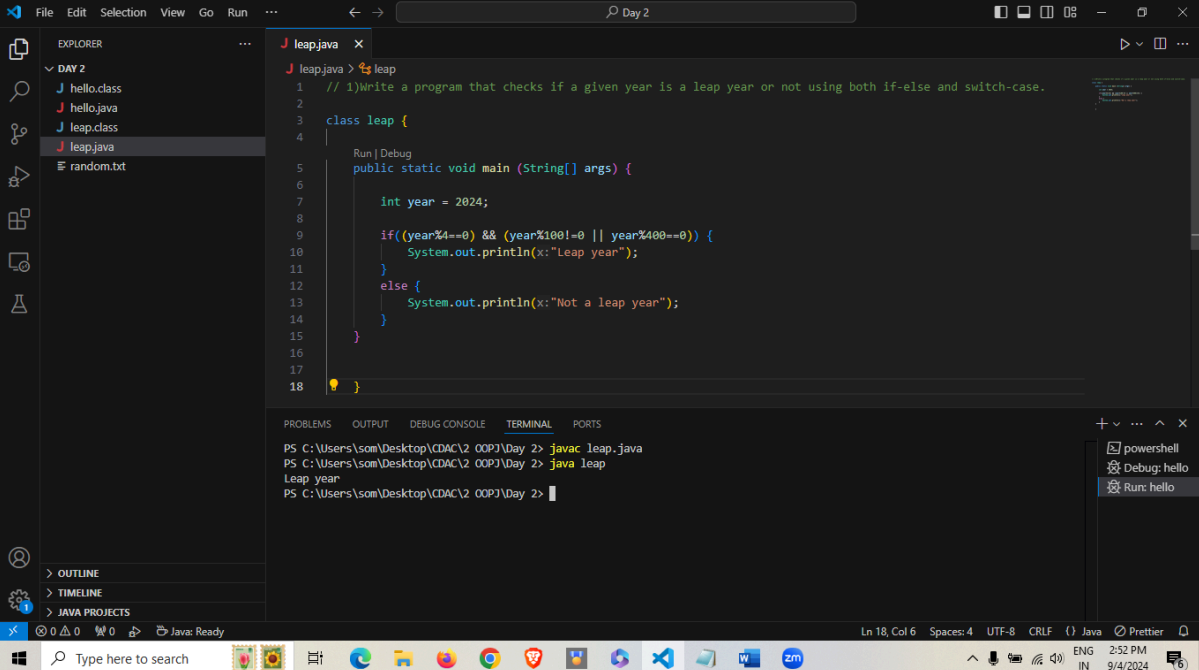


Assignment No- 2

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

A.



The screenshot shows a code editor with a Java file named `leap.java`. The code implements a program to check if a given year is a leap year or not using both if-else and switch-case. The code is as follows:

```
1 // 1) Write a program that checks if a given year is a leap year or not using both if-else and switch-case.
2
3 class leap {
4
5     public static void main (String[] args) {
6
7         int year = 2024;
8
9         if((year%4==0) && (year%100!=0 || year%400==0)) {
10             System.out.println(x:"Leap year");
11         }
12         else {
13             System.out.println(x:"Not a leap year");
14         }
15     }
16 }
17
18 }
```

The terminal output shows the execution of the program:

```
PS C:\Users\som\Desktop\CDAC\2 OOP\Day 2> javac leap.java
PS C:\Users\som\Desktop\CDAC\2 OOP\Day 2> java leap
Leap year
PS C:\Users\som\Desktop\CDAC\2 OOP\Day 2>
```

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).

```
File Edit Selection View Go Run ...
DAY 2
J BML.class
J BMI.java
J hello.class
J hello.java
J leap.class
J leap.java
random.txt

J BMI.java > BMI > main(String[])
4 class BMI {
5     public static void main(String[] args) {
11         System.out.println("Enter height in meters: ");
12         float height = sc.nextFloat();
13
14         float bmi = weight / (height * height);
15
16         if(bmi<18.5) {
17             System.out.println("Your BMI is: "+bmi+" you are underweight");
18         }
19         else if (bmi>18.5 && bmi<24.5) {
20             System.out.println("Your BMI is: "+bmi+" you are normalweight");
21         }
22         else {
23             System.out.println("Your BMI is: "+bmi+" you are overweight");
24         }
25     }
26 }
27
28
29

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\som\Desktop\CDAC\2 OOP\Day 2> javac BMI.java
PS C:\Users\som\Desktop\CDAC\2 OOP\Day 2> java BMI
Enter weight in Kgs:
65
Enter height in meters:
1.65
Your BMI is: 23.875116 you are normalweight
PS C:\Users\som\Desktop\CDAC\2 OOP\Day 2>
```

