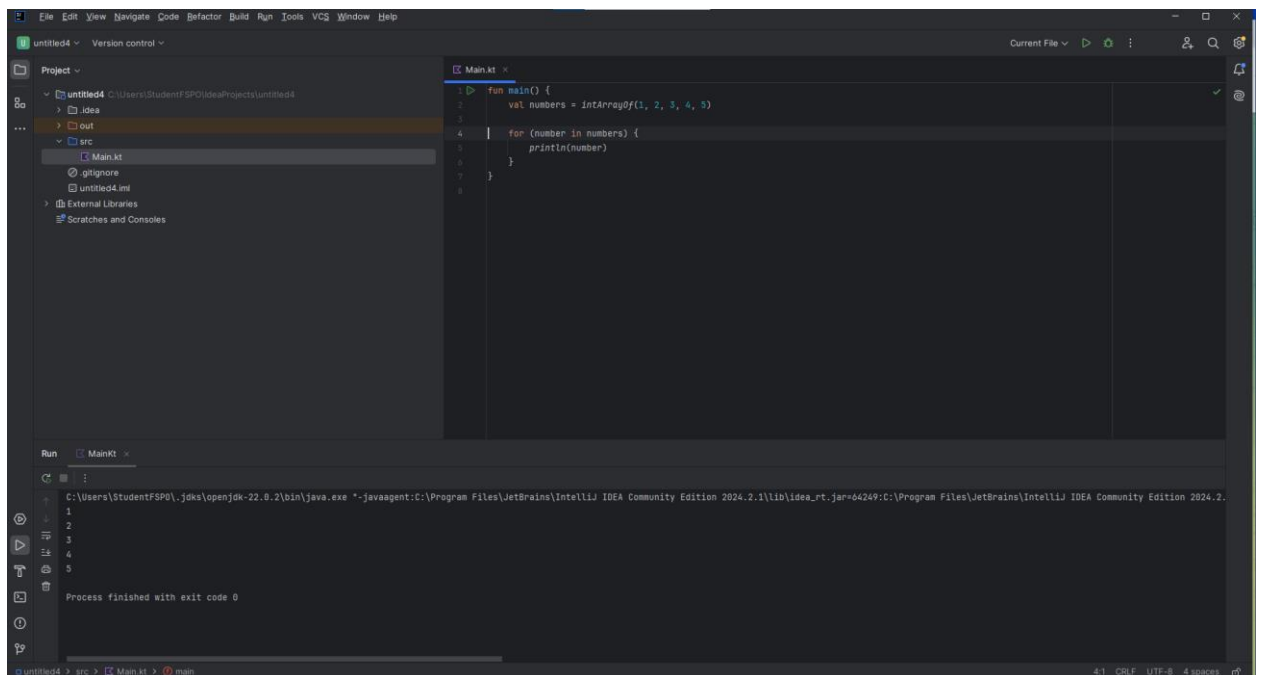


Адаменко ИС232

1)



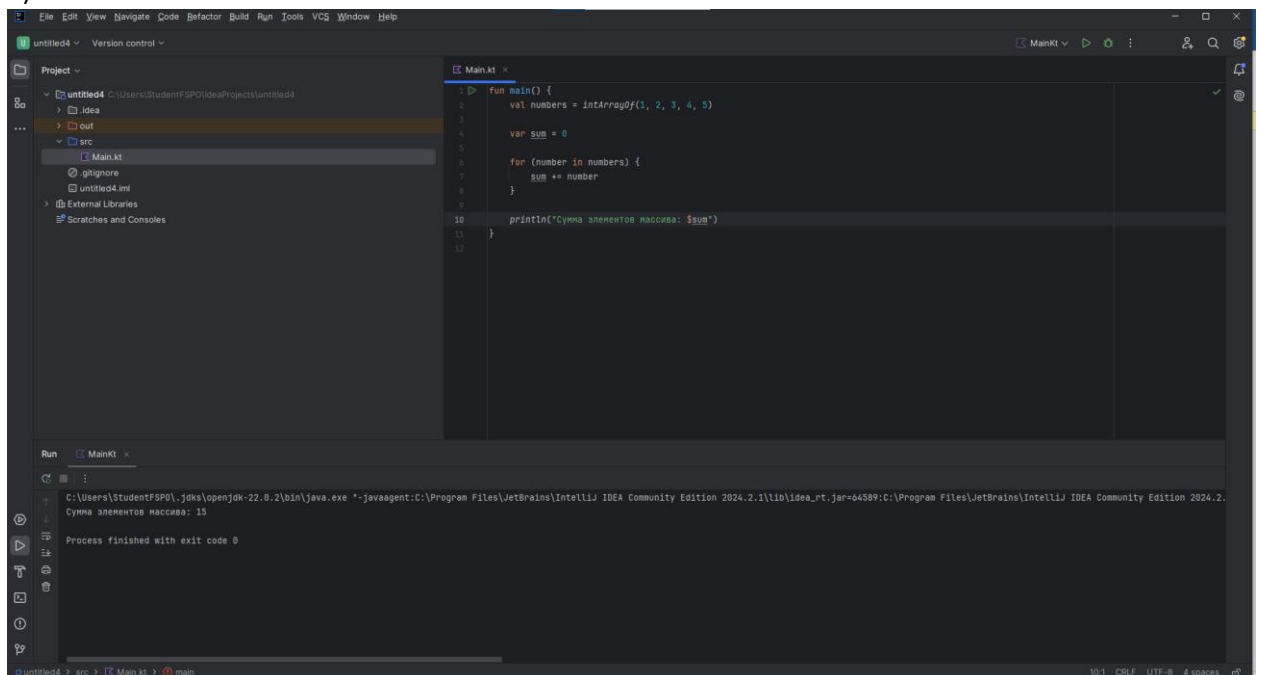
The screenshot shows the IntelliJ IDEA interface with a project named 'untitled4'. The 'Project' view on the left shows the file structure: 'src' contains 'Main.kt'. The 'Main.kt' file is open in the editor, showing the following code:

```
1 fun main() {  
2     val numbers = IntArray(5) {  
3         1, 2, 3, 4, 5  
4     }  
5     for (number in numbers) {  
6         println(number)  
7     }  
8 }
```

The 'Run' view at the bottom shows the execution output:

```
1  
2  
3  
4  
5  
Process finished with exit code 0
```

2)



