

SW Engineering CSC648/848 Fall 2023

SF STATE TUTORS .TECH

Team 3

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Milestone 2 Part 1

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| | |

1. Executive Summary

The modern college education is more complex than ever with students expected to take on ever-greater challenges in order to earn their degree. Students struggle to make the key connections they need to make in order to succeed. But what if there were a service that helped bridge the gap between students to enable them to help each other? A resource that enables students with the knowledge and experience to help to offer their services to students in need of that help. And what if that service were geared explicitly towards the students of one university, with services unique to their campus? Enter SF State Tutors.Tech.

SF State Tutors.Tech intends to be THE place where tutors and clients connect on the SF State campus. We intend to have an easy onboarding process for tutors whereby they can register and sign up as tutors in one click, or register as students and then onboard as tutors later. We intend searching for tutors to be easy for anyone, with an intuitive display of each tutor's credentials, rates and other information. We plan to enable messaging between tutors and students for registered students. We plan to have SFSU-specific features, such as only allowing students and tutors to register if they have an SFSU email address, and including maps of campus to enable students to meet up with tutors more easily. We also plan to have reviews of tutors by fellow SF State students so students will be able to trust the reputation of their tutor. With these great features we believe we can capture the market for tutors on the SFSU campus.

The SF State Tutors.Tech team is a diverse and dynamic team of software engineers who are eager to deliver this application. We bring a wide range of skills and experience to the table and have the expertise necessary to deliver this project.

2. List of main data items and entities (expand as necessary)

1. Unregistered User

Definition: User who does not have an account or a user that has not logged into their account yet.

Permissions: can make search requests for tutors. Can initiate the process of contacting a tutor for help but cannot launch a request until registered. Can initiate the process of signing up as a tutor but cannot complete the process until registered.

Data Items: None

2. Registered User

Definition: A registered user who has signed up with an email and a password.

Permissions: Inherits permissions from unregistered students. Can send messages to tutors to arrange tutoring. Can post tutoring ads. Can receive messages from students in response to tutoring ads. Can write reviews for tutors.

Data Items:

Username: User's account name, equivalent to their SFSU email address
Password: The user's secret password that they use to access their account
Image: A photo of the user
Account Page: a page identifying the user where they can view their messages, tutor posts, reviews, and account settings

3. Admin

Definition: User who reviews tutoring posts and reviews for appropriateness

Permissions: Admin can access the database via MySQL Workbench as a means of screening tutor posts and reviews. Admin shall only be permitted to review tutor posts and reviews and either mark them as appropriate or delete the user.

Data Items: None

4. Tutoring post

Definition: A post made by a registered user to advertise tutoring services

Data Items:

Subject: A field keyed to the subjects table

Rate: a field containing the tutor's hourly rate

Description: A field for the tutor to describe their services

Video: (optional) A video of the tutor

Flyer: (optional) A flyer advertising the tutor's services in pdf

CV: (optional) The tutor's resume in pdf

5. Message

Definition: A message sent by a registered user to a tutor to request tutoring services

Data Items:

Student: The registered user initiating the message

Tutor: The tutor receiving the message

Content: The content of the message

Date: The date of the message

6. Review

Definition: a review of a tutor's services by a registered user

Data Items:

Student: The registered user leaving the review

Tutor: The tutor being reviewed

Rating: a score between 1 and 5

Content: The text content of the review

Date: The date of the review

7. Subjects

Definition: a database table that exists as an enumeration of all options for a tutor to declare themselves qualified in: (MATH, ART, ENGLISH, CS, PHYSICS, HISTORY, SPANISH, ENGINEERING, ANTHROPOLOGY, BIOLOGY, CHEMISTRY, GEOLOGY, THEATER, and others TBD)

3. Functional Requirements - prioritized

Priority 1

Unregistered Users

1. User shall be able to view the home page
2. User shall be able to browse all tutors
3. User shall be able to search for tutors
4. User shall be able to view detailed information on a list of tutors
5. User shall be able to sign up

Registered Users

6. User shall inherit privileges from unregistered users
7. User shall be able to sign in
8. User shall be able to message tutors
9. User shall be able to become a tutor
 - 9.1 User shall be able to submit data including photo, subject, classes taught, bio, video, and pdfs
10. User shall be able to view an account page containing messages sent to them and by them

