

OBJECT ORIENTED PROGRAMMING (OOPS)

ASSIGNMENT - 1

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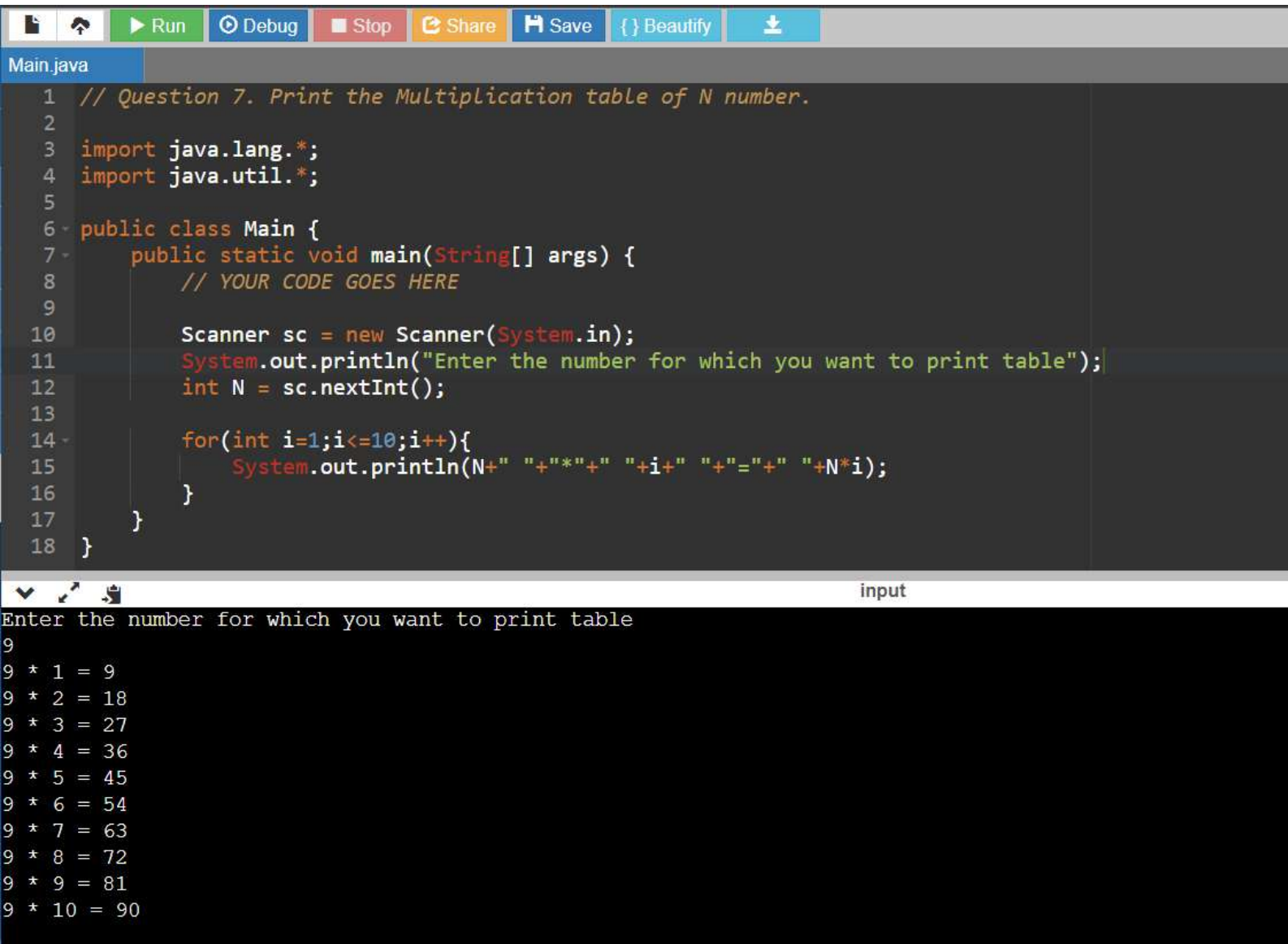
UNIVERSITY ROLL NO - GLA2022-13060018

