Team Number: 9

Team Members: Alice Kuang, Eva Morrison, Brooke Jackson, Minh Thong Pham, Minh Huyen Nguyen

Project Name: HelpMate

Project Synopsis:
A calendar reminder system that will have different categories of alerts to help students manage their health, academics, social events, and travel.

Architecture (or Design):
When the user opens the app, they will be brought to a login page. If they don't have an account, they will have an option to create one. When they create an account they will provide a username and password as well as an answer to a security question in case they forget their password in the future. The user will also have the option of changing their password if they already have an existing account. If the user has forgotten their password they can select the "forgot my password" option and answer a security question to retrieve it.
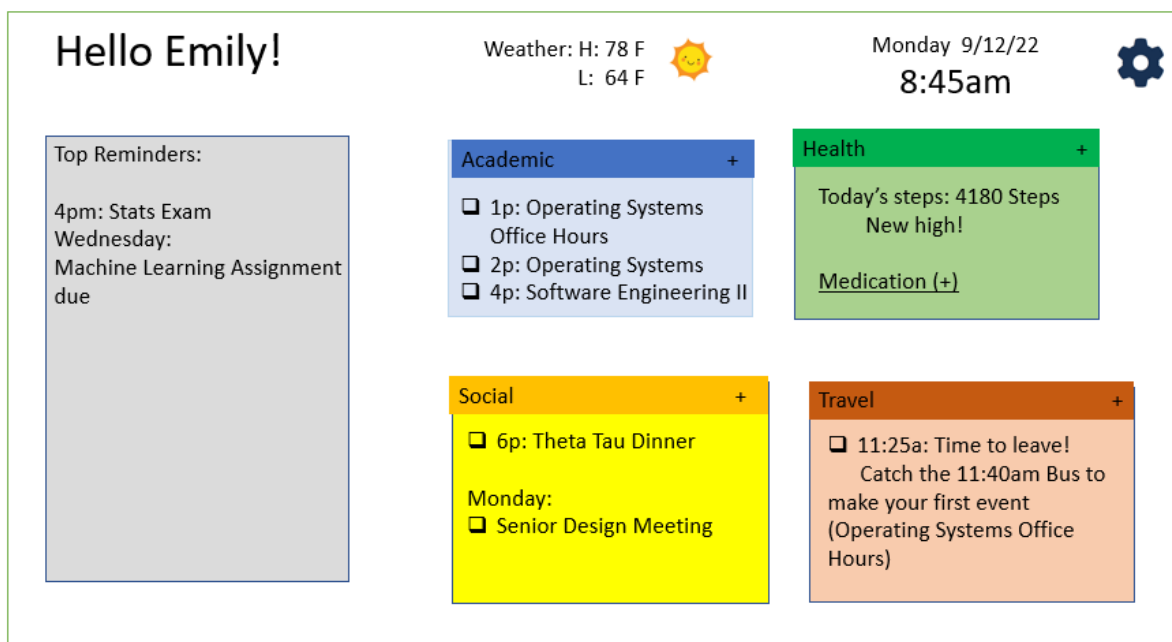
Prototype of the homepage.

Once users log in successfully, the main dashboard (illustrated by the prototype above) will appear. The users now can have access to their previously saved plans and are able to customize their applications. Users can arrange events based on the level of importance by starring events, so they will appear in the top reminders module.

Clicking on each module will also open a new page in the dashboard, giving a more detailed overview of each module (Health, Academics, Social and Travel).

The Health Module shows the summary of current health statistics on the homepage. These include the number of steps taken, the number of days exercised for the current week and viewing recurring health reminders. The user can also view upcoming reminders as well as add new reminders.

Academic Module will have homework and class events with top priority on that day, and allow users to mark if they have completed the events.

A Social Module shows social meetings such as family meetings, hangouts, and extracurricular events.

