

JFo Section-5 Practice Programs

```
Order.java MadLibs.java Animal.java Animal.java shape.java Student.java Student1.java Student2.java Card2.java module-info... Fish.java *Colo
1 package pri;
2 import java.util.Scanner;
3 /*Write an interactive Java program, ColorRange.java, which when given a wavelength in nanometers will return the corresponding
4 color in the visible spectrum*/
5 public class ColorRange {
6     public static void main(String[] args) {
7         Scanner scanner = new Scanner(System.in);
8
9         System.out.print("Enter a color code: ");
10        double wavelength = scanner.nextDouble();
11
12        if (wavelength >= 380 && wavelength < 450) {
13            System.out.println("The color is Violet");
14        }
15        else if (wavelength >= 450 && wavelength < 495) {
16            System.out.println("The color is Blue");
17        }
18        else if (wavelength >= 495 && wavelength < 570) {
19            System.out.println("The color is Green");
20        }
21        else if (wavelength >= 570 && wavelength < 590) {
22            System.out.println("The color is Yellow");
23        }
24        else if (wavelength >= 590 && wavelength < 620) {
25            System.out.println("The color is Orange");
26        }
27        else if (wavelength >= 620 && wavelength <= 750) {
28            System.out.println("The color is Red");
29        }
30        else {
31            System.out.println("The entered wavelength is not a part of the visible spectrum");
32        }
33
34        scanner.close();
35    }
36 }
```

Console ×

<terminated> ColorRange [Java Application] C:\Users\DELL\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64.22.0.1.v20240426-1149\jre\bin\javaw.exe (2 Aug 2024, 1:31:19 pm – 1:32:25 pm) [pid: 145]

Enter a color code: 494

The color is Blue

```
Order.java MadLibs.java Animal.java Animal.java shape.java Student.java Student1.java Student2.java Card2.java module-info...
1 package pri;
2 import java.util.Scanner;
3
4 public class TrafficLightChecker {
5     public static void main(String[] args) {
6         Scanner scanner = new Scanner(System.in);
7         System.out.print("Enter a color code: ");
8         int currentColor = scanner.nextInt();
9
10        String nextColor;
11        switch (currentColor) {
12            case 1:
13                nextColor = "green";
14                break;
15            case 2:
16                nextColor = "yellow";
17                break;
18            case 3:
19                nextColor = "red";
20                break;
21            default:
22                nextColor = "Invalid color";
23                break;
24        }
25
26        if (nextColor.equals("Invalid color")) {
27            System.out.println(nextColor);
28        } else {
29            System.out.printf("Next Traffic Light is %s\n", nextColor);
30        }
31
32        scanner.close();
33    }
34 }
```

Console ×

<terminated> TrafficLightChecker [Java Application] C:\Users\DELL\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64.22.0.1.v20240426-1149\jre\bin\javaw.exe (2 Aug 2024, 1:32:5)

Enter a color code: 2

Next Traffic Light is yellow

```
Order.java  MadLibs.java  Animal.java  Animal.java  shape.java  Student.java  Student1.java  Student2.java  Card2.java  ColorRange.java  TrafficLightSwitch.java

1 package pri;
2 import java.util.Scanner;
3 /*Re-write practice 5-2 using switch statement*/
4 public class TrafficLightSwitch {
5
6     public static void main(String[] args) {
7
8         Scanner scanner = new Scanner(System.in);
9
10        System.out.print("Enter the current traffic light color (Red, Yellow, Green): ");
11        String currentColor = scanner.nextLine().trim();
12        String nextColor;
13
14        switch (currentColor.toLowerCase()) {
15            case "red":
16                nextColor = "Green";
17                break;
18            case "green":
19                nextColor = "Yellow";
20                break;
21            case "yellow":
22                nextColor = "Red";
23                break;
24            default:
25                System.out.println("Invalid input! Please enter Red, Yellow, or Green.");
26                scanner.close();
27                return;
28        }
29
30        System.out.println("The next traffic light color is: " + nextColor);
31        scanner.close();
32    }
33 }
```

Console ×

<terminated> TrafficLightSwitch [Java Application] C:\Users\DELL\p2\pool\plugins\org.eclipse.justi.openjdk hotspot.jre.full.win32.x86_64_22.0.1.v20240426-1149\jre\bin\javaw.exe (2 Aug 2024, 1:33:57 pm - 1:34:00)
Enter the current traffic light color (Red, Yellow, Green): green
The next traffic light color is: Yellow