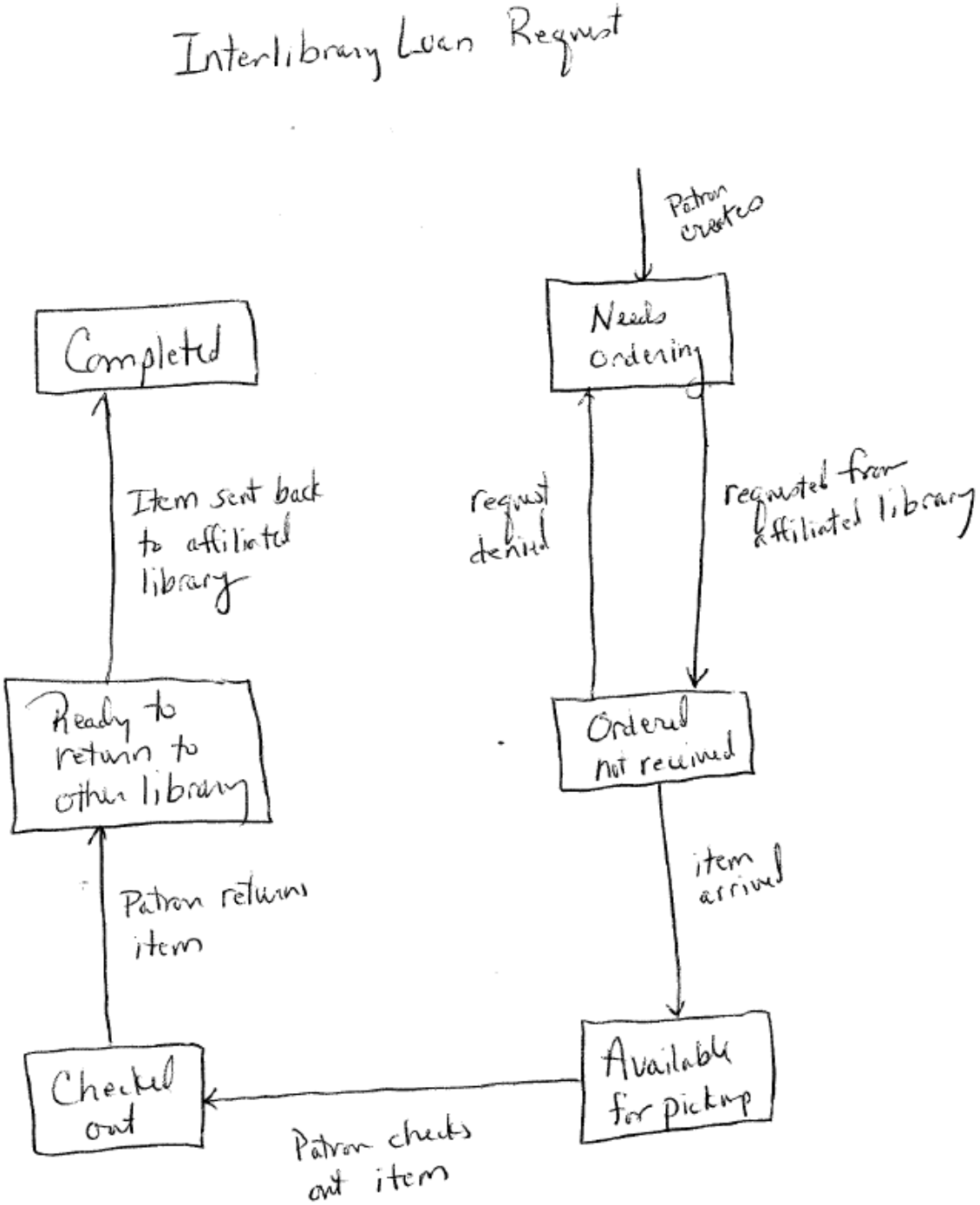
Requirements and Specification, ESOF 328, Spring 2022
Modeling Workshop, Jan. 31

Please turn the following in for a grade.

