**Assignment 1- Kotlin Lambda Functions**

// Part 1: Basics of Lambda Functions

// Task 2: Lambda Function as Parameter

fun operateOnNumbers(a: Int, b: Int, operation: (Int, Int) -> Int): Int {

return operation(a, b)

}

// Example Usage for Task 2

fun main() {

val addition: (Int, Int) -> Int = { x, y -> x + y }

val subtraction: (Int, Int) -> Int = { x, y -> x - y }

val result1 = operateOnNumbers(10, 5, addition)

println("Result of addition: $result1")

val result2 = operateOnNumbers(15, 7, subtraction)

println("Result of subtraction: $result2")

// Example with a different lambda operation (multiplication)

val multiplication: (Int, Int) -> Int = { x, y -> x \* y }

val result3 = operateOnNumbers(4, 6, multiplication)

println("Result of multiplication: $result3")

}

// Part 3: Lambda Expressions for Sorting

// Task 5: Sort with Lambda

fun sortStringsByLength(strings: List<String>): List<String> {

return strings.sortedBy { it.length }

}

// Example Usage for Task 5

fun main() {

val unsortedStrings = listOf("apple", "banana", "kiwi", "orange", "grape")

// Sorting the strings by length using the sortStringsByLength function

val sortedStrings = sortStringsByLength(unsortedStrings)

println("Original Strings: $unsortedStrings")

println("Sorted Strings by Length: $sortedStrings")

}