

SW Engineering CSC648/848 Fall 2021

SFSU Tutors

Team No.7

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Milestone 2

October 26, 2021

	Date Submitted	Date Revised
Milestone 1	October 9, 2021	October 13, 2021
Milestone 2	October 27, 2021	

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

2) Registered User:

- 2.1) A registered user shall be a student at San Francisco state university.
- 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 comply with the website terms and conditions.
- 2.9) A registered user shall be able to view the privacy policy.
- 2.10) A registered user shall be able to change their contact information.
- 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
- 2.14) A registered user shall be able to delete their account.
- 2.15) A registered user shall be able to filter search by rating.

3) Administrator:

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

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 a video description.
- 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 send inquiries to the tutor on their email.

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 be able to block unregistered/ registered users.
- 2.3) A registered user shall be able to subscribe to the website via email.
- 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].
- 2.6) A registered user shall be able to give feedback to another registered user.

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.
- 3.3) An administrator shall be required to view inquiries from all registered users.

4) Tutor:

- 4.1) A tutor shall be able to share their tutoring profile on social media.
- 4.2) A tutor shall be able to report students to administration for actionable activity.

Priority 3

1) Unregistered User:

- 1.1) A Unregistered user shall be able to subscribe for website membership.

2) Registered User:

- 2.1) A registered user shall be able to subscribe for website membership
- 2.2) A registered user shall be able to make a
- 2.3) A registered user shall be able to share the website content in social media.
- 2.4) A registered user shall have a rating.

3) Administrator:

- 3.1) An administrator shall be required to post new updates on the website.

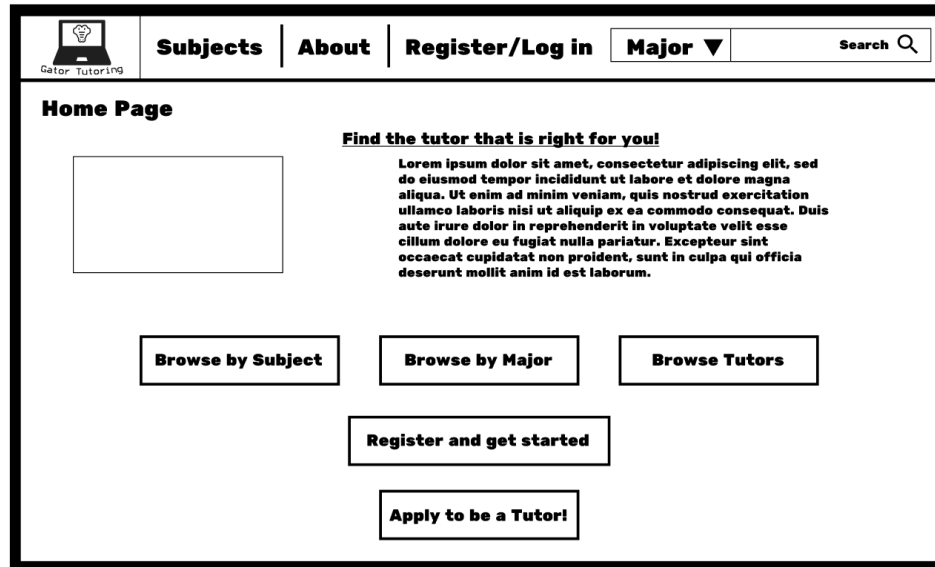
4) Tutor:

- 4.1) A tutor shall be able to change their online status.


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




[Subjects](#)
[About](#)
[Register/Log in](#)

Class ▼

CSC510

Search results for 'CSC510':



Picture of tutor

Tutor Name : CSC510

Credentials:


Tutoring Schedule:

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

Reviews:

★★★★☆

Book an appointment



Picture of tutor

Tutor Name : CSC510

Credentials:

Tutoring Schedule:


- M-Tu: 2:00pm - 4:30pm

Reviews:

★★★★☆

Book an appointment

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




[Subjects](#)
[About](#)
[Register/Log in](#)

Class ▼

CSC510

Book an Appointment

Tutor Name : CSC510



Picture of tutor

Credentials:

Tutoring Schedule:

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

Reviews: ★★★★★

- **Student1:**
★★★★☆
This tutor was great!
- **Student2:**
★★★★★
Helped me pass CSC510 with an A!