SECTION - P

CLASS ROLL NO - 33

YEAR - 2ND YEAR

Q. 7 Write a program in Java to print Multiplication table of N number.



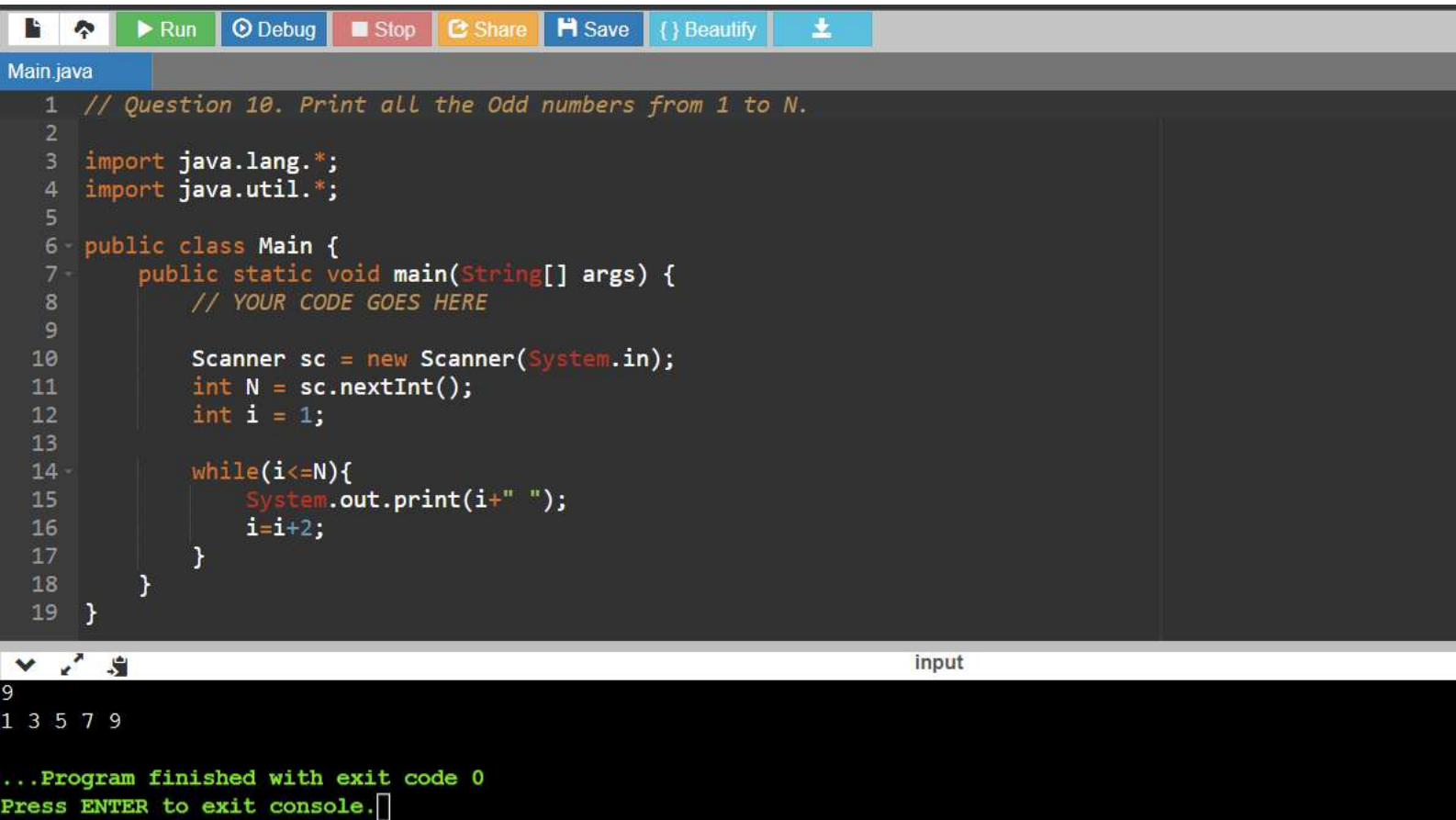
The screenshot shows a Java IDE with a toolbar at the top containing icons for Run, Debug, Stop, Share, Save, Beautify, and a download icon. The file name 'Main.java' is visible in the top left. The code in the editor is as follows:

```
1 // Question 7. Print the Multiplication table of N number.
2
3 import java.lang.*;
4 import java.util.*;
5
6 public class Main {
7     public static void main(String[] args) {
8         // YOUR CODE GOES HERE
9
10        Scanner sc = new Scanner(System.in);
11        System.out.println("Enter the number for which you want to print table");
12        int N = sc.nextInt();
13
14        for(int i=1;i<=10;i++){
15            System.out.println(N+" "+"*"+" "+" "+i+" "+"="+" "+" "+N*i);
16        }
17    }
18 }
```

Below the code editor, there is an input field labeled 'input' containing the text 'Enter the number for which you want to print table'. The output of the program is displayed below the input field:

```
9
9 * 1 = 9
9 * 2 = 18
9 * 3 = 27
9 * 4 = 36
9 * 5 = 45
9 * 6 = 54
9 * 7 = 63
9 * 8 = 72
9 * 9 = 81
9 * 10 = 90
```

