**Assignment 4**

Grades for this assignment come from the quiz: false  
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This assignment is linked to the discussion, false. Grading will be based on posts in the topic.)  
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Problem

Write a program to demonstrate an inheritance heirarchy for shapes.

Specification

Create the shape classes and write a program as described below:

* Write an inheritance hierarcy for classes Quadrilateral, Trapezoid, Parallelogram, Rectangle, and Square. Use Quadrilateral as the superclass of the hierarchy. Create and use a Point class to represent the points in each shape. Make the hierarchy as deep (i.e., as many levels) as possible.
* Specify the instance variables and methods for each class. The private instance variables of Quadrilateral should be the *x-y* coordinate pairs for the four endpoints of the Quadrilateral.
* Write a program that instantiates objects of your classes and outputs each object's area (except Quadrilateral).

In addition to your .java files, turn in a PDF document with a brief description of how you developed the design for the project. Include a paragraph for each phase of the software development life cycle shown below.

* Analysis - What
* Design - How
* Implementation

code

test

debug

deliver (turn-in .jar file)

MaintenanceAdmin

Grading

0 points if your program does not compile.

-5 for comments, indentation and placement of {} not per [Style Guide](http://www.cs.slcc.edu/style-guide.shtml).

-10 for each specification not met.

Submission

Attach an executable .jar file that also contains your PDF file and your .java source code files and submit.

.jar file p. 987 and 994