

CS4366: Senior Capstone Project Fall 2025

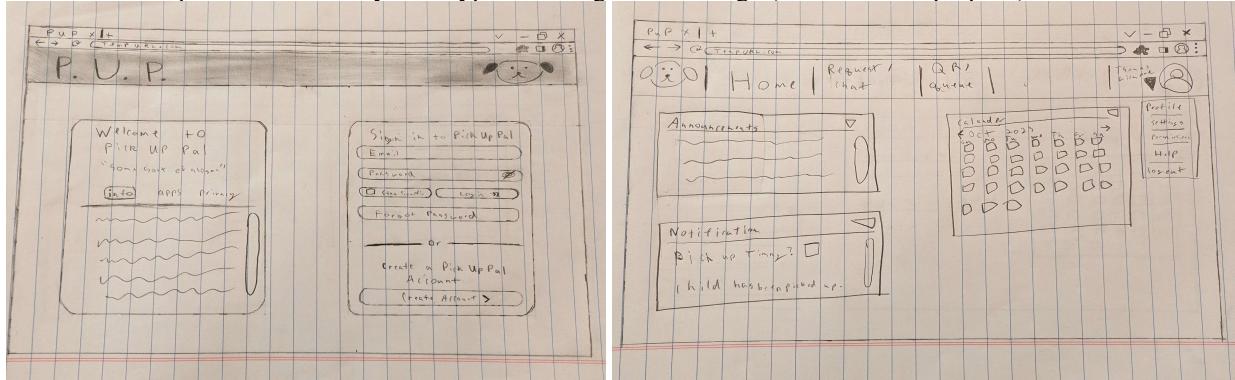
Stage 2: Software Design Specification (SDS)

- Release date: Sep 30, 2025
 - Due dates: Oct 23, 2025 (**Thursday**) before 11:59 PM
 - Submit report (e.g., Word) and presentation slide (e.g., PowerPoint) files through the Blackboard.
 - Update the group webpage that include:
 - Group members and their roles for this stage
 - Group meetings and activities
 - Upcoming schedules
 - The file names should include project number and group_name, “stage#_group_name”. For example, stage2_MyGroup.doc and stage2_MyGroup.ppt.
- Total score 30%
- Type your all team members’ FULL name in the cover pages of project report and presentation slide.
- NO hand-written project report will be accepted.

Description

First, analyze your system and decompose it into a set of modules (objects or subsystems). Use UML diagrams to represent the modules and their relationships. In the UML diagrams, in order to better understand your system, provide (a) class diagram(s), (b) use case diagram(s), and (c) sequence diagram(s). (ii) Second, explain the class/object/modules for each diagram. (iii) Finally, think about how your system’s interface might look. Design an initial version of user interface using any tool or even your hand-drawing would be okay – low fidelity prototype. Include several screen shots in your report with functionalities. Follow the golden rules for UI designs (will be discussed in class).

Here is an example of Low-Fidelity Prototype sketching out the design (for a different purpose).



Deliverables

In this project, you should

- Submit a report (letter size; 11 font size; single-space) including,
 - Project description (1 paragraph)
 - System analysis and decomposition: UML diagrams – class, use case, and sequence diagrams
 - Low-fidelity prototype
 - Implementation plan (at least half page) including testbed, programming language, any development tool/device, etc.
- Prepare a 10 - 15 minutes presentation slide accordingly and present your system. The presentation schedule will be announced later.

Grading policy

Your project report and presentation slide should look professional in the sense of completeness, clarity, consistency, and labeling. You may use pictures, graphs, and tables if they can help. You will be evaluated based on the followings:

- Clarity of UML, class, use case, and sequence diagrams
- Clarity of low-fidelity prototype
- Quality of project report
- Quality of presentation slide (10 - 15 minutes)