Q. 10 Write a program in Java to print all Odd numbers from 1 to N.

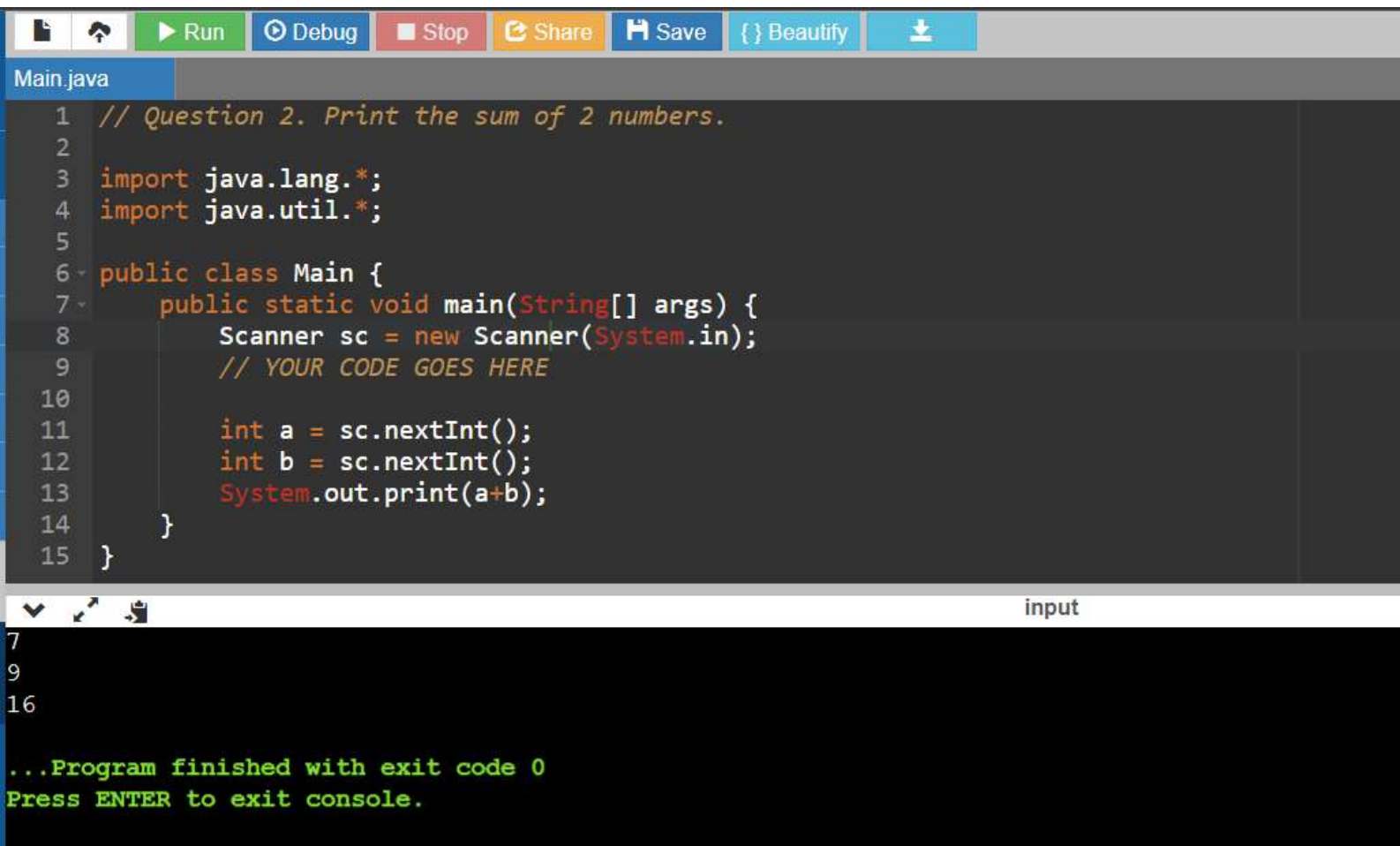


The screenshot shows a Java IDE with a toolbar at the top containing icons for file operations, running, debugging, stopping, sharing, saving, and beautifying code. The main editor window displays a Java program named 'Main.java'. The code is as follows:

```
1 // Question 10. Print all the Odd numbers from 1 to N.
2
3 import java.lang.*;
4 import java.util.*;
5
6 public class Main {
7     public static void main(String[] args) {
8         // YOUR CODE GOES HERE
9
10        Scanner sc = new Scanner(System.in);
11        int N = sc.nextInt();
12        int i = 1;
13
14        while(i<=N){
15            System.out.print(i+" ");
16            i=i+2;
17        }
18    }
19 }
```

Below the editor, there is a console window. It shows the input '9' and the output '1 3 5 7 9'. At the bottom, it states '...Program finished with exit code 0' and 'Press ENTER to exit console.'

