



```
1 import java.util.Scanner;
2
3 public class Main {
4     public static void main(String[] args) {
5         int[] scores = new int[9];
6         Scanner scanner = new Scanner(System.in);
7
8         System.out.println("Enter 9 integer scores");
9
10        for (int i = 0; i < 9; i++) {
11            scores[i] = scanner.nextInt();
12        }
13
14        System.out.println("Scores entered:");
15        for (int score : scores) {
16            System.out.print(score + " ");
17        }
18    }
19 }
20
```

Enter 9 integer scores:

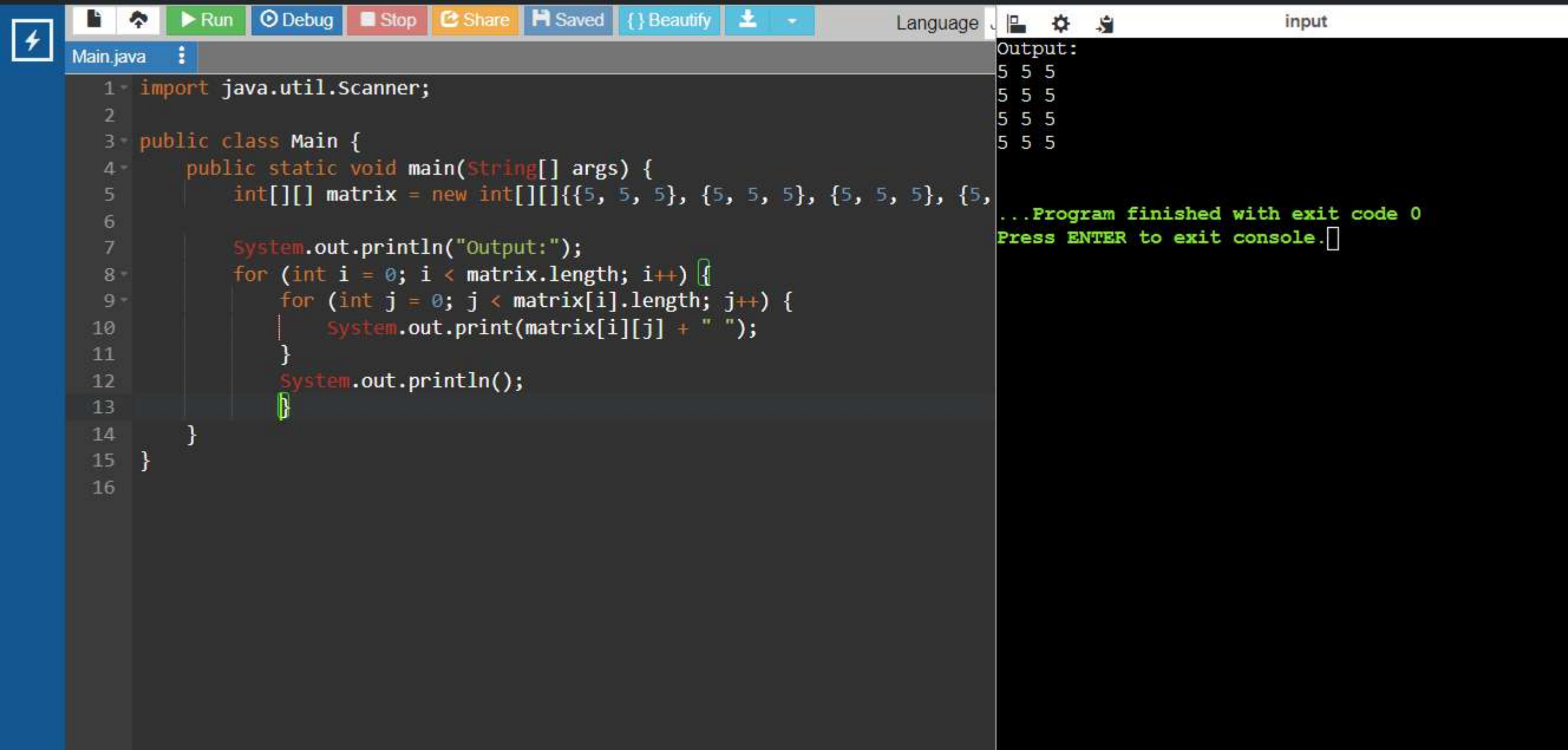
10 9 8 9 7 10 10 9 10

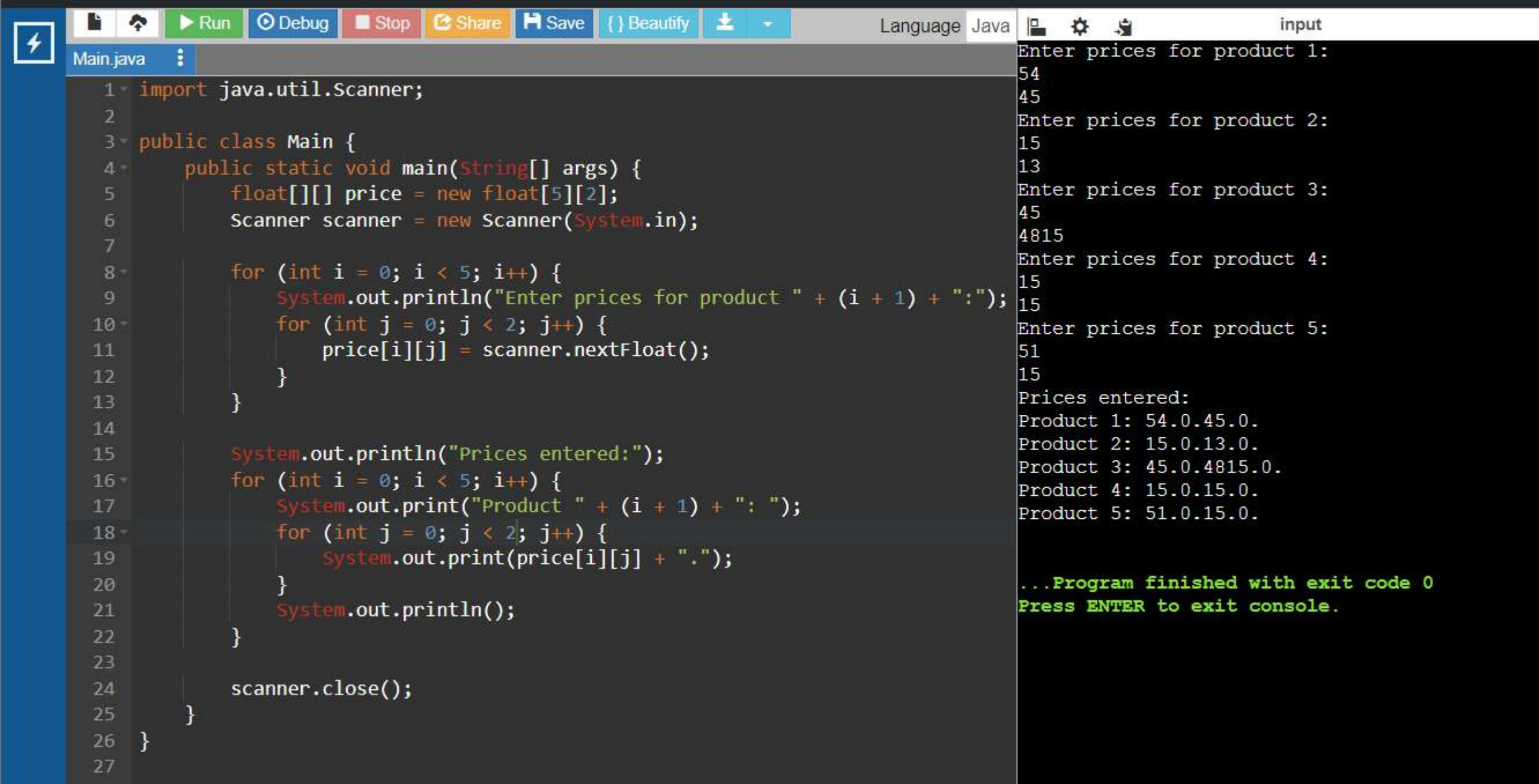
Scores entered:

