

Final Project for SW Engineering Class CSC648/848 Fall 2021

Team Number: 03

Name of Application: TutorPal

Names of Students:

Snehal Patil(spatil2@mail.sfsu.edu) – Team Lead

Cameron Robinson - Back-End Lead

Daniel Elnaggar - Front-End Lead

James Pratt - GitHub Master

Rollin Kung

Saptarshi Roy

URL of the demo: <https://csc648team3.ddns.net/>

Date: 12/17/2021

Table of Content

Sr. No	Content	Page No
1.	Product Summary	3
2.	Milestone Documents	4
1)	Milestone Document 1	4
2)	Milestone Document 2	21
3)	Milestone Document 3	45
4)	Milestone Document 4	47
3.	Product Screenshots	60
4.	Database Organization	66
5.	Google Analytics Stats	68
6.	Project Management	69
7.	Team Member Self-Assessment	70

1. Product Summary

Name of the Product: Tutor Pal

Final P1 List:

1. A user can search for available courses, tutors, or majors using the search bar.
2. A user can browse tutor posts using the “Start Browsing!” button on the front page.
3. Recent registered tutors and their posts are displayed on the front page.
4. Users are able to view each tutor’s post description and picture.
5. A user is able to contact a tutor by sending a message, which will then utilize lazy registration and ask the user to register.
6. A user is able to sign up as a tutor by clicking on the “Become a tutor!” button on the front page.
7. A user is able to offer tutoring by creating a post.
8. Users are able to visit the “About” page from the navigation bar.
9. Users can view their dashboard, which will display recent messages.

Product URL: <https://csc648team3.ddns.net/>

2. Milestone Documents

1) Milestone Document 1

SW Engineering CSC648/848 Fall 2021

Project Title : TutorPal

Team Number : 03

Names of Students:

Snehal Patil(spatil2@mail.sfsu.edu) – Team Lead

Cameron Robinson - Back-End Lead

Daniel Elnaggar - Front-End Lead

James Pratt - GitHub Master

Rollin Kung

Saptarshi Roy

Milestone: 1

Date: 10/9/2021

History Table:

Date	Revision
10/9/2021	1 st Version
10/15/2021	2 nd Version

Table of Contents

Sr. No	Content	Page No
1	Executive Summary	6
2	Personae and main Use Cases	7
3	Data items and Entities	11
4	Initial list of functional requirements	14
5	List of non-functional requirements	15
6	Competitive analysis	17
7	High-Level System Architecture and Technologies used	18
8	Team and roles	19
9	Checklist	20

1. Executive Summary

TutorPal aims to solve one of the largest roadblocks that SFSU students face - the inability to learn on demand, at their own pace, on subjects specific to SFSU. This web application is developed by SFSU students for SFSU students, meaning the developers have an understanding for what SFSU students need that other tutoring websites cannot satisfy.

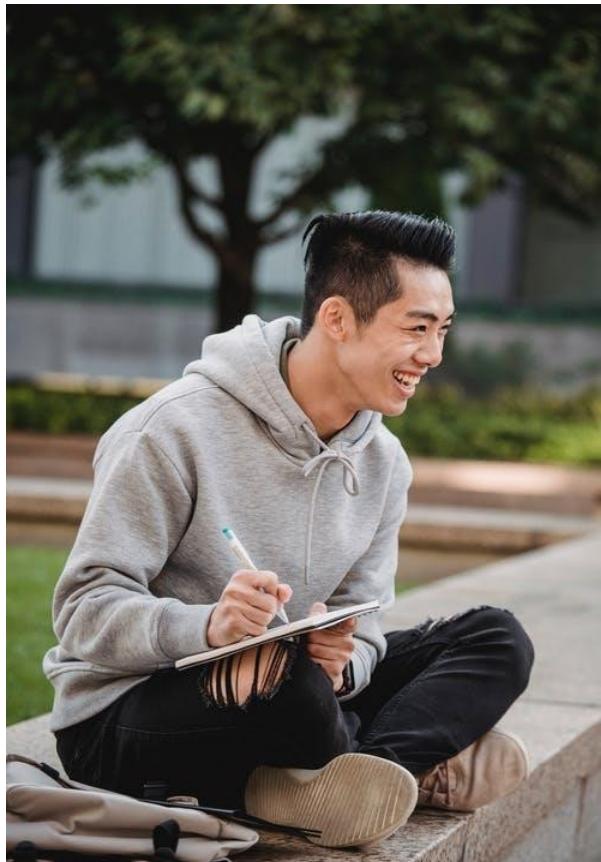
One of the largest advantages TutorPal has over competing tutoring websites is that it is tailored for SFSU students and tutors. The website is laid out so that students can filter by their specific class, discover topics that each class explores and search for tutors based on those topics. Other websites do not know the class listing and specific topics of each class in SFSU, whereas TutorPal does. TutorPal sports a user-friendly experience that allows users to browse tutors and classes before registering, so that they have a reason to register in the first place. The registration screen will not appear until after the user selects on “schedule appointment”, that way they will have already set aside a time and date for their session – which helps retainability. Communication is one of this web application’s strong suits, allowing tutors and students to send messages to each other through its interface. You are also able to upload videos and pictures of each tutoring session.

Our startup team is excited to bring you TutorPal – an immersive web application that focuses on delivering the most concise interface between tutor and those seeking a tutor. We are a group of undergraduates and graduate students who strive to see TutorPal thrive because we share an understanding for those students who also seek assistance on various subjects specific to SFSU.

2. Personas and Use Cases

(1) Personas

i. User: Steven Lee



[https://www.pexels.com/photo/asian-](https://www.pexels.com/photo/asian-male-sitting-on-fence-with-notebook-5554286/)

[male-sitting-on-fence-with-notebook-5554286/](https://www.pexels.com/photo/asian-male-sitting-on-fence-with-notebook-5554286/)

- Personal info: 21 years old, college junior majoring in biology, likes to go biking or playing basketball with friends
- Pain points: does not have the focus/patience to read books and prefers to watch videos, attend lectures, or talk to his friends because it is more interactive
- Motivations: wants to find tutors for his upper-division courses because he heard that there was a lot of work and the grading was harsh
- Goals: to pass his upper division classes with high grades

ii. User: Olivia Green



[https://www.pexels.com/photo/woman-](https://www.pexels.com/photo/woman-in-gray-blazer-holding-book-5915288/)

[in-gray-blazer-holding-book-5915288/](https://www.pexels.com/photo/woman-in-gray-blazer-holding-book-5915288/)

- Personal info: Age 48, Software Developer(20 years' experience), Senior Professor at SFSU
- Motivations: Giving guidance to students which would help them proceed in their decided path and play a role in shaping the person they will become.
- Pain Points: Lack of discussion between students and teachers.
- Goals: Uploading her lecture notes, recording and clearing students doubts.

iii. Admin User: Mark Andrews



(picture is free license

[here](#))

- Personal info: Age 36, Software Developer, an avid book reader and has three dogs.
- Motivations: Interested in seeing this application gain more traffic. Will work long hours to maintain the application and patch user interface to suit consumer needs.
- Goals: Clear up the many emails coming to his inbox about any issues users are having with the application - through a feedback box located at the bottom of the website.
- Frustrations: How impersonal web applications can be. Lack of communication.
- Bio: Mark likes to delegate work and make life for himself as smooth as possible. This means that for the teams he works in he aims for balanced workloads and frequent communication. He has a temper though, and doesn't like to get kept in the dark when it comes to communication.

(2) Use Cases

i. Steven is looking for tutors and deciding which one to apply for

Steven heard that there was a new tutoring service for SFSU students. He is worried about whether he can handle his upper division courses and decides to hire a tutor. Steven goes to the website and looks for tutors that teach the courses he is taking. After finding the tutors, he looks at the reviews of each tutor to help decide which one he wants to hire. However, when he tries to contact the tutor to hire them, he gets a notification telling him to log in before continuing.

ii. Steven is registering, meeting with tutor, and leaving reviews

Steven decides to register so he can hire his tutor. When filling out the forms, he sees that he needs to provide some personal information to verify his identity. After he finishes registering, Steven is able to continue and discuss with the tutor about potential tutoring. Fortunately, Steven is able to reach an agreement with the tutor and

book an appointment to meet with the tutor on another day. Several months later, Steven passes his classes and wants to write good reviews as thanks to his tutors. When he tries to submit his reviews, he gets a notification to log in before he can post his review. After Steven logs in, he is able to continue and submit his finished review.

iii. Olivia Uploading Lectures and Notes

Olivia is a senior Professor working at San Francisco State University. She has 20 years of experience in the IT industry and now has joined the university to teach students Computer science related courses and tell them her experience in Industry. Due to limited seats, many students are not able to join her course and have requested her lectures to be posted online on the tutoring website created for the students of San Francisco State University. As a result she decided to upload the lecture recording, class course work and materials to all the students who want to enroll in her course. She then decided to upload it on the tutoring website designed for the students of SFSU. Since she is new she will be prompted to register as a tutor. She creates her profile and starts uploading her sessions on the website. Her request for further uploading the documents is sent to the website admin.

iv. Checking Website for the response

Olivia has uploaded many sessions and notes on the website. When she logged in to the website to see her uploading status, she observed that all her materials and sessions were approved and uploaded for the students. There is a section on the website for the students to ask her queries and clear their doubts. She saw many students had seen the recording and posted their doubts in the question and answer section. And she starts replying to those queries to solve the students' doubts. She also starts exploring various features of the website which she could use to give students better experience.

v. Admin

Mark likes quick and active communication, so he turns on notifications in his email regarding this tutoring application and its activity. He knows that once the semester starts he will get an influx of applicants, the first being tutors and the next being those seeking tutoring. Once receiving such emails, he logs on to the tutoring app and approves each user. The users are separated based on tutor / those seeking tutoring, so he gives approval based on status.