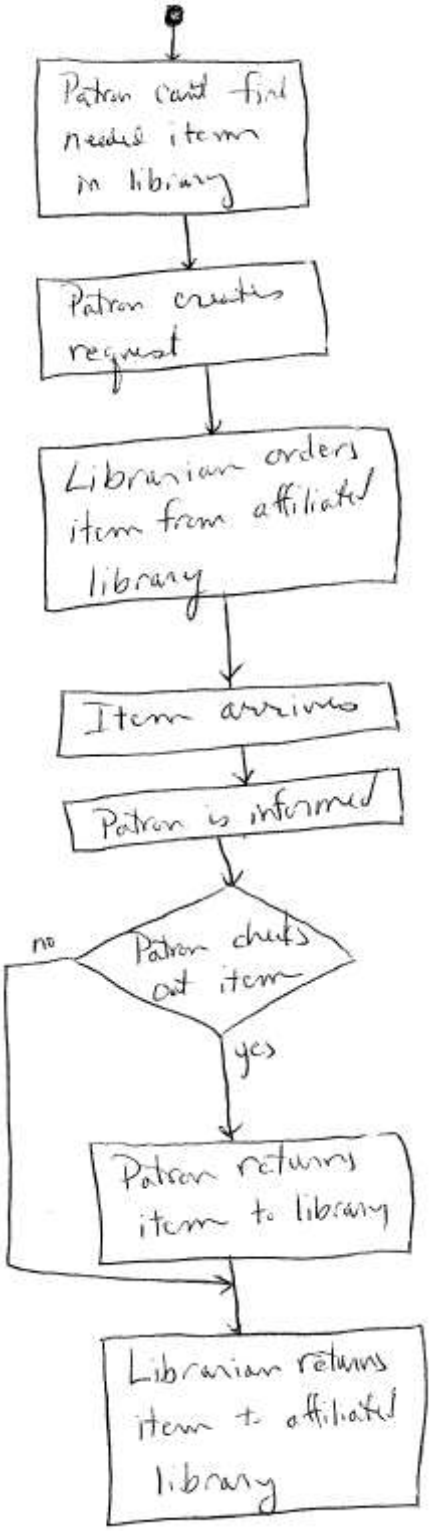
Imagine that you are developing requirements for a web-based interlibrary loan system for the *Whitehall Public Library* called *Trojan Books*. Following is a description of this system.

> When a library patron discovers that the *Whitehall Library* does not have a wanted item, the patron can go to *Trojan Books* on the web and request that item. If the patron creates an account on *Trojan Books* the patron can go to *Trojan Books* at any time and see the status of their item request. If that patron adds their email address to the account, an email message will be sent each time the status of the item request changes.
>
> When an item is requested, *Trojan Books* accesses a database determine if the book exists and reports to the user if the item does not exist. This database is outside *Trojan Books*, but for the purposes of this assignment, you can consider it within *Trojan Books*.
>
> Librarians at the *Whitehall Library* regularly check *Trojan Books* for item requests. Librarians attempt to get items from affiliated libraries. Librarians interact with *Trojan Books* when the item arrives at *Whitehall Library*, when the patron checks-out the item, and when the patron returns the item and the item is sent back to the affiliated library.
>
> If the patron does not have an account on Trojan Books, or they have an account, but that account does not include an email address, a Whitehall librarian will contact the patron to inform them that the item is available to be checked-out.