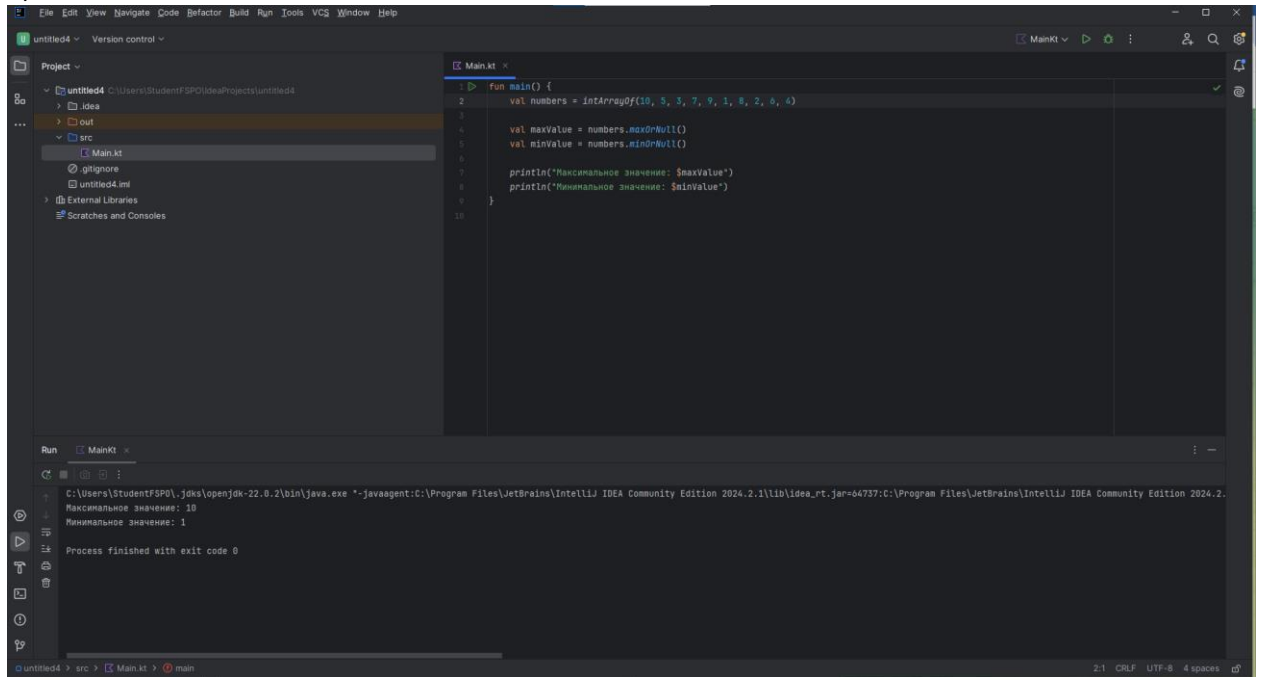
The screenshot shows the IntelliJ IDEA interface with the same project 'untitled4'. The 'Main.kt' file is open in the editor, showing the following code:

```
1 fun main() {  
2     val numbers = IntArray(5) {  
3         1, 2, 3, 4, 5  
4     }  
5     var sum = 0  
6     for (number in numbers) {  
7         sum += number  
8     }  
9  
10    println("Сумма элементов массива: $sum")  
11 }  
12 }
```

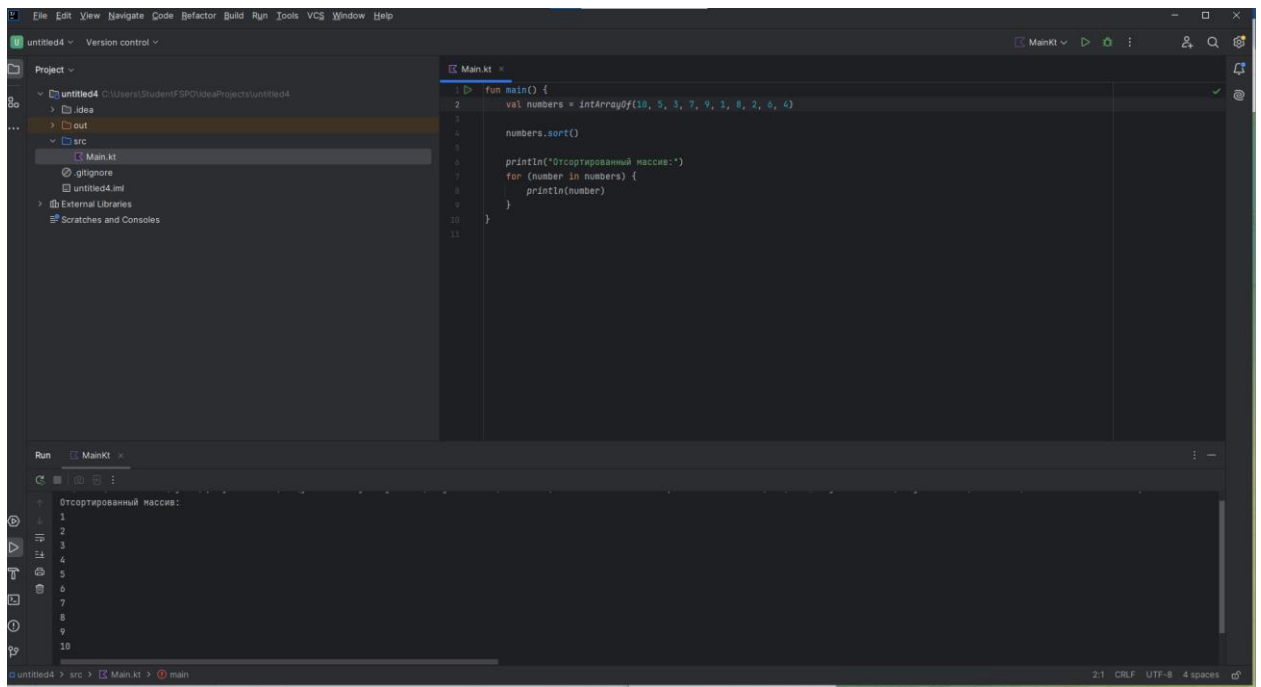
The 'Run' view at the bottom shows the execution output:

```
C:\Users\Student\FSP0\jdk\openjdk-22.0.2\bin\java.exe -javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\lib\idea_rt.jar=64589:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2.  
Сумма элементов массива: 15  
Process finished with exit code 0
```

3)



4)



5)