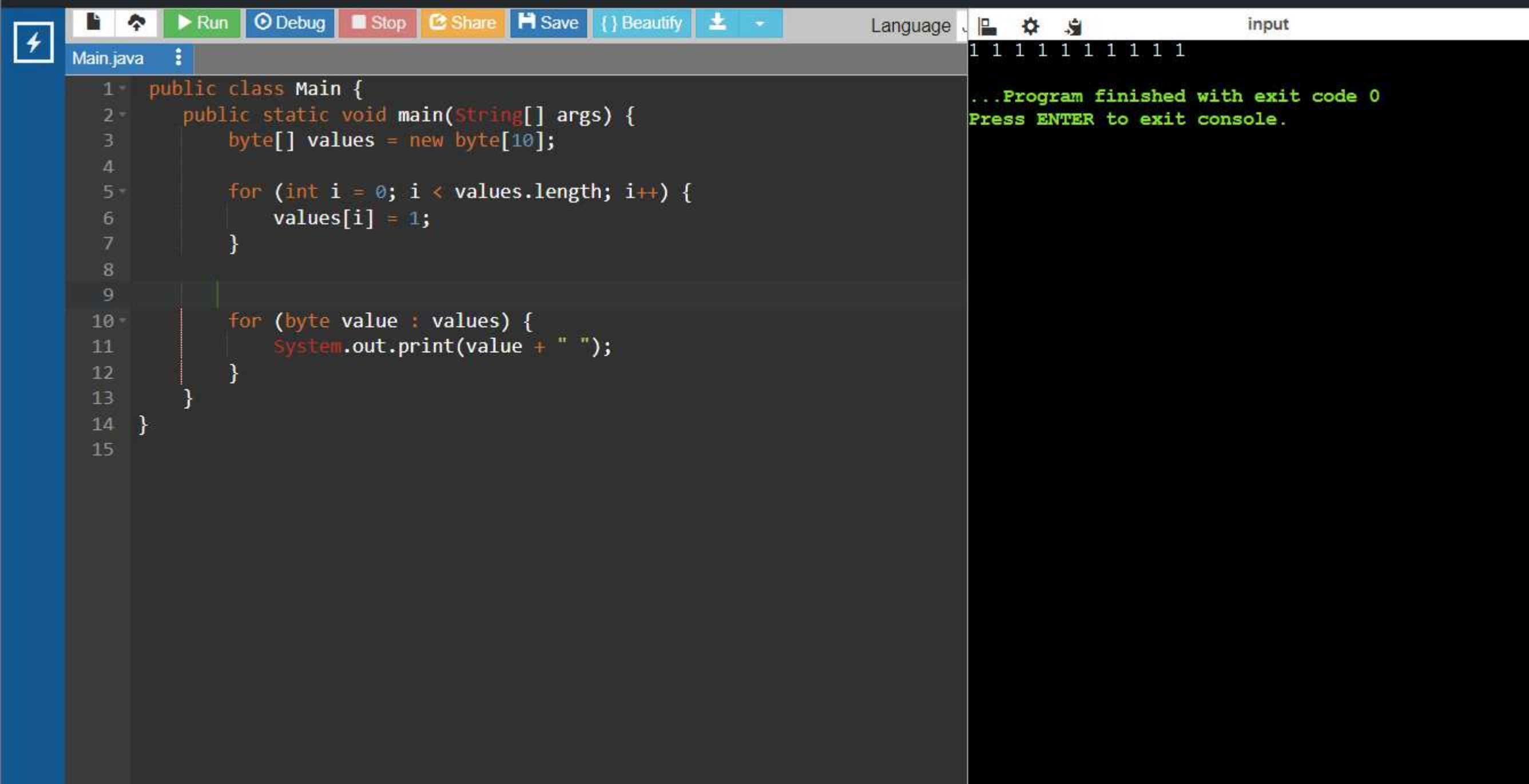
10 9 8 9 7 10 10 9 10

...Program finished with exit code 0

Press ENTER to exit console.











Main.java

```
1 import java.util.Scanner;
2
3 public class Main {
4     public static void main(String[] args) {
5         Scanner scanner = new Scanner(System.in);
6         int numberOfTests = 5;
7         int[] scores = new int[numberOfTests];
8
9         for (int i = 0; i < numberOfTests; i++) {
10             System.out.print("Enter score for test ");
11             scores[i] = scanner.nextInt();
12         }
13
14         int total = 0;
15         for (int score : scores) {
16             total += score;
17         }
18         double average = (double) total / numberOfTests;
19
20         System.out.printf("The average score is: %.2f\n", average);
21     }
22 }
```

```
Enter score for test 1: 89
Enter score for test 2: 79
Enter score for test 3: 98
Enter score for test 4: 100
Enter score for test 5: 97
The average score is: 92.60
```

```
...Program finished with exit code 0
Press ENTER to exit console.
```



MatrixOperations.j...

```
1- import java.util.Scanner;
2- public class MatrixOperations {
3-     public static void main(String[] args) {
4-         Scanner scanner = new Scanner(System.in);
5-         int[][] matrixA = new int[2][2];
6-         int[][] matrixB = new int[2][2];
7-
8-         boolean running = true;
9-         while (running) {
10-             System.out.println("Menu:");
11-             System.out.println("a. Enter Matrix A");
12-             System.out.println("b. Enter Matrix B");
13-             System.out.println("c. Display A + B");
14-             System.out.println("d. Display A - B");
15-             System.out.println("e. Display A * B");
16-             System.out.println("f. Exit");
17-             System.out.print("Choose an option: ");
18-             String choice = scanner.nextLine().toLowerCase();
19-
20-             switch (choice) {
21-                 case "a":
22-                     matrixA = enterMatrix(scanner, "A");
23-                     break;
24-                 case "b":
25-                     matrixB = enterMatrix(scanner, "B");
26-                     break;
27-                 case "c":
28-                     displayMatrix(addMatrices(matrixA, matrixB), "A + B");
29-                     break;
30-                 case "d":
31-                     displayMatrix(subtractMatrices(matrixA, matrixB), "A - B");
32-                     break;
33-                 case "e":
34-                     displayMatrix(multiplyMatrices(matrixA, matrixB), "A * B");
35-                     break;
36-                 case "f":
37-                     running = false;
38-                     break;
39-                 default:
40-                     System.out.println("Invalid option, please try again.");
41-             }
42-         }
43-
44-         System.out.println("Exiting program.");
45-         scanner.close();
46-     }
47- }
```

