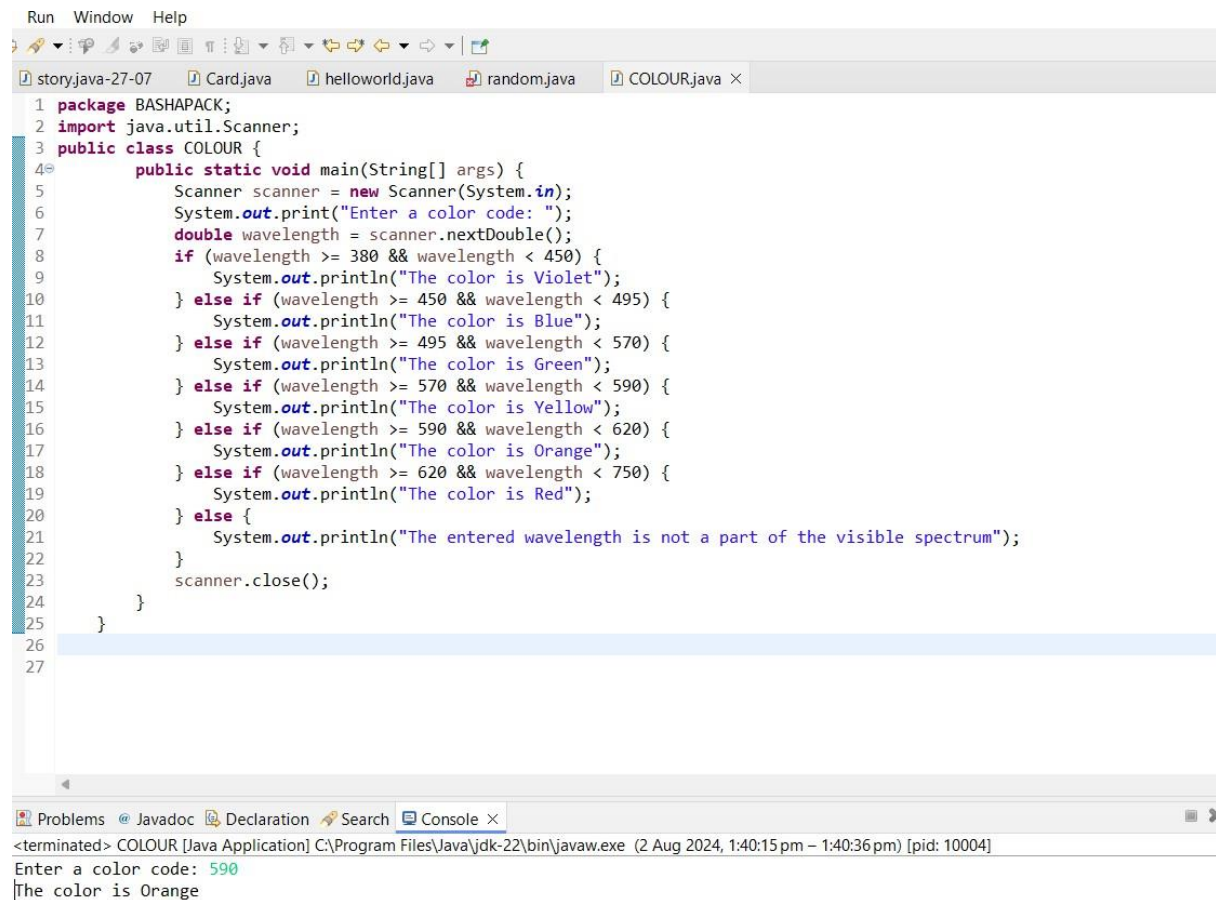


SHAIK MAHUMMAD 192325031



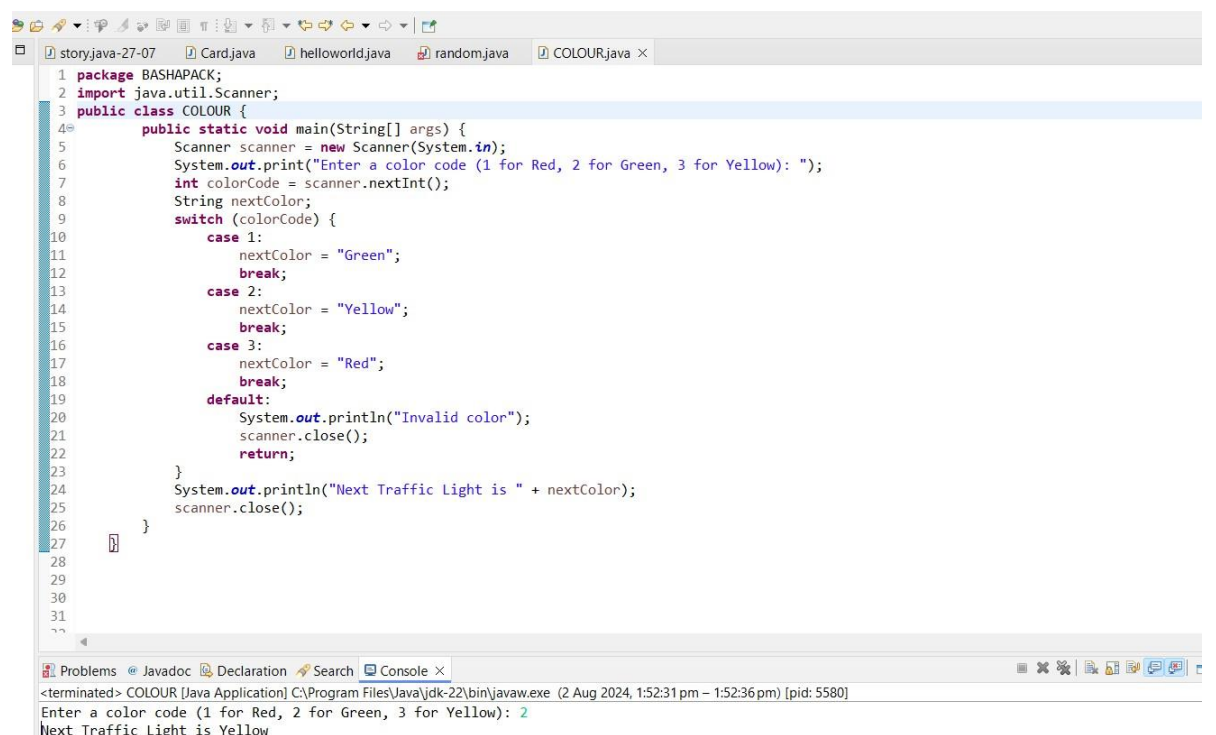
The screenshot shows an IDE with a Java file named COLOUR.java. The code defines a class COLOUR with a main method that uses a Scanner to read a double value representing a wavelength. It then uses a series of if-else statements to determine the color based on the wavelength range. The console output shows the user entered 590, and the program correctly identified it as Orange.

```
1 package BASHAPACK;
2 import java.util.Scanner;
3 public class COLOUR {
4     public static void main(String[] args) {
5         Scanner scanner = new Scanner(System.in);
6         System.out.print("Enter a color code: ");
7         double wavelength = scanner.nextDouble();
8         if (wavelength >= 380 && wavelength < 450) {
9             System.out.println("The color is Violet");
10        } else if (wavelength >= 450 && wavelength < 495) {
11            System.out.println("The color is Blue");
12        } else if (wavelength >= 495 && wavelength < 570) {
13            System.out.println("The color is Green");
14        } else if (wavelength >= 570 && wavelength < 590) {
15            System.out.println("The color is Yellow");
16        } else if (wavelength >= 590 && wavelength < 620) {
17            System.out.println("The color is Orange");
18        } else if (wavelength >= 620 && wavelength < 750) {
19            System.out.println("The color is Red");
20        } else {
21            System.out.println("The entered wavelength is not a part of the visible spectrum");
22        }
23        scanner.close();
24    }
25 }
26
27
```

