

# Rajalakshmi Engineering College

Name: Mohamed Fadil  
Email: 241501114@rajalakshmi.edu.in  
Roll no: 241501114  
Phone: null  
Branch: REC  
Department: AI & ML - Section 3  
Batch: 2028  
Degree: B.E - AI & ML

Scan to verify results



## 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**

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

```
public class Main {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        // Read number of test cases
        int t = scanner.nextInt();
        scanner.nextLine(); // Consume the newline after the integer

        // Process each test case
        for (int i = 0; i < t; i++) {
            String passage = scanner.nextLine();

            // Count punctuation marks
            int commas = 0;
            int periods = 0;
            int questionMarks = 0;

            // Iterate through each character in the passage
            for (int j = 0; j < passage.length(); j++) {
                char ch = passage.charAt(j);
```

```
        switch (ch) {
            case ',':
                commas++;
                break;
            case '.':
                periods++;
                break;
            case '?':
                questionMarks++;
                break;
        }
    }

    // Print the counts separated by spaces
    System.out.println(commas + " " + periods + " " + questionMarks);
}

scanner.close();
}
```

**Status :** Correct

**Marks :** 10/10

# Rajalakshmi Engineering College

Name: Mohamed Fadil

Email: 241501114@rajalakshmi.edu.in

Roll no: 241501114

Phone: null

Branch: REC

Department: AI & ML - Section 3

Batch: 2028

Degree: B.E - AI & ML

Scan to verify results



## 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**

```
// You are using Java
import java.util.Arrays;
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        // Read number of keywords
        int n = scanner.nextInt();
        scanner.nextLine(); // Consume the newline after the integer

        // Read the keywords line
        String keywordsLine = scanner.nextLine();

        // Split the keywords by space
        String[] keywords = keywordsLine.split(" ");

        // Sort the keywords alphabetically (lexicographically)
        Arrays.sort(keywords);

        // Print the sorted keywords separated by spaces
        for (int i = 0; i < keywords.length; i++) {
            System.out.print(keywords[i]);
            if (i < keywords.length - 1) {
                System.out.print(" ");
            }
        }
    }
}
```

```
System.out.println(); // Add newline at the end
    scanner.close();
}
```

**Status :** Correct

**Marks :** 10/10

# Rajalakshmi Engineering College

Name: Mohamed Fadil

Email: 241501114@rajalakshmi.edu.in

Roll no: 241501114

Phone: null

Branch: REC

Department: AI & ML - Section 3

Batch: 2028

Degree: B.E - AI & ML

Scan to verify results



## 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**

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

```
public class Main {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        // Read number of test cases
        int t = scanner.nextInt();
        scanner.nextLine(); // Consume the newline after the integer

        // Process each test case
        for (int i = 0; i < t; i++) {
            String mobileNumber = scanner.nextLine();

            if (isValidMobileNumber(mobileNumber)) {
                System.out.println("YES");
            } else {
                System.out.println("NO");
            }
        }
    }
}
```

```
        scanner.close();
    }

    // Method to check if a mobile number is valid
    public static boolean isValidMobileNumber(String number) {
        // Check if the length is exactly 10
        if (number.length() != 10) {
            return false;
        }

        // Check if it starts with zero
        if (number.charAt(0) == '0') {
            return false;
        }

        // Check if all characters are digits
        for (int i = 0; i < number.length(); i++) {
            char ch = number.charAt(i);
            if (ch < '0' || ch > '9') {
                return false;
            }
        }

        return true;
    }
}
```

**Status :** Correct

**Marks : 10/10**