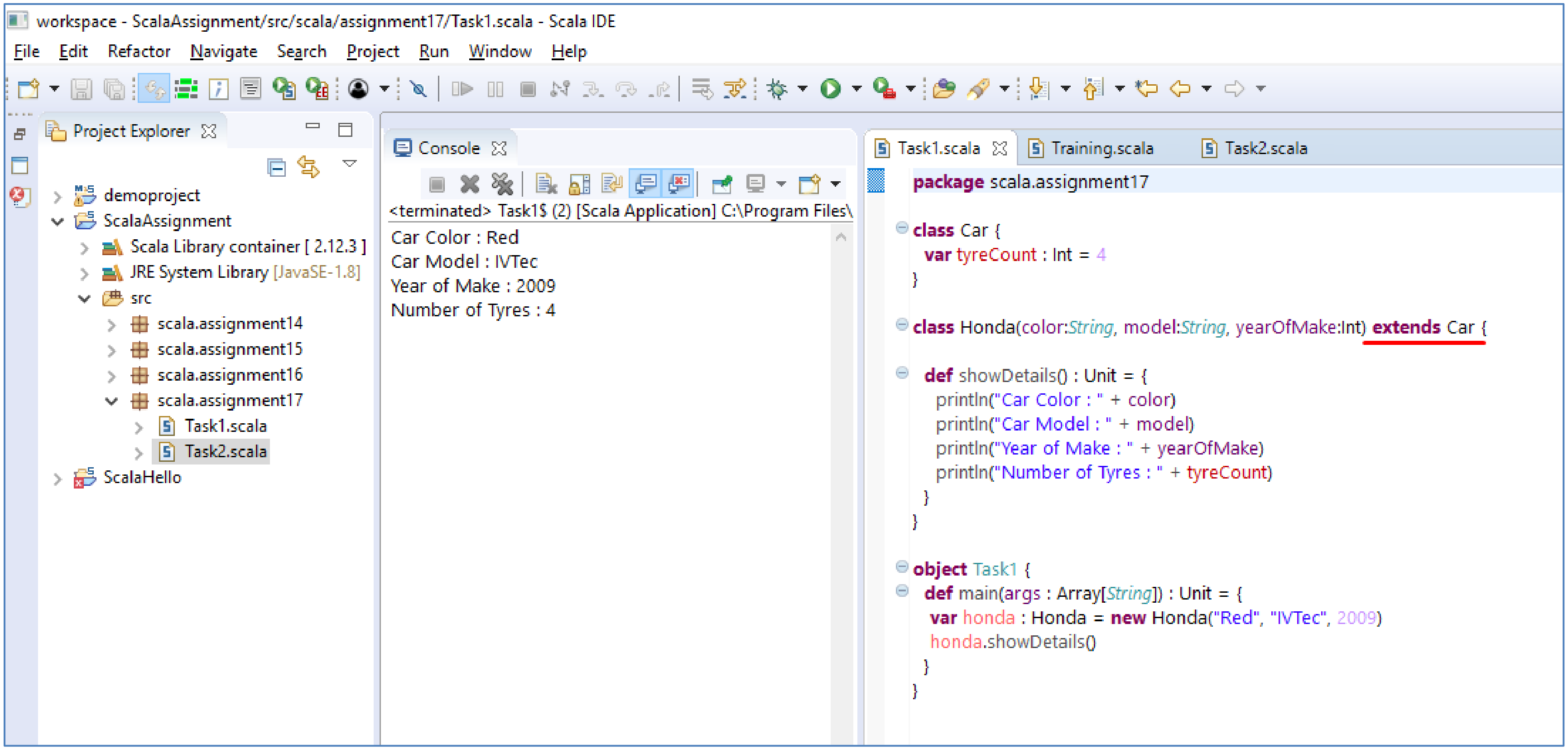
Session 17:
SCALA BASICS 4
Assignment 1

TASK 1:

Write a simple program to show inheritance in scala.

