

# Rajalakshmi Engineering College

Name: Harsha Vardhini S  
Email: 240701180@rajalakshmi.edu.in  
Roll no: 240701180  
Phone: 9787756112  
Branch: REC  
Department: CSE - Section 10  
Batch: 2028  
Degree: B.E - CSE

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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.Scanner;

```
public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        String sentence = sc.nextLine();

        String[] words = sentence.split(" "); // split sentence into words
        StringBuilder validWords = new StringBuilder();

        for (String word : words) {
            // Check length >= 2 and all letters
            if (word.length() >= 2 && isAllLetters(word)) {
                validWords.append(word).append(" ");
            }
        }

        if (validWords.length() > 0) {
            System.out.println(validWords.toString().trim());
        } else {
            System.out.println("No valid words.");
        }

        sc.close();
    }
}
```

// Helper method to check if a word contains only letters

```
static boolean isAllLetters(String word) {  
    for (int i = 0; i < word.length(); i++) {  
        if (!Character.isLetter(word.charAt(i))) {  
            return false;  
        }  
    }  
    return true;  
}
```

**Status :** Correct

**Marks :** 10/10