System Modeling

There are two major objects that will make a majority of our sub-objects. The first is the Equipment object which can be used to create different types of equipment. This includes but is not limited to: Raspberry Pi’s, computers, etc… The second major object is the Admin object which can be used to create different types of administrators that will use the software. This includes: Network Administrator, Graduate Teaching Assistant, and Instructor. [Answer what each object’s multiplicity is]. An Equipment object, Admin object, and their sub-objects each come with their own attributes. An Equipment object can contain: An “ID” to identify each equipment from one another, a “checkedOut” attribute that will contain the date and time that the equipment is checked out, a “checkedIn” attribute that will contain the date and time that the equipment is checked back in, and a “damaged” attribute that will by default display “Not Damaged” and will be updated with a damage description if it is. Each object also contains operations/actions that they can perform by default. The Equipment object contains a “checkOut()” operation that will check out that equipment, as well as a “checkIn()” operation that will check in that equipment. The Admin object also contains operations, such as: “addEquipment()” which allows Admins to add different types of equipment to the inventory, “removeEquipment()” which allows Admins to remove a particular equipment, “updateEquipment()” which allows an Admin to update a particular equipment, and “viewEquipment()” which allows an Admin to view a list of a particular equipment.

[Database Specs and Analysis]