PRACTICAL 1

1.write a kotlin program to take percentage from student and print grade
code:

```
fun main(){
    print("enter your percentage")
    val percentage = readLine()!!.toFloat()

    val grade = when{
        percentage >= 90 -> "A+"
        percentage >= 80 -> "B+"
        percentage >= 70 -> "C+"
        percentage >= 60 -> "D+"
        percentage >= 70 -> "E+"
        else -> "F"
    }
    print("enter your grade $grade")
}
```

output:

```
"C:\Program Files\Java\jdk-23\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 20
enter your percentage 78
enter your grade C+
Process finished with exit code 0
```

2.write a kotlin program to take a number from user and calculate factorial
CODE:

```
fun main() {
    print("Enter a number: ")
    val number = readLine()!!.toInt()
    val result = factorial(number)
    println("The factorial of $number is: $result")
}
fun factorial(n: Int): Long
    { var fact = 1L
    for (i in 1..n)
        { fact *= i
    }
    return fact
}
```

OUTPUT:

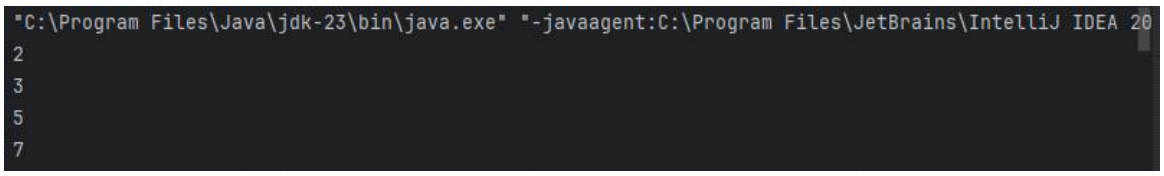
```
"C:\Program Files\Java\jdk-23\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 20
Enter a number: 6
The factorial of 6 is: 720

Process finished with exit code 0
```

3. write a kotlin program to print prime number between 0 to 100
code:

```
fun main() {
    for (num in 2..100)
        { var isPrime = true
        for (i in 2 until num)
            { if (num % i == 0)
            {
                isPrime = false
                break
            }
        }
        if (isPrime)
            { println(num)
        }
    }
}
```

output:



4.write a simple kotlin program to print fibonnaci series of a given number take user input

```
fun main() {
    print("Enter the number of terms: ")
    val terms = readLine()!!.toInt()

    if (terms <= 0) {
        println("Please enter a positive integer greater than 0.")
        return
    }

    println("Fibonacci Series up to $terms terms: ")

    var first = 0
    var second = 1

    // Handle special case for terms = 1
    if (terms == 1) {
        print("$first")
    } else {
        print("$first $second ")
        for (i in 3..terms) {
            val next = first + second
            print("$next ")
            first = second
            second = next
        }
    }
}
```

output:

```
"C:\Program Files\Java\jdk-23\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 20
Enter the number of terms: 6
Fibonacci Series up to 6 terms:
0 1 1 2 3 5
Process finished with exit code 0
```

5. write a kotlin a program to check whether the given number is armstrong or not

```
fun main() {
    print("enter a number:  ")
    val number = readLine()!!.toInt()

    val strNumber = number.toString()

    var sum = 0
    for(digitChar in strNumber) {
        val digit = digitChar.toString().toInt()
        sum += digit * digit * digit
    }
    if (sum == number) {
        println("$number is an armstrong number")
    } else {
        println("$number is not an armstrong number")
    }
}
```

output:

```
"C:\Program Files\Java\jdk-23\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 20
enter a number:  9
9 is not an armstrong number

Process finished with exit code 0
```