

# Rajalakshmi Engineering College

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Branch: REC

Department: AI & ML - Section 3

Batch: 2028

Degree: B.E - AI & ML

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

### 2028\_REC\_OOPS using Java\_Week 4\_Q1

Attempt : 1

Total Mark : 10

Marks Obtained : 10

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

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

In a publishing company, editors often need to quickly analyze passages of text to check for punctuation usage. To assist them, you are asked to write a program that counts the number of specific punctuation marks in each passage.

The punctuation marks of interest are:

Commas (,)Periods (.)Question marks (?)

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

The first line of input contains an integer T, representing the number of test cases (passages).

Each of the next T lines contains a single passage of text.

### ***Output Format***

For each test case, print three integers separated by spaces, representing the number of commas, periods, and question marks in the passage.

The first line of output corresponds to the first passage, the second line to the second passage, and so on.

Refer to the sample output for formatting specifications.

### ***Sample Test Case***

Input: 1

Hello, world. How are you?

Output: 1 1 1

### ***Answer***

```
import java.util.*;  
  
class Main {  
    public static void main(String[] args) {  
        Scanner sc = new Scanner(System.in);  
        int T = sc.nextInt();  
        sc.nextLine();  
  
        for (int t = 0; t < T; t++) {  
            String passage = sc.nextLine();  
            int commas = 0, periods = 0, questions = 0;  
  
            for (char ch : passage.toCharArray()) {  
                if (ch == ',') commas++;  
                else if (ch == '.') periods++;  
                else if (ch == '?') questions++;  
            }  
  
            System.out.println(commas + " " + periods + " " + questions);  
        }  
    }  
}
```

**Status : Correct**

**Marks : 10/10**

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

### 2028\_REC\_OOPS using Java\_Week 4\_Q2

Attempt : 1

Total Mark : 10

Marks Obtained : 10

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

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

Anu is developing a tool for a conference registration system. Participants submit keywords related to their fields of interest. The organizer wants to sort these keywords alphabetically to generate tags for session grouping.

Write a program that accepts at least five keywords as input arguments and outputs them in sorted alphabetical order.

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

The first line of input contains an integer n, representing the number of keywords.

The second line of input contains n space-separated keywords (string).

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

The output prints n space separated strings representing the sorted keyword in alphabetical order.

Refer to the sample output for formatting specifications.

### ***Sample Test Case***

Input: 5  
Blockchain Cloud AI Data Cybersecurity

Output: AI Blockchain Cloud Cybersecurity Data

### ***Answer***

```
import java.util.*;  
  
class Main {  
    public static void main(String[] args) {  
        Scanner sc = new Scanner(System.in);  
        int n = sc.nextInt();  
        String[] keywords = new String[n];  
  
        for (int i = 0; i < n; i++) {  
            keywords[i] = sc.next();  
        }  
  
        Arrays.sort(keywords);  
  
        for (int i = 0; i < n; i++) {  
            System.out.print(keywords[i]);  
            if (i < n - 1) System.out.print(" ");  
        }  
    }  
}
```

**Status : Correct**

**Marks : 10/10**

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

### 2028\_REC\_OOPS using Java\_Week 4\_Q3

Attempt : 1

Total Mark : 10

Marks Obtained : 10

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

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

Bechan Chacha is seeking help to filter out valid mobile numbers from a list provided by his crush. He can only pick his crush's number if the list contains valid mobile numbers.

A mobile number is considered valid if:

It has exactly 10 digits. It consists only of numeric values (0–9). It does not begin with zero.

Your task is to determine whether each mobile number in the list is valid or not.

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

The first line contains an integer T, representing the number of mobile numbers

to check.

The next T lines each contain a string S, representing a mobile number.

#### **Output Format**

For each mobile number S, the output print "YES" if it is valid.

Otherwise, print "NO".

Refer to the sample output for formatting specifications.

#### **Sample Test Case**

Input: 1  
9876543210

Output: YES

#### **Answer**

```
import java.util.*;  
  
class Main {  
    public static void main(String[] args) {  
        Scanner sc = new Scanner(System.in);  
        int T = sc.nextInt();  
        sc.nextLine();  
  
        for (int i = 0; i < T; i++) {  
            String s = sc.nextLine();  
            if (isValidMobile(s)) {  
                System.out.println("YES");  
            } else {  
                System.out.println("NO");  
            }  
        }  
    }  
  
    private static boolean isValidMobile(String s) {  
        if (s.length() != 10) return false;  
        if (!s.matches("[0-9]+")) return false;  
        if (s.charAt(0) == '0') return false;
```

```
    }  
    return true;  
}
```

**Status : Correct**

**Marks : 10/10**