Rajalakshmi Engineering College

Name: Monica B
Email: 240701330@rajalakshmi.edu.in
Roll no: 240701330
Phone: 6385195950
Branch: REC
Department: CSE - Section 8
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

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

```
import java.util.Scanner;
class mainn{
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        String sentence = sc.nextLine();
        String[] words = sentence.split(" ");
        boolean found = false;
        for (String word : words) {
            for (char c : word.toCharArray()) {
                if (Character.isDigit(c)) {
                    System.out.print(word + " ");
                    found = true;
                    break;
                }
            }
        }
        if (!found) {
            System.out.println("No words with digits found");
        }
    }
}
```

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

2. Problem Statement

Neha is analyzing text messages to identify words that have repeated

characters. A word is considered “repetitive” if any character appears more than once in that word.

Your task is to write a program that extracts all words that contain repeated characters from a given sentence.

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

Input Format

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

Output Format

The output prints all words that contain repeated characters separated by a space.

If no word contains repeated characters, print "No repetitive words found".

Refer to the sample output for formatting specifications.

Sample Test Case

Input: letter balloon apple tree

Output: letter balloon apple tree

Answer

```
import java.util.Scanner;
class main{
   public static void main(String[] args) {
      Scanner sc = new Scanner(System.in);
      String sentence = sc.nextLine();
      String[] words = sentence.split(" ");
      boolean found = false;
      for (String word : words) {
         boolean[] seen = new boolean[256];
         boolean repeat = false;
         for (char c : word.toCharArray()) {
            if (seen[c]) {
               repeat = true;
               break;
```

```
                }
                seen[c] = true;
            }
            if (repeat) {
                System.out.print(word + " ");
                found = true;
            }
        }
        if (!found) {
            System.out.println("No repetitive words found");
        }
    }
}
```

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

3. Problem Statement

A library wants to analyze book titles to count the number of words that start with an uppercase letter. This helps the library track proper nouns and important words in titles.

Your task is to write a program that, for each given title, counts and prints the number of words that start with an uppercase letter.

Input Format

The first line contains an integer T, representing the number of book titles.

Each of the next T lines contains a single title (string).

Output Format

For each title, the output print a single integer representing the number of words starting with an uppercase letter.

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 1
The Chronicles of Narnia
Output: 3

Answer

```
// You are using Java
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 l=sc.nextLine();
         String[] w=l.split(" ");int c=0;
         for(String wo:w){
            if(!wo.isEmpty()&&Character.isUpperCase(wo.charAt(0))){
               c++;
            }
         }
         System.out.println(c);
      }
   }
}
```

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

4. Problem Statement

Riya is preparing for a vocabulary test. Her teacher told her to focus on long words in her practice sentences, specifically words that have at least 5 letters.

Riya wants to write a program that will help her identify such words quickly.

Your task is to help Riya by printing all the words in a given sentence that have a length greater than or equal to 5.

If no such word exists, display "No long words found".

Input Format

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

Output Format

The output prints all words having length ≥ 5, separated by a space.

If no such word is found, print "No long words found".

Refer to the sample output for formatting specifications.

Sample Test Case

Input: The quick brown fox jumps over the lazy dog
Output: quick brown jumps

Answer

```
import java.util.Scanner;
class main{
   public static void main(String[] args) {
      Scanner sc = new Scanner(System.in);
      String sentence = sc.nextLine();
      sc.close();
      String[] words = sentence.split(" ");
      boolean found = false;
      for (String word : words) {
         if (word.length() >= 5) {
            System.out.print(word + " ");
            found = true;
         }
      }
      if (!found) {
         System.out.println("No long words found");
      }
   }
}
```

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