

## Final Project for SW Engineering CSC 648/848 Fall 2021

### Team No.7

#### SFSU Tutors

**Alekhya Gandu:** Team Lead ([agandu1@mail.sfsu.edu](mailto:agandu1@mail.sfsu.edu))

**William Lushbough:** Github Master ([wlushbough@mail.sfsu.edu](mailto:wlushbough@mail.sfsu.edu))

**Justin Diones:** Front End Lead ([jdiones@mail.sfsu.edu](mailto:jdiones@mail.sfsu.edu))

**Rui Qi Huang:** Front End Developer ([rhuang10@mail.sfsu.edu](mailto:rhuang10@mail.sfsu.edu))

**Rupak Khatri:** Front End Developer ([rkhatri@mail.sfsu.edu](mailto:rkhatri@mail.sfsu.edu))

**Mai Ra:** Back End Developer([mra1@mail.sfsu.edu](mailto:mra1@mail.sfsu.edu))

### Milestone 5

URL: <http://54.177.172.73:3000/>

Dec 18, 2021

## **Section 2: Project Summary**

Our web app is a tutoring app designed for San Francisco State University students. It connects students with tutors across the world, allowing them to find the best tutors suited for their subject and timezone. The easy to use website is designed for all users even those unfamiliar with web apps to navigate it through easily. The product is in its late stages and is ready to be deployed after some finishing touches are made. Students and tutors are allowed to create their own personalized accounts to make it more user friendly. Students are able to send messages to the tutor and the tutor can receive it and make adjustments for the student. Tutors are also able to post documents and anything necessary for the students' success. We believe in the success of our students and that this app will be able to help students achieve the grade they want.

**Name of Product:** SFSU Tutors

**Product URL:** <http://54.177.172.73:3000/>

**Itemized List:** Priority 1

General User:

- 1). A general user is not a registered user.
- 2). A general user shall be able to search for tutors.
- 3). A general user shall not be able to message a tutor.
- 4). A general user shall not be able to post to the forum.

Registered User:

- 1). A registered user is a user who has an account on the app.
- 2). A registered user shall post to the forum.
- 3). A registered user shall apply to be a tutor.
- 4). A registered user shall message the tutor.

Tutor:

- 1). A tutor is a registered user.
- 2). A tutor shall post to the forum.
- 3). A tutor shall receive messages.
- 4). A tutor shall also send messages to other tutors (because a tutor is also a registered user).

### **3) Milestone documents – M1-M4**

#### **Milestone 1:**

##### **Section 1: Executive Summary**

Studying in university is a major event in a student's life. The expectations of having the perfect university experience are high for every student. A major part of having a good university experience is being able to understand and enjoy the classes that a student takes in a semester. However, it is not uncommon for students to miss out on this part. There are instances in a student's educational career at university where they are not able to keep up in class, have missed classes, or are losing interest in the class. In any of those cases, what a student needs is reinforcement and additional support. Additional support can come in the form of many ways, one of those ways being tutoring from someone who has good knowledge of the subject. It is natural for one to ask why such a service is necessary when there are TA's and Instructors to help the student. Well, the TA's may not be able to give sufficient reinforcement for the student, and the instructor may not have enough time to allocate to that individual student. Tutoring services are great for helping students remove the gaps in their knowledge because the tutors cater to the needs of that individual student. The service that my team and I are creating will aim to exist as a safety net for students who need help in their subjects.

The application that we are building is called "SFSU Tutors" with an objective of providing quality tutoring services to students at flexible times. SFSU Tutors will only provide for the tutoring needs of SFSU students, and so it is a site that will support a niche market. The application will allow students to view tutors, their resumes, and their availability so create an appointment to meet with tutors that best suits their schedule. Although there are many tutoring services out there like Kumon, Khan Academy, and many more, our website will bring a fresh perspective by creating an environment where knowledge transfer occurs between students who haven't taken that course and students who have and have scored well. Our website allows for students to become tutors for a particular subject. Students will find it easier to navigate our service via our intuitive user interface design. Furthermore, services come at a price that is affordable by students of SFSU!

Our team is a part of a startup that is interested in creating a tutoring service for San Francisco State University. We are a group of students so who better than us to understand the needs and/or problems of students and create solutions and resources. We are very familiar with the tutoring marketplace and have good knowledge in the types of services that other companies offer. We plan on using this knowledge to carefully create a tutoring service that will stand out when compared to other companies in the marketplace. Our goal is to create resources that will aid in the development of everyone in the field of education, whether it be students, instructors, or tutors. My team is dedicated to creating a fully functional and operational application that will greatly benefit the users.

## **Section 2: Personae and Use Cases**

### **Personae:**



<https://unsplash.com/photos/4-EeTnaC1S4>



### **Jeff:**

#### **About**

- 3rd year SFSU student
- Majors in computer science
- Likes to study at the library, prefers to study in groups
- Basic coding skills

#### **Pain Point**

- Has a tough time learning online

#### **Goals and scenario:**

- Gets stuck on a homework coding assignment. He checks class Discord first if anyone asks the same or similar question(s) he has.
- Wants to find a reliable tutor to ask questions so he does not have to rely on Discord messages or asking questions in class.

### **Christine:**

#### **About**

- Graduate student at SFSU
- Majored in computer science
- Has been a team lead in school projects and has work experience
- Great leadership skills.

#### **Pain Point**

- Prefers tutoring in person, but can make do with online tutoring.

#### **Goals and scenario:**

- Is looking into becoming a tutor at SFSU. Understands how difficult it is for students and wants to help.

<https://unsplash.com/photos/6k80gHRQhxU>



<https://unsplash.com/photos/64YrPKiguAE>

- Wants to put her leadership skills and work experience to use to help students.

### Jennifer:

#### About

- System admin
- SFSU alumni
- Has experience working on back end
- Understands the needs of SFSU students to make user experience better

#### Pain Point

- May be unfamiliar with front end bugs

#### Goals and scenario:

- Wants to create a usable, interactive tutoring app tailored for SFSU students.
- If something breaks on the back end, she tries to fix it herself before asking others on her team.

### Use Cases:

- **Case 1: Student registration and booking an appointment**  
Jeff feels like he is falling behind in his CSC510 Analysis of Algorithms class after getting a lower score on the midterm than he expected. He understands that he will not be able to make good progress in the class if he does not review previous concepts. Jeff is referred to the SFSU Gator Tutoring App by one of his classmates. Jeff uses easy to use class based search to find a **tutor** for CSC510. He finds a **tutor** that is well reviewed and has a **schedule** that comfortably lines up with his that he can meet up with at least once per week. Before being able to book an **appointment** with the tutor, Jeff is prompted to **register onto the app as a student**.
- **Case 2: Student reviews a tutor**  
Jeff finishes the semester with an A- in CSC510 thanks to the tutoring he took throughout the semester. After the semester Jeff logs into the tutoring app again to leave a review for his tutor. Jeff leaves a positive **review** with 5 stars and emphasizes how much of a positive impact tutoring had on his learning experience during the semester.

- **Case 3: Person applies to become a tutor**

Christine wants to become a **tutor** to help students and grow connections with people in the computer science field. She learns about the SFSU Gator Tutoring App from one of her peers and applies to become a **tutor**. Christine has to upload her resume. In her application she chooses what class she wants to tutor for and her schedule of availability. Before she can send in her resume, she is prompted to register onto the site. The application is looked over by a site admin to make sure that she is qualified to become a **tutor**. She is then notified if she is **eligible to become a tutor** or if **she has been rejected**.

- **Case 4: System admin overlooks data being uploaded by users**

Jennifer is a **system admin** for the tutoring app. Jennifer is reviewing Jeff's review of his tutor as well as Christine's tutoring resume. Jennifer reads Jeff's review and verifies that Jeff did not post anything inappropriate in his review and keeps it on the site for other users to read. Jennifer goes over Christine's resume and verifies her credentials and makes sure that Christine is signing up to tutor the correct subject. Jennifer passes Christine through the application process and Christine is notified that she is **eligible to become a tutor**.

## **Section 3: List of main data items and entities – data glossary/description**

### **Glossary Description:**

#### **Unregistered Users:**

can access all public info. Cannot access tutor information. Does not need to login/register

#### **Registered Clients:**

can access the list of tutors by subject or course. Can request appointments with tutors. They need to login/register.

SFSU Email:

password:

#### **Registered Tutors:**

can access the list of tutors, and set their subject/course preferences.

SFSU Email:

Password:

Supporting Documents:

#### **Approved Registered Tutors:**

In addition to the behaviors of a registered tutor, an approved tutor can accept, deny, or cancel appointments. Can set their availability.

#### **Admin:**

An administrator who can revoke or grant privileges to users. They can monitor and change requests, listings, reviews, and any user-based queries on the site.

#### **Appointment:**

description, day/time, subject, and course.

#### **Tutor Availability:**

day/time, subject, and course.

**Subject:**

title, courses

**Course:**

subject, title

**Major:**

title

**Review:**

tutor, subject, course, description

**Tutor invited to appointment:**

Upon accepting the appointment, both the user and tutor can cancel the appointment or request a day/time change through the invitation settings.

## **Section 4: List of Functional Requirements**

**Unregistered User:**

1. A general user shall be able to search for a tutor.
2. A general user shall be able to search for a tutor according to the department, SFSU class, subject and name.
3. A general user shall be able see the tutor profile.
4. A general user shall be able to send inquiries to the tutor on their email.
5. A general user shall be able to search for tutor review.
6. A general user shall be able to create an account.
7. A general user shall be able to view the privacy policy.

**Registered User:**

8. A registered user shall be able to post tutoring info.
9. A registered user shall be able to be a tutor or user of tutoring service.
10. A registered user shall be able to log in/log out.
11. A registered user shall be able to delete his/her posts.
12. A registered user shall be a student of San Francisco state university.
13. A registered user shall be able to review tutor.
14. A registered user shall be able to see their uptime [member since].

- 15.** A registered user shall comply with the website terms and conditions.
- 16.** A registered user shall be able to view the privacy policy.
- 17.** A registered user shall be able to change their contact information.
- 18.** A registered user shall be able to change their password.
- 19.** A registered user shall be able access their profile information
- 20.** A registered user shall be able to edit their profile information
- 21.** A registered user shall be able to add specific tutor to favorites.
- 22.** A registered user shall be able to delete their account.
- 23.** A registered user shall be able to share the website content in social media.
- 24.** A registered user shall be able to filter search by rating.
- 25.** A registered user shall be able to give feedback to another registered user.

