# Rajalakshmi Engineering College

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## 2024_28_III_OOPS Using Java Lab

## 2028_REC_OOPS using Java_Week 2_Q6

Attempt : 1
Total Mark : 10
Marks Obtained : 10

## Section 1 : Coding

1.   Problem Statement

Maya, a student in an arts and crafts class, wants to create a pattern using stars (*) in a specific format. She plans to use a program to help her construct the pattern.

Write a program that takes an integer as input and constructs the following pattern using nested for loops.

Input: 5

Output:

*

* *

```
* * *

* * * *

* * * * *

* * * *

* * *

* *

*
```

### Input Format

The input consists of a number (integer) representing the number of rows.

### Output Format

The output displays the required pattern.

Refer to the sample output for the formatting specifications.

### Sample Test Case

```
Input: 5
Output: *
* *
* * *
* * * *
* * * * *
* * * *
* * *
* *
*
```

### Answer

```java
// You are using Java
import java.util.Scanner;
class StarPattern {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
```

```java
        // Read number of rows
        int rows = scanner.nextInt();

        // Upper half of the pattern
        for (int i = 1; i <= rows; i++) {
            for (int j = 1; j <= i; j++) {
                System.out.println("* ");
            }
        }

        // Lower half of the pattern
        for (int i = rows - 1; i >= 1; i--) {
            for (int j = 1; j <= i; j++) {
                System.out.println("* ");
            }
        }

        scanner.close();
    }
}
```

*Status :* Correct                                          *Marks : 10/10*