOSS OF REVENUES OR PROFITS, LOSS OF USE, BUSINESS INTERRUPTION, OR LOSS OF DATA, WHETHER IN AN ACTION IN CONTRACT OR TORT, EVEN IF THE OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

8.2 EXCEPT FOR LIABILITY ARISING OUT OF END USERS BREACH OF SECTION 1.2 (RESTRICTIONS ON USE), NEITHER PARTYS LIABILITY FOR ANY DAMAGES (WHETHER FOR BREACH OF CONTRACT, MISREPRESENTATIONS, NEGLIGENCE, STRICT LIABILITY,
OTHER TORTS OR OTHERWISE) UNDER THIS AGREEMENT SHALL EXCEED AN AMOUNT EQUAL TO THE TOTAL FEES PAID (PLUS FEES PAYABLE) TO APPDYNAMICS DURING THE TWELVE (12) MONTHS IMMEDIATELY PRECEDING THE CLAIM GIVING RISE TO SUCH DAMAGES. THESE LIMITATIONS SHALL APPLY NOTWITHSTANDING ANY FAILURE OF ESSENTIAL PURPOSE OF ANY REMEDY.

9. FORCE MAJEURE.

Except for payment obligations, neither party hereto will be liable for defaults or delays due to acts of God, or the public enemy, acts or demands of any government or governmental agency, fires, earthquakes, floods, accidents, or other unforeseeable causes beyond its reasonable control and not due to its fault or negligence.

10. DATA COLLECTION.

End User acknowledges that AppDynamics application server and machine software agents (the Agents) collect metrics that relate to the performance, health and resource of an application, its components (transactions, code libraries) and related infrastructure (nodes, tiers) that service those components.
In addition, AppDynamics collects metrics on End Users activities, such as web pages visited, length of visit, and which features of the Software an End User uses. If End User provides AppDynamics with any personally identifiable information (personal data), End User represents and warrants that such information has been collected by End User in accordance with the provisions of all applicable data protection legislation and that End User has all right and consents necessary to provide such personal data to AppDynamics. End User will indemnify AppDynamics for reasonable costs and other amounts that AppDynamics may incur relating to any breach of this Section.

11. US GOVERNMENT MATTERS.

As defined in FAR section 2.101, the Software and Documentation are commercial items and according to DFAR section 252.227 7014(a)(1) and (5) are deemed to be commercial computer software and commercial computer software documentation. Consistent with DFAR section 227.7202 and FAR section 12.212, any
use modification, reproduction, release, performance, display, or disclosure of such commercial software or commercial software documentation by the U.S. Government will be governed solely by the terms of this Agreement and will be prohibited except to the extent expressly permitted by the terms of this Agreement.

12. MISCELLANEOUS.

This Agreement shall be governed by and construed under the laws of the State of California, U.S.A. The parties consent to the exclusive jurisdiction and venue of the courts located in and serving San Francisco, California. Failure by either Party to exercise any of its rights under, or to enforce any provision of, this Agreement will not be deemed a waiver or forfeiture of such rights or ability to enforce such provision. If any provision of this Agreement is held by a court of competent jurisdiction to be illegal, invalid or unenforceable, such provision will be amended to achieve as nearly as possible the same economic effect of the original provision
and the remainder of this Agreement will remain in full force and effect. This Agreement and its exhibits, together with the Order Form(s) and any statements of work incorporating this Agreement, if applicable, represent the entire agreement between the parties and supersede any previous or contemporaneous oral or written agreements or communications regarding the subject matter of this Agreement. The person signing or otherwise accepting this Agreement for End User represents that s/he is duly authorized by all necessary and appropriate corporate action to enter this Agreement on behalf of End User. Any modification to this Agreement must be in writing and signed by a duly authorized agent of both parties. The Uniform Computer Information Transactions Act (UCITA) does not apply to this Agreement. This Agreement shall control over additional or different terms of any purchase order, confirmation, invoice, statement of work or similar document (other than an AppDynamics Order Form, which
will take precedence), even if accepted in writing by both parties, and waivers and amendments to this Agreement shall be effective only if made by non-pre-printed agreements clearly understood by both parties to be an amendment or waiver to this Agreement. For purposes of this Agreement, including means including without limitation. The rights and remedies of the parties hereunder will be deemed cumulative and not exclusive of any

other right or remedy conferred by this Agreement or by law or equity. No joint venture, partnership, employment, or agency relationship exists between the parties as a result of this Agreement or use of the Software. AppDynamics reserves the right to perform its obligations from locations and/or through use of affiliates and subcontractors, worldwide, provided that AppDynamics will be responsible for such parties. End User may not assign this Agreement without the prior written approval of AppDynamics and any purported assignment in violation of this section
shall be void; AppDynamics may assign, transfer or subcontract this Agreement in whole or in part. Upon any assignment of this Agreement by End User that is approved by AppDynamics, any licenses that contain an unlimited aspect will, with respect to End User or the successor entity, as applicable, be capped at the number of authorized Software units in use immediately prior to such assignment. End User agrees that AppDynamics may refer to End User by its trade name and logo, and may briefly describe End Users business, in AppDynamics marketing materials and website. AppDynamics may give notice to End User by electronic mail to End Users email address on record in End Users account information, or by written communication sent by first class mail or pre-paid post to End Users address on record in End Users account information. End User may give notice to AppDynamics at any time by any letter delivered by nationally recognized overnight delivery service or first class postage prepaid
mail to AppDynamics at the following address or such other address as may be notified to End User from time to time: AppDynamics, Inc., 303 Second Street, North Tower, 8th Floor, San Francisco, CA 94107, Attn: Legal Department. Notice under this Agreement shall be deemed given when received, if personally delivered; when receipt is electronically confirmed, if transmitted by email; the day after it is sent, if sent for next day delivery by recognized overnight delivery service; and upon receipt, if sent by certified or registered mail, return receipt requested.

EXHIBIT A

ENTERPRISE SUPPORT

GENERAL REQUIREMENTS.

AppDynamics will provide access to a ticketing system and email address (help@appdynamics.com), which will be available twenty-four (24) hours per day, seven (7) days per week. The email account will be maintained by qualified support specialists, who shall use commercially reasonable efforts to answer questions and resolve problems regarding the Software.

HOURS OF OPERATION.

Support
is available twenty-four (24) hours per day, seven (7) days per week.

ERROR CLASSIFICATION.

Any reported errors are classified in the following manner, in each case when caused by the Software:

Error Classification Criteria
========== ========
Urgent End User production application is down or there is a
major malfunction, resulting in a business revenue loss and

impacting the End User application functionality for a majority of users.

High Critical loss of End User application functionality or performance, impacting the application functionality for a high number of users.

Normal Moderate loss of End User application functionality or performance, impacting multiple users.

Low Minor loss of End User application functionality or product feature in question.

ERROR DEFINITION.

An error means a reproducible malfunction in the Software that is reported by End User through AppDynamics ticketing system that prevents the Software from performing in accordance with the operating specifications described in the then-current Documentation.

