Extra Credit Assignment 1

Month class -- 50 pts.

Month Class (Aggregation example)

Design a class named `Month`. The class should have the following private members:

- `name` - A <u>`MyString`</u> object (from the `MyString` class presented in Chapter 14's Case Study, source code provided) The name object should hold the name of a month, such as "January", "February", etc. This is an example of class aggregation: Class month "has an" object oh class MyString as a member variable.
- `monthNumber` - An integer variable that holds the number of the month. For example, January would be 1, February would be 2 etc. Valid values for this variable are 1 through 12.

In addition, provide the following member functions:

- A default constructor that sets `monthNumber` to 1 and `name` to "January".
- A constructor that accepts the name of the month as an argument. It should set `name` to the value passed as the argument and set `monthNumber` to the correct value.
- A constructor that accepts the number of the month as an arguments. It should set `monthNumber` to the value passed as the argument and set `name` to the correct month name.
- Appropriate set and get functions for the `name` and `monthNumber` member variables.
- Prefix and postfix overloaded ++ operator functions that increment `monthNumber` and set `name` to name of the next month. If `monthNumber` is set to 12 when these functions execute, they should set `monthNumber` to 1 and `name` to "January".
- Prefix and postfix overloaded -- operator functions that decrement `monthNumber` and set `name` to name of previous month. If `monthNumber` is set to 1 when these functions execute, they should set `monthNumber` to 12 and `name` to "December"

Also, you should overload cout's << operator and cin's >> operator to work with the `Month` class. Demonstrate the class in a program, test all the operators and functions you wrote.