The screenshot shows the IntelliJ IDEA IDE with a project named 'untitled4'. The 'Project' view on the left shows the file structure: 'src' > 'Main.kt'. The 'Main.kt' file is open in the editor, showing the following code:

```
1 fun main() {  
2     val numbers = IntArray(10){1, 2, 3, 2, 4, 5, 3, 6, 7, 8, 7, 9, 1, 3, 6, 2, 8, 1, 0}  
3  
4     val uniqueNumbers = numbers.toSet()  
5  
6     println("Уникальные элементы массива:")  
7     for (number in uniqueNumbers) {  
8         println(number)  
9     }  
10  
11  
12 }
```

The 'Run' view at the bottom shows the output of the program:

```
Уникальные элементы массива:  
1  
2  
3  
4  
5  
6  
7  
8  
9  
35
```

6)

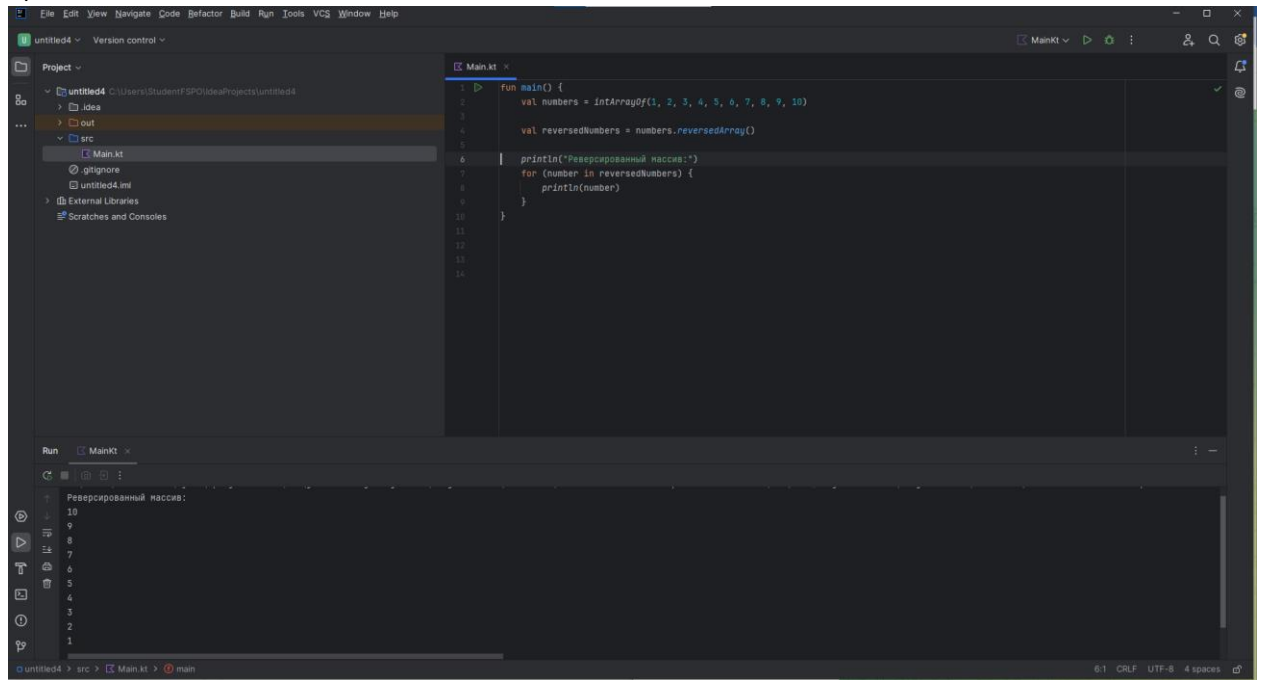
The screenshot shows the IntelliJ IDEA IDE with a project named 'untitled4'. The 'Project' view on the left shows the file structure: 'src' > 'Main.kt'. The 'Main.kt' file is open in the editor, showing the following code:

```
1 fun main() {  
2     val numbers = IntArray(10){1, 2, 3, 4, 5, 6, 7, 8, 9, 10}  
3  
4     val evenNumbers = mutableListOf<Int>()  
5     val oddNumbers = mutableListOf<Int>()  
6  
7     for (number in numbers) {  
8         if (number % 2 == 0) {  
9             evenNumbers.add(number)  
10        } else {  
11            oddNumbers.add(number)  
12        }  
13    }  
14  
15    println("Четные числа:")  
16    for (number in evenNumbers) {  
17        println(number)  
18    }  
19  
20    println("Нечетные числа:")  
21    for (number in oddNumbers) {  
22        println(number)  
23    }  
24  
25 }
```

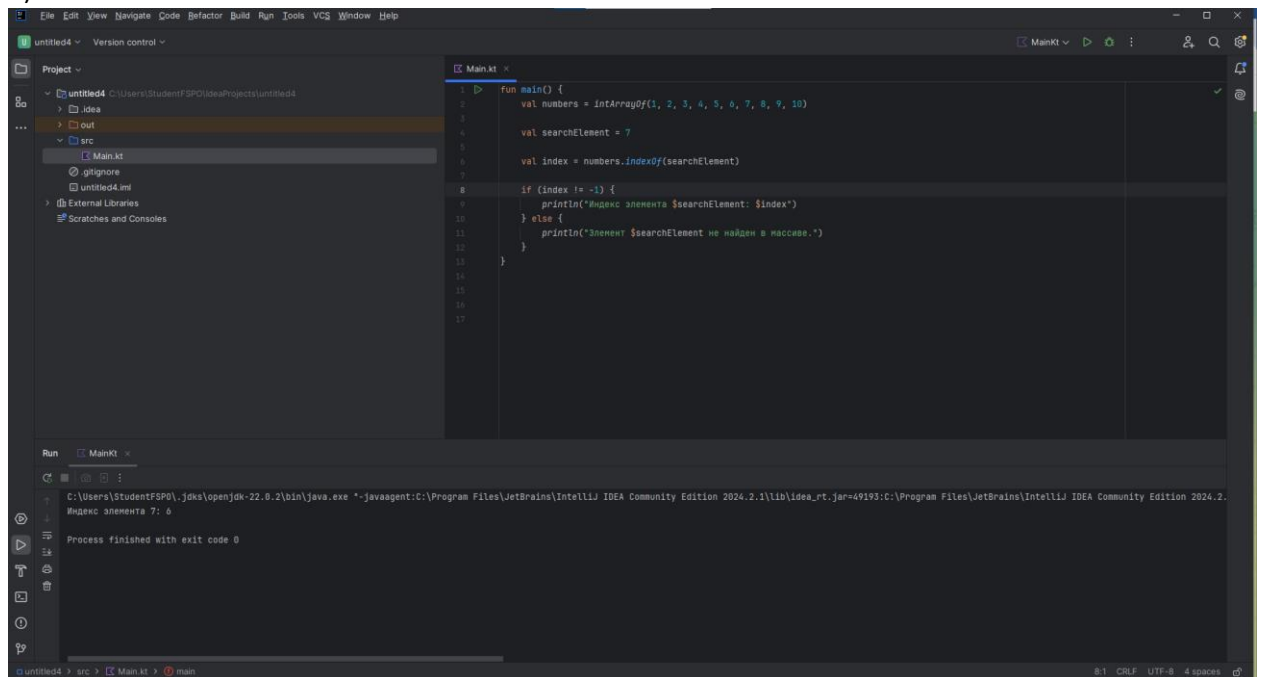
The 'Run' view at the bottom shows the output of the program:

```
Четные числа:  
2  
4  
6  
8  
10  
Нечетные числа:  
1  
3  
5  
7  
9
```

