Rajalakshmi Engineering College

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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

```
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***