Admins

11. Admin shall be able to view and edit the database in MySQL Workbench
12. Admin shall be required to approve tutors before their results are visible
13. Admin shall be required to delete accounts that violate terms of service
14. Admin shall only be permitted to approve and delete tutors

Priority 2

Unregistered Users

15. User shall be able to write a message to a tutor before signing up
16. User shall be able to send that message by signing up

- 17. User shall be able to sign up to be a tutor and sign up for the site at the same time
- 18. User shall be able to view individual pages for tutors listing additional media and reviews

Registered Users

- 19. User shall inherit all permissions from unregistered users
- 20. User shall be able to change his password
- 21. User shall be able to write reviews of tutors
- 22. User shall be able to view reviews they've written on the account page

Admins

- 23. Admins shall be required to approve reviews before they become visible on the site
- 24. Admins shall be required to delete accounts that abuse the review feature

Priority 3

Unregistered Users

- 25. User shall be able to view a map of the SFSU campus

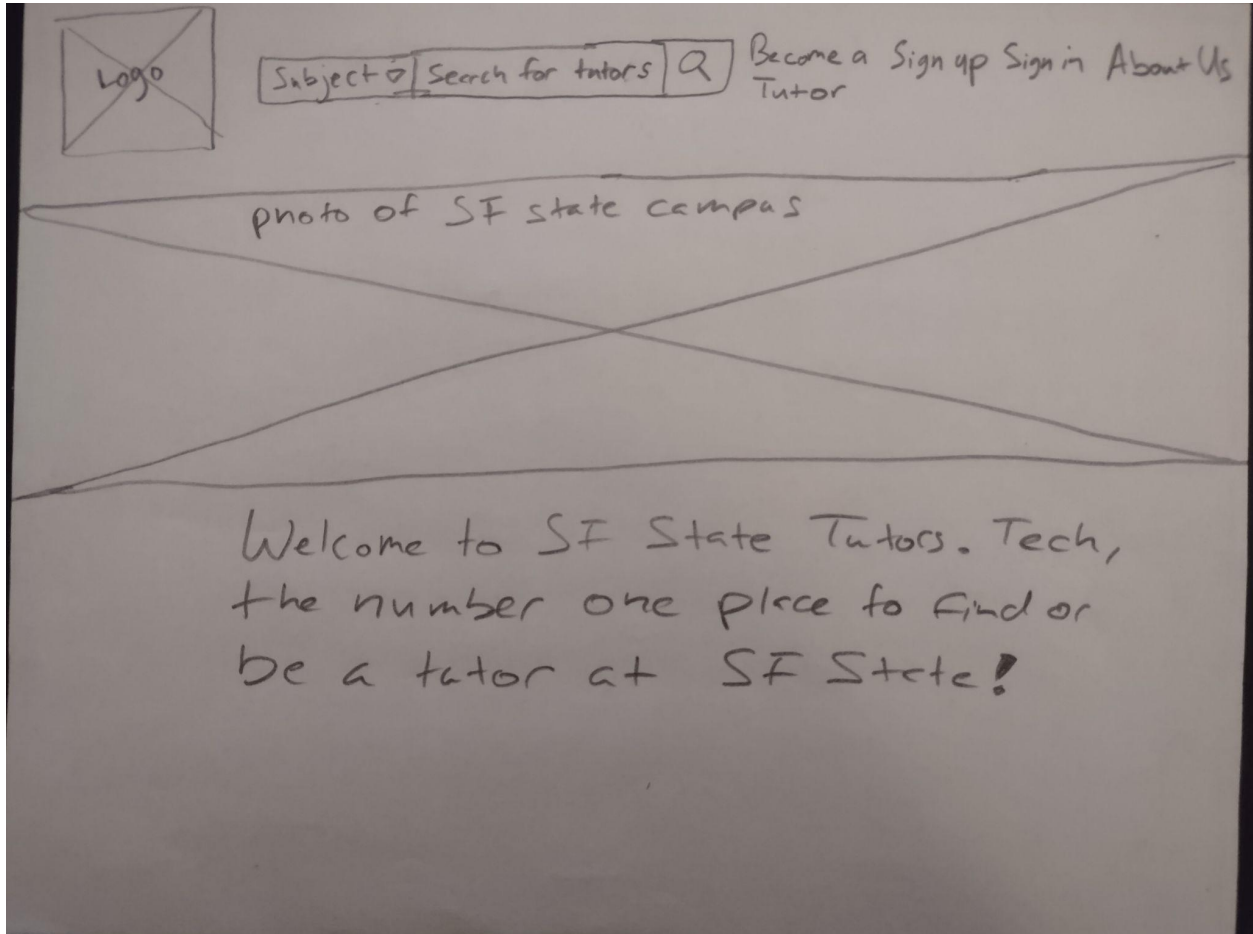
Registered Users

- 26. User shall be able to pin the map to share meetup location info with a tutor or student
- 27. User shall be able to view pins sent by tutors and students
- 28. If user is registered as a tutor, they shall be able to offer group sessions for tutoring
- 29. User shall be able to sign up for group tutoring sessions

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

1. Crystal (Student)

Crystal needs a tutor in math. She comes to the SF State Tutors.Tech Homepage.



Crystal searches for a tutor for Math 225. She gets several results and evaluates them.

Logo Math 225 Become A Tutor Sign up Sign in About Us

Search Results

1 - 18 results

user photo Math \$20.00/hr 5/5

Hi I'm Mike and I tutor Math 336 and Math 225.

more info message me

user photo Math \$40.00/hr 4.5/5

Hello I'm Steve, I'm a great Math 225 tutor

more info message me

user photo Math \$30.00/hr 4.2/5

I'm Joe and I tutor Math 225

Crystal selects more info from one of the results. On the following screen she views the tutor's resume, flyer, video, and reviews.

