

## CSE 403 – Winter 2011 Assignment 3 - SDS

**Due date:** Presentation due Fri Feb 4<sup>th</sup> before class. SDS Document due Fri Feb 4<sup>th</sup> before 11pm . Use the Turn-In link on class web page for both.

**Presentation dates:** Fri Feb 4 or Wed Feb 9, and Mon Feb 7

### Overview

You have already worked to define a system you will deliver by the end of the quarter. The purpose of this next team assignment is to accomplish the detailed architectural design and phased product delivery plan for your system, before you implement your ideas in code. A common name for this document is a System Design Specification (SDS), although in our case, we are augmenting the design with planning components.

After you complete your SDS, you will present it to your customers, convincing them that:

- you fully understand what it is that you are building;
- you have a solid idea how to approach building it; and
- you have the resources to do so in the time available.

### Deliverables

You will find yourself referring to your SRS as you detail the system architecture and plan. We expect to see the following components in your SDS. Please refer to the template SDS, on the class web site, for more about each component.

#### 1. System Architecture

This is a detailed definition of the system and software components. It will carefully and clearly identify the major modules and interfaces between modules required to implement the system. It should incorporate the design principles discussed in class. It should address the design of the system from the customer's viewpoint, as well as that of the developer or administrator.

For full points, the definition must include at least two views of the system architecture, with one view being a UML class (object) view. You also must include two UML sequence diagrams outlining two of the use cases from your SRS. If you use a database or datastore, outline the high-level schema.

#### 2. Team structure, schedule, task assignments and risk assessment

Describe your team structure (how you have organized the team, what are members' roles and responsibilities), elaborate on milestones (external and internal), define tasks, and specify the team member responsible for each task. This should reflect your *actual* plan of work, including items your team may have already completed.

Identify the top five software development high-risk areas of the project along with an analysis showing why you believe they will not become “show stoppers” for the project, and what your risk mitigation paths would be if they arose.

### 3. Test and documentation plan

Describe what aspects you plan to test and why they are sufficient, as well as how specifically you plan to test those aspects in a disciplined way. Discuss unit test, system test, and usability test strategy, along with specific test suites identified to capture the requirements (SRS). Identify the mechanism that you will use to track bugs that occur during use and testing.

Define the documentation that you plan to deliver with the system, e.g., user guides, admin guides, man pages, help menus.

### 4. Overview presentation

A set of PowerPoint slides summarizing the SDS elements (items 1, 2, and 3, above) for your product. This is the presentation that you'll give to your customer (and the class), convincing them that you're on track for a successful delivery. Please start with a brief recap of the product's purpose. You will have ten minutes for the presentation. Michael Ernst, a CSE professor, wrote up some nice notes about giving a technical talk. See <http://www.cs.washington.edu/homes/mernst/advice/giving-talk.html> if you'd like some hints.

Note that the SDS will be a *living document*. You will be asked to provide updates to it at periodic points in the development cycle. As part of developing the SDS, you may need to revise your SRS. Keeping these documents up to date with changes as they happen will make it easier to keep your team and customers in sync, and to meet your later deliverables.

### **Deliverables and Grading**

You will be working as a team for this assignment and have one deliverable package for the team. Please use the template SDS on the class web site as a starting point for your SDS document.

Have one person from your team submit your deliverables together so that all files will be stored in the same place. The preferred names for these files are *YourProjectName\_SDS*. [doc|pdf], *YourProjectName\_SDSPres*. [ppt|pdf]. Please have all group member names visible in each file. Use the Turn-In link on the class web page to turn the material in.

***This assignment is due Friday February 4<sup>th</sup>: Presentation before class SDS document before 11pm.***

In evaluating your work, we will be looking to see that you have addressed all the necessary elements of an architecture, covered well the planning material described above, and made reasonable decisions related to all project components.