

Deliverable: #1 - Project Proposal

Title: SE2: Software Design and Architecture (CS 446, ECE 452, CS 646).

Description:

This term's project will focus on building mobile apps. The app should be implemented as a Native Android app (i.e., not built using an app builder or a framework like React/Node.js or HTML5). The app must be useful, it must take advantage of being on a mobile platform (e.g., utilize and integrate with *several* services offered by the device), and it must run on a mobile phone (tablet support is fine, but it must be demoed on a phone). Apps cannot require crowd buy-in (e.g., it must be useful even if the app has only one user), they cannot simply replicate the functionality of a website, and they must not be simple CRUD apps. Finally, the app should use at least two architectural styles and two design patterns that have been covered in the class.

The project proposal is a description of what you intend to accomplish over the rest of the term for this project. It should describe your system and what you intend for it to do. Emphasis on projects that are interesting/useful is preferred; use this project to build something that excites your team! A scaling factor will be applied to the final project grade to account for its difficulty and your individual effort as part of the team; we will provide feedback on this aspect of your proposal so you can have an approximate idea of what this factor will be if your team completes the proposed work in a completed app. If this is going to be below a certain threshold, then we will suggest an idea for you to implement. The scope of the project should assume at least six hours per week development time (e.g., six team members x six hours per week x ten weeks = approximately 360 hours in total). This should be enough time to complete an interesting project.

Document Requirements:

1. Page 1:
 - Metadata: Project title, team member names, team member Quest IDs, Private Github repository link.
 - What is your project?
 - Why is it interesting?
 - Describe and justify your project selection.
 - Why does this project make sense in a mobile form factor?
2. Page 2-3:
 - What are the functional properties of your system. Numbered point form is fine (e.g., 1, 1.1, 1.2).
 - Provide at least two user scenarios to describe how a user would interact with your system and what the benefit to them would be. These should each be 1-2 paragraphs and can refer back to your numbered functional requirements.
 - Choose an appropriate architectural view (e.g., sequence diagrams) to represent your scenarios.
 - A description of the non-functional properties your system needs to support. There should be at least two of these. Justify why these properties are important for your system.
 - NOTE: We will compare your architecture and final demo against these functional and non-functional properties.
3. Page 4:
 - A set of low-fidelity mockups. Sometimes a set of simulated screenshots / hand drawings can make describing the system easier. You can forward reference these from the functional properties / user scenarios as required.
4. Page 5:
 - A Gantt chart with the expected project schedule and what each team member is going to do represented in the Gantt chart.
5. Only one team member needs upload this document to Learn. PDF only.
File naming scheme: cs446-d1_<project-name>.pdf (use - instead of space in file names)

Assessment:

This deliverable accounts for 5% of your final grade.