Logo Subjects Search for Tutors Become A Tutor Sign up Sign in About Us

Tutor Info

user photo Math \$20.00/hr 5/5

Hi, I'm Mike and I tutor Math 336 and Math 225

My resume my flier my video

message me

Reviews

5/5 Mike is a great tutor!

5/5 Mike really helped me!

Crystal clicks message me and enters a message to send to the tutor.

The sketch shows a web page for a tutor. At the top is a navigation bar with a logo, a search bar labeled 'Subject Search for Tutors', and links for 'Become a Tutor', 'Sign Up', 'Sign In', and 'About Us'. The main content area is titled 'Tutor Info' and features a 'user photo' placeholder, the subject 'Math', a rate of '\$20.00/hr', and a rating of '5/5'. Below this is a bio: 'Hi, I'm Mike and I tutor Math 336 and Math 225'. There are three links: 'My resume', 'My files', and 'My video'. A 'message me' button is located to the right of the bio. Below the button is a text input area containing the message: 'Hi Mike, I'm Crystal and I'd like you to tutor me in math. My discord is Crystal123'. At the bottom of the message area is a 'Submit' button and a reminder: 'Don't forget your contact info!'.

Logo Subject Search for Tutors Become a Tutor Sign Up Sign In About Us

Tutor Info

user photo Math \$20.00/hr 5/5

Hi, I'm Mike and I tutor Math 336 and Math 225

[My resume](#) [My files](#) [My video](#)

message me

Hi Mike, I'm Crystal and I'd like you to tutor me in math. My discord is Crystal123

Don't forget your contact info! Submit

Crystal hits submit. She's prompted to sign up or sign in.

The sketch shows a web page titled 'SIGN UP or SIGN IN TO SEND YOUR MESSAGE'. It has the same navigation bar as the previous page. The main content area is divided into two sections: 'Sign Up' and 'Sign In'. The 'Sign Up' section contains three input fields for 'SFSU email address', 'password', and 'password again', followed by a checkbox labeled 'I agree to the Terms and Conditions' and a 'Submit' button. The 'Sign In' section contains two input fields for 'SFSU email address' and 'password'.

Logo Subject Search for Tutors Become a Tutor Sign Up Sign In About Us

SIGN UP or SIGN IN TO SEND YOUR MESSAGE

Sign Up

SFSU email address

password

password again

☐ I agree to the Terms and Conditions.

