Day-47 of #101 days of the coding challenge-------

Problem:- Write a C++ program to sort characters (numbers and punctuation symbols are not included) in a string.
Example:
Sample Input: python
Sample Output: hnopty

Code:-

```cpp
#include<iostream>

#include<string>


using namespace std;


void swap(char *a, char *b)

{

        char temp;

        temp = *a;

        *a = *b;

        *b = temp;

}

string shortChar(string str)

{

        int i, j;

        string temp_string;


        for(j = 0; j<str.length(); j++)

        {
```

```cpp
        for(i = 0; i<str.length()-j-1; i++)

    {

        if(int(str[i]) > int(str[i+1])) // converting into the ASIC Value

        {

          swap(&str[i] , &str[i+1]);

        }

    }

    }

    return str;

}


int main()

{

    string str;

    cout<<"Enter the String"<<endl;

    getline(cin, str);

    string result = shortChar(str);


    cout<<"Solved:-----"<<endl;

    cout<<result;


    return 0;

}
```

Output:-

```
Enter the String
ravikumarpathak
Solved:-----
aaaahikkmprrtuv
----------------------------
```

Problem:- Write a C++ program to check if a given string is a Palindrome or not.
A palindrome is a word, number, phrase, or other sequence of characters which reads the same backward as forward, such as madam, racecar.
Example:
Sample Input: madam
Sample Output: True

Code:-

```cpp
#include<iostream>

#include<string>


using namespace std;


string reverseString(string str)

{

        int i, index = 0;

        string temp_string = str;

        for(i = str.length()-1; i>=0; i--) // revering the string

        {

          str[index] = temp_string[i];

          index++;

        }
```

```cpp
        str[index] = '\0'; // into the last index of the string


        return str;

}


void palinDrome(string str)

{

        string rev = reverseString(str);

        if(rev == str)

        {

                cout<<"String is Palindrome"<<endl;

        }

        else

        {

                cout<<"String is not palindrome"<<endl;

        }

}
int main()

{

        string str;

        cout<<"Enter the String"<<endl;

        getline(cin, str);
```

```cpp
        cout<<"Solution:------>"<<endl;

        palinDrome(str);

        return 0;

}
```
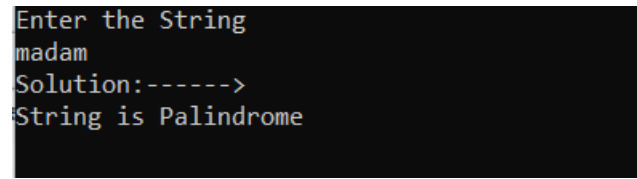
Output:-


```
Enter the String
madam
Solution:------>
String is Palindrome
```

Problem:-   Write a C++ program to change the case (lower to upper and upper to lower cases) of each character in a given string.
Example:
Sample Input: Pythpn
Sample Output: pYTHON

Code:-

```cpp
#include<iostream>

#include<string>


using namespace std;


string uppertoLowerToUpper(string str)

{

        int i;

        string tempString = "";
```

```cpp
        for(i = 0; i<str.length(); i++)
        {
                if(str[i] >= 'A' && str[i]<= 'Z')
                {
                  tempString += char(int(str[i]) + 32);
                }


                if(str[i] >= 'a' && str[i] <= 'z')
                {
                  tempString += char(int(str[i]) - 32);
                }
        }


        return tempString;
}
int main()
{
        string str;
        cout<<"Enter the String:"<<endl;
        getline(cin, str);
        string result = uppertoLowerToUpper(str);
        cout<<"Converted String::--->"<<result;
        return 0;
```

}

Output:-

```
Enter the String:
RavIkUMArPAThak
Converted String::--->rAViKumaRpatHAK
------------------------------
```