AUTHORIZED SUPPORT CONTACTS.

Maintenance and Support will be provided solely to End Users designated support contacts. The Order Form may indicate a maximum number of designated support contacts for End Users service level. End User will provide its designated support contacts, including its primary email address.

END USERS OBLIGATION TO ASSIST.
If End User reports a purported error in the Software to AppDynamics, AppDynamics ticketing system will request the following minimum information:

A general description of the operating environment
A list of all hardware components, operating systems and networks
A reproducible test case
Any log files, trace and systems files

End Users failure to provide this information may prevent or significantly delay AppDynamics ability to identify and fix the reported error. AppDynamics time to respond to any error will begin when AppDynamics has received all requested information from the End User and is able to reproduce the error.

ERROR RESOLUTION.

If AppDynamics determines there is an error in the Software, AppDynamics may, at its sole option, repair that error in the version of the Software that End User is currently using or instruct End User to install a newer version of the Software with that error repaired. AppDynamics reserves the right to provide End User with a workaround in lieu of fixing an error.

SOFTWARE UPDATES AND UPGRADES. End User must be current on fees in order to receive access to Maintenance.

RESPONSE TIME. AppDynamics shall respond to error tickets in accordance with the tables set forth below. AppDynamics will use reasonable means to repair the error and keep End User informed of progress. AppDynamics makes no representations as to when a full resolution of the error may be made.

Error	Initial Response	Manager Escalation	VP Escalation	Email Status Updates
Urgent	1 Hour	1 Business Day	1 Week	Daily
High	6 Hours	1 Week	2 Weeks	Weekly
Normal	1 Business Day	Quarterly Review	None	None
Low	2 Business Days	Semi-Annual Review	None	None

Maintenance and Support Policy: The Maintenance and Support policy is as follows:

AppDynamics provides Maintenance and Support for each version of the Software for a period of twelve (12) months after the generally available release of the next major version of the Software (a major release is a change in the first number to the right of the decimal point). For example, if version 4.1 is released on January 1, 2015, then AppDynamics will provide Maintenance and Support for version 4.0 until January 1, 2016. AppDynamics does not provide Maintenance or Support for any customized software (or components thereof).

For third party software or technology used by End User with the Software but not included with the Software (a Platform, such as Java Virtual Machines), AppDynamics will follow the end-of-life (EOL) support timeline announced by the third party vendor of such Platform. AppDynamics will stop providing Maintenance and Support for an EOLd Platform version when the Platform vendor stops providing maintenance and support for that Platform version.

EXHIBIT B
AVAILABILITY AND SECURITY

The terms set forth in this Exhibit B apply only if End User has purchased access to the online software-as-a-service (SaaS) version of the Software, as indicated on the Order Form.

AVAILABILITY.

AppDynamics will provide System Availability (as defined below) of ninety-nine and one-half percent (99.5%) (the Availability SLA), excluding situations identified as Exclusions below. For purposes of the Availability SLA, the AppDynamics network extends to, includes and terminates at the data center located router that provides the outside interface of each of AppDynamics WAN connections to its backbone providers (the AppDynamics Network).

Exclusions means any outage that results from any of the following:
a.

Any Maintenance performed by AppDynamics during AppDynamics standard Maintenance windows. AppDynamics will notify End User within forty-eight (48) hours of any standard Maintenance and within twenty-four (24) hours for other non-standard emergency Maintenance (collectively referred to herein as Scheduled Maintenance).

b. End User's information content or application programming, or the acts or omissions of End User or its agents, including, without limitation, the following:
1. End Users use of any programs not supplied by AppDynamics;
2. End Users failure to provide AppDynamics with reasonable advance prior notice of any pending unusual large deployments of new nodes (i.e., adding over ten percent (10%) total nodes in less than twenty-four (24) hours);
3. End Users implementation of any significant configuration changes, including changes that lead to a greater than thirty percent (30%) change in a one week period or greater than fifty percent (50%) change in a one month period in the number of key
objects in the system including but not limited to metrics, snapshots, nodes, events and business transactions;
4. Any misconfiguration by End User (as determined in AppDynamics sole discretion), including configuration errors and unintended usage of the Software;
5. End Users failure to upgrade the Agents to keep the Agent versions within six (6) months of the Controller version; or
6. End Users implementation of configuration changes in the number of key objects in the Software (including metrics, snapshots, nodes, events and business transactions) that results in, or is likely to result in, an adverse impact on other customers.

c. Force majeure or other circumstances beyond AppDynamics reasonable control that could not be avoided by its exercise of due care.

d. Failures of the Internet backbone itself and the network by which End User connects to the Internet backbone or any other network unavailability outside of the AppDynamics Network, such as misconfigurations, proxies or firewalls.

e. Any window of time when End User agrees that Software availability/unavailability will not be monitored or counted.

f. Any problems resulting from End User combining or merging the Software with any hardware or software not supplied by AppDynamics or not identified by AppDynamics in the Documentation as being compatible with the Software.

g. End Users or any third partys use of the Software in an unauthorized or unlawful manner.

Remedies for Excessive Downtime:

In the event the availability of the Software falls below the Availability SLA in a given calendar quarter, AppDynamics will pay End User a service credit (Service Credit) as follows, corresponding to the actual Availability of the Software during the applicable calendar quarter (on pro-rated basis for annual or multi-year fees): if the Availability is 99.5% or greater, End User is entitled to receive no credits; if the Availability is 97.0% - 99.49%, then End User is entitled to receive
Service Credits equal to five percent of the fees for the applicable calendar quarter (not to exceed $280); if the Availability is 95.0% - 96.9%, then End User is entitled to receive Service Credits equal to ten percent of the fees for the applicable calendar quarter (not to exceed $560); and if the Availability is less than 95.0%, then End User is

entitled to receive Service Credits equal to twenty percent of the fees for the applicable calendar quarter (not to exceed $1120). Such Service Credit will be issued as a credit against any fees owed by End User for the next calendar quarter of the Term, or, if End User does not owe any additional fees, then AppDynamics will pay End User the amount of the applicable Service Credit within thirty (30) days after the end of the calendar quarter in which such credit accrued. To receive Service Credits, End User must submit a written request to AppDynamics (to customersuccess@appdynamics.com with a copy to legal@appdynamics.com) within 15 days after the end of the quarter in which the Software was unavailable, or End Users right to receive Service Credits with respect to such unavailability will be waived. The remedies stated in this section are End Users sole and exclusive remedies and AppDynamics sole and exclusive obligations for service interruption or unavailability.

System Availability is measured by the following formula: (n - y) *100 / n
(1) n is the total number of minutes in the given calendar quarter minus the Exclusions (as defined above); and y is the total number of minutes in the given calendar quarter that the Controller is not accessible by End User (as determined by AppDynamics tools).
(2) Specifically excluded from n and y in this calculation are the Exclusions.

