BIG DATA HADOOP AND SPARK DEVLOPMENT

ASSIGNMENT 17

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BIG DATA HADOOPAND SPARK DEVELOPMENT

1. Introduction

In this assignment, the given tasks are performed and Output of the tasks are recorded in the form of Screenshots.

2. Objective

This Assignment consolidates the deeper understanding of the Session – 17 SCALA BASICS 4

3. Problem Statement

- Task 1
  - Write a simple program to show inheritance in scala.
- Task 2
  - Write a simple program to show multiple inheritance in scala
- 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 result.
- Task 4
  - Write a program to print the prices of 4 courses of 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.

Expected Output

- Task 1
- **Write a simple program to show inheritance in scala**.

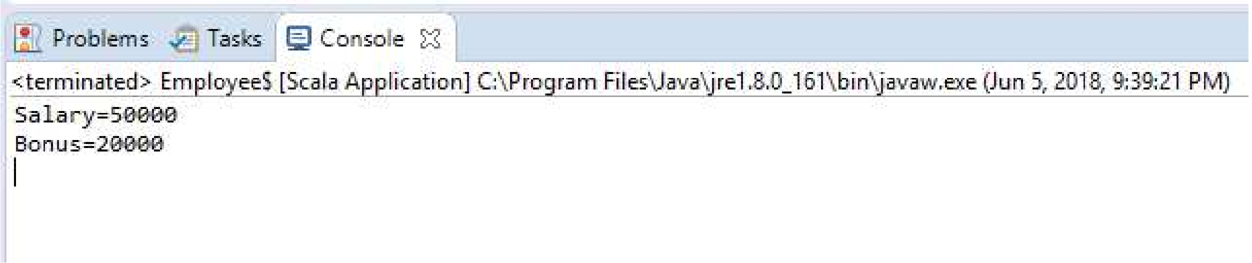
Following program is the example of inheritance in scala

```
class Performance{

  val Salary:Int = 50000
}
class Aprisal extends Performance{

  val bonus: Int =20000

  println("Salary="+Salary)
  println("Bonus="+bonus)
  }

object Employee {
  def main(args:Array[String]){
    new Aprisal()
  }
}
```

Output of the above program is shown below

```
Salary=50000
Bonus=20000
```

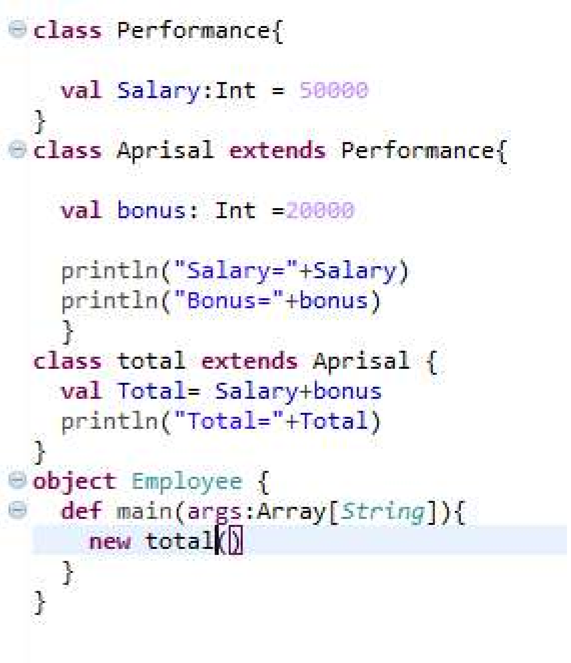
Screenshot of the output of the program inheritance



```
<terminated> Employee$ [Scala Application] C:\Program Files\Java\jre1.8.0_161\bin\javaw.exe (Jun 5, 2018, 9:39:21 PM)
Salary=50000
Bonus=20000
```

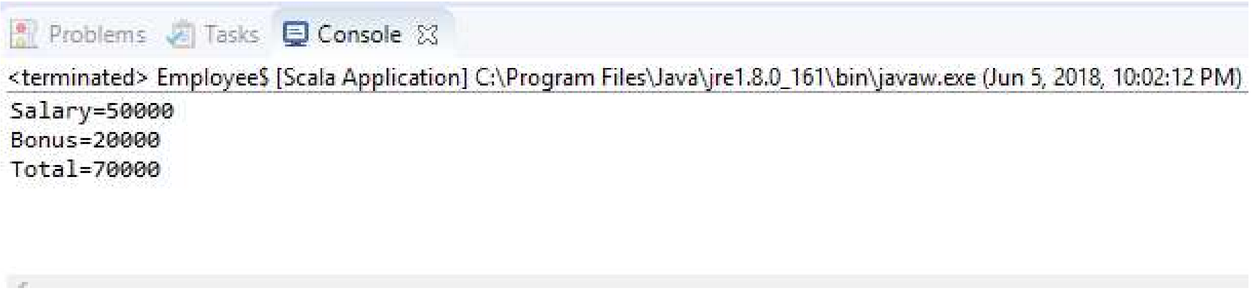
- Task 2
- Write a simple program to show multiple inheritance in scala

