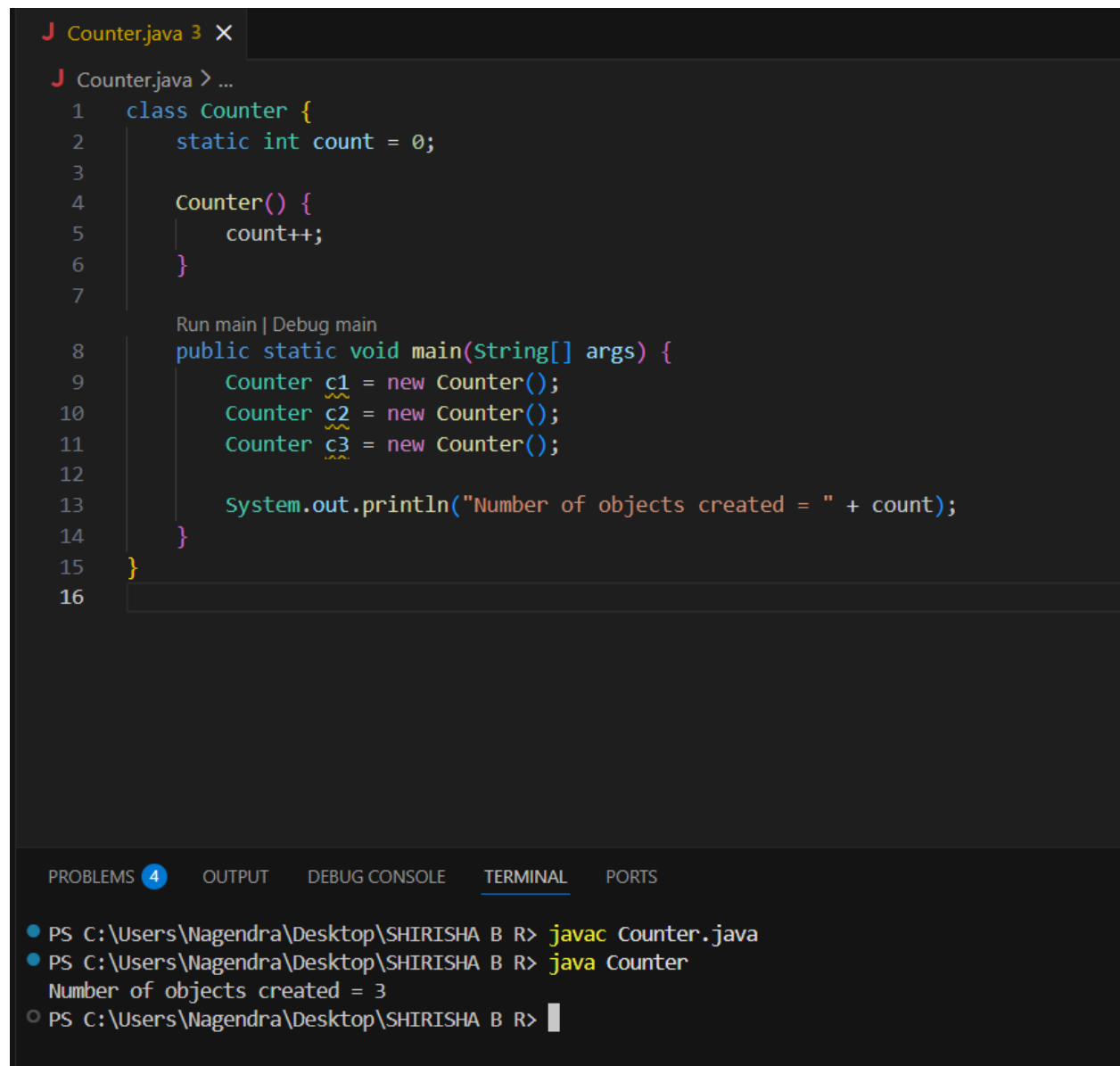


JAVA WEEK-02



The image shows a screenshot of an IDE with a dark theme. At the top, a tab labeled 'Counter.java 3' is open. Below it, the code editor displays the following Java code:

```
1 class Counter {
2     static int count = 0;
3
4     Counter() {
5         count++;
6     }
7
8     Run main | Debug main
9     public static void main(String[] args) {
10         Counter c1 = new Counter();
11         Counter c2 = new Counter();
12         Counter c3 = new Counter();
13
14         System.out.println("Number of objects created = " + count);
15     }
16 }
```

Below the code editor, there is a panel with tabs for 'PROBLEMS 4', 'OUTPUT', 'DEBUG CONSOLE', 'TERMINAL', and 'PORTS'. The 'TERMINAL' tab is selected, showing the following commands and output:

```
PS C:\Users\Nagendra\Desktop\SHIRISHA B R> javac Counter.java
PS C:\Users\Nagendra\Desktop\SHIRISHA B R> java Counter
Number of objects created = 3
PS C:\Users\Nagendra\Desktop\SHIRISHA B R> 
```

Counter.java 3

ArraySum.java X

ArraySum.java > ...

```
1  import java.util.Scanner;
2
3  class ArraySum {
    Run main | Debug main
4      public static void main(String[] args) {
5          Scanner sc = new Scanner(System.in);
6
7          int n, sum = 0;
8          System.out.print("Enter number of elements: ");
9          n = sc.nextInt();
10
11         int[] arr = new int[n];
12
13         System.out.println("Enter array elements:");
14         for (int i = 0; i < n; i++) {
15             arr[i] = sc.nextInt();
16             sum += arr[i];
17         }
18
19         System.out.println("Sum of array elements = " + sum);
20     }
21 }
22
```