SECURITY INFORMATION.

For all End User data stored in the software-as-a-service version of the Software, AppDynamics will satisfy all of its obligations under Section 3 by maintaining the security precautions described below.
Certifications
AppDynamics is SOC 2 Type II compliant, meaning it has been independently audited to verify the validity and functionality of its control activities and processes. Customers may request AppDynamics report at any time. AppDynamics data center provider is also SOC 2 Type II compliant.

Secure Connections
Agents initiate connections to a single Controller, which can either be hosted on-premises by the customer or by AppDynamics via the AppDynamics software-as-a-service platform. The Controller is the central repository and analytics engine where all performance data is stored, baselined, and analyzed. If End User downloads the Agent from End Users controller (ie., using the installation wizard provided by AppDynamics), then transport layer security (TLS) for Agent-to-Controller communication is enabled by default. For other installations, AppDynamics recommends enabling SSL/TLS encryption for Agent communications. For detailed instructions please see docs.appdynamics.com. Agents also support outbound HTTP proxies for customers using these security mechanisms. For Software user interface access, AppDynamics redirects all traffic to HTTPS.

Access Controls to Data
Access to collected data and data collection features is restricted to authenticated customer users by role-based access controls (RBAC). In addition, customer users do not have native access to run queries on the Controllers MySQL database.

Availability
Servers for the software are operated in fault-tolerant architecture in a manner designed to ensure availability. Data is backed up nightly and stored redundantly. AppDynamics also provides an off-site backup service. Software security updates and patches are evaluated by engineers and are deployed based upon the security risks and stability benefits they offer to the Software and End Users.

Security
Access to the Software platform infrastructure and data by AppDynamics personnel is secured by authentication methods including public key authentication, passwords and
network access control lists. Infrastructure and data access is restricted to AppDynamics employees and contractors subject to confidentiality agreements. System and network activity for the Software are regularly monitored by a team of engineers. Failed authentication attempts are audited and engineers are paged so that intrusions or threats can be investigated. Standard firewall policies are deployed to block access except to ports required for Software and Agent communication.

Sensitive Data
AppDynamics recommends on-premises (rather than software-as-a-service) deployments for customers subject to heightened regulatory oversight of data.

More Information
For more information on data privacy or security processes please contact help@appdynamics.com or your account representative. To report a suspected security breach, contact security@appdynamics.com.
AppDynamics Proprietary and Confidential * Revision 2016.11.01

1.79 appdynamics-alpine 24.11.0.7212

1.79.1 Available under license :

APPDYNAMICS, INC.

END USER LICENSE AGREEMENT

1. SOFTWARE LICENSE.

1.1 LICENSE GRANT.

This End User License Agreement (this Agreement) between AppDynamics, Inc., a Delaware corporation with its principal place of business located at 303 Second Street, North Tower, 8th Floor, San Francisco, CA 94107 (AppDynamics) and the customer set forth in the Order Form (as defined below) (End User) is effective as of the date the initial Order Form is executed or the date this Agreement is referenced by the applicable purchase order (the Effective Date). This Agreement shall govern each order form, sales quotation, proposal, purchase order or other ordering document that references this Agreement (each an Order Form). Each Order Form will form part of this Agreement. Subject to the terms and conditions of this Agreement, AppDynamics hereby grants to End User, during the License Term (as defined below), a non-exclusive, non-transferable, non-sublicensable right and license to use the software-as-a-service
and/or on-premises version of AppDynamics application intelligence software product, including one Controller, as designated in the Order Forms (the Software) for internal business purposes only for the quantity of units in the Order Form. AppDynamics Test & Dev Edition licenses shall only be used in test-only non-production environments. For purposes hereof, the License Term begins on the date AppDynamics delivers the Software license keys to End User and extends for the period specified in the applicable Order Form (unless earlier terminated in accordance with this Agreement). For the avoidance of doubt, End Users affiliates (and employees thereof) shall not use the Software without AppDynamics prior written consent. Notwithstanding anything to the contrary herein, this Agreement does not supersede a signed agreement between AppDynamics and End User with respect to the Software.

1.2 RESTRICTIONS ON USE.

Except as otherwise expressly provided in this Agreement, End User shall not (and shall not permit any third party to): (a) sublicense, sell, resell, transfer, assign, distribute, share, lease, rent, make any external commercial use of, outsource, use on a timeshare or service bureau, or use in an application service provider or managed service provider environment, or otherwise generate income from the Software; (b) copy the Software onto any public or distributed network, except for an internal and secure cloud computing environment; (c) cause the decompiling, disassembly, or reverse engineering of any portion of the Software, or attempt to discover any source code or other operational mechanisms of the Software (except where such restriction is expressly prohibited by law without the possibility of waiver, and then only upon prior written notice to AppDynamics); (d) modify, adapt, translate or create derivative works based on all or any part of the Software; (e) use any Third Party Software (as defined below) provided with the Software other than with the Software; (f) modify any proprietary rights notices that appear in the Software or components thereof; (g) publish the results of any benchmarking tests run on any Third Party Software; (h) use any Software in violation of any applicable laws and regulations (including any export laws, restrictions, national security controls and regulations) or outside of the license scope set forth in Section 1.1; (i) use the Software in support of any nuclear proliferation, chemical weapon, biological weapon or missile proliferation activity; (j) configure the Software to collect any (1) social security numbers or other government-issued identification numbers, (2) passwords or other authentication credentials, (3) health information, biometric data, genetic data, or payment/financial information, (4) any data relating to a person under the age of 13 years old, or (5) any other data that is subject to regulatory or contractual handling requirements (e.g., PCI, HIPAA, or state and federal data security laws) (collectively, Prohibited Data); or (k) use the Software to (1) store, download or transmit infringing, libelous, or otherwise unlawful or tortious material, or malicious code or malware, or (2) engage in phishing, spamming, denial-of-service attacks or other fraudulent or criminal activity, (3) interfere with or disrupt the integrity or performance of third party systems, or the Software or data contained therein, or (4) attempt to gain unauthorized access to the Software or AppDynamics' systems or networks, or (5) perform, or engage any third party to perform, authenticated or unauthenticated penetration testing, vulnerability assessments or other security assessments on the SaaS version of the Software. End User shall not export or re-export, directly or indirectly, any Software or technical data or any copy, portions or direct product thereof (i) in violation of any applicable laws and regulations, (ii) to any country for which the United States or any other government, or any agency thereof, at the time of export requires an export license or other governmental approval, including Cuba, Libya, North Korea, Iran, Iraq, or Rwanda or any other Group D:1 or E:2 country (or to a national or resident thereof) specified in the then current Supplement No. 1 to part 740 of the U.S. Export Administration Regulations (or any successor supplement or regulations, without first obtaining such license or approval) or (ii) to anyone on the U.S. Treasury Departments list of Specially Designated Nationals or the U.S. Commerce Departments Table of Denial Orders. End User shall, at its own expense, obtain all necessary customs, import, or other governmental authorizations and approvals.

