

# Rajalakshmi Engineering College

Name: SK PRATHOSH

Email: 241801211@rajalakshmi.edu.in

Roll no: 241801211

Phone: 7695899138

Branch: REC

Department: AI & DS - Section 3

Batch: 2028

Degree: B.E - AI & DS

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

### 2028\_REC\_OOPS using Java\_Week 3\_Q1

Attempt : 1

Total Mark : 10

Marks Obtained : 10

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

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

Rosh is intrigued by numerical patterns. Today, she stumbled upon a puzzle while working with arrays. She wants to compute the sum of the third-largest and second-smallest elements from a list of integers. She seeks your help to implement a program that solves this for her efficiently.

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

The first line of input is an integer N, representing the size of the array.

The second line of input consists of N space-separated integers, representing the elements of the array.

##### ***Output Format***

The output displays a single integer representing the sum of the third-largest and second-smallest elements in the array.

Refer to the sample output for the formatting specifications.

### **Sample Test Case**

Input: 10  
10 20 30 40 50 60 70 80 90 100  
Output: 100

### **Answer**

```
// You are using Java
import java.util.*;

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();
        int[] arr = new int[n];
        for (int i = 0; i < n; i++) {
            arr[i] = sc.nextInt();
        }

        TreeSet<Integer> set = new TreeSet<>();
        for (int num : arr) {
            set.add(num);
        }

        List<Integer> sorted = new ArrayList<>(set);
        int secondSmallest = sorted.get(1);
        int thirdLargest = sorted.get(sorted.size() - 3);
        System.out.print(secondSmallest + thirdLargest);
        sc.close();
    }
}
```

**Status :** Correct

**Marks :** 10/10