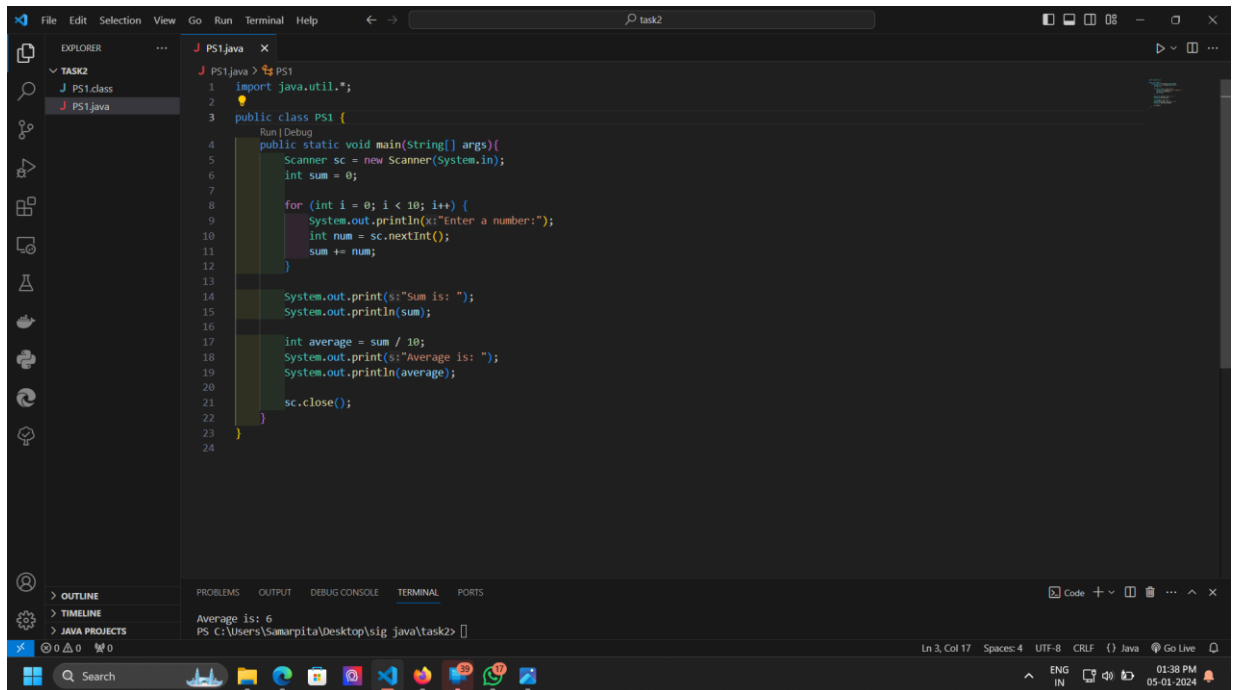


TASK 02

1. WAP to read 10 numbers from the keyboard and find their sum and average.

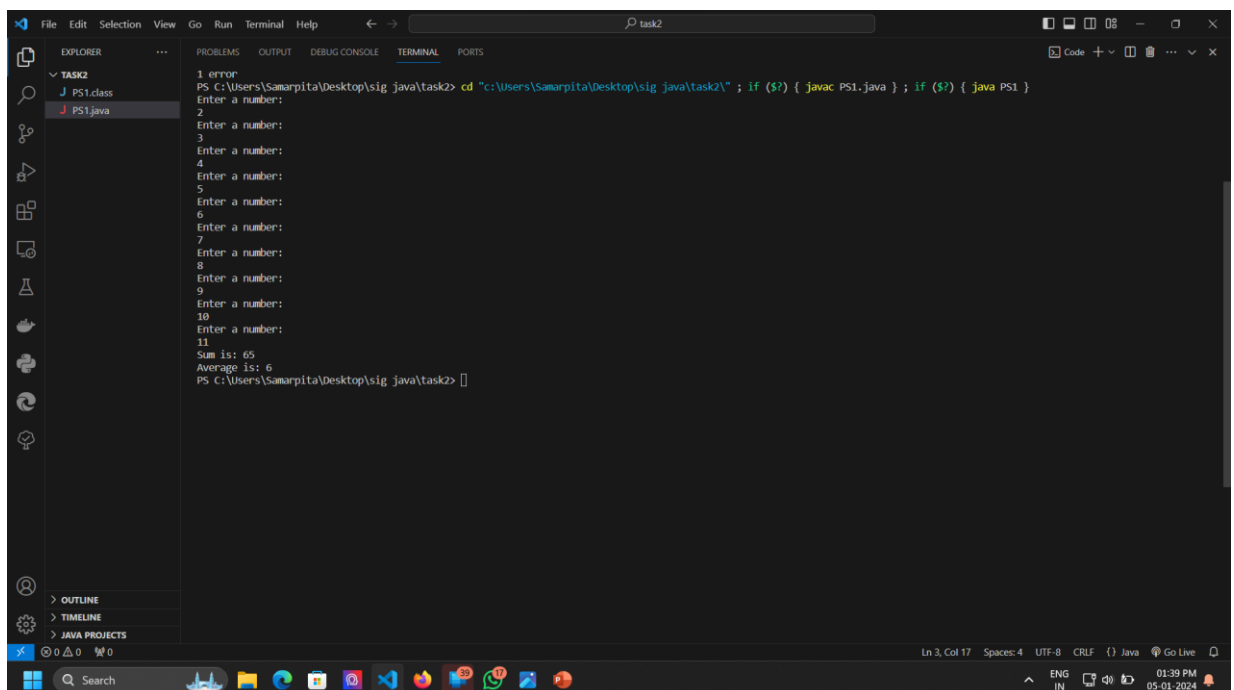


The screenshot shows an IDE with a Java file named `PS1.java`. The code is as follows:

```
1 import java.util.*;
2
3 public class PS1 {
4     public static void main(String[] args){
5         Scanner sc = new Scanner(System.in);
6         int sum = 0;
7
8         for (int i = 0; i < 10; i++) {
9             System.out.println("Enter a number:");
