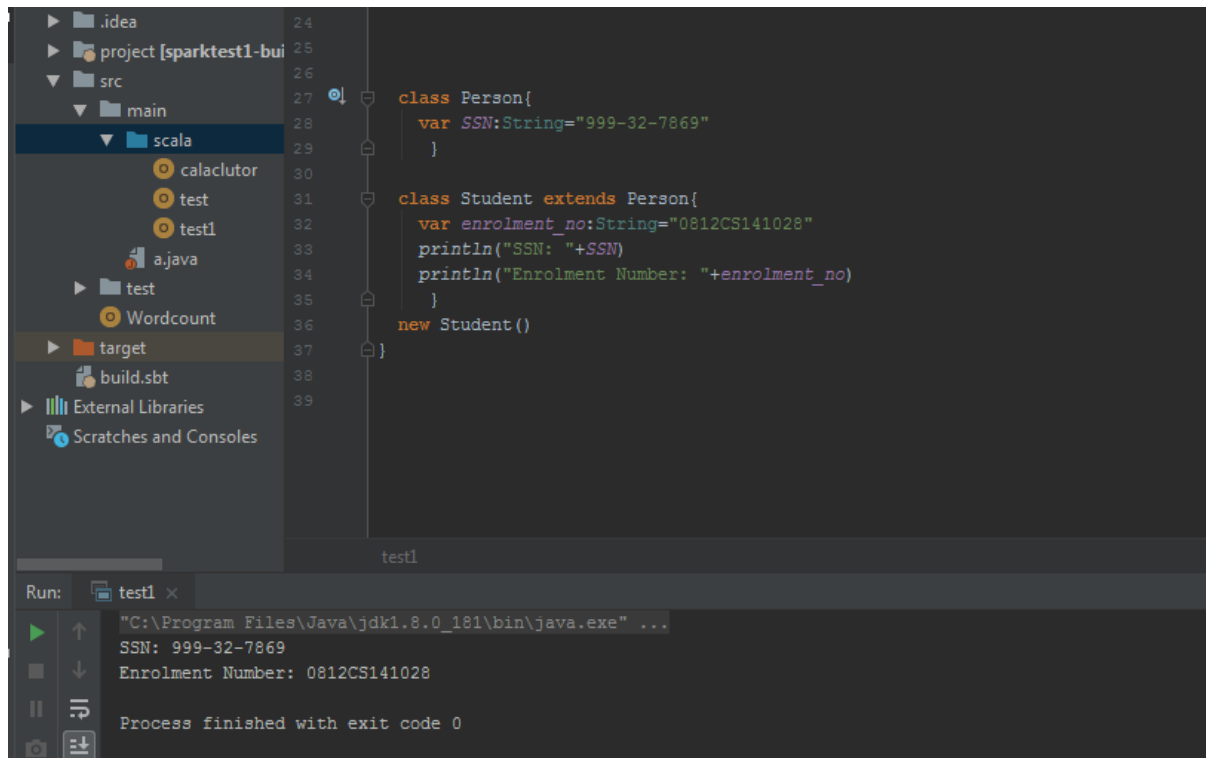


Session 17: SCALA BASICS 4

Assignment 1

Task 1

Write a simple program to show inheritance in scala.



The screenshot shows an IDE with a project structure on the left and a code editor on the right. The project structure includes a 'scala' folder under 'main', containing 'calaclutor', 'test', 'test1', and 'a.java'. The code editor displays the following Scala code:

```
24  
25  
26  
27 class Person{  
28     var SSN:String="999-32-7869"  
29 }  
30  
31 class Student extends Person{  
32     var enrolment_no:String="0812CS141028"  
33     println("SSN: "+SSN)  
34     println("Enrolment Number: "+enrolment_no)  
35 }  
36 new Student()  
37  
38  
39
```

Below the code editor, the 'Run' tab is active, showing the execution output for 'test1':

```
Run: test1 x  
"C:\Program Files\Java\jdk1.8.0_181\bin\java.exe" ...  
SSN: 999-32-7869  
Enrolment Number: 0812CS141028  
Process finished with exit code 0
```

Task 2

Write a simple program to show multiple inheritance in scala.

Note: Scala doesn't allow multiple inheritance, but allows us to extend multiple traits.

```
1 object Simulation {
2   def main(args: Array[String]): Unit = {
3
4     trait A {
5       var distance: Int = _
6       def action: Unit = {
7         distance = distance + 5
8       }
9     }
10
11     trait B {
12       var driverVar: Int = _
13       def action: Unit = {
14         driverVar = driverVar + 1
15       }
16     }
17
18     class AB extends A with B {
19       distance = 3
20       driverVar = 6
21       override def action: Unit = {
22         super[A].action
23         driverVar = driverVar + 1
24       }
25     }
26
27     Simulation.main(args)
28   }
29 }
```

Run: Simulation (1) x

"C:\Program Files\Java\jdk1.8.0_181\bin\java.exe" ...

7

8

Process finished with exit code 0

Task 3

Write a partial function to add three numbers in which one number is constant and two numbers can be passed as inputs and define another method which can take the partial function as input and squares the results.

```
1 object Task3 extends App {
2
3   def sum(a: Int, b: Int, c: Int): Int = a + b + c
4   val partialSum2ArgumentsProvided = sum(5, _: Int, _: Int) //one number is constant and two numbers can be passed as inputs
5
6   val final1 = partialSum2ArgumentsProvided(5, 5) //input numbers
7   println("Final Sum is", final1)
8
9   def squareRoot(i: Int): Unit = { println("SquareRoot of final is ", Math.sqrt(final1)) }
10
11   squareRoot(sum(0, 0, 0)) //function calling function
12
13 }
14
15 }
```

Run: Task3 x

"C:\Program Files\Java\jdk1.8.0_181\bin\java.exe" ...

