**CPP Assignment 2**

**Write the definition for a class called Rectangle that has floating point data members length and width.**

**RECT/01 Basic operations like setting length, width, calulating permimeter, area, displaying length, width are to be supported by creating suitable member functions.**

**Ans:** #include<iostream>

using namespace std;

class rectangle{

private:

float length;

float width;

public:

void setlength(float 1){

}

void perimeter(){

returns (2\*(length+width));

}

void show(){

cout<<"\nlength: "<<length;

cout<<"\nwidth: "<<width;

cout<<"\nperimeter: "<<perimeter();

cout<<"\narea: "<<area();

}

static int sameArea(rectangle r1, Rectangle r2){

if (r1.area()==r2.area())

return 1;

else

return 2;

}

}

int main()

{

Rectangle rec1,rec2;

rec1.setlength(5);

rec1.setwidth(2.5);

rec2.setlength(5);

rec2.setwidth(18.9);

cout<<"\n\t\tRectangle 1\n";

rec1.show();

cout<<"\n\t\tRectangle 2\n";

rec2.show();

int s=Rectangle::sameArea(rec1,rec2);

if (s==1)

cout<<"\nThe two reactangles are the same\n";

else if (s==0)

cout<<"\nThe two reactangles are NOT the same.\n";

rec1.setlength(15);

rec1.setwidth(6.3);

cout<<"\n\t\tRectangle 1\n";

rec1.show();

int s2=Rectangle::sameArea(rec1,rec2);

if (s2==1)

cout<<"\nThe two reactangles are the same\n";

else if (s2==0)

cout<<"\nThe two reactangles are NOT the same.\n";

return 0;

}

**Output:**

Rectangle 1

length: 9

width: 3.5

perimeter:25

area: 12.5

Rectangle 2

length: 9

width: 3.5

perimeter: 25

area: 12.5

The two rectangles are the same

Rectangle 1

length: 17

width: 9.3

perimeter: 5

area: 52.6

The two rectangles are NOT the same





