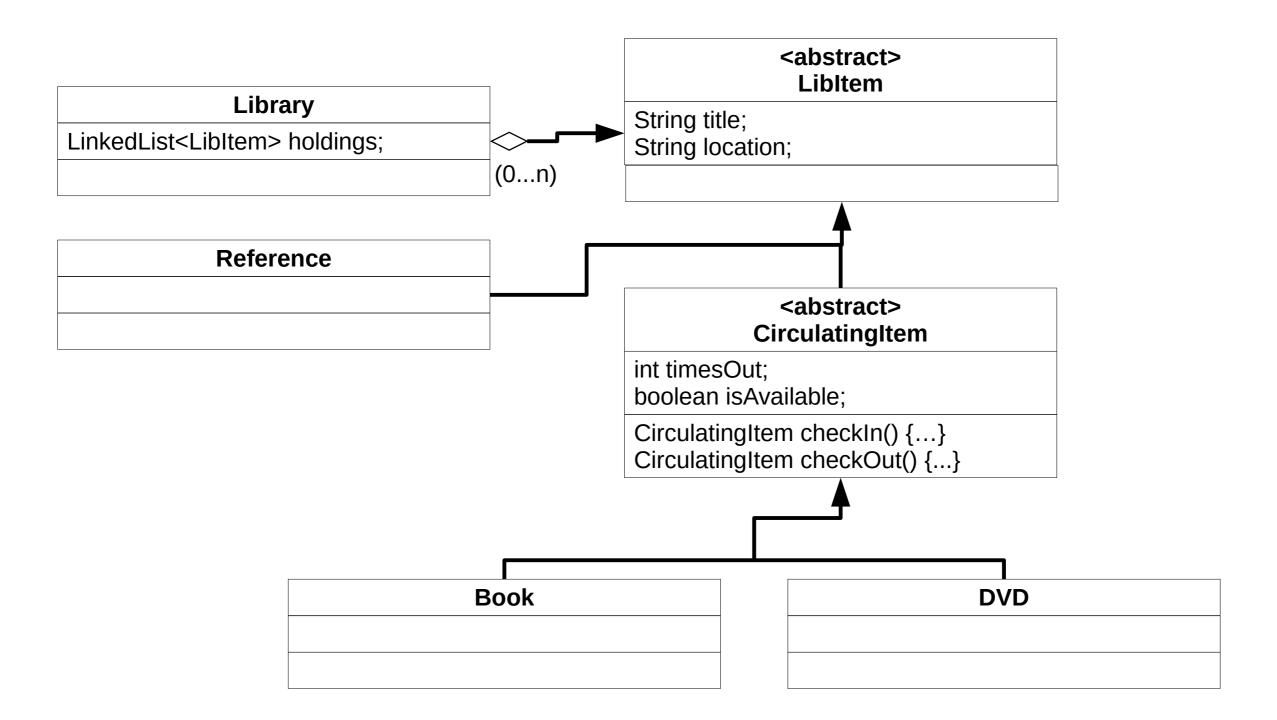## Notes for Today:

Please pick up a handout from the front or back tables **OR** pull up the online copy at
https://tinyurl.com/cs2102DesignCode

If you did not get Quiz 1 back last week, please come pick it up from the table in the front of the room

Quiz 2 will be given back in lab, NOT lecture

Design Task: Add classes and modify the existing code so that the library holdings can contain any of the three kinds of items. You should create additional classes to share fields and methods as appropriate.

HINT: Think about abstract classes, not interfaces.

Library

LinkedList<LibItem> holdings;

(0...n)

****
LibItem

String title; String location;

Reference

****
CirculatingItem

int timesOut; boolean isAvailable;
CirculatingItem checkIn() {…} CirculatingItem checkOut() {...}

Book

DVD

Rewrite the constructors for Book, Reference, and DVD, and write the constructors for LibItem and CirculatingItem.

Each of Books and DVDs should have a method lateFee that takes the number of days overdue a book is and returns the fee for that many days.

- For books, the late fee is 25 cents a day.

- For DVDs, the fee is 5 dollars (total) up to 3 days late, then 20 dollars (total) over 3 days.

Library

LinkedList<LibItem> holdings;

(0...n)

LibItem**

String title;
String location;

**<interface>
IBorrowable;**

double lateFee (int days);

Reference

CirculatingItem**

int timesOut;
boolean isAvailable;

CirculatingItem checkIn() {...}
CirculatingItem checkOut() {...}

Book

DVD