CS 35L Project Proposal

Team member names, preferred email addresses, and assigned section and TA

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- Assigned Section: 1B

- Assigned TA: Shi, Z.

Project name or Team name, if you have one

- UCLAble
- [UCLA] RampWay

What platform will your application run on, that is, is it a web application, iOS application, Android application, etc.

- UCLAble is planned to be a web application. We intend to develop using MongoDB, Next.js, React, Prisma, and Node.js.

What does the application do? Describe its main functionality in a few sentences.

- The application is designed to improve accessibility on UCLA's campus. It enables users to:
  - register and authenticate themselves
  - report accessibility issues,
  - view recent incident reports,
  - upvote issues that matter to them

- By addressing the primary concerns of students on campus, UCLAble aims to offer a user-friendly and centralized solution that is invaluable to members of the UCLA community for navigating the campus.

What motivated the project idea? For example, is there a particular pain point you are looking to solve?

- Roughly 15% of UCLA students reported having some type of disability. We wanted to create an app that empowered differently-abled people to thrive and navigate UCLA with

ease. Although UCLA is the smallest UC campus by land area, it can be difficult to navigate if somebody has a disability, especially if there are unforeseen closures in their typical route around campus. Our web app plans to address this by creating a system to report recent changes to accessible routes across campus (ex. construction on the Royce Hall ramp). If somebody was searching an UCLA specific location, our app will indicate the accessibility options nearby.

In what way does the application display dynamic data to the user?

- The application allows users to report accessibility related issues for a specific location (lecture halls, etc), allowing real-time updates to dynamically display new reports as they are added. This is also applicable to cases such as filtering and sorting via location, user upvotes and downvotes.

In what way does the application upload data from the client to the backend server where it persists?

- When a user submits a report, React components make a POST request to the backend server with the user post data as the request payload. The backend server can then persist the data in a MongoDB database. This will similarly be employed for ratings, user authentication, and uploads.

In what way does the application meaningfully search through server-side data?

- When a user searches for a UCLA-specific location, the backend server can query the database using filters on accessibility features for the specific location (elevators, wheelchair-friendly ramps, restrooms, etc). The server can then return the relevant data to the client.

In what way does the application address security issues?

- Users should be able to securely register and login to the application with accounts created using their university email and password. This authorization would ensure that all issues are reported by trusted users.

What are the [at least] three other distinct features of our application?

1. Users should be able to upvote/downvote reports which will change its visibility and the authenticity badge users see when they view it (based on a predetermined threshold).

2. Users should be able to bookmark or save locations for later viewing and easy access.

3. Users should be able to toggle between light, dark, and high contrast mode for accessibility.