

# Rajalakshmi Engineering College

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## 2024\_28\_III\_OOPS Using Java Lab

### 2028\_REC\_OOPS using Java\_Week 1\_Q6

Attempt : 1  
Total Mark : 10  
Marks Obtained : 10

#### Section 1 : Coding

##### 1. Problem Statement

Joey is learning about bitwise operations and is working on a project that involves extracting specific bits from integers. He needs to write a program that takes an integer and the number of bits N as input and outputs the value of the lowest N bits of the integer.

Help Joey in his project to understand and visualize how bitwise operations work in practical scenarios.

##### ***Input Format***

The first line of input consists of an integer X, representing the given integer.

The second line consists of an integer N, representing the number of bits to extract.

### **Output Format**

The output displays "Result: " followed by an integer representing the value of the lowest N bits of the given integer.

Refer to the sample output for formatting specifications.

### **Sample Test Case**

Input: 85

2

Output: Result: 1

### **Answer**

```
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        int X = scanner.nextInt();
        int N = scanner.nextInt();

        if (X < 1 || X > 1000000 || N < 1 || N > 20) {
            System.out.println("Invalid input.");
            return;
        }

        int mask = (1 << N) - 1;
        int result = X & mask;

        System.out.println("Result: " + result);
    }
}
```

**Status :** Correct

**Marks :** 10/10