EXECUTION:


workspace - ScalaAssignment/src/scala/assignment17/Task1.scala - Scala IDE
File Edit Refactor Navigate Search Project Run Window Help
Project Explorer
demoproject
ScalaAssignment
Scala Library container [2.12.3]
JRE System Library [JavaSE-1.8]
src
scala.assignment14
scala.assignment15
scala.assignment16
scala.assignment17
Task1.scala
Task2.scala
ScalaHello
Console
Task1.scala
Training.scala
Task2.scala

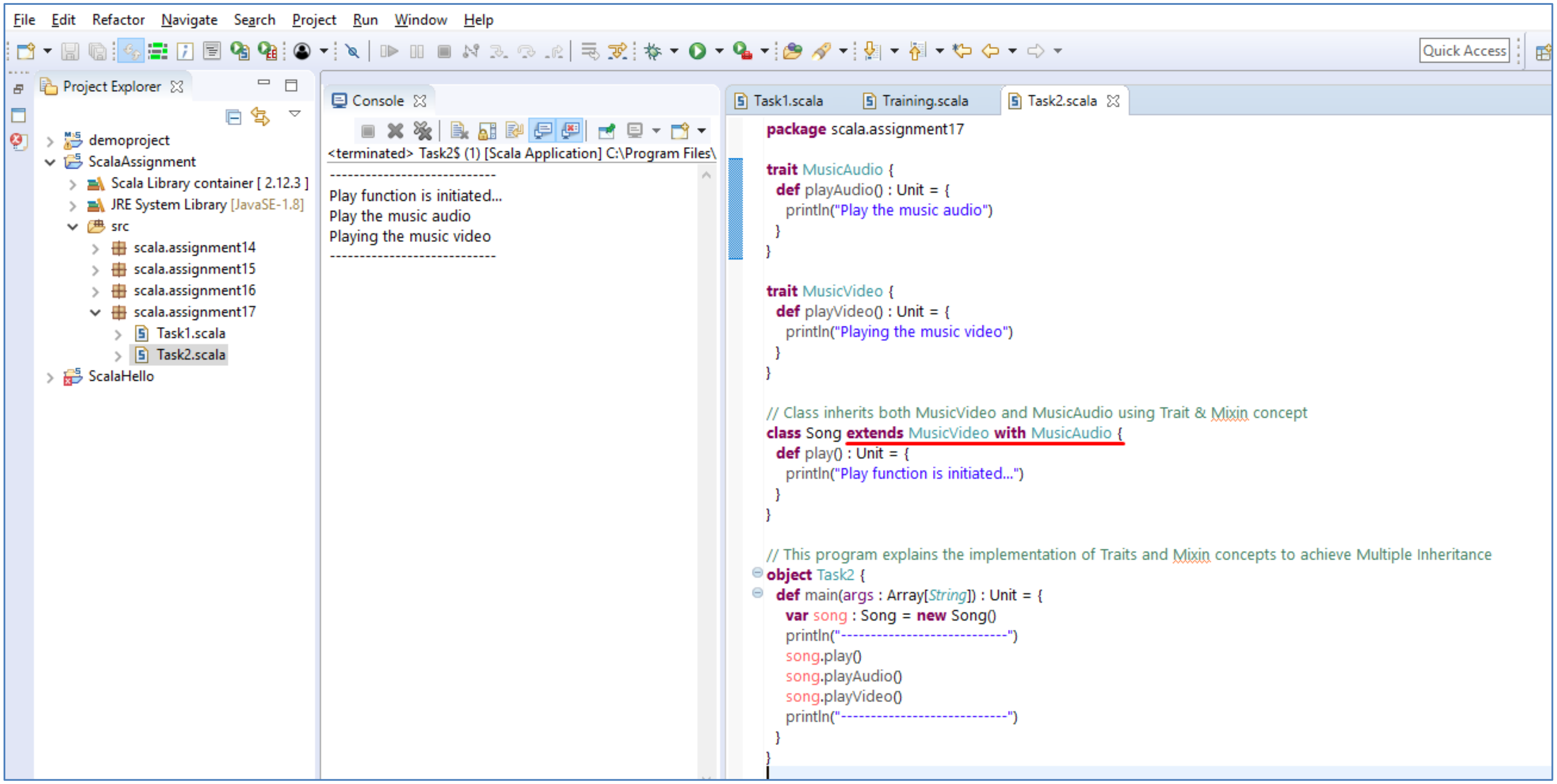
```
<terminated> Task1$ (2) [Scala Application] C:\Program Files\
Car Color : Red
Car Model : IVTec
Year of Make : 2009
Number of Tyres : 4
```

```
package scala.assignment17

class Car {
  var tyreCount : Int = 4
}

class Honda(color:String, model:String, yearOfMake:Int) extends Car {

  def showDetails() : Unit = {
    println("Car Color : " + color)
    println("Car Model : " + model)
    println("Year of Make : " + yearOfMake)
    println("Number of Tyres : " + tyreCount)
  }
}

object Task1 {
  def main(args : Array[String]) : Unit = {
   var honda : Honda = new Honda("Red", "IVTec", 2009)
   honda.showDetails()
  }
}
```

