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## CP Lab-10 Tasks

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Name:	Syed Muhammad Raza Ali
Enrolment:	02-134231-028
Course:	CP Lab
Faculty:	Miss Fatima

## Lab 10 String

### Tasks: 01

Write a program that determines if a string contains a certain alphabet and its number of occurrences. It displays 'Not Found' if the letter is not found in the string. Be sure to take case of the case sensitiveness.

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### Code:

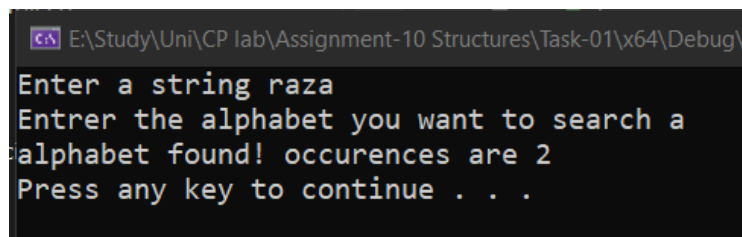
```
#include <iostream>
#include <string>
using namespace std;

int main() {

    int c = 0;
    bool flag = false;
    char searchElement;
    string input;
    cout << "Enter a string ";
    cin >> input;
    cout << "Entrer the alphabet you want to search ";
    cin >> searchElement;
    for (int i = 0; i <= input.length()-1; i++){
        if (input[i] == searchElement){
            c = c + 1;
            flag = true;
        }
    }
    if (flag == true){
        cout << "alphabet found! occurences are " << c<<endl;
    }
    else{
        cout << "alphabet doesn't exist" << endl;
    }

    return 0;}
```

### Output:



The screenshot shows a Windows command prompt window with the following text:

```
E:\Study\Uni\CP lab\Assignment-10 Structures\Task-01\x64\Debug\
Enter a string raza
Entrer the alphabet you want to search a
alphabet found! occurences are 2
Press any key to continue . . .
```

## Tasks: 02

Write a program in C++ in which we will get an input from the user and check whether number is palindrome or not.(use customize function)

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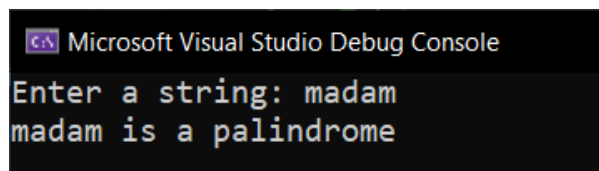
### Code:

```
#include <iostream>
#include <string>
using namespace std;

int main() {

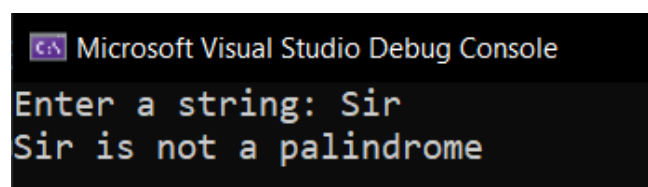
    string input, reversed;
    cout << "Enter a string: ";
    cin >> input;
    for (int i = input.length() - 1; i >= 0; i--) {
        reversed+= input[i];
    }
    if (input == reversed) {
        cout << input << " is a palindrome" << endl;
    }
    else {
        cout << input << " is not a palindrome" << endl;
    }
    return 0;
}
```

### Output (if palindrome):



```
Microsoft Visual Studio Debug Console
Enter a string: madam
madam is a palindrome
```

### Output (if not a palindrome):



```
Microsoft Visual Studio Debug Console
Enter a string: Sir
Sir is not a palindrome
```

## Tasks: 03

Write a program that compare two strings and prints the shorter one. It prints equal if both strings are same.

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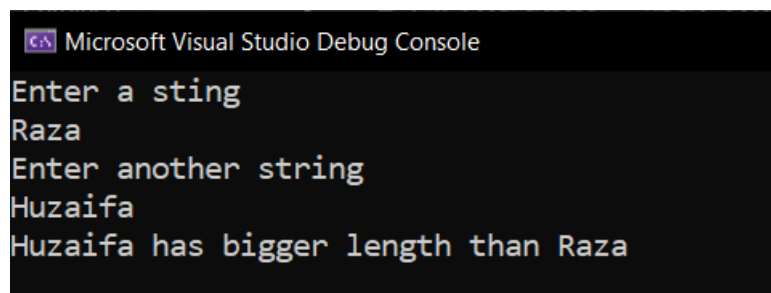
## Code:

```
#include <iostream>
#include <string>
using namespace std;

int main() {
    string word1, word2;
    cout << "Enter a sting" << endl;
    cin >> word1;
    cout << "Enter another string " << endl;
    cin >> word2;
    int a = word1.length();
    int b = word2.length();

    if (a == b) {
        cout << "both string have equal lengths " << endl;
    }
    else if (a > b) {
        cout << word1 << " has bigger length than " << word2 << endl;
    }
    else {
        cout << word2 << " has bigger length than " << word1 << endl;
    }
    return 0;
}
```

## Output:



```
Microsoft Visual Studio Debug Console
Enter a sting
Raza
Enter another string
Huzaifa
Huzaifa has bigger length than Raza
```

## Tasks: 04

Write a program that takes a string as an input and copies it another empty string and displays it.

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### Code:

```
#include <iostream>
#include <string>
using namespace std;

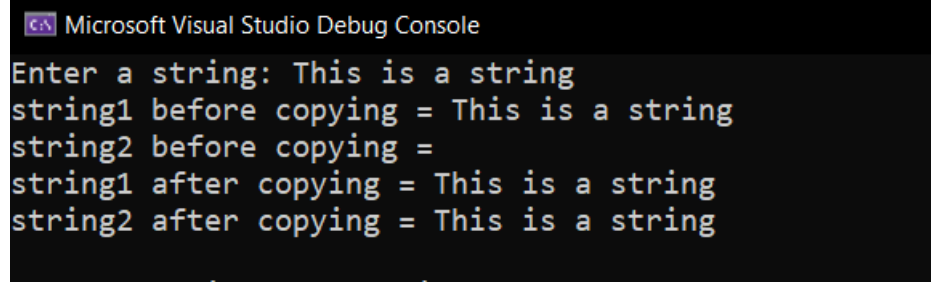
int main()
{
    string string1 ;
    string string2 = "";
    cout << "Enter a string: " ;
    getline(cin, string1);
    cout << "string1 before copying = " << string1 << endl
         << "string2 before copying = " << string2<<endl;

    string2 = string1;

    cout << "string1 after copying = " << string1 << endl
         << "string2 after copying = " << string2<<endl;

    return 0;
}
```

### Output:



```
Microsoft Visual Studio Debug Console
Enter a string: This is a string
string1 before copying = This is a string
string2 before copying = 
string1 after copying = This is a string
string2 after copying = This is a string
```