7)



8)



9)

The screenshot shows the IntelliJ IDEA interface. The Project view on the left displays the project structure for 'untitled4', including 'idea', 'out', 'src', and 'Main.kt'. The Main.kt file is open in the editor, showing the following Kotlin code:

```
1 fun main() {  
2     val originalArray = intArrayOf(1, 2, 3, 4, 5)  
3  
4     val copiedArray = originalArray.copyOf()  
5  
6     println("Элементы нового массива:")  
7     for (number in copiedArray) {  
8         println(number)  
9     }  
10 }  
11  
12  
13  
14  
15
```

The Run console at the bottom shows the output of the program:

```
C:\Users\Student\FSP0\jdk\openjdk-22.0.2\bin\java.exe -javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\lib\idea_rt.jar=49359:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2.  
Элементы нового массива:  
1  
2  
3  
4  
5  
Process finished with exit code 0
```

10)

The screenshot shows the IntelliJ IDEA interface. The Project view on the left displays the project structure for 'untitled4', including 'idea', 'out', 'src', and 'Main.kt'. The Main.kt file is open in the editor, showing the following Kotlin code:

```
1 fun main() {  
2     val numbers = intArrayOf(1, 2, 3, 4, 5, 6, 7, 8, 9, 10)  
3  
4     var sumOfEvenNumbers = 0  
5  
6     for (number in numbers) {  
7         if (number % 2 == 0) {  
8             sumOfEvenNumbers += number  
9         }  
10 }  
11  
12 println("Сумма всех четных чисел в массиве: $sumOfEvenNumbers")  
13 }  
14  
15  
16  
17  
18  
19
```

The Run console at the bottom shows the output of the program:

```
C:\Users\Student\FSP0\jdk\openjdk-22.0.2\bin\java.exe -javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\lib\idea_rt.jar=49550:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2.  
Сумма всех четных чисел в массиве: 30  
Process finished with exit code 0
```

11)

```

1 fun main() {
2     val array1 = IntArrayof(1, 2, 3, 4, 5)
3     val array2 = IntArrayof(3, 4, 5, 6, 7)
4
5     val set1 = array1.toSet()
6     val set2 = array2.toSet()
7
8     val intersection = set1.intersect(set2)
9
10    println("Пересежение массивов:")
11    for (number in intersection) {
12        println(number)
13    }
14 }
15
16
17
18
19
20
21

```

Run MainKt

```

C:\Users\Student\SPD\IdeaProjects\untitled4> java.exe -javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\lib\idea_rt.jar=49761:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2.
Пересежение массивов:
3
4
5
Process finished with exit code 0

```

12)

```

1 fun main() {
2     val numbers = IntArrayof(1, 2, 3, 4, 5)
3
4     println("Исходный массив:")
5     for (number in numbers) {
6         print("$number ")
7     }
8     println()
9
10    val index1 = 0
11    val index2 = 4
12
13    swapElements(numbers, index1, index2)
14
15    println("Массив после перестановки:")
16    for (number in numbers) {
17        print("$number ")
18    }
19    println()
20 }
21
22 fun swapElements(array: IntArray, index1: Int, index2: Int) {
23     if (index1 < 0 || index1 >= array.size || index2 < 0 || index2 >= array.size) {
24         println("Некорректные индексы для перестановки.")
25         return
26     }
27 }

```

Run MainKt

```

C:\Users\Student\SPD\IdeaProjects\untitled4> java.exe -javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\lib\idea_rt.jar=49941:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2.
Исходный массив:
1 2 3 4 5
Массив после перестановки:
5 2 3 4 1
Process finished with exit code 0

```

13)

The screenshot shows the IntelliJ IDEA interface with a Kotlin file named `Main.kt`. The code generates 20 random numbers and prints them. The console output shows the numbers generated.

```

1 import kotlin.random.Random
2
3 fun main() {
4     val randomNumbers = IntArray(20) { Random.nextInt(100, 101) }
5
6     println("Магический квадрат:")
7     for (number in randomNumbers) {
8         println(number)
9     }
10 }
11

```

Run console output:

```

C:\Users\Student\SP0\IdeaProjects\untitled4> java -jar C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2\bin\idea_rt.jar -S0151:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2\
Магический квадрат:
80
47
13
16
92
49
80
94
14
58
80
52
48
34
17
47
87
45
43
48
Process finished with exit code 0

```

14)

The screenshot shows the IntelliJ IDEA interface with a Kotlin file named `Main.kt`. The code filters numbers from an array that are divisible by 3 and prints them. The console output shows the filtered numbers.

```

1 fun main() {
2     val numbers = IntArray(10) { 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 }
3
4     println("Числа, делящиеся на 3:")
5     for (number in numbers) {
6         if (number % 3 == 0) {
7             println(number)
8         }
9     }
10 }
11

