CMPT-101, Fall 1999, Assignment 5

Write a C++ program that reads in a file of dates, and creates a new file containing those dates sorted in chronological order, i.e. in ascending order from earliest to latest.

Each line of the input file (and the output file) should contain lines formatted like this: *month day year*. Spaces separate the month, day, and year (multiple spaces are okay); no commas, slashes, hyphens or other characters are allowed. The output file will contain the same dates, but in chronological order. See the example files below.

You must write your own `Date` class to store each date that you read in. It should have accessors to get the month, day, and year of a `Date` object.

You can assume that all the dates are properly formatted, that there is exactly one date per line, and that there are no extra lines or spurious characters. Assume there are no duplicate dates. Practically speaking, these are highly unreasonable assumptions, so a good way to improve your program would be to add error-checking for invalid dates or garbage data. However, since you also have a project due, you can assume that the file contains only good data.

What to Hand In

Follow the usual assignment hand-in instructions. Hand in one test run of your program on a file that contains *at least* 15 different dates. Give a copy of the input file, and the sorted output file. Choose good test data: include dates with the same years, months, and day, to show that your program can sort any valid date.

Hint

To sort dates, read about selection sort in section 12.1 of the textbook. The code given there sorts a `vector` of `int`s, so you need to modify it to sort a `vector` of your `Date` objects.

Input file

```
January 1 1999
April 5 2006
April 2 2006
April 1 2007
October 12 1983
October 12 1988
January 1 1992
February 12 1248
```

This file is given

Output file

```
February 12 1248
October 12 1983
October 12 1988
January 1 1992
January 1 1999
April 2 2006
April 5 2006
April 1 2007
```

Generated by your program