

# EE461L - Software Engineering and Design Laboratory

## Project Proposal

### Objectives

In this project, you will use the skills acquired through lectures and labs to create **a working web application or a working Android application**. Our goal is to help you gain insights into the process of software design and implementation by working on this project. First, you will start by identifying the requirements from users' perspectives. Then you can design a solution and create a working prototype of the solution. Finally, you may identify key issues around and take the prototype into a useful product.

It is important that the team produces a working, testable implementation of the proposed app. Thus, when proposing an application to implement, the team must investigate whether the application is feasible to implement and whether the team has capability to do so. So please make sure to propose requirements such that the implementation could be completed in time and you are able to demonstrate the implementation in a live demo during the final presentation. Thus, it is important to find a good balance between creativity and feasibility!

**In this report, you will propose a new web application or Android application. Your report should include the following sections.**

Project Title:

Team Members:

UT EIDs:

Repository URL:

### 1. Motivation

You must include a description on what the problem is, why users need the proposed app, and what your vision is for solving the problem.

### 2. Feature Description and Requirements

You must include a description of the feature and its requirements. You can start with two to four user stories. You must include a UML use case diagram to specify your functional requirements. You must also include a state chart diagram to specify behavioral requirements. You may specify other non-functional requirements such as performance, usability, etc. as necessary. Please include mock-up screen snapshots of the proposed application and describe the associated user interaction scenarios, so that the teaching team can understand the proposed features.

### 3. Design Document

You must describe your preliminary design by including class diagrams showing your design classes and their relationships. If your team is leveraging existing libraries or technologies to

implement the proposed feature, please include specific descriptions of those libraries and technologies to be used and how they will be integrated into your application. In addition, you must include a brief testing plan to specify the key functionality you will be testing for, and the data you need for testing. You may also provide a tentative timeline of your work, including key dates.

#### 4. Feasibility

You must include a detailed description of how it is feasible to implement the proposed application. Here are several common factors that could lead to software development failures:

- A lack of familiarity with APIs
- A lack of familiarity with web app or Android app development
- Too many features
- Third party APIs/services that may not be reliable to use

**In your report, you must specify each member's contribution for this project proposal.**

Useful APIs, Services, Technologies:

- HTML, CSS, HTML Forms, Java URL, Java Sockets, SQLite libraries
- Tomcat, Java Jetty, GSON, Java Entities, jQuery, OpenCV, Django, GWT, Quartz, HTMLparser, Junit, iText, Java Runtime
- Balsamiq, Adobe Fireworks, Visio, ImageMagick
- Facebook/Google single sign on, cloud storage, SMTL provider, SMS service
- SVN, Git, Google Docs, ANTLR (NLP), Junit, Selenium, Lucene
- log4j, Servlet engine, HTML DOM Parser, JavaScript, UI libraries, AdWords, FBAds, Twitter, OpenSocial, GNIP, Socket.io, Node.js, Google Maps API

## Submission

Your team must create a repository for your project, and include 461L teaching staff as a watcher (with read permission).

Please submit **proposal report** and **presentation slides** electronically on Canvas **before 11:59PM** on the due date, **February 22 (Monday)**. The submission is per team, and there is no need to submit individual reports per person.

### Report Format

11pt font, Max 5 pages, including all figures, screenshots, etc.

### Presentation Format

PPT, PDF, or Keynote. 8 minutes. (In-class presentation, in the week of February 22)