1.3 EVALUATION USE.

If End User accessed the Software pursuant to a no-fee or beta evaluation (Evaluation Use), then the License Term is for the period enabled by the license key for the Software provided by AppDynamics. AppDynamics shall have the right to downgrade, limit or otherwise modify the Software provided for Evaluation Use at any time without notice, and no warranty, indemnity, Maintenance or Support obligations of AppDynamics will apply to Evaluation Use. End User may use the number and type of licenses indicated by AppDynamics in writing prior to End User downloading or accessing the Software, which will be enabled by End Users specific license key. AppDynamics has the right to immediately revoke and

terminate any Evaluation Use at any time. End User agrees to provide feedback related to the Software as reasonably requested by AppDynamics. End User grants to AppDynamics, without charge, the fully paid-up, perpetual, sublicensable right to exploit such feedback for any purpose. Evaluation Use is not a guarantee of future product features and should not be relied upon in making any purchasing decisions.

1.4 UNAUTHORIZED USE.

End User shall notify AppDynamics promptly of any unauthorized use of any password or account or any other known or suspected breach
of security or misuse of the Software. End User is responsible for use of the Software by any and all employees, contractors, or other users that it allows to access the Software.

1.5 MAINTENANCE AND SUPPORT.

Support is defined as AppDynamics' obligations to respond to support requests as described in Exhibit A (Enterprise Support). Maintenance means AppDynamics obligations related to error resolution, bug fixes and the provision of updates and upgrades made generally commercially available by AppDynamics in its sole discretion, all as described in Exhibit A. Subject to End Users payment of the fees set forth in the applicable Order Form(s), AppDynamics will (a) provide Maintenance and Support for the Software, and (b) solely if End User has purchased access to the software-as-a-service version of the Software, make the Software available to End User in accordance with Exhibit B (Availability and Security). For time-limited licenses for the Software (as set forth in an Order Form, Subscription Licenses), the fees for Maintenance and Support are included in the fees for the Software. For perpetual licenses, (i) AppDynamics shall invoice End User the applicable fees for Maintenance and Support (Maintenance and Support Fees) upon execution of the Order Form, and (ii) subject to payment of the Maintenance and Support Fees, AppDynamics will provide Support for the Maintenance and Support period set forth in the Order Form, as it may be renewed (the Maintenance and Support Term). If Maintenance and Support terminates with respect to any perpetual licenses, and End User is in good standing under this Agreement, then End User may reinstate Maintenance and Support on payment of the cumulative Maintenance and Support Fees applicable for the period during which Maintenance and Support lapsed, plus Maintenance and Support Fees for the reinstated Maintenance and Support Term. Notwithstanding anything herein to the contrary, if End User receives Support from an authorized
partner of AppDynamics (Partner), then the support terms agreed upon by End User and such Partner shall govern in lieu of those set forth in Exhibit A, and AppDynamics shall have no support obligations to End User.

1.6 SERVICES.

Subject to the terms hereof (including payment of any applicable fees set forth in the Order Form), AppDynamics will provide the training, enablement and/or other services described in an Order Form (or statement of work referencing this Agreement), if any (Services). All Services will be rendered on a time and materials basis. AppDynamics will not exceed the total time purchased without prior written approval from End User. If the Services purchased have been consumed, AppDynamics will stop the Services until additional Services have been purchased. If End User elects not to purchase additional Services, then the Services will be deemed complete. If not used, pre-purchased Services and expenses expire twelve (12) months after the date purchased (unless otherwise
set forth in the applicable Order Form). End User agrees to provide reasonable cooperation and information as necessary to permit AppDynamics to perform the Services. End User will reimburse AppDynamics for travel and expenses (at cost) incurred in connection with the Services (if any) by the Invoice Due Date (as defined below). Services will be performed on business days (a business day means Monday through Friday, excluding national holidays, during working hours, in the location where the Services are delivered). Saturday Services, and hours

worked during the week that exceed the local working hours in a week, will be charged at the agreed rate x 1.5. Services performed on Sundays or national holidays will be charged at 2 x the agreed rate. If End User cancels or delays any scheduled Services less than ten (10) business days before the start date of such Services, then AppDynamics will deduct from End User's account (or End User will pay for) the amount of Services that were scheduled
in any of the ten (10) business days following the date of cancellation (or notification of the delay, as applicable), and End User will fully reimburse AppDynamics for any reasonable travel and expenses incurred by AppDynamics for such Services (and for any Services rescheduled by End User) for which AppDynamics is unable to obtain a refund. During the License Term (for Subscription Licenses) or during the Maintenance and Support Term (for perpetual licenses), and in each case for a period of twelve (12) months thereafter, without AppDynamics prior written approval, End User will not solicit for employment or consultancy any AppDynamics employees who participated in the performance of Services.

2. FEES.

2.1 PRICING.

End User will be invoiced for those amounts and at those prices set forth in an Order Form (an Invoice), provided, however, that, for Evaluation Use, End User shall not be billed unless otherwise specified by AppDynamics in writing prior to End User downloading
or accessing (as applicable) the Software. Fees do not include any customization of the Software (nor support for any such customizations, unless otherwise agreed in writing). If End Users usage of the Software is in excess of those amounts set forth in the Order Form, End User will be billed for those overages at a pro-rated amount for the remainder of the applicable License Term, based on AppDynamics then-current standard pricing. If AppDynamics believes in good faith that End Users usage of the Software exceeds that set forth on the applicable Order Form, End User agrees to allow AppDynamics to audit End Users use of the Software (not more frequently than twice per calendar year), upon at least twenty-four (24) hours notice, to determine the actual Software use, using a commercially reasonable auditing procedure. End User acknowledges that purchases made under this Agreement are neither contingent on the delivery of any future functionality or features nor dependent on any oral or written
public comments made by AppDynamics regarding future functionality or features.

2.2 PAYMENTS.

End User shall pay Invoices within thirty (30) days of the invoice date (the Invoice Due Date). If End User reasonably disputes any Invoice, (i) End User shall provide AppDynamics with written notice of such dispute, including the grounds therefor (a Dispute Notice), prior to the Invoice Due Date, (ii) End User and AppDynamics shall, for a period of fifteen (15) days following AppDynamics receipt of such Dispute Notice, negotiate in good faith to resolve the dispute and (iii) if such dispute remains unresolved at the end of such period, the parties shall retain all of their respective rights under this Agreement (including, without limitation, any action for non-payment of the fees set forth herein). All payment obligations are non-cancelable and all amounts paid are non-refundable, except (a) for amounts paid in error that are not actually due under this Agreement, and (b) as set forth
in Sections 6.1 and 7.1. The fees paid by End User are exclusive of all taxes, levies, or duties imposed by taxing authorities, if any, and End User shall be responsible for payment of all such taxes, levies, or duties, excluding taxes based on AppDynamics income. End User represents and warrants that the billing and contact information provided to AppDynamics is complete and accurate, and AppDynamics shall have no responsibility for any Invoices that are not received due to inaccurate or missing information provided by End User. End User shall pay interest on all payments not received by the Invoice Due Date at a rate of one percent (1%) per month or the maximum amount allowed by law, whichever is lesser. All amounts due under this Agreement shall be paid by End User in full without

any set-off, counterclaim, deduction or withholding (other than any deduction or withholding of tax as required by law). If requested by AppDynamics, End User will obtain and furnish to AppDynamics tax receipts or other certificates issued by the competent taxation office showing the payments of the withholding tax within a reasonable time after payment. Following written notice, AppDynamics shall be entitled to suspend End Users access to the Software if payments are not received within thirty (30) days of the Invoice Due Date. Notwithstanding anything herein to the contrary, if End User makes its payments pursuant to this Agreement to a Partner, then the payment terms agreed by End User and such Partner shall govern to the extent anything in this Section 2 conflicts with such Partner payment terms.

