Case Study – 6 (40 points)

Name:

Clemson ID:

Submission: Save this Word document with your answers as a PDF file and upload the PDF file to Canvas.

(10 pts) Build an object model for the Book Exchange Project. You should have a super-class, class and subclasses. Remember, we are modeling the system level objects not low-level software objects. Your objects need to have both methods and attributes. (Fig 6.1, Fig 6.2 & Fig 6.6)

Administrator/Owner

Guest Attributes Temporary Username

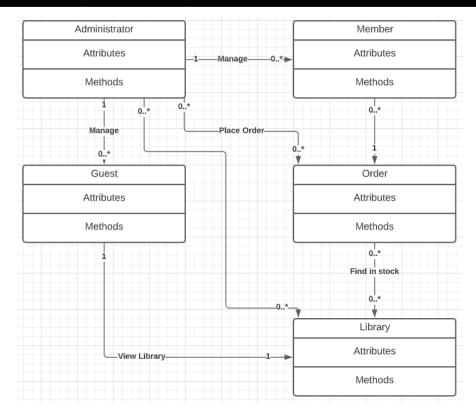
Methods

Person	User)
Attributes Name	Attributes	Administrator/Owr
Location	Username Location	Attributes Personalized Account
Methods View Home	Membership Status	Moderator powers Make App Changes
Contact Become User	Methods View Home	Payment Method
	Contact View Library	Methods Ban/Unban Post on forums Donate Books Receive Books Accept/Deny Donations
		Member
		Attributes Personalized Account Payment Method
		Methods Post on forums Donate books Receive books

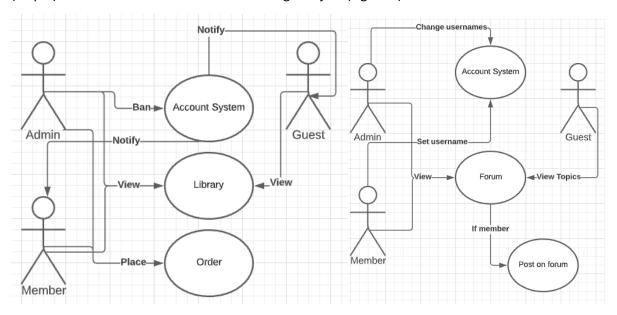
(10 pts) Build the class hierarchy diagram w/cardinality for the Book Exchange Project based on your object model above (Fig 6.17)

View Library Register as Member

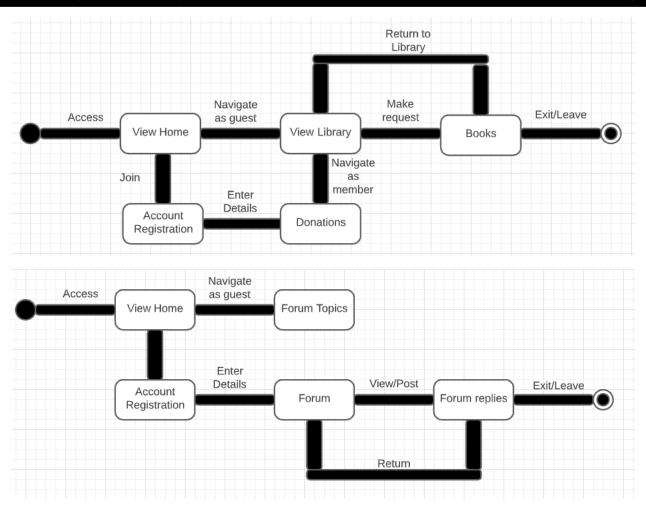
UML	Nature	Example	Example	Description
0*	Zero or many	Admin 1	Ban Member 0*	An admin can ban no or many
				members
0*	Zero or many	Member 0*	Donate Books 0*	Any number of members can donate any number of books
1	One and only	Member 1	Make account 1	A member may only have one
	one			account



(10 pts) Build 2 use cases for the Book Exchange Project (Fig 6.15)



(10 pts) Build 2 state transition diagrams for the Book Exchange Project (Fig 6.20)



Use one of the diagramming tools identified on the "External Tools Page" in Canvas.

More information on UML Class diagrams can be found at O'Reilly Learning in *UML Distilled: A Brief Guide to the Standard Object Modeling Language*, by Martin Fowler.