Programming Project - Class Design

1) Review Java programming (first 7 chapters of Java Foundations)
2) Complete the following programming assignment:

   Design & implement a class called `Point` *that can be used to keep track of a location in the Cartesian plane. Include (at a minimum) the following methods:*

   - `setX(x), setY(y), setPoint(x,y)` *set the coordinates of the point*
   - `shiftX(n), shiftY(n)` *shift a point by a given amount along one of the axes*
   - `distance(p2)` *finds the distance to point p2*
   - `rotate(Angle)` *rotates the point by a specified angle around the origin. The formula for rotation is as follows:*

     $$x' = x\cos(\Theta) - y\sin(\Theta)$$
     $$y' = x\sin(\Theta) + y\cos(\Theta)$$
   - *any other methods you believe to be necessary.*
3) Write a toString method for your Point class that displays the coordinates of the point as an ordered pair, eg (3,2)
4) Create a driver class that demonstrates that your methods produce the correct output.

Think carefully about your design and use good object oriented principles in your implementation.

Submission requirements:

- Include your name as a comment at the top of each source code file
- Make good use of whitespace/comments to make your implementation clear.
- In a well-formatted .doc, .pdf, or .txt file, *briefly* describe your implementation, give sample output, and include your entire point class.
- Zip your code, preferably the entire Eclipse project. Do not use .rar.
- Include your first and last name in the .zip filename
- Upload your implementation/output document & zipped project **separately** to Canvas
- Turn in a hard copy of your implementation document

Be prepared to demo your project in class following the due date.