Q. 2 Write a program in Java to print sum of 2 numbers.



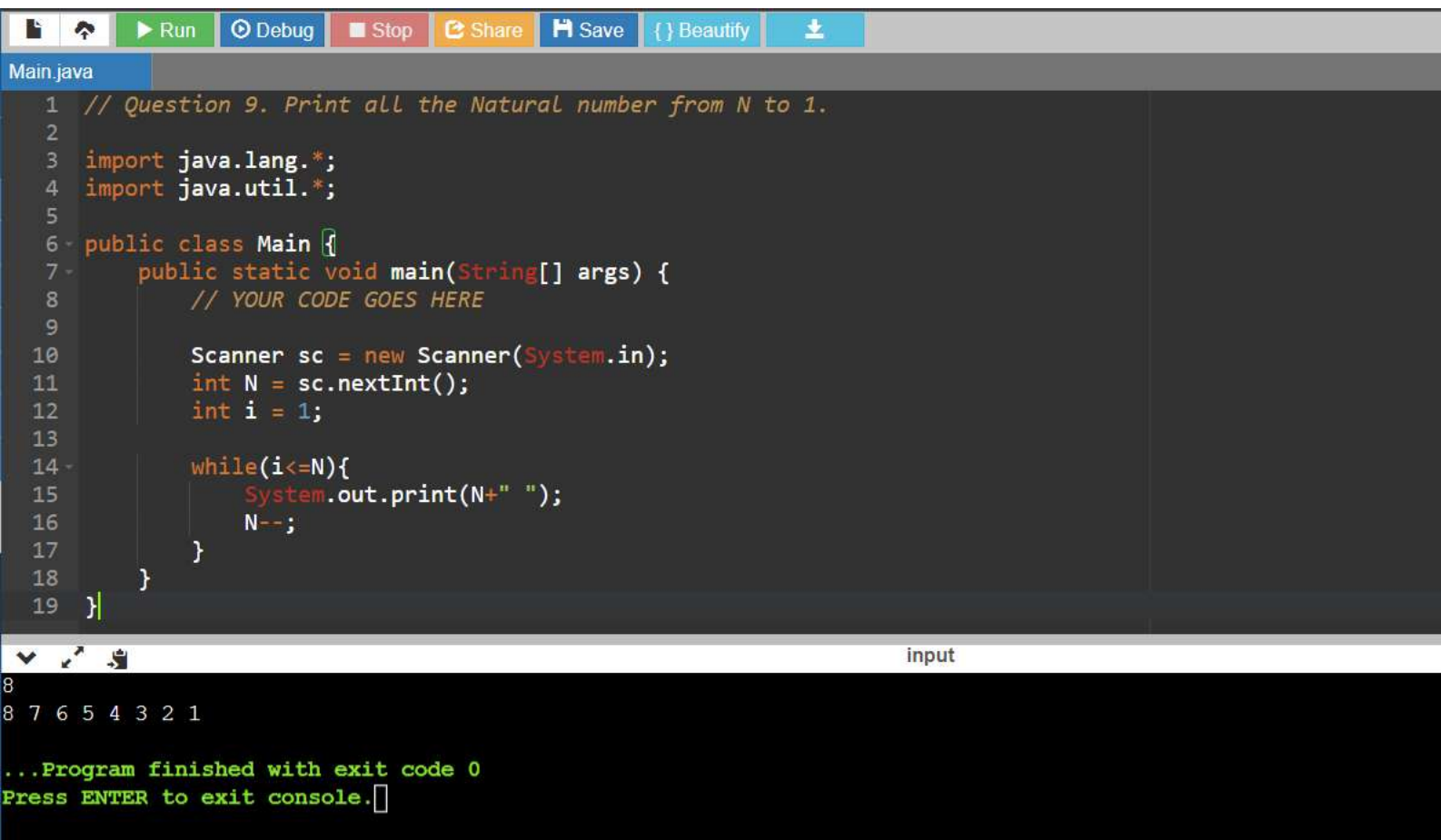
The screenshot shows an IDE with a toolbar at the top containing icons for Run, Debug, Stop, Share, Save, Beautify, and a download icon. Below the toolbar, the file name 'Main.java' is displayed. The code editor contains the following Java code:

```
1 // Question 2. Print the sum of 2 numbers.
2
3 import java.lang.*;
4 import java.util.*;
5
6 public class Main {
7     public static void main(String[] args) {
8         Scanner sc = new Scanner(System.in);
9         // YOUR CODE GOES HERE
10
11         int a = sc.nextInt();
12         int b = sc.nextInt();
13         System.out.print(a+b);
14     }
15 }
```

At the bottom of the IDE, there is a console window with the text 'input' and the output of the program:

```
7
9
16
...Program finished with exit code 0
Press ENTER to exit console.
```

Q. 9 Write a program in Java to print all Natural numbers from N to 1.



The screenshot shows a Java IDE with a toolbar at the top containing icons for file operations, running, debugging, stopping, sharing, saving, and beautifying code. The main editor window displays a Java program for 'Main.java'. The code uses a Scanner to read an integer N from the user and a while loop to print numbers from N down to 1. The output window at the bottom shows the input '8' and the resulting output '8 7 6 5 4 3 2 1'. The program concludes with a message indicating it finished with exit code 0 and prompts the user to press ENTER to exit the console.

```
1 // Question 9. Print all the Natural number from N to 1.
2
3 import java.lang.*;
4 import java.util.*;
5
6 public class Main {
7     public static void main(String[] args) {
8         // YOUR CODE GOES HERE
9
10        Scanner sc = new Scanner(System.in);
11        int N = sc.nextInt();
12        int i = 1;
13
14        while(i<=N){
15            System.out.print(N+" ");
16            N--;
17        }
18    }
19 }
```