TASK 2:

Write a simple program to show multiple inheritance in scala

EXECUTION:



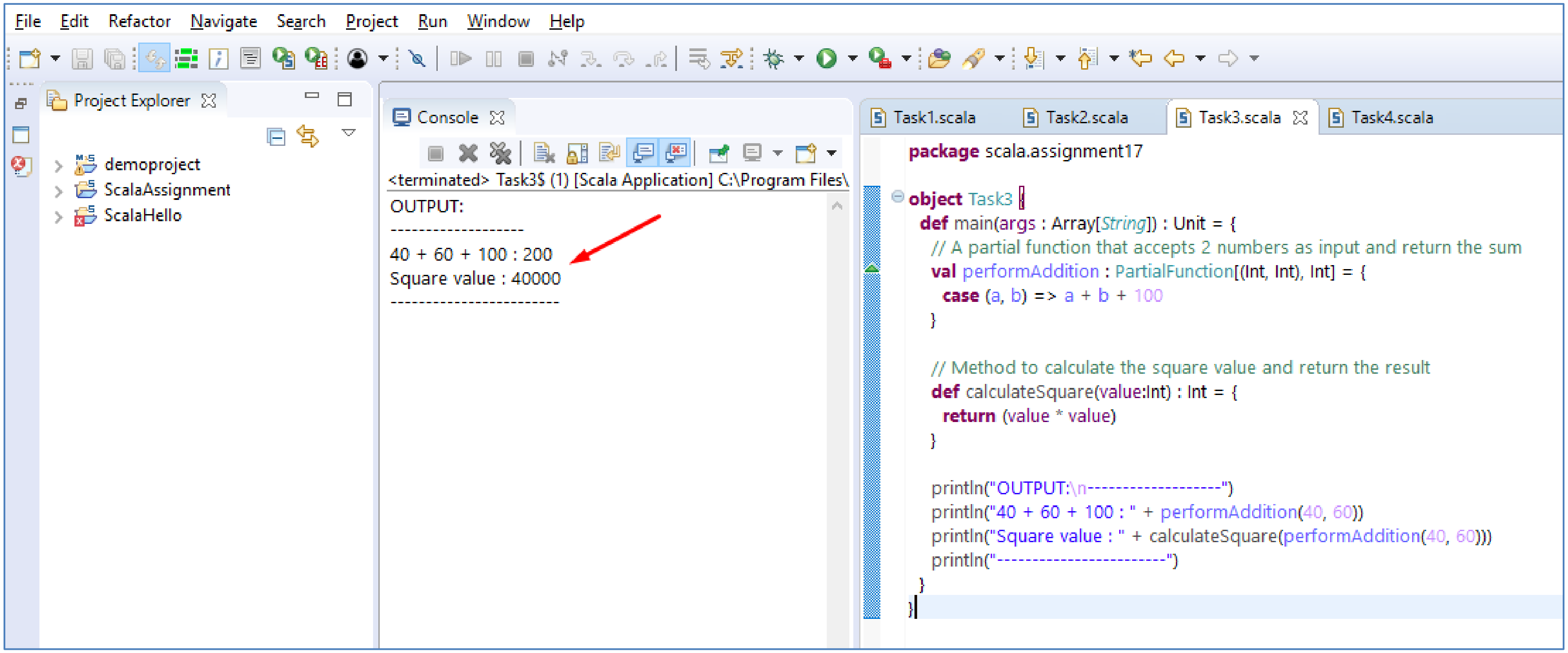
```
<terminated> Task2$ (1) [Scala Application] C:\Program Files\
---------------------------
Play function is initiated...
Play the music audio
Playing the music video
---------------------------
```

```scala
package scala.assignment17

trait MusicAudio {
  def playAudio() : Unit = {
    println("Play the music audio")
  }
}

trait MusicVideo {
  def playVideo() : Unit = {
    println("Playing the music video")
  }
}

// Class inherits both MusicVideo and MusicAudio using Trait & Mixin concept
class Song extends MusicVideo with MusicAudio {
  def play() : Unit = {
    println("Play function is initiated...")
  }
}

// This program explains the implementation of Traits and Mixin concepts to achieve Multiple Inheritance
object Task2 {
  def main(args : Array[String]) : Unit = {
    var song : Song = new Song()
    println("---------------------------")
    song.play()
    song.playAudio()
    song.playVideo()
    println("---------------------------")
  }
}
```

