SW Engineering CSC 648-848 Fall 2023
weLearn - A Comprehensive SFSU Tutoring Service

Team 4
Milestone 2

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1. **Executive Summary -**

Our motivation for developing the tutoring application stems from a shared understanding of the challenges students face in their academic journeys, particularly in the demanding environments of schools and colleges. Graduation is the ultimate goal for every student, yet it often involves overcoming hurdles, including challenging courses. To address these challenges, we have conceived an innovative tutoring web application designed to provide struggling students with the necessary support to successfully navigate their courses.

What sets our application apart is its unique focus on the San Francisco State University (SFSU) community. Unlike generic tutoring platforms, our application exclusively connects SFSU students in need of academic assistance with fellow SFSU students who have excelled in the same courses. This tailored approach not only enhances academic outcomes but also fosters a sense of camaraderie within the SFSU student body. Our application not only enhances academic outcomes but also offers an opportunity for students to tutor courses that they excelled in.

Our startup team consists of 6 members. Everyone in the team works well together and the team leader makes sure that everyone is on task and focused on work. In our startup team, there is one team leader, one front-end lead, one back-end lead, and one github master. We also have one front-end helper and one back-end helper to help the front-end lead and back-end lead with work. Our startup team is very organized and we have two to three meetings a week.

2. **List of main data items and entities - data glossary/description -**

Mandatory: M **Optional: O**

Unregistered User:

- User ID: A unique identifier for tracking user interactions. (M)
- Session ID: A temporary identifier for tracking user sessions. (M)
- Access Timestamp: Timestamp indicating when the unregistered user accessed the system. (O)

Registered User:

- Student ID: A unique identifier for each student. (M)
- First Name: The first name of the student. (M)
- Last Name: The last name of the student. (M)
- Email Address: The email address associated with the student's account. (M)
- Username: The username used for authentication. (M)
- Password: Securely stored password for login. (M)
- Enrollment Status: Indicates whether the student is currently enrolled. (O)
- Tutor Record: What the tutor submits when applying to be a tutor. (M)

Admin:

- Admin ID: A unique identifier for each administrator. (M)
- First Name: The first name of the administrator. (M)
- Last Name: The last name of the administrator. (M)

Tutoring Record: what the tutor submits when applying to be a tutor examples: topic, Resume, video, etc.

- Topic: A subject that the tutor wants to help the student with/ a subject that the tutor excels at (M)
- Description: A short bio about the tutor (M)
- Class numbers: A list of class numbers for the courses that the user wants to tutor (M)
- Resume: A documentation of accomplishments, skills, etc. (M)
- Profile picture: An image of the tutor (O)
- Video: A recording of an introduction or message created by the tutor (O)

Messages:

- Message sender: email of the user sending the message (M)
- Message recipient: email of the user receiving the message (M)
- Message body: What the user wants to send to the recipient (M)

3. **Initial list of functional requirements -**

Priority 1

At least one SFSU specific requirement must be Priority 1.

- **1. Unregistered user**
    - 1.1 An unregistered user shall be able to register and become a registered user.
    - 1.2. An unregistered user shall be able to access public information on the platform without the need for authentication.
    - 1.3. Unregistered users shall have the capability to view a list of available tutors on the platform.
- **2. Registered user**
    - 2.1. A registered user shall be able to create an account.
    - 2.2. A registered user shall have an email, username, and password
    - 2.3. A registered user shall be able to log in using email/username and password credentials.
    - 2.4. Registered user shall be able to search for SFSU classes they need help with
    - 2.5. Registered users shall have the ability to view tutor profiles.
    - 2.6. Registered users shall be able to send messages to tutors asking for appointments in person or online
    - 2.7. Registered users shall be able to apply as a tutor

- 2.8. Registered users shall be able to post picture, resume, and optionally, a video introduction if they want to be a tutor.
- 2.9. Registered users (if approved as tutor) shall be able to receive messages from student asking for tutoring

- **3. Admin**
  - 3.1. Admins shall be required to review and approve or reject tutor profiles.
  - 3.2. Admin shall be required to remove inappropriate or offensive content from the platform.
  - 3.3. Admin shall be able to access tutor profiles, resumes, profile pictures, and videos.
  - 3.4. Admin shall be able to access student username, email, and profile picture.

