

```
#include <iostream>

#include <stack>

#include <cctype>

using namespace std;

void printOriginalAndReversed(const string& str) {

    cout << "Original String: " << str << endl;

    stack<char> s;

    for (int i = 0; i < str.length(); i++) {

        s.push(str[i]);

    }

    cout << "Reversed String: ";

    while (!s.empty()) {

        cout << s.top();

        s.pop();

    }

    cout << endl;

}

bool isPalindrome(const string& str) {

    int left = 0;

    int right = str.length() - 1;

    while (left < right) {

        if (!isalnum(str[left])) {

            left++;

        } else if (!isalnum(str[right])) {

            right--;

        } else {

            if (tolower(str[left]) != tolower(str[right])) {

                return false;

            }

            left++;

            right--;

        }

    }

    return true;

}
```

```
}  
  
int main() {  
    string input;  
    cout << "Enter a string: ";  
    getline(cin, input);  
    printOriginalAndReversed(input);  
    if (isPalindrome(input)) {  
        cout << "The string is a palindrome." << endl;  
    } else {  
        cout << "The string is NOT a palindrome." << endl;  
    }  
    return 0;  
}
```