

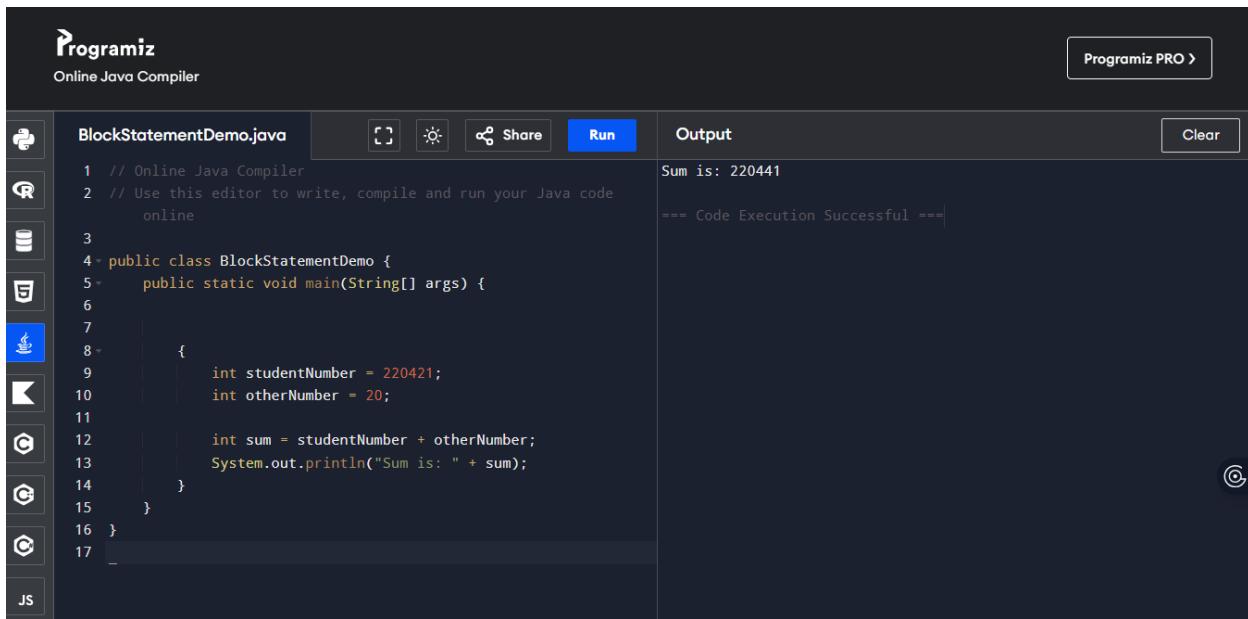
Mitchelle Mutuku
Adm No: 220421

1. BLOCK STATEMENT

Source Code

```
public class BlockStatementDemo {  
    public static void main(String[] args) {  
  
        {  
            int studentNumber = 220421;  
            int otherNumber = 20;  
  
            int sum = studentNumber + otherNumber;  
            System.out.println("Sum is: " + sum);  
        }  
    }  
}
```

Output Screenshot



The screenshot shows the Programiz Online Java Compiler interface. The code editor contains the provided Java code. The output window displays the result of running the program, which is "Sum is: 220441" followed by a message indicating a successful execution.

```
1 // Online Java Compiler  
2 // Use this editor to write, compile and run your Java code  
3 // online  
4+ public class BlockStatementDemo {  
5+     public static void main(String[] args) {  
6  
7         {  
8             int studentNumber = 220421;  
9             int otherNumber = 20;  
10  
11             int sum = studentNumber + otherNumber;  
12             System.out.println("Sum is: " + sum);  
13         }  
14     }  
15 }  
16  
17 _
```

Output:
Sum is: 220441
--- Code Execution Successful ---

2. IF STATEMENT

Source Code

```
import java.util.Scanner;

public class HeightChecker {

    public static void main(String[] args) {

        Scanner input = new Scanner(System.in);

        System.out.print("Enter your height in feet (e.g. 5.8): ");

        double height = input.nextDouble();

        if (height >= 6.0) {

            System.out.println("Tall");

        } else if (height >= 5.7 && height < 6.0) {

            System.out.println("Average");

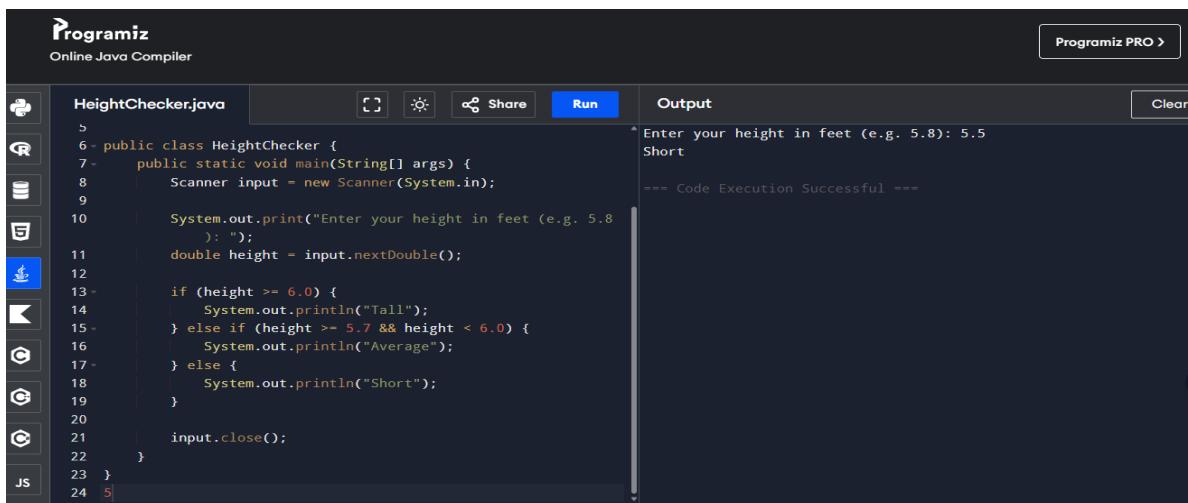
        } else {

            System.out.println("Short");

        }

        input.close();
    }
}
```