3. CONFIDENTIALITY

3.1 SCOPE AND RESTRICTIONS.

Confidential Information means all information of a party (Disclosing Party) disclosed to the other party (Receiving Party) that is designated in writing or identified as confidential at the time of disclosure or should be reasonably known by the Receiving Party to be confidential due to the nature of the information disclosed and the circumstances surrounding the disclosure. The terms of this Agreement, the Software, any technical or other documentation relating to the Software, logins, passwords and other access codes and any and all information regarding AppDynamics business, products and services are the Confidential Information of AppDynamics. The Receiving Party will: (i) not use the Disclosing Partys Confidential Information for any purpose outside of this Agreement; (ii) not disclose such Confidential Information to any person or entity, other than its affiliates, employees, consultants, agents and professional advisers who have a need to know for the Receiving Party to exercise its rights or perform its obligations hereunder, provided that such employees, consultants, and agents are bound by agreements or, in the case of professional advisers, ethical duties respecting such Confidential Information in accordance with the terms of this Section 3; and (iii) use reasonable measures to protect the confidentiality of such Confidential Information. If the Receiving Party is required by applicable law or court order to make any disclosure of such Confidential Information, it will first give written notice of such requirement to the Disclosing Party, and, to the extent within its control, permit the Disclosing Party to intervene in any relevant proceedings to protect its interests in its Confidential Information, and provide full cooperation to the Disclosing Party in seeking to obtain such protection. Further, this Section 3 will not apply to information that the Receiving Party can document: (i) was rightfully in its possession or known to it prior to receipt without any restriction on its disclosure; (ii) is or has become public knowledge or publicly available through no fault of the Receiving Party; (iii) is rightfully obtained by the Receiving Party from a third party without breach of any confidentiality obligation; or (iv) is independently developed by employees of the Receiving Party who had no access to such information.

3.2 EQUITABLE RELIEF.

The Receiving Party acknowledges that unauthorized disclosure of the Disclosing Partys Confidential Information could cause substantial harm to the Disclosing Party for which damages alone might not be a sufficient remedy and, therefore, that upon any such disclosure by the Receiving Party the Disclosing Party will be entitled to seek appropriate equitable relief in addition to whatever other remedies it might have at law or equity.

4. PROPRIETARY RIGHTS. AppDynamics and its suppliers own and shall retain all proprietary rights, including all copyright, patent, trade secret, trademark and all other intellectual property rights, in and to the Software and the results of any Services. End User acknowledges that the rights granted under this Agreement do not provide End User with title to or ownership of the Software. Certain free or open source based software (the FOSS Software) and

third party software included with the Software
(the Third Party Software) is shipped with the Software but is not considered part of the Software hereunder. A list of the FOSS Software and Third Party Software is set forth on the webpage located at https://docs.appdynamics.com/display/DASH/Legal+Notices With respect to Third Party Software included with the Software, such Third Party Software suppliers are third party beneficiaries of this Agreement. End Users use of such FOSS Software is subject to the terms of the licenses set forth on such webpage. The Software and Third Party Software may only be used by End User as prescribed by the AppDynamics documentation located at http://docs.appdynamics.com (as it may be updated from time to time, the Documentation).

5. TERM AND TERMINATION.

The term of this Agreement begins on the Effective Date and will remain in effect until all Subscription Licenses (and Maintenance and Support Terms, if applicable) expire or until this Agreement is otherwise terminated in accordance with the terms
hereof, whichever occurs first (the Term). This Agreement may be renewed at any time by execution of an Order Form referencing this Agreement, and any such renewal will be deemed part of the Term hereunder. If either party commits a material breach of this Agreement, and such breach has not been cured within thirty (30) days after receipt of written notice thereof, the non-breaching party may terminate this Agreement, except that AppDynamics may immediately terminate this Agreement and/or End Users license to the Software upon End Users breach of Section 1.2. Either party may also terminate this Agreement upon written notice if the other party suspends payment of its debts or experiences any other insolvency or bankruptcy-type event. Upon expiration or termination of this Agreement for any reason, (i) with respect to Subscription Licenses, all rights granted to End User shall terminate and End User shall destroy any copies of the Software and Documentation within End Users possession
and control; (ii) with respect to perpetual licenses, these will survive termination of this Agreement unless AppDynamics terminates the Agreement for End Users breach of this Agreement in which case all rights granted to End User shall terminate and End User shall destroy any copies of the Software and Documentation within End Users possession and control; and (iii) each Receiving Party will return or destroy, at the Disclosing Partys option, the Disclosing Partys Confidential Information in the Receiving Partys possession or control. All fees that have accrued as of such expiration or termination, and Sections 1.2, 1.3, 1.4, 2, 3, 4, 5, 6.2 and 7 through 12, will survive any expiration or termination hereof.

6. WARRANTIES.

6.1 LIMITED WARRANTY.The limits below will not apply to the extent prohibited by applicable law.

AppDynamics warrants that during the first thirty (30) days following the date the Software is purchased, the Software will, in all material respects, conform to the
functionality described in the then-current Documentation for the applicable Software version. AppDynamics sole and exclusive obligation, and End Users sole and exclusive remedy, for a breach of this warranty shall be that AppDynamics shall be required to use commercially reasonable efforts to repair or replace the Software to conform in all material respects to the Documentation, and if AppDynamics is unable to materially restore such functionality within thirty (30) days from the date of written notice of such breach, End User shall be entitled to terminate the license to the affected Software upon written notice and AppDynamics shall promptly provide a pro-rata refund of the Software license fees (or Maintenance and Support Fees, for perpetual licenses) that have been paid in advance for the remainder of the License Term for the applicable Software (beginning on the date of termination). End User must notify AppDynamics in writing of any warranty breaches within such warranty period,
and End User must have installed and configured the Software in accordance with the Documentation to be eligible for the foregoing remedy.