(3) Data Items and Entities

- **User**
 - Users will be required to have a valid SFSU email.
 - Users will be able to utilize the web application to purchase courses they need or post questions they wish to ask on the website. The three types of users include:
 - Unregistered (Students/Tutors)
 - Registered (Students/Tutors)
 - Admin Users
- Below are some basic components for each user's registration record
 - Username (unique username in string format)
 - Password (encrypted for safety)
 - Email (email address ended with "@mail.sfsu.edu" in order to be validated as an sfsu user)
- **Courses**
 - Courses will refer to the topics/subjects that users will purchase on the website. Each course will have a list of tutors, along with a description of the tutor and their experience with the course.
 - Some basic components of each item:
 - Subject (Subject to which topic the tutor/question belongs to)
 - Title (title of the topic/subject posted on the website)
 - Description (short introduction and related details to the topic)
 - Banner_img (picture/image to visualise the course)

- **Category**

- There will be multiple courses/tutors to select from
- Users may browse the list of all tutors at first and then narrow down the results by using different subjects/years of experience/year. Below are some basic components for each tutor.
- id (unique numeric value for each category)
- title (title)
- Subject/Major (tag of the category)
- Year (Freshman/Sophomore/Junior/Senior)
- Instructor (who is teaching the courses)

- **Image**

- This will be used to give any users on the website the impression of the tutor they have selected
- If the user clicks on the title image, they will be redirected to another webpage which will include other details that will feature other images displayed along with that tutor

- **Messages**

- Users will be able to message one another
- There will be a different icon when there are unread/new messages
- Messages will be ordered chronologically with the newest first
- Messages will be in the status bar (always visible regardless of which page the user is on)

Tutoring Record

- Tutoring Items:
 - CV (Resume)
 - Video Optional
 - Name of Tutor
 - Image of Tutor
- Users will be able to access a Tutor's past record with other students. This includes:
 - Name of Tutor
 - Image of Tutor
 - Reviews along with the subject taken with said tutor
 - Background (what the tutor specializes in)

(4) Initial list of functional requirements

Unregistered Users

1. Unregistered students shall be able to browse available tutors on the site by course or major.
2. Unregistered students shall be able to search for tutors by keywords.
3. Unregistered students shall be able to view tutor details, pricing and read reviews without registering.

Registered Users

4. A student shall register with his/her first and last name and student ID.
5. A student shall declare his/her major when registering.
6. A student shall be able to begin posting a review of a tutor before logging in.
7. A student shall be able to book an appointment with a tutor for a time period
8. A student shall be able to message tutors about potential tutoring.
9. Tutors shall apply to be a tutor after registering.
10. Tutors shall be able create a profile page with their qualifications.
11. Tutors shall be able to select what courses they tutor.
12. Tutors shall post available time slots for tutoring.
13. Tutors shall upload personalized videos to introduce themselves to potential students.
14. Tutors shall be able to message students regarding tutoring sessions.

Admin

15. Admins shall approve tutor posts before they officially go live on the site.
16. Admins shall approve tutor applications before tutors are added to the website.
17. Admins shall approve student reviews of tutors before they go live on the website.
18. The system shall allow for uploading of many types of multimedia content.
19. The system shall display multimedia content stored within the database when loaded.

(5) List of non-functional requirements

- 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 e-mail 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).

(6) Competitive analysis

Features	KhanAcademy	Chegg	Tutor.com	Tutorme.com	TutorPal
Academic Focus	+	+	+	+	++
UI Browsing	+	+	++	++	++
Text Search	+	+	+	++	++
Target Audience - College	-	++	++	++	++
Free to SFSU students	-	-	-	-	+
Browsing before signup	++	-	-	-	++
Demo Lecture	+	-	+	+	+
User friendly	+	+	+	++	++

Superior : ++ The

same : + Does not

exists: -

TutorPal's main focus is to give better tutoring experience to the students and tutor of SFSU. Students will be able to search courses which they want to enroll in way easier than it is on other sites. TutorPal will provide a UI which will have text searching features, user friendly, easy access to anyone who wants to enroll for courses or join tutoring. SFSU students will be able to specifically search by SFSU courses giving us an advantage over our competition who is more generalized to broad topics. Students facing issues coping up with the coursework, can learn at their pace and get free access to all the coursework after registering to the courses.

(7) High-level system architecture and technologies used

Server Host: Amazon AWS

Operating System: Ubuntu 20.04 Server

Database: MySQL

Web Server: Apache 2.4

Server-Side Language: JavaScript

Additional Technologies:

Web Framework: Node.JS/Express

IDE: JetBrains WebStorm

Web Analytics: Google Analytics

SSL Cert: Encrypt (Cert Bot)

(8) Team and roles

Snehal Patil - Team Lead, Document Editor

Cameron Robinson - Backend Lead

Rollin Kung - Backend Team Member

Daniel Elnaggar - Frontend Lead

Saptarshi Roy - Frontend Team Member

James Pratt - GitHub Master, Document Master

(9) Checklist

Checklist	Status
So far all team members are engaged and attending ZOOM sessions when required.	Done
Team found a time slot to meet outside of the class.	Done
Back end, Front end leads and GitHub master chosen.	Done
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.	Done
Team lead ensured that all team members read the final M1 and agree/understand it before submission.	Done
GitHub organized as discussed in class (e.g. master branch, development branch, folder for milestone documents etc.)	Done

2) Milestone Document 2

SW Engineering CSC648/848 Fall 2021

Project Title : TutorPal

Team Number : 03

Names of Students:

Snehal Patil(spatil2@mail.sfsu.edu) – Team Lead
Cameron Robinson - Back-End Lead
Daniel Elnaggar - Front-End Lead
James Pratt - GitHub Master
Rollin Kung
Saptarshi Roy

Milestone : 2

Date : 10/28/2021

History Table :

Date	Revision
10/28/2021	1 st Version
11/07/2021	2 nd Version

Table of Contents

1. Executive Summary	23
2. Data Items and Entities	24
3. Functional requirements	26
4. UI Storyboards	27
1) Use Case 1	
2) Use Case 2	
3) Use Case 3	
4) Use Case 4	
5) Use Case 5	
5. High-level system architecture and Database Organization	40
A. DB Organization	
B. Media Storage	
C. Search/Filter architecture and Implementation	
D. High Level API	
6. Key Risks	42
7. Project Management	44

(1) Executive Summary

TutorPal aims to solve one of the largest roadblocks that SFSU students face - the inability to learn on-demand, at their own pace, on subjects specific to SFSU. This web application is developed by SFSU students for SFSU students, meaning the developers have an understanding of what SFSU students need that other tutoring websites cannot satisfy.

One of the biggest advantages TutorPal has over competing for tutoring websites is that it is tailored for SFSU students and tutors. The website is laid out so that SFSU students can filter by their specific class, discover topics that each class explores and search for tutors based on those topics. Other websites do not know the class listing and specific topics of each class in SFSU, whereas TutorPal does. TutorPal sports a user-friendly experience that allows users to browse tutors and classes before registering so that they have a reason to register in the first place. The registration screen will not appear until after the user selects on “schedule appointment”, that way they will have already set aside a time and date for their session – which helps retainability. Communication is one of this web application’s strong suits, allowing students to connect to tutors with a simple messaging form and contact system.

Our startup team is excited to bring you TutorPal – an immersive web application that focuses on delivering the most concise interface between tutors and those seeking a tutor. We are a group of undergraduates and graduate students who strive to see TutorPal thrive because we share an understanding for those students who also seek assistance on various subjects specific to SFSU.

(2) Data Items and Entities

i. User

- . Users will be required to have a valid SFSU email.
- . Users will be able to utilize the web application to purchase courses they need or post questions they wish to ask on the website. The three types of users include:
 - o Unregistered (Students/Tutors)
 - o Registered (Students/Tutors)
 - o Admin Users
- . Unregistered users will be able to browse through the courses but have to sign in before registering for them.
- . Registered users will have full access to register for the courses and connect to the website for queries.
- . Admin will have full access to the system, they will be able to approve or reject the posts based on the content.
- . Below are the basic components for each user's registration record
 - o Username (unique username in string format)
 - o Password (encrypted for safety)
 - o Email (email address ended with "@mail.sfsu.edu" in order to be validated as a sfsu user)
 - o Userid
 - o Major
 - o Name

ii. Tutoring Record

- . Tutoring Items:
 - o CV (Resume)
 - o Video Optional
 - o Name of Tutor
 - o Image of Tutor
- . Users will be able to access a Tutor's past record with other students. This includes:
 - o Name of Tutor
 - o Reviews along with the subject taken with a said tutor
 - o Background (what the tutor specializes in)

iii. Courses

- Courses will refer to the topics/subjects that users will purchase on the website. Each course will have a list of tutors, along with a description of the tutor and their experience with the course.
- Courses will be divided based on subjects, tutors, with easy access to the students.
- Some basic components of each item:
 - Subject (Subject to which topic the tutor/question belongs)
 - Title (title of the topic/subject posted on the website)
 - Description (short introduction and related details to the topic)
 - Banner_img (picture/image to visualize the course)

iv. Category

- There will be a list of majors to select from.
- Users may browse the list of all tutors at first and then narrow down the results by using different subjects/years of experience/year. Below are some basic components for each tutor.
 - § id (unique numeric value for each category)
 - § title (title)
 - § Subject/Major (tag of the category)
 - § Year (Freshman/Sophomore/Junior/Senior)
 - § Instructor (who is teaching the courses)

v. Image

- This will be used to give any users on the website the impression of the tutor they have selected.
- If the user clicks on the title image, they will be redirected to another webpage which will include other details that will feature other images displayed along with that tutor

vi. Messages

- Users will be able to message one another
- There will be a different icon when there are unread/new messages
- Messages will be ordered chronologically with the newest first
- Messages will be in the status bar (always visible regardless of which page the user is on)

- § MessageID
- § Date/Time
- § Text

(3) Functional requirements

Priority 1:

Unregistered Users

1. Unregistered students shall be able to browse and search for available tutors on the site by course or major.
2. Unregistered students shall be able to register.
3. Unregistered students shall be able to view tutor details, pricing and read reviews without registering.

Registered Users

1. A student shall register with his/her first and last name and student ID.
2. A student shall be able to message tutors about potential tutoring.
3. Tutors shall apply to be a tutor after registering.
4. Tutors shall be able create a profile page with their qualifications.
5. Tutors shall be able to select what courses they tutor.
6. Tutors shall post available time slots for tutoring.
7. Tutors shall be able to message students regarding tutoring sessions.