Output Screenshot



The screenshot shows the Programiz Online Java Compiler interface. The left pane displays the Java code for HeightChecker.java. The right pane shows the output window where the user enters '5.5' as the height, and the program outputs 'Short'. Below the output, a message indicates 'Code Execution Successful'.

```
HeightChecker.java
6- public class HeightChecker {
7-     public static void main(String[] args) {
8-         Scanner input = new Scanner(System.in);
9-
10-        System.out.print("Enter your height in feet (e.g. 5.8):
11-        ");
12-        double height = input.nextDouble();
13-
14-        if (height >= 6.0) {
15-            System.out.println("Tall");
16-        } else if (height >= 5.7 && height < 6.0) {
17-            System.out.println("Average");
18-        } else {
19-            System.out.println("Short");
20-        }
21-
22-        input.close();
23-    }
24- }
```

```
Enter your height in feet (e.g. 5.8): 5.5
Short
*** Code Execution Successful ***
```

3. SWITCH STATEMENT

Source Code

```
import java.util.Scanner;

public class DayOfWeek {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);

        System.out.print("Enter a number (1-7): ");
        int day = input.nextInt();

        switch (day) {
            case 1:
                System.out.println("Monday");
                break;
            case 2:
                System.out.println("Tuesday");
                break;
            case 3:
                System.out.println("Wednesday");
                break;
            case 4:
                System.out.println("Thursday");
                break;
            case 5:
                System.out.println("Friday");
                break;
        }
    }
}
```

case 6:

```
System.out.println("Saturday");
```

```
break;
```

case 7:

```
System.out.println("Sunday");
```

```
break;
```

default:

```
System.out.println("Invalid input");
```

```
}
```

```
}
```

Output Screenshot

The screenshot shows the Programiz Online Java Compiler interface. The code editor contains the following Java code:

```
DayOfWeek.java
20     case 3:
21         System.out.println("Wednesday");
22         break;
23     case 4:
24         System.out.println("Thursday");
25         break;
26     case 5:
27         System.out.println("Friday");
28         break;
29     case 6:
30         System.out.println("Saturday");
31         break;
32     case 7:
33         System.out.println("Sunday");
34         break;
35     default:
36         System.out.println("Invalid input");
37     }
38
39     input.close();
```

The output window shows the following interaction:

```
* Enter a number (1?7): 3
Wednesday
--- Code Execution Successful ---
```

4. WHILE LOOP

Source Code

```
import java.util.Scanner;

public class WhileLoopDemo {

    public static void main(String[] args) {

        Scanner input = new Scanner(System.in);

        System.out.print("Enter a number: ");

        int number = input.nextInt();

        int counter = 1;

        while (counter <= number) {

            System.out.println(counter);

            counter++;

        }

        input.close();
    }
}
```

Output Screenshot

The screenshot shows the Programiz Online Java Compiler interface. The code editor on the left contains the provided Java code for a 'While Loop Demo'. The 'Run' button is highlighted in blue. The output window on the right displays the execution results. The user enters '4' as the number, and the program prints integers from 1 to 4, followed by a success message.

```
Programiz
Online Java Compiler
Programiz PRO
```

Java	Copy	Run	Output
3	4	5	Enter a number: 4
4	5	6	1
5	6	7	2
6	7	8	3
7	8	9	4
8	9	10	==== Code Execution Successful ===
9	10	11	
10	11	12	
11	12	13	
12	13	14	
13	14	15	
14	15	16	
15	16	17	
16	17	18	
17	18	19	
18	19	20	
19	20	21	
20	21	22	
21	22	23	
22	23		
23			

5. DO...WHILE LOOP

Source Code

```
import java.util.Scanner;

public class LoginSystem {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);

        int correctStudentNumber = 220421
        String correctPassword = "java123";

        int studentNumber;
        String password;

        do {
            System.out.print("Enter student number: ");
            studentNumber = input.nextInt();

            System.out.print("Enter password: ");
            password = input.next();

        } while (studentNumber != correctStudentNumber || !password.equals(correctPassword));

        System.out.println("Access Granted");

        input.close();
    }
}
```

