CPSC 327
Project 3

Model a library

Motivation: Topics covered by this project;
- vector and iterator
- developing generic functionality (sort algorithms, find, file writing)

Note: This project requires C++11 support. The eclipse starter project has this configured correctly.

Teams: None, please work individually on this project.

Assignment
As described in class you are going to model a public library using the starter project located on the course projects page. Please import into eclipse as per instructions given on the Projects page.

Target Platform
Linux 16.04 with the GNU toolchain. Eclipse CDT- Oxygen.

fileIO.cpp and library.cpp
Please provide definitions for all functions in fileIO.cpp and library.cpp.
Their behavior is described in the appropriate header files in the includes_usr directory.
Please note, you are required to use vectors to hold the book and patron objects described in datastructures.h. These vectors should reside in library.cpp.

Model_A_Library.cpp
You will find file Model_A_Library.cpp in the src folder. This file servers as a tester for fileIO.cpp and library.cpp. Please notice that I have provided testing for fileIO.cpp. Please see //TODO notations for suggested approaches to test your library.cpp implementation. You are not required to implement this file or use it in any way, it is only provided as a framework for testing. It is however the basis on

which I will build my tester, and the function that tests fileIO.cpp is the one I will use to test your implementations.

constants.h
Note the BOOKFILE and PATRONFILE constants. These are the names of the files where you should serialize books and patrons. BOOKFILE_EMPTY and PATRONFILE_EMPTY are empty files. Initial versions of these files can be found in the dont_alter_these_files directory. The function reset_books_patrons() in Model_A_Library.cpp uses these initial versions to reset the files used for fileIO testing in testfileIO() for every run of the program.

To Turn In
Please turn in only the following files.

fileIO.cpp
library.cpp

I will embed them in my project for testing. This also means that I will not see any changes you make to any files except for those 2.