

```
//HOMEWORK 2
```

```
#include<iostream>
#include<fstream>
#include<cctype>
#include<cstring>
```

```
using namespace std;
```

```
//since we are required to write each function,
//I made 3 different functions that calculates
//number of uppercase, lowercase and digit of
//a given char array respectively
```

```
//this function calculates the number of upper case letters
//recursively and returns as an int
int numberOfUpper(char text[],int n, int sum = 0)
{
    if (n<0) return sum;
    else
    {
        if('A'<= text[n-1] && text[n-1] <= 'Z') sum++;//letter check

        return numberOfUpper(text, n-1, sum);//return the function
    }
}
```

```
//this function calculates the number of lower case letters
//recursively and returns as an int
int numberOfLower(char text[],int n, int sum = 0)
{
    if (n<0) return sum;
    else
    {
        if('a'<= text[n-1] && text[n-1] <= 'z') sum++;//letter check

        return numberOfLower(text, n-1, sum);//return the function
    }
}
```

```
//calculates the number of digits iteratively
int numberOfDigits(char text[])
{
    int sum = 0;

    for(int i=0; text[i]; i++)
```

```

    {
        if('0' <= text[i] && text[i] <= '9')
            sum++; //check
    }
    return sum;
}

```

```

int main()
{
    int n;
    char s[60];

    cout<<"Enter a line of text: ";
    cin.getline(s, 60); //get line from keyboard

    n = strlen(s); //length of the char array

    cout<<"\n\nNumber of uppercase letters is: "<<numberOfUpper(s,
n)<<endl;
    cout<<"\nNumber of lowercase letters is: "<<numberOfLower(s,
n)<<endl;
    cout<<"\nNumber of digits is: "<<numberOfDigits(s)<<endl;

    system("pause");
    return 0;
}

```

Enter a line of text: Even if you try, I ll beat you 555 times

Number of uppercase letters is: 2

Number of lowercase letters is: 25

Number of digits is: 3

Press any key to continue . . .