Лабораторная работа №10

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Код

1.

```
fun printNumber(n: Int): List<Int> {
    return if (n == 0) {
        emptyList()
    } else {
        (n ≥ downTo ≥ 1).toList()
    }
}

Generate unit tests | Comment code | Explain code | Fix bugs
fun main() {
    println(printNumber( n: 0)) // []
    println(printNumber( n: 2)) // [2, 1]
    println(printNumber( n: 5)) // [5, 4, 3, 2, 1]
}
```

2.

```
fun pyramid(n: Int) {
    for (i in 1 ≤ .. ≤ n) {
        val spaces = " ".repeat( n: n - i)
        val hashes = "#".repeat( n: 2 * i - 1)
        println(spaces + hashes + spaces)
    }
}

Generate unit tests | Comment code | Explain code | Fix bugs
fun main() {
    println("pyramid(1)")
    pyramid( n: 1)

    println("\npyramid(2)")
    pyramid( n: 2)

    println("\npyramid(3)")
    pyramid( n: 3)
}
```

3.

```
Generate unit tests | Comment code | Explain code | Fix bugs
fun caesarCipher(text: String, shift: Int): String {
    return text.map { char ->
        when {
            char.isLetter() -> {
                val base = if (char.isUpperCase()) 'A' else 'a'
                val offset = (char - base + shift) % 26
                (base + if (offset < 0) offset + 26 else offset)
            }
            else -> char
        }
    }.joinToString( separator: "")
}

Generate unit tests | Comment code | Explain code | Fix bugs
fun main() {
    println(caesarCipher( text: "Hello",  shift: 3))
    println(caesarCipher( text: "Khoor",  shift: -3))
}
```

4.

```
Generate unit tests | Comment code | Explain code |
fun fizzBuzz(n: Int) = (1 ≤ .. ≤ n).map {
    when {
        it % 15 == 0 -> "ВизллБизлл"
        it % 3 == 0 -> "Физллл"
        it % 5 == 0 -> "Бизллл"
        else -> it
    }
}

Generate unit tests | Comment code | Explain code |
fun main() {
    println(fizzBuzz( n: 15))
}
```

Результат

1.

```
[]
[2, 1]
[5, 4, 3, 2, 1]
```

2.
```
pyramid(1)
#

pyramid(2)
 #
###

pyramid(3)
  #
 ###
#####
```

3.
```
Connected to the target VM, address: '127.0.0.1:51382', transport: 'socket'
Khoor
Hello
Disconnected from the target VM, address: '127.0.0.1:51382', transport: 'socket'
```

4.
```
[1, 2, Физллл, 4, Бизллллл, Физллл, 7, 8, Физллл, Бизллллл, 11, Физллл, 13, 14, ВизллБизлл]
```