

SCS 2204 - Functional Programming

Scala Tutorial – 4

Question 01

```

1 package Package
2 import scala.io.StdIn.readDouble
3
4 object q1 {
5     var interest = 0.0
6
7     def main(args: Array[String]): Unit = {
8         print("Enter the Deposit amount : ")
9         var depositAmount = readDouble()
10        findInterest(depositAmount)
11    }
12
13    def findInterest(depamount: Double): Unit = {
14        var interest = 0.00
15        if(depamount <= 20000){
16            interest = 2.0/100.0
17            finalAmounts(depamount, interest)
18        }
19        else if(depamount <= 200000){
20            interest = 4.0/100.0
21            finalAmounts(depamount, interest)
22        }
23        else if(depamount <= 2000000){
24            interest = 3.5/100.0
25            finalAmounts(depamount, interest)
26        }
27        else{
28            interest = 6.5/100.0
29            finalAmounts(depamount, interest)
30        }
31    }
32
33    def finalAmounts(dAmount: Double , iAmount: Double): Unit = {
34        var interestAmount = dAmount * iAmount
35        println(s"The interest earned on Rs. $dAmount = Rs. $interestAmount")
36    }
37 }

```

Run: q1 ×

```

"C:\Program Files\Java\jdk1.8.0_181\bin\java.exe" ...
Enter the Deposit amount : 50000
The interest earned on Rs. 50000.0 = Rs. 2000.0
Process finished with exit code 0

```

Question 02

The screenshot shows an IDE with a project named 'Tutorial04'. The file explorer on the left shows the project structure, including 'src/main/scala/Package' with files 'q1', 'q2', and 'q3'. The 'q2.scala' file is open in the editor, showing the following code:

```

1 package Package
2 import scala.io.StdIn.readInt
3
4 object q2 {
5   def main(args: Array[String]): Unit = {
6     print("Enter the Integer : ")
7     var number = readInt()
8
9     PatternMatching(number)
10  }
11
12  def PatternMatching(num: Int): Unit = {
13    if(num <= 0){
14      println("Negative/Zero")
15    }
16    else if(num % 2 == 0){
17      println("Even number")
18    }
19    else{
20      println("Odd number")
21    }
22  }
23 }
24

```

The 'Run' tab at the bottom shows the execution of 'q2'. The command executed is '"C:\Program Files\Java\jdk1.8.0_181\bin\java.exe" ...'. The output shows 'Enter the Integer : 67' followed by 'Odd number'. The process finished with exit code 0.

Question 03

```

1  package Package
2
3  object q3 {
4  def main(args: Array[String]): Unit = {
5      println(formatNames( name = "Benny", toUpper))
6
7      println(formatNames( name = "Niroshan", str => {
8          val temptxt = str.charAt(1).toUpper
9          str.updated(1, temptxt)
10     }))
11
12     println(formatNames( name = "Saman", toLower))
13
14     println(formatNames( name = "Kumara", str => {
15         val temptxt = str.charAt(5).toUpper
16         str.updated(5, temptxt)
17     }))
18 }

```

```

19
20 def toUpper(txt: String): String = txt.toUpperCase()
21
22 def toLower(txt: String): String = txt.toLowerCase()
23
24 def formatNames(name: String, formatElements: String => String): String = {
25     formatElements(name)
26 }
27
28

```

q3 › main(args: Array[String])

Run: q3 ×

```

"C:\Program Files\Java\jdk1.8.0_181\bin\java.exe" ...
BENNY
NIROSHAN
saman
KumarA
Process finished with exit code 0

```