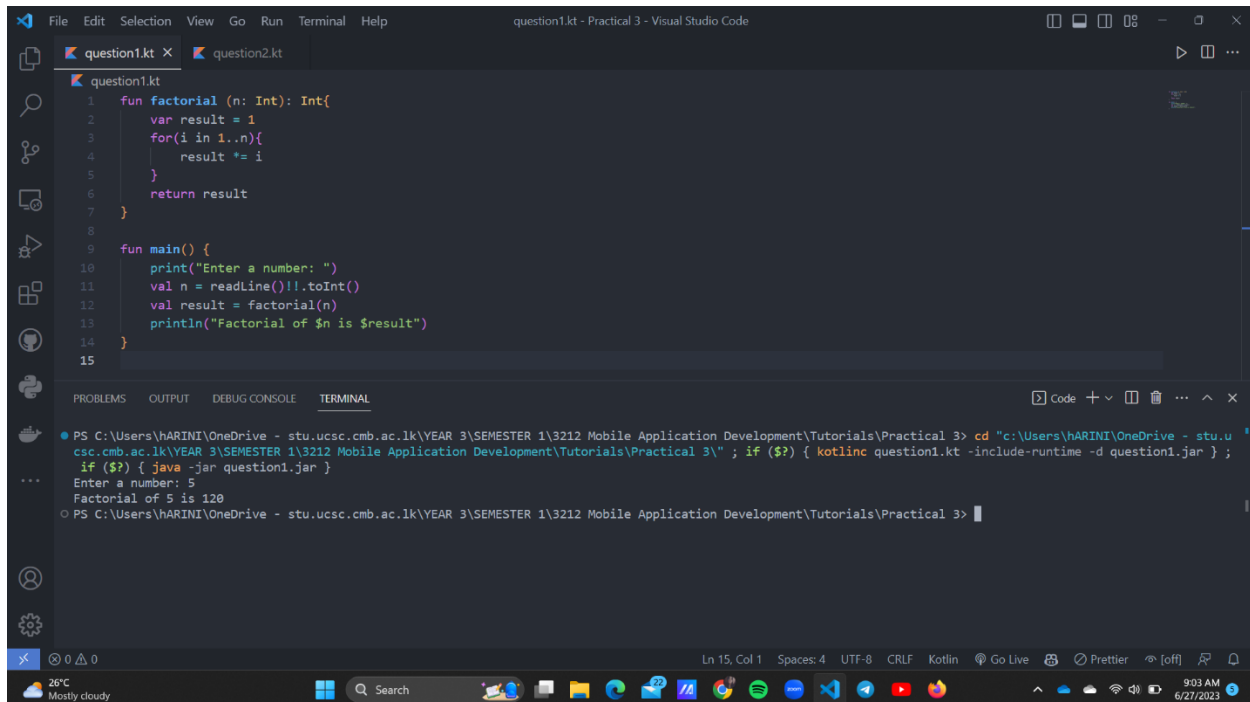


# SCS 3212 - Mobile Application Development

## Lab Sheet 03

### Question 1:

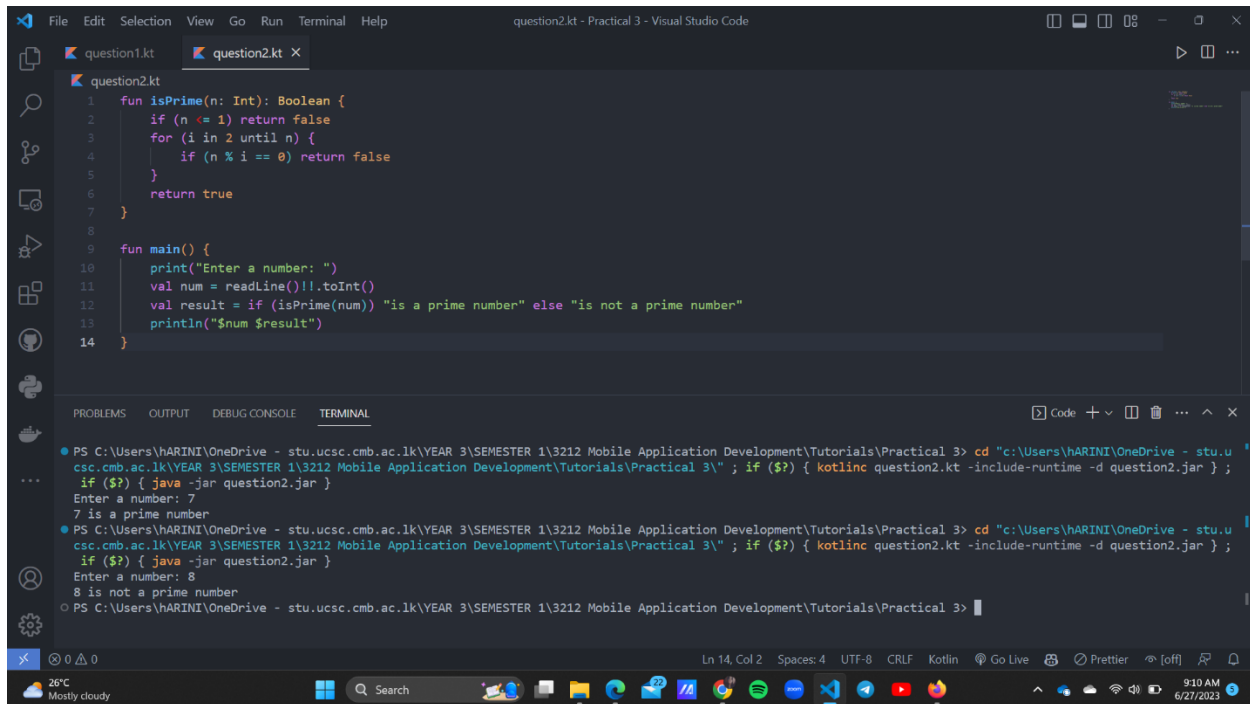


```
File Edit Selection View Go Run Terminal Help
question1.kt - Practical 3 - Visual Studio Code

question1.kt
1 fun factorial (n: Int): Int{
2     var result = 1
3     for(i in 1..n){
4         result *= i
5     }
6     return result
7 }
8
9 fun main() {
10     print("Enter a number: ")
11     val n = readLine()!!.toInt()
12     val result = factorial(n)
13     println("Factorial of $n is $result")
14 }
15

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
PS C:\Users\hARINI\OneDrive - stu.ucsc.cmb.ac.lk\YEAR 3\SEMESTER 1\3212 Mobile Application Development\Tutorials\Practical 3> cd "c:\Users\hARINI\OneDrive - stu.u
csc.cmb.ac.lk\YEAR 3\SEMESTER 1\3212 Mobile Application Development\Tutorials\Practical 3\" ; if ($?) { kotlinc question1.kt -include-runtime -d question1.jar } ;
if ($?) { java -jar question1.jar }
Enter a number: 5
Factorial of 5 is 120
PS C:\Users\hARINI\OneDrive - stu.ucsc.cmb.ac.lk\YEAR 3\SEMESTER 1\3212 Mobile Application Development\Tutorials\Practical 3>
```