Admin

1. Admins shall approve tutor posts and applications before they officially go live on the site.

Priority 2:

Registered Users

1. A student shall be able to begin posting a review of a tutor before logging.
2. A student shall be able to book an appointment with a tutor for a time period
3. Tutors shall upload personalized videos to introduce themselves to potential students.

Admin

1. Admins shall approve student reviews of tutors before they go live on the website.

(4) UI Storyboards

i. Use Case 1:

(1) Steven heard that there was a new tutoring service for SFSU students. He is worried about whether he can handle his upper division courses and decides to hire a tutor. (2) Steven goes to the website and looks for tutors that teach the courses he is taking. (3) After finding the tutors, he looks at the descriptions of each tutor to help decide which one he wants to hire. He decides to contact Kesha Mourey. (4) When he tries to contact the tutor to hire them, he gets a notification telling him to log in before continuing. He registers as a new student, and is (5) taken to the dashboard.

(1)

The storyboard displays the TutorPal website interface. At the top, there is a navigation bar with 'Majors ▾', a search icon, 'About us', and 'Tutor Apply'. Below the navigation bar, the main header features the 'TutorPal' logo and a sub-header 'a tutor website made by SFSU Students, for SFSU students'. To the right of the sub-header is a large button labeled 'sign up →'. Below this button, a link says 'Already have an account? [Login](#)'. A note at the bottom left states '*website for demonstration purposes'. On the right side, there is a section titled 'Recently Added Tutors' containing four tutor profiles. Each profile includes a small user icon, the tutor's name, a yellow star rating, and a 'Contact!' button. The first tutor listed is Kesha Mourey, who teaches CSC 660 and CSC 448. The second is Bill Baggins, who teaches HIS 101, HIS 102, and CHEM 101. The third is Joy Pierce, who teaches CSC 220 and HIS 101. The fourth is Tamara Noe.

Tutor Name	Courses Taught	Rating	Contact
Kesha Mourey	CSC 660 CSC 448	★★★★★	Contact!
Bill Baggins	HIS 101 HIS 102 CHEM 101	★★★	Contact!
Joy Pierce	CSC 220 HIS 101	★★★★★	Contact!
Tamara Noe			Contact!

(2)

The screenshot shows a website interface for a tutoring service. At the top, there's a navigation bar with 'Majors ▾' (dropdown), a search icon, and links for 'About us' and 'Tutor Apply'. On the left, a sidebar lists majors: Art (ART), Biology (BIO), Chemistry (CHEM), Comp. Sci (CSC), English (ENG), History (HIS), and Math (MAT). Below this is a section for 'SFSU Students, student' with a 'sign up →' button and a 'Login' link. A note at the bottom states: '*website for demonstration purposes'.

Recently Added Tutors

- Kesha Mourey**
Contact!
 - CSC 660
 - CSC 448
- Bill Baggins**
Contact!
 - HIS 101
 - HIS 102
 - CHEM 101
- Joy Pierce**
Contact!
 - CSC 220
 - HIS 101
- Tamara Noe**
Contact!

(3)

This screenshot shows a detailed profile for a tutor named Kesha Mourey. The top navigation bar is identical to the one in screenshot (2).

Kesha Mourey

Description
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.

Courses
• CSC 660
• CSC 340

Passions
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad!

Contact!
Hi Kesha, I am a senior at SFSU and am taking CSC 660. I am struggling quite a bit and was wondering if you could tutor me. Thank you and have a good day.
Stephen | send message

\$60

(4)



A screenshot of a registration form on a website. The form is contained within a light blue rounded rectangle. At the top left is a back arrow. Inside the form, there are four input fields: 'name *', 'SFSU email *', 'password *', and 'verify password *'. Below these fields is a checkbox labeled 'opt in for terms *' followed by a 'Continue →' button. At the bottom of the form is a link 'Already have an account? [Login](#)'. The top navigation bar includes links for 'Majors ▾', a search icon, 'About us', and 'Tutor Apply'.

Majors ▾

About us

Tutor Apply

Register

←

name *

SFSU email *

password *

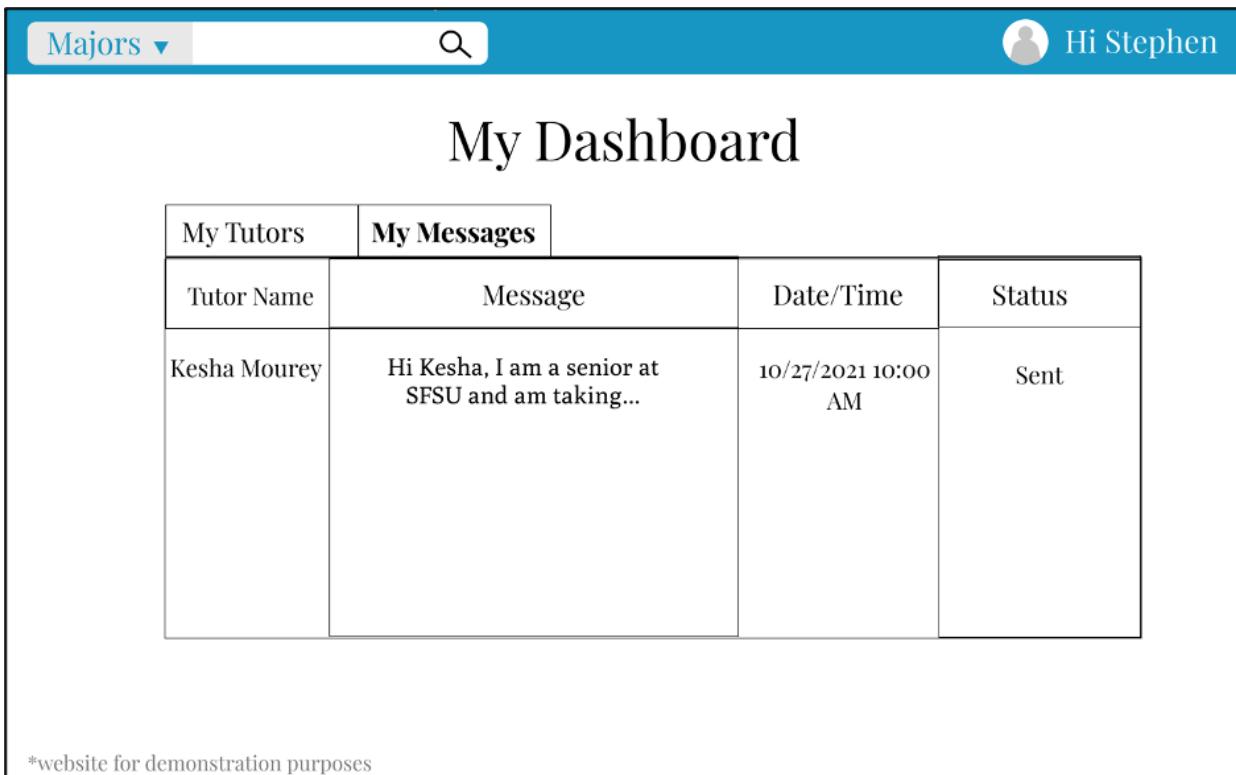
verify password *

opt in for terms * Continue →

Already have an account? [Login](#)

*website for demonstration purposes

(5)



A screenshot of a user dashboard. The top navigation bar includes 'Majors ▾', a search icon, and a profile icon with the name 'Hi Stephen'. The main title 'My Dashboard' is centered above a table. The table has two tabs at the top: 'My Tutors' and 'My Messages'. The 'My Messages' tab is selected, showing one message from 'Kesha Mourey'. The message content is partially visible as 'Hi Kesha, I am a senior at SFSU and am taking...'. The message was sent on '10/27/2021 10:00 AM' and is marked as 'Sent'. The top navigation bar also includes 'About us' and 'Tutor Apply'.

Majors ▾

About us

Tutor Apply

My Dashboard

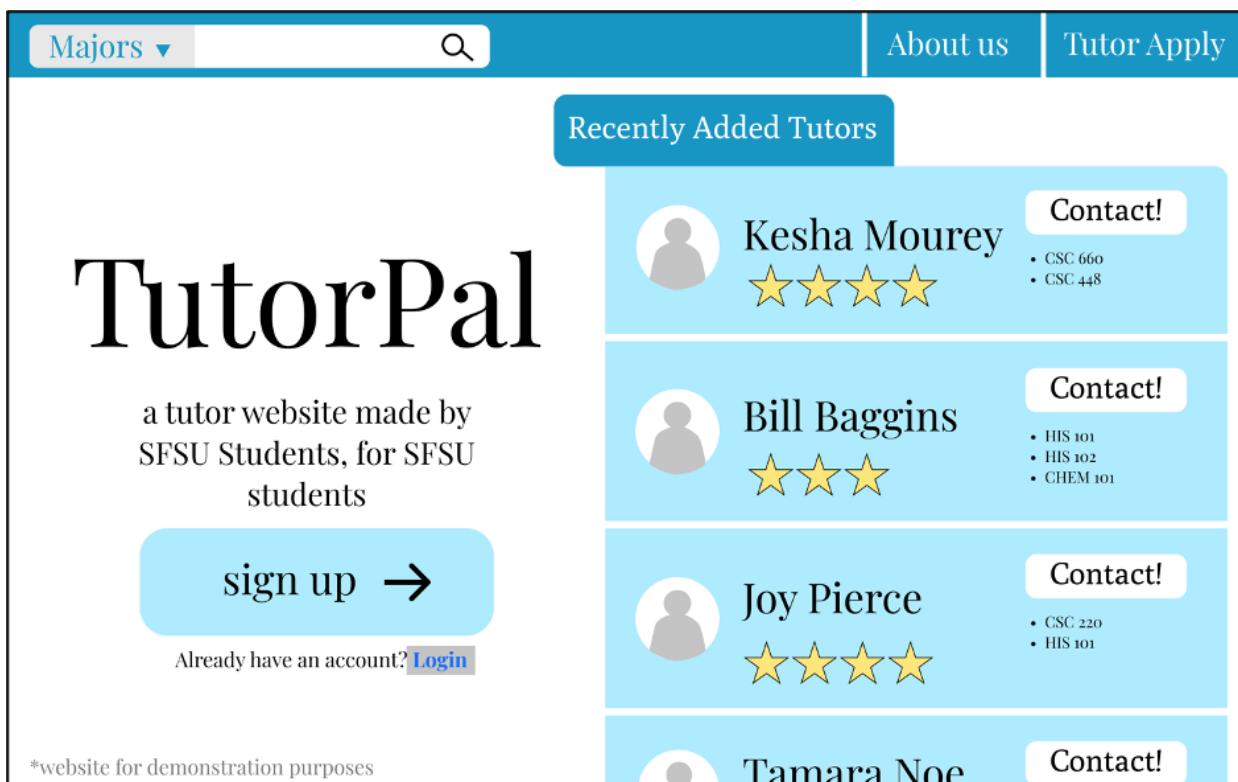
My Tutors	My Messages		
Tutor Name	Message	Date/Time	Status
Kesha Mourey	Hi Kesha, I am a senior at SFSU and am taking...	10/27/2021 10:00 AM	Sent

*website for demonstration purposes

ii. Use Case 2:

Steven successfully passes his classes and wants to write a good review to Kesha to thank them. He doesn't want to have to login every time to review his tutor though, so he (1) navigates to his tutor through TutorPal. (2) Once finding Kesha, he clicks on "Review". (3) After leaving his review and rating, he clicks on "Submit". (4) He is met with a window that prompts him to login, and after doing so, he is (5) taken to his dashboard. A notification appears at the bottom of the screen confirming that his review was submitted and he is able to edit his review from the dashboard.

