

# 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.

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**

// 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> validWords = new ArrayList<>();
        for (String word : words) {
            if (isValidWord(word)) {
                validWords.add(word);
            }
        }

        if (validWords.isEmpty()) {
            System.out.println("No valid words.");
        } else {
            for (int i = 0; i < validWords.size(); i++) {
                System.out.print(validWords.get(i));
                if (i < validWords.size() - 1) System.out.print(" ");
            }
        }
        sc.close();
    }

    private 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