## Question 2:



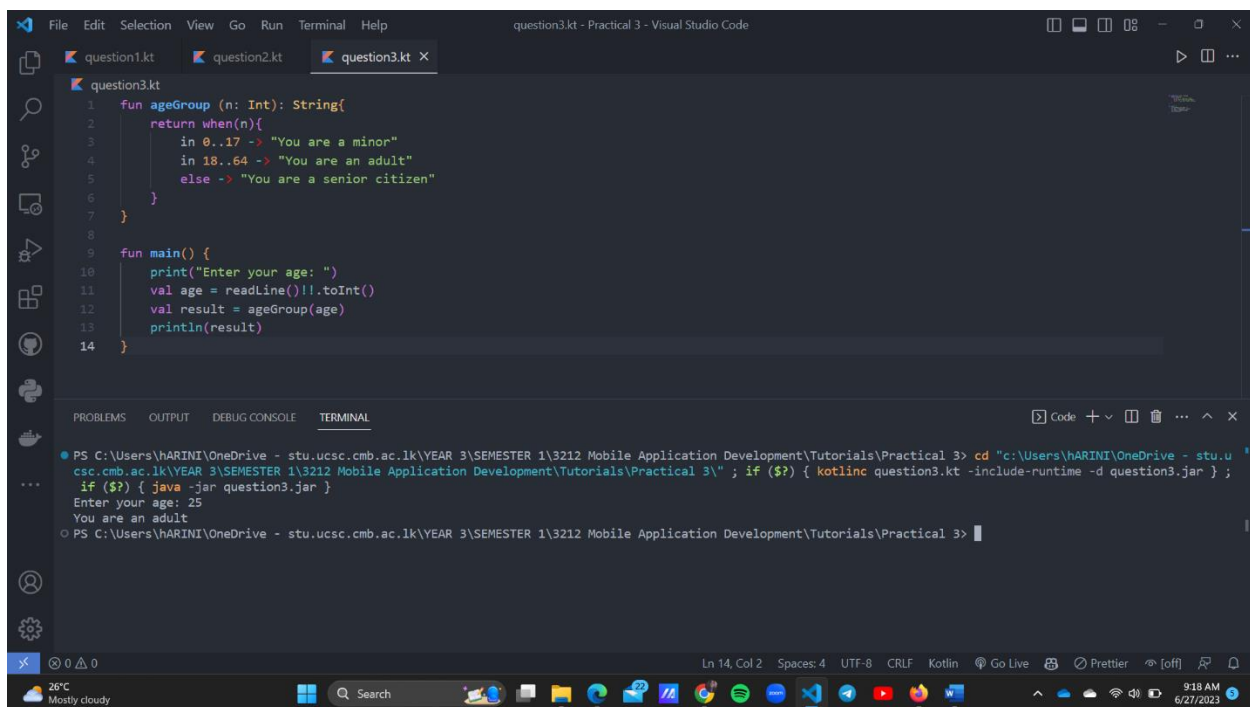
The screenshot shows a Visual Studio Code editor with a Kotlin file named `question2.kt`. The code defines a function `isPrime` that checks if a number is prime and a `main` function that prompts the user for a number and prints the result. The terminal shows the compilation and execution of the program, with successful runs for inputs 7 and 8.

```
1 fun isPrime(n: Int): Boolean {
2     if (n <= 1) return false
3     for (i in 2 until n) {
4         if (n % i == 0) return false
5     }
6     return true
7 }
8
9 fun main() {
10    print("Enter a number: ")
11    val num = readLine()!!.toInt()
12    val result = if (isPrime(num)) "is a prime number" else "is not a prime number"
13    println("$num $result")
14 }
```

Terminal Output:

```
PS C:\Users\hARINI\OneDrive - stu.ucsc.cmb.ac.lk\YEAR 3\SEMESTER 1\3212 Mobile Application Development\Tutorials\Practical 3> cd "c:\Users\hARINI\OneDrive - stu.u
csc.cmb.ac.lk\YEAR 3\SEMESTER 1\3212 Mobile Application Development\Tutorials\Practical 3" ; if ($?) { kotlinc question2.kt -include-runtime -d question2.jar } ;
if ($?) { java -jar question2.jar }
Enter a number: 7
7 is a prime number
PS C:\Users\hARINI\OneDrive - stu.ucsc.cmb.ac.lk\YEAR 3\SEMESTER 1\3212 Mobile Application Development\Tutorials\Practical 3> cd "c:\Users\hARINI\OneDrive - stu.u
csc.cmb.ac.lk\YEAR 3\SEMESTER 1\3212 Mobile Application Development\Tutorials\Practical 3" ; if ($?) { kotlinc question2.kt -include-runtime -d question2.jar } ;
if ($?) { java -jar question2.jar }
Enter a number: 8
8 is not a prime number
PS C:\Users\hARINI\OneDrive - stu.ucsc.cmb.ac.lk\YEAR 3\SEMESTER 1\3212 Mobile Application Development\Tutorials\Practical 3>
```