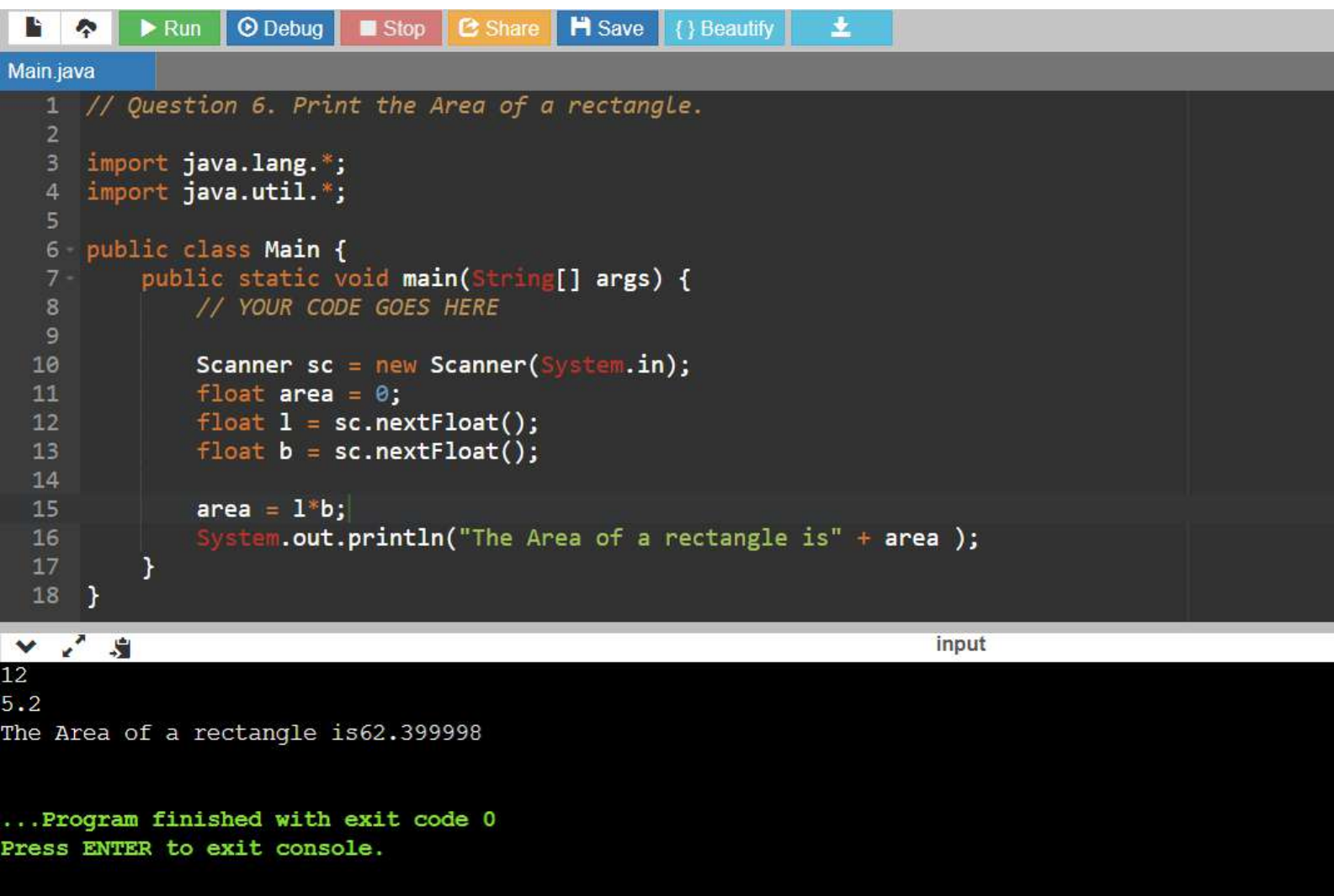
input

8

8 7 6 5 4 3 2 1

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

### Q. 6 Write a program in Java to print Area of a Rectangle.



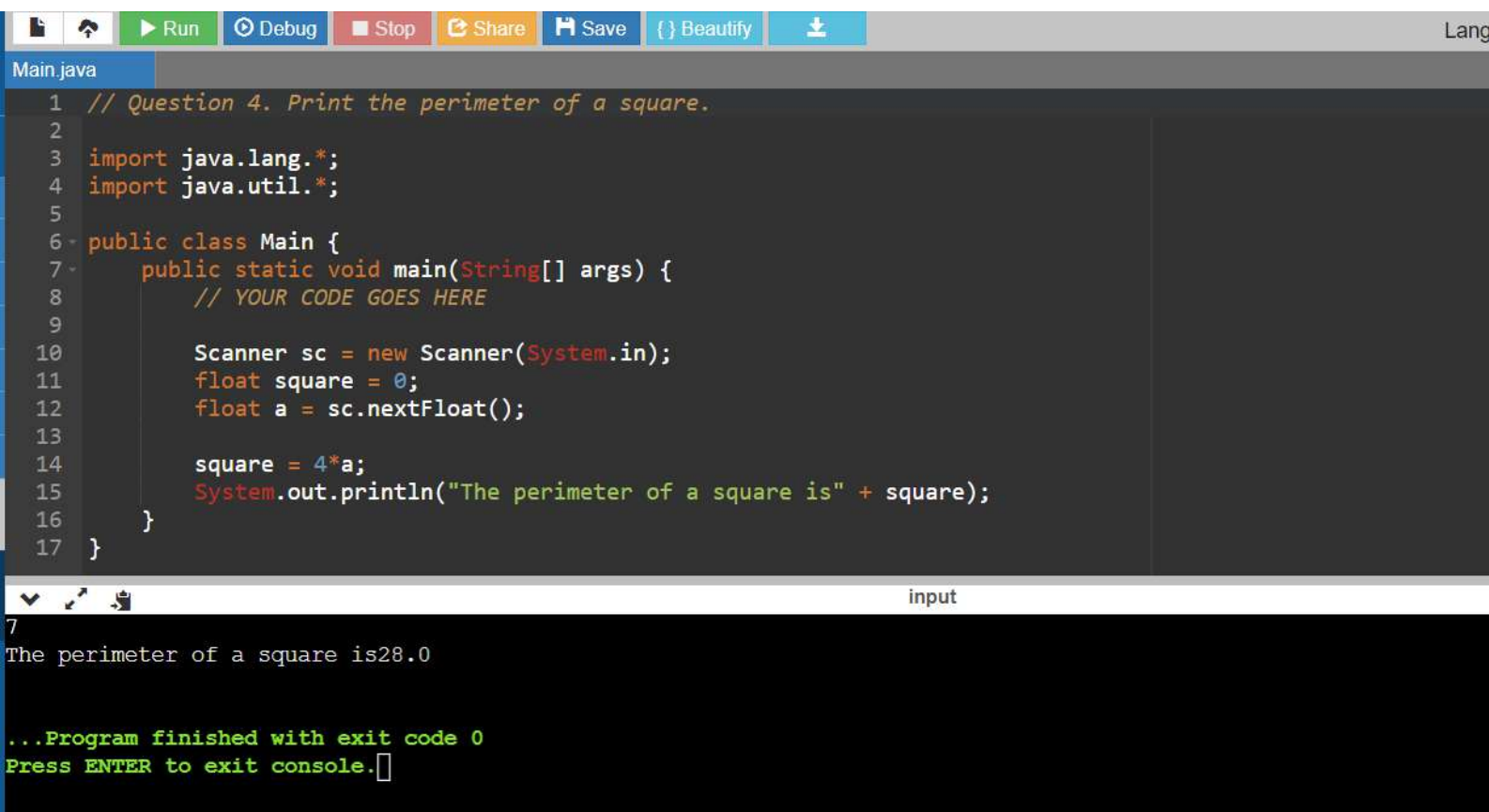
```
1 // Question 6. Print the Area of a rectangle.
2
3 import java.lang.*;
4 import java.util.*;
5
6 public class Main {
7     public static void main(String[] args) {
8         // YOUR CODE GOES HERE
9
10        Scanner sc = new Scanner(System.in);
11        float area = 0;
12        float l = sc.nextFloat();
13        float b = sc.nextFloat();
14
15        area = l*b;
16        System.out.println("The Area of a rectangle is" + area );
17    }
18 }
```

input

12  
5.2  
The Area of a rectangle is62.399998

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

#### Q. 4 Write a program in Java to print Perimeter of a square.



The screenshot shows an IDE with a toolbar at the top containing icons for Run, Debug, Stop, Share, Save, Beautify, and a download icon. The file name 'Main.java' is visible in the top left. The code editor contains the following Java code:

```
1 // Question 4. Print the perimeter of a square.
2
3 import java.lang.*;
4 import java.util.*;
5
6 public class Main {
7     public static void main(String[] args) {
8         // YOUR CODE GOES HERE
9
10        Scanner sc = new Scanner(System.in);
11        float square = 0;
12        float a = sc.nextFloat();
13
14        square = 4*a;
15        System.out.println("The perimeter of a square is" + square);
16    }
17 }
```