(1)



(2)

Majors ▾

CSC 660 Tutors

Kesha Mourey

Bill Baggins

Joy Pierce

Tamara Noe

Contact!

Review

Contact!

Review

Contact!

Review

Contact!

*website for demonstration purposes

(3)

Majors ▾

Kesha Mourey

Courses

- CSC 660
- CSC 340

Comments

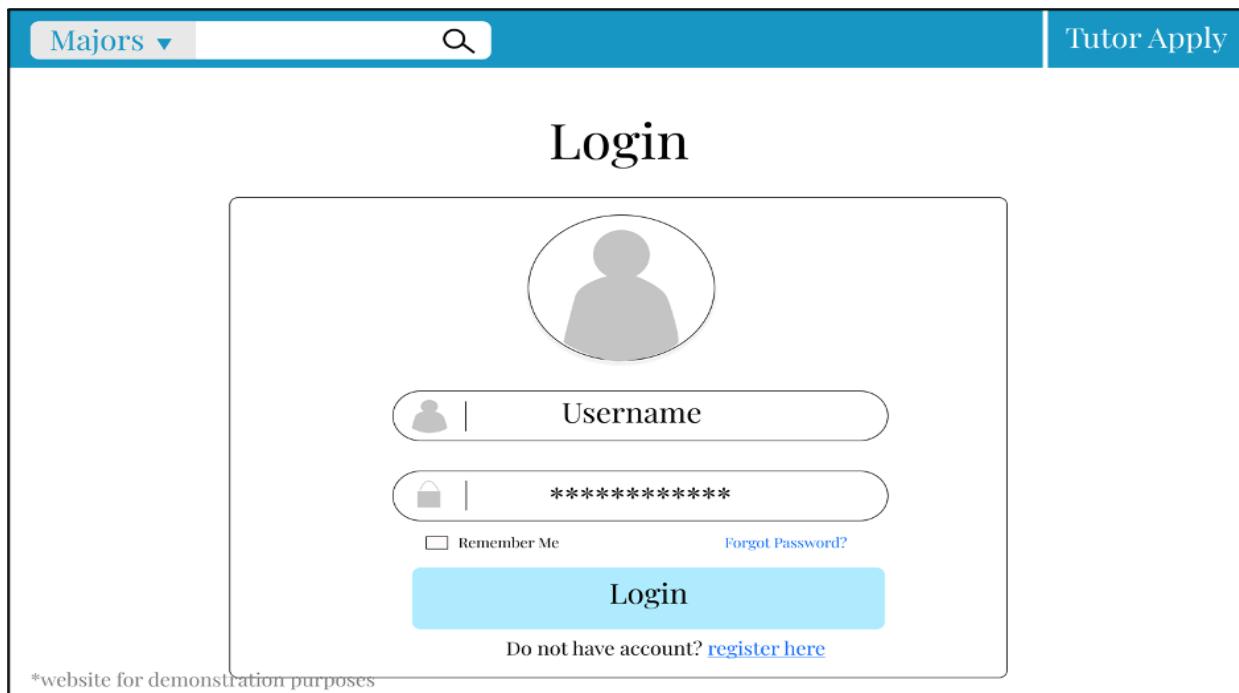
Leave a Rating

★★★★★

Submit

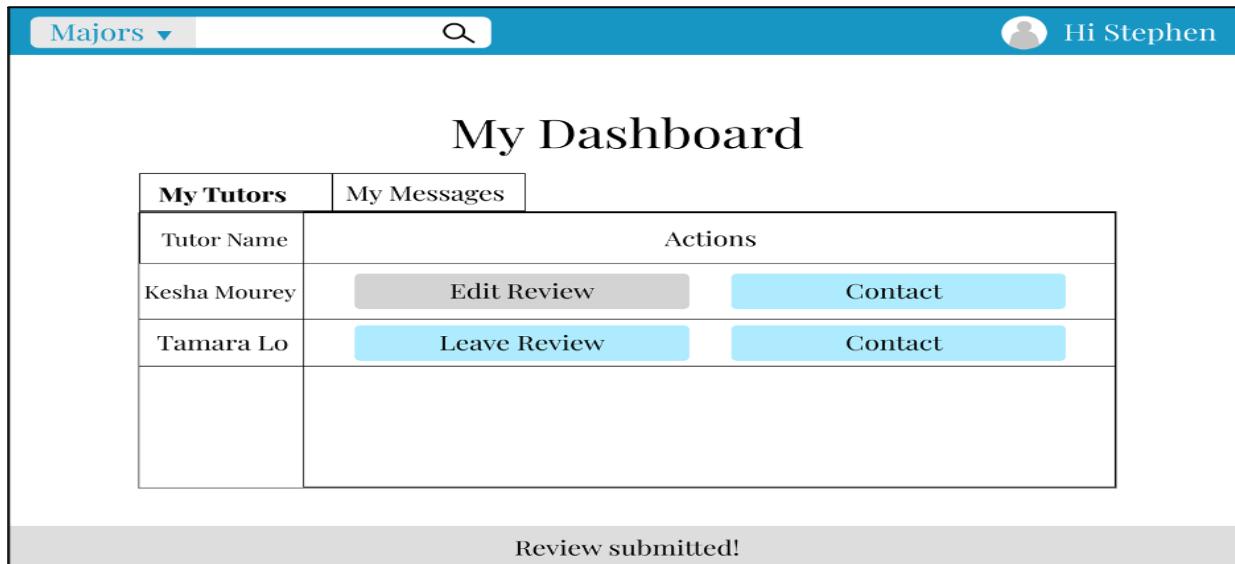
*website for demonstration purposes

(4)



The image shows a login page with a teal header bar. On the left is a "Majors ▾" dropdown, a search icon, and a "Tutor Apply" button. The main title "Login" is centered above a large input field containing a placeholder user icon. Below the input field are two rounded rectangular fields: one for "Username" with a user icon and one for "Password" with a lock icon. Underneath these fields are two small buttons: "Remember Me" and "Forgot Password?". A large blue "Login" button is centered below the password field. At the bottom of the form, there is a link "Do not have account? [register here](#)". A small note at the bottom left states "*website for demonstration purposes".

(5)



The image shows a dashboard page with a teal header bar. On the left is a "Majors ▾" dropdown, a search icon, and a user profile icon with the name "Hi Stephen". The main title "My Dashboard" is centered above a table. The table has two columns: "My Tutors" and "My Messages". The "My Tutors" column lists two tutors: "Kesha Mourey" and "Tamara Lo". The "Actions" column contains buttons for each tutor: "Edit Review" and "Contact" for Kesha, and "Leave Review" and "Contact" for Tamara. A message at the bottom of the table says "Review submitted!".

My Tutors	My Messages
Tutor Name	Actions
Kesha Mourey	Edit Review Contact
Tamara Lo	Leave Review Contact

iii. Use Case 3:

(1) Kesha signs up for TutorPal using the “Tutor Apply” button at top right of window. (2) She fills in all her information, including what classes she would like to tutor. (3) She is taken to her dashboard which shows one tab for “My Messages” and one tab for “My Reviews”. (4) She clicks on “My Messages” a week later and sees that she has one message from Stephen who is seeking a tutor. They are successfully able to connect via email because he provided that information.

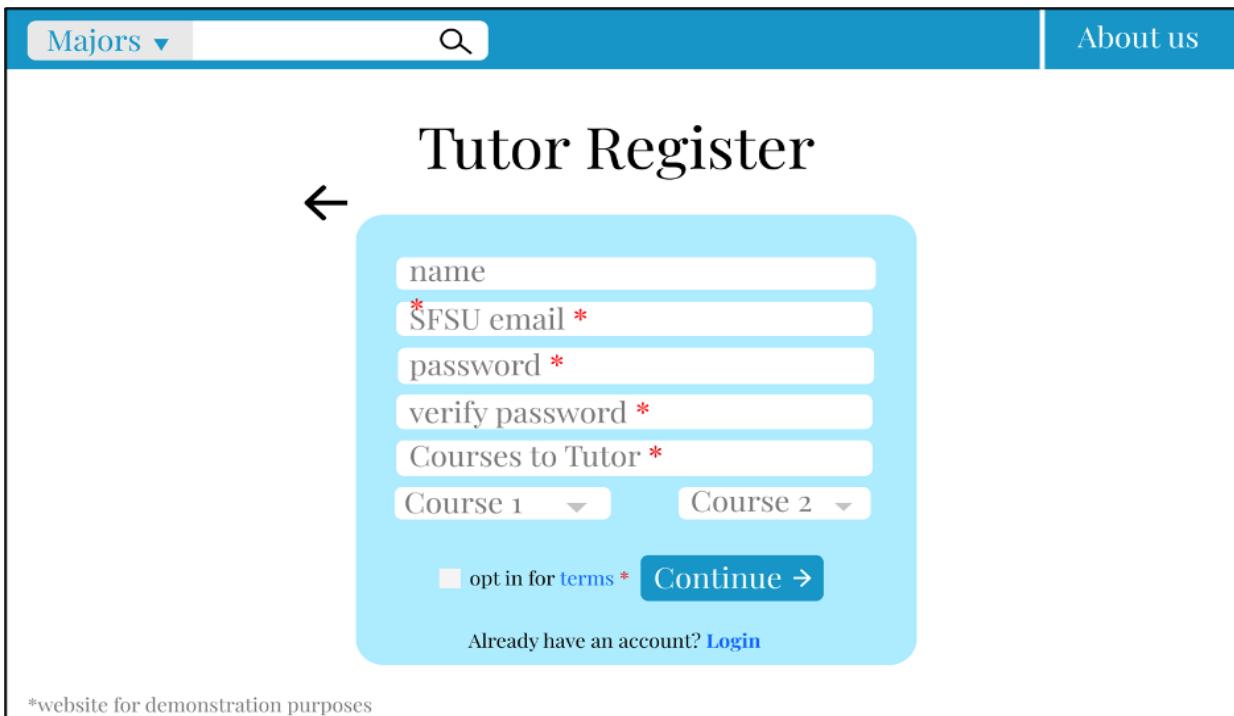
(1)

