CSCI 1990 ASSIGNMENT 5 FALL 2009

DUE NOVEMBER 12

In Java create a class called Circle. The class has one **double** attribute, the **radius**. It has the following methods:

1. A **constructor** that initializes **radius** to 0.0.
2. **setRadius** that lets any program with an instance of this class set the radius of the circle. However, if there is an attempt to set **radius** to a value not >= 0, it prints an error message and sets the **radius** to zero.
3. **getRadius** returns the value of **radius**.
4. **calculateArea** that has no parameters and outputs the area of the circle which is Π times radius times radius.
5. **calculateCircumference** that has no parameters and outputs the circumference of the circle which is 2 times Π times radius

Now create a client that should do the following:

1. Create an instance of Circle.
2. Output **radius** to demonstrate that it has been initialized to zero.
3. Ask the user to input **radius**.
4. Call **setRadius** to set **radius** to the value just input.
5. Call **getRadius** and then output the value it returns to verify that **setRadius** worked properly.
6. Call **calculateArea**.
7. Call **calculateCircumference**.