Computer Science Capstone Design

Assignment: Full Prototype Milestone

(100 pts)

Overview

A major milestone in any project is the production of the first fully-functional prototype, typically called an "alpha prototype". **The defining characteristic of the alpha prototype is that everything works**, i.e., all core functionality has been substantially implemented. Although still rough around the edges in terms of interfaces (color schemes, layouts, icons and other visual elements), the product can be used "as intended" from front to back, meaning that all user flows are completed and are basically functional. This milestone thereby marks a major project transition from a main focus on implementation of core functions, to testing, debugging and refining those functions.

This is also an important milestone in terms of client confidence in your team. After many months (and, in the real world, substantial investment of funds) of requirements acquisition, basic design, and implementation of small pieces and modules, the alpha prototype is the first moment at which the client really sees the project "coming together", with access to a real piece of software that can demonstrate a preliminary but coherent vision of what it wills feel like to actually use the targeted product.

Assignment specifics: What to do

The overall goal in the alpha prototype milestone is simple: the team must demonstrate implementation of all core functions of the product *as a coherent solution satisfying all core use cases*. **This last point is important. You don't just do some set of individual "module demos" to check off key functions, you have to show the product "in action"**, i.e., being used exactly with exactly the user flows that were envisioned during the design. This goal creates the foundation for planning, demonstrating, and evaluating this deliverable: working with your mentor, you will develop a "demonstration plan" that details, for each major product use case, the detailed user flow for that use case, i.e., the step-by-step process that a user will go through in completing that user flow. This will then serve as the outline for your actual live demo to your mentor, as well as the grading sheet for evaluating demo completeness. Note that in many cases there will be *multiple* use cases for the product, e.g., a use case for a "normal user" using the product, a different use case for tasks an "admin user" will want to do, and another user flow for "guest users". The number and nature of use cases varies by project, of course; the point is that you have to cover all core user flow for your project.

Important note: The demo plan here is just a guide to make sure you hit the major functions; it is not a guarantee that nothing else will be asked or demo'd! Your product must be a fully functional alpha prototype; mentors/clients evaluating the product should be free to deviate from the plan to use/view any function that catches their interest. Be ready!

Just as for the fall demo, there is a MSWord template for creating your demo outline linked on the BBlearn schedule. Here are the specifics of what you need to do:

Specifically, here's what you need to do:

1. Schedule a time to give the Full Prototype Demo with your team mentor. This may be scheduled any time before Spring Break.

2. Download the Demo Grading Sheet template and flesh out the missing parts. Basically you'll need to briefly review your major use cases and then, for each one, walk us through the entire use case.

3. Send your completed Demo Grading Sheet to your mentor for review **at least one week in advance** of your planned demo date. Your mentor may ask you to add/upgrade certain missing/vague aspects of your demo plan, so be sure to start on this right away to allow time for upgrades. You must receive an explicit "OK, I approve this demo plan" from your mentor **before you schedule a demo date!**

4. For the scheduled demo: **Bring a hardcopy of your agreed-upon Demonstration Plan with you** for your mentor; it is meant to be used by your mentor for his/her notes, and ultimately as the grading sheet for the quality of your demo.

Deliverables

- A live in-person demonstration of your software demos for your CS Faculty mentor, following the established Demonstration Plan.