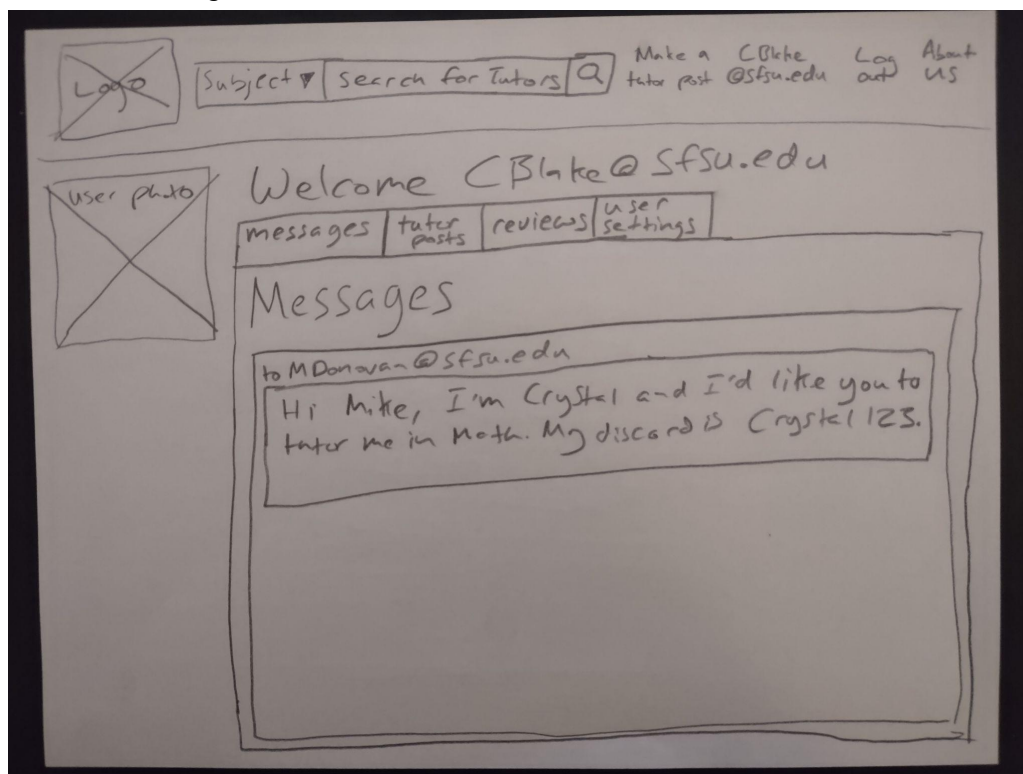
Submit

Sign In

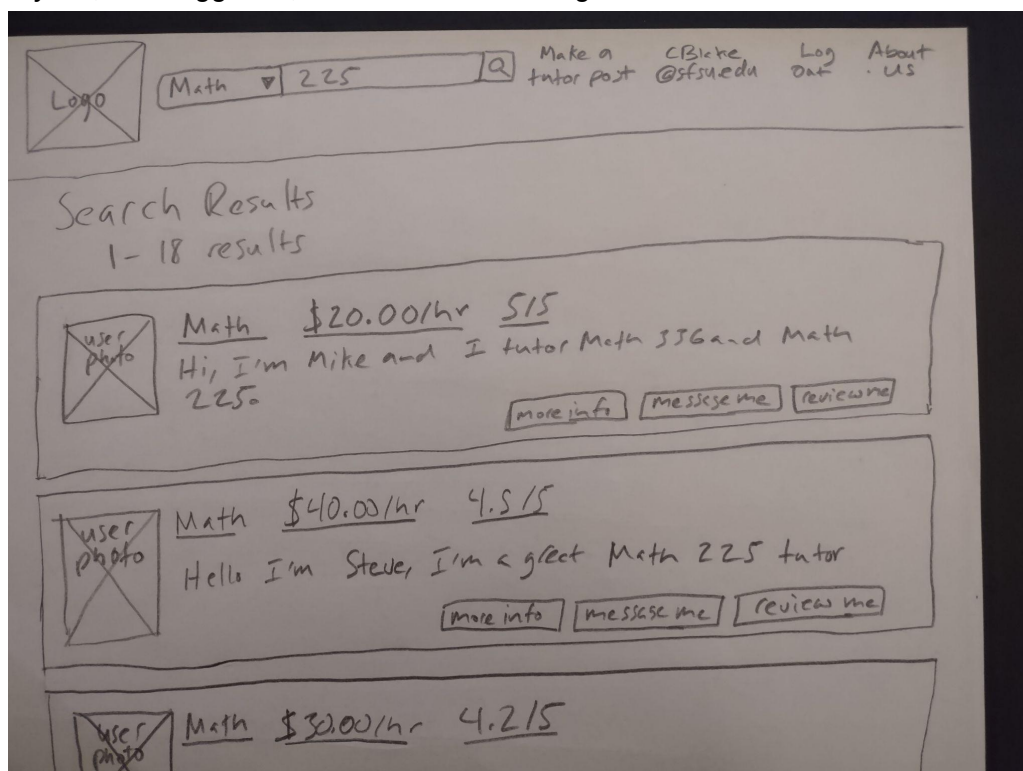
SFSU email address

password

Crystal enters her email and password to sign up. She's taken to a dashboard where she can view her message. Soon her tutor contacts her and she has a successful tutoring session.



Crystal, now logged in, searches for tutors again. She sees she can leave a review.



Crystal clicks review me and finds a text box and a ratings box she can use to review the tutor

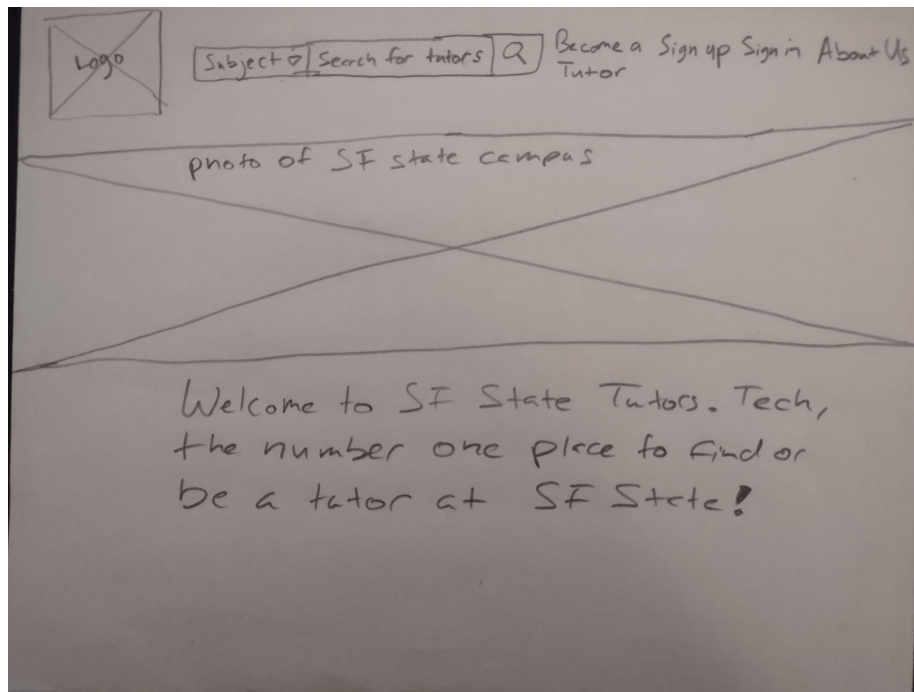
A hand-drawn mockup of a web page showing search results for tutors. At the top, there is a navigation bar with a 'Logo' placeholder, a search bar containing 'Math 225', and links for 'Make a tutor post', 'CBlake @sfesu.edu', 'Log out', and 'About us'. Below the navigation bar, the page is titled 'Search Results' with '1-18 results' underneath. The first result is for a tutor named Mike, with a placeholder for a profile picture. The text for this result includes 'Math \$20.00/hr 5/5', 'Hi, I'm Mike and I tutor Math 336 and Math 225.', and buttons for 'more info', 'message me', and 'review me'. Below the buttons, there is a 'Rating/5: 5.0' and a section for 'your reviews:' with a text input field and a 'submit' button. The second result is for a tutor named Steve, with a placeholder for a profile picture. The text for this result includes 'Math \$40.00/hr 4.5/5' and 'Hello I'm Steve, I'm a great Math 225 tutor', followed by buttons for 'more info', 'message me', and 'review me'.

Crystal goes to her dashboard where she can see her review

A hand-drawn mockup of a user dashboard. At the top, there is a navigation bar with a 'Logo' placeholder, a search bar containing 'Subject', and links for 'Make a tutor post', 'CBlake @sfesu.edu', 'Log out', and 'About us'. Below the navigation bar, the page is titled 'Welcome CBlake@sfesu.edu'. On the left side, there is a 'user photo' placeholder with a 'Click or drag + drop to change image' instruction. To the right of the photo, there are tabs for 'messages', 'tutor posts', 'reviews', and 'user settings'. The 'reviews' tab is selected, and the page is titled 'Reviews'. Below the title, there is a large text area containing a review: '5/5 Mike is the best tutor!'.