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.

EXECUTION:



```
<terminated> Task3$ (1) [Scala Application] C:\Program Files\
OUTPUT:
-------------------
40 + 60 + 100 : 200
Square value : 40000
------------------------
```

```
package scala.assignment17

object Task3 {
  def main(args : Array[String]) : Unit = {
    // A partial function that accepts 2 numbers as input and return the sum
    val performAddition : PartialFunction[(Int, Int), Int] = {
      case (a, b) => a + b + 100
    }

    // Method to calculate the square value and return the result
    def calculateSquare(value:Int) : Int = {
      return (value * value)
    }

    println("OUTPUT:\n-------------------")
    println("40 + 60 + 100 : " + performAddition(40, 60))
    println("Square value : " + calculateSquare(performAddition(40, 60)))
    println("------------------------")
  }
}
```

TASK 4:

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

Android App Development -14,999 INR

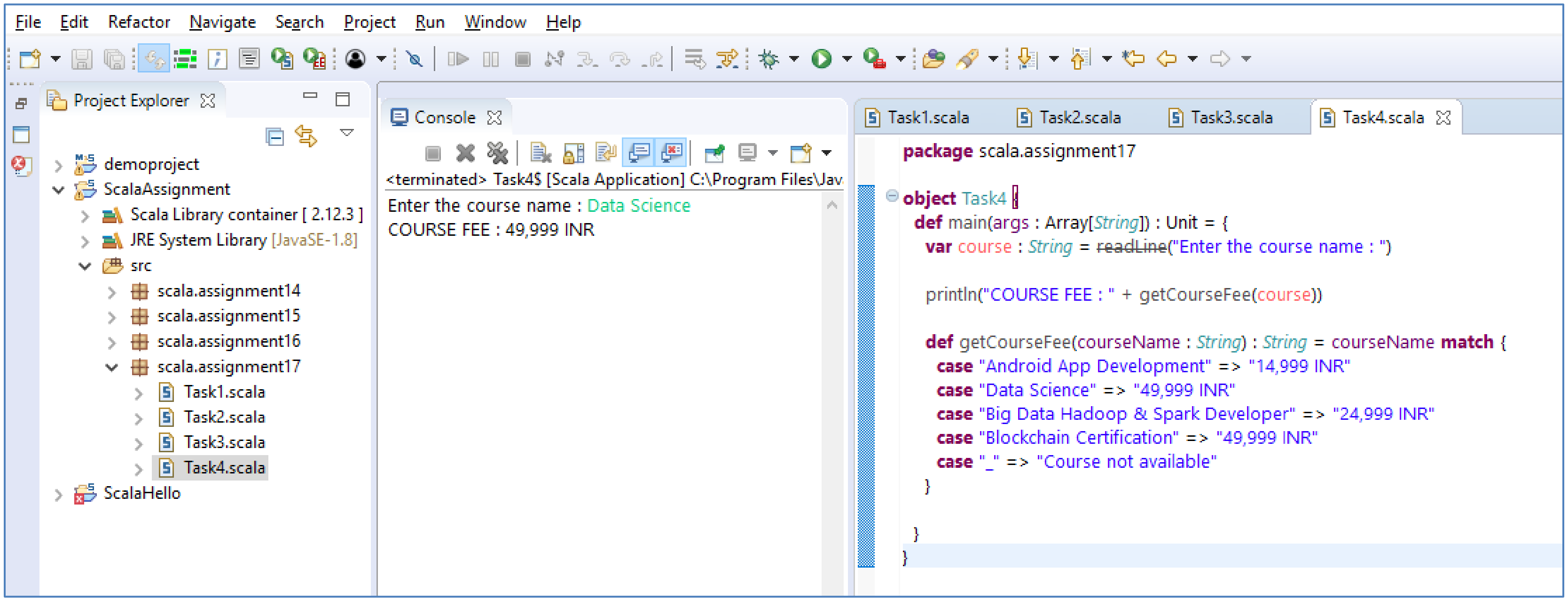
Data Science - 49,999 INR

Big Data Hadoop & Spark Developer – 24,999 INR

Blockchain Certification – 49,999 INR

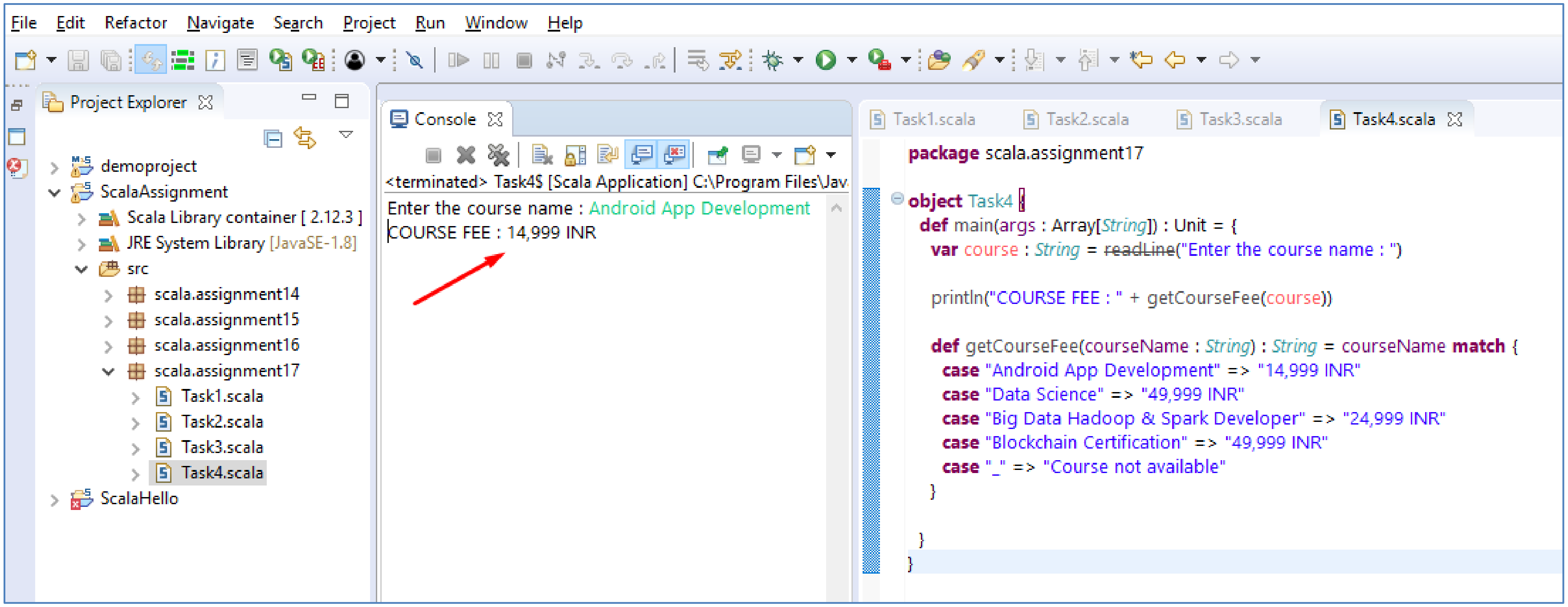
using match and add a default condition if the user enters any other course.

