SCALA PROGRAMMING
LAB 10

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Problem Statement 17 Write a Scala program that creates an enum class Color with values for different colors. Use the enum class to represent an object's color.

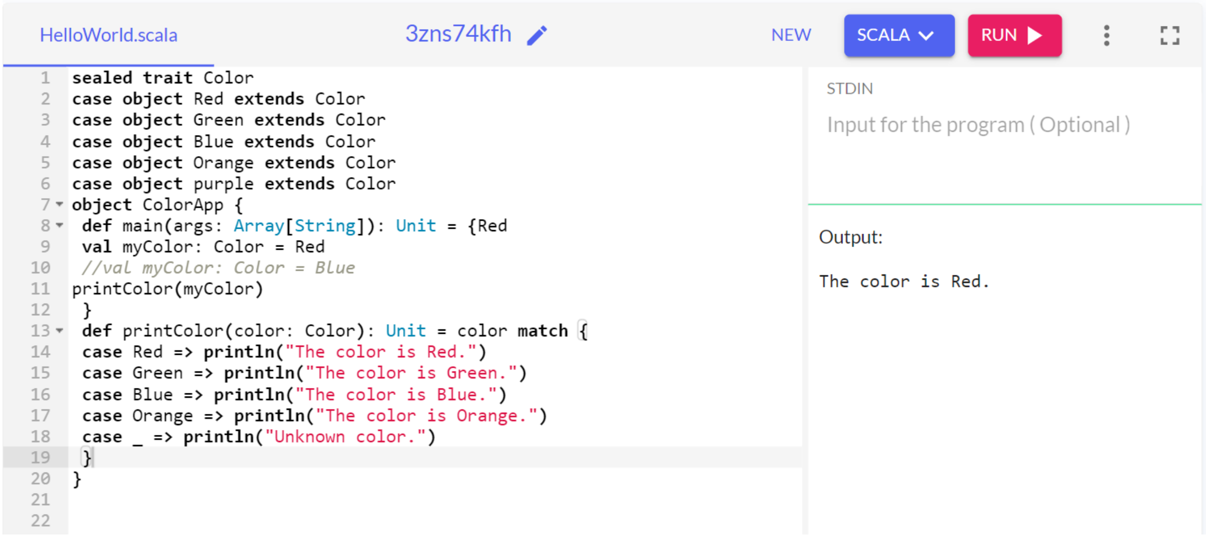
First, we define a sealed trait "Color" that serves as the base type for different color objects. Then, we define case objects "Red", Green, and Blue that extend the Color trait to represent specific colors. The "ColorApp" object contains the “main()” method where we can test functionality. It assigns the "Red" color to the myColor variable and calls the "printColor()" method to print the color name. The "printColor()" method uses pattern matching to determine the specific color of the object and prints a corresponding message.

CODE :-

```
sealed trait Color
case object Red extends Color
case object Green extends Color
case object Blue extends Color
case object Orange extends Color
case object purple extends Color
object ColorApp {
 def main(args: Array[String]): Unit = {Red
 val myColor: Color = Red
 //val myColor: Color = Blue
printColor(myColor)
 }
 def printColor(color: Color): Unit = color match {
 case Red => println("The color is Red.")
 case Green => println("The color is Green.")
 case Blue => println("The color is Blue.")
 case Orange => println("The color is Orange.")
 case _ => println("Unknown color.")
 }
}
```

OUTPUT :-

```
The color is Red.
```



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 def printColor(color: Color): Unit = color match {
 case Red => println("The color is Red.")
 case Green => println("The color is Green.")
 case Blue => println("The color is Blue.")
 case Orange => println("The color is Orange.")
 case _ => println("Unknown color.")
 }
}
```

```
The color is Red.
```

In this code we are creating the class sealed trait Color which means the object whichever we create should present inside the same class and can't be created outside the class.The case object Red extends Color means we are creating the object named as Red extending the property of main class i.e sealed trait Color. Then we are creating the main function and object of the class. The main function denotes the start of the programming function.Then we are creating a function called printColor which will match the object name with case name and print the value or the output which is given by the user.

CODE :

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case object Blue extends Color
case object Orange extends Color
case object purple extends Color
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printColor(myColor)
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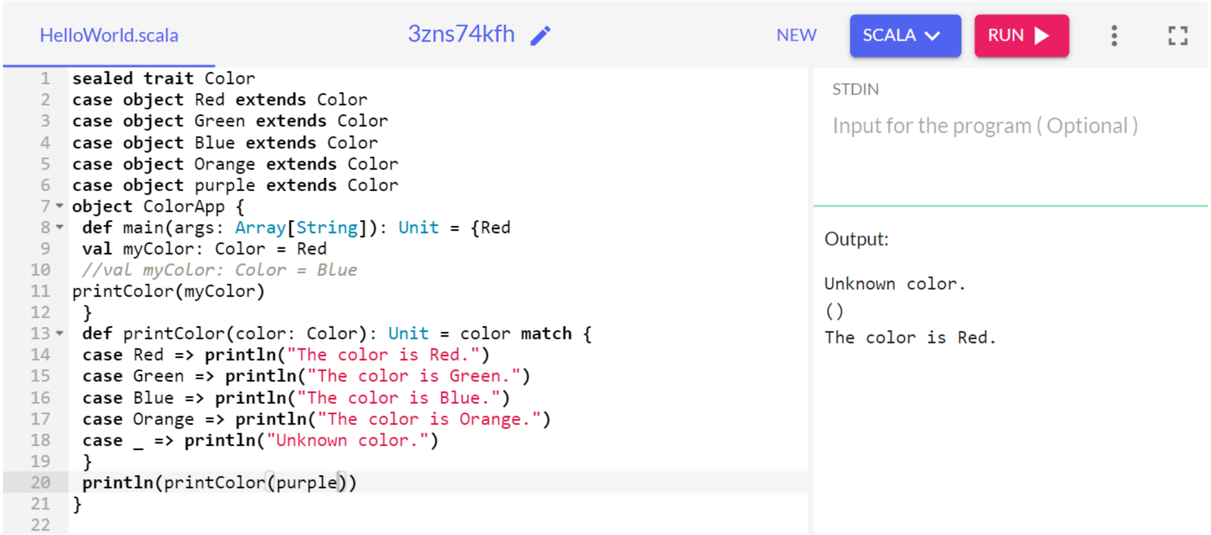
 def printColor(color: Color): Unit = color match {
 case Red => println("The color is Red.")
 case Green => println("The color is Green.")
 case Blue => println("The color is Blue.")
 case Orange => println("The color is Orange.")
 case _ => println("Unknown color.")
 }
 println(printColor(purple))
}
```

OUTPUT :-

```
Unknown color
( )
The color is Red.
```



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 case Green => println("The color is Green.")
 case Blue => println("The color is Blue.")
 case Orange => println("The color is Orange.")
 case _ => println("Unknown color.")
 }
 println(printColor(purple))
}
```

```
Unknown color.
()
The color is Red.
```

Here in this code we are passing the value i.e color purple by calling the function printColor and printing the case related to the same color. In this code we didn’t kept the case for color purple so it will print the value present in the case “case _ “ (which means this case can take any unknown parameters) i.e “Unknown Color”.After printing this it will go to the main function and check the values present over there and again it will enter the printColor method print the case which has the value to print the matter related to red color.