The screenshot shows the homepage of the TutorPal website. At the top, there is a navigation bar with links for "Majors ▾", a search icon, "About us", and "Tutor Apply". Below the navigation bar, the main title "TutorPal" is displayed in a large serif font. Underneath the title, a subtitle reads: "a tutor website made by SFSU Students, for SFSU students". To the right of the subtitle is a blue button with the text "sign up →". Below this button, a link says "Already have an account? [Login](#)". On the right side of the page, there is a section titled "Recently Added Tutors" containing four cards, each representing a tutor profile:

- Laura Bags** (Contact! CSC 660, CSC 448) - 5 yellow stars
- Bill Baggins** (Contact! HIS 101, HIS 102, CHEM 101) - 3 yellow stars
- Joy Pierce** (Contact! CSC 220, HIS 101) - 5 yellow stars
- Tamara Noe** (Contact!) - Only the first letter of the name is visible

*website for demonstration purposes

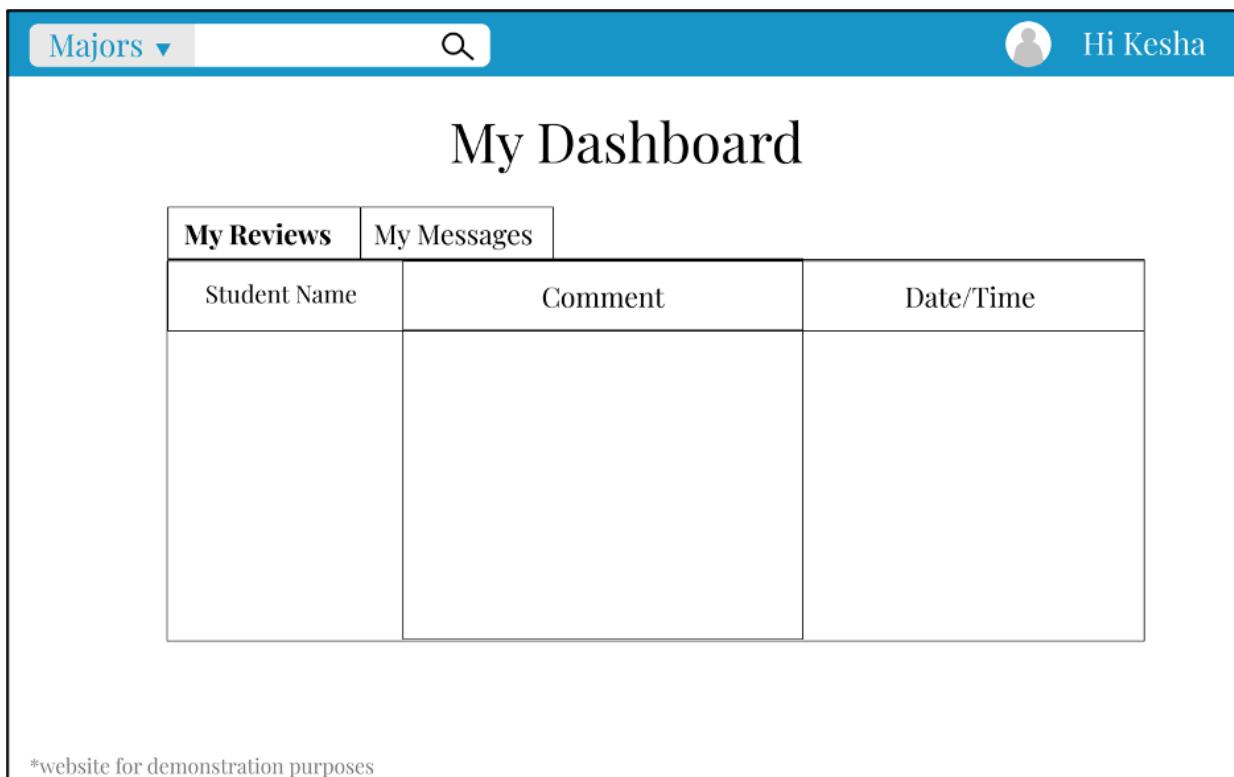
(2)



A screenshot of a web page titled "Tutor Register". The page has a blue header bar with "Majors ▾", a search icon, and "About us". Below the header is a large light blue rectangular form. At the top left of the form is a black arrow pointing left. The form contains fields for "name", "SFSU email *", "password *", "verify password *", and "Courses to Tutor *". Under "Courses to Tutor *", there are two dropdown menus labeled "Course 1" and "Course 2". At the bottom of the form is a checkbox labeled "opt in for terms *" followed by a "Continue →" button. Below the form, a link says "Already have an account? [Login](#)".

*website for demonstration purposes

(3)



A screenshot of a web page titled "My Dashboard". The page has a blue header bar with "Majors ▾", a search icon, and a user profile icon with the name "Hi Kesha". Below the header is a title "My Dashboard". Underneath the title is a horizontal navigation bar with two tabs: "My Reviews" (which is active) and "My Messages". Below the navigation bar is a table with three columns: "Student Name", "Comment", and "Date/Time". The table currently has one empty row.

*website for demonstration purposes

(4)

The screenshot shows the 'My Dashboard' page. At the top, there are tabs for 'Majors ▾', a search bar, and a user profile icon labeled 'Hi Kesha'. Below the tabs is a section titled 'My Reviews' and 'My Messages'. Under 'My Messages', there is a table with four columns: 'Student Name', 'Message', 'Date/Time', and 'Status'. One message is listed:

Student Name	Message	Date/Time	Status
Kesha Mourey	Hi Kesha, I am a senior at SFSU and am taking...	10/27/2021 10:00 AM	Received

*website for demonstration purposes

iv. Use Case 4:

Kesha has finished tutoring Stephen and wants to know how he did, so she wants to check up on her reviews. However she doesn't want to have to login to do so. (1) She navigates through TutorPal to find her reviews. She sees that she was given five stars! (2) She wants to check if she has gotten any other reviews, so she logs in. (3) She is taken to her dashboard and clicks on the "My Reviews" tab. (4) She sees that she has gotten one good review from Stephen and one good review from another student that she also tutored.

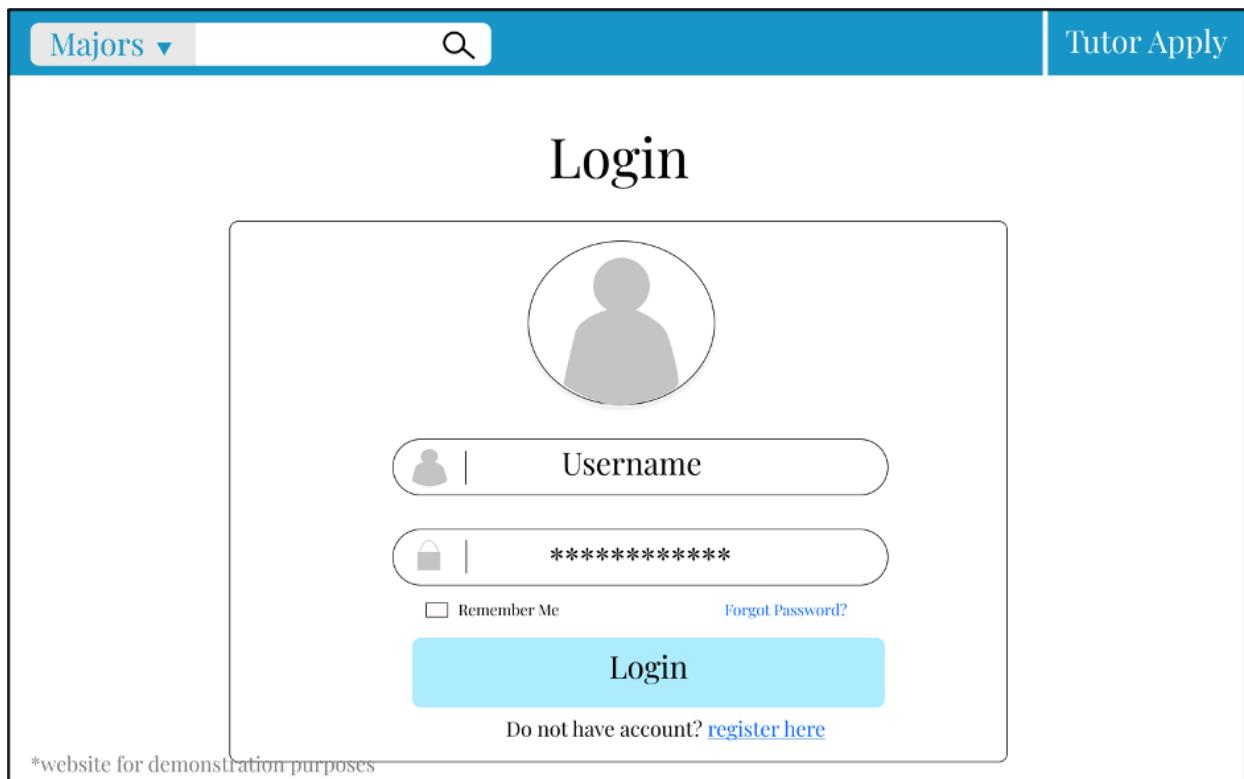
(1)

The screenshot shows the 'TutorPal' homepage. At the top, there is a navigation bar with 'Majors ▾', a search bar, 'About us', and 'Tutor Apply'. The main content area features a heading 'Recently Added Tutors' and a list of four tutors with their profiles and ratings:

- Kesha Mourey** (5 stars)
 - Contact!
 - CSC 660
 - CSC 448
- Bill Baggins** (4 stars)
 - Contact!
 - HIS 101
 - HIS 102
 - CHEM 101
- Joy Pierce** (5 stars)
 - Contact!
 - CSC 220
 - HIS 101
- Tamara Noe** (5 stars)
 - Contact!