10            int num = sc.nextInt();
11            sum += num;
12        }
13
14        System.out.print("Sum is: ");
15        System.out.println(sum);
16
17        int average = sum / 10;
18        System.out.print("Average is: ");
19        System.out.println(average);
20
21        sc.close();
22    }
23 }
24
```

The terminal output shows the program running and calculating the average of 10 numbers:

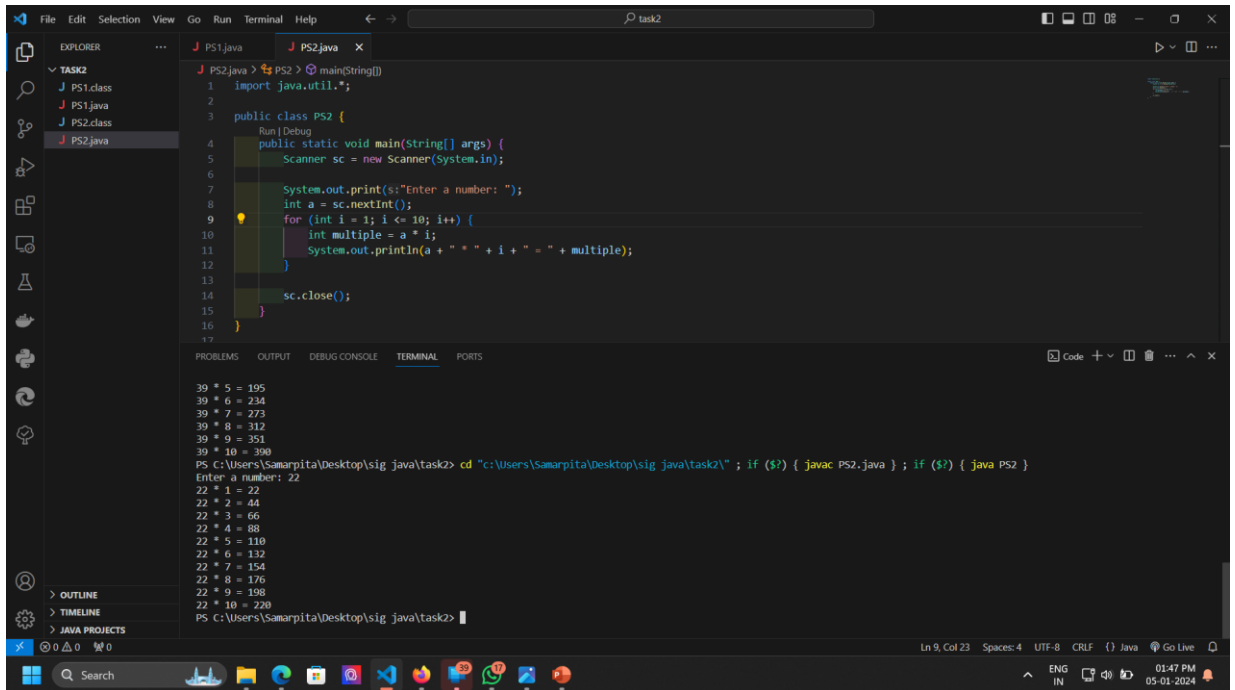
```
Average is: 6
PS C:\Users\Samarpita\Desktop>sig java/task2>
```