PROBLEMS 4

OUTPUT

DEBUG CONSOLE

TERMINAL

PORTS

- PS C:\Users\Nagendra\Desktop\SHIRISHA B R> javac ArraySum.java
- PS C:\Users\Nagendra\Desktop\SHIRISHA B R> java ArraySum
Enter number of elements: 4
Enter array elements:
20 30 40 10
Sum of array elements = 100
- PS C:\Users\Nagendra\Desktop\SHIRISHA B R>

ArrayAverage.java X

ArrayAverage.java > ...

```
1  import java.util.Scanner;
2
3  class ArrayAverage {
    Run main | Debug main
4      public static void main(String[] args) {
5          Scanner sc = new Scanner(System.in);
6
7          int n;
8          double sum = 0;
9
10         System.out.print("Enter number of elements: ");
11         n = sc.nextInt();
12
13         int[] arr = new int[n];
14
15         System.out.println("Enter elements:");
16         for (int i = 0; i < n; i++) {
17             arr[i] = sc.nextInt();
18             sum += arr[i];
19         }
20
21         double average = sum / n;
22         System.out.println("Average of array elements = " + average);
23     }
24 }
25
```

PROBLEMS 4 OUTPUT DEBUG CONSOLE TERMINAL PORTS

- PS C:\Users\Nagendra\Desktop\SHIRISHA B R> javac ArrayAverage.java
- PS C:\Users\Nagendra\Desktop\SHIRISHA B R> java ArrayAverage
Enter number of elements: 4
Enter elements:
50 30 20 10
Average of array elements = 27.5
- PS C:\Users\Nagendra\Desktop\SHIRISHA B R> █

ArrayAverage.java MathUtility.java X Student.java

MathUtility.java > ...

```
1  import java.util.Scanner;
2
3  class MathUtility {
4
5      static int add(int a, int b) {
6          return a + b;
7      }
8
9      Run main | Debug main
10     public static void main(String[] args) {
11         Scanner sc = new Scanner(System.in);
12
13         System.out.print("Enter first number: ");
14         int a = sc.nextInt();
15
16         System.out.print("Enter second number: ");
17         int b = sc.nextInt();
18
19         int result = MathUtility.add(a, b);
20         System.out.println("Sum = " + result);
21     }
22 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Users\Nagendra\Desktop\SHIRISHA B R> javac MathUtility.java
PS C:\Users\Nagendra\Desktop\SHIRISHA B R> java MathUtility
Enter first number: 20
Enter second number: 10
Sum = 30
PS C:\Users\Nagendra\Desktop\SHIRISHA B R> 
```

```

J Student.java > Student > accept(Scanner sc, int n)
1  /* Develop a Java program to create a class Student with
2  members usn, name, an array credits and an array marks.
3  Include methods to accept and display details and a
4  method to calculate SGPA of a student.
5  */
6  import java.util.Scanner;
7
8  class Student
9  {
10     String usn, name;
11     int[] credits, marks;
12
13     void accept(Scanner sc, int n) {
14         System.out.print("Enter USN: ");
15         usn = sc.next();
16         sc.nextLine(); // clear buffer
17         System.out.print("Enter Name: ");
18         name = sc.nextLine();
19
20         credits = new int[n];
21         marks = new int[n];
22
23         System.out.println("Enter credits and marks:");
24         for (int i = 0; i < n; i++) {
25             System.out.print("Credits of subject " + (i + 1) + ": ");
26             credits[i] = sc.nextInt();
27             System.out.print("Marks of subject " + (i + 1) + ": ");
28             marks[i] = sc.nextInt();
29         }
30     }
31
32     double calculateSGPA() {

```

```
32     double calculateSGPA() {
33         double sum = 0;
34         int total = 0;
35
36         for (int i = 0; i < credits.length; i++) {
37             int gp;
38             if (marks[i] >= 90) gp = 10;
39             else if (marks[i] >= 80) gp = 9;
40             else if (marks[i] >= 70) gp = 8;
41             else if (marks[i] >= 60) gp = 7;
42             else if (marks[i] >= 50) gp = 6;
43             else if (marks[i] >= 40) gp = 5;
44             else gp = 0;
45
46             sum += gp * credits[i];
47             total += credits[i];
48         }
49         return sum / total;
50     }
51
52     void display() {
53         System.out.println("\nUSN: " + usn);
54         System.out.println("Name: " + name);
55     }
56 }
```

```

57  class StudentDemo{
      Run main | Debug main
58      public static void main(String[] args) {
59          Scanner sc = new Scanner(System.in);
60
61          System.out.print("Enter number of subjects: ");
62          int n = sc.nextInt();
63
64          Student s = new Student();
65          s.accept(sc, n);
66          s.display();
67
68          System.out.printf("SGPA: %.2f\n", s.calculateSGPA());
69      }
70  }
71

```

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS

```

• PS C:\Users\Nagendra\Desktop\SHIRISHA B R> javac Student1.java
• PS C:\Users\Nagendra\Desktop\SHIRISHA B R> java Student1Demo
Enter number of subjects: 4
Enter USN: 1bmcs22045
Enter Name: shirishabr
Enter credits and marks:
Credits of subject 1: 3
Marks of subject 1: 90
Credits of subject 2: 2
Marks of subject 2: 96
Credits of subject 3: 2
Marks of subject 3: 89
Credits of subject 4: 1
Marks of subject 4: 88

USN: 1bmcs22045
Name: shirishabr
SGPA: 9.63
❖ PS C:\Users\Nagendra\Desktop\SHIRISHA B R>

```