You will develop a detailed specification document describing the purpose, users, use cases, workflows, features, and general structure of your senior design project software. You should begin by considering the most important interaction your application has with external things (e.g. people). Identify the users, what they want from your application, and how they should use it. Identify interactions with other external components such as libraries and hardware. Make sure to consider inputs and outputs and expected behavior.

Your final specification document must include the following:

1. A short paragraph describing your project's objectives
2. A list of users with a short description of each
3. For each user, the use cases that apply, including the actors, the pre-condition, and the trigger action
4. For each use case, a specific workflow using a list of actions taken by the relevant actors
5. For each use case, a description of the features and functional components by analyzing the associated workflow
6. A visual representation of the relationship between major functional components through control-flow and/or data-flow graphs as appropriate (use Visio, Gliffy, Omnigraffle, OpenOffice, or a tool of your choice)
7. The functional and non-functional requirements for all major components

As you define the specification, you may uncover new use-cases, workflows, and functional components. Capture as many as you can identify while iterating through these steps.

You must also prepare a screencast wherein you describe your specification. You will play the role of a senior developer describing the specification to another developer who will assist with implementation. The screencast need not cover all aspects of the specification but must minimally describe all major functional components and at least two workflows (with associated use cases) that exercise these components.

**Deliverable:** E-mail your specification and screencast to cctoombs@gwu.edu prior to the start of class on 11 September 2013. The subject line must read: “CSci 4243-4 HW4: <GW NetID>” where <GW NetID> is replaced with your GW NetID. For example, the subject line for a submission by Chris Toombs will read “CSci 4243-4 HW4: cctoombs”.

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CSci 4243-4: Senior Design

**HW4: Design Homework Part 1**