Rajalakshmi Engineering College

Name: Mohammed Rizwan
Email: 240701327@rajalakshmi.edu.in
Roll no: 240701327
Phone: 9944383207
Branch: REC
Department: CSE - Section 9
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

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

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        String sentence = sc.nextLine();
        String[] words = sentence.split(" ");
        List<String> wordsWithDigits = new ArrayList<>();

        for (String word : words) {
            if (word.matches(".*\\d.*")) {
                wordsWithDigits.add(word);
            }
        }

        if (wordsWithDigits.isEmpty()) {
            System.out.println("No words with digits found");
        } else {
            System.out.println(String.join(" ", wordsWithDigits));
        }
    }
}
```

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

2. 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.*;

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        String sentence = sc.nextLine();
        String[] words = sentence.split(" ");

        String longestWord = words[0];

        for (String word : words) {
            if (word.length() > longestWord.length()) {
                longestWord = word;
```

```
        }
      }

        System.out.println(longestWord);
    }
}
```

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

3. 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

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

public class Main {
   public static void main(String[] args) {
      Scanner sc = new Scanner(System.in);
      String sentence = sc.nextLine();
      String[] words = sentence.split(" ");

      List<String> longWords = new ArrayList<>();

      for (String word : words) {
         if (word.length() >= 5) {
            longWords.add(word);
         }
      }

      if (longWords.isEmpty()) {
         System.out.println("No long words found");
      } else {
         System.out.println(String.join(" ", longWords));
      }
   }
}
```

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

4. 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.*;

public 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 title = sc.nextLine();
            String[] words = title.split(" ");
            int count = 0;

            for (String word : words) {
                if (Character.isUpperCase(word.charAt(0))) {
                    count++;
                }
            }

            System.out.println(count);
        }
    }
```

```
}
```

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