

## CSE4939W and CSE 4940 CSE Design Laboratory I & II

### High-level Project Specification

**DUE DATE: Wednesday, October 6, 11:59pm (First Draft)**

**Wednesday, October 13, 11:59pm (Revised Version)**

The Project Specification focuses on the initial and revised draft of a specification for your proposed project that will be continued to be corrected and updated over the entire period of the two semester sequence, and is organized in the following components:

1. **Product Backlog:** In the agile development process, a product backlog is an ordered list of *requirements* that is maintained for a product (see: <http://scrumreferencecard.com/>). The backlog consists of features, bug fixes, non-functional requirements, etc.—whatever needs to be done in order to successfully deliver a viable product. The *product backlog items* (PBIs) are ordered by the Product Owner (your team) based on considerations like risk, business value, dependencies, date needed, etc. Each item is accompanied by a short description of the functionality desired in a product. Identify an initial list of 7 to 12 product backlog items; note that this list may grow or shrink over the course of the year. Each item should be accompanied by a short description. You will consult this product backlog when coming up with a sprint backlog for each sprint scrum. A sample PBI and sprint backlog is shown at the end of this document where S=Small, M=Medium, L=Large, and XL= extra L.
2. **Purpose, Objectives, Goals:** This written document is intended for both designers and developers will contain the following sections: introduction on the purpose, objectives, and goals of the project; a description of the operating environment such as hardware, software, platforms, unique features, limits, requirements, etc. To provide you with some guidance on this process, the web page contains a document that describes a specification, its content, and its various sections (<http://sdcse.engr.uconn.edu/Cse4939W/ProjArchSpec.pdf>). At a minimum, it is expected that this section contains an Introduction, Glossary, Operating Environment, Information, Security, and Performance.
3. **High-Level Software Architecture Diagram:** A diagrammatic figure that demonstrates the overall system and its components, also explaining hardware, software, technologies, architecture style (e.g., client server, cloud, web app, embedded, etc.). This diagram is often part of the Introduction and/or Operating Environment sections.

The document that contains the three items above is expected to evolve over time as new items are added over time. Thus, with every increment there will be updates needed to this document. In writing your first draft of the specification, you are to limit your response to between 6 to 8 single spaced, 12 pt pages, with 1 inch margins on all sides. You also may have up to 5 additional pages if they represent various diagrammatic and functional views of your application, e.g., general system structure, software architecture, etc. Note that by the end of the year, we expect that you will have a robust specification (20 to 30 pages) that tracks all of the requirements of the final deliverable that were added incrementally to this document over time. Samples of this document for three prior teams are at:

- Team A: <http://sdcse.engr.uconn.edu/Cse4939W/TeamASpec.docx>

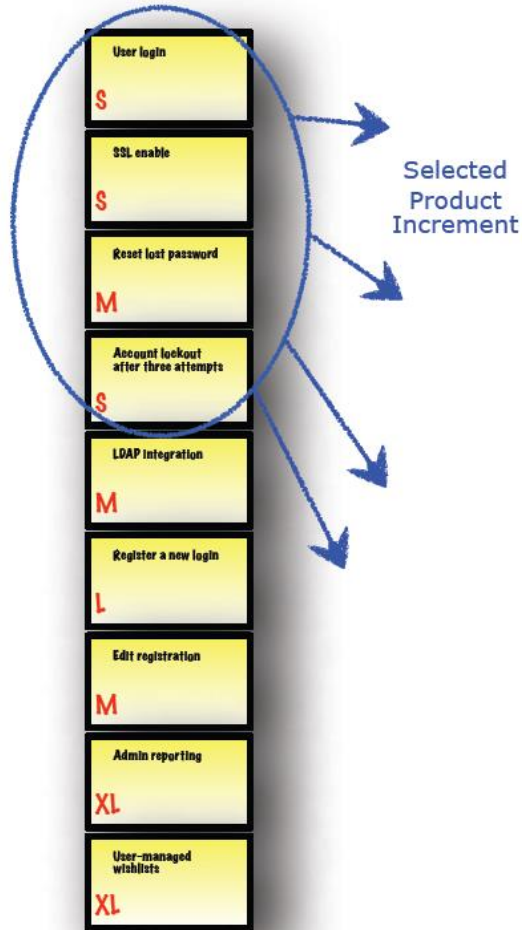
- Team D: <http://sdcse.engr.uconn.edu/Cse4939W/TeamDSpec.docx>
- Team G: <http://sdcse.engr.uconn.edu/Cse4939W/TeamGSpec.docx>

Note, that as a team, you must clearly identify (using first initial and last names) who wrote which sections of the specification. The Introduction and Glossary are to be shared sections done by all team members. For the Glossary, each team member should place initials next to the terms that s/he defines. The other required sections on: Operating Environment, Information, Performance, and Security, are to be split equally among team members, with each member solely responsible for at least one section. Clearly identify who did which section.

For this project, your team must be sure that you have enough expertise to qualify as both an expert and a “customer” in the area, in addition to your role as a software engineer. Your team should have chosen an application that is sufficiently complex, and would require a significant team effort for developing its solution, starting in this semester, and continuing in the next semester.

The first draft of the initial specification is due on Wednesday, **October 6 11:59pm**, and the instructor will provide you with feedback and input on the content, approach, etc. Using this as a basis, a revised and expanded version of this initial specification will be due on the Wednesday, **October 13 11:59pm**. This revised initial specification will be used as the basis to evolve with each increment. The course web page contains two examples from a prior offering of CSE4939/4940 on the specification.

# Product Backlog



# Sprint Backlog