**Administrator:**

- 26.** An administrator shall be required to approve a new tutor.
- 27.** An administrator shall be required to view a list of tutors on the website.
- 28.** An administrator shall be required to view comments posted by other registered users.
- 29.** An administrator shall be required to delete an account of all registered users.
- 30.** An administrator shall be required to remove a tutor review.
- 31.** An administrator shall be required to view inquiries from all registered users.
- 32.** An administrator shall be required to send inquiries to all user.
- 33.** An administrator shall be required to delete a comment on a tutor review.
- 34.** An administrator shall be required to validate the appropriate review and post it.
- 35.** An administrator shall be required to ban a specific user for misconduct.

**Tutor**

- 36.** A tutor shall see a rating about themselves.
- 37.** A tutor shall be able to edit their profile information.
- 38.** A tutor shall be able to delete their account.
- 39.** A tutor shall be able to change their online status.
- 40.** A tutor shall be able to accept new students in their session.
- 41.** A tutor shall be able to remove students from their session.

## **Section 5: List of non-functional requirements**

High-level non-functional specifications (how the app is delivered and other constraints) that MUST be adhered to (not negotiable)

1. Application shall be developed, tested and deployed using tools and servers approved by Class CTO and as agreed in Milestone 0. Application delivery shall be from chosen cloud server
2. Application shall be optimized for standard desktop/laptop browsers e.g. must render correctly on the two latest versions of two major browsers
3. All or selected application functions must render well on mobile devices
4. Data shall be stored in the database on the team's deployment cloud server.
5. No more than 50 concurrent users shall be accessing the application at any time
6. Privacy of users shall be protected and all privacy policies will be appropriately communicated to the users.
7. The language used shall be English (no localization needed)
8. Application shall be very easy to use and intuitive
9. Application should follow established architecture patterns
10. Application code and its repository shall be easy to inspect and maintain
11. Google analytics shall be used
12. No email clients shall be allowed.
13. Pay functionality, if any (e.g. paying for goods and services) shall not be implemented nor simulated in UI.
14. Site security: basic best practices shall be applied (as covered in the class) for main data items
15. Application shall be media rich (images, video etc.). Media formats shall be standard as used in the market today
16. Modern SE processes and practices shall be used as specified in the class, including collaborative and continuous SW development
17. For code development and management, as well as documentation like formal milestones required in the class, each team shall use their own github to be set-up by class instructors and started by each team during Milestone 0
18. The application UI (WWW and mobile) shall prominently display the following exact text on all pages "*SFSU Software Engineering Project CSC 648-848, Fall 2021 For Demonstration Only*" at the top of the WWW page. (Important so as to not confuse this with a real application).

## Section 6: Competitive Analysis

Key Features	<a href="http://www.tutor.com/">http://www.tutor.com/</a> (Competitor A)	<a href="https://tutorme.com/">https://tutorme.com/</a> (Competitor B)	<a href="https://www.skooli.com/">https://www.skooli.com/</a> (Competitor C)	Our Future Product
Search and Browse	-	+	+	++
Navigation Bar	+	+	+	++
“How it works” guidelines	-	-	++	+
Sign up/Login	+	+	+	+
User Reviews	+	+	+	+

(+) Contains Feature

(++) Superior Feature

(-) No Feature

We reviewed competitor tutoring web applications and they all looked solid. However, as we browsed through their key features, what we noticed was that most of their features such as the landing page and navigation bar seemed to be cluttered. For example, Competitor A did not have a search function and their landing page doesn't give users a general idea of how things work. Competitor C seems to have everything, but they also have unnecessary things like recognitions and awards which can be put on another page. What makes our app competitive is that our text search will return something no matter what and our navigation bar will have a simple UI (unlike Competitor A & B) for users who aren't tech savvy. Our search is also customized for our SFSU student needs and will offer tutoring for majors that are within SFSU. Our text search will allow users to check specific boxes (time availability, level of knowledge..etc) to pick the best tutors suited for them.

## **Section 7: High-level system architecture and technologies used**

Below is a list of the technologies used in Team 7's software stack:

Server Host: AWS EC2 Instance 1vCPU 2GB Ram

Operating System: Ubuntu v18.0

Database: MySQL v8.0.26

Web Server: Nodejs 14.17.6

Server-Side Language: Javascript

Additional Technologies: Web Framework: Expressjs 4.17.1

Front-End UI: Reactjs 17.0.2, HTML/CSS

IDE: Visual Studio Code Website

Performance: Google Analytics

## **Section 8: Team and Roles**

- |                      |                                 |
|----------------------|---------------------------------|
| 1. Alekhya Gandu     | - Team Lead/ Back end team lead |
| 2. William Lushbough | - Github Master                 |
| 3. Justin Diones     | - Front end Lead                |
| 4. Rui Qi Huang      | - Front end team member 1       |
| 5. Rupak Khatri      | - Front end team member 2       |

6. Mai Ra - Back end team member 1

## **Section 9: Checklist**

1. So far all team members are engaged and attending ZOOM sessions when required	OK
2. Team found a time slot to meet outside of the class	DONE
3. Back end, Front end leads and Github master chosen	DONE
4. Team ready and able to use the chosen back and front end frameworks and those who need to learn are working on learning and practicing	ON TRACK
5. Team lead ensured that all team members read the final M1 and agree/understand it before submission	
6. Github is organized as discussed in class (e.g. master branch, development branch, folder for milestone documents etc.)	ON TRACK

## **Milestone 2:**

### **Section 1: Executive Summary**

Studying in university is a major event in a student's life. The expectations of having the perfect university experience are high for every student. A major part of having a good university experience is being able to understand and enjoy the classes that a student takes in a semester. However, it is not uncommon for students to miss out on this part. There are instances in a student's educational career at university where they are not able to keep up in class, have missed classes, or are losing interest in the class. In any of those cases, what a student needs is

reinforcement and additional support. Additional support can come in the form of many ways, one of those ways being tutoring from someone who has good knowledge of the subject. It is natural for one to ask why such a service is necessary when there are TA's and Instructors to help the student. Well, the TA's may not be able to give sufficient reinforcement for the student, and the instructor may not have enough time to allocate to that individual student. Tutoring services are great for helping students remove the gaps in their knowledge because the tutors cater to the needs of that individual student. The service that my team and I are creating will aim to exist as a safety net for students who need help in their subjects.

The application that we are building is called "SFSU Tutors" with an objective of providing quality tutoring services to students at flexible times. SFSU Tutors will only provide for the tutoring needs of SFSU students, and so it is a site that will support a niche market. The application will allow students to view tutors, their resumes, and their availability so create an appointment to meet with tutors that best suits their schedule. Although there are many tutoring services out there like Kumon, Khan Academy, and many more, our website will bring a fresh perspective by creating an environment where knowledge transfer occurs between students who haven't taken that course and students who have and have scored well. Our website allows for students to become tutors for a particular subject. Students will find it easier to navigate our service via our intuitive user interface design. Furthermore, services come at a price that is affordable by students of SFSU!

Our team is a part of a startup that is interested in creating a tutoring service for San Francisco State University. We are a group of students so who better than us to understand the needs and/or problems of students and create solutions and resources. We are very familiar with the tutoring marketplace and have good knowledge in the types of services that other companies offer. We plan on using this knowledge to carefully create a tutoring service that will stand out when compared to other companies in the marketplace. Our goal is to create resources that will aid in the development of everyone in the field of education, whether it be students, instructors, or tutors. My team is dedicated to creating a fully functional and operational application that will greatly benefit the users.

## **Section 2: List of main data items and entities:**

### **Unregistered Users:**

Can access all public info. Cannot access tutor information. Does not need to login/register

### **Registered Clients:**

Must be a SFSU student. Can access the list of tutors by subject or course. Can request appointments with tutors. They need to login/register. Can access the list of tutors and apply to be an Approved Registered Tutor.

SFSU Email:

password:

**Approved Registered Tutors:**

can accept, deny, or cancel appointments. Can set their availability.

**Admin:**

An administrator who can revoke or grant privileges to users. They can monitor and change requests, listings, reviews, and any user-based queries on the site.

**Appointment:**

description, day/time, subject, and course.

**Tutor Availability:**

day/time, subject, and course.

**Subject:**

title, courses

**Course:**

subject, title

**Major:**

title

**Review:**

tutor, rating, subject, course, description

**Tutor Posts:**

A list of reviews about a specific tutor

**User Review Record:**

A list of the users' previous reviews.

**Tutor invited to appointment:**

Upon accepting the appointment, both the user and tutor can cancel the appointment or request day/time change through the invitation settings.

## **Section 3: Functional Requirements - prioritized**

### **Priority 1**

#### **1) Unregistered User:**

- 1.1. An unregistered user shall be able to search for a tutor according to the department, SFSU class, subject and name.
- 1.2. An unregistered user shall be able to create an account.
- 1.3. An unregistered user shall be able to view the privacy policy.

#### **2) Registered User:**

- 2.1. A registered user shall inherit all functions from an unregistered user.
- 2.2. A registered user shall be able to be a tutor or user of tutoring service.
- 2.3. A registered user shall be able to log in/log out.
- 2.4. A registered user shall be able to delete his/her posts.
- 2.5. A registered user shall be able to post tutoring info.
- 2.6. A registered user shall be able to review tutor.
- 2.8. A registered user shall be a student at San Francisco state university.
- 2.9. A registered user shall be able to filter search by rating.
- 2.10. A registered user shall be able to delete their account.
- 2.11. A registered user shall be able to change their password.
- 2.12. A registered user shall be able access their profile information
- 2.13. A registered user shall be able to edit their profile information

#### **3) Administrator:**

- 3.1. An administrator shall be required to approve a new tutor.
- 3.2. An administrator shall be able to view a list of tutors on the website before it goes live.
- 3.3. An administrator shall be able to view comments posted by other registered users.
- 3.4. An administrator shall be able to delete an account of all registered users.
- 3.5. An administrator shall be able to remove a tutor review.
- 3.6. An administrator shall be able to validate the appropriate review and post it.
- 3.7. An administrator shall be able to send inquiries to all users.
- 3.8. An administrator shall be able to delete a comment on a tutor review.
- 3.9. An administrator shall be required to view inquiries from all registered users.