At the bottom left, there is a 'sign up →' button and a link 'Already have an account? [Login](#)'. A note at the bottom states: '*website for demonstration purposes'.

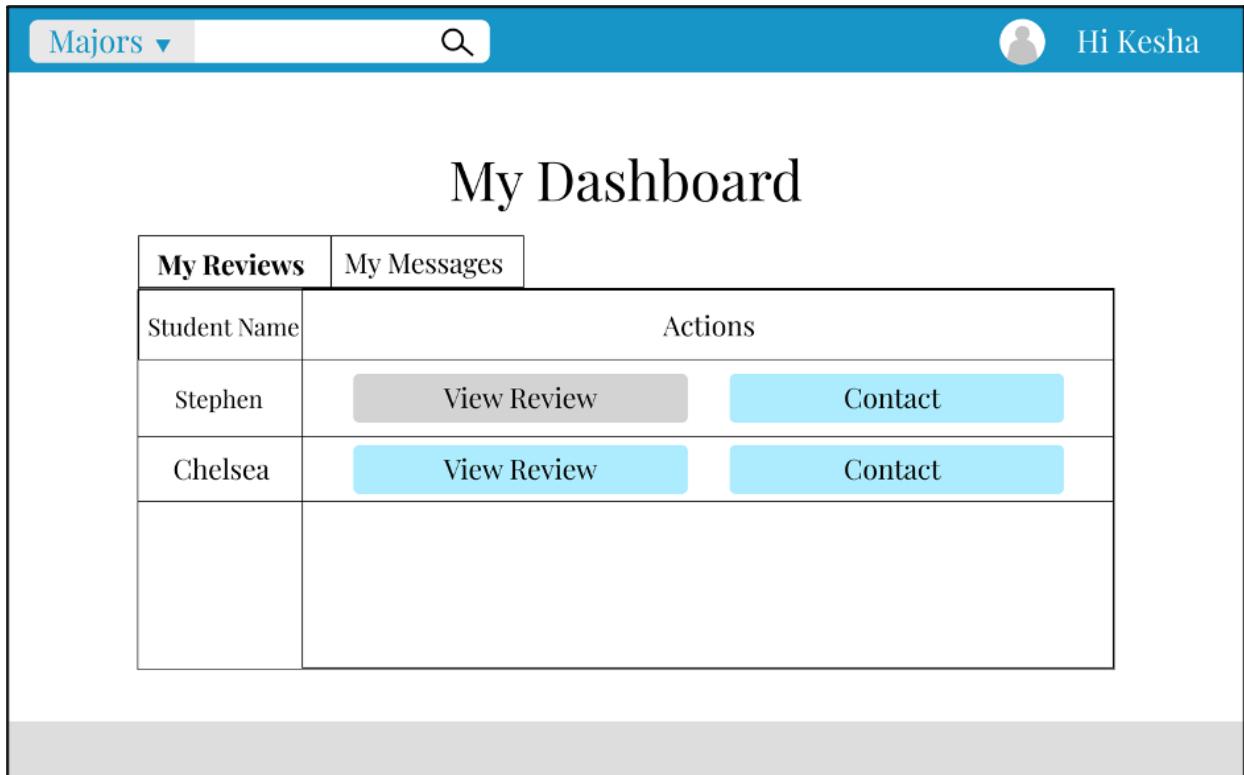
(2)



The screenshot shows a login interface. At the top left is a "Majors ▾" button, a search bar with a magnifying glass icon, and a "Tutor Apply" button. The main title "Login" is centered above a large input field containing a placeholder user icon. Below this are two rounded rectangular input fields: one for "Username" with a person icon and another for "Password" with a lock icon. Underneath these fields are two small links: "Remember Me" and "Forgot Password?". A large blue "Login" button is centered below the password field. At the bottom of the form, there is a link "Do not have account? [register here](#)".

*website for demonstration purposes

(3)



The screenshot shows a dashboard page. At the top left is a "Majors ▾" button, a search bar with a magnifying glass icon, and a user profile icon with the name "Hi Kesha". The main title "My Dashboard" is centered above a table. The table has two tabs at the top: "My Reviews" (selected) and "My Messages". The table structure includes a header row with "Student Name" and "Actions" columns, and two data rows for "Stephen" and "Chelsea". Each data row contains a "View Review" button and a "Contact" button. The "Stephen" row has the "View Review" button in a greyed-out state, while the "Chelsea" row has it in a blue state.

(4)

The screenshot shows a web-based application interface. At the top, there is a blue header bar with the text "Majors ▾", a search icon, and a user profile icon labeled "Hi Stephen". Below the header, the main title "My Dashboard" is centered. To the left, there is a sidebar titled "My Students" containing a table with two rows: "Student Name" and "Stephen". A large, semi-transparent blue callout box is overlaid on the right side of the screen. It contains the text "Review from Stephen" and "5/5" above a message: "Thank you so much for your help! I was able to pass my midterm." At the bottom left of the callout, there is a small note: "*website for demonstration purposes".

5) Use Case 5:

Mark likes quick and active communication, so he turns on notifications in his email regarding this tutoring application and its activity. He knows that once the semester starts he will get an influx of messages that need to be moderated. Once receiving such emails, (1)he logs on to the tutoring app. (2) He is taken to the admin dashboard which displays pending messages and reviews. (3) After clicking on one review from a student named Stephen to a tutor named Kesha and seeing that passes review guidelines, he clicks on approve. (5) Review is successfully approved and a notification appears saying that is has been posted.

(1)

Majors ▾

Tutor Apply

Login



| Username

| *****

Remember Me [Forgot Password?](#)

Do not have account? [register here](#)

*website for demonstration purposes

(2)

Majors ▾

Hi Stephen

My Dashboard

Pending Reviews	Pending Messages			
From	To	Actions		
Stephen	Kesha	<input type="button" value="View Review"/>	<input type="button" value="Approve"/>	<input type="button" value="Remove"/>
Chelsea	Bill	<input type="button" value="View Review"/>	<input type="button" value="Approve"/>	<input type="button" value="Remove"/>

(3)

The screenshot shows a mobile application interface. At the top, there is a blue header bar with the text "Majors ▾" on the left, a search icon in the center, and a user profile icon "Hi Stephen" on the right. Below the header, the title "My Dashboard" is centered. On the left side, there is a vertical list titled "Pending" with items: "From Stephen", "Stephen", and "Chelsea". A large, semi-transparent blue callout box is overlaid on the screen. It contains the text "Review from Stephen" and "5/5" above a message: "Thank you so much for your help! I was able to pass my midterm." At the bottom of the callout are two buttons: a green "Approve" button and a red "Remove" button. To the left of the callout, there is a white arrow pointing left.

(4)

The screenshot shows a mobile application interface. At the top, there is a blue header bar with the text "Majors ▾" on the left, a search icon in the center, and a user profile icon "Hi Stephen" on the right. Below the header, the title "My Dashboard" is centered. There are two tabs at the top: "Pending Reviews" (which is selected) and "Pending Messages". Below the tabs is a table with three rows. The columns are "From", "To", and "Actions". The first row has "Stephen" in the From column and "Kesha" in the To column. The Actions column contains a blue "View Review" button and a grey "Edit" button. The second row has "Chelsea" in the From column and "Bill" in the To column. The Actions column contains a blue "View Review" button, a green "Approve" button, and a red "Remove" button. A grey banner at the bottom of the screen says "Review approved!".

(5) High-level system architecture and Database Organization

A. DB Organization:

i. Users

- user_id (Primary Key)
- username
- email
- password_hashed
- password_salt
- first_name
- last_name
- major (Foreign Key)

ii. Tutors

- tutor_id (Primary Key)
- user_id (Foreign Key)
- image
- rating
- tutor_cv

iii. Tutors_tutoring_courses

- tutor_id (Foreign Key)
- course_id (Foreign Key)

iv. Admin

- admin_id (Primary Key)
- admin_user_id (Foreign Key)

v. Reviews

- review_id (Primary Key)
- review_of_tutor_id (Foreign Key)
- review_by_user_id (Foreign Key)
- review_text
- review_rating

vi. Courses

- course_id (Primary Key)

- major (Foreign Key)
- course_number
- title
- description
- image

vii. Major

- major_id (Primary Key)
- major_short_name
- major_long_name

viii. Messages

- message_id (Primary Key)
- date_sent
- message_text
- to_user (Foreign Key)
- from_user (Foreign Key)
- is_unread

B. Media Storage

All non-standard data will be stored in the database using the BLOB format.

C. Search/Filter architecture and Implementation

The user will use search terms that will use the %LIKE implementation to search the necessary columns. Filters will be defined in the database and rendered to the web page. When the user selects a filter, the database will only return the results in the proper category using the WHERE modifier.

D. High Level API

i. validateUser

This function will use the supplied username and password and attempt to authenticate the user in the database. Only returning a valid login attempt when the user supplies the proper password for the username.

ii. registerUser

registerUser will be used when a user creates a new account and will properly handle storing the new user into the database and logging the user into the site after returning.

(6) Key Risks

- *Skills risks*

One potential skill risk is that our group is not familiar or comfortable with the tools needed for our project such as Bootstrap, MySQL, and so on. In order to minimize this risk, we have split the group into front-end and back-end teams with the team lead and GitHub master helping whichever team needs help at the time. This makes it easier for people to learn because they can focus on the tools relevant to their work rather than needing to understand how to create the whole project. Another solution we have come up with is to reduce our scope to a manageable P1 list so that we will have a working product to show by the deadline.

