

# Rajalakshmi Engineering College

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

### 2028\_REC\_OOPS using Java\_Week 1\_Q1

Attempt : 1  
Total Mark : 10  
Marks Obtained : 10

#### **Section 1 : Coding**

##### **1. Problem Statement**

Gloria is responsible for monitoring the performance of two machines in a factory. She needs to determine which of the two machines is operating closest to the optimal temperature of 100 degrees Celsius using the relational operator.

Assist Gloria in displaying the machine's temperature, which is closer to 100, and the difference from 100.

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

The first line of input consists of an integer N, representing the temperature of the first machine.

The second line consists of an integer M, representing the temperature of the second machine.

### **Output Format**

The output prints "The integer closer to 100 is X with a difference of Y" where X is the temperature of the closer machine and Y is the difference from 100.

Refer to the sample output for formatting specifications.

### **Sample Test Case**

Input: 90  
80

Output: The integer closer to 100 is 90 with a difference of 10

### **Answer**

```
import java.util.Scanner;

class ClosestTo100Checker {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        int a = scanner.nextInt();
        int b = scanner.nextInt();
        int diffA = (a > 100) ? (a - 100) : (100 - a);
        int diffB = (b > 100) ? (b - 100) : (100 - b);
        int closerInt = (diffA < diffB) ? a : b;
        int closerDiff = (diffA < diffB) ? diffA : diffB;
        System.out.println("The integer closer to 100 is " + closerInt + " with a
difference of " + closerDiff);
        scanner.close();
    }
}
```

**Status :** Correct

**Marks :** 10/10