Computer Programming Lab

CEN-392

Program 6

Code :-

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

int strlen(char str[])
{
    int i = 0;
    while (str[i] != '\0')
        i++;
    return i;
}

void strlength()
{
    cout<<"\nString Length Operation Is Selected.\n";
    char str[100];
    fflush(stdin);
```

```
    cout << "Enter The String : ";
    cin.getline(str, 100);
    int slen = strlen(str);
    cout << "\nString Length : " << slen << "\n";
}

void strrev()
{
    cout<<"\nString Reverse Operation Is Selected.\n";
    char str[100];
    fflush(stdin);
    cout << "Enter The String : ";
    cin.getline(str, 100);

    int slen = strlen(str);
    for (int i = 0; i < slen / 2; i++)
    {
        char ch = str[i];
        str[i] = str[slen - i - 1];
        str[slen - i - 1] = ch;
    }
    cout << "\nReversed String : " << str << "\n";
}

void strcpy()
{
    cout<<"\nString Copy Operation Is Selected.\n";
    char str1[100], str2[100];
    fflush(stdin);
    cout << "Enter The String : ";
    cin.getline(str2, 100);
    int s2len = strlen(str2);
    for (int i = 0; i < s2len; i++)
    {
        str1[i] = str2[i];
    }
    str1[s2len] = '\0';
    cout << "\nString Is Copied : " << str1 << "\n";
}
```

```
void strcmp()
{
    cout<<"\nString Compare Operation Is Selected.\n";
    char str1[100], str2[100];
    fflush(stdin);
    cout << "Enter The String_1 : ";
    cin.getline(str1, 100);
    cout << "Enter The String_2 : ";
    cin.getline(str2, 100);
    int s1len = strlen(str1);
    int s2len = strlen(str2);
    if (s1len != s2len)
    {
        cout << "\n'"<<str1<<"' And '"<<str2<<"' Are Not
Same\n";
        return;
    }
    for (int i = 0; i < s1len; i++)
    {
        if (str1[i] != str2[i])
        {
            cout << "\n'"<<str1<<"' And '"<<str2<<"' Are Not
Same\n";
            return;
        }
    }
    cout <<"\n '" <<str1<<"' And '"<<str2<<"' Are Same\n";
}

void strcat()
{
    cout<<"\nString Concatation Operation Is Selected.\n";
    char str1[100], str2[100];
    fflush(stdin);
    cout << "Enter The String_1 : ";
    cin.getline(str1, 100);
    cout << "Enter The String_2 : ";
    cin.getline(str2, 100);
```

```
    int s1len = strlen(str1);
    int s2len = strlen(str2);

    for (int i = 0; i < s2len; i++)
    {
        str1[i + s1len] = str2[i];
    }
    str1[s1len + s2len] = '\0';
    cout << "\nConcated String : " << str1 << "\n";
}

void isPalindrome()
{
    cout<<"\nString Pallindrome Operation Is Selected.\n";
    char str[100];
    fflush(stdin);
    cout << "Enter The String : ";
    cin.getline(str, 100);
    int slen = strlen(str);
    for (int i = 0; i < slen / 2; i++)
    {
        if (str[i] != str[slen - i - 1])
        {
            cout <<str<<" Is Not A Pallindrome\n";
            return;
        }
    }
    cout <<"\n"<<str<<" Is Pallindrome\n";
}

void Seach()
{
    cout<<"\nString Search Substring Operation Is
Selected.\n";
    char str1[100], str2[100];
    fflush(stdin);
    cout << "Enter The String_1 : ";
    cin.getline(str1, 100);
```

```
    cout << "Enter The String_2 : ";
    cin.getline(str2, 100);
    int s1len = strlen(str1);
    int s2len = strlen(str2);
    if (s1len < s2len)
    {
        cout << "Substring Not Found\n";
        return;
    }
    bool check=false;
    for (int i = 0; i < s1len; i++)
    {
        int j = 0;
        for (; j < s2len && i + j < s1len; j++)
        {
            if (str1[i + j] != str2[j])
            {
                break;
            }
        }
        if (j == s2len)
        {
            if(!check)cout<<"\nSubstring Found!\n";
            cout << "Index : " << i << "\n";
            check=true;
        }
    }
    if(!check)
    cout << "\nSubstring Not Found!\n";
}

void Menu()
{
    cout << "\n\n____String_Operations____\n";
    cout << "1.Length\n";
    cout << "2.Reverse\n";
    cout << "3.Copy\n";
    cout << "4.Compare\n";
    cout << "5.Concatnate\n";
```