- *Schedule risks*

One potential schedule risk is our group members being too busy and unable to complete their work. We have taken steps to solve this problem by splitting up the work and people who finish early can help those who are still working on their parts. Another solution is to trim our P1 list to a viable minimum so that we can finish our product by the deadline.

- *Technical risks*

One technical risk is figuring out what to do for the vertical prototype. Most of the members in our group have limited experience with databases which meant having to find tutorials to learn from. In order to create the vertical prototype, our backend lead looked up guides on how to set it up.

- *Teamwork risks*

One potential teamwork risk that could occur during this time is lack of communication. In order to prevent communication issues, we have set time periods when everyone can meet on Wednesday and Friday. Because we have fixed time periods to meet, people can plan their schedules around our meeting times. If they cannot, they can let the group know ahead of time and ask for a summary of our meeting.

Another teamwork risk is people becoming stressed and frustrated due to their workload or other real-life issues. To solve this problem, we have reached an understanding where

people can feel comfortable asking for help if they are struggling. People can also let the group know that they need to take a break for a couple of days so they take their break after finishing their portion of work. We have also reduced the P1 scope of our project so that our members will not be overwhelmed.

- *Legal/content risks*

One potential legal risk is using images that are copyrighted without permission. This may result in us being forced to pay the owner of the images. In order to solve this issue, we used images from a website called Pexels which contains millions of free stock photos.

(7) Project Management

To complete Milestone 2, our team had scheduled to meet every Friday and Wednesday with updates on the tasks assigned to everyone. We discuss the milestone progress and plan on how to finish our milestone and take the required steps. We have created a Discord server where connect with each other to discuss our queries and share the content created by the team. Also, we are using trello.com which has made it easier for us to track our task list and work progress. The team is available whenever anyone has issues helping us to maintain consistent progress towards the completion of Milestone 2.

3) Milestone Document 3

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

Team number: 03

Meeting date: November 17, 2021

(1) Summary of feedback on UI (list of items, note that details are available in ZOOM recording)

- Change name of website to look like a logo and put it at the top left of website
- Move search bar to the top middle of the screen
- Replace tutor apply link with register/ login
- Show 3-4 recent posts on the home page
- Make the search bar longer
- Add gray text in search bar as examples of what users should type (ex: course name, tutor name)
- Results page should show number of results
- Tutor information box on results page has too much white space. We can fill it with a short introduction about the tutor
- Get rid of tutor review button
- Keep button colors consistent
- Contact tutor button should lead to a pre-filled form
- Change title of registration page to just say register
- No roles (students/ tutors)
- Get rid of major field in login page

(2) Summary of feedback on code and architecture

Feedback given was positive. No changes needed.

(3) Summary of feedback on GitHub usage

Feedback given was positive. No changes needed.

(4) Summary of feedback on DB

Feedback given was positive. No changes needed.

(5) Summary of feedback on teamwork

Feedback given was positive. No changes needed.

(6) Any other comments and issues Check Point (CP) given, DUE: NA

List below agreed upon P1 list of features for final delivery which constitute product plan.

Unregistered Users

1. Unregistered users shall be able to browse and search for available tutors on the site by course or major.
2. Unregistered users shall be able to register.
3. Unregistered students shall be able to view tutor.

Registered Users

1. A user shall register with his/her first and last name and student ID.
2. A student shall be able to message tutors about potential tutoring.
3. User can offer tutoring by posting post after registering.

4) Milestone Document 4

SW Engineering CSC648/848 Fall 2021

Team Number: 03

Application Name: TutorPal

Names of Students:

Snehal Patil(spatil2@mail.sfsu.edu) – Team Lead

Cameron Robinson - Back-End Lead

Daniel Elnaggar - Front-End Lead

James Pratt - GitHub Master

Rollin Kung

Saptarshi Roy

URL of the demo: <https://dev-csc648team3.ddns.net/>

Date: 12/18/2021

History Table:

Date	Revision
12/17/2021	1 st Version

Table of Content

Sr. No	Content	Page No
1	Product Summary	49
2	Usability Test Plan	50
3	QA Test Plan	52
4	Code Review	55
5	Self-check on best practices for security	58
6	Self-check: Adherence to original Non-functional specs	59

(1) Product Summary

Name of the Product: Tutor Pal

Final P1 List:

1. A user can search for available courses, tutors, or majors using the search bar.
2. A user can browse tutor posts using the “Start Browsing!” button on the front page.
3. Recent registered tutors and their posts are displayed on the front page.
4. Users are able to view each tutor’s post description and picture.
5. A user is able to contact a tutor by sending a message, which will then utilize lazy registration and ask the user to register.
6. A user is able to sign up as a tutor by clicking on the “Become a tutor!” button on the front page.
7. A user is able to offer tutoring by creating a post.
8. Users are able to visit the “About” page from the navigation bar.
9. Users can view their dashboard, which will display recent messages.

Product URL: <https://csc648team3.ddns.net/>

(2) Usability Test Plan

Test Objectives:

We will be testing if users can search for a tutor and send them a message. The main selling point of our website is to let SFSU students find tutors for their classes and the search function as well as the contact function are essential for this purpose. Finding and messaging tutors should be intuitive otherwise our site will not be sustainable because it will not be able to attract customers.

Test background and setup:

- System Setup

We will have each user enter separate rooms. Each room will have a computer with multiple types of browsers installed so users can use whichever one they are most comfortable with. A stopwatch will also be provided so users can measure how long they take to complete each task.

- Starting Point

Each user will be provided the URL of the tutoring website and will already be logged in. Software that measures clicks will also be installed on the provided computers and will start counting when the test starts. The decision of which browser they wish to use as well as how to accomplish each task will be left for each user to decide. The timer will start once the home page has finished loading.

- Intended Users

There are multiple intended groups of users. The first group are users who are new to the website and have never interacted with a tutoring website before. The second group are users who have some experience providing tutoring before.

- URL of the system to be tested

The URL is <https://csc648team3.ddns.net/>

- What is to be measured

We will be focusing on measuring user satisfaction by using Likert tests.

Usability Task Description:

The first task for testers is to search for a tutor. The test starts after the landing page has finished loading and ends when the search result page has finished loading. The task will be considered completed successfully if it is completed within 1 minute.

The second task for testers is to contact a tutor. The test starts after the search page has finished loading and ends when the message to the tutor is sent. The task will be considered completed successfully if it is completed within 1 minute.

Evaluation of Effectiveness:

We will perform the usability test with multiple new users and record how many of them are able to complete the task within two minutes.

Evaluation of Efficiency:

We will measure the number of clicks and the total amount of time it takes each user to complete the task.

Evaluation of user satisfaction:

- The search bar was easy to locate.

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

- The contact tutor button was easy to locate.

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

- The sending a message to the tutor was intuitive.

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

(3) QA Test Plan

Test Objectives:

To make sure all listed features are functioning properly.

HW and SW Setup:

Website URL: <https://dev-csc648team3.ddns.net/>

Server Host: Amazon AWS

Operating System: Ubuntu 20.04 Server

Database: MySQL

Web Server: Apache 2.4

Server-Side Language: JavaScript

Additional Technologies: Web Framework: Node.JS/Express

IDE: JetBrains WebStorm

Web Analytics: Google Analytics

SSL Cert: Encrypt (Cert Bot)

Features to be Tested:

- Search Bar
- Contact Button
- Register Button
- Log In Button
- Log Out Button

QA Test Plan:

Test#	1	2	3	4	5
Title	Log In	Log Out	Register	Search	Message Tutor
Description	This will test whether or not a user will be able to log into their account	This will test whether or not a user will be able to log out of their account	This will test whether or a user is able to create a new account	This will evaluate whether a user is able to search for a tutor or a class by typing in search bar	Registered student would attempt to contact the tutor via message
Test Input	From the landing page, user will click on Login and enter credentials (email: testuser@mail.sfsu.edu and password: test)	After confirming that the user is logged in, from the landing page, user will click on the small arrow at the top right corner and select logout	From the landing page, user will click on “SignUp” and then enter first and last name, email id, password, and select a major	User will type in the name of a course “CSC 648,” and click on Search	From a tutor’s page, the user will type in a message and click on Contact Me!
Expected Correct Output	The user will be redirected into home page showing that the user has logged in by displaying their name on the right-hand corner of the web page	Will redirect to home page showing that the user has the option to log into their account if they choose to do so	Once a user registers, a pop up would appear saying that they have successfully registered, and they would be redirected to the login page.	When a user searches up e.g., csc 648, the tutor post with the above class would appear.	If the user is not logged in, a message will pop up asking whether or not the user wishes to log in. If the user is logged in they will be directed to a messaging page where they can send a message. If the message goes through the user is notified that

					the message was successfully sent.
Test Result	Pass (Chrome) Pass (Firefox)	Pass (Chrome) Pass (Firefox)	Pass (Chrome) Pass (Firefox)	Pass (Chrome) Pass (Firefox)	Pass (Chrome) Pass (Firefox)

(4) Code Review

- Review Email

ckRobinson <notifications@github.com>
Sat 12/11/2021 6:49 AM
To: CSC-648-SFSU/csc648-03-fa21-team03 <csc648-03-fa21-team03@noreply.github.com>
Cc: Snehal Shrinivas Patil; Push <push@noreply.github.com>

@ckRobinson pushed 3 commits.

- [b25242f](#) Added reference to mysql in database export.
- [0080211](#) Properly connected registration controller to app.
- [1e39778](#) Updated register user function to access database.

ckRobinson <notifications@github.com>
Sat 12/11/2021 6:58 AM
To: CSC-648-SFSU/csc648-03-fa21-team03 <csc648-03-fa21-team03@noreply.github.com>
Cc: Snehal Shrinivas Patil; Author <author@noreply.github.com>

We need some documentation on the register.js file. Everything else looks alright, approved pending documentation updates.

rkung117 <notifications@github.com>
Sat 12/11/2021 7:58 AM
To: CSC-648-SFSU/csc648-03-fa21-team03 <csc648-03-fa21-team03@noreply.github.com>
Cc: Snehal Shrinivas Patil; Push <push@noreply.github.com>

@rkung117 pushed 2 commits.