**/\* No need**

#### **4) Tutor**

- 4.1. A tutor shall see a rating about themselves.
- 4.2. A tutor shall be able to edit their profile information.
- 4.3. A tutor shall be able to delete their account.
- 4.4. A tutor shall be able to upload video descriptions.

- 4.5. A tutor shall be able to accept new students in their session.
- 4.6. A tutor shall be able to remove students from their session.

\*/

## **Priority 2**

### **1) Unregistered User:**

- 1.1. An Unregistered user shall comply with website terms and conditions.
- 1.2. An Unregistered user shall be able to subscribe to the website via email.
- 1.3. An unregistered user shall be able to search for tutor review.

### **2) Registered User:**

- 2.1. A registered user shall be able to report the unregistered/ registered users and their actionable activities to the website support.
- 2.2. A registered user shall comply with the website terms and conditions.
- 2.3. A registered user shall be able to give feedback to another registered user.
- 2.4. A registered user shall be able to add specific tutor to favorites.
- 2.5. A registered user shall be able to see their uptime [member since].

### **3) Administrator:**

- 3.1. An administrator shall be required to send messages to subscribed users.
- 3.2. An administrator shall be required to ban a specific user for misconduct.

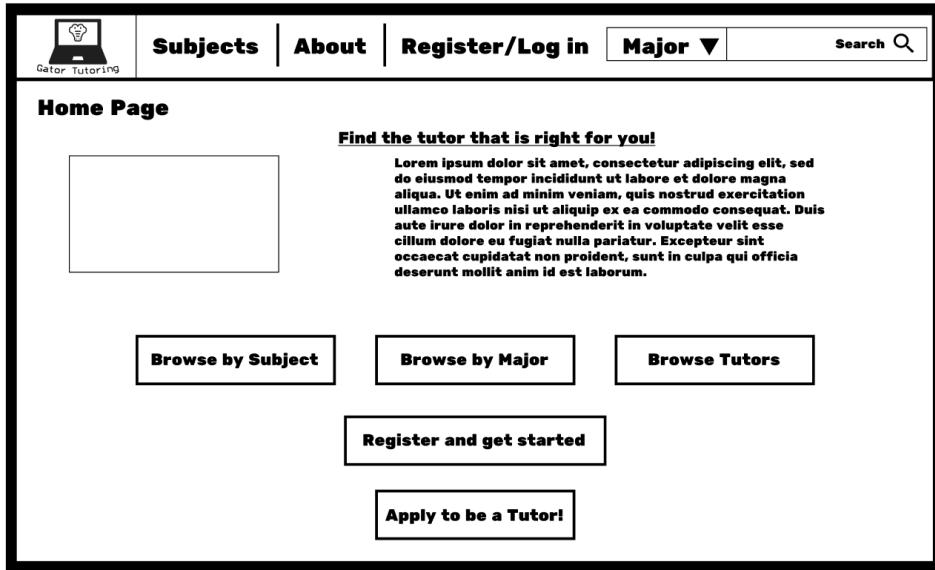
### **4) Tutor:**

- 4.1. A tutor shall be able to share their tutoring profile on social media.

## Section 4: Use Case Storyboards

- **Case 1: Student books an appointment and registers**

A student opens the home page and uses the search bar to search for CSC510 tutors. The student can now choose a tutor and once on the tutor page can choose a date on the calendar to book their tutoring appointment. Before the appointment is booked, the student is prompted to register.



*Website home page*

**Search results for 'CSC510':**

 Picture of tutor	<b>Tutor Name : CSC510</b> <b>Credentials:</b> <b>Tutoring Schedule:</b> • M-Wed: 1:00pm - 4:00pm • Thus: 2:00pm - 3:30pm	<a href="#" style="border: 1px solid black; padding: 2px;">Book an appointment</a>
 Picture of tutor	<b>Tutor Name : CSC510</b> <b>Credentials:</b> <b>Tutoring Schedule:</b> • M-Tu: 2:00pm - 4:30pm	<a href="#" style="border: 1px solid black; padding: 2px;">Book an appointment</a>

*Search results after the user searches for 'CSC510' in the Class category*

**Book an Appointment**

<b>Tutor Name : CSC510</b>  Picture of tutor	<b>Credentials:</b> <b>Tutoring Schedule:</b> • M-Wed: 1:00pm - 4:00pm • Thus: 2:00pm - 3:30pm	<b>Reviews:</b> ★★★★☆ <ul style="list-style-type: none"> <li>• Student1: ★★★★★ This tutor was great!</li> <li>• Student2: ★★★★★ Helped me pass CSC510 with an A!</li> </ul>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="7" style="text-align: center;">October</th> </tr> <tr> <th>S</th><th>M</th><th>T</th><th>W</th><th>T</th><th>F</th><th>S</th> </tr> </thead> <tbody> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td style="background-color: #cccccc;">4</td><td style="background-color: #cccccc;">5</td><td style="background-color: #cccccc;">6</td><td style="background-color: #cccccc;">7</td><td></td><td></td><td></td> </tr> <tr> <td></td><td style="background-color: #cccccc;">11</td><td style="background-color: #cccccc;">12</td><td style="background-color: #cccccc;">13</td><td style="background-color: #cccccc;">14</td><td></td><td></td> </tr> <tr> <td></td><td style="background-color: #cccccc;">18</td><td style="background-color: #cccccc;">19</td><td style="background-color: #cccccc;">20</td><td style="background-color: #cccccc;">21</td><td></td><td></td> </tr> <tr> <td></td><td style="background-color: #cccccc;">25</td><td style="background-color: #cccccc;">26</td><td style="background-color: #cccccc;">27</td><td style="background-color: #cccccc;">28</td><td></td><td></td> </tr> </tbody> </table> <p>Select a date above to choose your appointment date</p>	October							S	M	T	W	T	F	S																						4	5	6	7					11	12	13	14				18	19	20	21				25	26	27	28		
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*After the student selects a tutor they are brought to this screen where they can book their appointment date and view tutor reviews.*

**Register**

• **Register as a:**  **Student**  **Tutor**

Full Name

SFSU E-mail

Password

Verify Password

**Register**

*Student registration page*

**Thank you for signing up with SFSU Tutors!**  
Check your SFSU E-mail to verify your registration.

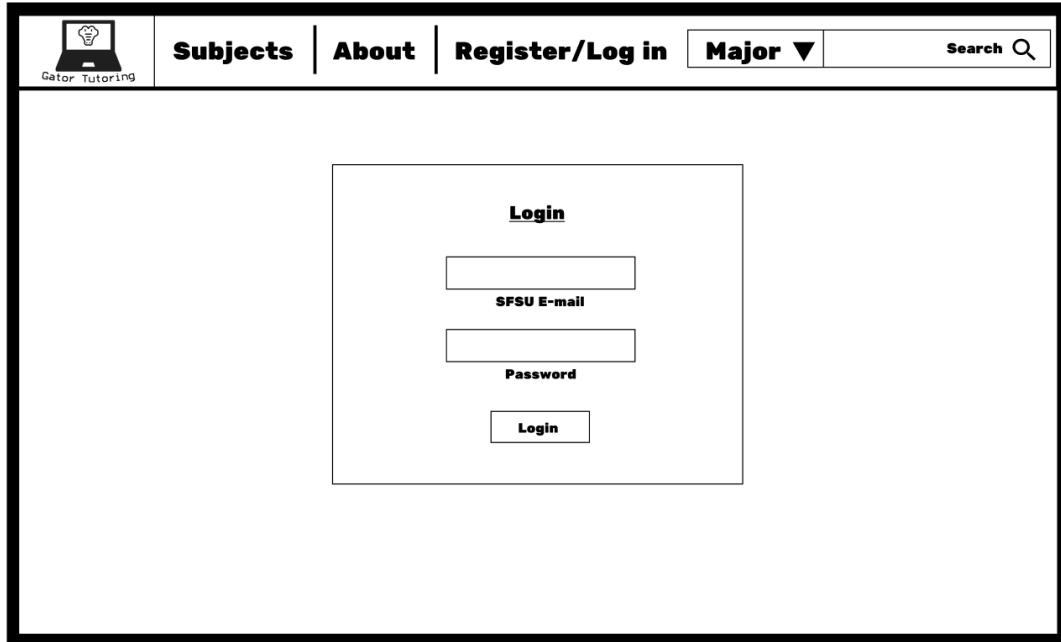
**Go back to Home**      **Go to Login**

<b>Get to know us</b>	<b>For Students</b>	<b>For Tutors</b>	<b>SFSU Software Engineering Project</b>
About Us Contact Us 1600 Holloway Ave San Francisco, CA 94132	Subjects Find a tutor Book a meeting Review a tutor	Apply to be a tutor	CSC648-B48 Fall 2021 For Demonstration Only

*Successful registration*

- **Case 2: Student reviews a tutor**

After a tutoring session, a student logs back into their account to leave a review for their tutor. Reviews let the student leave a star rating out of 5 and a message.



*User login page*

The screenshot shows a website interface for "Gator Tutoring". At the top, there is a navigation bar with links for "Subjects", "About", "Profile", "Major ▼", and a search bar labeled "Search". Below the navigation bar, the title "Student Profile" is displayed. To the left, there is a placeholder box for a "Picture of student". To the right, there are two sections: "Upcoming Appointments" (which is currently empty) and "Past Appointments". Under "Past Appointments", there is one entry: "Tutor1/CSC510: ★★★★☆" followed by a link "Leave a review".

*User profile to view past appointments to leave a review for previous tutors*

The screenshot shows a website interface for "Gator Tutoring". At the top, there is a navigation bar with links for "Subjects", "About", "Profile", "Major ▼", and a search bar. Below the navigation bar, the main content area has a title "Leave a Review". On the left side, there is a placeholder for a "Picture of tutor" and some sample text for "Tutor Name : CSC510", "Credentials", "Tutoring Schedule", and "Reviews". On the right side, there is a section for "Star Rating" with a 5-star icon, "Your Review" with a placeholder text box containing sample Lorem ipsum text, and a "Post Review" button.

