

COURSE ID: CS360(A)
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HOME WORK #:01

Description:

The area of a rectangle is the rectangle's length times its width. Write a C++ program that asks for the length and width of two rectangles. The program should tell the user which rectangle has the greater area, or if the areas are the same.

```
[*] Untitled1  ex1.cpp
1  #include<iostream>
2  using namespace std;
3
4  class Rectangle
5  {
6  public:
7      void setWidth(double j);
8      double getWidth() const;
9      void setLength(double i);
10     double getLength() const;
11     double getarea();
12
13 private:
14     double Width;
15     double Length;
16 };
17
18 void Rectangle::setLength(double i)
19 {
20     Length=i;
21 }
22
23 double Rectangle::getLength() const
24 {
25     return Length;
26 }
27
28 void Rectangle::setWidth(double j)
29 {
30     Width=j;
31 }
32 double Rectangle::getWidth() const
33 {
34     return Width;
35 }
36 double Rectangle::getarea()
37 {
38     return Width*Length;
39 }
```

Compiler Resources Compile Log Debug

```
ex1.cpp
40 int main()
41 {
42     double Width1, Length1;
43     double Width2, Length2;
44     double area1, area2;
45     Rectangle p; // Create p object to Rectangle class
46     cout << "/*This Program Compare two Rectangles area and */\n "
47     cout << "/*output the greater than and equal to condition*/\n" << endl;
48     cout << "Enter Length of 1st Rectangle = ";
49     cin >> Length1; // get the first Rectangle Length
50     cout << "Enter Width of 1st Rectangle = ";
51     cin >> Width1; // get the first Rectangle Width
52     cout << "Enter Length of 2nd Rectangle = ";
53     cin >> Length2; // get the Second Rectangle Length
54     cout << "Enter Width of 2nd Rectangle = ";
55     cin >> Width2; // get the Second Rectangle Width
56     p.setLength(Length1); // set the Length of First Rectangle in private of Rectangle class
57     p.setWidth(Width1); // set the Width of First Rectangle in private of Rectangle class
58     cout << "-----\n";
59     cout << "The Area of 1st Rectangle =" << p.getarea() << endl;
60     area1=p.getarea();
61     p.setLength(Length2); // set the Length of Second Rectangle in private of Rectangle class
62     p.setWidth(Width2); // set the Length of Second Rectangle in private of Rectangle class
63     cout << "The Area of 2nd Rectangle =" << p.getarea() << endl;
64     area2=p.getarea();
65     if(area1 > area2) //compare the area of both the Rectangle if Area1 grater than Area2 execute this statement.
66     {
67         cout << "Area of 1st Rectangle > 2nd Rectangle = " << area1 << " > " << area2 << endl;
68     }
69     else if(area1==area2) // if area1 is equal to area2 execute this statement
70     {
71         cout << "Area of 1st Rectangle = 2nd Rectangle = " << area1 << " = " << area2 << endl;
72     }
73     else // else the area1 is less than area2 of Rectangle
74     {
75         cout << "Area of 1st Rectangle < 2nd Rectangle = " << area1 << " < " << area2 << endl;
76     }
77     cout << "-----\n";
78 }
79
80
```

Line: 1 Col: 1 Sel: 0 Lines: 80 Length: 2416 Insert Done parsing in 0 seconds

Output Window :

```
C:\Users\Niraj\Documents\Visual Studio 2015\Projects\C++ Class\week4\ex1.exe
/*This Program Compare two Rectangles area and */
/*output the greater than Less than or equal to */
/*condition.
Enter Length of 1st Rectangle = 10
Enter Width of 1st Rectangle = 20
Enter Length of 2nd Rectangle = 10
Enter Width of 2nd Rectangle = 20
-----
The Area of 1st Rectangle =200
The Area of 2st Rectangle =200
Area of 1st Rectangle = 2nd Rectangle = 200 = 200
-----
-----
Process exited after 5.946 seconds with return value 0
Press any key to continue . . .
```