The screenshot shows the same IDE with the terminal output for the program. The output is as follows:

```
1 error:
PS C:\Users\Samarpita\Desktop>sig java/task2> cd "c:\Users\Samarpita\Desktop\sig java\task2\" ; if ($?) { javac PS1.java } ; if ($?) { java PS1 }
2
3 Enter a number:
4 Enter a number:
5 Enter a number:
6 Enter a number:
7 Enter a number:
8 Enter a number:
9 Enter a number:
10 Enter a number:
11 Enter a number:
12 Sum is: 65
13 Average is: 6
14 PS C:\Users\Samarpita\Desktop>sig java/task2>
```

2. WAP to display the multiplication table for a given integer.



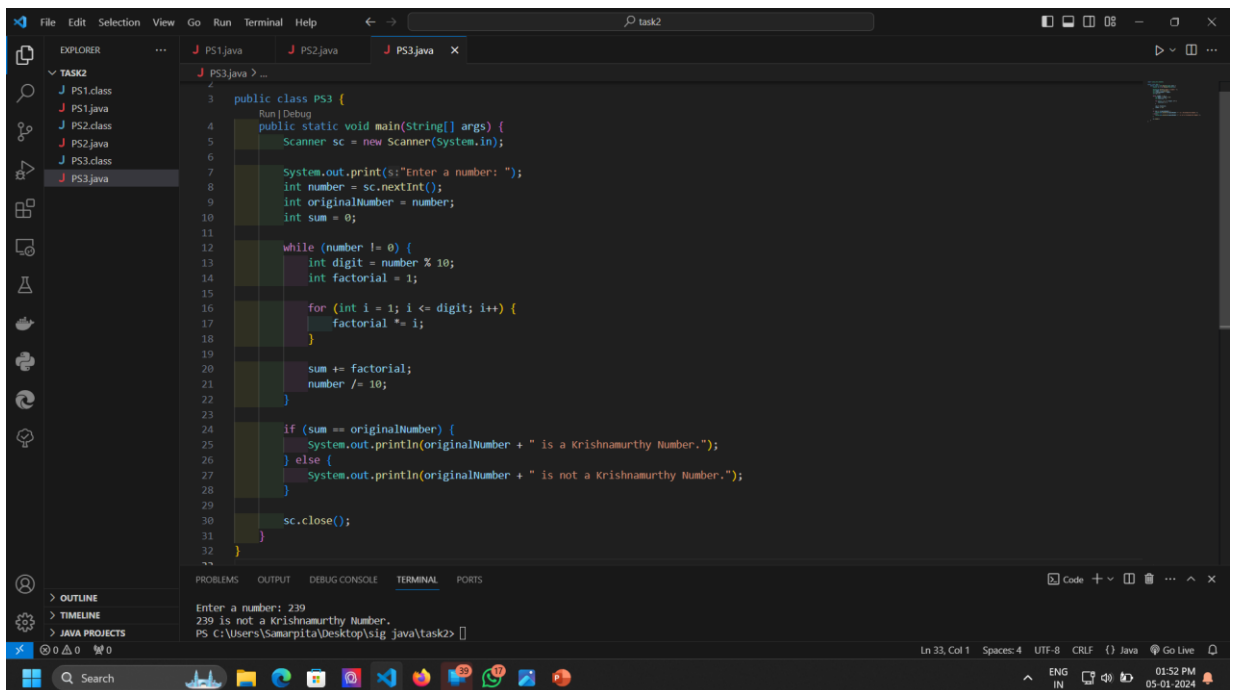
The screenshot shows an IDE with a Java file named `PS2.java`. The code is as follows:

```
1 import java.util.*;
2
3 public class PS2 {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6
7         System.out.print(s:"Enter a number: ");
8         int a = sc.nextInt();
9         for (int i = 1; i <= 10; i++) {
10             int multiple = a * i;
11             System.out.println(a + " * " + i + " = " + multiple);
12         }
13         sc.close();
14     }
15 }
16 }
```