Below the code editor, there is an 'input' field and a console output area. The console shows the output of the program:

```
7
The perimeter of a square is28.0

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

### Q. 3 Write a program in Java to print the following staircase pattern -

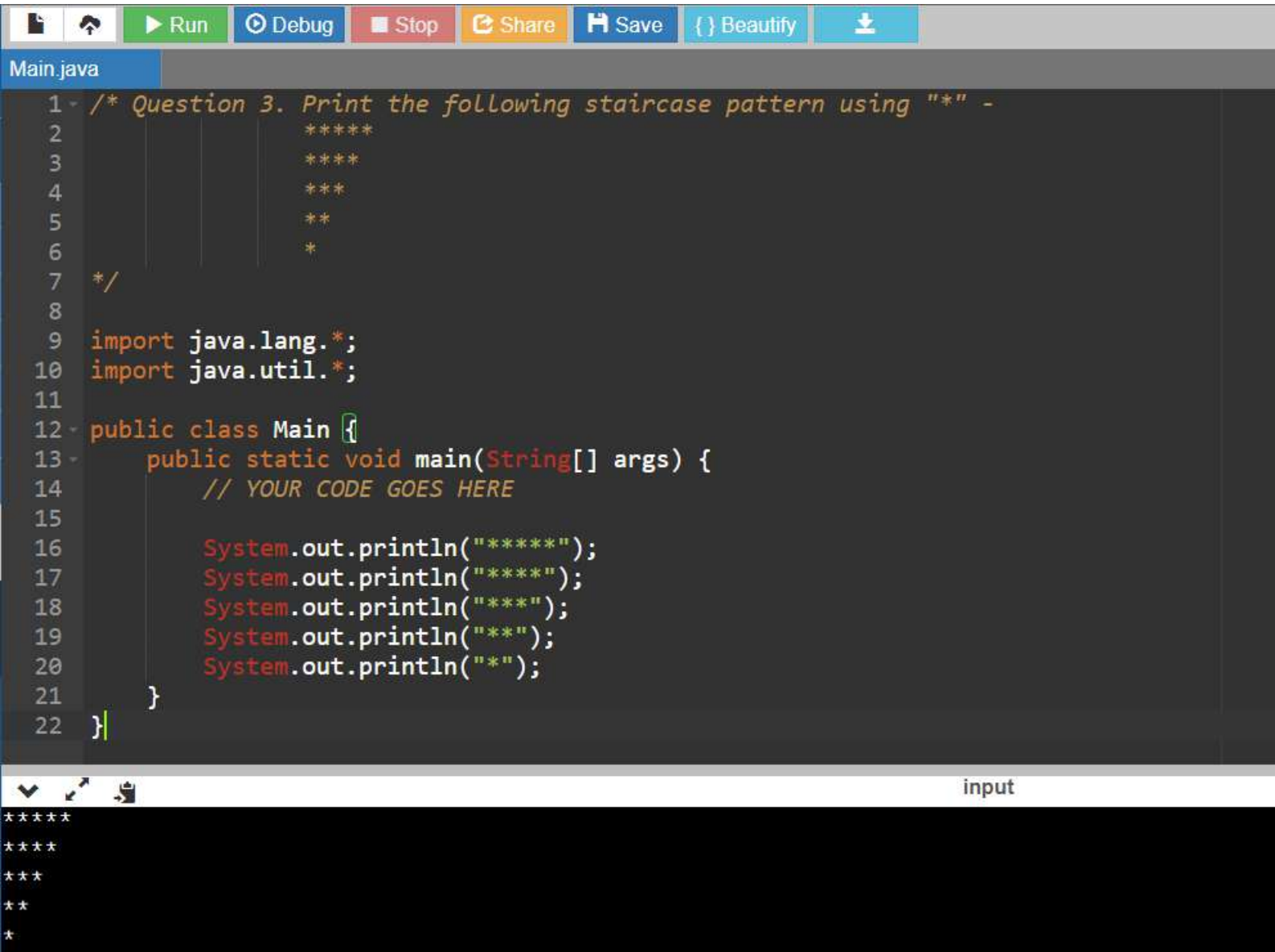
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The screenshot shows a Java IDE with a toolbar at the top containing icons for file operations, running, debugging, stopping, sharing, saving, beautifying, and downloading. Below the toolbar is a tab labeled 'Main.java'. The main editor area contains the following code:


```
1 - /* Question 3. Print the following staircase pattern using "*" -
2         *****
3         *****
4         ***
5         **
6         *
7     */
8
9     import java.lang.*;
10    import java.util.*;
11
12    public class Main {
13        public static void main(String[] args) {
14            // YOUR CODE GOES HERE
15
16            System.out.println("*****");
17            System.out.println("*****");
18            System.out.println("***");
19            System.out.println("**");
20            System.out.println("*");
21        }
22    }
```

At the bottom of the IDE, there is a status bar with a 'input' label. Below the status bar, the output of the program is displayed as a staircase pattern of asterisks:

