A graphics tool allows users to create complex shapes for designs.

One of the patterns you need to implement is a diamond shape using stars (*).

The user provides the number of rows in the top half of the diamond.

Task: Write a Java program that takes an integer n and prints a diamond pattern.

Sample Input 1:

Input: n = 3

Sample Output 1:

Output:

```
*

***

*****

***

*
```

Sample Input 2:

Input: n = 4

Sample Output 2:

Output:

```
   *

  ***

 *****

*******

 *****

  ***

   *
```

Coding:

```java
import java.io.*;

import java.util.*;


public class gfg1 {

    public static void main(String[] args) {

        Scanner s = new Scanner(System.in);

        int num = s.nextInt();

        int m = 1;

        int n;


        // First triangle

        do {

            n = 1;

            // Print spaces

            while (n <= num - m) {

                System.out.print(" ");

                n++;

            }

            // Print stars

            n = 1;

            while (n <= m * 2 - 1) {

                System.out.print("*");

                n++;

            }
```

```java
            System.out.println();

        } while (++m <= num);


        // Second triangle
        m = num - 1;
        do {
            n = 1;
            // Print spaces
            while (n <= num - m) {
                System.out.print(" ");
                n++;
            }
            // Print stars
            n = 1;
            while (n <= m * 2 - 1) {
                System.out.print("*");
                n++;
            }
            System.out.println();
        } while (--m > 0);
    }
}
```

Output:

```
E:\javacode.java\8-10-2024>javac gfg1.java

E:\javacode.java\8-10-2024>java gfg1
4
    *
   ***
  *****
 *******
  *****
   ***
    *
```