(Final Sum is,15)

(SquareRoot of final is ,3.872983346207417)

Process finished with exit code 0

Task 4

Write a program to print the prices of 4 courses in Acadgild:

Android App Development -14,999 INR

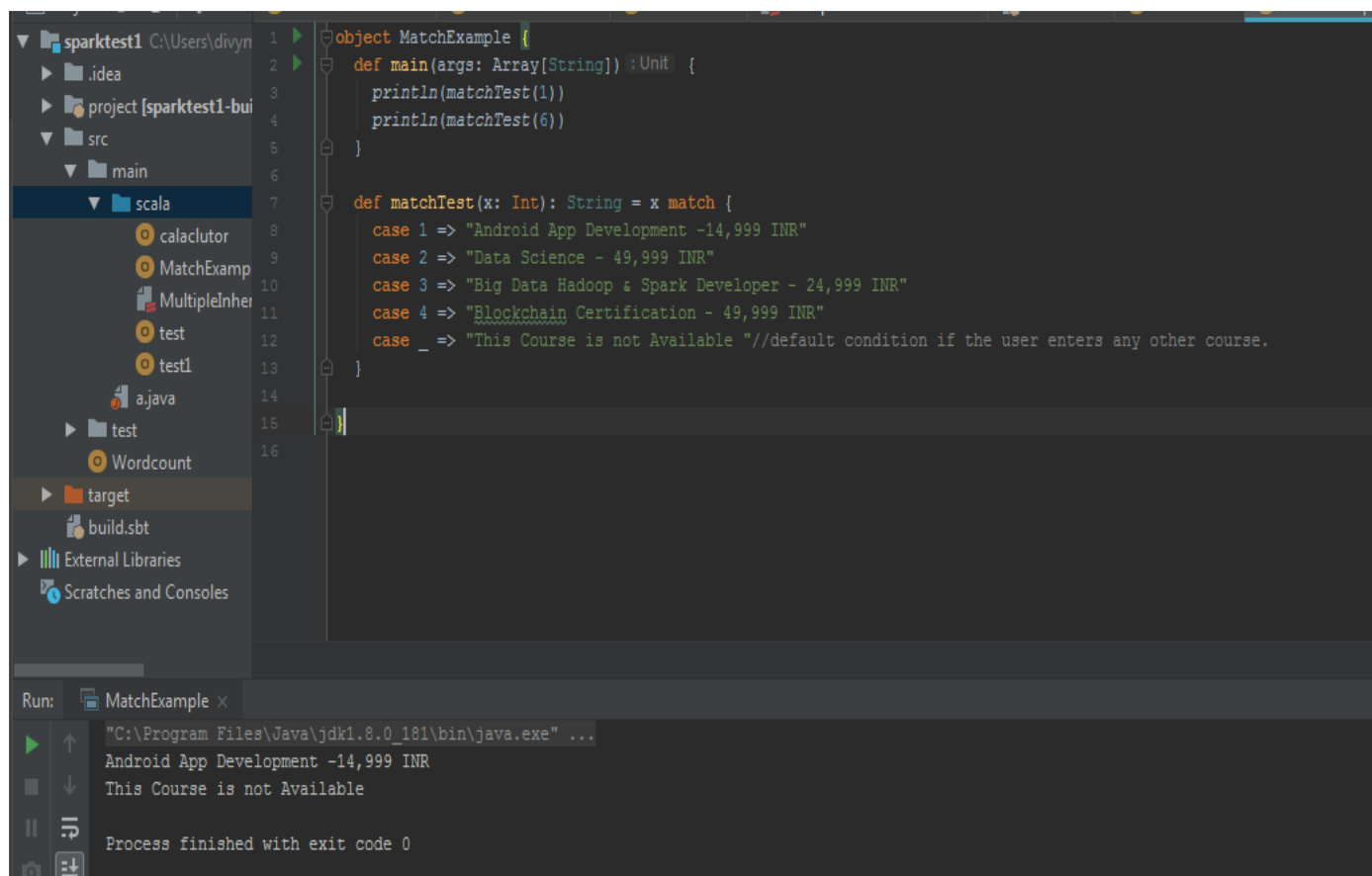
Data Science - 49,999 INR

Big Data Hadoop & Spark Developer – 24,999 INR

Blockchain Certification – 49,999 INR

using match and add a default condition if the user enters any other course.

Code



```
1 object MatchExample {
2   def main(args: Array[String]): Unit {
3     println(matchTest(1))
4     println(matchTest(6))
5   }
6
7   def matchTest(x: Int): String = x match {
8     case 1 => "Android App Development -14,999 INR"
9     case 2 => "Data Science - 49,999 INR"
10    case 3 => "Big Data Hadoop & Spark Developer - 24,999 INR"
11    case 4 => "Blockchain Certification - 49,999 INR"
12    case _ => "This Course is not Available" //default condition if the user enters any other course.
13  }
14 }
15
16
```

Run: MatchExample x

"C:\Program Files\Java\jdk1.8.0_181\bin\java.exe" ...

Android App Development -14,999 INR

This Course is not Available

Process finished with exit code 0