Priority 2

- **1. Unregistered user**
  - 1.1. Unregistered users are shown a product page, with features and a login button.
- **2. Registered user**
  - 2.1. A registered user shall have the option to recover their password if forgotten
  - 2.2. A registered user shall be able to respond to messages asking for tutoring

- 2.3. A registered user shall be able to report a user for misconduct or any inappropriate activity

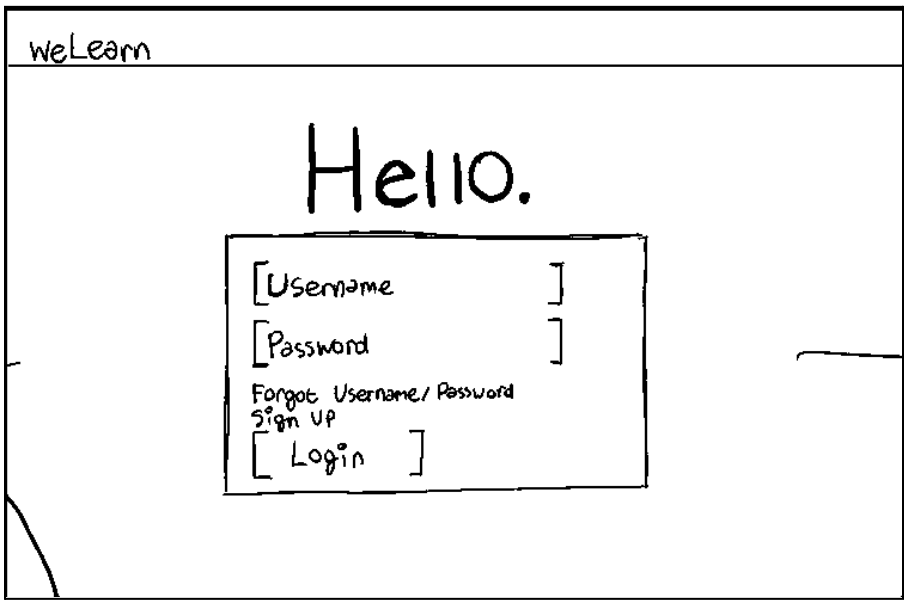
- **3. Admin**
  - 3.1. Admin shall be able to take appropriate action against profiles of reported user.

Priority 3

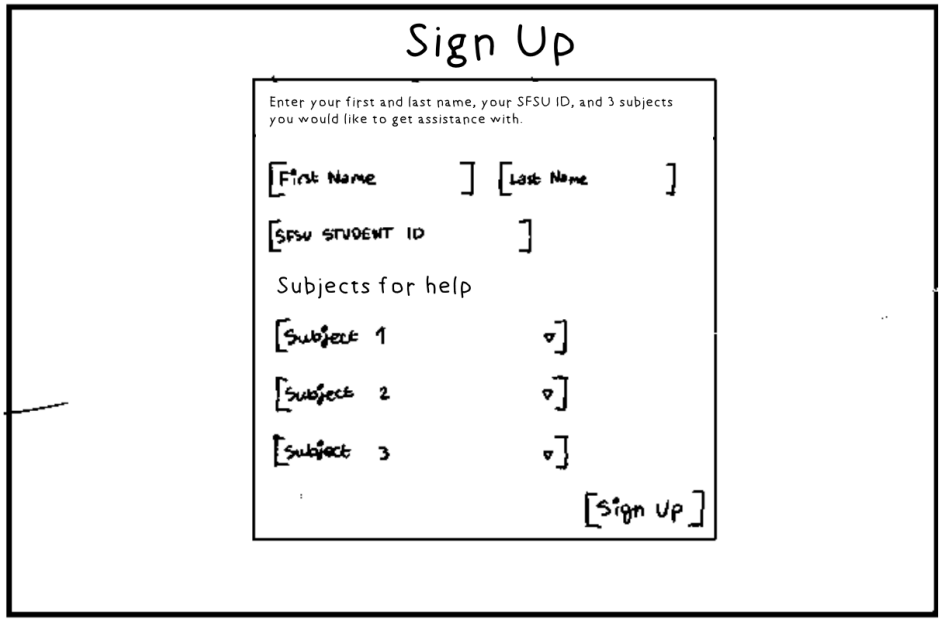
- **1. Unregistered user**
  - 1.1. An unregistered user shall be able to view ratings and reviews for tutors
  - 1.2. An unregistered user shall be able to sort search results by rating
- **2. Registered user**
  - 2.1. An registered user shall be able to view and post ratings and reviews for tutors.
  - 2.2. Registered user shall be able to schedule appointments with the tutor.
  - 2.3. Registered user shall receive email notification about appointment time and location.
- **3. Admin**
  - 3.1. Admins shall be required to remove reviews with inappropriate or offensive content

4. **UI Storyboards for each main use case(low-fidelity B&W wire diagrams only)**

