Practical No. 2

1. Write a Kotlin program that reverse an array without using the built-in reverse function.
Print the reversed array.

CODE:

```kotlin
fun main() {
    val arr = arrayOf(1, 2, 3, 4, 5)

    println("Original array:")
    println(arr.joinToString( separator: ", "))

    val reversedArray = Array(arr.size) { 0 }
    var j = arr.size - 1
    for (i in arr.indices) {
        reversedArray[i] = arr[j]
        j--
    }

    println("Reversed array:")
    println(reversedArray.joinToString( separator: ", "))
}
```

OUTPUT:

```
C:\Users\rdnc\.jdks\openjdk-23.0.2\bin\java.ex
Original array:
1, 2, 3, 4, 5
Reversed array:
5, 4, 3, 2, 1

Process finished with exit code 0
```

2. Write a Kotlin program that finds the largest and smallest elements in a given integer
array.

Code:

```kotlin
fun main() {
    val arr = intArrayOf(3, 1, 9, 7, 5, 6, 8)
    var largest = arr[0]
    var smallest = arr[0]
    for (element in arr) {
        if (element > largest) {
            largest = element
        }
        if (element < smallest) {
            smallest = element
        }
    }
    println("Largest element: $largest")
    println("Smallest element: $smallest")
}
```

Output:

```
C:\Users\rdnc\.jdks\openjdk-23.0.2\bin\java
Largest element: 9
Smallest element: 1


Process finished with exit code 0
```

3. Write a Kotlin program that calculates the sum of all even numbers in an array.
Code:

```kotlin
fun main() {

    val arr = intArrayOf(3, 4, 6, 7, 8, 10, 15)
    var sumOfEvens = 0
    for (element in arr) {
        if (element % 2 == 0) {  // Check if the number is even
            sumOfEvens += element
        }
    }

    println("Sum of all even numbers: $sumOfEvens")
}
```

Output:

```
C:\Users\rdnc\.jdks\openjdk-23.0.2\
Sum of all even numbers: 28


Process finished with exit code 0
```

4. Write a Kotlin program that counts the occurrence of a specific element in an array
Code:

```kotlin
fun main() {
    val arr = intArrayOf(3, 4, 6, 7, 4, 10, 4, 15)
    val elementToFind = 4
    var count = 0
    for (element in arr) {
        if (element == elementToFind) {
            count++
        }
    }
    println("Element $elementToFind occurs $count times in the array.")
}
```

Output:

```
C:\Users\rdnc\.jdks\openjdk-23.0.2\bin\java.e
Element 4 occurs 3 times in the array.


Process finished with exit code 0
```

5. Write a Kotlin program that merges two arrays into a third array
Code:

```kotlin
fun main() {
    val arr1 = intArrayOf(1, 2, 3)
    val arr2 = intArrayOf(4, 5, 6)
    val mergedArray = IntArray( size: arr1.size + arr2.size)
    var index = 0
    for (i in arr1) {
        mergedArray[index] = i
        index++
    }
    for (i in arr2) {
        mergedArray[index] = i
        index++
    }
    println("Merged array: ${mergedArray.joinToString( separator: ", ")}")
}
```

Output:

```
C:\Users\rdnc\.jdks\openjdk-23.0.2\bin
Merged array: 1, 2, 3, 4, 5, 6


Process finished with exit code 0
```