Homework assignment 07

Complete the following programs for this week’s homework.

Programming assignments

Get in the Octagon! (60 points)

Write an Octagon class that inherits from GeometricObject and implements the Comparable interface, comparing the area of the shape. You can assume that all the sides are equal in length.

Implement the Comparable interface in the Circle and Rectangle classes from our last homework assignment, comparing the area of each shape.

Also add the overloaded toString() method to each class that prints a summary of the object.

Then, in another class, create an ArrayList of at least one of each Circle, Rectangle and Octagon.

Write 2 methods:

- A sumArea() method that takes an ArrayList of GeometricObjects and returns the sum for the entire list
- A printSorted() method that takes an ArrayList, sorts it by area (using the compareTo() method) and then prints the sorted list using the overloaded toString() method.

Call the 2 methods with the ArrayList and print the results.

Cloud to Butt (40 points)
Inspired by this amazing chrome extension here:

(https://chrome.google.com/webstore/detail/cloud-to-butt-plus/apmlngnhgbnjpajelfkmabhfapgnoai?hl=en)

that replaces occurrence of the words 'the cloud' with 'my butt' and 'cloud' with 'butt', write a program that reads in each line of text from this link: https://cs.nyu.edu/courses/fall17/CSCI-UA.0101-008/assignments/text/cloud_article.txt

and replace every occurrence 'cloud' with 'butt' (or any other word you'd like)

Write each line back out to a text file named butt_article.txt (or whatever word you choose)

Remember that comments and good naming conventions factor into your grade! Don't forget.