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CS6003A

Module 04: Assignment 01 – Programming Project 04

Algorithm for Rectangle Class Program

The first thing that I will do is create the rectangle class. Within this, I will begin with the constructor method for the class.

The initial constructor method will take in the length and width attributes of the rectangle as it’s parameters and will include them as objects as well.

I will then create the perimeter method that will calculate the perimeter using the length and width objects.

After this I will create the area method which will calculate the area of the rectangle using the length and width objects.

Next, I will create the display method which will use instantiation on the rectangle class to display the length, width, perimeter and area of an object.

Then, I will create a child class inheriting from the rectangle class which includes another parameter for height. Within this, I will add a volume method so that it can calculate that.

Finally, I will write the main function which will ask the user to input the length and width of a rectangle. Using the class as well as the display method, it will return those values to the user. Also, I will then ask them for a height so that the program can return the volume to the user.

In addition to this, I will use exception handling to make sure the inputs are valid, as well as use the absolute value function in case the user enters negative numbers.