Menu:

a. Enter Matrix A  
b. Enter Matrix B  
c. Display A + B  
d. Display A - B  
e. Display A \* B  
f. Exit

Choose an option: a

Enter values for Matrix A:

Element [1][1]: 1  
Element [1][2]: 0  
Element [2][1]: 0  
Element [2][2]: 1

Menu:

a. Enter Matrix A  
b. Enter Matrix B  
c. Display A + B  
d. Display A - B  
e. Display A \* B  
f. Exit

Choose an option: b

Enter values for Matrix B:

Element [1][1]: 0  
Element [1][2]: 1  
Element [2][1]: 1  
Element [2][2]: 0

Menu:

a. Enter Matrix A  
b. Enter Matrix B  
c. Display A + B  
d. Display A - B  
e. Display A \* B  
f. Exit

Choose an option: c

Result of A + B:

1 1  
1 1

Menu:

a. Enter Matrix A  
b. Enter Matrix B  
c. Display A + B  
d. Display A - B  
e. Display A \* B  
f. Exit

Choose an option: f

Exiting program.

...Program finished with exit code 0

Press ENTER to exit console.



```

47
48 public static int[][] enterMatrix(Scanner scanner, String matrixName) {
49     int[][] matrix = new int[2][2];
50     System.out.println("Enter values for Matrix " + matrixName + ":");
51     for (int i = 0; i < 2; i++) {
52         for (int j = 0; j < 2; j++) {
53             System.out.print("Element [" + (i + 1) + "][" + (j + 1) + "]: ");
54             matrix[i][j] = scanner.nextInt();
55         }
56     }
57     scanner.nextLine();
58     return matrix;
59 }
60
61 public static int[][] addMatrices(int[][] a, int[][] b) {
62     int[][] result = new int[2][2];
63     for (int i = 0; i < 2; i++) {
64         for (int j = 0; j < 2; j++) {
65             result[i][j] = a[i][j] + b[i][j];
66         }
67     }
68     return result;
69 }
70
71 public static int[][] subtractMatrices(int[][] a, int[][] b) {
72     int[][] result = new int[2][2];
73     for (int i = 0; i < 2; i++) {
74         for (int j = 0; j < 2; j++) {
75             result[i][j] = a[i][j] - b[i][j];
76         }
77     }
78     return result;
79 }
80
81 public static int[][] multiplyMatrices(int[][] a, int[][] b) {
82     int[][] result = new int[2][2];
83     for (int i = 0; i < 2; i++) {
84         for (int j = 0; j < 2; j++) {
85             result[i][j] = a[i][0] * b[0][j] + a[i][1] * b[1][j];
86         }
87     }
88     return result;
89 }
90
91 public static void displayMatrix(int[][] matrix, String operation) {
92     System.out.println("Result of " + operation + ":");
93     for (int[] row : matrix) {
94         for (int element : row) {
95             System.out.print(element + " ");
96         }
97         System.out.println();
98     }
99 }
100 }
101

```

```

a. Enter Matrix A
b. Enter Matrix B
c. Display A + B
d. Display A - B
e. Display A * B
f. Exit

```

Choose an option: a

Enter values for Matrix A:

```

Element [1][1]: 1
Element [1][2]: 0
Element [2][1]: 0
Element [2][2]: 1

```

Menu:

```

a. Enter Matrix A
b. Enter Matrix B
c. Display A + B
d. Display A - B
e. Display A * B
f. Exit

```

Choose an option: b

Enter values for Matrix B:

```

Element [1][1]: 0
Element [1][2]: 1
Element [2][1]: 1
Element [2][2]: 0

```

Menu:

```

a. Enter Matrix A
b. Enter Matrix B
c. Display A + B
d. Display A - B
e. Display A * B
f. Exit

```

Choose an option: c

Result of A + B:

```

1 1
1 1

```

Menu:

```

a. Enter Matrix A
b. Enter Matrix B
c. Display A + B
d. Display A - B
e. Display A * B
f. Exit

```

Choose an option: f

Exiting program.

```

...Program finished with exit code 0
Press ENTER to exit console.

```