```

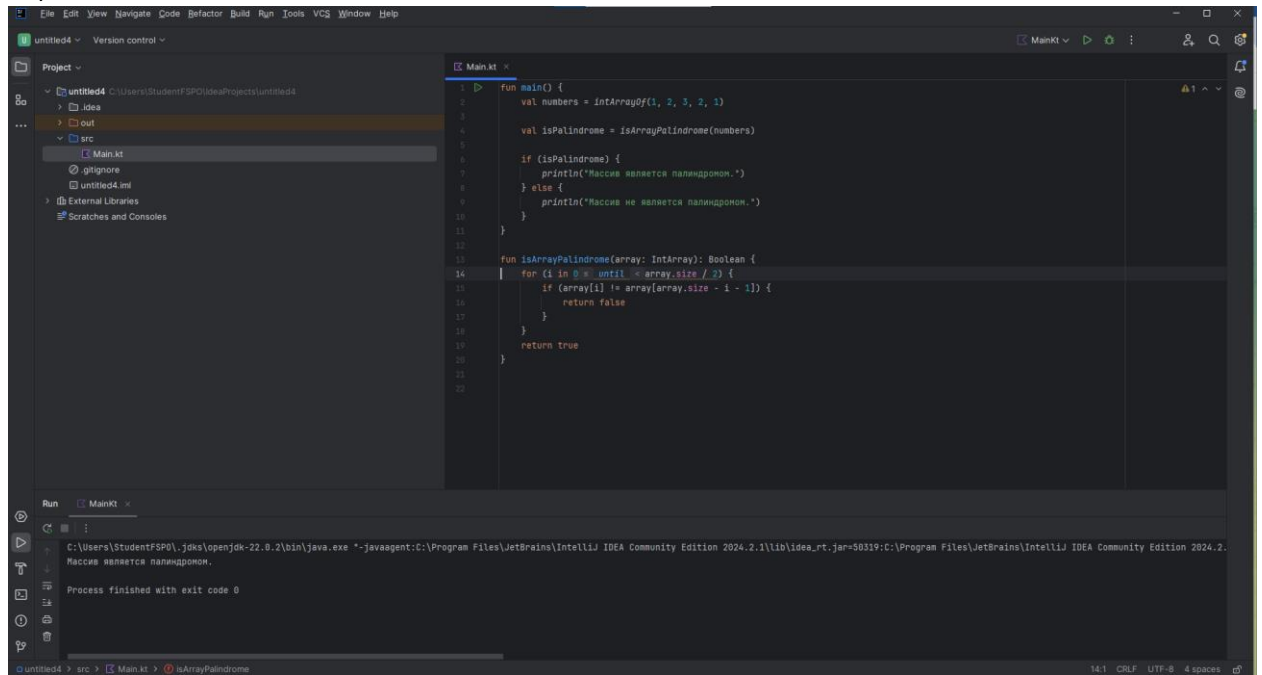
Run console output:

```

C:\Users\Student\SP0\IdeaProjects\untitled4> java -jar C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2\bin\idea_rt.jar -S0230:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2\
Числа, делящиеся на 3:
3
6
9
Process finished with exit code 0

```

15)



```

1 fun main() {
2     val numbers = intArrayOf(1, 2, 3, 2, 1)
3
4     val isPalindrome = isArrayPalindrome(numbers)
5
6     if (isPalindrome) {
7         println("Массив является палиндромом.")
8     } else {
9         println("Массив не является палиндромом.")
10    }
11 }
12
13 fun isArrayPalindrome(array: IntArray): Boolean {
14     for (i in 0 until array.size / 2) {
15         if (array[i] != array[array.size - 1 - i]) {
16             return false
17         }
18     }
19     return true
20 }

```

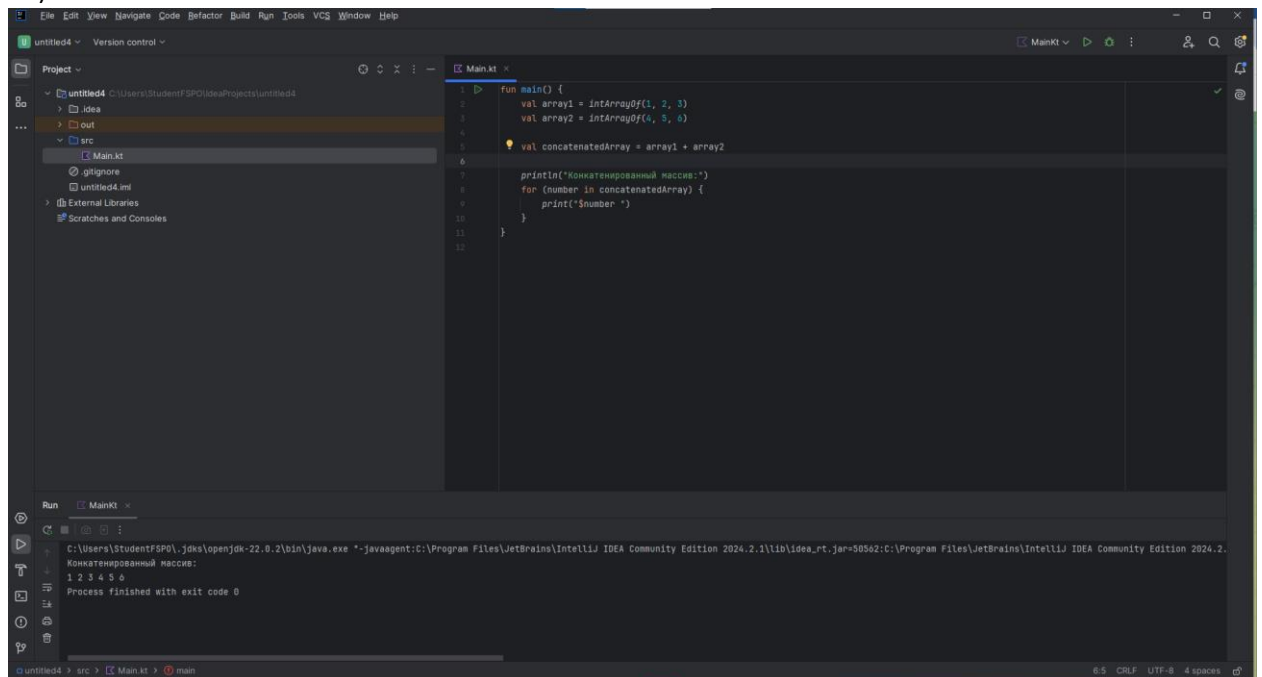
Run Main.kt

```

C:\Users\Student\SP0\jdk\openjdk-22.0.2\bin\java.exe -javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2\lib\idea_rt.jar=58319:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2
Массив является палиндромом.
Process finished with exit code 0

```

16)



```

1 fun main() {
2     val array1 = intArrayOf(1, 2, 3)
3     val array2 = intArrayOf(4, 5, 6)
4
5     val concatenatedArray = array1 + array2
6
7     println("Конкатенированный массив:")
8     for (number in concatenatedArray) {
9         print("$number ")
10    }
11 }
12