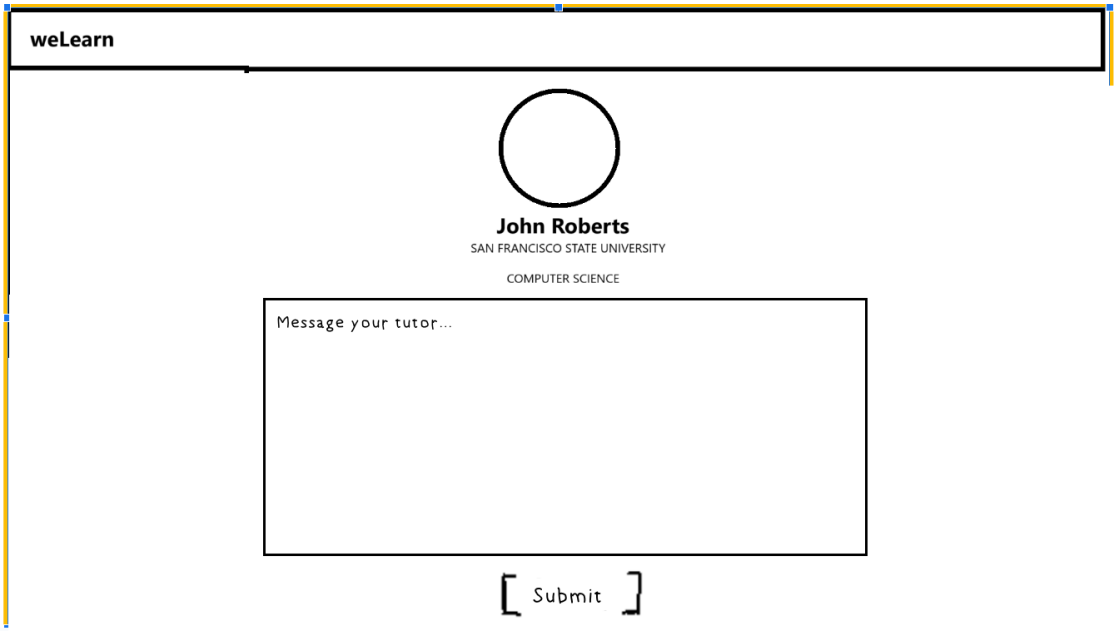
Login Screen



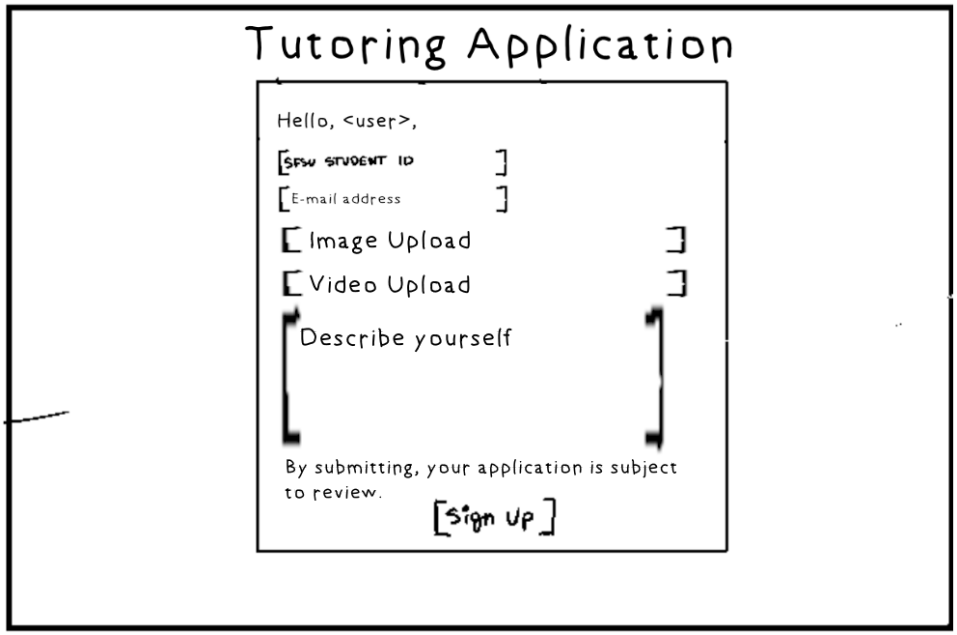
Sign up Screen



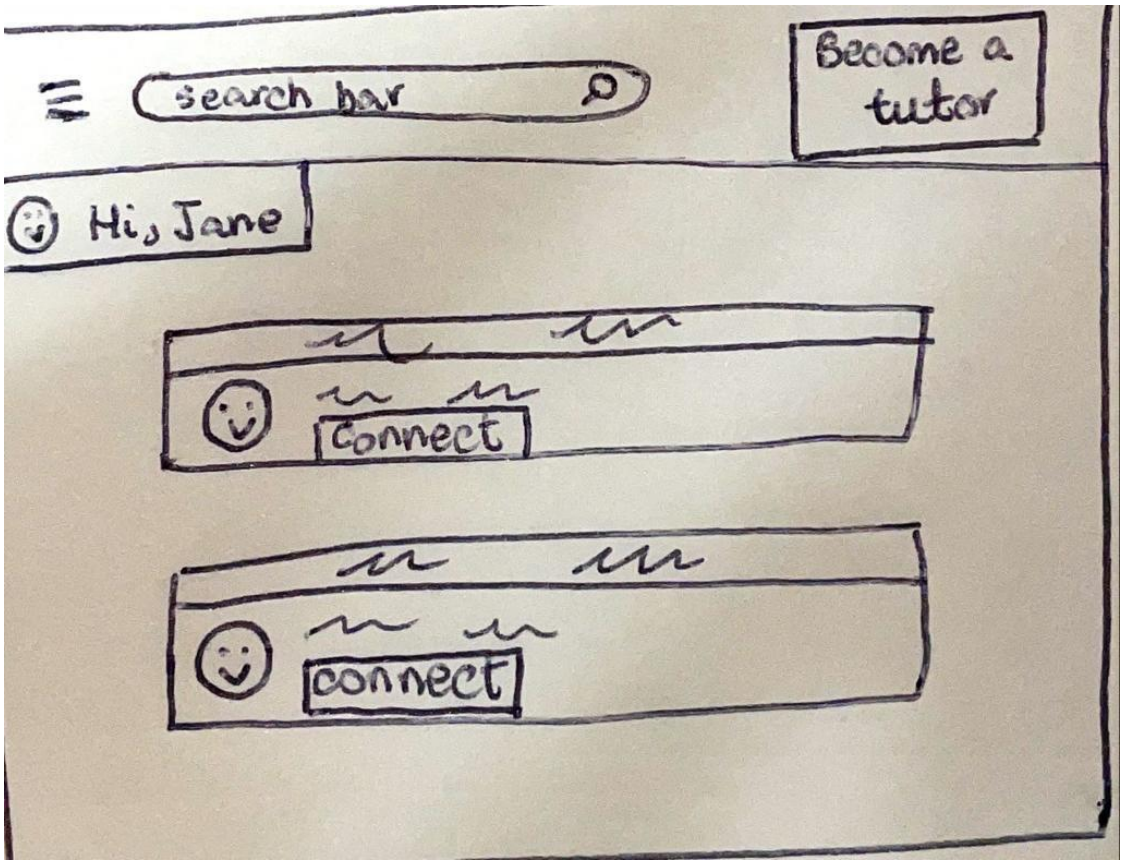
- Messaging the tutor use case



-Student Applies for a Tutoring Position



-Student is Searching for a Tutor for a class at SFSU use case



5. **High-level Architecture, Database Organization summary only -**

5.1: High-level Architecture

Tutor table - Columns:

ID: primary key, numeric

Name: weak key, alphanumeric

Topic: foreign key, numeric

CV: data, pdf

Profile Picture: data, jpeg/png

Description: data, alphanumeric

Topic table - Columns:

Topic ID: Primary key, numeric

Name of Topic: weak key, alphanumeric

5.2 Database Organization

- Media storage: Media will be stored in the database using files images/videos. We will be storing images/videos in our Amazon server (S3) and the database will contain the references to their locations along with the file metadata, for example: file name and type. In particular, we will have a file path column in our table which will contain these reference URLs. Search/filter architecture and implementation: For search, we will use MySQL's %Like to search the Tutor table.
- No new SW tools and frameworks added

6. **Identify actual key risks for your project at this time -**

Teamwork risks - One teamwork risk our group is having issues with is contacting one of the group members. They do reply but sometimes it is just not consistent. We all work well together during the in-class meeting. One possible solution is to do a daily check-in through Discord messaging to see if everyone is on task and on track. If they still do not respond, the team lead would send an email to them and CC the professor.

7. **Project management -**

We have managed and are planning to manage M2 by using Trello and Discord. Most people in our group are active on Discord so it is the best way for us to communicate with each other. On Trello, we have cards called doing, done, and questions. In the doing card we have a list of tasks that we are currently working on. In the done card, we have a list of tasks that are finished. Finally, on the questions card, we have a list of questions that we are planning on asking in class.

8. **Use of ChatGPT and like tools (optional) -**

   We have not used ChatGPT for M2.