

HW6: Overloading Operators

2. Day of the Year

Assuming that a year has 365 days, write a class named `DayOfYear` that takes an integer representing a day of the year and translates it to a string consisting of the month followed by day of the month. For example,

Day 2 would be January 2.
Day 32 would be February 1.
Day 365 would be December 31.

The constructor for the class should take as parameter an integer representing the day of the year, and the class should have a member function `print()` that prints the day in the month day format. The class should have an integer member variable to represent the day, and should have static member variables holding strings that can be used to assist in the translation from the integer format to the month- day format.

Test your class by inputting various integers representing days and printing out their representation in the month day format.

3. Day of the Year Modification

Modify the `DayOfYear` class, written in Programming Challenge 2, to add a constructor that takes two parameters: a string representing a month and an integer in the range 0 through 31 representing the day of the month. The constructor should then initialize the integer member of the class to represent the day specified by the month and day of month parameters. The constructor should terminate the program with an appropriate error message if the number entered for a day is outside the range of days for the month given.

Add the following overloaded operators:

`++` prefix and postfix increment operators. These operators should modify the `DayOfYear` object so that it represents the next day. If the day is already the end of the year, the new value of the object will represent the first day of the year.

`--` prefix and postfix decrement operators. These operators should modify the `DayOfYear` object so that it represents the previous day. If the day is already the first day of the year, the new value of the object will represent the last day of the year.