## Question 3:



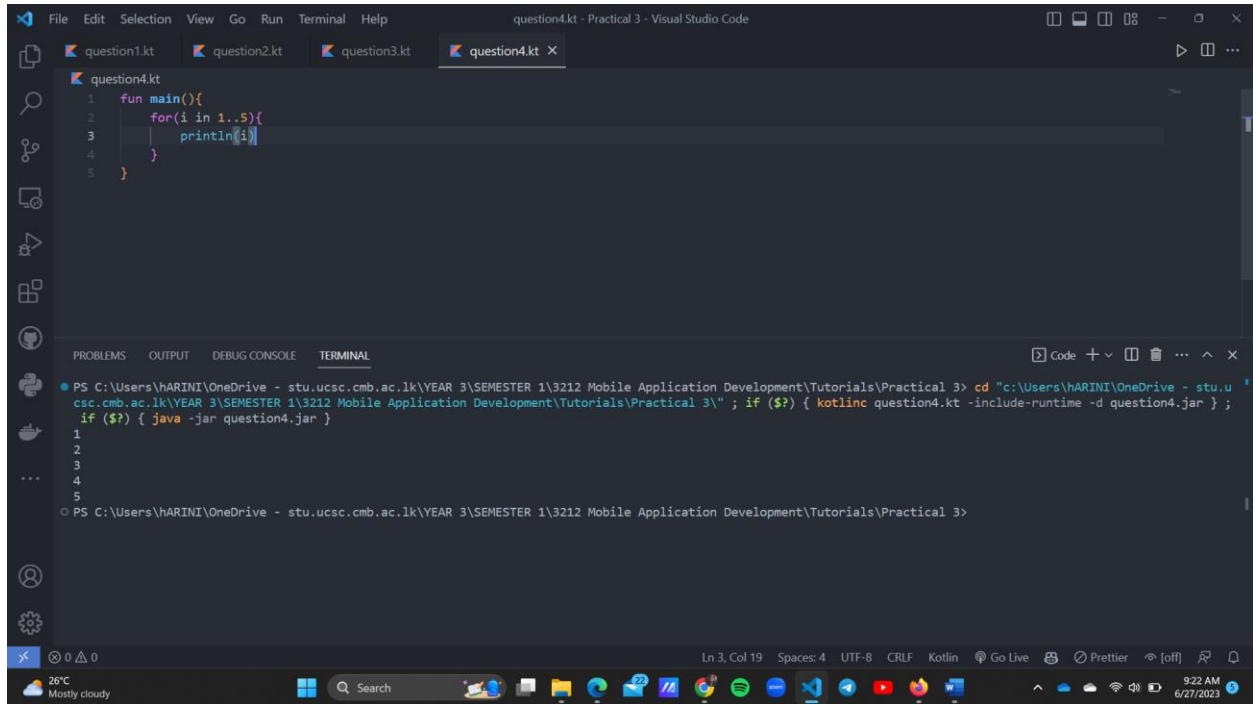
The screenshot shows a Visual Studio Code editor with a Kotlin file named `question3.kt`. The code defines a function `ageGroup` that categorizes a person's age into 'minor', 'adult', or 'senior citizen' and a `main` function that prompts the user for their age and prints the result. The terminal shows the compilation and execution of the program, with a successful run for input 25.

```
1 fun ageGroup(n: Int): String{
2     return when(n){
3         in 0..17 -> "You are a minor"
4         in 18..64 -> "You are an adult"
5         else -> "You are a senior citizen"
6     }
7 }
8
9 fun main() {
10    print("Enter your age: ")
11    val age = readLine()!!.toInt()
12    val result = ageGroup(age)
13    println(result)
14 }
```

Terminal Output:

```
PS C:\Users\hARINI\OneDrive - stu.ucsc.cmb.ac.lk\YEAR 3\SEMESTER 1\3212 Mobile Application Development\Tutorials\Practical 3> cd "c:\Users\hARINI\OneDrive - stu.u
csc.cmb.ac.lk\YEAR 3\SEMESTER 1\3212 Mobile Application Development\Tutorials\Practical 3" ; if ($?) { kotlinc question3.kt -include-runtime -d question3.jar } ;
if ($?) { java -jar question3.jar }
Enter your age: 25
You are an adult
PS C:\Users\hARINI\OneDrive - stu.ucsc.cmb.ac.lk\YEAR 3\SEMESTER 1\3212 Mobile Application Development\Tutorials\Practical 3>
```