```
*****
*****
***
**
*
```



Q. 1 Write a program in Java to print "Hello World!" program.

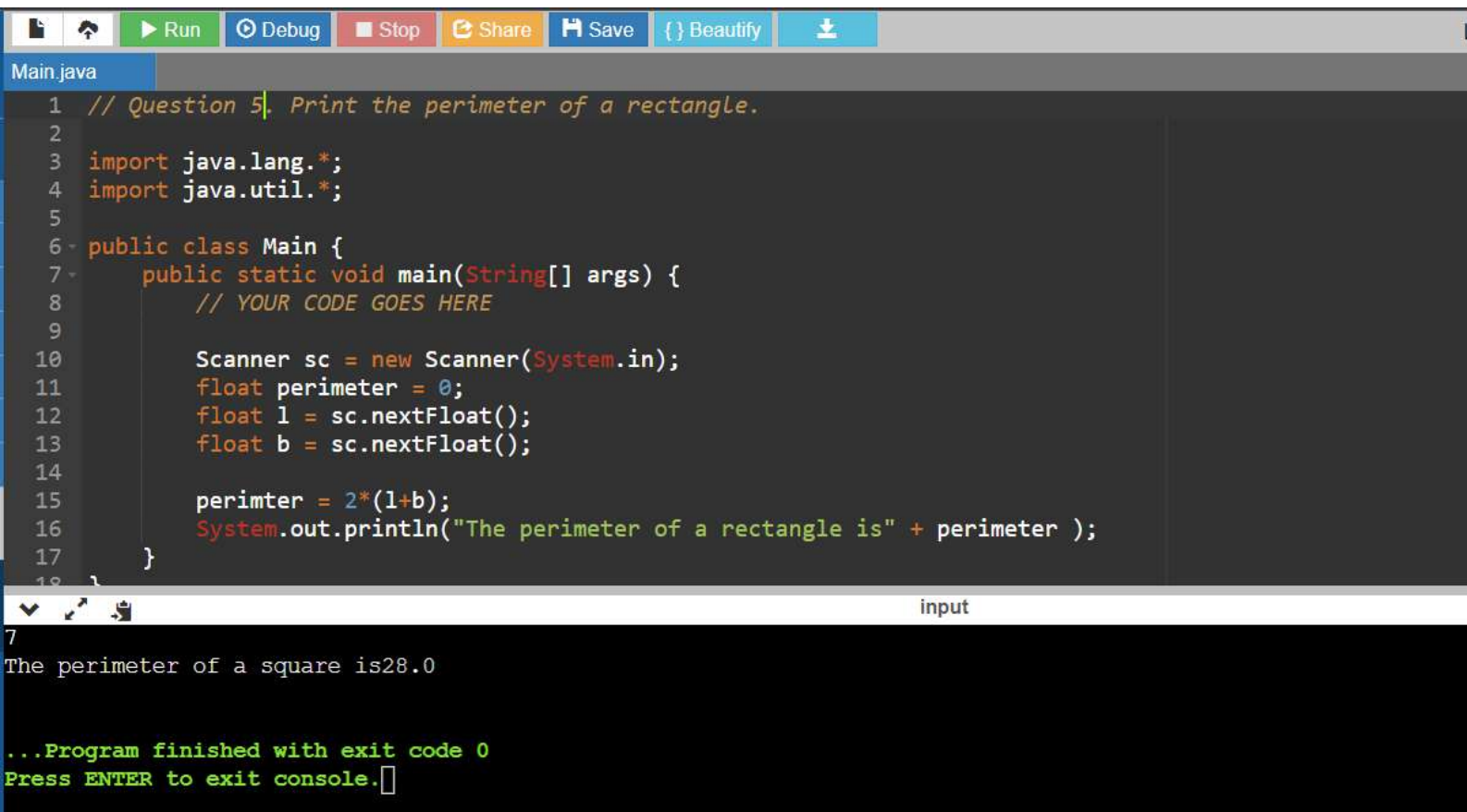


The screenshot shows an IDE interface with a toolbar at the top containing icons for file operations and buttons for Run, Debug, Stop, Share, Save, Beautify, and Download. Below the toolbar, the file name 'Main.java' is displayed. The code editor contains the following Java code:

```
1 // Question 1. Print the "Hello World!" Program.
2
3 import java.lang.*;
4 import java.util.*;
5
6 public class Main {
7     public static void main(String[] args) {
8         // YOUR CODE GOES HERE
9
10        System.out.print("Hello World !");
11    }
12 }
```

At the bottom, the console output shows 'Hello World !' followed by the message '...Program finished with exit code 0' and 'Press ENTER to exit console.' with a cursor.

Q. 5 Write a program in Java to print the Perimeter of a rectangle.



The screenshot shows an IDE window titled 'Main.java' with a toolbar containing 'Run', 'Debug', 'Stop', 'Share', 'Save', 'Beautify', and a download icon. The code in the editor is as follows:

```
1 // Question 5. Print the perimeter of a rectangle.
2
3 import java.lang.*;
4 import java.util.*;
5
6 public class Main {
7     public static void main(String[] args) {
8         // YOUR CODE GOES HERE
9
10        Scanner sc = new Scanner(System.in);
11        float perimeter = 0;
12        float l = sc.nextFloat();
13        float b = sc.nextFloat();
14
15        perimter = 2*(l+b);
16        System.out.println("The perimeter of a rectangle is" + perimeter );
17    }
18 }
```

Below the code editor is an 'input' field. The console output shows the program's execution:

```
7
The perimeter of a square is28.0

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

Q. 8 Write a program in Java to print all Natural numbers from 1 to N.

Run Debug Stop Share Save Beautify

Main.java

```
1 // Question 8. Print all the Natural number from 1 to N.
2
3 import java.lang.*;
4 import java.util.*;
5
6 public class Main {
7     public static void main(String[] args) {
8         // YOUR CODE GOES HERE
9
10        Scanner sc = new Scanner(System.in);
11        int N = sc.nextInt();
12        int i = 1;
13
14        while(i<=N){
15            System.out.print(i+" ");
16            i++;
17        }
18    }
19 }
```

input

10  
1 2 3 4 5 6 7 8 9 10

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