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**CS 2024 – C++ Programming**

**Assignment #2: Rectangle**

For this assignment, we are told to use classes and objects dealing with a rectangle. The class *Rectangle* has public and private variables and methods that determine the abilities and basics of the shape of a Rectangle. Rectangles have a height and width and we are trying to use dot functions throughout this assignment to access functions inside the provided class. I already had some background knowledge in this field but this assignment further developed and refreshed my memory on object-oriented programming.

To start, I added more code towards the public methods of Rectangle and its constructor to make it function the way the specifications were given on the PDF. For the constructor, we are given that an initial rectangle 0 by 0. Thus, we need to set the private height and width to both zeros. As for setDimensions(), we took in user input of numbers to set to width and height and had a conditional if statement to check whether input was less than 0. The area function multiplies the width by the height like normal and returns the value to the method call and the circumference function measures the perimeter of the rectangle given the parameters inputted by the user.

The toughest part was the print function for the rectangle. I tried to make it look nicer instead of just displaying (w,h)… I opted for a c-out with many concatenations that included:

cout<<< “Rectangle: (” <<< mWidth <<< “,” <<< mHeight <<< “)”<<<endl

(or something similar). The rest of the code inside the main method just consisted of dot functions that called different methods inside the class Rectangle that was required by the Assignment. This is an example of my output:

Rectangle: (0,0)

Enter a width: 3

Enter a height: 4

Rectangle: (3,4)

Area is: 12

Circumference is: 14