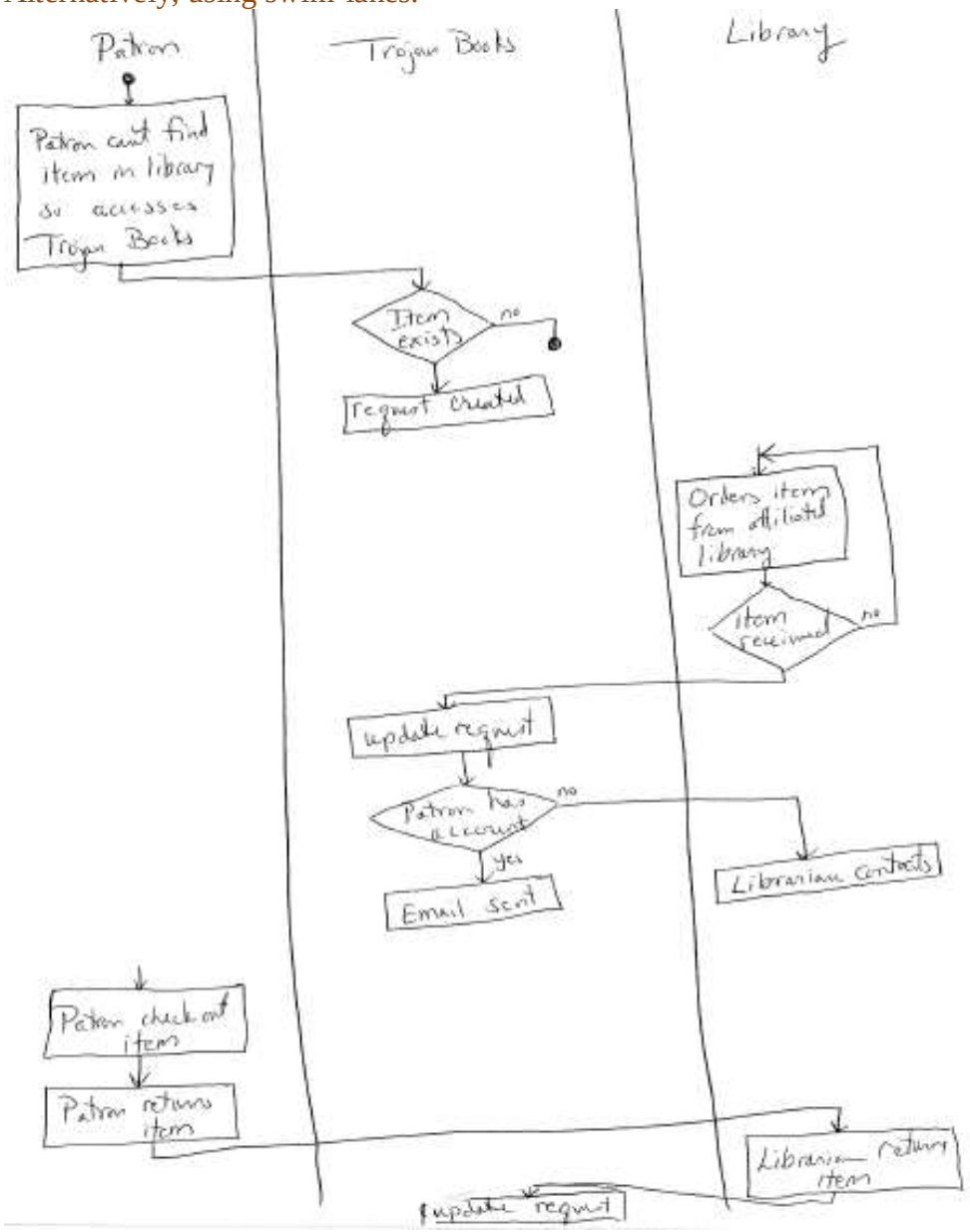
1. Create a state-transition diagram that describes the states of an interlibrary loan book request and how the request transitions from one state to another.



2. Create an activity diagram (possibly using swim lanes) that models how patrons request books from *Trojan Books*, how library personnel obtain those books, and lets the patron know that the book is available.



Alternatively, using swim-lanes:



3. Create a use-case diagram for *Trojan Books*, showing any roles and use cases which are likely to be needed. (10 pts.)