

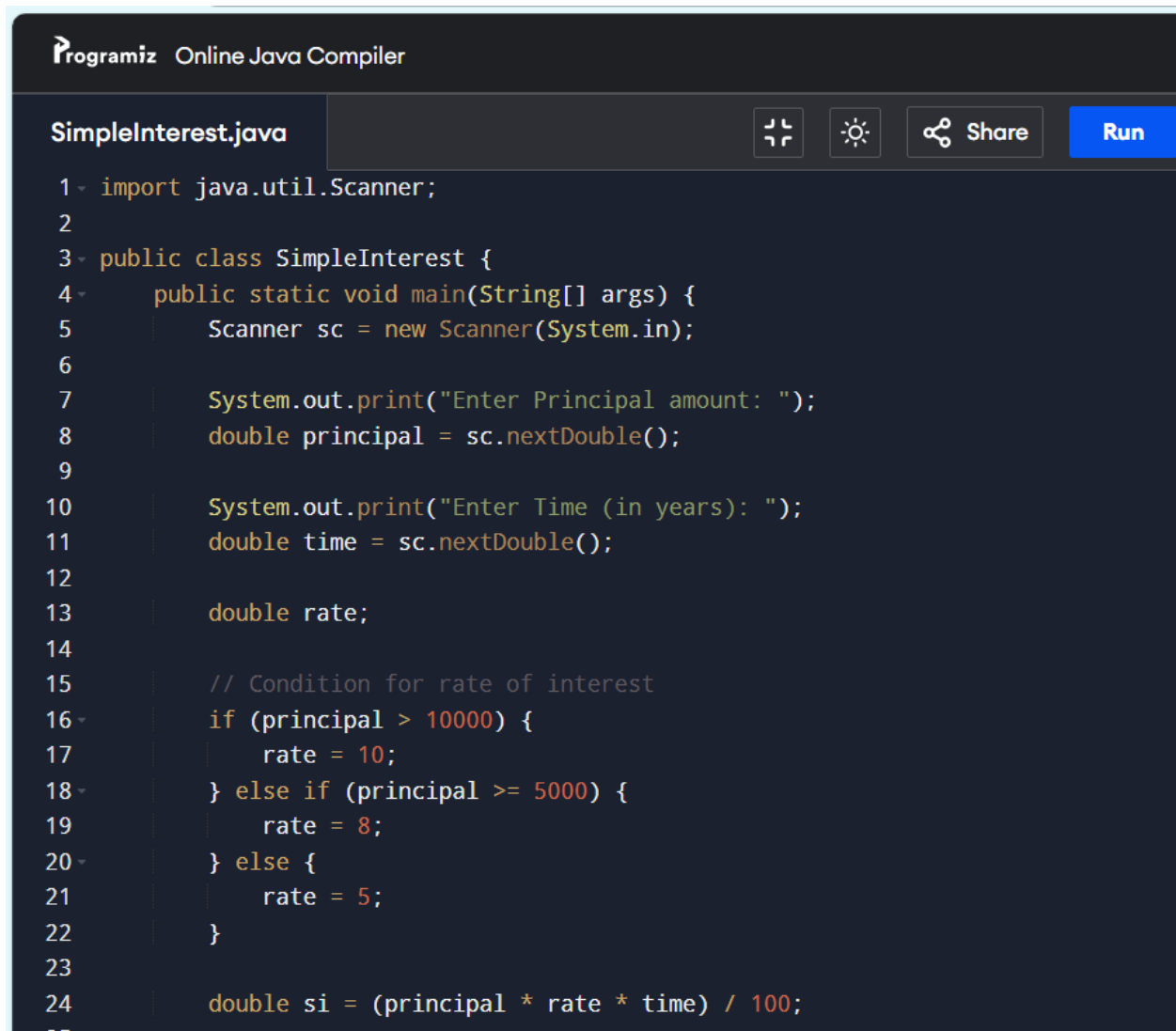
Assignment-01

Q1. Simple Interest with Conditions

Write a program to enter P, T (principal and time) and calculate simple interest. Use the Scanner class for taking inputs from the console. Users will enter the principal amount and time (in years).

Create an if-else statement and modify the interest rate based on the principal amount:

- If the amount > 10000, then interest rate = 10%.
- If the amount is between 10000 and 5000, then interest rate = 8%.
- If the amount is below 5000, then interest rate = 5



```
Programiz Online Java Compiler

SimpleInterest.java

1 import java.util.Scanner;
2
3 public class SimpleInterest {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6
7         System.out.print("Enter Principal amount: ");
8         double principal = sc.nextDouble();
9
10        System.out.print("Enter Time (in years): ");
11        double time = sc.nextDouble();
12
13        double rate;
14
15        // Condition for rate of interest
16        if (principal > 10000) {
17            rate = 10;
18        } else if (principal >= 5000) {
19            rate = 8;
20        } else {
21            rate = 5;
22        }
23
24        double si = (principal * rate * time) / 100;
25    }
}
```

```
25
26     System.out.println("\n--- Output ---");
27     System.out.println("Principal: " + principal);
28     System.out.println("Time: " + time + " years");
29     System.out.println("Rate: " + rate + "%");
30     System.out.println("Simple Interest: " + si);
31 }
32 }
```

Output**

Output

Clear

```
Enter Principal amount: 5000
Enter Time (in years): 5

--- Output ---
Principal: 5000.0
Time: 5.0 years
Rate: 8.0%
Simple Interest: 2000.0

=== Code Execution Successful ===
```

