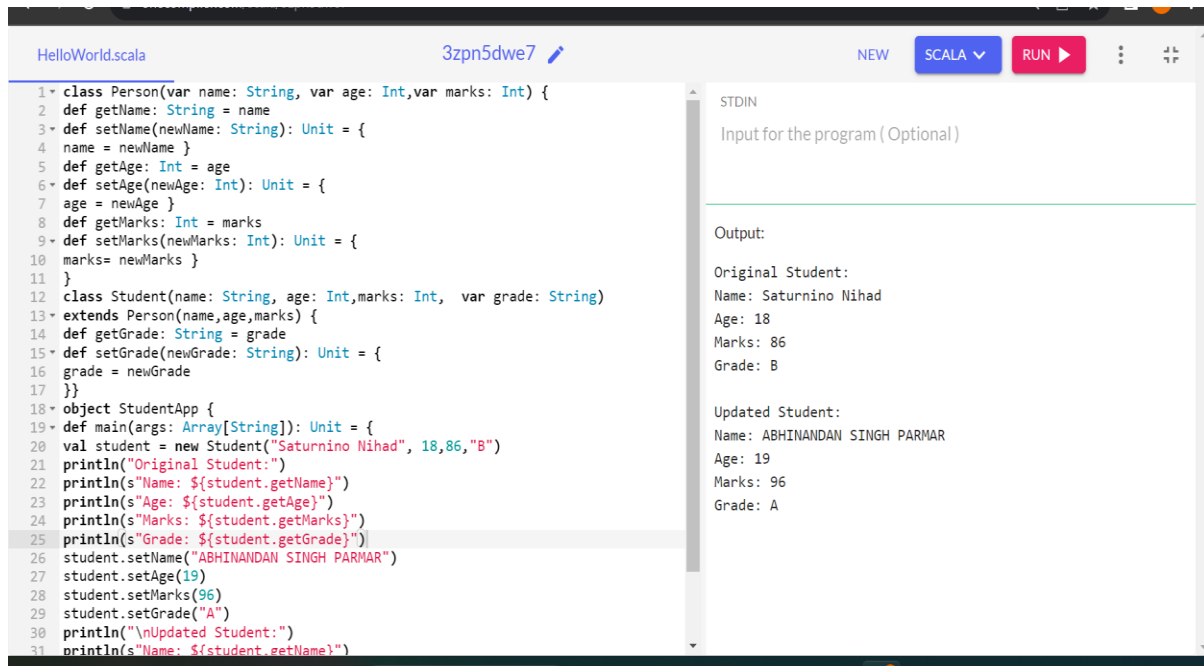


LAB-16

ABHINANDAN SINGH PARMAR

22BTRAD001

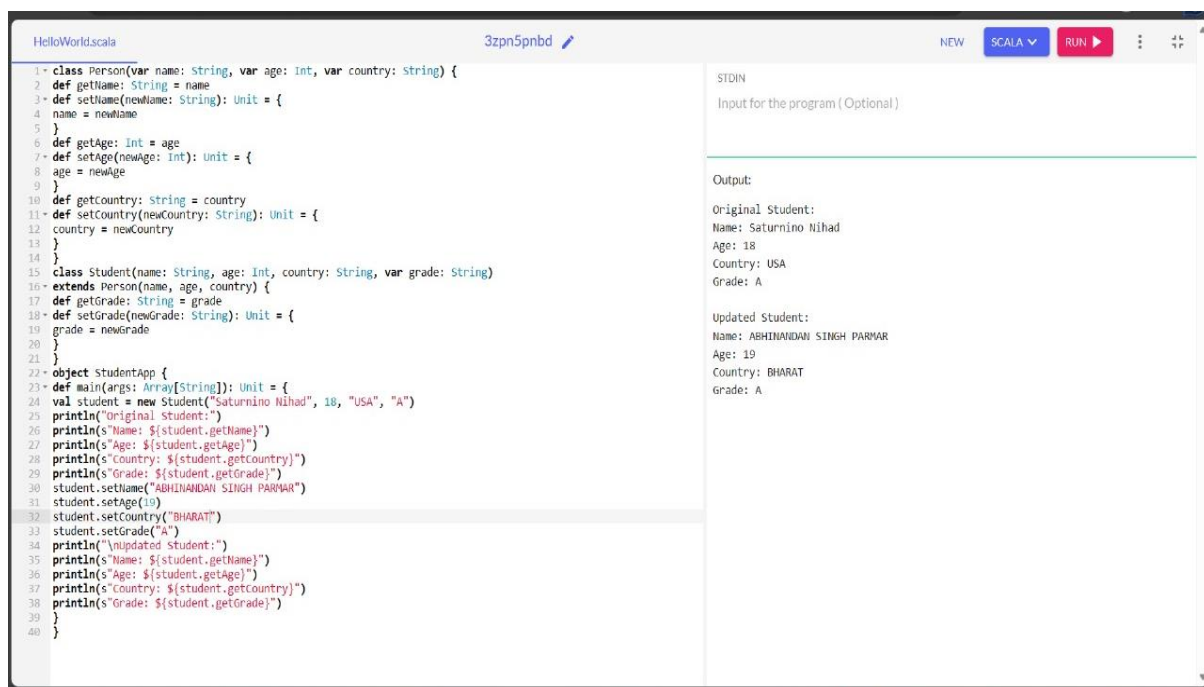


The screenshot shows a Scala IDE with a file named `HelloWorld.scala`. The code defines a `Person` class with `name`, `age`, and `marks` attributes, and a `Student` class that extends `Person` and adds a `grade` attribute. The `main` method in `StudentApp` creates a `Student` object, prints its initial details, updates its name, age, marks, and grade, and prints the updated details.

```
1 class Person(var name: String, var age: Int, var marks: Int) {  
2   def getName: String = name  
3   def setName(newName: String): Unit = {  
4     name = newName  
5   }  
6   def getAge: Int = age  
7   def setAge(newAge: Int): Unit = {  
8     age = newAge  
9   }  
10  def getMarks: Int = marks  
11  def setMarks(newMarks: Int): Unit = {  
12    marks = newMarks  
13  }  
14  class Student(name: String, age: Int, marks: Int, var grade: String)  
15  extends Person(name, age, marks) {  
16    def getGrade: String = grade  
17    def setGrade(newGrade: String): Unit = {  
18      grade = newGrade  
19    }  
20  }  
21  object StudentApp {  
22    def main(args: Array[String]): Unit = {  
23      val student = new Student("Saturnino Nihad", 18, 86, "B")  
24      println("Original Student:")  
25      println(s"Name: ${student.getName}")  
26      println(s"Age: ${student.getAge}")  
27      println(s"Marks: ${student.getMarks}")  
28      println(s"Grade: ${student.getGrade}")  
29      student.setName("ABHINANDAN SINGH PARMAR")  
30      student.setAge(19)  
31      student.setMarks(96)  
32      student.setGrade("A")  
33      println("\nUpdated Student:")  
34      println(s"Name: ${student.getName}")  
35    }  
36  }
```

Output:

```
Original Student:  
Name: Saturnino Nihad  
Age: 18  
Marks: 86  
Grade: B  
  
Updated Student:  
Name: ABHINANDAN SINGH PARMAR  
Age: 19  
Marks: 96  
Grade: A
```



The screenshot shows a Scala IDE with a file named `HelloWorld.scala`. The code defines a `Person` class with `name`, `age`, and `country` attributes, and a `Student` class that extends `Person` and adds a `grade` attribute. The `main` method in `StudentApp` creates a `Student` object, prints its initial details, updates its name, age, country, and grade, and prints the updated details.

```
1 class Person(var name: String, var age: Int, var country: String) {  
2   def getName: String = name  
3   def setName(newName: String): Unit = {  
4     name = newName  
5   }  
6   def getAge: Int = age  
7   def setAge(newAge: Int): Unit = {  
8     age = newAge  
9   }  
10  def getCountry: String = country  
11  def setCountry(newCountry: String): Unit = {  