The terminal output shows the program running and displaying the multiplication table for the input number 22:

```
PS C:\Users\Samarpita\Desktop\sig java\task2> cd "C:\Users\Samarpita\Desktop\sig java\task2\" ; if ($?) { javac PS2.java } ; if ($?) { java PS2 }
Enter a number: 22
22 * 1 = 22
22 * 2 = 44
22 * 3 = 66
22 * 4 = 88
22 * 5 = 110
22 * 6 = 132
22 * 7 = 154
22 * 8 = 176
22 * 9 = 198
22 * 10 = 220
PS C:\Users\Samarpita\Desktop\sig java\task2>
```

3. WAP to check whether a number is Krishnamurthy Number or not.



The screenshot shows an IDE with a Java file named `PS3.java`. The code is as follows:

```
3 public class PS3 {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6
7         System.out.print(s:"Enter a number: ");
8         int number = sc.nextInt();
9         int originalNumber = number;
10        int sum = 0;
11
12        while (number != 0) {
13            int digit = number % 10;
14            int factorial = 1;
15
16            for (int i = 1; i <= digit; i++) {
17                factorial *= i;
18            }
19
20            sum += factorial;
21            number /= 10;
22        }
23
24        if (sum == originalNumber) {
25            System.out.println(originalNumber + " is a Krishnamurthy Number.");
26        } else {
27            System.out.println(originalNumber + " is not a Krishnamurthy Number.");
28        }
29
30        sc.close();
31    }
32 }
```