October

S	M	T	W	T	F	S
	4	5	6	7		
	11	12	13	14		
	18	19	20	21		
	25	26	27	28		

Select a date above to choose your appointment date

Book an appointment

After the student selects a tutor they are brought to this screen where they can book their appointment date and view tutor reviews.



[Subjects](#)
[About](#)
[Register/Log in](#)

Major ▼

Search

Register

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

Full Name


SFSU E-mail

Password

Verify Password

Register

Student registration page



[Subjects](#)
[About](#)
[Register/Log in](#)

Major ▼

Search

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

Go back to Home

Go to Login

Get 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 tutor

For Tutors

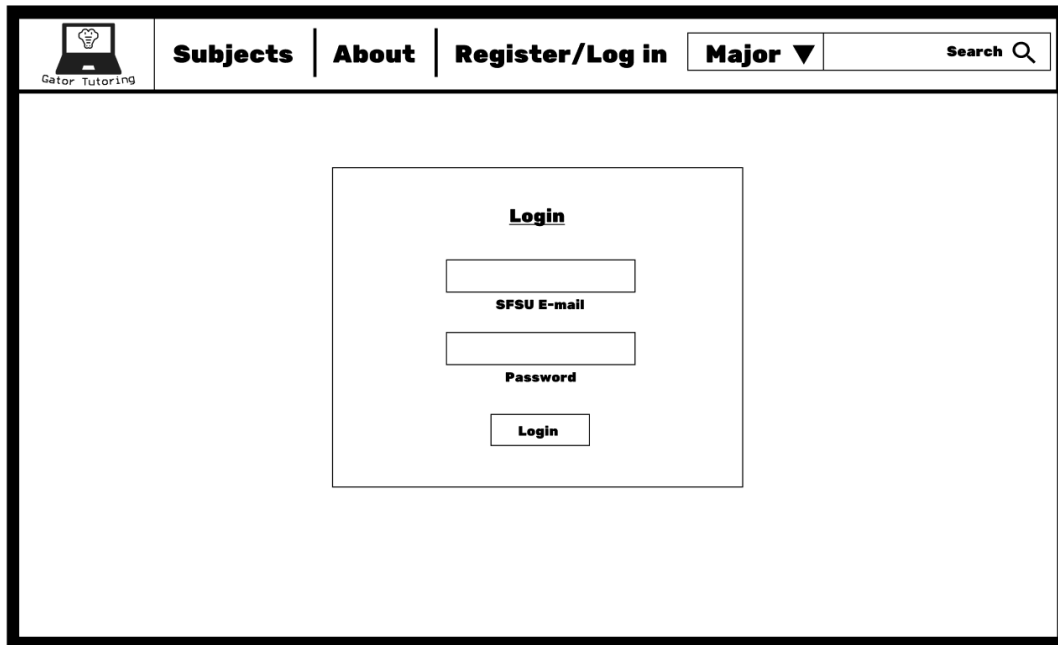
Apply to be a tutor

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

Successful registration

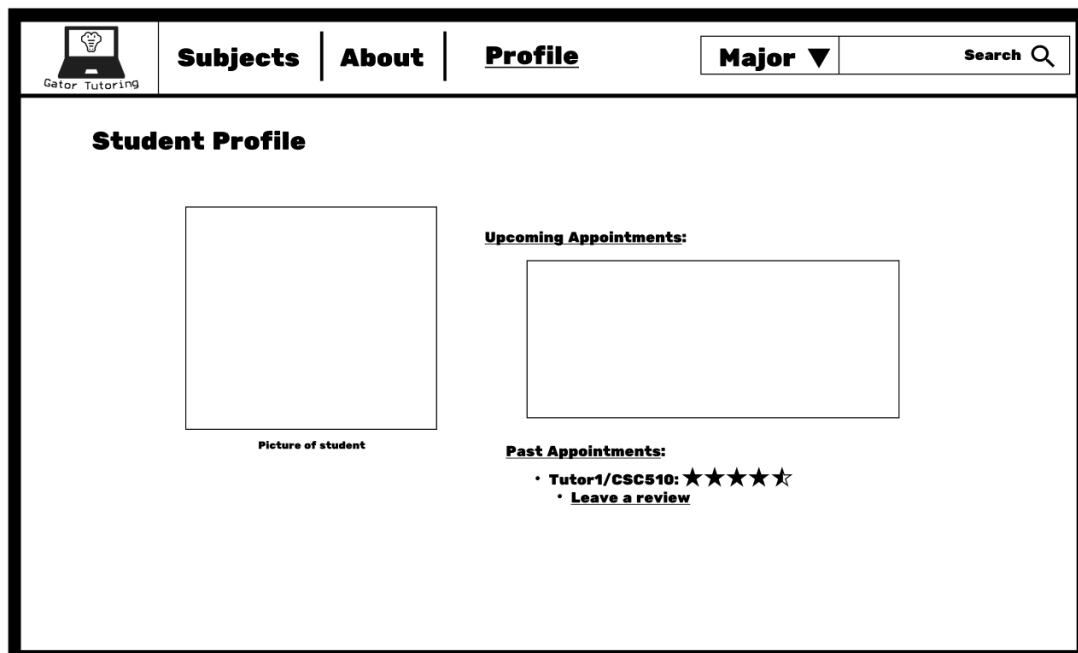
- **Case 2: Student reviews a tutor**

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.




The login page features a header with a 'Gator Tutoring' logo, navigation links for 'Subjects', 'About', and 'Register/Log in', a 'Major' dropdown menu, and a search bar. The main content area contains a 'Login' form with fields for 'SFSU E-mail' and 'Password', and a 'Login' button.

User login page