```
    cout << "6.Pallindrome\n";
    cout << "7.Search Substring\n";
    cout << "8.Exit\n";
    cout << "Enter Your Choice : ";
}

void AnsBar()
{
    cout<<"_____________________________________________________
_____________\n";
}

bool Options()
{

    int opt;
    fflush(stdin);
    cin >> opt;
    AnsBar();
    switch (opt)
    {
    case 1:
        strlength();
        break;
    case 2:
        strrev();
        break;
    case 3:
        strcpy();
        break;
    case 4:
        strcmp();
        break;
    case 5:
        strcat();
        break;
    case 6:
        isPalindrome();
        break;
```

```
        case 7:
            Seach();
            break;
        case 8:
        cout<<"Exit Is Selected.\n";
        AnsBar();
            return 0;
        default:
            cout << "Invalid Entry!\n";
            break;
        }
        AnsBar();
        return 1;
    }

    int main()
    {
        system("cls");
        cout << "____Vicky_Gupta_20BCS070____\n";
        while (true)
        {
            Menu();
            if (!Options())
                break;
        }
        cout << "Exiting...\n";
        return 0;
    }
```

Output :-

```
____Vicky_Gupta_20BCS070____


____String_Operations____
1.Length
2.Reverse
3.Copy
4.Compare
5.Concatnate
6.Pallindrome
7.Search Substring
8.Exit
Enter Your Choice : 1
_____________________________________________________________

String Length Operation Is Selected.
Enter The String : Vicky Gupta

String Length : 11
_____________________________________________________________


____String_Operations____
1.Length
2.Reverse
3.Copy
4.Compare
5.Concatnate
6.Pallindrome
7.Search Substring
8.Exit
Enter Your Choice : 2
_____________________________________________________________

String Reverse Operation Is Selected.
Enter The String : Vicky

Reversed String : ykciV
_____________________________________________________________
```

```
____String_Operations____
1.Length
2.Reverse
3.Copy
4.Compare
5.Concatnate
6.Pallindrome
7.Search Substring
8.Exit
Enter Your Choice : 3
_____________________________________________________________

String Copy Operation Is Selected.
Enter The String : Hello World

String Is Copied : Hello World
_____________________________________________________________


____String_Operations____
1.Length
2.Reverse
3.Copy
4.Compare
5.Concatnate
6.Pallindrome
7.Search Substring
8.Exit
Enter Your Choice : 4
_____________________________________________________________

String Compare Operation Is Selected.
Enter The String_1 : Vicky
Enter The String_2 : Vicky

 'Vicky' And 'Vicky' Are Same
_____________________________________________________________
```

```
____String_Operations____
1.Length
2.Reverse
3.Copy
4.Compare
5.Concatnate
6.Pallindrome
7.Search Substring
8.Exit
Enter Your Choice : 6
_____________________________________________________________

String Pallindrome Operation Is Selected.
Enter The String : NitiN

NitiN Is Pallindrome
_____________________________________________________________


____String_Operations____
1.Length
2.Reverse
3.Copy
4.Compare
5.Concatnate
6.Pallindrome
7.Search Substring
8.Exit
Enter Your Choice : 7
_____________________________________________________________

String Search Substring Operation Is Selected.
Enter The String_1 : Hey Someone Is Here, Hello
Enter The String_2 : He

Substring Found!
Index : 0
Index : 15
Index : 21
_____________________________________________________________
```

```
____String_Operations____
1.Length
2.Reverse
3.Copy
4.Compare
5.Concatnate
6.Pallindrome
7.Search Substring
8.Exit
Enter Your Choice : 5
_____________________________________________________________

String Concatation Operation Is Selected.
Enter The String_1 : Computer
Enter The String_2 : Engineer

Concated String : Computer Engineer
_____________________________________________________________


____String_Operations____
1.Length
2.Reverse
3.Copy
4.Compare
5.Concatnate
6.Pallindrome
7.Search Substring
8.Exit
Enter Your Choice : 8
_____________________________________________________________
Exit Is Selected.
_____________________________________________________________
Exiting...
```