Output Screenshot

The screenshot shows the Programiz Online Java Compiler interface. On the left, there's a sidebar with icons for various languages: Python, C, C++, C#, Go, Java, JavaScript, and PHP. The main area has tabs for 'LoginSystem.java' (selected), 'Run', and 'Output'. The code in 'LoginSystem.java' is a Java program that prompts for student number and password, comparing them against constants. The 'Output' tab shows the execution results: entering student number 220421 and password java123, followed by 'Access Granted' and a success message.

```
1 // Use this editor to write, compile and run your Java code
2 online
3
4 import java.util.Scanner;
5
6 public class LoginSystem {
7     public static void main(String[] args) {
8         Scanner input = new Scanner(System.in);
9
10        int correctStudentNumber = 220421;
11        String correctPassword = "java123";
12
13        int studentNumber;
14        String password;
15
16        do {
17            System.out.print("Enter student number: ");
18            studentNumber = input.nextInt();
19
20            System.out.print("Enter password: ");
21            password = input.next();
```

```
Enter student number: 220421
Enter password: java123
Access Granted

== Code Execution Successful ==
```

6. FOR LOOP

Source Code

import java.util.Scanner;

```
public class ForLoopPattern {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);

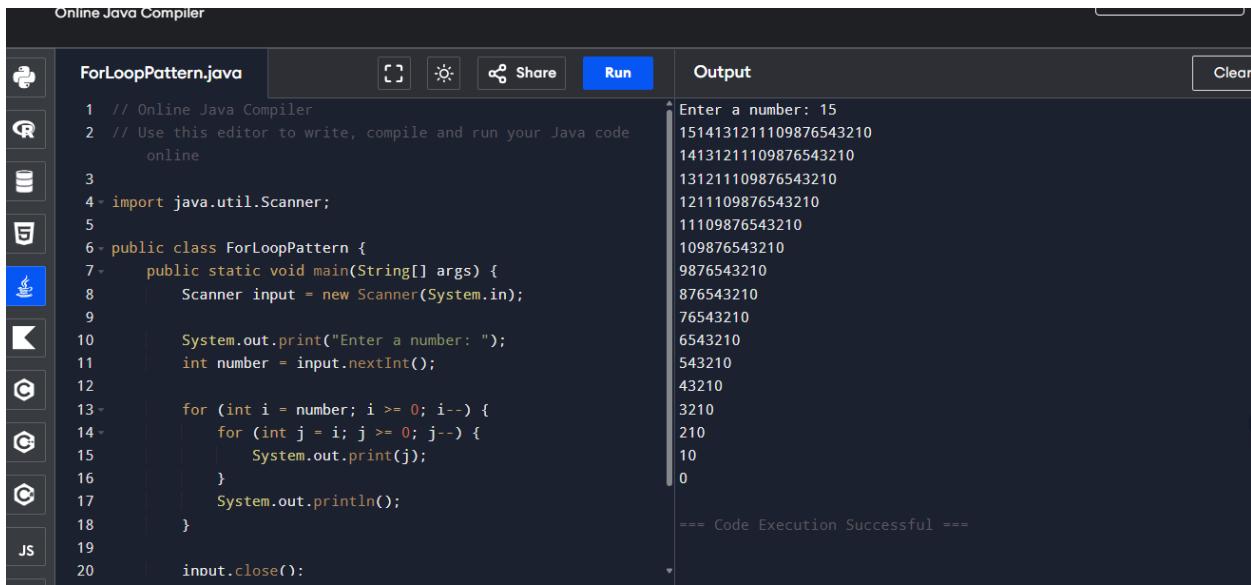
        System.out.print("Enter a number: ");
        int number = input.nextInt();

        for (int i = number; i >= 0; i--) {
            for (int j = i; j >= 0; j--) {
                System.out.print(j);
            }
            System.out.println();
        }
    }
}
```

```
}
```

```
    input.close();  
}  
}
```

Output Screenshot



The screenshot shows an online Java compiler interface. The code editor contains a Java file named `ForLoopPattern.java` with the following content:

```
1 // Online Java Compiler
2 // Use this editor to write, compile and run your Java code
3
4+ import java.util.Scanner;
5
6- public class ForLoopPattern {
7-     public static void main(String[] args) {
8         Scanner input = new Scanner(System.in);
9
10        System.out.print("Enter a number: ");
11        int number = input.nextInt();
12
13        for (int i = number; i >= 0; i--) {
14            for (int j = i; j >= 0; j--) {
15                System.out.print(j);
16            }
17            System.out.println();
18        }
19        inout.close();
20    }
}
```

The output window shows the execution results. It prompts the user to enter a number (15) and then prints a descending triangle of numbers from 15 down to 0.

```
Enter a number: 15
1514131211109876543210
14131211109876543210
131211109876543210
1211109876543210
11109876543210
109876543210
9876543210
876543210
76543210
6543210
543210
43210
3210
210
10
0
--- Code Execution Successful ---
```