Mike (Tutor)

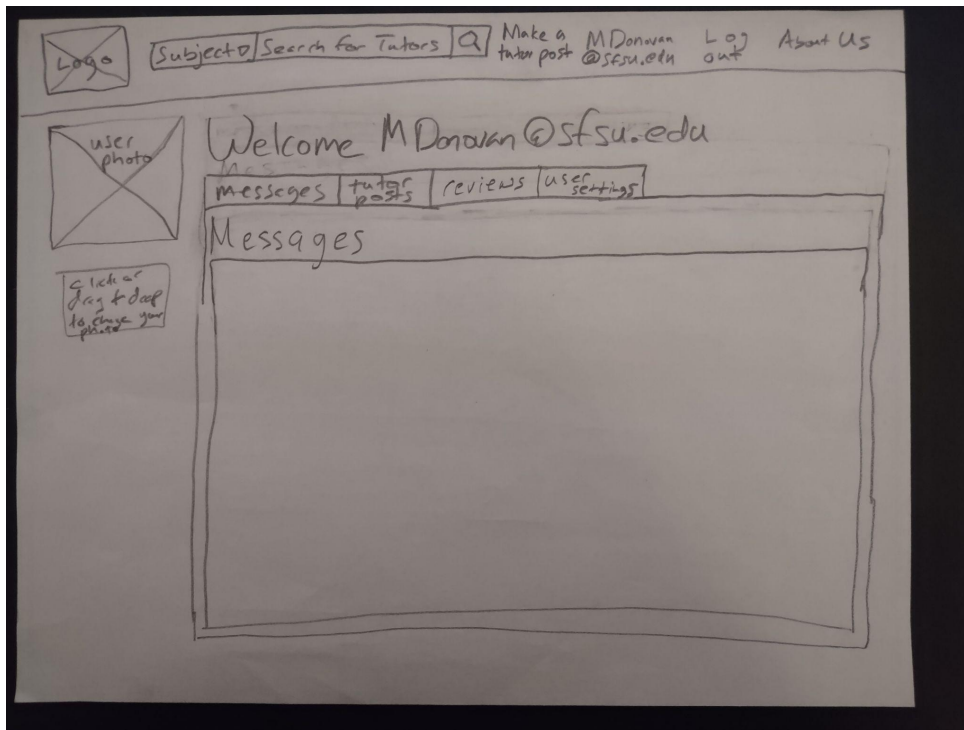
Mike wants to make some extra money tutoring. He heads to the SF State Tutors.Tech homepage.



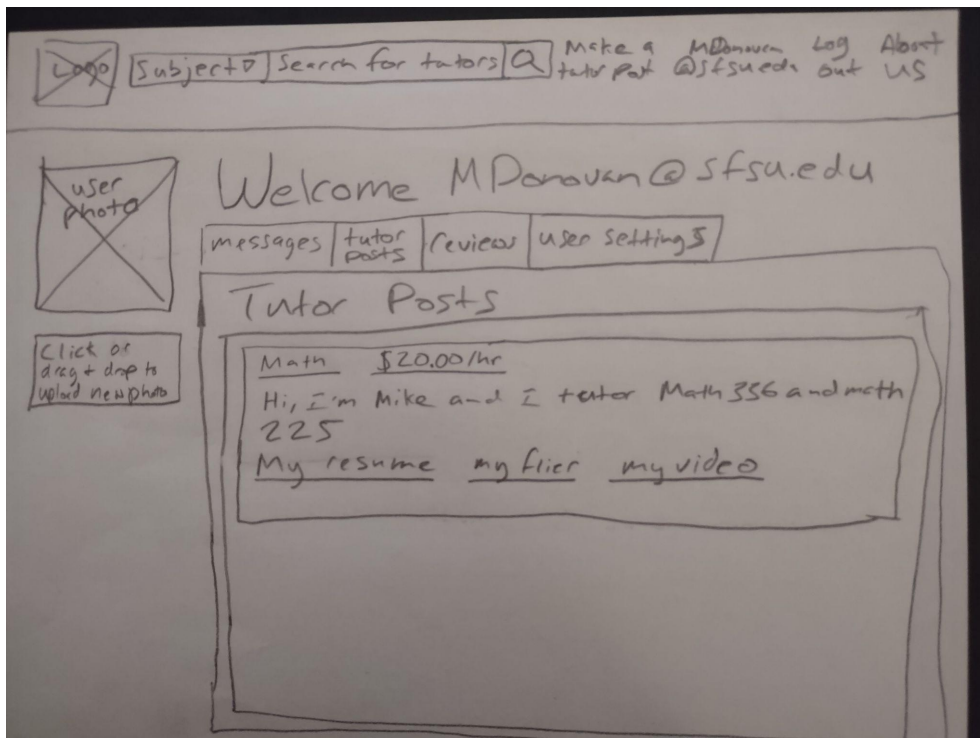
Mike clicks the link "Become a Tutor". He finds a form prompting him to fill out some information.