Below is the screen shot of the example program to show the multiple inheritance in scala



```
class Performance{

  val Salary:Int = 50000
}
class Aprisal extends Performance{

  val bonus: Int =20000

  println("Salary="+Salary)
  println("Bonus="+bonus)
  }
class total extends Aprisal {
  val Total= Salary+bonus
  println("Total="+Total)
}
object Employee {
  def main(args:Array[String]){
    new total()
  }
}
```

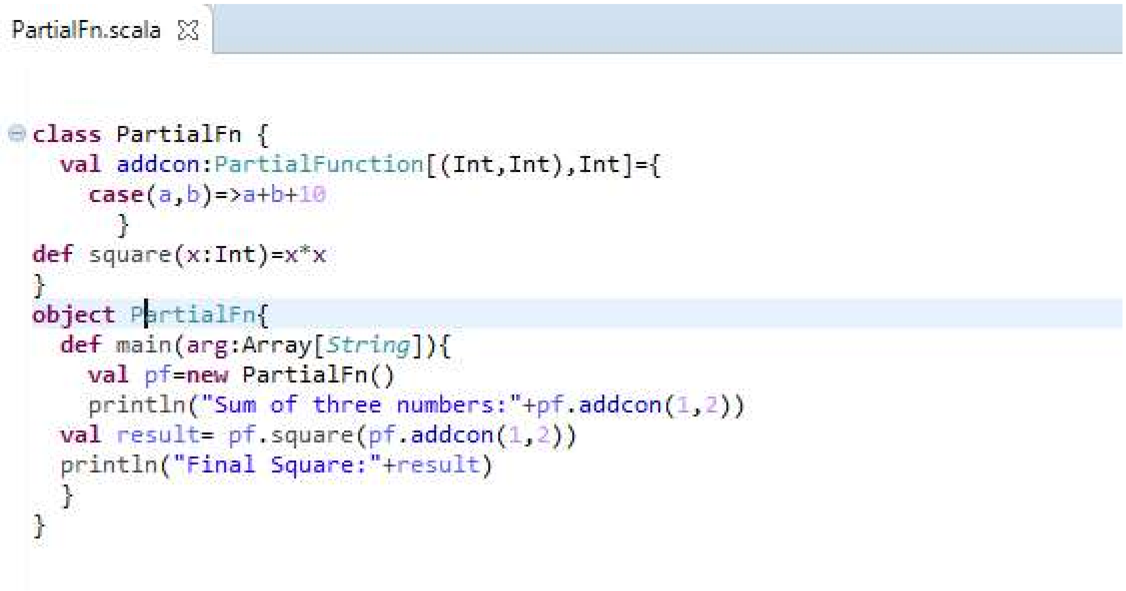
Output of the above program is shown below



```
<terminated> Employee$ [Scala Application] C:\Program Files\Java\jre1.8.0_161\bin\javaw.exe (Jun 5, 2018, 10:02:12 PM)
Salary=50000
Bonus=20000
Total=70000
```

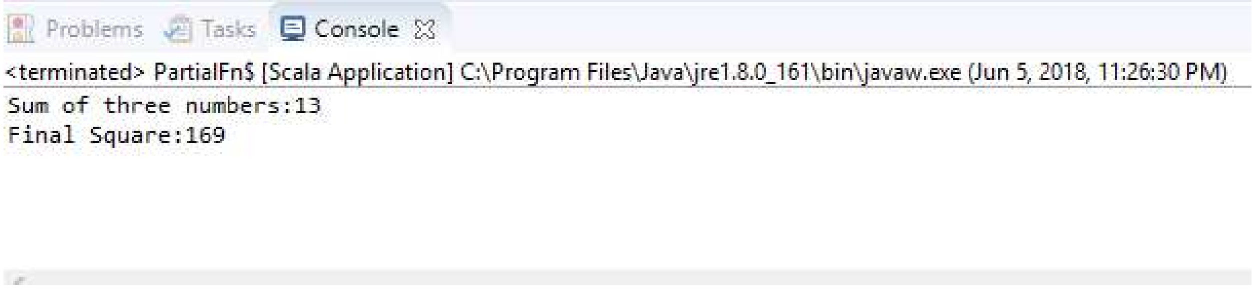
- Task 3
- Write a partial function to add three numbers in which one number is constant and two numbers can be passed as inputs and define another method which can take the partial function as input and squares the result.

Following is the program to create a partial function.
A partial function is written to add three numbers in which one number is constant and two numbers are passed as inputs and another is defined as method which takes the partial function as input and squares the result.
Constant is 10 in the program



```
class PartialFn {
  val addcon:PartialFunction[(Int,Int),Int]={
    case(a,b)=>a+b+10
      }
def square(x:Int)=x*x
}
object PartialFn{
  def main(arg:Array[String]){
    val pf=new PartialFn()
    println("Sum of three numbers:"+pf.addcon(1,2))
  val result= pf.square(pf.addcon(1,2))
  println("Final Square:"+result)
  }
}
```

Output of the program is given below.



