

# Rajalakshmi Engineering College

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Department: AI & ML - Section 1

Batch: 2028

Degree: B.E - AI & ML

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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 (word.length() >= 2 && word.matches("[a-zA-Z]+")) {
                validWords.add(word);
            }
        }

        if (validWords.isEmpty()) {
            System.out.println("No valid words.");
        } else {
            for (String w : validWords) {
                System.out.print(w + " ");
            }
            System.out.println();
        }
    }
}
```

}

**Status :** Correct

**Marks :** 10/10