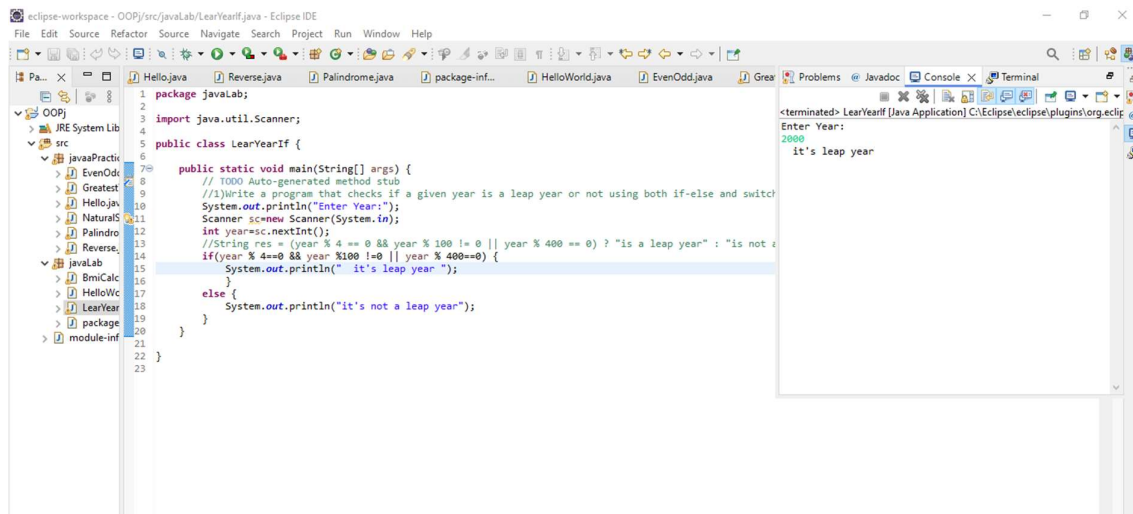


Assignment No- 2

1) Write a program that checks if a given year is a leap year or not using both if-else and switch-case.



```
package javaLab;

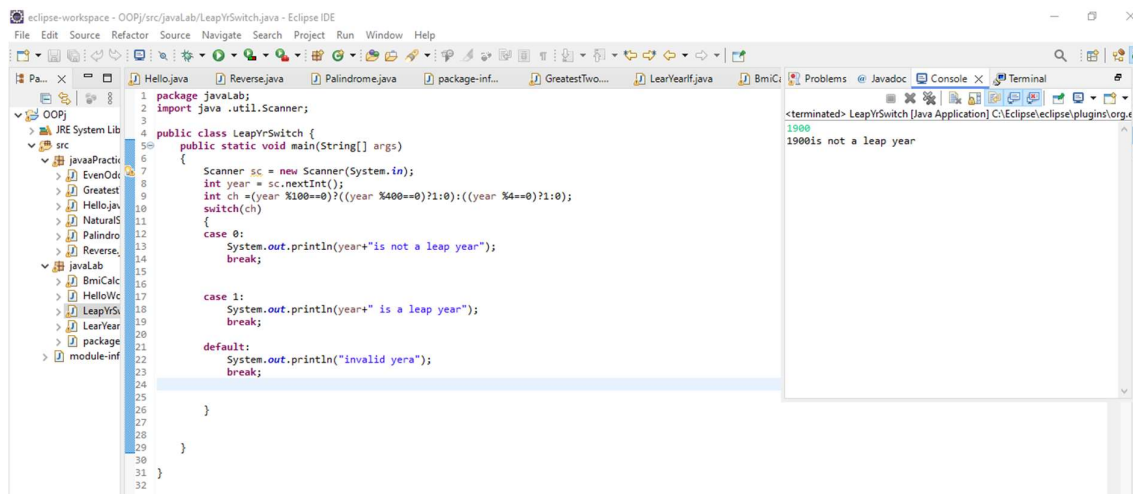
import java.util.Scanner;

public class LearYearIf {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        //1) Write a program that checks if a given year is a leap year or not using both if-else and switch-case.
        System.out.println("Enter Year:");
        Scanner sc = new Scanner(System.in);
        int year = sc.nextInt();
        //String res = (year % 4 == 0 && year % 100 != 0 || year % 400 == 0) ? "is a leap year" : "is not a leap year";
        if(year % 4 == 0 && year % 100 != 0 || year % 400 == 0) {
            System.out.println("it's leap year");
        }
        else {
            System.out.println("it's not a leap year");
        }
    }
}
```