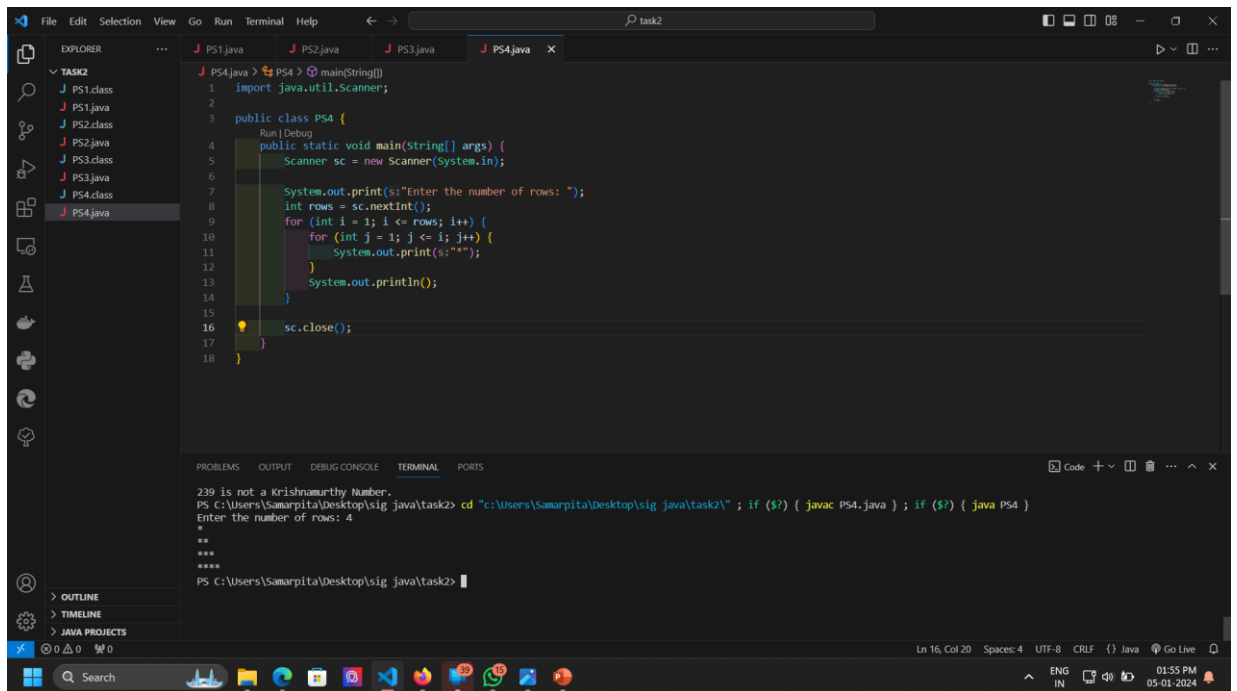
The terminal output shows the program running and checking the input number 239:

```
Enter a number: 239
239 is not a Krishnamurthy Number.
PS C:\Users\Samarpita\Desktop\sig java\task2>
```

4. WAP to display a pattern like a right angle triangle using an asterisk.

*

**



The screenshot shows an IDE with a Java file named PS4.java. The code is as follows:

```
1 import java.util.Scanner;
2
3 public class PS4 {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6
7         System.out.print(s:"Enter the number of rows: ");
8         int rows = sc.nextInt();
9         for (int i = 1; i <= rows; i++) {
10             for (int j = 1; j <= i; j++) {
11                 System.out.print(s:"");
12             }
13             System.out.println();
14         }
15
16         sc.close();
17     }
18 }
```

The terminal output shows the program execution:

```
PS C:\Users\Samarpita\Desktop> sig java\task2> cd "c:\Users\Samarpita\Desktop\sig java\task2\" ; if ($?) { javac PS4.java } ; if ($?) { java PS4 }
Enter the number of rows: 4
*
**
***
****
PS C:\Users\Samarpita\Desktop\sig java\task2>
```

5. Difference between while Loop and do while Loop with proper syntax and example.

While loop	Do while loop
In a while loop, the condition is checked before the loop body is executed. If the condition is initially false, the loop body may not execute at all.	In a do-while loop, the loop body is executed at least once before checking the condition. This guarantees that the loop body is executed at least once, regardless of the condition's initial evaluation.
SYNTAX while (condition) { // loop body }	SYNTAX do { // loop body } while (condition);
 <pre>ps5.java > J whileloop.java > ... 1 public class whileloop { 2 Run Debug 3 public static void main(String[] args) { 4 int i = 1; 5 // While loop 6 while (i <= 5) { 7 System.out.println("Value of i: " + i); 8 i++; 9 } 10 } 11 } 12 PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS PS C:\Users\Samarpita\Desktop\sig java\task2> cd "c:\Users\Samarpita\Desktop\sig java\task2" & java whileloop Value of i: 1 Value of i: 2 Value of i: 3 Value of i: 4 Value of i: 5</pre>	 <pre>ps5.java > J dowhileloop.java > dowhileloop 1 public class dowhileloop { 2 Run Debug 3 public static void main(String[] args) { 4 int i = 1; 5 // Do-while loop 6 do { 7 System.out.println("Value of i: " + i); 8 i++; 9 } while (i <= 5); 10 } 11 } 12 PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS PS C:\Users\Samarpita\Desktop\sig java\task2\ps5.java> cd "c:\Users\Samarpita\Desktop\sig java\task2" & java dowhileloop Value of i: 1 Value of i: 2 Value of i: 3 Value of i: 4 Value of i: 5</pre>