PIMPRI CHINCHWAD EDUCATION TRUST's.

PIMPRI CHINCHWAD COLLEGE OF ENGINEERING

(An Autonomous Institute)

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

Name of the student: Varad Amol Pisale   **PRN : 124B1B043**

Department: Computer Engineering   **Division : A**

Course Name : Data Structures Laboratory   **Code:BCE23PC02**

Completion Date : 15/10/2025

Assignment No. 7

Problem Statement: Write a program to check whether a string is a palindrome using stack operations.
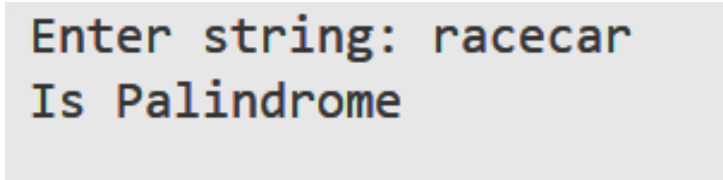
Source Code :

```cpp
#include <bits/stdc++.h>
using namespace std;

int main()
{
  string str;
  // mam,madam,racecar,maam
  // list<char> ll;
  // SLL ll;
  stack<char> st;
  cout << "Enter string: ";
  getline(cin, str);
  int n = str.size(), i = 0;
  while (i < n / 2)
  {
    st.push(str[i]);
    // cout << st.top()<<endl;
    i++;
  }
  // cout << "out of loop" << endl;
  if (n % 2 != 0)
  {
    i++;
    // cout << str[i] << endl;
```

```
        }
        while (i < n)
        {
           // cout << st.top() << " " << str[i]<<endl;
           if (st.top() != str[i])
             {
                cout << "Not a palindrome" << endl;
                return 0;
             }
           st.pop();
           i++;
        }
        cout << "Is Palindrome" << endl;
        return 0;
     }
```

Screen Shot of Output :

```
Enter string: racecar
Is Palindrome
```

Conclusion: Hence we have implemented a stack to check whether a string is plaindrome.