

# 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**

```
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;  
  }  
  
}
```

**Status :** Correct

**Marks :** 10/10