Deadline: 5/16/2007, 8:30am

Object-Oriented Programming Homework-5

1. Create a class called Complex for performing arithmetic with complex numbers. Write a driver program to test your class.
   Complex numbers have the form:

   realPart + imaginaryPart * i

   where i is $\sqrt{-1}$. Use double variables to represent the private data of the class. Provide a constructor function that enables an object of this class to be initialized when it is declared. The constructor should contain default values in case no initializers are provided. Provide public member function for each of the following:
   (a) Addition of two Complex numbers: The real parts are added together and the imaginary parts are added together.
   (b) Printing Complex numbers in the form (a, b), where a is the real part and b is the imaginary part.
   (c) Multiplication of two Complex numbers: Solve this question by assuming that you have two complex numbers (a, b) and (c, d).

2. Create a Date class with the following capabilities:
   (a) Output the date in multiple formats such as:
   DDD YYYY
   MM/DD/YY
   May 16, 2007
   (b) Use overloaded constructors to create Date objects initialized with date of the formats in part (a).
   (c) Create operators for testing the equality of two dates and for comparing dates to determine if one date is prior to, or after, another.