PIMPRI CHINCHWAD EDUCATION TRUST's.

PIMPRI CHINCHWAD COLLEGE OF ENGINEERING

(An Autonomous Institute)

Class : SY BTech **Acad. Yr. 2025-26** **Semester :** I

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Department: Computer Engineering **Division :** A

Course Name : Data Structures

Course Code: BCE23PC02

Completion Date :

Assignment No. 8

Problem Statement:

Write a program to reverse the words in a sentence using a stack.

Example:

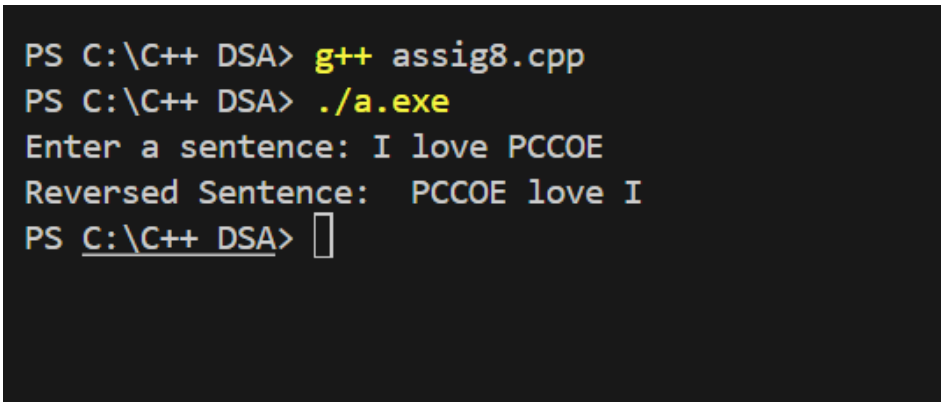
Input: I love coding
Output: coding love I

Source Code :

```
#include<iostream>
#include<string>
#define n 100
using namespace std;


int main() {
    string sentence;
    cout << "Enter a sentence: ";
```

```
    getline(cin, sentence);


    string words[n];
    int count = 0;
    string word = "";
    // to store sentence in words array
    for (int i = 0; i <= sentence.size(); i++) {
        if (sentence[i] == ' ' || i == sentence.size()) {
            words[count++] = word;
            word = "";
        } else {
            word += sentence[i];
        }
    }
    // print words in revered order
    cout << "Reversed Sentence: ";
    for (int i = count - 1; i >= 0; i--) {
        cout << words[i] << " ";
    }
    cout << endl;


    return 0;
}
```

Screen Shot of Output :



Conclusion:

This program demonstrates how a **stack concept can be applied to reverse the order of words** in a sentence. By storing words in an array and then printing them in reverse order, we can easily simulate stack operations (push and pop). This shows the usefulness of stack data structures in solving problems related to reversing and backtracking.