The user profile page has a header with the 'Gator Tutoring' logo, navigation links for 'Subjects', 'About', and 'Profile', a 'Major' dropdown menu, and a search bar. The main content area is titled 'Student Profile' and includes a placeholder for the 'Picture of student'. To the right, there are sections for 'Upcoming Appointments' and 'Past Appointments'. The 'Past Appointments' section lists 'Tutor1/CSC510' with a 4-star rating and a 'Leave a review' link.


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



[Subjects](#) | [About](#) | [Profile](#)

Major ▼

Leave a Review



Picture of tutor

Tutor Name : CSC510

Credentials:

Tutoring Schedule:

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

Reviews:

★★★★★

• **Star Rating:**

★★★★★

• **Your Review:**

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

Find the tutor that is right for you!

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Browse by Subject **Browse by Major** **Browse Tutors**

Register and get started

Apply to be a Tutor!

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

Apply to be a Tutor

Full Name

Select Major Department ▼

Class 1 (Required):

Class 2 (Optional):

Class 3 (Optional):

Class(es) you would like to tutor

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

Availability

Upload Resume/Credentials

Apply

Tutor application page

Register

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

Full Name

SFSU E-mail

Password

Verify Password

Tutor registration

Thank you for applying to be a tutor for SFSU Tutors!

