

# Rajalakshmi Engineering College

Name: janane jaipratha

Email: 241501072@rajalakshmi.edu.in

Roll no: 241501072

Phone: 7548851756

Branch: REC

Department: AI & ML - Section 2

Batch: 2028

Degree: B.E - AI & ML

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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***

```
import java.util.*;  
public class Main {  
    public static void main(String[] args) {  
        Scanner sc = new Scanner(System.in);  
        int rows = sc.nextInt();
```

```
for (int i = 1; i <= rows; i++) {  
    for (int j = 1; j <= i; j++) {  
        System.out.print("*");  
        if (j < i) System.out.print(" ");  
    }  
    System.out.println();  
}  
for (int i = rows - 1; i >= 1; i--) {  
    for (int j = 1; j <= i; j++) {  
        System.out.print("*");  
        if (j < i) System.out.print(" ");  
    }  
    System.out.println();  
}  
}
```

Status : Correct

Marks : 10/10