```

Run Main.kt

```

C:\Users\Student\SP0\jdk\openjdk-22.0.2\bin\java.exe -javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2\lib\idea_rt.jar=58562:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2
Конкатенированный массив:
1 2 3 4 5 6
Process finished with exit code 0

```


17)

```

1 fun main() {
2     val numbers = intArrayOf(1, 2, 3, 4, 5)
3
4     var sum = 0
5     var product = 1
6
7     for (number in numbers) {
8         sum += number
9         product *= number
10    }
11
12    println("Сумма всех элементов массива: $sum")
13    println("Произведение всех элементов массива: $product")
14 }
15

```

Run Main.kt

```

C:\Users\Student\SP0\jdk\openjdk-22.0.2\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2\lib\idea_rt.jar=50651:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2"
Сумма всех элементов массива: 15
Произведение всех элементов массива: 120
Process finished with exit code 0

```

18)

```

1 fun main() {
2     val numbers = intArrayOf(1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15)
3
4     val numbersList = numbers.toList()
5     val groups = numbersList.chunked(5)
6
7     println("Группы чисел:")
8     for ((index, group) in groups.withIndex()) {
9         println("Группа ${index + 1}: ${group.joinToString(separator = ", ")}")
10    }
11 }
12

```

Run Main.kt

```

C:\Users\Student\SP0\jdk\openjdk-22.0.2\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2\lib\idea_rt.jar=50858:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2"
Группы чисел:
Группа 1: 1, 2, 3, 4, 5
Группа 2: 6, 7, 8, 9, 10
Группа 3: 11, 12, 13, 14, 15
Process finished with exit code 0

```

```

19) fun main() {
    val array1 = intArrayOf(1, 3, 5, 7, 9)
    val array2 = intArrayOf(2, 4, 6, 8, 10)

    val mergedArray = mergeSortedArrays(array1, array2)

    println("Слитый отсортированный массив:")
    for (number in mergedArray) {
        print("$number ")
    }
}

fun mergeSortedArrays(array1: IntArray, array2: IntArray): IntArray {
    val result = IntArray(array1.size + array2.size)
    var i = 0

```

```

var j = 0
var k = 0

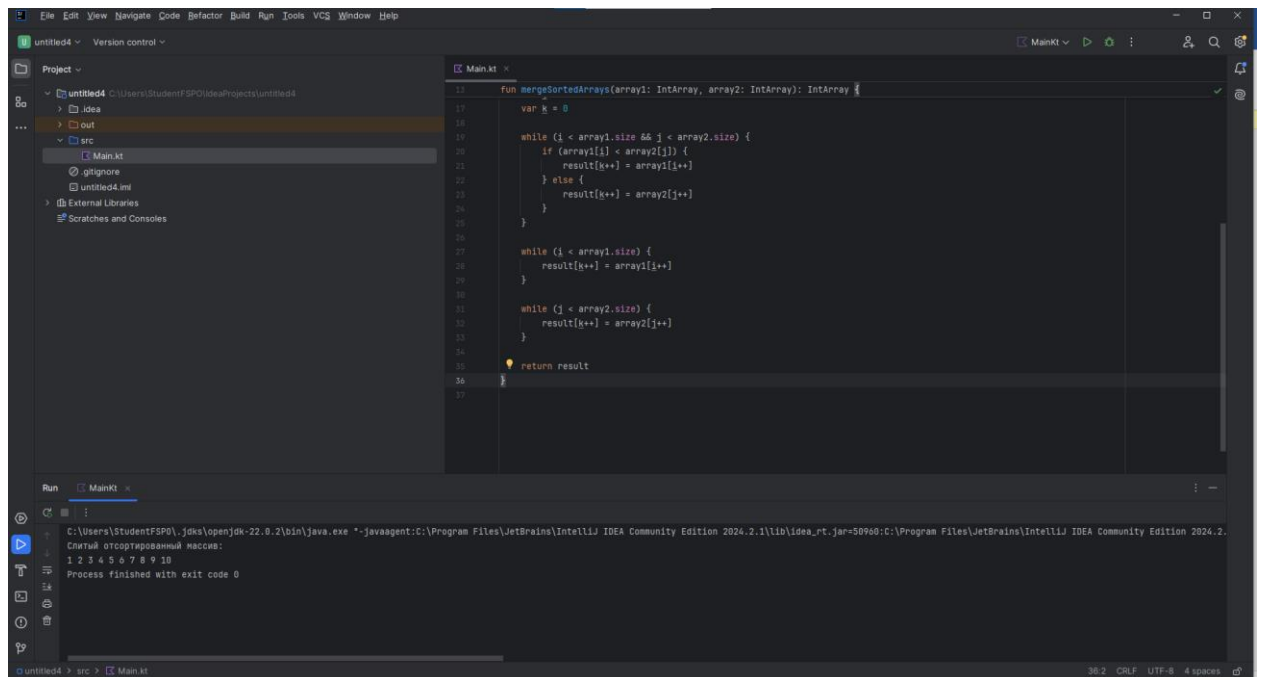
while (i < array1.size && j < array2.size) {
    if (array1[i] < array2[j]) {
        result[k++] = array1[i++]
    } else {
        result[k++] = array2[j++]
    }
}

while (i < array1.size) {
    result[k++] = array1[i++]
}

while (j < array2.size) {
    result[k++] = array2[j++]
}

return result
}

```



20)

The screenshot shows the IntelliJ IDEA interface with a project named 'untitled4'. The 'Project' view on the left shows the file structure: 'src' contains 'Main.kt'. The 'Main.kt' file is open in the editor, showing the following code:

```

1 fun main() {
2     val firstTerm = 1
3     val commonDifference = 2
4     val numberOfTerms = 10
5
6     val arithmeticProgression = IntArray(numberOfTerms) { index -> firstTerm + index * commonDifference }
7
8     println("Aritmeticheskaia progressiia:")
9     for (number in arithmeticProgression) {
10         println(number)
11     }
12 }
13

```

The 'Run' view at the bottom shows the execution output:

```

C:\Users\Student\SPQ\IdeaProjects\untitled4> javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2\lib\idea_rt.jar-51016:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2\bin\java.exe -javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2\lib\idea_rt.jar-51016:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2\bin\java.exe
Aritmeticheskaia progressiia:
1
3
5
7
9
11
13
15
17
19
Process finished with exit code 0