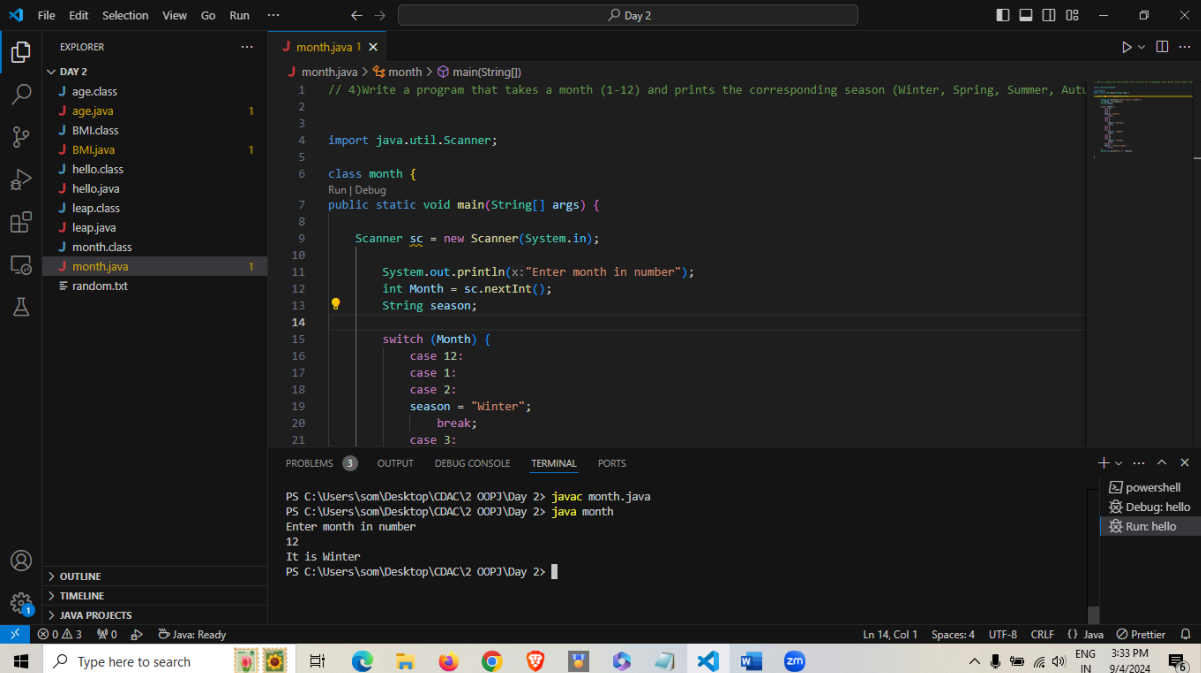
3)Write a program that checks if a person is eligible to vote based on their age.

```
File Edit Selection View Go Run ...
DAY 2
J age.class
J age.java
J BML.class
J BMI.java
J hello.class
J hello.java
J leap.class
J leap.java
random.txt

J age.java > age > main(String[])
1 import java.util.Scanner;
2
3 class age {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6
7         System.out.println("Enter Age");
8         int Age = sc.nextInt();
9
10         if(Age>=18) {
11             System.out.println("You are eligible for vote");
12         }
13         else {
14             System.out.println("You are not eligible for vote");
15         }
16     }
17 }
18
19
20

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\som\Desktop\CDAC\2 OOP\Day 2> javac age.java
PS C:\Users\som\Desktop\CDAC\2 OOP\Day 2> java age
Enter Age
56
You are eligible for vote
PS C:\Users\som\Desktop\CDAC\2 OOP\Day 2>
```

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



The screenshot shows an IDE with a project named 'Day 2'. The Explorer panel on the left lists files: 'age.class', 'age.java', 'BMI.class', 'BMI.java', 'hello.class', 'hello.java', 'leap.class', 'leap.java', 'month.class', 'month.java', and 'random.txt'. The 'month.java' file is selected and open in the editor. The code in 'month.java' is as follows:

```
1 // 4)Write a program that takes a month (1-12) and prints the corresponding season (Winter, Spring, Summer, Autumn)
2
3
4 import java.util.Scanner;
5
6 class month {
7     public static void main(String[] args) {
8
9         Scanner sc = new Scanner(System.in);
10
11         System.out.println("Enter month in number");
12         int Month = sc.nextInt();
13         String season;
14
15         switch (Month) {
16             case 12:
17             case 1:
18             case 2:
19                 season = "Winter";
20                 break;
21             case 3:
```

The bottom panel shows the 'TERMINAL' output:

```
PS C:\Users\som\Desktop\CDAC\2 OOP\Day 2> javac month.java
PS C:\Users\som\Desktop\CDAC\2 OOP\Day 2> java month
Enter month in number
12
It is Winter
PS C:\Users\som\Desktop\CDAC\2 OOP\Day 2>
```

The status bar at the bottom indicates 'Ln 14, Col 1', 'Spaces: 4', 'UTF-8', 'CRLF', and 'Java'.

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.

