Rajalakshmi Engineering College

Name: Jai Shuriya J
Email: 240701200@rajalakshmi.edu.in
Roll no: 240701200
Phone: 8754381941
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**