

# 5COSC023W - Tutorial 2 Exercises Sample Solutions - Practice Kotlin

## Exercise 1

```
fun main() {  
    var x = 1  
    val y = x  
  
    val z = y  
    x = 2  
  
    println(x)  
    println(y)  
    println(z)  
}
```

z is constant and it cannot be changed.

## Exercise 2

```
fun other(s: String): String {  
    var s2 = ""  
    for (i in 0 until s.length step 2)  
        s2 += s[i]  
  
    return s2  
}  
  
fun main() {  
    println(other("cement"))  
}  
  
/* Output:  
cmn  
*/
```

## Exercise 3

```
fun sum(a: Double, b: Double, c: Double): Double {  
    var results = a + b + c
```

```

    return results
}

fun main() {
    println(sum (4.0, 5.0, 11.0))
}

```

or

```

fun sum(a: Double, b: Double, c: Double) =
    a + b + c

fun main() {
    println(sum (4.0, 5.0, 11.0))
}

```

## Exercise 4

```

fun createNewList(old_list: List<Int>, n1: Int, n2: Int): List<Int> {
    var new_list = mutableListOf<Int>()

    for (e in old_list)
        if (n1 <= e && e <= n2)
            new_list.add(e)

    return new_list
}

fun main() {
    var list = listOf(5, 100, 10, -1, 200, 66)

    var list2 = createNewList(list, 2, 150)
    for (i in list2)
        print("$i ")
}

```

## Exercise 5

```

fun everyFifth(start: Int, end: Int) {
    for (i in start..end)
        if ((i - start) % 5 == 4)
            println(i)
}

fun main() {

```

```
    everyFifth(11, 30)
}
```

## Exercise 6

```
fun everyFifthNonSpace(s: String) {
    var count = 0
    for (i in 0..s.length-1) {
        if (s[i] != ' ')
            ++count
        if (count == 5) {
            println(s[i])
            count = 0
        }
    }
}

fun main() {
    everyFifthNonSpace("abc d e fgh ik")
}
```

## Exercise 7

```
fun countDigits(number: Int, digit: Int): Int {
    var worker = number
    var occurrences = 0
    while (worker > 0) {
        var rightmost_digit = worker % 10
        worker = worker / 10
        if (rightmost_digit == digit)
            ++occurrences
    }
    return occurrences
}

fun main() {
    println(countDigits(764241, 4)) // 2
}
```