6.2 WARRANTY DISCLAIMER.

EXCEPT AS EXPRESSLY PROVIDED IN THIS SECTION 6, ALL SOFTWARE, DOCUMENTATION, MAINTENANCE AND SUPPORT AND SERVICES ARE PROVIDED AS IS AND APPDYNAMICS AND ITS SUPPLIERS EXPRESSLY DISCLAIM ANY AND ALL OTHER REPRESENTATIONS AND WARRANTIES, EITHER EXPRESS, IMPLIED, STATUTORY, OR OTHERWISE WITH RESPECT THERETO, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, OR THE CONTINUOUS, UNINTERRUPTED, ERROR-FREE, VIRUS-FREE, OR SECURE ACCESS TO OR OPERATION OF THE SOFTWARE. APPDYNAMICS EXPRESSLY DISCLAIMS ANY WARRANTY AS TO THE ACCURACY OR COMPLETENESS OF ANY INFORMATION OR DATA ACCESSED OR USED IN CONNECTION WITH THE SOFTWARE, DOCUMENTATION, MAINTENANCE AND SUPPORT, OR SERVICES. AppDynamics is not responsible for any delays, delivery failures, or any other loss or damage resulting
from the transfer of data over communications networks and facilities, including the Internet, and End User acknowledges that the Software and Documentation may be subject to limitations, delays and other problems inherent in the use of such communications facilities. The Software is not fault-tolerant and is not designed or intended for use in hazardous environments, including without limitation, in the operation of aircraft or other modes of human mass transportation, nuclear or chemical facilities, life support systems, implantable medical equipment, motor vehicles or weaponry systems, or any other application in which failure of the Software could lead to death or serious bodily injury of a person, or to severe physical or environmental damage (each, a High Risk Use). AppDynamics expressly disclaims any express or implied warranty or representation of fitness for High Risk Use. AppDynamics shall not be liable to End User for any loss, damage or harm suffered by End User that
is directly or indirectly caused by End Users unauthorized use of the Software to process Prohibited Data.

7. INDEMNIFICATION.

7.1 BY APPDYNAMICS.

AppDynamics agrees at its expense to defend End User against (or, at AppDynamics option, settle), any third party claim to the extent such claim alleges that the Software infringes or misappropriates any patent, copyright, trademark or trade secret of a third party, and AppDynamics shall pay all costs and damages finally awarded against End User by a court of competent jurisdiction as a result of any such claim. In the event that the use of the Software is, or in AppDynamics sole opinion is likely to become, subject to such a claim, AppDynamics, at its option and expense, may (a) replace the applicable Software with functionally equivalent non-infringing technology, (b) obtain a license for End Users continued use of the applicable Software, or (c) terminate the license and provide a pro-rata refund of the Software license fees (or Maintenance
and Support Fees, for perpetual licenses) that have been paid in advance for the remainder of the License Term for the applicable Software (beginning on the date of termination). The foregoing indemnification obligation of AppDynamics will not apply: (1) if the Software is modified by End User or its agent; (2) if the Software is combined with other non-AppDynamics products, applications, or processes, but solely to the extent the alleged infringement is caused by such combination; or (3) to any unauthorized use of the Software. The foregoing shall be End Users sole remedy with respect to any claim of infringement of third party intellectual property rights.

7.2 BY END USER.

End User agrees to defend, at its expense, AppDynamics and its affiliates, its suppliers and its resellers against any third party claim to the extent such claim arises from or is made in connection with End Users breach of Section 1 or

End Users negligence or willful misconduct, and End User shall pay all
costs and damages finally awarded against AppDynamics by a court of competent jurisdiction as a result of any such claim.

7.3 INDEMNIFICATION REQUIREMENTS.

In connection with any claim for indemnification under this Section 7, the indemnified party must promptly provide the indemnifying party with notice of any claim that the indemnified party believes is within the scope of the obligation to indemnify, provided, however, that the failure to provide such notice shall not relieve the indemnifying party of its obligations under this Section 7, except to the extent that such failure materially prejudices the indemnifying partys defense of such claim. The indemnified party may, at its own expense, assist in the defense if it so chooses, but the indemnifying party shall control the defense and all negotiations related to the settlement of any such claim. Any such settlement intended to bind either party shall not be final without the other partys written consent, which consent shall not
be unreasonably withheld, conditioned or delayed; provided, however, that End Users consent shall not be required when AppDynamics is the indemnifying party if the settlement involves only the payment of money by AppDynamics.

8. LIMITATION OF LIABILITY. The limits below will not apply to the extent prohibited by applicable law.

8.1 EXCEPT FOR LIABILITY ARISING OUT OF END USERS BREACH OF SECTION 1.2 (RESTRICTIONS ON USE), IN NO EVENT SHALL EITHER PARTY BE LIABLE UNDER THIS AGREEMENT FOR ANY INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, INCLUDING DAMAGES FOR LOSS OF REVENUES OR PROFITS, LOSS OF USE, BUSINESS INTERRUPTION, OR LOSS OF DATA, WHETHER IN AN ACTION IN CONTRACT OR TORT, EVEN IF THE OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

8.2 EXCEPT FOR LIABILITY ARISING OUT OF END USERS BREACH OF SECTION 1.2 (RESTRICTIONS ON USE), NEITHER PARTYS LIABILITY FOR ANY DAMAGES (WHETHER FOR BREACH OF CONTRACT, MISREPRESENTATIONS, NEGLIGENCE, STRICT LIABILITY,
OTHER TORTS OR OTHERWISE) UNDER THIS AGREEMENT SHALL EXCEED AN AMOUNT EQUAL TO THE TOTAL FEES PAID (PLUS FEES PAYABLE) TO APPDYNAMICS DURING THE TWELVE (12) MONTHS IMMEDIATELY PRECEDING THE CLAIM GIVING RISE TO SUCH DAMAGES. THESE LIMITATIONS SHALL APPLY NOTWITHSTANDING ANY FAILURE OF ESSENTIAL PURPOSE OF ANY REMEDY.

9. FORCE MAJEURE.

Except for payment obligations, neither party hereto will be liable for defaults or delays due to acts of God, or the public enemy, acts or demands of any government or governmental agency, fires, earthquakes, floods, accidents, or other unforeseeable causes beyond its reasonable control and not due to its fault or negligence.

10. DATA COLLECTION.

End User acknowledges that AppDynamics application server and machine software agents (the Agents) collect metrics that relate to the performance, health and resource of an application, its components (transactions, code libraries) and related infrastructure (nodes, tiers) that service those components.

In addition, AppDynamics collects metrics on End Users activities, such as web pages visited, length of visit, and which features of the Software an End User uses. If End User provides AppDynamics with any personally identifiable information (personal data), End User represents and warrants that such information has been collected by End User in accordance with the provisions of all applicable data protection legislation and that End User has all right and consents necessary to provide such personal data to AppDynamics. End User will indemnify AppDynamics for reasonable costs and other amounts that AppDynamics may incur relating to any breach of this Section.