**Gator Tutoring**

**Subjects** | **About** | **Profile** | **Major ▼** | **Search**

## Leave a Review

**Tutor Name :** CSC510

**Credentials:**

**Tutoring Schedule:**

- M-Wed: 1:00pm - 4:00pm
- Thus: 2:00pm - 3:30pm

**Reviews:**

★★★★★

**Star Rating:**  
★★★★★

**Your Review:**

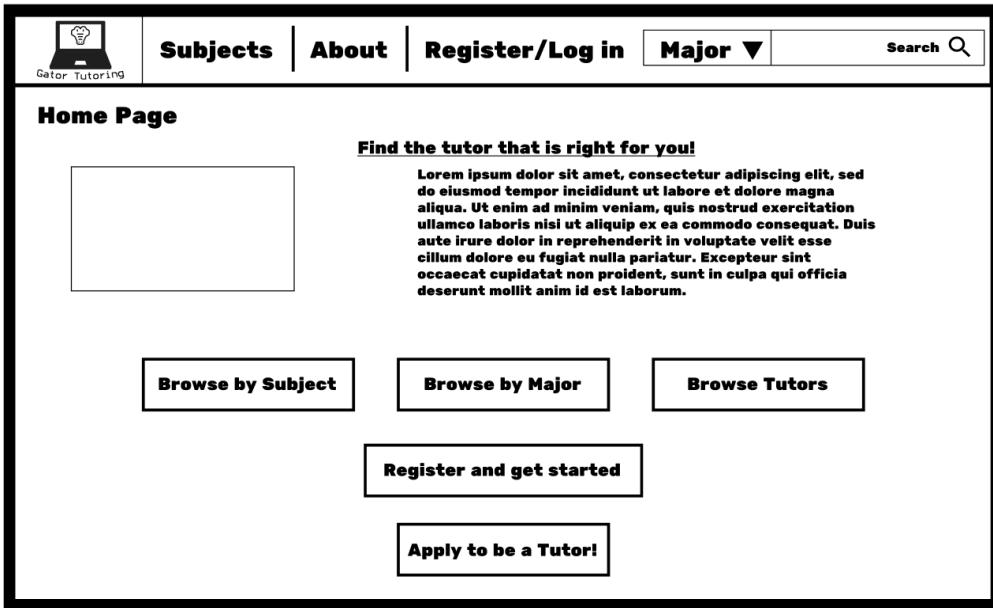
Placeholder text: Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua...

**Post Review**

*Review page, user can leave star rating and a review message to post for other users to see*

- **Case 3:** User applies to become a tutor

User clicks the ‘Apply to become a tutor!’ button on the home page. The user is prompted to fill out information such as their major department, their schedule of availability, as well as upload a resume document to be looked over by an admin to view their credentials. Before sending in their application the user is prompted to register to the site as a tutor.



*Home page, ‘Apply to be a Tutor!’ button at the bottom*

*Tutor application page*

The screenshot shows a web page with a header containing links for 'Subjects', 'About', 'Register/Log in', 'Major ▼', and a 'Search' bar. The main content area is titled 'Register' and contains fields for 'Full Name', 'SFSU E-mail', 'Password', and 'Verify Password'. There is also a radio button for selecting 'Student' or 'Tutor' status, with 'Tutor' selected. A 'Register' button is at the bottom.

*Tutor registration*

The screenshot shows a web page with a header containing links for 'Subjects', 'About', 'Register/Log in', 'Major ▼', and a 'Search' bar. The main content area is titled 'Apply to be a Tutor' and contains fields for 'Full Name', 'Select Major Department' (with a dropdown arrow), and three optional class selection fields labeled 'Class 1 (Required)', 'Class 2 (Optional)', and 'Class 3 (Optional)'. Below these is a section for 'Class(es) you would like to tutor'. A table shows availability for days from Monday to Sunday, with specific times listed for certain days. At the bottom are buttons for 'Upload Resume/Credentials' and 'Apply'.

Day(s)	M	Tue	W	Thu	F	Sat	Sun
Start	N/A	11:00am	11:00am	11:00am	11:00am		
End		1:00pm	1:00pm	1:00pm	1:00pm	N/A	N/A

The screenshot shows a website for "Gator Tutoring". At the top, there is a navigation bar with links for "Subjects", "About", "Register/Log in", "Major ▼", and a search bar. Below the navigation bar, a central message box contains the following text:  
**Thank you for applying to  
be a tutor for SFSU Tutors!**  
**Check your SFSU E-mail after 1-2 business  
days after we review your application to see if  
you are eligible to become a tutor!**  
Below this message are two buttons: "Go back to Home" and "Go to Login".  
At the bottom of the page, there is a footer section with three columns: "Get to know us", "For Students", and "For Tutors". The "Get to know us" column lists "About Us", "Contact Us", and the address "1600 Holloway Ave, San Francisco, CA 94132". The "For Students" column lists "Subjects", "Find a tutor", "Book a meeting", and "Review a tutor". The "For Tutors" column lists "Apply to be a tutor". To the right of these columns, there is a small note: "SFSU Software Engineering Project CSC648-848 Fall 2021 For Demonstration Only".

*Successful registration and application sent to be approved by system admin*

- **Case 4: System admin approves data being posted by students/tutors**

Admin can view data posted by students such as tutor reviews and applications sent in by tutors. The admin can then ‘approve’ or ‘remove’ tutor reviews left by students if they are appropriate or not. The admin can also view tutor applications, reading all the information that the applicant filled out including their resume document they have uploaded with their application. From here the admin can ‘approve’ or ‘decline’ a tutor’s eligibility. Will be implemented with MySQL Workbench, UI for admin will be implemented if time permits.

**Admin Viewer**

**View tutor reviews**

**View tutor applications**

**View users**

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*Admin home page*

 [Subjects](#) | [About](#) | [Register/Log in](#) | [Major ▼](#) | [Search](#)

### Admin Viewer: Tutor Reviews

Student Name	Tutor Name	Star Rating	Review Message	Admin
Name1	Name1	★★★★★☆	Review text....	<a href="#">Approve</a> <a href="#">Remove</a>
Name2	Name2	★★★★★☆	Review text....	<a href="#">Approve</a> <a href="#">Remove</a>
Name3	Name3	★★★★★☆	Review text....	<a href="#">Approve</a> <a href="#">Remove</a>
Name4	Name4	★★★★★☆	Review text....	<a href="#">Approve</a> <a href="#">Remove</a>
Name5	Name5	★★★★★☆	Review text....	<a href="#">Approve</a> <a href="#">Remove</a>

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**For Tutors**  
[Apply to be a tutor](#)

**SFSU Software Engineering Project**  
**CSC648-848 Fall 2021**  
**For Demonstration Only**

*Admin view page of tutor reviews*

 [Subjects](#) | [About](#) | [Register/Log in](#) | [Major ▼](#) | [Search](#)

### Admin Viewer: Tutor Applications

Tutor Name	Picture	View Resume	Major	Class(es) to Tutor	Schedule	Admin
Name1		<a href="#">Link</a>	CSC	Class1 Class2	<ul style="list-style-type: none"> <li>M-Wed: 1:00pm - 4:00pm</li> <li>Thus: 2:00pm - 3:30pm</li> </ul>	<a href="#">Approve</a> <a href="#">Decline</a>
Name2		<a href="#">Link</a>	AAS	Class1	<ul style="list-style-type: none"> <li>M-Wed: 1:00pm - 4:00pm</li> <li>Thus: 2:00pm - 3:30pm</li> </ul>	<a href="#">Approve</a> <a href="#">Decline</a>
Name3		<a href="#">Link</a>	BIO	Class1 Class2 Class3	<ul style="list-style-type: none"> <li>M-Wed: 1:00pm - 4:00pm</li> <li>Thus: 2:00pm - 3:30pm</li> </ul>	<a href="#">Approve</a> <a href="#">Decline</a>
Name4		<a href="#">Link</a>	CSC	Class1 Class2	<ul style="list-style-type: none"> <li>M-Wed: 1:00pm - 4:00pm</li> <li>Thus: 2:00pm - 3:30pm</li> </ul>	<a href="#">Approve</a> <a href="#">Decline</a>
Name5		<a href="#">Link</a>	ENGR	Class1	<ul style="list-style-type: none"> <li>M-Wed: 1:00pm - 4:00pm</li> <li>Thus: 2:00pm - 3:30pm</li> </ul>	<a href="#">Approve</a> <a href="#">Decline</a>

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*Admin view of tutor applications*

## **Section 5: High Level Database Architecture**

### **5. High Level Architecture, Database Organization**

#### **Student Table:**

- Email (Primary Key)
- First Name
- Last Name
- Image\_Reference

#### **Tutor Table:**

- Tutor Id (Primary Key)
- Tutor Email
- First Name
- Last Name
- courseTeaching
- Image\_Reference

#### **Posting Table:**

- Post Id (Primary Key)
- Email
- Title
- Description
- Price
- Category
- Image\_Reference

#### **Messages Table:**

- Message ID (Primary Key)
- Post ID (Foreign Key)
- Student
- Tutor
- Inquiry\_Description

**Review Table:**

- Review\_ID (Primary Key)
- Title
- TutorID (Foreign Key)
- Rating
- Description

**Media Storage:**

The images in our project will be stored in the React application in a static folder. The formats that will be acceptable will be .jpg and .png.

**Search/Filter Architecture and Implementation:**

When a user enters an input in the search bar, the React application will send this request to the Webpack server (which is a part of the React application), which will proxy the request to the Nodejs server. The query will be processed by using SQL and the “%like” statement.

## **Section 6: Identifying Risks**

### **Skill risks:**

Learning new skills and technologies such as ReactJS, new languages (to some members) such as JavaScript and even relearning them. A lot of the technologies that our group will be using will require some relearning. We don't think anyone in our group is 100% confident in their ability so there will be a lot of reading through various documents. We will address this issue by having everyone study up on their respective technologies during their free time so they can have a better understanding of it once it comes time to code.

### **Schedule risks:**

We believe that the schedule has been very flexible based on what was already given to us and we will be able to finish the project in a timely manner without a need for extensions.

### **Technical risks:**

No technical risks at this time.

### **Teamwork risks:**

So far, our team has divided work between all members and based on their skills, that member will take on work most suitable for them. For example, our frontend lead is taking on the role of storyboarding in this milestone. Our teamwork at this time has been great and everyone has completed the work they were assigned.

### **Legal/content risks:**

No legal or content risks. We obtain everything we have needed legally, such as reactJS, MySQL, and IDEs from the school because of our status as students. All visual elements of the site are free to use and will appropriately be cited.