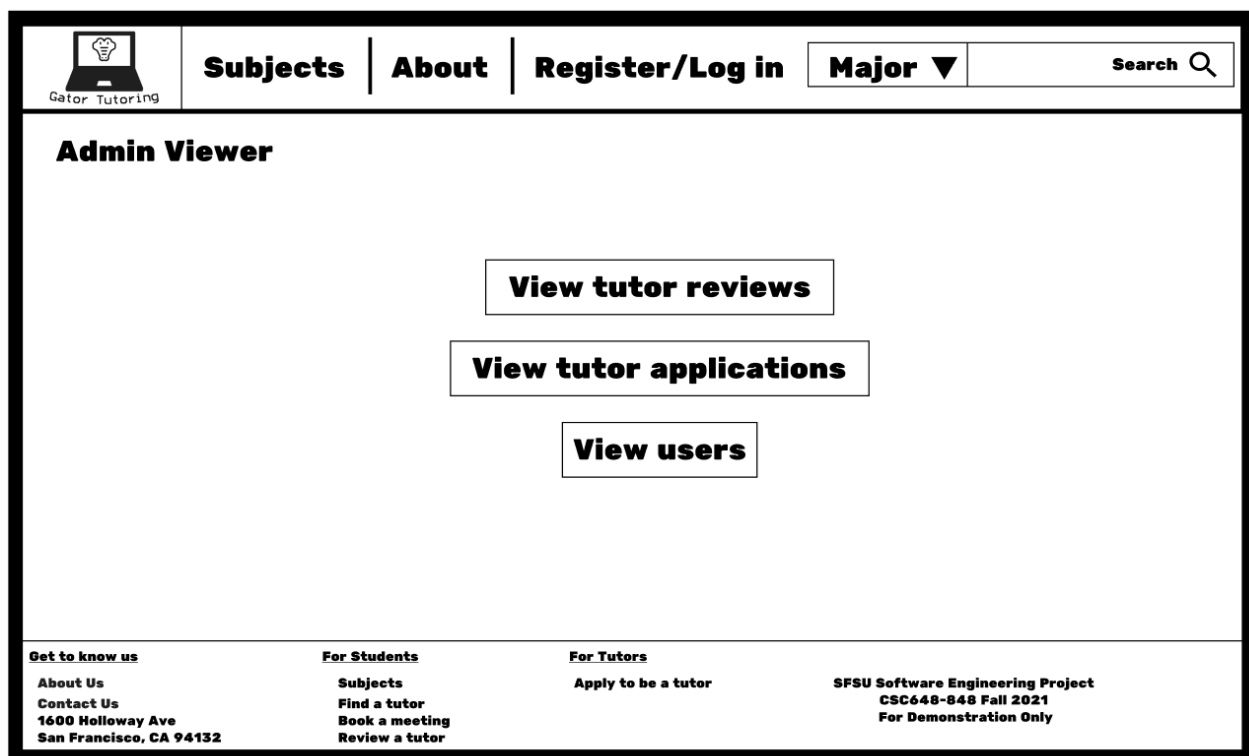
Check your SFSU E-mail after 1-2 business days after we review your application to see if you are eligible to become a tutor!

Get to know us	For Students	For Tutors	SFSU Software Engineering Project
About Us	Subjects	Apply to be a tutor	CSC648-848 Fall 2021
Contact Us	Find a tutor		For Demonstration Only
1600 Holloway Ave	Book a meeting		
San Francisco, CA 94132	Review a tutor		


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 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....	▲ ▼	Approve Remove
Name2	Name2	★★★★☆	Review text....	▲ ▼	Approve Remove
Name3	Name3	★★★★☆	Review text....	▲ ▼	Approve Remove
Name4	Name4	★★★★☆	Review text....	▲ ▼	Approve Remove
Name5	Name5	★★★★☆	Review text....	▲ ▼	Approve Remove


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For Students
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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		Link	CSC	Class1 Class2	• M-Wed: 1:00pm - 4:00pm • Thus: 2:00pm - 3:30pm	Approve Decline
Name2		Link	AAS	Class1	• M-Wed: 1:00pm - 4:00pm • Thus: 2:00pm - 3:30pm	Approve Decline
Name3		Link	BIO	Class1 Class2 Class3	• M-Wed: 1:00pm - 4:00pm • Thus: 2:00pm - 3:30pm	Approve Decline
Name4		Link	CSC	Class1 Class2	• M-Wed: 1:00pm - 4:00pm • Thus: 2:00pm - 3:30pm	Approve Decline
Name5		Link	ENGR	Class1	• M-Wed: 1:00pm - 4:00pm • Thus: 2:00pm - 3:30pm	Approve Decline

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For Students
 Subjects
 Find a tutor
 Book a meeting
 Review a tutor

For Tutors
 Apply to be a tutor

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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.