EXECUTION:



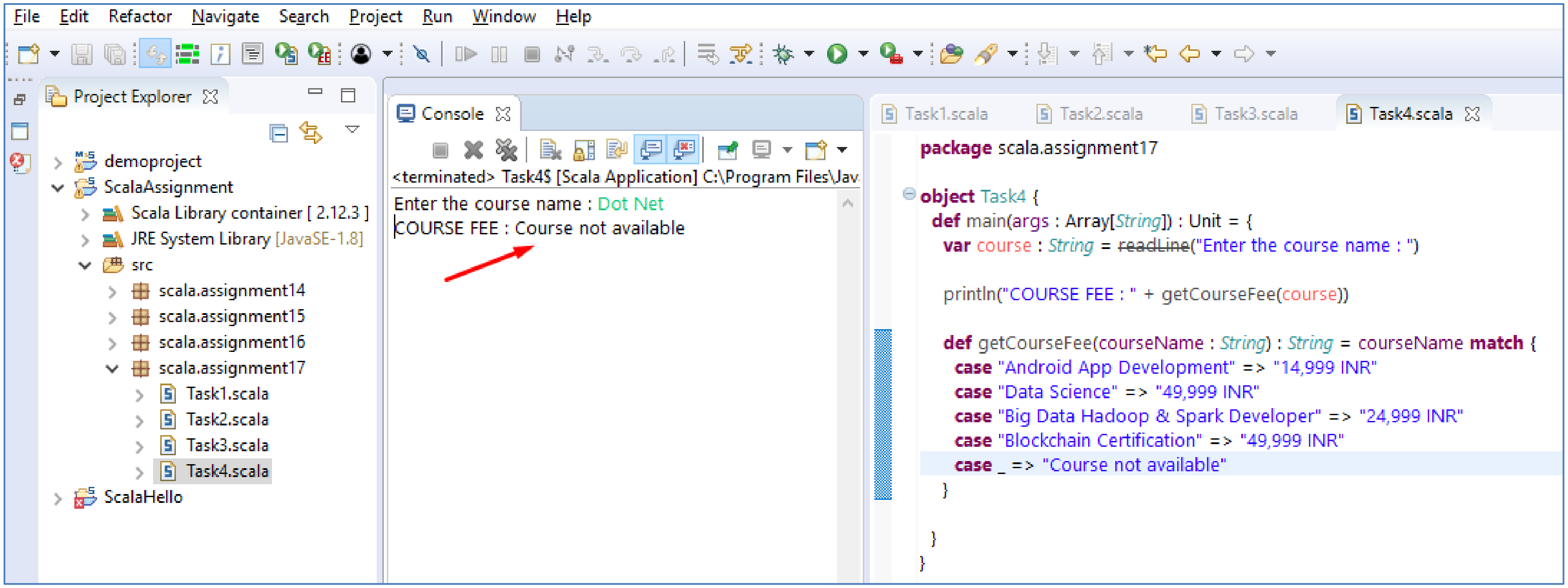
```
<terminated> Task4$ [Scala Application] C:\Program Files\Jav
Enter the course name : Data Science
COURSE FEE : 49,999 INR
```

```
package scala.assignment17

object Task4 {
  def main(args : Array[String]) : Unit = {
    var course : String = readLine("Enter the course name : ")

    println("COURSE FEE : " + getCourseFee(course))

    def getCourseFee(courseName : String) : String = courseName 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 "_" => "Course not available"
    }

  }
}
```



```
<terminated> Task4$ [Scala Application] C:\Program Files\Jav
Enter the course name : Android App Development
COURSE FEE : 14,999 INR
```

```
package scala.assignment17

object Task4 {
  def main(args : Array[String]) : Unit = {
    var course : String = readLine("Enter the course name : ")

    println("COURSE FEE : " + getCourseFee(course))

    def getCourseFee(courseName : String) : String = courseName 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 "_" => "Course not available"
    }

  }
}
```



```
<terminated> Task4$ [Scala Application] C:\Program Files\Jav
Enter the course name : Dot Net
COURSE FEE : Course not available
```

```
package scala.assignment17

object Task4 {
  def main(args : Array[String]) : Unit = {
    var course : String = ~~readLine~~("Enter the course name : ")

    println("COURSE FEE : " + getCourseFee(course))

    def getCourseFee(courseName : String) : String = courseName 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 _ => "Course not available"
    }

  }
}
```