CMT115 – Lab 8

Due Date: Nov 22nd, 2010

The purpose of this lab is to give you practice with interfaces.

Part 1 – Hexagons

You will be creating a Hexagon class that extends Geometric object. In addition to the inherited information you will be adding additional data fields and methods as described in the Notes section below. This shape implements Comparable.

Notes:
Hexagons have:

- One double field (side) with default values of 1.0 representing the sides of the hexagon
- A constructor that takes in a side value and creates a hexagon with it
- A method getArea which returns the area of a hexagon
- An hexagon's area is: (sqrt(3)/4)*side^2*6
- A method getPerimeter which returns the perimeter of the hexagon
- A method compareTo that compares two Hexagons by area
- The method signature for the Comparable interface is **public int compareTo(Object o)**
- For compareTo, 1 means this hexagon is bigger, 0 means they are the same, and -1 means this hexagon is smaller (Hint: Remember your polymorphism)
- Comparable is part of the standard library, so you don't need any import statements to use it
- You should NOT use the GeometricObject class from Lab 7. Use the Lab 8 version.

Save your program as **Hexagon.java** and make sure your class name is the same in the file.

Grading

Style Points: 20 points
Hexagon: 80 points
Total: 100 points

Programs that do not compile or are not correctly named will receive **ZERO POINTS**, so please make sure your work compiles before submitting it.

Submission

You will be submitting your work through Blackboard. Be sure to submit all of your Java files, and NOT your CLASS files. If you have any issues or questions please let me know.