# Algorithms Level 3

# PROGRAMMING ADVICES

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```cpp
#include <string>
#include <iostream>

using namespace std;

string  ReadString()
{
    string S1;
    cout << "Please Enter Your String?\n";
    getline(cin, S1);
    return S1;

}

enum enWhatToCount { SmallLetters=0, CapitalLetters=1,All=3};

short CountLetters(string S1, enWhatToCount
WhatToCount=enWhatToCount::All)
{


    if (WhatToCount == enWhatToCount::All)
    {
        return S1.length();
    }

    short Counter = 0;

    for (short i = 0; i < S1.length(); i++)
    {

        if (WhatToCount==enWhatToCount::CapitalLetters &&
isupper(S1[i]))
            Counter++;


        if (WhatToCount == enWhatToCount::SmallLetters &&
islower(S1[i]))
            Counter++;


    }

    return Counter;

}
```

```cpp
short  CountCapitalLetters(string S1)
{

    short Counter = 0;

    for (short i = 0; i < S1.length(); i++)
    {

        if (isupper(S1[i]))
            Counter++;

    }

    return Counter;
}

short  CountSmallLetters(string S1)
{

    short Counter = 0;

    for (short i = 0; i < S1.length(); i++)
    {

        if (islower(S1[i]))
            Counter++;

    }

    return Counter;
}
```

```cpp
int main()
{

    string S1 = ReadString();

    cout << "\nString Length = " << S1.length();
    cout << "\nCapital Letters Count= " <<
CountCapitalLetters(S1);
    cout << "\nSmall Letters Count= " << CountSmallLetters(S1);

    cout << "\n\nMethod 2\n";
    cout << "\nString Length = " << CountLetters(S1);
    cout << "\nCapital Letters Count= " << CountLetters(S1,
enWhatToCount::CapitalLetters);
    cout << "\nSmall Letters Count= " <<
CountLetters(S1,enWhatToCount::SmallLetters );

    system("pause>0");

}
```