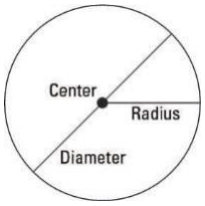

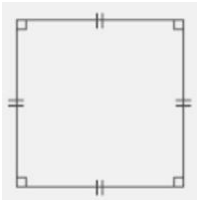

Develop a program that creates two classes – *Circle*, and *Square*. For each class, provide methods accessor and mutator, method findArea() that will calculate the area of the shape, and method display() that will print the class name (Circle, or Square). Use private attributes. For the constructor of class Square set the side values to 3.0 inches.

Using Python List and the loop concept, create five objects of the given shapes above. Which object to create and load into the List depends on your random number generator between 0 to 1. If the random number is 0, then using the default constructor to create and load the Square object into the List. If the random number is 1, ask the user to enter the radius value of the Circle object and then load the object into the List.

Using a loop reiterates through your List of objects and call methods display() and findArea() to print the class name and its area. Your program should offer the user two options to print the results:

1. Save the results into a file. The program should ask the user to input a file name.
2. Print the results on the screen

**Write a Report Summary**

Using Microsoft Word or any text editor, please describe briefly and answer the following questions. Please do not simply answer yes/no, describe them!

1. Did you complete your assignment, and did it run without errors?
2. Did your program produce the correct result?
3. Did you test your program thoroughly?
4. How long did it take to complete your assignment?
5. Did you write the program yourself? Did you get any help from anyone?
6. When you encountered obstacles to completing your program, how did you resolve the issues? Did you use Google to get help? Describe how Google was able or not able to assist you.
7. What did you learn from doing this assignment?
8. Any other information you would like to share with your instructor?

**Submission Instructions:**

- Submit all source code files.
- Submit all your program output.
- Submit the UML Diagrams.
- Submit your Report Summary.