Chapter 9 Homework – Objects and Classes

Reading Assignment:
Read Chapter 9 in Introduction to Programming with C++, 3rd Edition by Liang

Problem Assignment:
Submit each of the following by the assigned due date.
1. (10 pts) Work CheckPoint Exercise 9.5 on page 350.
2. (45 pts) Work Programming Exercise 9.2 (class Fan) in the textbook on page 367.   Additional specifications:
    * Use separate header and implementation files.
    * The main program (not the functions) should display the values of Speed, On, and Radius after calling the functions.
    * The problem refers to *__accessor__* (get) and *__mutator__* (set) functions for all the *__data fields__* (Speed, On, and Radius). This means the following functions should be included:
        o *getSpeed( );*
        o *getOn( );*
        o *getRadius( );*
        o *setSpeed( );*
        o *setOn( );*
        o *setRadius( );*
    * Run the program for the test case described in the textbook and add a 3rd fan object that uses the default values assigned by the constructor. The program should use the accessor functions to display Speed, On, and Radius for all 3 fan objects.
    * Turn in printouts of:
        o The main function
        o The class implementation file
        o The class header file
        o The program output
        o The class diagram (UML diagram) – create this in Word or Excel

2. (45 pts) Work Programming Exercise 9.9 (class LinearEquation) in the textbook on page 369-370.
    Additional specifications:
    * Use separate header and implementation files.
    * The main program (not the functions) should display the results or any error messages.
    * Run the main program for the two cases in Programming Exercise 3.3 on page 107.
    * Turn in printouts of:
        o The main function
        o The class implementation file
        o The class header file
        o The results from running the program using the two cases indicated above.
        o The class diagram (UML diagram)