## Question 4:

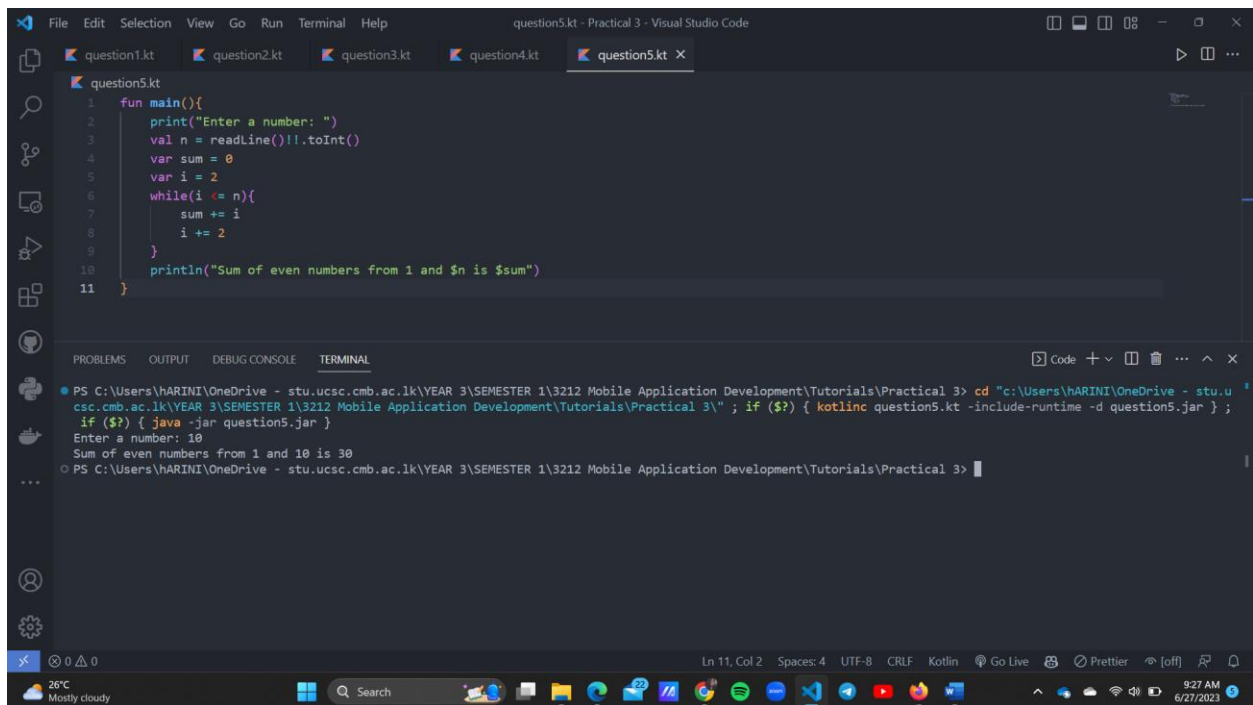


```
File Edit Selection View Go Run Terminal Help
question4.kt - Practical 3 - Visual Studio Code

question4.kt
1 fun main(){
2     for(i in 1..5){
3         println(i)
4     }
5 }
```

```
PS C:\Users\hARINI\OneDrive - stu.ucsc.cmb.ac.lk\YEAR 3\SEMESTER 1\3212 Mobile Application Development\Tutorials\Practical 3> cd "c:\Users\hARINI\OneDrive - stu.u
csc.cmb.ac.lk\YEAR 3\SEMESTER 1\3212 Mobile Application Development\Tutorials\Practical 3\" ; if ($?) { kotlinc question4.kt -include-runtime -d question4.jar } ;
if ($?) { java -jar question4.jar }
1
2
3
4
5
PS C:\Users\hARINI\OneDrive - stu.ucsc.cmb.ac.lk\YEAR 3\SEMESTER 1\3212 Mobile Application Development\Tutorials\Practical 3>
```

## Question 5:



```
File Edit Selection View Go Run Terminal Help
question5.kt - Practical 3 - Visual Studio Code

question5.kt
1 fun main(){
2     print("Enter a number: ")
3     val n = readLine()!!.toInt()
4     var sum = 0
5     var i = 2
6     while(i <= n){
7         sum += i
8         i += 2
9     }
10    println("Sum of even numbers from 1 and $n is $sum")
11 }
```

```
PS C:\Users\hARINI\OneDrive - stu.ucsc.cmb.ac.lk\YEAR 3\SEMESTER 1\3212 Mobile Application Development\Tutorials\Practical 3> cd "c:\Users\hARINI\OneDrive - stu.u
csc.cmb.ac.lk\YEAR 3\SEMESTER 1\3212 Mobile Application Development\Tutorials\Practical 3\" ; if ($?) { kotlinc question5.kt -include-runtime -d question5.jar } ;
if ($?) { java -jar question5.jar }
Enter a number: 10
Sum of even numbers from 1 and 10 is 30
PS C:\Users\hARINI\OneDrive - stu.ucsc.cmb.ac.lk\YEAR 3\SEMESTER 1\3212 Mobile Application Development\Tutorials\Practical 3>
```