Problems Javadoc Declaration Search Console X

<terminated> COLOUR [Java Application] C:\Program Files\Java\jdk-22\bin\javaw.exe (2 Aug 2024, 1:40:15 pm – 1:40:36 pm) [pid: 10004]

Enter a color code: 590
The color is Orange



The screenshot shows the same IDE with the COLOUR.java file. The code has been modified to use a switch statement for color identification. The Scanner now reads an integer color code (1 for Red, 2 for Green, 3 for Yellow). The console output shows the user entered 2, and the program correctly identified it as Yellow.

```
1 package BASHAPACK;
2 import java.util.Scanner;
3 public class COLOUR {
4     public static void main(String[] args) {
5         Scanner scanner = new Scanner(System.in);
6         System.out.print("Enter a color code (1 for Red, 2 for Green, 3 for Yellow): ");
7         int colorCode = scanner.nextInt();
8         String nextColor;
9         switch (colorCode) {
10             case 1:
11                 nextColor = "Green";
12                 break;
13             case 2:
14                 nextColor = "Yellow";
15                 break;
16             case 3:
17                 nextColor = "Red";
18                 break;
19             default:
20                 System.out.println("Invalid color");
21                 scanner.close();
22                 return;
23         }
24         System.out.println("Next Traffic Light is " + nextColor);
25         scanner.close();
26     }
27 }
28
29
30
31
32
```

Problems Javadoc Declaration Search Console X

<terminated> COLOUR [Java Application] C:\Program Files\Java\jdk-22\bin\javaw.exe (2 Aug 2024, 1:52:31 pm – 1:52:36 pm) [pid: 5580]

Enter a color code (1 for Red, 2 for Green, 3 for Yellow): 2
Next Traffic Light is Yellow

```
1 package BASHAPACK;
2 import java.util.Scanner;
3 public class COLOUR {
4     public static void main(String[] args) {
5         Scanner scanner = new Scanner(System.in);
6         System.out.print("Enter a color code (1 for Red, 2 for Green, 3 for Yellow): ");
7         int colorCode = scanner.nextInt();
8         String nextColor;
9         if (colorCode == 1) {
10             nextColor = "Green";
11         } else if (colorCode == 2) {
12             nextColor = "Yellow";
13         } else if (colorCode == 3) {
14             nextColor = "Red";
15         } else {
16             System.out.println("Invalid color");
17             scanner.close();
18             return;
19         }
20         System.out.println("Next Traffic Light is " + nextColor);
21         scanner.close();
22     }
23 }
24
25
26
27
```

Problems Javadoc Declaration Search Console X

<terminated> COLOUR [Java Application] C:\Program Files\Java\jdk-22\bin\javaw.exe (2 Aug 2024, 1:48:33 pm – 1:49:17 pm) [pid: 15596]

Enter a color code (1 for Red, 2 for Green, 3 for Yellow): 3

Next Traffic Light is Red

```
1 package BASHAPACK;
2 import java.util.Scanner;
3 public class COLOUR {
4     public static void main(String[] args) {
5         Scanner scanner = new Scanner(System.in);
6         System.out.print("Enter a color code (1 for Red, 2 for Green, 3 for Yellow): ");
7         int colorCode = scanner.nextInt();
8         String nextColor;
9         if (colorCode == 1) {
10             nextColor = "Green";
11         } else if (colorCode == 2) {
12             nextColor = "Yellow";
13         } else if (colorCode == 3) {
14             nextColor = "Red";
15         } else {
16             System.out.println("Invalid color");
17             scanner.close();
18             return;
19         }
20         System.out.println("Next Traffic Light is " + nextColor);
21         scanner.close();
22     }
23 }
24
25
26
27
```

Problems Javadoc Declaration Search Console X

<terminated> COLOUR [Java Application] C:\Program Files\Java\jdk-22\bin\javaw.exe (2 Aug 2024, 1:48:33 pm - 1:49:17 pm) [pid: 15596]

Enter a color code (1 for Red, 2 for Green, 3 for Yellow): 3

Next Traffic Light is Red