//Design
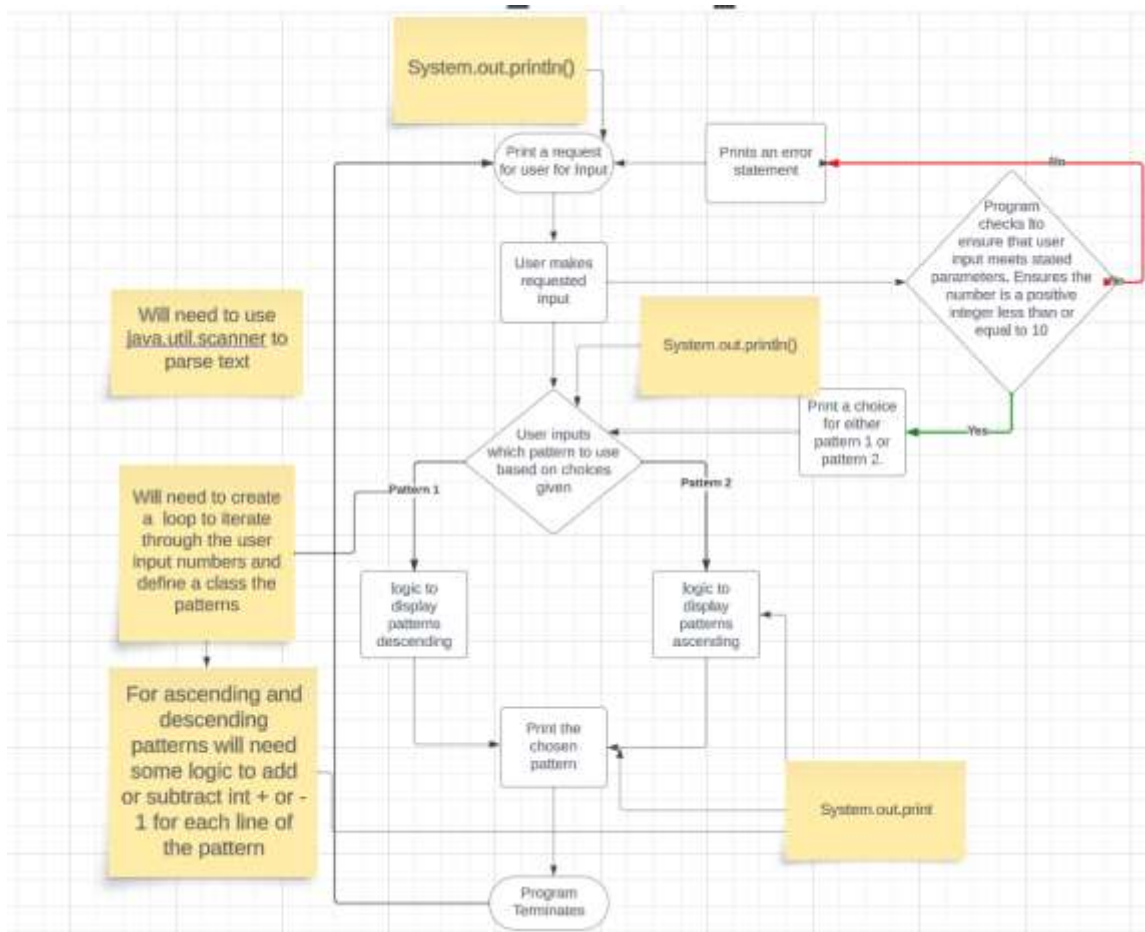

//Code

```java
package Asterisk;


import java.util.Scanner; //Using util scanner to parse text


//Pattern 1 Outer loop to iterate the pattern until the user input reached
public class AsteriskPattern {
    public static void pattern1(int maxAsterisks) {
        for (int i = 1; i <= maxAsterisks; i++) {
            for (int j = 0; j < i; j++) {
                System.out.print("*");
```