## **Section 7: Project Management**

For the past milestones, we have used discord and zoom to assign tasks to each member. It has been a great tool to use to communicate each member's roles. Everyone in the group attends the zoom meetings so we are able to get everyone working on the sections they are assigned. So far, it has been working great. We used Discord and Zoom to assign each member a section to do for M2. Since we are not face to face, we just have to trust that each member will be able to complete their tasks on time and deliver. We feel that using Trello and other similar tools might be more harmful than helpful because each member would have to learn to use the tool, on top of other technologies and might not be active on it. We don't see the point of fixing something that's working perfectly for us. Each member has been responsive and active on Discord and it is easy to assign roles there.

### **Milestone 3:**

#### **Summary of Milestone 3 ZOOM meeting review with Prof. Petkovic and plans for further development**

**Team number: 7**

**Meeting date: 11/17/2021**

#### **Summary of feedback on UI (list if items, note tat details are available in ZOOM recording)**

The first feedback for the UI design in general was that the font was too small and has to be larger on every page. We have removed the home tab on the navbar because we have a logo. We need to make the tabs on the navbar look more like buttons and the search bar should be bigger. On the home page we have to remove the 'Book Appointments' button.

In search section, we have to make search bar longer, guide the user on how to use the search function, add a button to message a tutor, and display total # of results. We can use prefills after the user clicks on a button after searching.

In the Login/ registration section we have to add a 'Forgot Password' link and a 'If already a user?' link to login on the registration page. And finally mark required fields using a (\*).

In the tutor dashboard we should make a separate tab for messages that they have received and a tab for the tutor to post. In the tutor app, the title should be matched with the navbar link and remove the major dropdown.

### **Summary of feedback on code and architecture**

We have to fix some bugs. We have to put header comments in code scripts as well as add comments to explain what the pieces of code do.

### **Summary of feedback on github usage**

It will be better if we put commit messages in every time we push to git from local and we should write more comments on the header or inline. In comments we should explain what code does to understand what and why we pushed our code so the group can have a better understanding of the changes made.

### **Summary of feedback on DB**

We have to clean up the user tables and add password/ encryption to our database for security. There should be no roles or no students, only just users should be there and a bit will be flipped to set a user as a tutor.

### **Summary of feedback on teamwork**

We have done a good job with teamwork. We have had some miscommunication errors but things have been resolved by Milestone 3 and our group is on track.

### **Any other comments and issues**

- Add ‘Forgot Password’, ‘Already a user? Login’, ‘Not registered? Register’ links on login and registration pages
- Remove usages of red in the application
- Fix image size
- Add major to search drop down menu, add ‘Total # of results’ at the top of search results, and make search results display consistently with the different drop down options

**Check Point (CP) given, DUE: 12/18/2021**

### **P1 List of Features:**

Priority 1

1) Unregistered User:

1.1) An unregistered user shall be able to search for a tutor according to the class subject or tutor name.

1.2) An unregistered user shall be able to create an account.

2) Registered User:

2.1) A registered user shall inherit all functions as Unregistered User plus the following below.

2.2) A registered user shall be able to be a tutor or user of tutoring service.

2.3) A registered user shall be able to log in/log out.

2.4) A registered user shall be able to delete his/her posts.

2.5) A registered user shall be able to post tutoring info.

2.6) A registered user shall be able access their profile information

2.7) A registered user shall be able to edit their profile information

3) Administrator:

3.1) An administrator shall be able to approve a new tutor before it goes live.

3.2) An administrator shall be able to view a list of tutors on the website.

3.3) An administrator shall be able to view comments posted by other registered users.

3.4) An administrator shall be able to delete an account of all registered users.

3.5) An administrator shall be able to remove a tutor review.

3.6) An administrator shall be able to validate the appropriate review and post it.

**Plan of Action:**

The plan of action is to meet every weekday at 12:30pm PST to discuss the P1 features and how they can be implemented. The BackEnd Team is to implement Redis in the project in order to identify if a user is registered or unregistered; along with additional user behaviors. Then both the Frontend and Backend team will coordinate how to handle sessions, messaging, and posts which are all related to each other to handle user communication in the application. Up to this point all of the P1 features are implemented besides user-communication. The last week of daily meetings will primarily focus on

user-communication. Once user-communication is fully implemented, then the application will fulfill all of the P1 Feature requirements.

## **Milestone 4:**

### **Section 1: Product Summary**

Our web app is a tutoring app designed for San Francisco State University students. It connects students with tutors across the world, allowing them to find the best tutors suited for their subject and timezone. The easy to use website is designed for all users even those unfamiliar with web apps to navigate it through easily. The product is in its late stages and is ready to be deployed after some finishing touches are made. Students and tutors are allowed to create their own personalized accounts to make it more user friendly. Students are able to send messages to the tutor and the tutor can receive it and make adjustments for the student. Tutors are also able to post documents and anything necessary for the students' success. We believe in the success of our students and that this app will be able to help students achieve the grade they want.

**Name of Product:** SFSU Tutors

**Product URL:** <http://54.177.172.73:3000/>

### **Itemized List: Priority 1**

#### 1) Unregistered User:

1.1) An unregistered user shall be able to search for a tutor according to the class subject or tutor name.

1.2) An unregistered user shall be able to create an account.

#### 2) Registered User:

2.1) A registered user shall inherit all functions as Unregistered User plus the following below.

2.2) A registered user shall be able to be a tutor or user of tutoring service.

2.3) A registered user shall be able to log in/log out.

2.4) A registered user shall be able to delete his/her posts.

2.5) A registered user shall be able to post tutoring info.

- 2.6) A registered user shall be able access their profile information
- 2.7) A registered user shall be able to edit their profile information

3) Administrator:

- 3.1) An administrator shall be able to approve a new tutor before it goes live.
- 3.2) An administrator shall be able to view a list of tutors on the website.
- 3.3) An administrator shall be able to view comments posted by other registered users.
- 3.4) An administrator shall be able to delete an account of all registered users.
- 3.5) An administrator shall be able to remove a tutor review.
- 3.6) An administrator shall be able to validate the appropriate review and post it.

## **Section 2: Usability Test Plan**

### **Objectives:**

We are testing our search function to ensure complete usability for any user that uses our website. This is being tested to make sure that the test results comply with all functional requirements given such as displaying consistent search results, displaying the correct information of tutors that are searched for, displaying the correct number of total search results found, and that it is effective and easy for users to understand and use. We need to make sure that the search function works because it is the main function of our website. Without the search working there is no way for a user to look for and contact tutors since contacting tutors will be done on the search results page. To ensure that it is easy for users to use, we must make the search easily findable on the page as well as convey to the user how to use the search as this was something pointed out to us in our Milestone 3 check in. If there is no guidance given to the user on the search, they will not know what they are searching for. The dropdown menu along with placeholder text in the search bar should guide the user on how to effectively use the search function.

### **Test Background and Setup:**

**System Setup:** To first set up the search function the server holding the database information of the tutors must first be set up and running. This database information is posted once a user applies to be a tutor and is accepted to become a tutor by an admin of the website. The search function gets this information from the database to display back to the user. The data to be posted and displayed back in the search are the tutor's name, profile picture, and the class they are tutoring. Both sides of the front end and back end need to work together in order to achieve this.

**Starting Point:** Since the Search bar is a part of our Navigation bar component that is visible and ready to use on any tab on the website, the user's starting point could be anywhere on the site. The Navigation bar is placed at the top of every tab and the Search bar can be found in the middle.

**Intended Users:** The users intended to use the search function are students who want to search for a tutor. They can type in the course they need tutoring in or the name of the tutor themselves in order to find the tutor that they need. A user that wants to become a tutor can also use the search to see how the site functions before they apply to become a tutor. The search is the main function to find a tutor on the site so it is primarily for the students looking to become a tutor.

**URL/What is being measured: <http://54.177.172.73:3000/>**

The search function is being measured on a Likert scale in order to measure the usability of the search. We need to make sure that the system is fast and efficient, easy to comprehend, and not feel hard for any user to understand how it works. This is done in order to ensure our customers with ease of usability when using our website.

**Usability Task Description:**

Visit the site on any browser, the Navigation bar containing the Search bar should be visible at the top of every page. The user can click on the dropdown menu to filter search results by choosing either Tutors or Courses. By picking Tutors, the user can search for the tutor based on their name and by picking Courses the user can search based on the course they need a tutor for. If the user does not choose an option from the dropdown and continues with the search, the displayed results will pull from both Tutors and Courses. For example if a user searches for “c”, the information displayed will show all tutors that have a name that starts with a “C” and all courses containing “c”. To complete a search request the user can choose an option from the dropdown menu, type in a keyword into the search bar for what they are searching for, and click the Search button. After a search request is made the information will be displayed showing the tutor’s profile picture, first and last name, their email, the course they are tutoring, and a short description of the course. All information displayed on the search results should be consistent between the different dropdown filters, ie. searching by Tutors should not display more or less information than if the user searched by Courses.

**Evaluation of Effectiveness:** Is the information being shown relevant and consistent to what keywords I am searching.

**Evaluation of Efficiency:** Is the information being displayed in a timely manner so that the user does not have to wait a noticeable amount of time before search result data is displayed.

**Evaluation of User Satisfaction:** Is the information not only relevant but is displayed neatly and easy to understand for the user.

### **Section 3: QA test plan:**

**Test Objective:** Checking that the search bar is able to return requests from the user and in a timely manner. The results should also be accurate and what the user intended.

**HW and SW setup:** <http://54.177.172.73:3000/>

**Setup of HW:** Deploy live version of the website to the cloud, access the website on the cloud from any device of the user's choosing that has internet browser capabilities.

**Setup of SW:** Have a working version of Google Chrome and Mozilla Firefox to access the live application. Two browsers are needed to test for discrepancies if any between the two browsers.