11. US GOVERNMENT MATTERS.

As defined in FAR section 2.101, the Software and Documentation are commercial items and according to DFAR section 252.227 7014(a)(1) and (5) are deemed to be commercial computer software and commercial computer software documentation. Consistent with DFAR section 227.7202 and FAR section 12.212, any use modification, reproduction, release, performance, display, or disclosure of such commercial software or commercial software documentation by the U.S. Government will be governed solely by the terms of this Agreement and will be prohibited except to the extent expressly permitted by the terms of this Agreement.

12. MISCELLANEOUS.

This Agreement shall be governed by and construed under the laws of the State of California, U.S.A. The parties consent to the exclusive jurisdiction and venue of the courts located in and serving San Francisco, California. Failure by either Party to exercise any of its rights under, or to enforce any provision of, this Agreement will not be deemed a waiver or forfeiture of such rights or ability to enforce such provision. If any provision of this Agreement is held by a court of competent jurisdiction to be illegal, invalid or unenforceable, such provision will be amended to achieve as nearly as possible the same economic effect of the original provision and the remainder of this Agreement will remain in full force and effect. This Agreement and its exhibits, together with the Order Form(s) and any statements of work incorporating this Agreement, if applicable, represent the entire agreement between the parties and supersede any previous or contemporaneous oral or written agreements or communications regarding the subject matter of this Agreement. The person signing or otherwise accepting this Agreement for End User represents that s/he is duly authorized by all necessary and appropriate corporate action to enter this Agreement on behalf of End User. Any modification to this Agreement must be in writing and signed by a duly authorized agent of both parties. The Uniform Computer Information Transactions Act (UCITA) does not apply to this Agreement. This Agreement shall control over additional or different terms of any purchase order, confirmation, invoice, statement of work or similar document (other than an AppDynamics Order Form, which will take precedence), even if accepted in writing by both parties, and waivers and amendments to this Agreement shall be effective only if made by non-pre-printed agreements clearly understood by both parties to be an amendment or waiver to this Agreement. For purposes of this Agreement, including means including without limitation. The rights and remedies of the parties hereunder will be deemed cumulative and not exclusive of any other right or remedy conferred by this Agreement or by law or equity. No joint venture, partnership, employment, or agency relationship exists between the parties as a result of this Agreement or use of the Software. AppDynamics reserves the right to perform its obligations from locations and/or through use of affiliates and subcontractors, worldwide, provided that AppDynamics will be responsible for such parties. End User may not assign this Agreement without the prior written approval of AppDynamics and any purported assignment in violation of this section shall be void; AppDynamics may assign, transfer or subcontract this Agreement in whole or in part. Upon any assignment of this Agreement by End User that is approved by AppDynamics, any licenses that contain an unlimited aspect will, with respect to End User or the successor entity, as applicable, be capped at the number of authorized Software units in use immediately prior to such assignment. End User agrees that AppDynamics may refer to End

User by its trade name and logo, and may briefly describe End Users business, in AppDynamics marketing materials and website. AppDynamics may give notice to End User by electronic mail to End Users email address on record in End Users account information, or by written communication sent by first class mail or pre-paid post to End Users address on record in End Users account information. End User may give notice to AppDynamics at any time by any letter delivered by nationally recognized overnight delivery service or first class postage prepaid mail to AppDynamics at the following address or such other address as may be notified to End User from time to time: AppDynamics, Inc., 303 Second Street, North Tower, 8th Floor, San Francisco, CA 94107, Attn: Legal Department. Notice under this Agreement shall be deemed given when received, if personally delivered; when receipt is electronically confirmed, if transmitted by email; the day after it is sent, if sent for next day delivery by recognized overnight delivery service; and upon receipt, if sent by certified or registered mail, return receipt requested.

EXHIBIT A

ENTERPRISE SUPPORT

GENERAL REQUIREMENTS.

AppDynamics will provide access to a ticketing system and email address (help@appdynamics.com), which will be available twenty-four (24) hours per day, seven (7) days per week. The email account will be maintained by qualified support specialists, who shall use commercially reasonable efforts to answer questions and resolve problems regarding the Software.

HOURS OF OPERATION.

Support is available twenty-four (24) hours per day, seven (7) days per week.

ERROR CLASSIFICATION.

Any reported errors are classified in the following manner, in each case when caused by the Software:

Error Classification Criteria
Urgent End User production application is down or there is a major malfunction, resulting in a business revenue loss and impacting the End User application functionality for a majority of users.
High Critical loss of End User application functionality or performance, impacting the application functionality for a high number of users.
Normal Moderate loss of End User application functionality or performance, impacting multiple users.

Low Minor loss of End User application functionality or
product feature in question.

ERROR DEFINITION.

An error means a reproducible malfunction in the Software that is reported by End User through AppDynamics ticketing system that prevents the Software from performing in accordance
with the operating specifications described in the then-current Documentation.

AUTHORIZED SUPPORT CONTACTS.

Maintenance and Support will be provided solely to End Users designated support contacts. The Order Form may indicate a maximum number of designated support contacts for End Users service level. End User will provide its designated support contacts, including its primary email address.

END USERS OBLIGATION TO ASSIST.
If End User reports a purported error in the Software to AppDynamics, AppDynamics ticketing system will request the following minimum information:

A general description of the operating environment
A list of all hardware components, operating systems and networks
A reproducible test case
Any log files, trace and systems files

End Users failure to provide this information may prevent or significantly delay AppDynamics ability to identify and fix the reported error. AppDynamics time to respond to any error will begin when AppDynamics has received all requested information
from the End User and is able to reproduce the error.

ERROR RESOLUTION.

If AppDynamics determines there is an error in the Software, AppDynamics may, at its sole option, repair that error in the version of the Software that End User is currently using or instruct End User to install a newer version of the Software with that error repaired. AppDynamics reserves the right to provide End User with a workaround in lieu of fixing an error.

SOFTWARE UPDATES AND UPGRADES. End User must be current on fees in order to receive access to Maintenance.

RESPONSE TIME. AppDynamics shall respond to error tickets in accordance with the tables set forth below. AppDynamics will use reasonable means to repair the error and keep End User informed of progress. AppDynamics makes no representations as to when a full resolution of the error may be made.

Error Initial Response Manager Escalation VP Escalation Email Status Updates

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Urgent
1 Hour 1 Business Day 1 Week Daily
High 6 Hours 1 Week 2 Weeks Weekly
Normal 1 Business Day Quarterly Review None None
Low 2 Business Days Semi-Annual Review None None

Maintenance and Support Policy: The Maintenance and Support policy is as follows:

AppDynamics provides Maintenance and Support for each version of the Software for a period of twelve (12) months after the generally available release of the next major version of the Software (a major release is a change in the first number to the right of the decimal point). For example, if version 4.1 is released on January 1, 2015, then AppDynamics will provide Maintenance and Support for version 4.0 until January 1, 2016. AppDynamics does not provide Maintenance or Support for any customized software (or components thereof).

