Experiment-11

Aim: Write a program, sum of 2 numbers declared in class and the display the number and sum using friend class.

**Source Code:**

#include<iostream>

using namespace std;

class B;

class A{

private:

int x;

public:

int val(){

cout<<"Enter first number";

cin>>x;

return 0;

}

friend int add(A,B);

};

class B{

private:

int y;

public:

int val(){

cout<<"Enter second number";

cin>>y;

return 0;

}

friend int add(A,B);

};

int add(A obj1 , B obj2){

return(obj1.x + obj2.y);

}

int main(){

A obj1;

B obj2;

obj1.val();

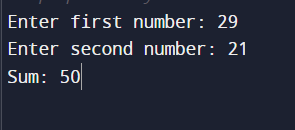
obj2.val();

cout<<"Sum: "<<add(obj1 , obj2);

return 0;

}

**OUTPUT:**

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EXPERIMENT-12

**Aim:** Implement a class string containing the following functions:

a. Overload + operator to carry out the concatenation of strings.

b. Overload = operator to carry out string copy.

c. Overload <= operator to carry out the comparison of strings.

d. Function to display the length of a string.

e. Function tolower( ) to convert upper case letters to lower case.

f. Function toupper( ) to convert lower case letters to upper case

**SOURCE CODE:**

#include <iostream>

#include <string.h>

using namespace std;

class String1{

public:

char s[20];

String1 (){};

String1(char s[]){

strcpy(this->s,s);}

void operator +(String1 &C){

cout<<"The Concatenation of the strings is: "<<strcat(s,C.s);}

void operator =(String1 &A){

strcpy(s,A.s);

cout<<"The Copied string is: "<<s;}

void operator <=(String1 &B){

cout<<"The value of the comparison of the strings is: "<<strcmp(s,B.s);}

void length(){

cout<<"The length of the input string is: "<<strlen(s);}

void tolowercase(){

char a;

for(int i=0;i<strlen(s);i++){

a = tolower(s[i]);

cout<<a;}

}

void touppercase(){

char a;

for(int i=0;i<strlen(s);i++){

a = toupper(s[i]);

cout<<a;}}

};

int main() {

int ch;

char s1[20],s2[20];

cout<<"MENU"<<endl;

cout<<"1. Concatenation of two string "<<endl;

cout<<"2. Copying one string to another "<<endl;

cout<<"3. Comparison of two strings "<<endl;

cout<<"4. Finding length of the string "<<endl;

cout<<"5. Converting the string to lowercase characters "<<endl;

cout<<"6. Converting the string to uppercase characters"<<endl;

cout<<"Enter your choice (1-6) to select the operation you want to perform: ";

cin>>ch;

cout<<endl;

switch (ch)

{case 1:{

cout<<"Enter First string: ";

cin>>s1;

cout<<"Enter Second string: ";

cin>>s2;

String1 s3(s1),s4(s2);

s3+s4;}

break;

case 2:{

cout<<"Enter the string: ";

cin>>s1;

String1 s3(s1),s4("");

s4 = s3;}

break;

case 3:{

cout<<"Enter First string: ";

cin>>s1;

cout<<"Enter Second string: ";

cin>>s2;

String1 s3(s1),s4(s2);

s3 <= s4;}

break;

case 4:{

cout<<"Enter the string: ";

cin>>s1;

String1 s3(s1);

s3.length();}

break;

case 5:{

cout<<"Enter the string: ";

cin>>s1;

String1 s3(s1);

cout<<"The string after conversion is : ";

s3.tolowercase();}

break;

case 6:{

cout<<"Enter the string: ";

cin>>s1;

String1 s3(s1);

cout<<"The string after conversion is : ";

s3.touppercase();}

break;

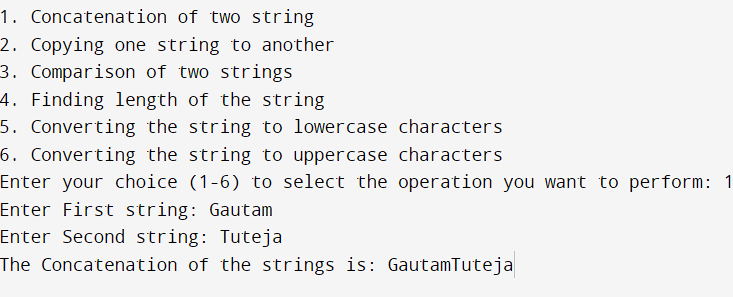
default:

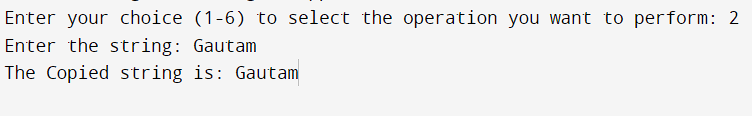
cout<<"Invalid Input";

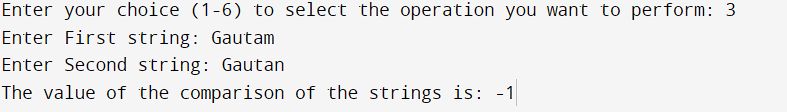
break;}

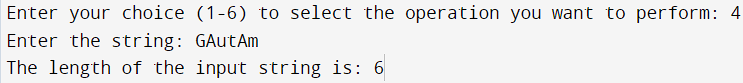
return 0;}

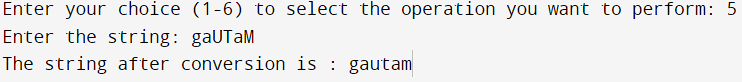
**OUTPUT:**

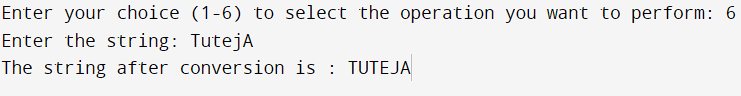
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