A hand-drawn sketch of a form titled 'Fill out the following to become a tutor!'. At the top left is a 'Logo' box. To its right are 'Subject' and 'Search for tutors' input fields with a magnifying glass icon, and links for 'Become a Tutor', 'Sign up', 'Sign in', and 'About Us'. The form fields include: 'your photo*' with a placeholder image and '(click or drag and drop)'; 'your SF State email*' with an input field; 'your password*' with an input field; 'your password again*' with an input field; 'your subject*' with a 'Select one' dropdown menu; 'your rate*' with an input field; 'your description*' with a large text area and the instruction '(please list course numbers of your classes taught)'; 'your resume' with a '.pdf' icon and '(click or drag and drop)'; 'your flier' with a '.pdf' icon and '(click or drag and drop)'; and 'your video' with a '.mp4' icon and '(click or drag and drop)'. A 'Submit' button is at the bottom center. At the bottom left, it says '* required'. At the bottom right, there are two checkboxes: 'I agree to the terms and conditions' and 'I understand there will be a wait while my post is reviewed'.

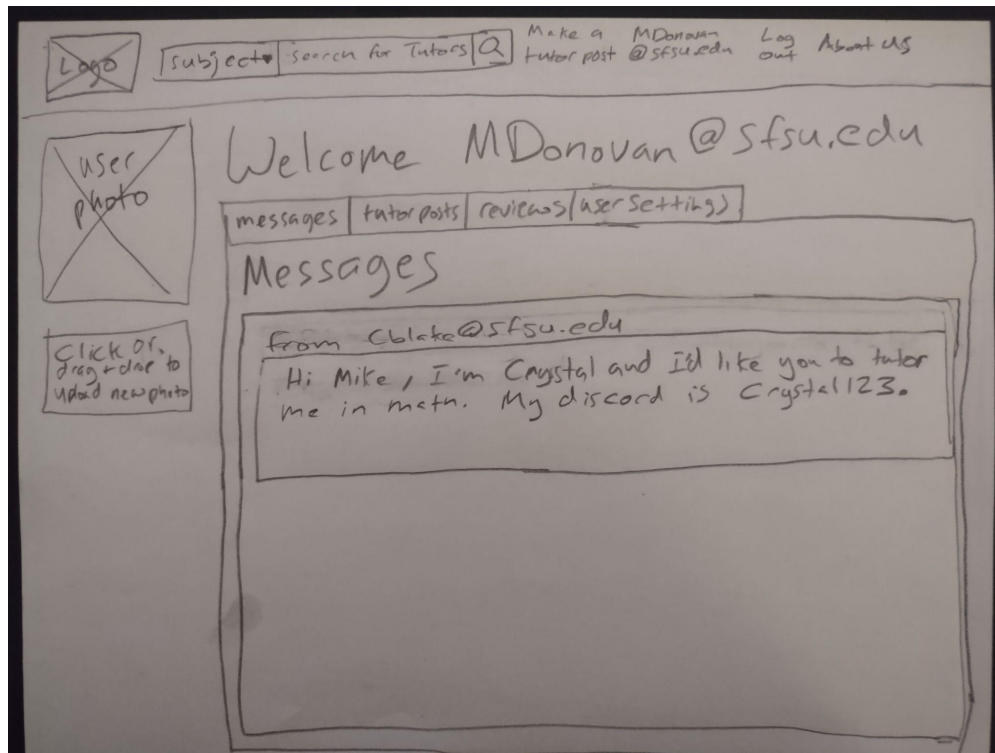
Mike fills out the form, signing up to tutor Math. He hits submit and is taken to his dashboard where he can view his messages and tutor posts.