Console Output:

```
<terminated> LearYearIf [Java Application] C:\Eclipse\ eclipse\plugins\org.eclipse.jdt.launcher\bin\java.exe
Enter Year:
2000
it's leap year
```



```
package javaLab;

import java.util.Scanner;

public class LeapYrSwitch {

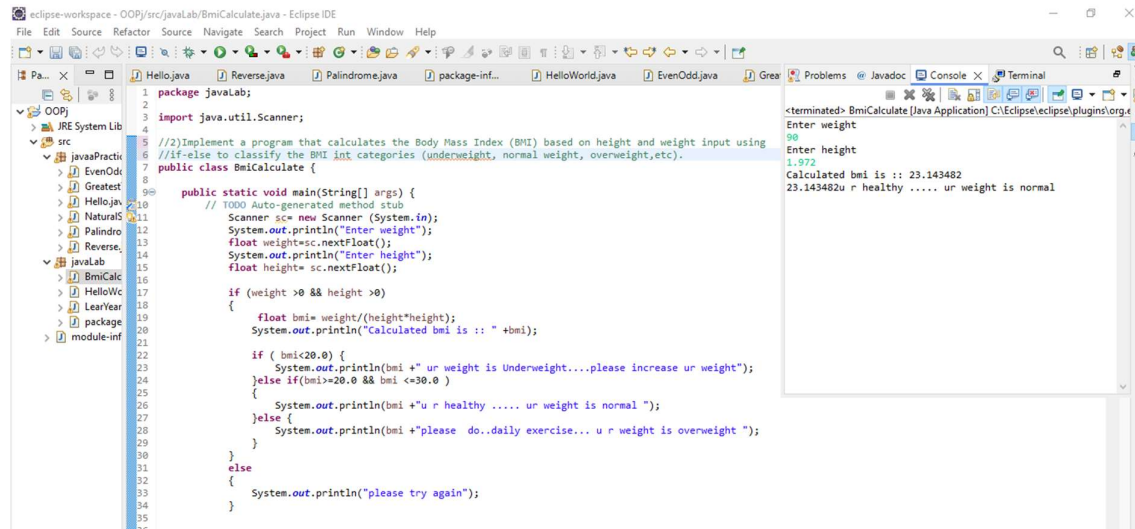
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int year = sc.nextInt();
        int ch = (year % 400 == 0) ? 1 : ((year % 4 == 0) ? 1 : 0);
        switch(ch) {
            case 0:
                System.out.println(year + "is not a leap year");
                break;
            case 1:
                System.out.println(year + " is a leap year");
                break;
            default:
                System.out.println("invalid yera");
                break;
        }
    }
}
```

Console Output:

```
<terminated> LeapYrSwitch [Java Application] C:\Eclipse\ eclipse\plugins\org.eclipse.jdt.launcher\bin\java.exe
1900
1900is not a leap year
```

2) Implement a program that calculates the Body Mass Index (BMI) based on height and weight input using if-else to classify the BMI into

categories (underweight, normal weight, overweight,etc).



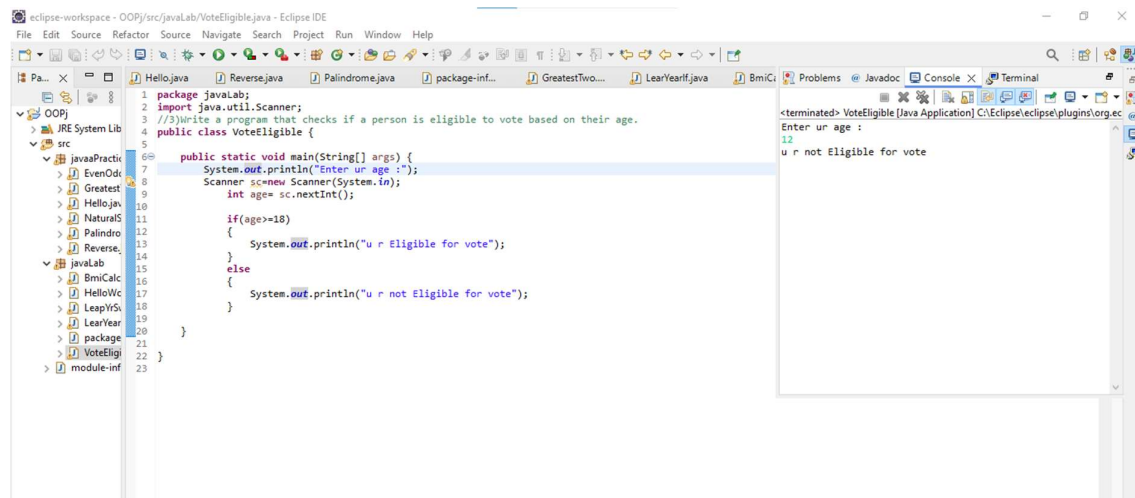
The screenshot shows the Eclipse IDE with a project named 'javaLab'. The package 'javaLab' is selected in the Package Explorer. The file 'BmiCalculate.java' is open in the Editor. The code implements a program that calculates the Body Mass Index (BMI) based on height and weight input using a Scanner. The program uses an if-else statement to classify the BMI into categories: underweight, normal weight, or overweight. The console output shows the program running successfully, displaying the calculated BMI and the corresponding weight category.

```
1 package javaLab;
2
3 import java.util.Scanner;
4
5 //2)Implement a program that calculates the Body Mass Index (BMI) based on height and weight input using
6 //If-else to classify the BMI into categories (underweight, normal weight, overweight,etc).
7 public class BmiCalculate {
8
9     public static void main(String[] args) {
10         // 1000 Auto-generated method stub
11         Scanner sc= new Scanner(System.in);
12         System.out.println("Enter weight");
13         float weight=sc.nextFloat();
14         System.out.println("Enter height");
15         float height= sc.nextFloat();
16
17         if (weight >= 0 && height > 0)
18         {
19             float bmi= weight/(height*height);
20             System.out.println("Calculated bmi is :: "+bmi);
21
22             if ( bmi<20.0 ) {
23                 System.out.println(bmi + " ur weight is Underweight...please increase ur weight");
24             }else if(bmi>=20.0 && bmi <=30.0 )
25             {
26                 System.out.println(bmi + "u r healthy ..... ur weight is normal ");
27             }else {
28                 System.out.println(bmi+"please do..daily exercise... u r weight is overweight ");
29             }
30         }
31         else
32         {
33             System.out.println("please try again");
34         }
35     }
36 }
```