```

21)

The screenshot shows the IntelliJ IDEA interface with a project named 'untitled4'. The 'Project' view on the left shows the file structure: 'src' contains 'Main.kt'. The 'Main.kt' file is open in the editor, showing the following code:

```

1 fun main() {
2     val numbers = IntArray(10) { 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 }
3
4     val elementToRemove = 5
5
6     val updatedArray = removeElement(numbers, elementToRemove)
7
8     println("Ostannueshchiesia massive:")
9     for (number in updatedArray) {
10         print("$number ")
11     }
12 }
13
14 fun removeElement(array: IntArray, element: Int): IntArray {
15     val list = array.toList().toMutableList()
16
17     list.remove(element)
18
19     return list.toIntArray()
20 }
21

```

The 'Run' view at the bottom shows the execution output:

```

C:\Users\Student\SPQ\IdeaProjects\untitled4> javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2\lib\idea_rt.jar-51115:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2\bin\java.exe -javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2\lib\idea_rt.jar-51115:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2\bin\java.exe
Ostannueshchiesia massive:
1 2 3 4 6 7 8 9 10
Process finished with exit code 0

```

22)

The screenshot shows the IntelliJ IDEA interface with a Kotlin file named `Main.kt`. The code defines a `main` function that initializes an array of integers and calls a `findSecondLargest` function. The `findSecondLargest` function implements a loop to find the second largest element, throwing an `IllegalArgumentException` if the array has fewer than 2 elements or if the second largest element is not found. The Run console shows the output: "Второй по величине элемент: 9".

```

1 fun main() {
2     val numbers = intArrayOf(10, 5, 3, 7, 9, 1, 8, 2, 6, 4)
3
4     val secondLargest = findSecondLargest(numbers)
5
6     println("Второй по величине элемент: $secondLargest")
7 }
8
9 fun findSecondLargest(array: IntArray): Int {
10    if (array.size < 2) {
11        throw IllegalArgumentException("Массив должен содержать хотя бы два элемента.")
12    }
13
14    var first = Int.MIN_VALUE
15    var second = Int.MIN_VALUE
16
17    for (number in array) {
18        if (number > first) {
19            second = first
20            first = number
21        } else if (number > second && number < first) {
22            second = number
23        }
24    }
25
26    if (second == Int.MIN_VALUE) {
27        throw IllegalArgumentException("Второй максимальный элемент не найден.")
28    }
29
30    return second
31 }

```

Run console output:

```

C:\Users\Student\SP0\jdk\openjdk-22.0.2\bin\java.exe -javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2\lib\idea_rt.jar=51237:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2\
Второй по величине элемент: 9
Process finished with exit code 0

```

23)

The screenshot shows the IntelliJ IDEA interface with a Kotlin file named `Main.kt`. The code defines a `main` function that initializes three arrays of integers and calls a `mergeArrays` function. The `mergeArrays` function implements a loop to merge the three arrays into a single array, throwing an `IllegalArgumentException` if the arrays are empty. The Run console shows the output: "Объединенный массив: 1 2 3 4 5 6 7 8 9".

```

1 fun main() {
2     val array1 = intArrayOf(1, 2, 3)
3     val array2 = intArrayOf(4, 5, 6)
4     val array3 = intArrayOf(7, 8, 9)
5
6     val mergedArray = mergeArrays(array1, array2, array3)
7
8     println("Объединенный массив:")
9     for (number in mergedArray) {
10        print("$number ")
11    }
12 }
13
14 fun mergeArrays(vararg arrays: IntArray): IntArray {
15    // Определение размера результирующего массива
16    val totalSize = arrays.sumOf { it.size }
17    val result = IntArray(totalSize)
18
19    var index = 0
20    for (array in arrays) {
21        for (number in array) {
22            result[index++] = number
23        }
24    }
25
26    return result
27 }
28
29
30

```

Run console output:

```

C:\Users\Student\SP0\jdk\openjdk-22.0.2\bin\java.exe -javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2\lib\idea_rt.jar=51380:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2\
Объединенный массив:
1 2 3 4 5 6 7 8 9
Process finished with exit code 0

```

24)

```

1 fun main() {
2     val matrix = arrayOf(
3         intArrayOf(1, 2, 3),
4         intArrayOf(4, 5, 6),
5         intArrayOf(7, 8, 9)
6     )
7
8     val transposedMatrix = transposeMatrix(matrix)
9
10    println("транспонированная матрица:")
11    for (row in transposedMatrix) {
12        for (number in row) {
13            print("$number ")
14        }
15        println()
16    }
17 }
18
19 fun transposeMatrix(matrix: Array<IntArray>): Array<IntArray> {
20     val rows = matrix.size
21     val cols = matrix[0].size
22
23     val transposedMatrix = Array(cols) { IntArray(rows) }
24
25     for (i in 0 until rows) {
26         for (j in 0 until cols) {
27             transposedMatrix[j][i] = matrix[i][j]
28         }
29     }
30
31     return transposedMatrix
32 }

```

Run MainKt

C:\Users\StudentSP0\jdk\openjdk-22.0.2\bin\java.exe -javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\lib\idea_rt.jar=51378:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\bin -Dfile.encoding=UTF-8

Транспонированная матрица:

```

1 4 7
2 5 8
3 6 9

```

Активация Windows
Чтобы активировать Windows, перейдите в раздел "Параметры".

25)

```

1 fun main() {
2     val numbers = intArrayOf(1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
3
4     val searchElement = 7
5
6     val isFound = linearSearch(numbers, searchElement)
7
8     if (isFound) {
9         println("Элемент $searchElement найден в массиве.")
10    } else {
11        println("Элемент $searchElement не найден в массиве.")
12    }
13 }
14
15 fun linearSearch(array: IntArray, element: Int): Boolean {
16     for (number in array) {
17         if (number == element) {
18             return true
19         }
20     }
21
22     return false
23 }

```

Run MainKt

C:\Users\StudentSP0\jdk\openjdk-22.0.2\bin\java.exe -javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\lib\idea_rt.jar=51479:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\bin -Dfile.encoding=UTF-8

Элемент 7 найден в массиве.

Process finished with exit code 0

Активация Windows
Чтобы активировать Windows, перейдите в раздел "Параметры".

