OOP Lab

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Lab 4

1. Write a class called Rectangle that has floating point data members length and width. Define another class "centroid" which should have two points (locus). The class has the following member functions:

void setlength(float) to set the length data member

void setwidth(float) to set the width data member

float perimeter() to calculate and return the perimeter of the rectangle

float area() to calculate and return the area of the rectangle

void show() to display the length and width of the rectangle

int sameArea(Rectangle) that has one parameter of type Rectangle.

int clacDiag(Rectangle), which has one parameter of type Rectangle

obj centroid(Rectangle), which takes the parameter of type Rectangle and returns centroiod

int sameArea(), returns 1 if the two Rectangles have the same area, and returns 0 if they don't.

1. Write the definitions for each of the above method

2. Write main function to create two rectangle objects. Set the length and width of the first rectangle by taking from user. Display each rectangle and its area, diagonal and perimeter.

3. Check whether the two Rectangles have the same area and print a message indicating the result. Set the length and width of the first rectangle to another by taking from user. Display each Rectangle and its area and perimeter again. Again, check whether the two Rectangles have the same area and print a message indicating the result