Rajalakshmi Engineering College

Name: Jesvanth Sabarish V K
Email: 240701214@rajalakshmi.edu.in
Roll no: 240701214
Phone: 9080128264
Branch: REC
Department: CSE - Section 6
Batch: 2028
Degree: B.E - CSE

Scan to verify results

2024_28_III_OOPS Using Java Lab

REC_2028_OOPS using Java_Week 4_CY

Attempt : 1
Total Mark : 40
Marks Obtained : 40

Section 1 : Coding

1. Problem Statement

In a university library, librarians need to track the usage of special characters in students' notes.

To help them, you are asked to write a program that counts the number of specific symbols in each passage of text.

The symbols of interest are:

Exclamation marks (!)Colons (:)Semicolons (;)

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 exclamation marks, colons, and semicolons 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! How are you
Output: 1 0 0

Answer

```
// You are using Java
import java.util.*;
class Main{
   public static void main(String[] args){
      Scanner sc = new Scanner(System.in);
      int n = sc.nextInt();
      sc.nextLine();
      for(int i=0;i<n;i++){
         String string = sc.nextLine();
         int exm =0,col=0,semcol=0;
         char[] StArr = string.toCharArray();
         for(char ch:StArr){
            if(ch == '!')exm++;
            if(ch == ':')col++;
            if(ch == ';')semcol++;
         }

      System.out.print(exm+ " "+ col+" "+semcol+'\n');

      }

   }
```

}

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

2. Problem Statement

Meera is practicing her English vocabulary. She wants to focus on words that have more vowels in them, as they help improve her pronunciation. She decides to extract only those words from a sentence that contain at least two vowels.

Your task is to help Meera by writing a program that finds such words from the given sentence.

Input Format

The input contains a string representing the sentence.

Output Format

The output prints all the words that contain at least two vowels, separated by a space.

If no such word exists, print "No words with two vowels".

Refer to the sample output for formatting specifications.

Sample Test Case

Input: This is an example sentence
Output: example sentence

Answer

```
// You are using Java
import java.util.*;
class Main{
   public static void main(String[] args){
      Scanner sc = new Scanner(System.in);
      String[] string = sc.nextLine().split(" ");
```

```
        int ovC = 0;
        for(String s: string){
            char[] charA = s.toCharArray();
            int count =0;
            for(char ch : charA){
                char newCh = Character.toLowerCase(ch);
                if(ch == 'a')count++;
                if(ch =='e')count++;
                if(ch=='i')count++;
                if(ch=='o')count++;
                if(ch=='u')count++;
            }
            if(count>=2){
                System.out.print(s+" ");
                ovC++;
            }
        }
        if(ovC == 0){
            System.out.println("No words with two vowels");
        }
    }
}
```

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

3. Problem Statement

Anjali is preparing a report on text complexity. She wants to identify all words in a sentence that contain at least one digit so she can analyze numeric mentions.

Your task is to write a program that extracts and prints all words containing at least one digit from a given sentence.

If no such word exists, print "No words with digits found".

Input Format

The input contains a single line containing a sentence with multiple words.

Output Format

The output prints all words containing at least one digit separated by a space.

If no word contains a digit, print "No words with digits found".

Refer to the sample output for formatting specifications.

Sample Test Case

Input: The model X100 and Y200 are available
Output: X100 Y200

Answer

```
// You are using Java
import java.util.*;
class Main{
    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);
        String[] string = sc.nextLine().split(" ");
        int ovC =0;
        for(String s: string){
            char[] ch = s.toCharArray();
            int count =0;
            for(char c : ch){
                if(Character.isDigit(c)){
                    ovC++;
                    count++;
                }
            }
            if(count>0)System.out.print(s+ " ");
        }
        if(ovC ==0){
            System.out.println("No words with digits found");
        }
    }
}
```

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

4. Problem Statement

A bookstore wants to analyze the titles of books to determine their longest word in each title. This helps in designing banners and covers.

Your task is to write a program that, given a sentence (book title), finds and prints the longest word. If multiple words have the same maximum length, print the first one.

Input Format

The input contais a single line containing a sentence representing the book title.

Output Format

The output prints a string representing the longest word in the sentence (book title).

Refer to the sample output for formatting specifications.

Sample Test Case

Input: The Chronicles of Narnia

Output: Chronicles

Answer

```
// You are using Java
import java.util.*;
class Main{
    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);
        String[] string = sc.nextLine().split(" ");
        int tracker =0,pos=0;
        for(int i=0;i<string.length;i++){
            int localTracker =string[i].toCharArray().length;
            if(localTracker>tracker){
                tracker = localTracker;
                pos = i;
            }
        }
        System.out.println(string[pos]);
    }
```

}

Status : Correct *Marks : 10/10*