**Feature to be tested:** Search bar

**QA test plan:**

3 Test plans:

- **Input:** enter “science”
  - **Output:** Check that you get a list of all tutors that are teaching science, all string containing “science” in the subject field
- 
- **Input:** enter “1”
  - **Output:** Check that the ID of the returned list contains the tutor with ID #1
- 
- **Input:** enter a tutor name
  - **Output:** Check that the results consist of these strings
    - The tutors name should be exactly as the user defined it

### **Tabular Format:**

#### **Browser Chrome**

Test #	Title	Description	Input	Expected correct Output	Test results PASS/FAIL
1	Test “science” is being returned after inputting	Type “science” in search field	science	Get all results that contain “science”	PASS
2	Test “1” is being returned after inputting	Type “1” in the search field	1	Get all results that contain ID 1	PASS
3	Test tutor name is being returned after submission	Type tutor name in search field	Bill	Get all tutors with first name Bill	

#### **Browser Firefox**

Test #	Title	Description	Input	Expected correct Output	Test results PASS/FAIL
1	Test “science” is being returned after inputting	Type “science” in search field	science	Get all results that contain “science”	PASS

2	Test “1” is being returned after inputting	Type “1” in the search field	1	Get all results that contain ID 1	PASS
3	Test tutor name is being returned after submission	Type tutor name in search field	Bill	Get all tutors with first name Bill	PASS

## Section 4: Code Review

Coder: Rui Qi Huang

Code Reviewer: William Lushbough

**Code Review for CSC648**



Rui Qi Ben Huang  
Wed 12/15/2021 8:53 PM  
To: William Lushbough

Hello William,

Please review the attached code listed below in the Github

[FFdevelop](#) [csc648-03-fa21-team07 / application / client / src / components / Mynavbar.js](#) [Jump to](#)

Thanks,  
Rui  
Frontend Developer

[Reply](#) | [Forward](#)

Thanks Rui,

I have reviewed your code regarding the navigation bar feature, titled Mynavbar.js. The following are some suggestions for the code.

In general, ought to be implementing basic headers in every code file in our repository. Therefore, we should add a simple header that includes the name of the title of the file, filename, and a list of contributors to the code. We should also remove the comments of unused code unless there is a listed specification as to why we are keeping the code commented out, for example, keeping commented code in the file for a future feature. The naming practices of each of your properties are in line with our Data Section of Milestone 2. The Github commits express great detail. My final suggestion is to include a few in-line comments that list what the following code is doing. Doing this in a brief manner will help future contributors understand the code more quickly.

Best,  
William Lushbough  
Github Master

```
1 import React, { useContext } from "react";
2 import "./navbar.css";
3 import { NavLink } from "react-router-dom";
4 import Container from "react-bootstrap/Container";
5 import { Nav, Navbar, NavDropdown } from "react-bootstrap";
6 // import 'bootstrap/dist/css/bootstrap.css';
7 import Picture from "./pictures/logo.png";
8 // import 'bootstrap/dist/js/bootstrap.bundle';
9 // import 'bootstrap/dist/js/bootstrap.bundle.min.js';
10 // import 'bootstrap/dist/js/bootstrap.js';
11 // import 'jquery/dist/jquery.min';
12 import Button from "react-bootstrap/Button";
13 import $ from "jquery";
14 import Searchbar from "./SearchBar";
15 import { ApplicationContext } from "../ApplicationContext";
16
17 const Mynavbar = () => {
18   const { loggedInUser } = useContext(ApplicationContext);
19   console.log(loggedInUser);
20
21   return (
22     <nav
23       className="navbar navbar-expand-lg navbar-dark main-nav"
24       id="thenavbar"
25     >
26       <div className="container-fluid">
27         <a className="navbar-brand" href="/">
28           <img src={Picture} width="80" height="55" alt="" />
29         </a>
30
31         <button
32           type="button"
33           className="navbar-toggler"
34           data-bs-toggle="collapse"
35           data-bs-target="#navbarCollapse"
36         >
37           <span className="navbar-toggler-icon" />
38         </button>
39         <div
40           className="collapse navbar-collapse justify-content-between"
41           id="navbarCollapse"
42           data-target=".navbar-collapse"
43         >
44           <div className="navbar-nav">
45             <Button
46               href="/about"
47               className="nav-item nav-link btn-outline-dark"
48             >
```

```
87         <div className="navbar-nav">
88             {loggedInUser.firstName === "" ? (
89                 <>
90                 <Button
91                     href="/Login"
92                     className="nav-item nav-link btn-outline-dark"
93                 >
94                     Login
95                 </Button>
96
97                 <Button
98                     href="/Registration"
99                     className="nav-item nav-link btn-outline-dark"
100                >
101                    Register
102                </Button>
103                </>
104            ) : (
105                <Button
106                    href="#"
107                    className="nav-item nav-link btn-outline-dark"
108                >
109                    LogOut
110                </Button>
111            )}
112        </div>
113    </div>
114  </div>
115  </nav>
116 );
117 };
118
119 $("#tableMenu a").on("click", function (e) {
120     e.preventDefault(); // cancel the link behaviour
121     var selText = $(this).text();
122     $("#tableButton").text(selText);
123 });
124
125 export default Mynavbar;
```

## Section 5: Security Self-Check

Asset to be Protected	Types of possible/expected attacks	Strategy to mitigate/protect the asset
User data that is being transferred over the network.	The network request can be intercepted.	Send sensitive data via POST requests.
User Passwords	If passwords are not encrypted hacker can obtain passwords	Passwords must be encrypted in before they are stored in the DB.
User Passwords	SQL injection attack, unnecessary characters to cause heavy overhead to the server	Put character limits on inputs, make sure email has @mail.sfsu.edu at end
Protecting Database Connection	If hackers get access to database server, they can access information in the database	This can be prevented by not hardcoding database information but putting it in a .env file

## **Section 6: Self-Check**

- 1.(**DONE**) Application shall be developed, tested and deployed using tools and servers approved by Class CTO and as agreed in Milestone 0. Application delivery shall be from chosen cloud server
- 2.(**DONE**) Application shall be optimized for standard desktop/laptop browsers e.g. must render correctly on the two latest versions of two major browsers
- 3.(**DONE**) All or selected application functions must render well on mobile devices
- 4.(**DONE**) Data shall be stored in the database on the team's deployment cloud server.
- 5.(**DONE**) No more than 50 concurrent users shall be accessing the application at any time
- 6.(**DONE**) Privacy of users shall be protected and all privacy policies will be appropriately communicated to the users.
- 7.(**DONE**) The language used shall be English (no localization needed)
- 8(**DONE**). Application shall be very easy to use and intuitive
- 9.(**DONE**) Application should follow established architecture patterns
- 10.(**DONE**) Application code and its repository shall be easy to inspect and maintain
- 11.(**DONE**) Google analytics shall be used
- 12.(**DONE**) No e-mail clients shall be allowed.
- 13.(**DONE**) Pay functionality, if any (e.g. paying for goods and services) shall not be implemented nor simulated in UI.

14.(**DONE**) Site security: basic best practices shall be applied (as covered in the class) for main data items

15.(**DONE**) Application shall be media rich (images, video etc.). Media formats shall be standard as used in the market today

16.(**DONE**) Modern SE processes and practices shall be used as specified in the class, including collaborative and continuous SW development

17.(**DONE**) For code development and management, as well as documentation like formal milestones required in the class, each team shall use their own github to be set-up by class instructors and started by each team during Milestone 0

18.(**DONE**) The application UI (WWW and mobile) shall prominently display the following exact text on all pages "SFSU Software Engineering Project CSC 648-848, Fall 2021 For Demonstration Only" at the top of the WWW page. (Important so as to not confuse this with a real application).

## Section 4: Project Screenshot

SFSU Software Engineering Project CSC648-848, Fall 2021 For Demonstration Only

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*Why Use SFSU Tutoring?*

- Select a tutor from a number of different classes and majors
- Book appointments to meet on campus or setup meetings online
- Help with classwork, study for tests, or review subjects
- View reviews of tutors to find the one that suits your needs

1) Home Screen

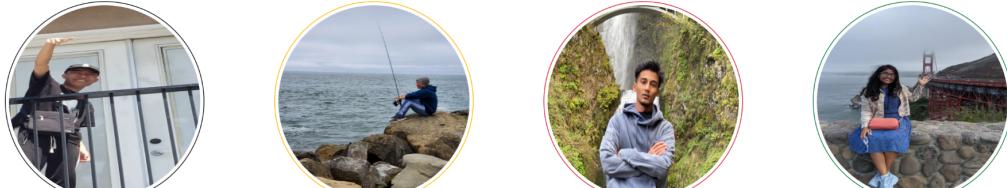
## About Team 7:

Below is a list of the technologies used in Team 7's software stack:

**Server Host:** AWS EC2 Instance 1vCPU 2GB Ram  
**Operating System:** Ubuntu v18.0  
**Database:** MySQL v8.0.26  
**Web Server:** Nodejs 14.17.6  
**Server-Side Language:** Javascript  
**Additional Technologies:** Web Framework: Expressjs 4.17.1  
**Front-End UI:** Reactjs 17.0.2, HTML/CSS  
**IDE:** Visual Studio Code  
**Website Performance:** Google Analytics

## Meet The Team

Meet and Greet our Team Members



2) About Team

**Application Form**

\* denotes a required field

First name\*

Last name \*

Email\*

Major

Course\*

Description\*

Resume\*  No file chosen

Upload Photo\*

No file chosen

**Apply now**

**GETTING TO KNOW US**

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- San Francisco, CA
- 94132

**FOR STUDENTS**

- Subjects
- Find a tutor
- Book a meeting
- Review a tutors

**FOR TUTORS**

- Apply to be a tutor
- SFSU Software Engineering Project
- CSC648-848 Fall 2021
- For Demonstration Only

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### 3) Application form section for apply tutor

SFSU Software Engineering Project CSC648-848, Fall 2021 For Demonstration Only

 About Us Apply to be a tutor Posts ✓ Category Tutors Courses Search.. Search Login Register

**Tutor Posts**

Type your post here:

Submit Post

**GETTING TO KNOW US**

- About Us
- Contact Us
- 1600 Holloway Ave
- San Francisco, CA
- 94132

**FOR STUDENTS**

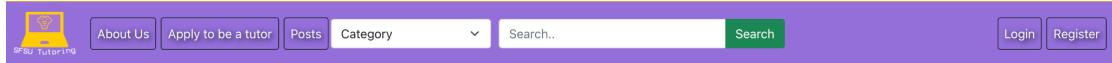
- Subjects
- Find a tutor
- Book a meeting
- Review a tutors

**FOR TUTORS**

- Apply to be a tutor
- SFSU Software Engineering Project
- CSC648-848 Fall 2021
- For Demonstration Only

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### 5) Tutor posts section



## Login

SFSU E-mail

Password

Don't have an account?