26)

The screenshot shows the IntelliJ IDEA interface with a Kotlin file named `Main.kt`. The code defines a `main` function that creates an array of integers `1, 2, 3, 4, 5`, calculates its average using a `findAverage` function, and prints the result. The `findAverage` function is a generic function that takes an `IntArray` and returns a `Double`. It includes a check for an empty array, throwing an `IllegalArgumentException` if the array is empty. The console output shows the average value: `Среднее арифметическое: 3.0`.

```

1 fun main() {
2     val numbers = IntArrayof(1, 2, 3, 4, 5)
3
4     val average = findAverage(numbers)
5
6     println("Среднее арифметическое: $average")
7 }
8
9 fun findAverage(array: IntArray): Double {
10     if (array.isEmpty()) {
11         throw IllegalArgumentException("Массив не должен быть пустым.")
12     }
13
14     val sum = array.sum()
15
16     return sum.toDouble() / array.size
17 }
18

```

Run console output: `Среднее арифметическое: 3.0`

27)

The screenshot shows the IntelliJ IDEA interface with a Kotlin file named `Main.kt`. The code defines a `main` function that creates an array of integers `1, 1, 1, 2, 2, 3, 3, 3, 4, 4, 4, 5, 5, 5, 5`, finds the maximum length of a sequence of identical elements using a `findMaxSequence` function, and prints the result. The `findMaxSequence` function is a generic function that takes an `IntArray` and returns an `Int`. It includes a check for an empty array, throwing an `IllegalArgumentException` if the array is empty. The console output shows the maximum length: `Максимальная последовательность одинаковых элементов: 5`.

```

1 fun main() {
2     val numbers = IntArrayof(1, 1, 1, 2, 2, 3, 3, 3, 4, 4, 4, 5, 5, 5, 5)
3
4     val maxSequence = findMaxSequence(numbers)
5
6     println("Максимальная последовательность одинаковых элементов: $maxSequence")
7 }
8
9 fun findMaxSequence(array: IntArray): Int {
10     if (array.isEmpty()) {
11         throw IllegalArgumentException("Массив не должен быть пустым.")
12     }
13
14     var currentLength = 1
15     var maxLength = 1
16
17     for (i in 1..array.size) {
18         if (array[i] == array[i - 1]) {
19             currentLength++
20             if (currentLength > maxLength) {
21                 maxLength = currentLength
22             }
23         } else {
24             currentLength = 1
25         }
26     }
27
28     return maxLength
29 }
30

```

Run console output: `Максимальная последовательность одинаковых элементов: 5`

28)

```

1 fun main() {
2     println("Введите размер массива (например, 5):")
3     val size = readLine()!!.toInt()
4     val array = IntArray(size)
5
6     println("Введите элементы массива:")
7     for (i in 0..until< size) {
8         array[i] = readLine()!!.toInt()
9     }
10
11     println("Введенный массив:")
12     println(array.joinToString())
13 }
14
15

```

Run Main.kt

```

C:\Users\Student\SP0\jdk\openjdk-22.0.2\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2\lib\idea_rt.jar=51902:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2\bin" -Didea.config.path=C:\Users\Student\SP0\IdeaProjects\untitled4 -Didea.system.path=C:\Users\Student\SP0\IdeaProjects\untitled4\out\production\untitled4
Введите размер массива (например, 5):
5
Введите элементы массива:
1
2
3
4
5
Введенный массив:
1, 2, 3, 4, 5
Process finished with exit code 0

```

29)

```

1 fun main() {
2     println("Введите размер массива (например, 5):")
3     val size = readLine()!!.toInt()
4     val array = IntArray(size)
5
6     println("Введите элементы массива:")
7     for (i in 0..until< size) {
8         array[i] = readLine()!!.toInt()
9     }
10
11     array.sort()
12
13     val median = if (size % 2 == 1) {
14         array[size / 2]
15     } else {
16         (array[size / 2 - 1] + array[size / 2]) / 2.0
17     }
18
19     println("Медиана массива: $median")
20 }
21

```

Run Main.kt

```

C:\Users\Student\SP0\jdk\openjdk-22.0.2\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2\lib\idea_rt.jar=51979:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2\bin" -Didea.config.path=C:\Users\Student\SP0\IdeaProjects\untitled4 -Didea.system.path=C:\Users\Student\SP0\IdeaProjects\untitled4\out\production\untitled4
Введите размер массива (например, 5):
5
Введите элементы массива:
1
2
3
4
5
Медиана массива: 3
Process finished with exit code 0

```

30)

The screenshot displays the IntelliJ IDEA IDE interface. The top menu bar includes File, Edit, View, Navigate, Code, Refactor, Build, Run, Tools, VCS, Window, and Help. The Project tool window on the left shows a project named 'untitled4' with a directory structure including 'idea', 'out', 'src', 'Main.kt', 'gltignore', and 'untitled4.iml'. The Main.kt file is open in the editor, showing the following Kotlin code:

```
1 fun main() {
2     val array = (1..100).toList().shuffled().toIntArray()
3
4     val groups = mutableListOf<List<Int>>()
5     for (i in 0..9 until 100 step 10) {
6         groups.add(array.slice(indices = 1..10 until i + 10))
7     }
8
9     println("pynna wceen:")
10    groups.forEachIndexed { index, group ->
11        println("pynna ${index + 1}: ${group.joinToString()}" )
12    }
13 }
14
```

The Run tool window at the bottom shows the execution command and output:

```
C:\Users\StudentFSP0\j\jdk\openjdk-22.0.2\bin\java.exe -javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\lib\idea_rt.jar=52185:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\bin -Dfile.encoding=UTF-8
pynna wceen:
pynna 1: 59, 70, 83, 68, 81, 20, 67, 48, 57, 30
pynna 2: 27, 87, 79, 88, 46, 46, 15, 25, 51, 62
pynna 3: 36, 2, 93, 7, 17, 38, 28, 4, 61, 63
pynna 4: 44, 29, 72, 42, 64, 75, 8, 96, 47, 39
pynna 5: 78, 98, 26, 89, 50, 92, 69, 33, 85, 49
pynna 6: 97, 58, 90, 9, 91, 50, 100, 53, 40, 10
pynna 7: 94, 74, 18, 3, 11, 6, 45, 52, 34, 76
pynna 8: 16, 60, 54, 71, 35, 95, 12, 37, 19, 21
pynna 9: 24, 80, 82, 22, 14, 77, 23, 31, 41, 32
pynna 10: 84, 65, 5, 43, 55, 1, 86, 99, 13, 73

Process finished with exit code 0
```

An 'Активация Windows' (Windows Activation) watermark is visible in the bottom right corner of the IDE window.