**LAB 12**

**Objectives**

To understand the concepts of strings and pointers.

**Task 1**

Apply standard library functions.

1. Input character array from user.Find the length of string.(strlen)
2. Input two character array.Copy the elements of first to second array.(strcpy)
3. Input two character array.Compare both arrays.(strcmp)
4. Input two character array.Concatenate the elements of both arrays(strcat)

#include<iostream>

using namespace std;

void main()

{

char str1[20];

char str2[]="\_PROGRAMMER";

char str3[20];

int l,k;

cout<<"Enter Alphabet : ";

cin>>str1;

l=strlen(str1);

cout<<"\nlength of string str1 is "<<l<<endl;

strcpy(str3,str2);

cout<<"\nAfter copying string of str3 and str2 is "<<str3<<endl;

k=strcmp(str3,str2);

cout<<"\nComparing string of str3 and str2 is "<<k<<endl;

strcat(str1,str2);

cout<<"\nConcatenation string of str1 and str2 is "<<str1<<endl;

system("pause");

}

**Task 2**

Write a program that contains user defined function xstrlen that calculates the length of string.

#include<iostream>

using namespace std;

int xstrlen(char \*s);

void main()

{

char arr[100];

int len1;

cout<<"Enter Alphabets & Get Length of string : ";

cin>>arr;

len1=xstrlen(arr);

cout<<"\n"<<"Length of string is "<<len1<<endl;

system("pause");

}

int xstrlen(char \*s)

{

int length=0;

while (\*s!='\0')

{

length++;

s++;

}

return(length);

}

**Task3**

Write a program that contains user defined function xstrcmp that compares two string.

#include<iostream>

using namespace std;

int xstrcmp(char \*s,char \*t);

void main()

{ int x;

char arr1[20];

char arr2[20];

cout<<"Enter First Words for Compare Second Alphabet : ";

cin>>arr1;

cout<<"Enter Second Words for Compare First Alphabet : ";

cin>>arr2;

x=xstrcmp(arr1,arr2);

cout<<"\nString Comparison = "<<x<<endl;

system("pause");

}

int xstrcmp(char \*s,char \*t)

{

while(\*s==\*t)

{

if(\*s=='\0')

return(0);

s++;

t++;

}

return(\*s-\*t);

}

**Task 4**

Write a program that contains user defined function xstrcpy that copies ont string to another.

#include<iostream>

using namespace std;

void xstrcpy(char \*t,char \*s);

void main()

{

char arr1[20];

char arr2[20];

cout<<"Enter First Words to Copy Second Array : ";

cin>>arr1;

cout<<"Enter Any Words But First Words is Overlap this Words : ";

cin>>arr2;

xstrcpy(arr2,arr1);

cout<<"Copy of String is '"<<arr2<<"'"<<endl;

system("pause");

}

void xstrcpy(char \*t,char \*s)

{

while(\*s!='\0')

{

\*t=\*s;

s++;

t++;

}

\*t='\0';

}