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

        }

    }
//Pattern 2 - Inner loop to do same as outer loop in opposite order achieved
by i--

    public static void pattern2(int maxAsterisks) {

        for (int i = maxAsterisks; i > 0; i--) {

            for (int j = 0; j < i; j++) {

                System.out.print("*");

            }

            System.out.println();

        }

    }


    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in); // Declare the object and
initialize with

        // predefined standard input object


        System.out.print("Enter the maximum number of asterisks to display:
");

        int maxAsterisks = scanner.nextInt(); // defines int variable

      //Uses nextInt() method to read integer value and initialize


        if (maxAsterisks <= 0) {

            System.out.println("Please enter a positive integer for the
maximum number of asterisks.");

            return;

        }
```

```java
        System.out.println("Choose an output pattern:");

        System.out.println("1. Pattern 1");

        System.out.println("2. Pattern 2");


        System.out.print("Enter 1 or 2: ");

        int choice = scanner.nextInt(); // defines int variable
     //Uses nextInt() method to read integer value and initialize



        if (choice == 1) {

            pattern1(maxAsterisks);

        } else if (choice == 2) {

            pattern2(maxAsterisks);

        } else {

            System.out.println("Invalid choice. Please enter 1 or 2.");

        }

        scanner.closed()//received an error from IDE so closed scanner

    }//end main

}//end class AsteriskPattern
```

//output from command line

```
Command Prompt

C:\Users\rdcox\Documents\JAVA>javac AsteriskPattern.java

C:\Users\rdcox\Documents\JAVA>java AsteriskPattern.java
Enter the maximum number of asterisks to display: 10
Choose an output pattern:
1. Pattern 1
2. Pattern 2
Enter 1 or 2: 1
*
**
***
****
*****
******
*******
********
*********
**********

C:\Users\rdcox\Documents\JAVA>java AsteriskPattern.java
Enter the maximum number of asterisks to display: 10
Choose an output pattern:
1. Pattern 1
2. Pattern 2
Enter 1 or 2: 2
**********
*********
********
*******
******
*****
****
***
**
*

C:\Users\rdcox\Documents\JAVA>
```

//ouput from IDE

File   Edit   Source   Refactor   Navigate   Search   Project   Run   Window   Help

Package Explorer ×

HelloWorld
> JRE System Library [JavaSE-17]
> src
  > Asterisk
    > AsteriskPattern.java
      > AsteriskPattern
          main(String[]) : void
          pattern1(int) : void
          pattern2(int) : void
  > BMICalculator
    > BMICalculator.java
  > JavaAssignment_1
    > java1.java
  > mypack
    > HelloWorld.java
  > module-info.java

AsteriskPattern.java ×

```java
31        //Uses nextInt() method to read integer value and initialize
32
33        if (maxAsterisks <= 0) {
34            System.out.println("Please enter a positive integer
35            return;
36        }
37
38        System.out.println("Choose an output pattern:");
39        System.out.println("1. Pattern 1");
40        System.out.println("2. Pattern 2");
41
42        System.out.print("Enter 1 or 2: ");
43        int choice = scanner.nextInt(); // defines int variable
44    //Uses nextInt() method to read integer value and initialize
45
46
47        if (choice == 1) {
48            pattern1(maxAsterisks);
49        } else if (choice == 2) {
50            pattern2(maxAsterisks);
51        } else {
52            System.out.println("Invalid choice. Please enter 1 o
53        }
54        scanner.close(); //closed scanner in this version based
55    }//end main
56 }//end class AsteriskPattern
```

Task List ×

Find   ▶ All ▶ Act...

Outline ×

  Asterisk
  > AsteriskPattern
      pattern1(int) : void
      pattern2(int) : void
      main(String[]) : voi

Problems   @ Javadoc   Declaration   Console ×   Coverage

<terminated> AsteriskPattern [Java Application] C:\Users\rdcox\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x
```
Enter the maximum number of asterisks to display: 10
Choose an output pattern:
1. Pattern 1
2. Pattern 2
Enter 1 or 2: 1

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