

CSE4939W/4940 CSE Design Laboratory I & II

Prototyping and Management Plan

CSE4939W: Three Prototypes; Week 9 – Week 11 - Week 14

CSE4940: Four Versions: Weeks 5, 8, 12 and 14

Prototyping and Management Plan: For each prototype, you must identify the major components of your system that are to be designed/ implemented. These components can be listed as bullet items with short explanations. Clearly, later prototypes will include the functionality of earlier prototypes. Estimation is always a difficult task in any software project. When defining the functionality of each component you should avoid being overly optimistic by erring on the side of caution. Remember, it's usually better to underestimate your capabilities and deliver either intended functionality earlier or more functionality on time. To accomplish this, you must assign final implementation responsibilities among the team members. For each component and sub-component of your project you need to clearly identify the division of responsibility by outlining the components of the system each person is designing and implementing. In addition to identifying individual responsibilities, it is also necessary that you develop a preliminary integration plan to understand the transition between your three prototyping versions. In this case, you are performing a form of risk management by identifying potential problems before they occur. The two facets of the management plan are summarized as follows:

1. Clearly identify each person's responsibilities in the implementation by indicating exactly which components of the system each person is implementing and the boundary (interfaces) between the components. Include an indication of the components that each member is implementing either as a primary or a backup software engineer.
2. You must design a plan for integration of the individual components of the system. The integration plan must include concrete, ordered steps for the integration as you transition through all prototyping versions. You must identify any problems anticipated during the integration process and include a discussion of the potential problems.

Your plan will need to include three prototypes for the end of the first semester (weeks 9, 11 and 14) and seven prototypes for the second semester (CSE4940 5, 8, 12, 14) with the last prototype being a beta version. A sample plan with three prototypes shown is on the web page.

Prototype Presentations and Reports: Each prototype will require the following:

- **Presentation and Demonstration:** A presentation that reviews your project goals and objectives (including overall architecture, technologies, screen shots, etc.), the functionality you intended to implement (based on your prototyping and management plan), the functionality you actually implemented, the changes to the subsequent prototypes for the remainder of the project (revision of the prototyping and management plan), and a demonstration of the prototype and its functionality. The initial prototype may have separate components with minimal interactions while the final prototype should be fully tested and integrated.
- **Assessment:** This is a team document that is submitted to address the following issues:
 1. Update of the prototyping/management plan that clearly shows your progress.
 2. Impressions of the language/technologies chosen and their ease of use. Include both positive and negative impressions.

3. Evaluation of languages/technologies against software reuse and software evolution concepts.
4. Critique of teamwork experiences - what has worked and what hasn't.

Three sample prototype reports and presentations are posted on the course web page.

There are three deadlines for this project.. The initial version of the Prototyping and Management Plan is due at the **ninth class**, and the instructor will provide you with feedback and input on the content, approach, etc. Using this as a basis, a Prototyping and Management Plan that addresses the instructors comments will be due at the **tenth class**. A third and final version of the Prototyping and Management Plan is due at the **fourteenth class** and should outline the prototypes to be delivered for the CSE490X course in the following semester.

Project Deadlines for CSE4939W Prototypes (Subject to Change)

1. Week 9: Select and Demonstrate technologies, install them, screen mocks or other working components
2. Week 11: Continue to expand functionality
3. Week 14:
 - Expand functionality
 - Organized Code Repository
 - Set up for Second Semester Implementation

Projected Prototype Deadlines for CSE4940 Prototypes (Subject to Change)

All Prototypes will have a reported delivered as described on previous page outline progress, status, and planned work.

1. Week 1: Demo of Project/Adjust Tams
2. Week 2: Revise Design Based on PT Efforts in 4939W
3. Week 4: Assessment of Realistic Issues
4. Week 5: Increment with Testing
5. Week 8: Increment with Testing
6. Week 12: Increment with Testing
 - a. Alpha Version
 - b. Changes/Improvements Finalized
7. Week 14: Increment with Testing
 - a. Beta Version
 - b. Final System Testing
 - c. Presentation at SDP Day
 - d. Final Project Report for Semester