

Team Assignment #6: Final Prototype & Report

For this assignment, you will design and implement your final prototype, and prepare a final report.

I. Assignment Instructions

1. **Review your requirements.** Review the requirements that you identified in T4. Your requirements must directly inform the design of your prototype. As such, your team should revisit your requirements as you decide on the form and function of your prototype.
2. **Create a design framework.** Based upon your established requirements, create a design framework to convey the overall structure of your users' experience (refer to CRC Ch5). Your design framework should have two components: a) an interaction framework and b) a visual design framework. Make sure to explicitly reference concepts learned in class as you describe your motivations behind your various design decisions.
 - a. **Interaction framework.** This should indicate:
 - i. your app's form factor (mobile app), posture (e.g. transient, sovereign, etc.), input methods – and how each of these elements will impact your design (for example, the constraints and affordances of each).
 - ii. the functional and data elements (what are these elements and what is your rationale for their inclusion? How are they helping you meet your persona's needs and your design requirements?)
 - iii. functional groups and hierarchy (how are your functions and data organized in the interface, and what is your rationale for this organization?)
 - iv. sketch of the interaction framework (high-level sketches of the interface components and screens)
 - v. 2 key path scenarios
 - vi. 2 validation scenarios: these can be alternative and/or necessary-use scenarios. Clearly indicate whether your scenarios are alternative and/or necessary-use scenarios.
 - b. **Visual design framework.** This should indicate:
 - i. Your experience attributes. Choose 3-5 adjectives to describe the tone and voice of your app. Provide a brief description as to why you choose each adjective.
 - ii. Your "visual language". You must specify the colors, layouts and fonts that you will use in your app. You can also specify any other standardized design elements that you have decided on (e.g., particular shapes, iconographic styles, etc.). For each element in your language, specify why you have chosen it and how it will help you achieve you experience attributes. You are encouraged to do a visual language study, examining existing products or other sources of inspiration for ideas.
3. **Create your software prototype.** Using your interaction and visual design frameworks as a guide, create a software prototype. This prototype should be high-fidelity in look and low- to medium-fidelity in feel.
 - a. **High-fidelity in look.** This means that the visual appearance of the prototype is your primary focus: it should look like a "production quality" interface, and it should visually display all functionality and content that users will interact with. Relatedly, users must be able to navigate to all screens in your interface. Care should be paid to the elements of visual design covered in class (e.g., color, organization, grids, size, shape, excise, etc.).

Your goal is to produce a high quality interface that is creative and innovative, exceptionally usable, aesthetically-pleasing, well-organized, and that meets the goals and objectives reflected in your persona and design requirements.

- b. **Low- to medium-fidelity in feel.** Your interface may not be able to support all of your envisioned user interactions. This is OK. As described above, your goal is to visually convey all of the functions and data elements that your system would support, and enable users to navigate to the various screens in your interface. You can then simulate system responses to user interactions (*e.g.*, well-designed, aesthetically pleasing popups), to demonstrate how your system would work. You must either simulate or implement every feature in your interface (that is, something should happen when clicking/pressing every interactive object in your system).
4. **Create your final report.** Your report should contain the following:
- a. Part A: Background
 - i. Succinctly summarize the problem that you have been addressing through this semester project (no more than two paragraphs). You may use your T1 assignment to help you here, but for T6, you should provide a very short summary of the problem space.
 - ii. Make sure to appropriately cite related work and include a bibliography at the end of the report.
 - b. Part B: Design Requirements & Persona
 - i. State your final functional (3) and non-functional (3) design requirements, briefly summarizing why each is an important requirement (that is, how your data led you to these requirements).
 - ii. Include your final persona specification
 - c. Part C: Design Framework
 - i. Provide the written description of your interaction and visual design framework, and digital copy of your sketches, as described above. Make sure to explicitly reference concepts learned in class as you describe your motivations behind your various design decisions.
 - d. Part D: Prototype
 - i. Provide a link to your software prototype (which should be created according to the guidelines above). In grading, we will be looking to see how well you have translated your design framework into a digital representation. Have your ideas been well-translated onto the screen?
 - ii. Write an overview how your prototype works, using screenshots to illustrate the functionality and convey how the user can navigate the app.
 - iii. Describe the internals of your implementation—what programming languages, frameworks, etc. did you use to develop your prototype? Discuss important design decisions you made in the implementation: did your choice of programming languages, for example, impact your design decisions? Also discuss how implementation problems may have affected the usability of your interface.
 - e. Part F: Discussion
 - i. Reflect upon how your initial ideas for an app (T1) were similar to or different from the design requirements that you ended up with and your final prototype.
 - ii. Discuss what you learned over the course of the iterative design process in this team project. If you did it again, what would you do differently? Here, do not focus on the specific design decisions of your project (which you already discussed

- above). Instead, focus on the meta-level decisions about your design process (*e.g.*, your data collection and analysis processes, the design ideation process, etc.).
- f. Finally, provide a few sentences describing each team member's contribution to this assignment.

II. What to Turn in

- A. **Your final report (PDF)**, as described above.
 - a. Your report must **be a MAXIMUM of 10 single-spaced pages**, total. Minimum font size is 11pt and margins must be 1" around. No exceptions: content over 10 pages or not conforming to these specifications will not be read. This page limit does NOT include references and the interaction framework sketches. All other content (persona, screenshots etc. are included in the page limit).
 - b. **Remember that you should make explicit references to course readings and/or lecture topics throughout the report, to show that you are able to apply these concepts.**
 - c. Also remember to carefully proofread your submission: Clarity, grammar, spelling, and overall readability will be assessed.
 - d. In addition, you must carefully organize your paper so that it is blatantly obvious how you are addressing all required components.