

CSC220 Assignment 3

Inheritance

~~(due Sept. 13th 10:00 am)~~

Canceled due to Hurricane Irma

The goal of this week's assignment is:

1. Practice the concept of inheritance
2. Learn to care about special cases

Things you must do:

1. There are many details in this assignment. Make sure you read the whole thing carefully before writing any code and closely follow this instruction.
2. You must complete your assignment individually.
3. Always remember Java is case sensitive.
4. Your file names, class names, and package name must match exactly as they are specified here.
5. **Your project must include the methods you implemented in the lab.**

Things you must not do:

1. You must not change the file names, class names, package names.
2. You must not change the signature of any of these methods (name, parameters, ...). Just fill in the missing code inside them.
3. You must not create any different class.

You should have created a new project during the lab and you will be using the same project for this assignment. You are going to continue working on that project and complete the partial implementation of your Library class.

As you saw during the lab, we are going to construct a program for libraries that allows books to be checked in and out electronically. A book is represented by an ISBN, an author, and a title, all of which cannot change once the book has been created. (Please note that ISBNs are unique.) A library book is a book together with a holder (representation of the person who has the book checked out) and a due date, both of which can change as needed. (Please note that for our purposes, all holders are unique.) For this lab, a holder is represented by his/her name as a String.

Your job is to complete several methods defined that are incomplete.

Important Note: There are only two parts in this assignment BUT there are many details involved. Start early! You are encouraged to write more tests in your main function to make sure you have implemented all methods properly. However, submit your code with the original LibraryTest.java provided. We will first run the main function provided to make sure your code is working with the examples we provided and then, we will test your code with new and different examples.

Part 0

- You first must make sure that you have already finished the lab successfully and have all methods in the lab instruction working properly. Then, grab the new version of **LibraryTest.java** from the assignment section in Blackboard.
- Note that there are special cases that you should be careful about, some of which are included in the LibraryTest for you.

Part 1 - lookup

```
public ArrayList<LibraryBook> lookup(String holder)
```

- Returns the list of library books checked out to the specified holder.
- If the specified holder has no books checked out, returns an empty list.

Part 2 - checkin

```
public boolean checkin(long isbn)
```

- Unsets the holder and due date of the library book.
- If no book with the specified ISBN is in the library, returns false.
- If the book with the specified ISBN is already checked in, returns false.
- Otherwise, returns true.

```
public boolean checkin(String holder)
```

- Unsets the holder and due date for all library books checked out by the specified holder.
- If no books with the specified holder are in the library, returns false;
- Otherwise, returns true.

If you see any “TEST FAILED ...” you need to go back and debug your code.

Make sure to submit your assignment by uploading your Lab03 folder into your csc220-XXXX220 folder by the deadline

For all your assignments, please start early and seek help early (either from the instructor or the TAs).

Submission Guideline

You should have already created your csc220-xxxxxxx folder in your university box account and know how to submit your assignment through box (you can consult the tutorials in blackboard again if you have forgotten).

Inside your csc220-xxxxxxx folder in box, you should only have two folders called **Lab01** and **Lab02** (considering you have submitted both assignments).

In order to submit assignment 3, log into your university box account, go into your csc220-xxxxxxx folder and upload **Lab03** folder from your Eclipse workspace. Now you should see three separate folders in your csc220-xxxxxxx folder (in box): **Lab01**, **Lab02**, and **Lab03**.