Finally, the Travel Module allows users to store their travel plans, add their tickets with a QR code scanner, and receive pop-up notifications before their flights. Users have the flexibility to keep or delete or change events/tasks corresponding to their plan.
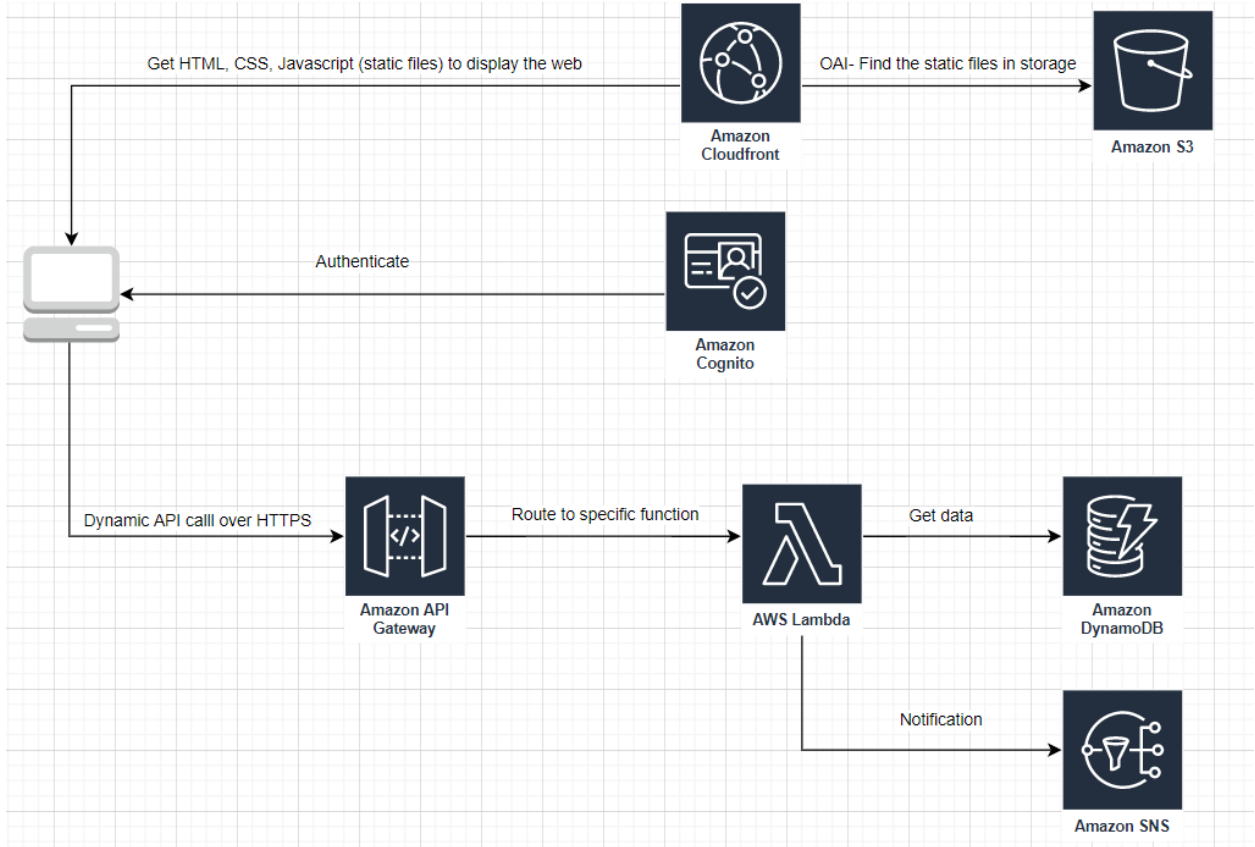
From the home page, users can also access "settings" (gear in top right corner of prototype). Settings will give the user access to the controls of the app and allow them to view their personal information. From there they will be able to change their username, password, and their answer to the security question. The users will also be given an option to change the look of their home screen if they wish. This includes the setup of the Modules as well as the color scheme.

The following is a User Interface Diagram, showing the above-mentioned functionalities.