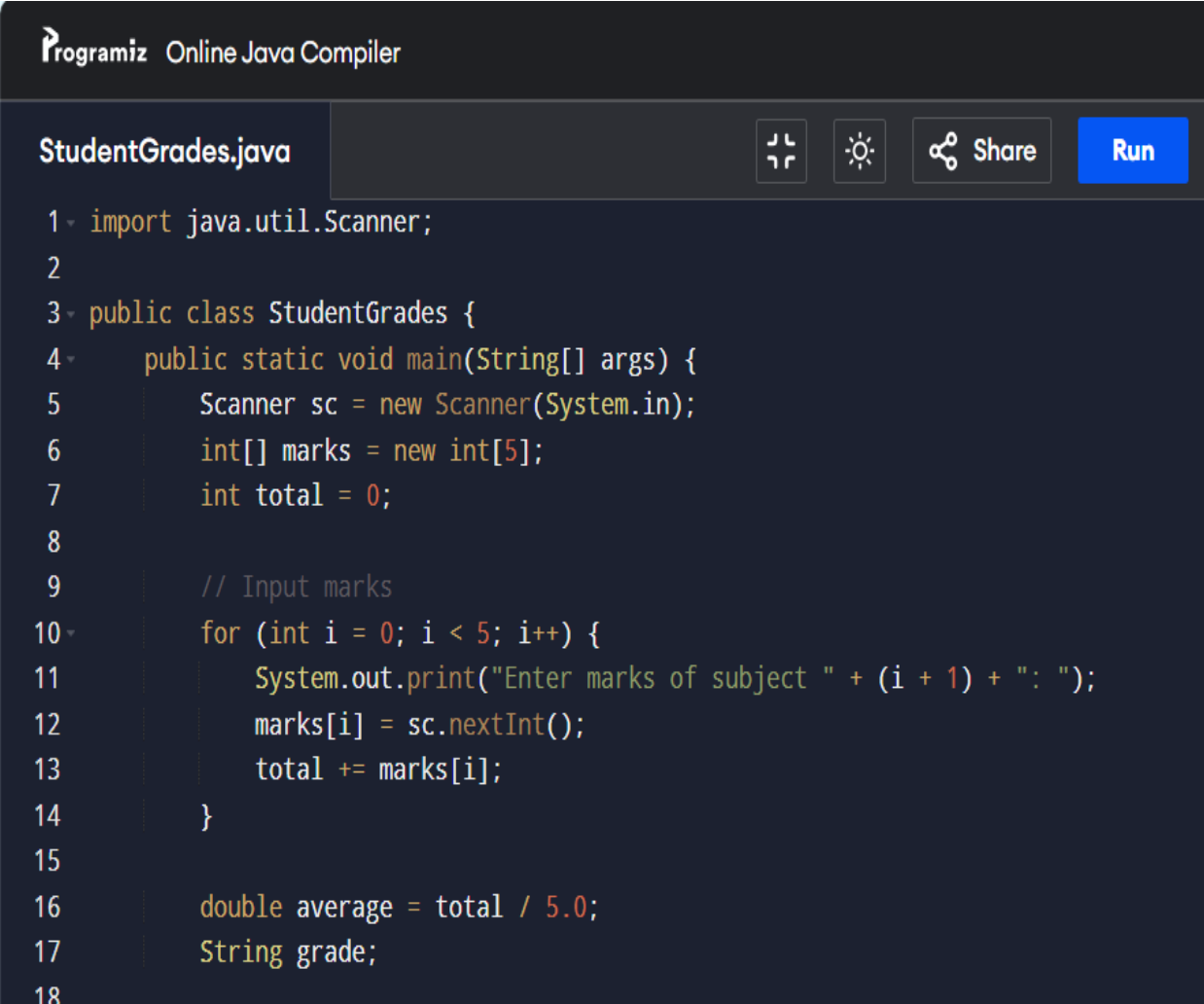
Q2. Marks, Average & Grade

Write a program to enter marks of five subjects and calculate total marks and average. Each subject has a full mark of 100.

Give grades based on average marks:

- Ex (> 90%)
- A (> 80%)
- B (> 60%)
- C (\geq 40%)
- F (< 40%)

Use Scanner class to take inputs from the console.



```
Programiz Online Java Compiler

StudentGrades.java

1 import java.util.Scanner;
2
3 public class StudentGrades {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6         int[] marks = new int[5];
7         int total = 0;
8
9         // Input marks
10        for (int i = 0; i < 5; i++) {
11            System.out.print("Enter marks of subject " + (i + 1) + ": ");
12            marks[i] = sc.nextInt();
13            total += marks[i];
14        }
15
16        double average = total / 5.0;
17        String grade;
18    }
```

```

18
19     // Grade calculation
20     if (average > 90) {
21         grade = "Ex";
22     } else if (average > 80) {
23         grade = "A";
24     } else if (average > 60) {
25         grade = "B";
26     } else if (average >= 40) {
27         grade = "C";
28     } else {
29         grade = "F";
30     }
31
32     System.out.println("\n--- Output ---");
33     System.out.println("Total Marks = " + total);
34     System.out.println("Average Marks = " + average);
35     System.out.println("Grade = " + grade);
36 }
37 }

```

Output**

Programiz PRO >

Output

Clear

Enter marks of subject 1: 25
Enter marks of subject 2: 25
Enter marks of subject 3: 55
Enter marks of subject 4: 88
Enter marks of subject 5: 99

--- Output ---
Total Marks = 292
Average Marks = 58.4
Grade = C

=== Code Execution Successful ===