12    country = newCountry  
13  }  
14  class Student(name: String, age: Int, country: String, var grade: String)  
15  extends Person(name, age, country) {  
16    def getGrade: String = grade  
17    def setGrade(newGrade: String): Unit = {  
18      grade = newGrade  
19    }  
20  }  
21  object StudentApp {  
22    def main(args: Array[String]): Unit = {  
23      val student = new Student("Saturnino Nihad", 18, "USA", "A")  
24      println("Original Student:")  
25      println(s"Name: ${student.getName}")  
26      println(s"Age: ${student.getAge}")  
27      println(s"Country: ${student.getCountry}")  
28      println(s"Grade: ${student.getGrade}")  
29      student.setName("ABHINANDAN SINGH PARMAR")  
30      student.setAge(19)  
31      student.setCountry("BHARAT")  
32      student.setGrade("A")  
33      println("\nUpdated Student:")  
34      println(s"Name: ${student.getName}")  
35      println(s"Age: ${student.getAge}")  
36      println(s"Country: ${student.getCountry}")  
37      println(s"Grade: ${student.getGrade}")  
38    }  
39  }
```

Output:

```
Original Student:  
Name: Saturnino Nihad  
Age: 18  
Country: USA  
Grade: A  
  
Updated Student:  
Name: ABHINANDAN SINGH PARMAR  
Age: 19  
Country: BHARAT  
Grade: A
```

Code:

```
class Person(var name: String, var age: Int, var marks: Int) {  
    def getName: String = name  
    def setName(newName: String): Unit = {  
        name = newName }  
    def getAge: Int = age  
    def setAge(newAge: Int): Unit = {  
        age = newAge }  
    def getMarks: Int = marks  
    def setMarks(newMarks: Int): Unit = {  
        marks = newMarks }  
}  
  
class Student(name: String, age: Int, marks: Int, var grade: String)  
    extends Person(name, age, marks) {  
    def getGrade: String = grade  
    def setGrade(newGrade: String): Unit = {  
        grade = newGrade  
    }  
}  
  
object StudentApp {  
    def main(args: Array[String]): Unit = {  
        val student = new Student("Saturnino Nihad", 18, 86, "B")  
        println("Original Student:")  
        println(s"Name: ${student.getName}")  
        println(s"Age: ${student.getAge}")  
        println(s"Marks: ${student.getMarks}")  
        println(s"Grade: ${student.getGrade}")  
    }  
}
```

```
student.setName("ABHINANDAN SINGH PARMAR")
student.setAge(19)
student.setMarks(96)
student.setGrade("A")
println("\nUpdated Student:")
println(s"Name: ${student.getName}")
println(s"Age: ${student.getAge}")
println(s"Marks: ${student.getMarks}")
println(s"Grade: ${student.getGrade}")
}}
```

OUTPUT

Original Student:

Name: Saturnino Nihad

Age: 18

Marks: 86

Grade: B

Updated Student:

Name: ABHINANDAN SINGH PARMAR

Age: 19

Marks: 96

Grade: A