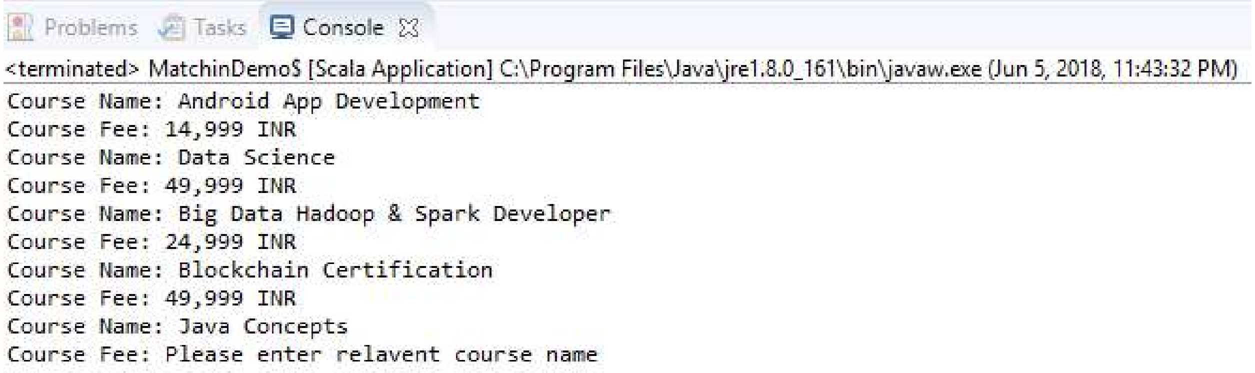
```
<terminated> PartialFn$ [Scala Application] C:\Program Files\Java\jre1.8.0_161\bin\javaw.exe (Jun 5, 2018, 11:26:30 PM)
Sum of three numbers:13
Final Square:169
```

- Task 4
- Write a program to print the prices of 4 courses of 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.

```
class matching {

  def matchTest(x: String): String = x match {
    case "Android App Development" => "14,999 INR"
    case "Data Science" => "49,999 INR"
    case "Big Data Hadoop & Spark Developer" => "24,999 INR"
    case "Blockchain Certification" => "49,999 INR"
    case _ => "Please enter relavent course name"
  }
}

object MatchinDemo {
  def main(args: Array[String]){
      val m = new matching()

      println("Course Name: " + "Android App Development" + "\nCourse Fee: "+m.matchTest("Android App Development"))
      println("Course Name: " + "Data Science" + "\nCourse Fee: "+m.matchTest("Data Science"))
      println("Course Name: " + "Big Data Hadoop & Spark Developer" + "\nCourse Fee: "+m.matchTest("Big Data Hadoop & Spark Developer"))
      println("Course Name: " + "Blockchain Certification" + "\nCourse Fee: "+m.matchTest("Blockchain Certification"))
      println("Course Name: " + "Java Concepts" + "\nCourse Fee: "+m.matchTest("Java Concepts"))

  }
}
```

```
class matching {

  def matchTest(x: String): String = x match {
    case "Android App Development" => "14,999 INR"
    case "Data Science" => "49,999 INR"
    case "Big Data Hadoop & Spark Developer" => "24,999 INR"
    case "Blockchain Certification" => "49,999 INR"
    case _ => "Please enter relavent course name"
  }
}

object MatchinDemo {
  def main(args: Array[String]){
      val m = new matching()

      println("Course Name: " + "Android App Development" + "\nCourse Fee: 
"+m.matchTest("Android App Development"))
      println("Course Name: " + "Data Science" + "\nCourse Fee: "+m.matchTest("Data 
Science"))
      println("Course Name: " + "Big Data Hadoop & Spark Developer" + "\nCourse 
Fee: "+m.matchTest("Big Data Hadoop & Spark Developer"))
      println("Course Name: " + "Blockchain Certification" + "\nCourse Fee: 
"+m.matchTest("Blockchain Certification"))
      println("Course Name: " + "Java Concepts" + "\nCourse Fee: 
"+m.matchTest("Java Concepts"))

  }
}
```

Output of the program



<terminated> MatchinDemo$ [Scala Application] C:\Program Files\Java\jre1.8.0_161\bin\javaw.exe (Jun 5, 2018, 11:43:32 PM)

```
Course Name: Android App Development
Course Fee: 14,999 INR
Course Name: Data Science
Course Fee: 49,999 INR
Course Name: Big Data Hadoop & Spark Developer
Course Fee: 24,999 INR
Course Name: Blockchain Certification
Course Fee: 49,999 INR
Course Name: Java Concepts
Course Fee: Please enter relavent course name
```