For third party software or technology used by End User with the Software but not included with the Software (a Platform, such as Java Virtual Machines), AppDynamics will follow the end-of-life
(EOL) support timeline announced by the third party vendor of such Platform. AppDynamics will stop providing Maintenance and Support for an EOLd Platform version when the Platform vendor stops providing maintenance and support for that Platform version.

EXHIBIT B
AVAILABILITY AND SECURITY

The terms set forth in this Exhibit B apply only if End User has purchased access to the online software-as-a-service (SaaS) version of the Software, as indicated on the Order Form.

AVAILABILITY.

AppDynamics will provide System Availability (as defined below) of ninety-nine and one-half percent (99.5%) (the Availability SLA), excluding situations identified as Exclusions below. For purposes of the Availability SLA, the AppDynamics network extends to, includes and terminates at the data center located router that provides the outside interface of each of AppDynamics WAN connections to its backbone providers (the AppDynamics Network).

Exclusions means any outage that results from any of the following:
a.
Any Maintenance performed by AppDynamics during AppDynamics standard Maintenance windows. AppDynamics will notify End User within forty-eight (48) hours of any standard Maintenance and within twenty-four (24) hours for other non-standard emergency Maintenance (collectively referred to herein as Scheduled Maintenance).

b. End User's information content or application programming, or the acts or omissions of End User or its agents, including, without limitation, the following:
1. End Users use of any programs not supplied by AppDynamics;
2. End Users failure to provide AppDynamics with reasonable advance prior notice of any pending unusual large deployments of new nodes (i.e., adding over ten percent (10%) total nodes in less than twenty-four (24) hours);
3. End Users implementation of any significant configuration changes, including changes that lead to a greater than

thirty percent (30%) change in a one week period or greater than fifty percent (50%) change in a one month period in the number of key
objects in the system including but not limited to metrics, snapshots, nodes, events and business transactions;
4. Any misconfiguration by End User (as determined in AppDynamics sole discretion), including configuration errors and unintended usage of the Software;
5. End Users failure to upgrade the Agents to keep the Agent versions within six (6) months of the Controller version; or
6. End Users implementation of configuration changes in the number of key objects in the Software (including metrics, snapshots, nodes, events and business transactions) that results in, or is likely to result in, an adverse impact on other customers.

c. Force majeure or other circumstances beyond AppDynamics reasonable control that could not be avoided by its exercise of due care.

d. Failures of the Internet backbone itself and the network by which End User connects to the Internet backbone or any other network unavailability outside of the AppDynamics Network, such as misconfigurations, proxies or firewalls.

e. Any window of time when End User agrees that Software availability/unavailability will not be monitored or counted.

f. Any problems resulting from End User combining or merging the Software with any hardware or software not supplied by AppDynamics or not identified by AppDynamics in the Documentation as being compatible with the Software.

g. End Users or any third partys use of the Software in an unauthorized or unlawful manner.

Remedies for Excessive Downtime:

In the event the availability of the Software falls below the Availability SLA in a given calendar quarter, AppDynamics will pay End User a service credit (Service Credit) as follows, corresponding to the actual Availability of the Software during the applicable calendar quarter (on pro-rated basis for annual or multi-year fees): if the Availability is 99.5% or greater, End User is entitled to receive no credits; if the Availability is 97.0% - 99.49%, then End User is entitled to receive
Service Credits equal to five percent of the fees for the applicable calendar quarter (not to exceed $280); if the Availability is 95.0% - 96.9%, then End User is entitled to receive Service Credits equal to ten percent of the fees for the applicable calendar quarter (not to exceed $560); and if the Availability is less than 95.0%, then End User is entitled to receive Service Credits equal to twenty percent of the fees for the applicable calendar quarter (not to exceed $1120). Such Service Credit will be issued as a credit against any fees owed by End User for the next calendar quarter of the Term, or, if End User does not owe any additional fees, then AppDynamics will pay End User the amount of the applicable Service Credit within thirty (30) days after the end of the calendar quarter in which such credit accrued. To receive Service Credits, End User must submit a written request to AppDynamics (to customersuccess@appdynamics.com with a copy to legal@appdynamics.com) within 15 days after
the end of the quarter in which the Software was unavailable, or End Users right to receive Service Credits with respect to such unavailability will be waived. The remedies stated in this section are End Users sole and exclusive remedies and AppDynamics sole and exclusive obligations for service interruption or unavailability.

System Availability is measured by the following formula: (n - y) *100 / n

(1) n is the total number of minutes in the given calendar quarter minus the Exclusions (as defined above); and y is the total number of minutes in the given calendar quarter that the Controller is not accessible by End User (as determined by AppDynamics tools).
(2) Specifically excluded from n and y in this calculation are the Exclusions.

SECURITY INFORMATION.

For all End User data stored in the software-as-a-service version of the Software, AppDynamics will satisfy all of its obligations under Section 3 by maintaining the security precautions described below.
Certifications
AppDynamics
is SOC 2 Type II compliant, meaning it has been independently audited to verify the validity and functionality of its control activities and processes. Customers may request AppDynamics report at any time. AppDynamics data center provider is also SOC 2 Type II compliant.

Secure Connections
Agents initiate connections to a single Controller, which can either be hosted on-premises by the customer or by AppDynamics via the AppDynamics software-as-a-service platform. The Controller is the central repository and analytics engine where all performance data is stored, baselined, and analyzed. If End User downloads the Agent from End Users controller (ie., using the installation wizard provided by AppDynamics), then transport layer security (TLS) for Agent-to-Controller communication is enabled by default. For other installations, AppDynamics recommends enabling SSL/TLS encryption for Agent communications. For detailed instructions please see docs.appdynamics.com. Agents also support outbound
HTTP proxies for customers using these security mechanisms. For Software user interface access, AppDynamics redirects all traffic to HTTPS.

Access Controls to Data
Access to collected data and data collection features is restricted to authenticated customer users by role-based access controls (RBAC). In addition, customer users do not have native access to run queries on the Controllers MySQL database.

Availability
Servers for the software are operated in fault-tolerant architecture in a manner designed to ensure availability. Data is backed up nightly and stored redundantly. AppDynamics also provides an off-site backup service. Software security updates and patches are evaluated by engineers and are deployed based upon the security risks and stability benefits they offer to the Software and End Users.

Security
Access to the Software platform infrastructure and data by AppDynamics personnel is secured by authentication methods including public key authentication, passwords and
network access control lists. Infrastructure and data access is restricted to AppDynamics employees and contractors subject to confidentiality agreements. System and network activity for the Software are regularly monitored by a team of engineers. Failed authentication attempts are audited and engineers are paged so that intrusions or threats can be investigated. Standard firewall policies are deployed to block access except to ports required for Software and Agent communication.

Sensitive Data
AppDynamics recommends on-premises (rather than software-as-a-service) deployments for customers subject to

heightened regulatory oversight of data.

More Information

For more information on data privacy or security processes please contact help@appdynamics.com or your account representative. To report a suspected security breach, contact security@appdynamics.com.

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