**Класс «Array»**

Наследник класса «Any»

Реализует интерфейсы: Iterator<out T>, Iterable<out T>, Sequence<out T>, Map<K, out V>, Grouping<T, out K>, Appendable, Comparable<in T>

**Методы:**

**hasNext (task 1)**

abstract operator fun hasNext(): Boolean

Returns true if the iteration has more elements.

**Next (task 1)**

abstract operator fun next(): T

Returns the next element in the iteration.

**Drop (task 4.6)**

fun <T> Array<out T>.drop(**n**: Int): [List](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/-list/index.html)<T>

Returns a list containing all elements except first [n](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/drop.html#kotlin.collections$drop(kotlin.Array((kotlin.collections.drop.T)),%20kotlin.Int)/n) elements.

**indexOf (task 4.17, 4.26)**

fun <T> Array<out T>.indexOf(**element**: T): Int

Returns first index of [element](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/index-of.html#kotlin.collections$indexOf(kotlin.Array((kotlin.collections.indexOf.T)),%20kotlin.collections.indexOf.T)/element), or -1 if the array does not contain element.

**dropLast (task 4.19)**

fun <T> Array<out T>.dropLast(**n**: Int): [List](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/-list/index.html)<T>

Returns a list containing all elements except last [n](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/drop-last.html#kotlin.collections$dropLast(kotlin.Array((kotlin.collections.dropLast.T)),%20kotlin.Int)/n) elements.

**Take (task 4.6)**

fun <T> Array<out T>.take(**n**: Int): [List](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/-list/index.html)<T>

Returns a list containing first [n](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/take.html#kotlin.collections$take(kotlin.Array((kotlin.collections.take.T)),%20kotlin.Int)/n) elements.

**takeLast (task 4.19)**

fun <T> Array<out T>.takeLast(**n**: Int): [List](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/-list/index.html)<T>

Returns a list containing last [n](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/take-last.html#kotlin.collections$takeLast(kotlin.Array((kotlin.collections.takeLast.T)),%20kotlin.Int)/n) elements.

**Класс «List»**

Наследник класса «Collection»

Реализует интерфейсы: Iterable<out T>, Iterator<out T>, Collection<out E>, Sequence<out T>, Map<K, out V>, Comparable<in T>, MutableList<E>, Grouping<T, out K>, Appendable

**Методы:**

**hasNext (task 1)**

abstract operator fun hasNext(): Boolean

Returns true if the iteration has more elements.

**Next (task 1)**

abstract operator fun next(): T

Returns the next element in the iteration.

**indexOf (task 8.26)**

abstract fun indexOf(**element**: @UnsafeVariance E): Int

Returns the index of the first occurrence of the specified element in the list, or -1 if the specified element is not contained in the list.

**Distinct (task 4.47)**

fun <T> Array<out T>.distinct(): [List](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/-list/index.html)<T>

Returns a list containing only distinct elements from the given array.

**Drop (task 8.6)**

fun <T> Array<out T>.drop(**n**: Int): [List](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/-list/index.html)<T>

Returns a list containing all elements except first [n](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/drop.html#kotlin.collections$drop(kotlin.Array((kotlin.collections.drop.T)),%20kotlin.Int)/n) elements.

**dropLast (task 8.19)**

fun <T> Array<out T>.dropLast(**n**: Int): [List](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/-list/index.html)<T>

Returns a list containing all elements except last [n](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/drop-last.html#kotlin.collections$dropLast(kotlin.Array((kotlin.collections.dropLast.T)),%20kotlin.Int)/n) elements.

**Take (task 8.6)**

fun <T> Array<out T>.take(**n**: Int): [List](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/-list/index.html)<T>

Returns a list containing first [n](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/take.html#kotlin.collections$take(kotlin.Array((kotlin.collections.take.T)),%20kotlin.Int)/n) elements.

**takeLast (task 8.19)**

fun <T> Array<out T>.takeLast(**n**: Int): [List](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/-list/index.html)<T>

Returns a list containing last [n](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/take-last.html#kotlin.collections$takeLast(kotlin.Array((kotlin.collections.takeLast.T)),%20kotlin.Int)/n) elements.

**binarySearch (task 10)**

fun <T : [Comparable](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin/-comparable/index.html)<T>> [List](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/-list/index.html)<T?>.binarySearch(  
    **element**: T?,  
    **fromIndex**: Int = 0,  
    **toIndex**: Int = size  
): Int

Searches this list or its range for the provided [element](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/binary-search.html#kotlin.collections$binarySearch(kotlin.collections.List((kotlin.collections.binarySearch.T?)),%20kotlin.collections.binarySearch.T?,%20kotlin.Int,%20kotlin.Int)/element) using the binary search algorithm. The list is expected to be sorted into ascending order according to the Comparable natural ordering of its elements, otherwise the result is undefined.

**maxOfOrNull (task 4.53, 8.17, 8.26, 8.29)**

inline fun <T> Array<out T>.maxOfOrNull(  
    **selector**: (T) -> Double  
): Double?

Returns the largest value among all values produced by [selector](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/max-of-or-null.html#kotlin.collections$maxOfOrNull(kotlin.Array((kotlin.collections.maxOfOrNull.T)),%20kotlin.Function1((kotlin.collections.maxOfOrNull.T,%20kotlin.collections.maxOfOrNull.R)))/selector) function applied to each element in the array or null if there are no elements.

**minOfOrNull (task 8.5, 8.17, 8.26)**

inline fun <T> Array<out T>.minOfOrNull(  
    **selector**: (T) -> Double  
): Double?

Returns the smallest value among all values produced by [selector](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/min-of-or-null.html#kotlin.collections$minOfOrNull(kotlin.Array((kotlin.collections.minOfOrNull.T)),%20kotlin.Function1((kotlin.collections.minOfOrNull.T,%20kotlin.Double)))/selector) function applied to each element in the array or null if there are no elements.

**Plus (task 4.47, 5, 9)**

operator fun <T> [Collection](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/-collection/index.html)<T>.plus(**element**: T): [List](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/-list/index.html)<T>

Returns a list containing all elements of the original collection and then the given [element](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/plus.html#kotlin.collections$plus(kotlin.collections.Iterable((kotlin.collections.plus.T)),%20kotlin.collections.plus.T)/element).

**Класс «Set»**

Наследник класса «Collection»

Реализует интерфейсы: Iterable<out T>, Iterator<out T>, Collection<out E>, Sequence<out T>, Map<K, out V>, Comparable<in T>, MutableSet<K, V>, Grouping<T, out K>, Appendable

**Методы:**

**First (task 10)**

inline fun <T> Array<out T>.first(  
    **predicate**: (T) -> Boolean  
): T

Returns the first element matching the given [predicate](https://kotlinlang.org/api/latest/jvm/stdlib/kotlin.collections/first.html#kotlin.collections$first(kotlin.Array((kotlin.collections.first.T)),%20kotlin.Function1((kotlin.collections.first.T,%20kotlin.Boolean)))/predicate).