**/\* 26. Create a class triangle.include overload functions for calculating area.overload assignment operator and equality operator. \*/**

using namespace std;

#include<iostream>

#include<cmath>

class triangle

{int a,b,c;

public:

triangle()

{a=0;

b=0;

c=0;}

triangle(int x,int y, int z)

{a=x;

b=y;

c=z;}

void operator==(const triangle&t)

{if(a==t.a&&b==t.b&&c==t.c)

cout<<"\ntriangles are equal";

else

cout<<"\ntriangles are not equal";

}

void operator=(const triangle&t)

{a=t.a;

b=t.b;

c=t.c;}

void display()

{cout<<"a:"<<a<<"\nb:"<<b<<"\nc:"<<c;}

int area(int);//equilateral tr.

int area(int,int);//right tr.

int area(int,int,int);//scalene tr.

};

int triangle::area (int a)

{cout<<"area of equilateral triangle is:"<<(sqrt(3)\*a\*a)/4<<"\n";}

int triangle::area (int a,int b)

{cout<<"area of right triangle is:"<<0.5\*a\*b<<"\n";}

int triangle::area (int a,int b,int c)

{float s,t;

if((a+b)>c&&(a+c)>b&&(b+c)>a)

{s=(a+b+c)/2.0;

t=sqrt(s\*(s-a)\*(s-b)\*(s-c));

cout<<"\n Area of triangle "<<t<<"\n";}

else

cout<<"\n Invalid sides ";}

int main()

{int ch,a,b,c;

triangle t1(4,2,3),t2(1,8,5),obj;

cout<<"first triangle:\n";

t1.display();

cout<<"\nsecond triangle:\n";

t2.display();

t2==t1;

t2=t1;

cout<<"\nfirst triangle:\n";

t1.display();

cout<<"\nsecond triangle:\n";

t2.display();

t2==t1;

cout<<"\narea of triangle:\nmenu";

cout<<"\n1.equilateral triangle\n2.right triangle\n3.scalene triangle";

cout<<"\nenter your choice:";

cin>>ch;

switch(ch)

{

case 1:cout<<"enter the side of equilateral triangle";

cin>>a;

obj.area(a);

break;

case 2:cout<<"enter the base and height of right triangle:";

cin>>a>>b;

obj.area(a,b);

break;

case 3:cout<<"enter the 3 sides of scalene triangle:";

cin>>a>>b>>c;

obj.area(a,b,c);

break;

default:cout<<"wrong choice\n";

break;

}

system("pause");

return 0;

}

Output :-

