

CSCE 1040 Homework 6 Fall 2015

For this assignment we are going to augment the Smallsville Library Management System that we designed in Homework 4 and built in Homework 5

For the purposes of this assignment you need to turn the original book or item class in Homework 5 into a base or parent class, and then create appropriate child or extended classes for Reference, DVD, Book-on-Tape as well as Book. This will also mean you will need to make changes to accommodate these types in your other classes and user interfaces. Remember these different types of loanable items may have different loan periods as well as different fine rates and replacement costs. In your design file as well as report you should include information on how you have incorporated these differences in your design and the complications these created in the implementation, respectively.

You will need to modify your design from Homework 4 and 5 based on grader comments and class discussion. You will need to turn this updated design in as well as use it for the basis of your program.

Be sure to attend class lectures as we will discuss many of the topics you will need to complete the assignment!

Program Requirements

Your program will be written in C++ not any any other computer language.

You will include the steps in your algorithm in your code. You may, of course, paraphrase them if you like.

Your program will be graded based largely upon whether it works correctly on a CSE Department Linux machine.

Your program will also be graded upon your program style. At the very least your program should include:

- A consistent indentation style as recommended in the textbook and in class.

- Meaningful variable names.

- A block header comment section that includes: Your Name and Email

Address, and a brief description of the program.

Your program's output should initially display the department and course number, program number, your name, and your email address – as in Homework 1.

Be sure to create appropriate test data and execute tests for proper and improper data on all functions.

You will submit your program source file to the BB Learn website under the **"Homework 6"** drop box. Make sure you submit your program before the due date and time. You must also submit your updated design, or recipe file, and a short report about your efforts. In total you will submit 6 files (1 report, 1 design 2 *.cpp and 2 *.h)

Please be sure and test your program to make sure it is calculating the result properly. You can either do this by hand (calculating some test values on paper to see if they match what your program says), or temporarily display various intermediate values you're calculating in the process and desk check the results to make sure they are correct. The more test cases you try and you get correct answers, the more certain you will be that when the grader uses his own test cases that your program will produce the correct result.