

Rajalakshmi Engineering College

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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.³

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.*;  
  
public class Main{  
    public static void main(String[] args){  
        Scanner sc = new Scanner(System.in);  
        String sentence = sc.nextLine().trim();  
        sc.close();  
  
        String[] words = sentence.split("\\s+");  
        ArrayList <String> validwords = new ArrayList<>();  
        for (String word : words){  
            if (isValid(word)){  
                validwords.add(word);  
            }  
        }  
        if (validwords.isEmpty()){  
            System.out.println("No valid words.");  
        } else{  
            System.out.println(String.join(" ", validwords));  
        }  
    }  
    public static boolean isValid(String word){  
        if (word.length() < 2){  
            return false;  
        }  
        for (char c : word.toCharArray()){  
            if (!Character.isLetter(c)){  
                return false;  
            }  
        }  
        return true;  
    }  
}
```

```
        }  
    }  
    return true;  
}  
}
```

Status : Correct

Marks : 10/10