**GETTING TO KNOW US**

About Us  
Contact Us  
1600 Holloway Ave  
San Francisco, CA  
94132

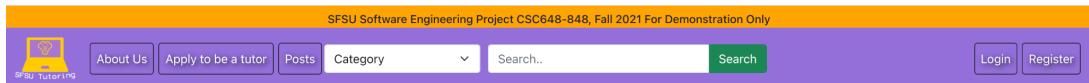
**FOR STUDENTS**

Subjects  
Find a tutor  
Book a meeting  
Review a tutors

**FOR TUTORS**

Apply to be a tutor  
SFSU Software Engineering Project  
CSC648-848 Fall 2021  
For Demonstration Only

## 6) Login section to apply



## Register

First Name  Last Name

SFSU E-mail

Password

Re-enter Password

By clicking Register, you agree to our Terms and Privacy Policy.[Terms of Use](#)

Already have an account?

## 7) Register Section for users

## **Section 5: Database Organization**

## User Table:

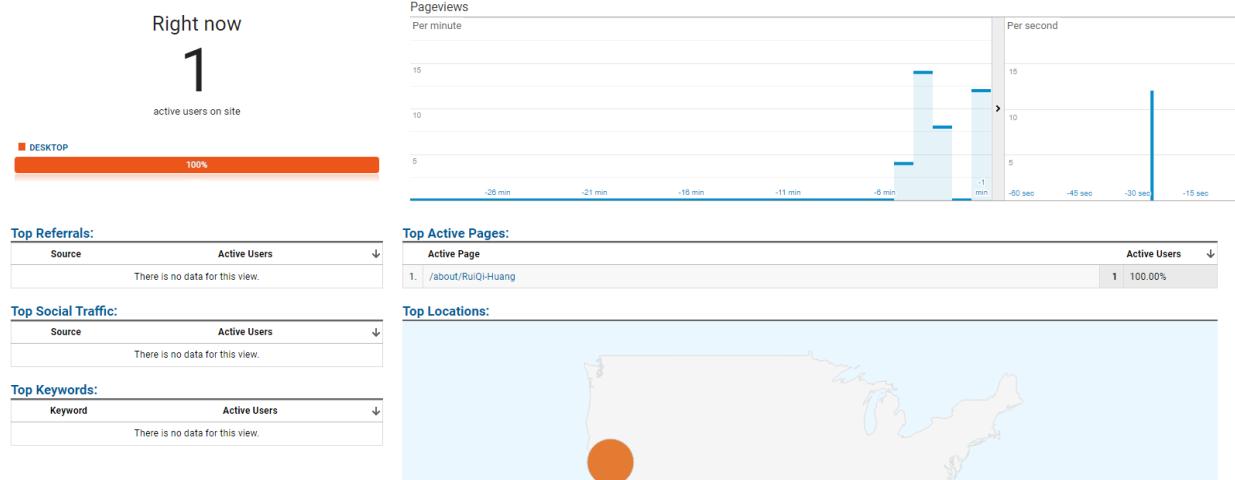
user_id	firstName	lastName	email	password	t...
1	John	Doe	jdoe@mail.sfsu.edu	\$2b\$10\$NZtI.9OM800KvsK3eN.sq.g8Oy/w7NJJHrg.n82A5/A/trigsLheu	1
2	Joycy	Pallapati	jpallapati@mail.sfsu.edu	\$2b\$10\$P4oHY3viz3Pa45Q.e0vpluc0WwY0BbrMfMz.XXfr4psj9k17ivzC.	1
3	Karen	Biggs	kbiggs@mail.sfsu.edu	\$2b\$10\$J59JPG5v6yOU69obo/rRea4.L3RGDLOQaXcCHhuXDsfzmAtY...	1
4	Sarah	Parelli	sparelli@mail.sfsu.edu	\$2b\$10\$nK3zC3u410owviwrxFVSbu.nzEZlYCrjHcR5jCVmdi6guzeDbySdK	1
5	Sreenidhi	Kings	skings@mail.sfsu.edu	\$2b\$10\$fvXlaowlLdvBt9zH6M/FU.trCzB3J5I.igbliGVW38vmtcaM8jKvu	1
6	Justin	Sparks	jsparks@mail.sfsu.edu	\$2b\$10\$NJ43TArAmxcSEHxjDzMye9WDmvbtFsq7Shslkn8o.lKbDbfxR7...	1
7	Booker	Dewitt	bdewitt@mail.sfsu.edu	\$2b\$10\$TVc31AJUg1sPC68B9fGetOENj4h6NTOWJ3yA55GrFu5SiAuLh...	0
9	Violet	Zaun	vzaun@mail.sfsu.edu	\$2b\$10\$sJVpv5142h4l7t7BaiDdMethZFHZMnY1wJfUTSWuUmUjXy7sh...	0
NULL	NULL	NULL	NULL	NULL	NULL

## Tutors Table:

## Posting Table:

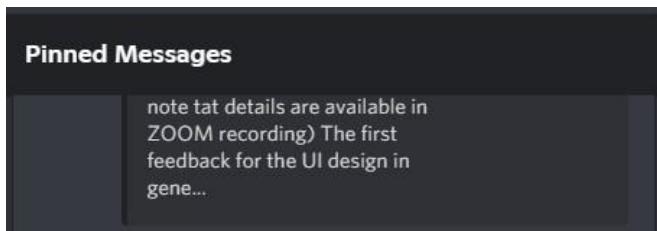
## Messages Table:

## Section 6: Google Analytics



## Section 7: Project Management

Our Project Management System was through Discord. We chose this because it is mobile-friendly, has great text/voice chat features, and allows us to Pin messages like a Trello board. It also allowed our team to organize chat conversations according to the subject; for example “frontend, github, or backend.”



**Pinned Messages**

note tat details are available in ZOOM recording) The first feedback for the UI design in gene...

---

**Justin Diones** 12/15/2021  
@everyone

milestone 4

- 1.) product summary - justin
- 2.) usability test plan (search) - justin
- 3.) qa test plan (search) - rui
- 4.) code review - william: reviewer rui: coder
- 5.) self check on best practices for security - alex
- 6.) self check- alex

milestone 5

- 1.) cover page
- 2.) product summary - justin (copied from m4)
- 3.) milestone documents - mai
- 4.) product screenshots - mai
- 5.) database organization - alex
- 6.) google analytics - justin
- 7.) project management - william
- 8.) team member self assessment and contributions - email to be sent to every member of the team by each member (justin, i can copy the emails into the document) (edited)

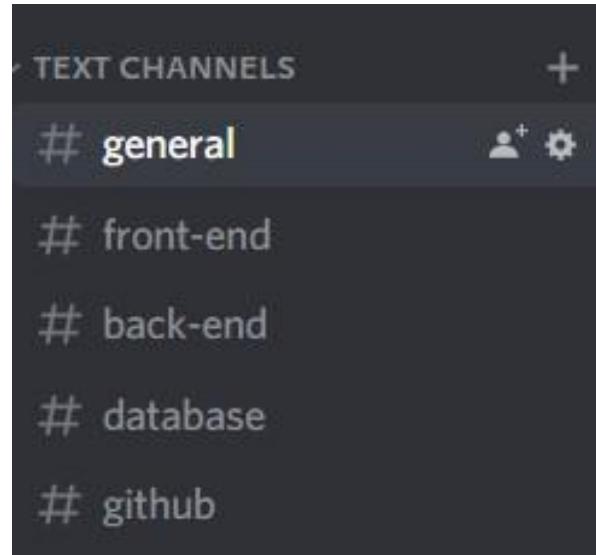
---

**Justin Diones** 11/17/2021

[https://docs.google.com/document/d/1zHeWAGwleU-yO\\_44gtVxNIY1dgzIxvVlq\\_CKgZ7XZxQ/edit?usp=sharing](https://docs.google.com/document/d/1zHeWAGwleU-yO_44gtVxNIY1dgzIxvVlq_CKgZ7XZxQ/edit?usp=sharing)

Google Docs

CSC648 M3 Notes



**TEXT CHANNELS**

- # general
- # front-end
- # back-end
- # database
- # github

The screenshot shows a Discord server interface for 'Team 7 CSC648'. On the left, there's a sidebar with sections for 'INFORMATION' (docs, tutorials), 'TEXT CHANNELS' (general, front-end, back-end, database, github), and 'VOICE CHANNELS' (Lounge, Study Room 1, Study Room 2). The 'back-end' channel is selected and highlighted in blue. In the main window, the '# back-end' channel is active. A message from 'wifiwillie' at 09/15/2021 asks if they are hosting the server on an AWS EC 2 instance. Morty replies 'yeah'. wifiwillie then links to a DEV Community article titled 'How To Deploy Your Node.js App On AWS With NGINX And SSL' by Shadid Haque, posted on Mar 29. The message from Mai (@Morty) at 09/15/2021 reminds Morty to close the instance. Morty responds that he stopped it. Finally, Morty says he connected the DB.

# back-end

wifiwillie 09/15/2021 You are hosting the server on an AWS EC 2 instance right?

Morty 09/15/2021 yeah

wifiwillie 09/15/2021 here's what i was talking about earlier. Half way through seems useful  
<https://dev.to/shadid12/how-to-deploy-your-node-js-app-on-aws-with-nginx-and-ssl-3p5l> (edited)

DEV Community

**How To Deploy Your Node.js App On AWS With NGINX And SSL**

Shadid Haque • Mar 29

Mai 09/15/2021 @Morty i want to remind you to close instance.

Morty 09/15/2021 Hey! Thanks! Yeah I stopped it

Morty 09/15/2021 Hey, I connected the DB.

## **8) Team member self assessment and contributions:**

### **William (wlushbough@mail.sfsu.edu)-**

a.) Contributions:

Github Master

FrontEnd

General Support

Documentation

b.) 20 Commits

c.) I think overall the main problem was biting off more than we could chew. Perhaps we should not have used reactJS if it would be easier for us to code in another language. I also found it hard to know what needed to be done. It was also difficult figuring out how to code the actual features. Especially because a lot of work was assigned later on.

d.) In general, I wish we could have addressed team morale and communication early on. There was a hostile environment which led to members not communicating effectively enough to complete tasks. I suppose I could have brought this up early on but I was not personally in a leadership position to do so. Communication seemed to improve towards the end of the semester but unfortunately, it seemed to be too late. The frequent condescending remarks by the team-lead demoralized the group in my opinion. I think we should have been given the option to change groups.