Console Output:

```
<terminated> BmiCalculate [Java Application] C:\Eclipse\ eclipse\plugins\org.e
Enter weight
Enter height
1.972
Calculated bmi is :: 23.143482
23.143482u r healthy ..... ur weight is normal
```

3)Write a program that checks if a person is eligible to vote based on their age.



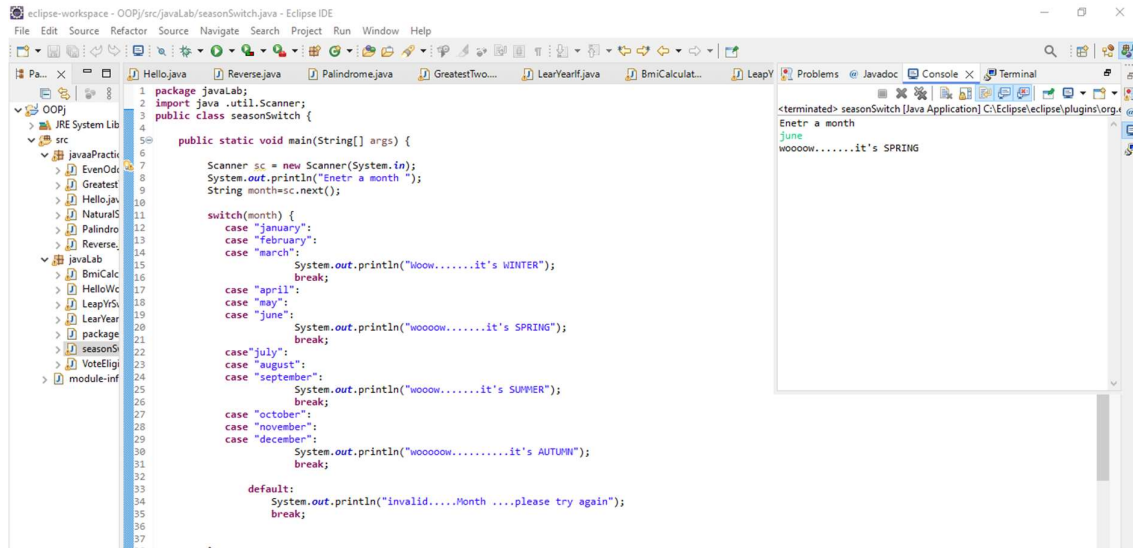
The screenshot shows the Eclipse IDE with a project named 'javaLab'. The package 'javaLab' is selected in the Package Explorer. The file 'VoteEligible.java' is open in the Editor. The code implements a program that checks if a person is eligible to vote based on their age. The program uses an if-else statement to check if the age is greater than or equal to 18. The console output shows the program running successfully, displaying the age and the eligibility status.

```
1 package javaLab;
2 import java.util.Scanner;
3 //3)Write a program that checks if a person is eligible to vote based on their age.
4 public class VoteEligible {
5
6     public static void main(String[] args) {
7         System.out.println("Enter ur age :");
8         Scanner sc=new Scanner(System.in);
9         int age= sc.nextInt();
10
11         if(age>=18)
12         {
13             System.out.println("u r Eligible for vote");
14         }
15         else
16         {
17             System.out.println("u r not Eligible for vote");
18         }
19     }
20 }
21
22
23 }
```

Console Output:

```
<terminated> VoteEligible [Java Application] C:\Eclipse\ eclipse\plugins\org.ec
Enter ur age :
12
u r not Eligible for vote
```

4)Write a program that takes a month (1-12) and prints the corresponding season (Winter, Spring, Summer, Autumn) using a switch case



5)Write a program that allows the user to select a shape (Circle, Square, Rectangle, Triangle) and then calculates the area based on user-provided dimensions using a switch case.

