

Rajalakshmi Engineering College

Name: Gayathri Boopathy
Email: 240701141@rajalakshmi.edu.in
Roll no: 240701141
Phone: 9363837860
Branch: REC
Department: CSE - Section 10
Batch: 2028
Degree: B.E - CSE

Scan to verify results



2024_28_III_OOPS Using Java Lab

2028_REC_OOPS using Java_Week 10_Q4

Attempt : 1
Total Mark : 10
Marks Obtained : 10

Section 1 : COD

1. Problem Statement

In a ticket reservation system, you store the available seat numbers in a TreeSet. Users input their desired seat number, and the program checks whether the chosen seat is available.

Using a TreeSet ensures quick and efficient verification of seat availability, ensuring a smooth and organized ticket booking process.

Input Format

The first line of input contains a single integer n , representing the number of available seats.

The second line contains n space-separated integers, representing the available seat numbers.

The third line contains an integer *m*, representing the seat number that needs to be searched.

Output Format

The output displays "[*m*] is present!" if the given seat is available. Otherwise, it displays "[*m*] is not present!"

Refer to the sample output for the formatting specifications.

Sample Test Case

Input: 4

2 4 5 6

5

Output: 5 is present!

Answer

// You are using Java

```
import java.util.Set;
```

```
import java.util.TreeSet;
```

```
import java.util.Scanner;
```

```
class NumberChecker {
```

```
    private Set<Integer> numberSet;
```

```
    public NumberChecker(Set<Integer> numberSet) {
```

```
        this.numberSet = numberSet;
```

```
    }
```

```
    public void addNumbers(int[] numbers) {
```

```
        for (int number : numbers) {
```

```
            numberSet.add(number);
```

```
        }
```

```
    }
```

```
    public String checkNumber(int number) {
```

```
        return numberSet.contains(number) ? number + " is present!" : number + " is not present!";
```

```
    }
```

```
class Main {
```

```
public static void main(String[] args) {
    Scanner scanner = new Scanner(System.in);
    int numberOfElements = scanner.nextInt();
    int[] numbers = new int[numberOfElements];

    for (int i = 0; i < numberOfElements; i++) {
        numbers[i] = scanner.nextInt();
    }

    int elementToCheck = scanner.nextInt();
    scanner.close();

    Set<Integer> numberSet = new TreeSet<>();
    NumberChecker numberChecker = new NumberChecker(numberSet);
    numberChecker.addNumbers(numbers);

    System.out.println(numberChecker.checkNumber(elementToCheck));
}
```

Status : Correct

Marks : 10/10