Lab Exam Question
Course Title: Structured Programming Language Laboratory
Course Code: CSE 1112
Time: 45 Minutes
Set C

Total Marks: 30

Task: Magic Word Detector (30 Marks)

A **magic word** is defined as a word that:

- contains only **vowels** (a, e, i, o, u), and

- has an **even number of characters**.

Write a modular C program that reads a sentence and checks whether the sentence contains any **magic word**, using the following functions:

- `void take_input(char str[])`: to take the full sentence input from the user.

- `int extract_words(char sentence[], char words[][20])`: to split the sentence into individual words.

- `int is_magic_word(char word[])`: to check whether a word is a magic word.

- `void find_magic_word(char words[][20], int count)`: to identify and print whether any magic word exists.

Program Requirements:

- Case-insensitive vowel check (e.g., "AEIOU" should be treated the same as "aeiou").

- Do **not** print the magic words — only print whether any exists.

Sample Input/Output

Sample Run

Input:
Enter a sentence: She saw an ai ee oo iu and eagle
Output:
Magic word found!

Sample Run

Input:
Enter a sentence: The owl flew over the mountain
Output:
No magic word found.