# Rajalakshmi Engineering College

Name: Nishant Gurung
Email: 241501131@rajalakshmi.edu.in
Roll no: 241501131
Phone: 8670069246
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 n = Integer.parseInt(sc.nextLine());

      for (int i = 0; i < n; i++) {
         String s = sc.nextLine();

         int comma = 0, periods = 0, q_mark = 0;
         for (char ch : s.toCharArray()) {
            if (ch == ',') comma++;
            if (ch == '.') periods++;
            if (ch == '?') q_mark++;
         }
         System.out.println(comma + " " + periods + " " + q_mark);
      }
   }
}
```

***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 n = Integer.parseInt(sc.nextLine());

      for (int i = 0; i < n; i++) {
         String num = sc.nextLine().trim();
         boolean flag = true;

         if (num.length() != 10) {
            flag = false;
         }
         else if (num.charAt(0) == '0') {
            flag = false;
         }
         else {
            for (char ch : num.toCharArray()) {
               if (!Character.isDigit(ch)) {
                  flag = false;
                  break;
               }
```

```
            }
        }
        if (flag) System.out.print("YES");
        else  System.out.print("NO");
    }

  }
}
```

***Status :*** Correct **Marks : 10/10**

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## 2024_28_III_OOPS Using Java Lab

## 2028_REC_OOPS using Java_Week 4_Q4

Attempt : 1
Total Mark : 10
Marks Obtained : 10

### Section 1 : Coding

1. Problem Statement

Arjun is learning how to filter words from a sentence based on grammar rules. He wants to identify the valid words in a sentence.

A word is considered valid if it satisfies all these conditions:

The word contains only alphabets (a–z, A–Z).The word length is at least 2 characters.The word should not contain digits or special characters.

Your task is to read a sentence and print all the valid words in it.

***Input Format***

The input contains a single line containing a sentence S.

***Output Format***

The output prints all the valid words separated by spaces.

If no valid word exists, print "No valid words."

Refer to the sample output for formatting specifications.

***Sample Test Case***

Input: Hello world1 123 ab" @#$ Hi
Output: Hello Hi

***Answer***

```
import java.util.*;
class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        String word = sc.nextLine();
        String[] w = word.split(" ");
        boolean found = false;

        for (String ch : w) {
            if (ch.length() >= 2 && ch.matches("[a-zA-Z]+")) {
                System.out.print(ch + " ");
                found = true;
            }
        }

        if (!found) {
            System.out.println("No valid words.");
        }
    }
}
```

***Status :*** Correct ***Marks : 10/10***