UI Diagram
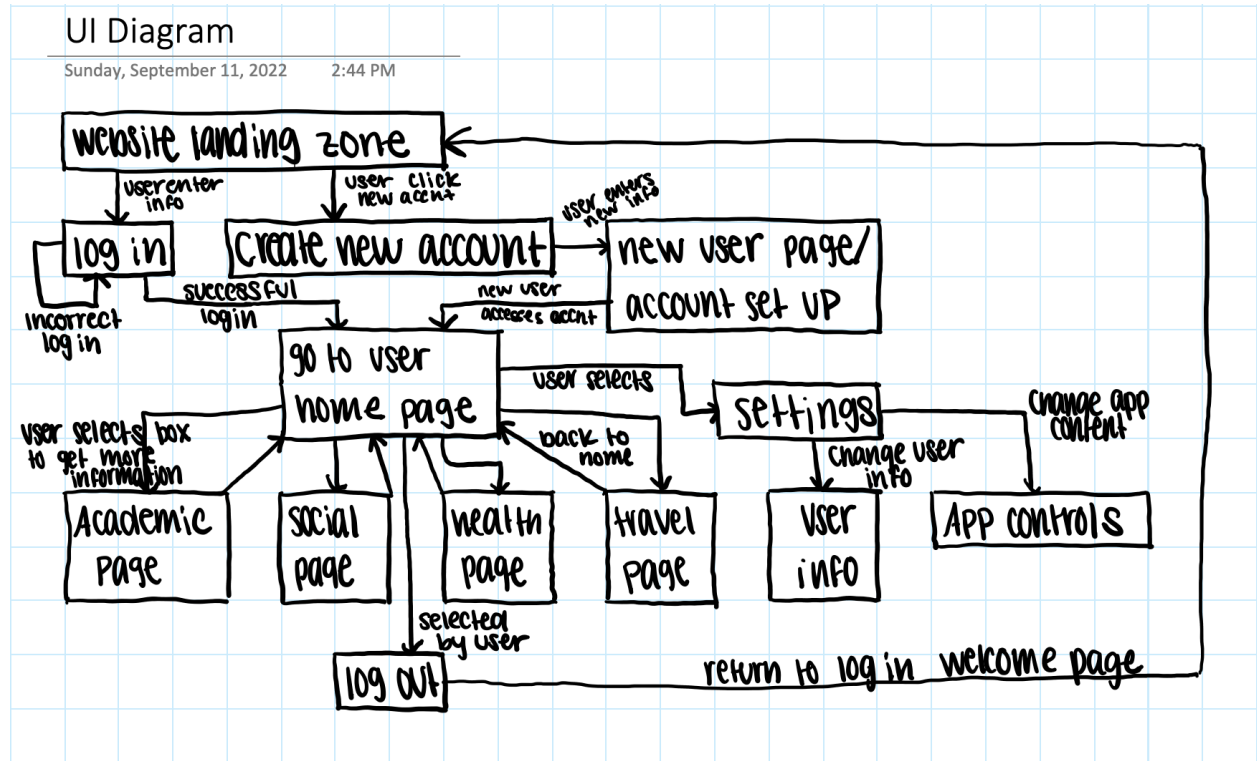
For the tools to complete our project, we plan to use ReactJS as our frontend and Amazon's DynamoDB as the back end. The respective coding languages used will be JavaScript and NoSQL. To communicate with the AWS server, we will use Restful API, and Node.js.

To complete AWS deployment, we will use a variety of Amazon tools. For example, for user authentication, we will use Amazon Incognito. For frontend support, we will use Amazon cloudfront and Amazon simple cloud storage, to display our JavaScript, HTML, and CSS elements to the web and find statically stored files. For backend, we will use the Amazon API gateway, going through AWS lambda to retrieve data stored in Amazon DynamoDB and help with the mass delivery of messages from Amazon SNS. The detailed deployment diagram can be found below.

Deployment in AWS Cloud