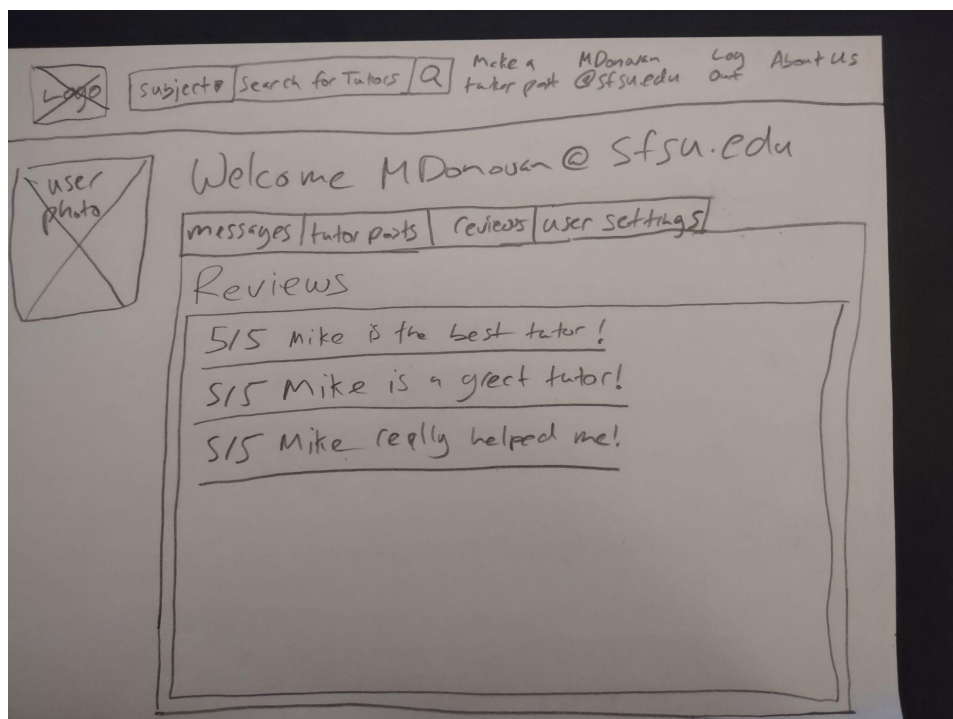
Mike gets his first tutoring post approved. He views it on tutor posts.



Mike gets a message about his tutoring services. He contacts the student and they arrange a successful tutoring session.



Mike's tutoring session goes well. He checks his reviews and sees he's received a positive review.



5. High level Architecture, Database Organization summary only

Database Organization

Table: users

Fields:

id
username
hashed_password
img_url

Table: tutorPosts

Fields:

tutor_id
subject
description
flier_url
cv_url
video_url
is_pending

Table: messages

Fields:

message_id
recipient_id
sender_id
message_text
date_stamp
post_id

Table: tutor_reviews

Fields:

tutor_id
review
rating
reviewer_name
reviewer_id
time_stamp

Table: tutor_subjects

Fields:

id
subject_name

Table: sessions

Fields:

session_id

expires

data

Media Storage

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

Skills risks

Only one teammate with heavy backend experience

One other teammate has some backend experience but hasn't done any backend on this project yet

Much of the team lacks experience with the frontend framework, we've all tried to prepare on our own but we haven't done much coding yet so it's hard to say how successful that preparation has been

Schedule risks

Our most experienced team member has a 40hr/week internship

Technical risks

None known

Teamwork risks

We were late with this milestone, which signals that we have some teamwork issues.

Legal/content risks

None known

How to resolve our risks

We intend to resolve the skill risk with additional training, and the scheduling risk by offloading as much work from that team member as possible. We intend to resolve our lateness by being more conscientious of deadlines in the future.

7. Project management

For project management we intend to use Trello, plus regular chat communication over Discord and regular voice meetings over Discord to coordinate the team.

8. Use of ChatGPT and like tools (optional)

We did not use ChatGPT in this milestone.