### **Rui (rhuang10@mail.sfsu.edu)-**

a) Worked on the frontend, specifically the navbar, tutor dashboard and application form and did part of the styling.

b) ~20 submissions to github front end branch

c) One of the main challenges that I had while working on the frontend was learning javascript/react/bootstrap all at the same time. This is my first time developing for the frontend so it was a hurdle to read all the documentations necessary to meet professor-outlined standards.

d) The one thing I would do better on would be to not procrastinate the work for the frontend especially when I am new to it and have to meet certain deadlines. Working in a group is also

challenging and something I would try to improve on since everyone has differing ideas on how to approach specific problems.

**Team member self assesment**

 Rui Qi Ben Huang  
Sat 12/18/2021 10:21 AM  
To: Justin Buyco Diones; William Lushbough; Mai Ra; Alekhya Gandu; Rupak Khatri

[Like](#) [Reply](#) [Forward](#) [...](#)

a) Worked on the frontend, specifically the navbar, tutor dashboard and application form and did part of the styling.

b) ~20 submissions to github front end branch

c) One of the main challenges that I had while working on the frontend was learning javascript/react/bootstrap all at the same time. This is my first time developing for the frontend so it was a hurdle to read all the documentations necessary to meet professor-outlined standards.

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[Reply](#) | [Reply all](#) | [Forward](#)

### Justin (jdiones@mail.sfsu.edu)

a) Contributions

- Front end team lead
- Overlooking front end design of all pages
- Bug fixing front end bugs
- Assigning roles to the front-end team
- Overlooking documentation for the milestone write ups

b) 55 commits were made

c) The main challenge I had to face was communicating with our team lead. Miscommunications between Alex and myself led to a lot of unneeded tension between us and within the team. Another big challenge was trying to figure out a lot of things last minute due to some of these miscommunications. While some problems were fixed, other problems arose as the project got closer to the deadline.

d) The main thing I would do better next time is have clear communication between all members. There was a lot of miscommunications or no communication at all at times from some members. I think if we were clearer on communicating, we could have finished things a lot more efficiently and did not have to scramble at the last minute to fix or add functions. With better communication it would have been easier to assign tasks and understand what needed to be done throughout the process of the project.



Justin Buyco Diones  
Sat 12/18/2021 1:03 AM

To: William Lushbough; Alekhya Gandu; Rui Qi Ben Huang; Rupak Khatri; Mai Ra



a) Contributions

- Front end team lead
- Overlooking front end design of all pages
- Bug fixing front end bugs
- Assigning roles to the front-end team
- Overlooking documentation for the milestone write ups

b) 55 commits were made

c) The main challenge I had to face was communicating with our team lead. Miscommunications between Alex and myself led to a lot of unneeded tension between us and within the team. Another big challenge was trying to figure out a lot of things last minute due to some of these miscommunications. While some problems were fixed, other problems arose as the project got closer to the deadline.

d) The main thing I would do better next time is have clear communication between all members. There was a lot of miscommunications or no communication at all at times from some members. I think if we were clearer on communicating, we could have finished things a lot more efficiently and did not have to scramble at the last minute to fix or add functions. With better communication it would have been easier to assign tasks and understand what needed to be done throughout the process of the project.

[Reply](#) | [Reply all](#) | [Forward](#)

## Alekhya ([agandu1@mail.sfsu.edu](mailto:agandu1@mail.sfsu.edu))

a). Contributions:

- Team Lead
- Back End Lead and Developer
- Front End Developing
- Cloud Deployment and Maintenance
- Database Management
- Documentation

b). Git Commits: ~66

c). The challenges I have faced during this project can be categorized into two subdivisions. The first subdivision would be related to implementation problems, trying to get the code to work, learning how certain software work, implementing them, and having it not work as intended, and the many other painful, yet somewhat thrilling, tasks that come along with being a rookie software developer. The second category would be related to the uncomfortable and perhaps sometimes inevitable gaps in communication, clash of personality types, and a lack of self-motivation that can arise in any teamwork type setting. As the Team Lead for Team07, I feel that everyone in my team did their best till the very end. There were moments that were not so

good but there were really good moments as well. I believe that given the circumstances, Team07 did their best! I learned invaluable lessons both from the technical aspect and non-technical aspect of software development.

d). I have a newfound respect for software development and its processes. It takes a lot of drive and commitment to create something of value. There are many things that I, as a Team Lead, would do differently. Firstly, I would have liked to dictate each team member's work earlier on. However, I realize I may have struggled with that because I was confused myself, I had never been in this kind of team working environment before. Coming from a background more leaned towards hardware I had little awareness of software implementation, JavaScript was completely new to me. However, despite the learning curve, we pulled through and managed it. Also, I should have held more team meetings outside of class. We did more and more towards the end, but it would have helped a lot if we met frequently earlier on. Lastly, I feel that we as a team should have put more effort into getting to know each other and understand where the other person is coming from regarding their thoughts and expressions. It is quite easy to judge, especially when there is so much diversity. However, I feel that it can be very easy to forget that diversity is also what makes us strong. All in all, I have learned an incredible amount and I am thankful for this opportunity of being Team Lead.

#### Milestone 5 Team Assessment



Alekhya Gandu  
Sat 12/18/2021 12:05 PM



To: Rui Qi Ben Huang; Mai Ra; Justin Buyco Diones; William Lushbough; Rupak Khatri

a). Contributions:

- Team Lead
- Back End Lead and Developer
- Front End Developing
- Cloud Deployment and Maintenance
- Database Management
- Documentation

b). Git Commits: ~66

c). The challenges I have faced during this project can be categorized into two subdivisions. The first subdivision would be related to implementation problems, trying to get the code to work, learning how certain software work, implementing them, and having it not work as intended, and the many other painful, yet somewhat thrilling, tasks that come along with being a rookie software developer. The second category would be related to the uncomfortable and perhaps sometimes inevitable gaps in communication, clash of personality types, and a lack of self-motivation that can arise in any teamwork type setting. As the Team Lead for Team07, I feel that everyone in my team did their best till the very end. There were moments that were not so good but there were really good moments as well. I believe that given the circumstances, Team07 did their best! I learned invaluable lessons both from the technical aspect and non-technical aspect of software development.

d). I have a newfound respect for software development and its processes. It takes a lot of drive and commitment to create something of value. There are many things that I, as a Team Lead, would do differently. Firstly, I would have liked to dictate each team member's work earlier on. However, I realize I may have struggled with that because I was confused myself, I had never been in this kind of teamworking environment before. Coming from a background more leaned towards hardware I had little awareness of software implementation, JavaScript was completely new to me. However, despite the learning curve, we pulled through and managed it. Also, I should have held more team meetings outside of class. We did more and more towards the end, but it would have helped a lot if we met frequently earlier on. Lastly, I feel that we as a team should have put more effort into getting to know each other and understand where the other person is coming from regarding their thoughts and expressions. It is quite easy to judge, especially when there is so much diversity. However, I feel that it can be even easier to forget that diversity is also what makes us strong. All in all, I have learned an incredible amount and I am thankful for this opportunity of being Team Lead.

Best Regards,  
Alekhya.

Mai Ra ([mra1@mail.sfsu.edu](mailto:mra1@mail.sfsu.edu))

- a. Contributions:
  - Back End
  - Documentation
- b. 5 commits
- c. Overall the main challenge is taking the back end without a proper knowledge of the back end and having to learn all the things at the time limit. This is my first time working with lots of team members and learning about communication is the key in a group.
- d. Personally, I wish I could take it a little bit easier than the back end and study more about subject related material, so I could support the team members. And the other main thing about the group is, we should do better next time is we should set a small milestone within the group to finish within, so we would not have to do everything at the last minute.

 Mai Ra  
 Sat 12/18/2021 8:56 AM  
 To: Alekhya Gandu; William Lushbough; Justin Buyco Diones; Rui Qi Ben Huang; Rupak Khatri  
[Mai Ra \(mra1@mail.sfsu.edu\)](mailto:mra1@mail.sfsu.edu)

↳ ↲ ↴ ↵ ...

a. Contributions:  

- Back End
- Documentation

b. 5 commits

c. Overall, the main challenge is taking the back end without a proper knowledge of the back end and having to learn all the things at the time limit. This is my first time working with lots of team members and learning about communication is the key in a group.

d. Personally, I wish I could take it a little bit easier than the back end and study more about subject related material, so I could support the team members. And the other main thing about the group is, we should do better next time is we should set a small milestone within the group to finish within, so we would not have to do everything at the last minute.

[Reply](#) | [Reply all](#) | [Forward](#)

Rupak Khatri(rkhatri@mail.sfsu.edu)

Hi Team,

- a) Following are the list of contributions I made as a Front-end developer:
  - i) Created Member login page
  - ii) Managed to fetch requests on pages like Apply to be a tutor, Postings, Login, Registration.
  - iii) Implemented front-end validation for login and registration
  - iv) Created student dashboard profile and added fetch request on apply
  - v) Implemented and render search results on two categories, Tutor and Major.
- b) ~40 git commits
- c) The challenging part for me was debugging the problems. As a new react developer, debugging the class-based component and implementing Hooks was something that I found challenging. Moreover, this is my first time working with a team of 7 members so clean pushing and merging code on Github was also a bit challenging for me.

- d) Some of the things that I would do differently next time is that I would definitely communicate more effectively with the group member regarding the functions that I'm implementing on my side earlier. I now know the importance of well-written comments on code while working on a team so I would definitely implement that on my code. I will definitely try to work making smaller milestone so that i don't push all the work till last moment.

Milestone 5 Team Assessment

Rupak Khatri  
Sat 12/18/2021 1:12 PM

To: Alekhya Gandu; William Lushbough; Justin Buyco Diones; Mai Ra; Rui Qi Ben Huang

Hi Team,

a. Following are the list of contributions I made as a Front-end developer:

- i. Created Member login page
- ii. Managed to fetch requests on pages like Apply to be a tutor, Postings, Login, Registration.
- iii. Implemented front-end validation for login and registration
- iv. Created student dashboard profile and added fetch request on apply
- v. Implemented and render search results on two categories, Tutor and Major.

b. ~40 git commits

c. The challenging part for me was debugging the problems. As a new react developer, debugging the class-based component and implementing Hooks was something that I found challenging. Moreover, this is my first time working with a team of 7 members so clean pushing and merging code on Github was also a bit challenging for me.

d. Some of the things that I would do differently next time is that I would definitely communicate more effectively with the group member regarding the functions that I'm implementing on my side earlier. I now know the importance of well-written comments on code while working on a team so I would definitely implement that on my code. I will definitely try to work on making smaller milestones so that I don't procrastinate.

...