

# Rajalakshmi Engineering College

Name: Tejasvi Vinothkumar  
Email: 241001288@rajalakshmi.edu.in  
Roll no: 241001288  
Phone: 9342277819  
Branch: REC  
Department: IT - Section 2  
Batch: 2028  
Degree: B.E - IT

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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.*;  
  
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> validWords = new ArrayList<>();  
  
        for (String word : words) {  
            if (isValidWord(word)) {  
                validWords.add(word);  
            }  
        }  
  
        if (validWords.isEmpty()) {  
            System.out.println("No valid words.");  
        } else {  
            System.out.println(String.join(" ", validWords));  
        }  
  
        sc.close();  
    }  
  
    // Function to check if a word is valid
```

```
public static boolean isValidWord(String word) {  
    if (word.length() < 2) return false;  
  
    for (char c : word.toCharArray()) {  
        if (!Character.isLetter(c)) {  
            return false;  
        }  
    }  
    return true;  
}
```

**Status :** Correct

**Marks :** 10/10