- [d6b2b21](#) removed registerbackend code
- [3018982](#) added comments about register file and registeruser function

rkung117 <notifications@github.com>
Sat 12/11/2021 8:02 AM
To: CSC-648-SFSU/csc648-03-fa21-team03 <csc648-03-fa21-team03@noreply.github.com>
Cc: Snehal Shrinivas Patil; Author <author@noreply.github.com>

removed extra register file. added comments for register.js file. please check when you have time.

ckRobinson <notifications@github.com>
Sat 12/11/2021 8:26 AM
To: CSC-648-SFSU/csc648-03-fa21-team03 <csc648-03-fa21-team03@noreply.github.com>
Cc: Snehal Shrinivas Patil; Author <author@noreply.github.com>

@ckRobinson approved this pull request.

Looks good. Approved.

ckRobinson <notifications@github.com>
Sat 12/11/2021 8:27 AM
To: CSC-648-SFSU/csc648-03-fa21-team03 <csc648-03-fa21-team03@noreply.github.com>
Cc: Snehal Shrinivas Patil; Author <author@noreply.github.com>

Merged [#27](#) into develop.

- GitHub Commit and reviews

Merged ckRobinson merged 28 commits into [develop](#) from [landingpage](#) 6 days ago

Conversation 3 Commits 28 Checks 0 Files changed 19

snehalp396 commented 6 days ago

please check and update

The screenshot shows a GitHub pull request interface. At the top, a comment from **ckRobinson** is displayed, requesting documentation for the `register.js` file. Below it, **rkung117** has assigned themselves to the issue. The commit history shows two commits from **rkung117**: one removing registerbackend code and another adding comments about the register file and registeruser function. A comment from **rkung117** follows, stating they removed the extra register file and added comments to the `register.js` file. **ckRobinson** then approves the changes, leaving a comment that looks good and is approved. Finally, **ckRobinson** merges the commit `7cc8669` into the `develop` branch. A success message indicates the pull request was merged and closed, and the `landingpage` branch can be safely deleted.

- Code review:

```

22 + * This function is called when user submits data on the registration page. The data
23 + * that the user has given is inserted into the database.
24 + * @param request the request from the user that will be inserted into the database
25 + * @param callback
26 + */
27 + function registerUser(request, response, callback){
28 +
29 +     const hashedPassword = loginHashing.hashPasswordForRegistration(request.body.password);
30 +
31 +     const email = request.body.email;
32 +     const password_hashed = hashedPassword.hash;
33 +     const password_salt = hashedPassword.salt;
34 +     const first_name = request.body.first_name;
35 +     const last_name = request.body.last_name;
36 +     const major = request.body.major_dropdown;
37 +
38 +     const sqlSearch = "SELECT * FROM users WHERE email = ?";
39 +     const search_query = mysql.format(sqlSearch, [email]);
40 +
41 +     request.registered = false;
42 +
43 +     database.query (search_query, async (err, result) => {

```

```

    110 application/node/controller/register.js
...
... @@ -0,0 +1,110 @@
1 + /**
2 + *
3 + * This file is used when the user attempt to register. It takes the data user inputs and
4 + * inserts it into the database. If user is already logged in and attempts to register, it
5 + * redirects them to the home page. Otherwise, it continues to the registration page. If user
6 + * is already registered and they attempt to register again, they are redirected to the login
7 + * page. Otherwise, it continues to the registration page.
8 + *
9 + * @author Rollin Kung and Cameron Robinson.
10 + * @date 12/10/2021
11 + * @since 0.0.1
12 + */
13 +
14 + const express = require('express');
15 + const router = express.Router();
16 +
17 + const loginHashing = require("../model/loginHashing");
18 +
19 + const {database, mysql} = require('../model/mysqlConnection');
20 +

```



```

    49 application/node/views/studentRegister.ejs
...
... @@ -1,3 +1,12 @@
1 +
2 +
3 + <!-- This file is used when the user attempt to register, it enters the user details and clicks submit button to register.
4 + If the validation is correct, the data is inserted in the database and new user is created.
5 +
6 + @author Snehal Patil
7 + @date 11/19/2021 -->
8 +
9 +
10+ <!doctype html>
11+ <html lang="en">
12+   <head>
13+     @@ -22,65 +31,69 @@
14+       <br>
15+       <br>
16+       <section class="container">
17+         <div class="row content d-flex justify-content-center mt-5">
18+           <div class="row content d-flex justify-content-center mt-3">
19+             <div class="col-md-5 mt-5">
20+               <h3 class="mb-4 text-center ">Register Here</h3>
21+               <div class="signup-form text-center box shadow bg-white p-4 ">
22+                 <form action="#" class="mb-3">
23+                   <form action="/register" name='registration' method="post" class="mb-3" oninput='confirmPassword.setCustomValidity(confirmPassword.value.length < 8 ? "Please enter at least 8 characters." : "")'>
24+                     <div class="row">
25+                       <!-- floatingInput -->
26+                       <div class="form-floating mb-3 col-md-6">
27+                         <input type="text" name="fname" class="form-control rounded-0" id="floatingInput" placeholder="Enter First Name" required autofocus>
28+                         <label for="floatingInput">First Name<span class="text-danger">*</span></label>
29+                       <input type="text" name="first_name" class="form-control rounded-0" id="first_name" placeholder="First Name" required autofocus>
30+                         <label for="first_name">First Name<span class="text-danger">*</span></label>
31+                       </div>
32+                       <div class="form-floating mb-3 col-md-6">
33+                         <input type="text" name="lname" class="form-control rounded-0" id="floatingInput" placeholder="Enter Last Name" required autofocus>
34+                         <label for="floatingInput">Last Name<span class="text-danger">*</span></label>
35+                       <input type="text" name="last_name" class="form-control rounded-0" id="last_name" placeholder="Last Name" required autofocus>
36+                         <label for="last_name">Last Name<span class="text-danger">*</span></label>
37+                       </div>
38+                     </div>
39+                     <div class="form-floating mb-3 col-md-6">
40+                       <input type="email" class="form-control rounded-0" id="floatingInput" placeholder="Email Address" required autofocus>
41+                         <label for="floatingInput">SFSU Email Address<span class="text-danger">*</span></label>
42+                       <input type="email" name="email" class="form-control rounded-0" id="email" placeholder="Email Address" required autofocus>
43+                         <label for="email">SFSU Email Address<span class="text-danger">*</span></label>
44+                       </div>
45+                     <div class="form-floating mb-3 col-md-12">
46+                       <input type="password" name="password" class="form-control rounded-0" id="floatingPassword" placeholder="password" required autofocus>
47+                         <label for="floatingPassword">Password<span class="text-danger">*</span></label>
48+                       <input type="password" name="password" class="form-control rounded-0" id="password" placeholder="password" required autofocus>
49+                         <label for="password">Password<span class="text-danger">*</span></label>
50+                       </div>
51+                     <div class="form-floating mb-3 col-md-12">

```

(5) Self-check on best practices for security

Asset to be protected	Types of possible/expected attacks	Strategy to mitigate/protect the asset
Passwords	Admin can view password in database, database breach, man in the middle attack capturing password	Password is salted and hashed when stored in the database to prevent viewing or sending the passwords in plain text
Tutor data	Tutor data database breach	Protecting the database only allowing access with sshKey.
Entire Database	SQL Injection of malicious SQL code	Use data sanitation on user entered data before running query on database.
Input validation	User inputs invalid or malicious data	Use bootstrap field validation to make sure the data is of a valid type before sending to the back end.
Search bar	User inputs invalid or malicious data	Use bootstrap field validation to make sure the user can only input 40 characters into the search bar to prevent sending too much data to the back end.
Registration email	User attempts to register with a non-SFSU email	Use bootstrap field validation to make sure the email entered contains sfsu.edu

(6) Self-check: Adherence to original Non-functional specs

- 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. – **DONE**
- 2) Application shall be optimized for standard desktop/laptop browsers e.g., must render correctly on the two latest versions of two major browsers. – **DONE**
- 3) All or selected application functions must render well on mobile devices. – **DONE**
- 4) Data shall be stored in the database on the team's deployment cloud server. – **DONE**
- 5) No more than 50 concurrent users shall be accessing the application at any time. – **DONE**
- 6) Privacy of users shall be protected, and all privacy policies will be appropriately communicated to the users. – **DONE**
- 7) The language used shall be English (no localization needed) – **DONE**
- 8) Application shall be very easy to use and intuitive – **DONE**
- 9) Application should follow established architecture patterns – **DONE**
- 10) Application code and its repository shall be easy to inspect and maintain – **DONE**
- 11) Google analytics shall be used - **DONE**
- 12) No e-mail clients shall be allowed. – **DONE**
- 13) Pay functionality, if any (e.g., paying for goods and services) shall not be implemented nor simulated in UI. – **DONE**
- 14) Site security: basic best practices shall be applied (as covered in the class) for main data items – **DONE**
- 15) Application shall be media rich (images, video etc.). Media formats shall be standard as used in the market today – **DONE**
- 16) Modern SE processes and practices shall be used as specified in the class, including collaborative and continuous SW development – **DONE**
- 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 – **DONE**
- 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). – **DONE**

3. Product screenshots

1) Landing Page

The screenshot shows the TutorPal landing page. At the top, there is a navigation bar with links for "About", "Offer Tutoring", "Major" (set to "CSC 648"), "Search", "SignUp", and "Login". Below the navigation, a banner states "Software Engineering Project CSC 648-848, Fall 2021 For Demonstration Only" and "Fall 2021 | Section 3 | Team 3". The main content area features the "TutorPal" logo and the text "A tutor website made by SFSU students, for SFSU students." Below this are two blue buttons: "Start Browsing!" and "Become a Tutor!". To the right, there is a sidebar titled "Recently Added Tutors" featuring four tutor profiles:

- Oscar Holmes** (black silhouette) is offering tutoring for ENG 418 Grammar for Writers. A "Contact!" button is available.
- Alexandra Baker** (profile photo of a woman) is offering tutoring for CSC 648 Software Development. A "Contact!" button is available.
- Aida Gibson** (black silhouette) is offering tutoring for CSC 690 Interactive Multimedia Development. A "Contact!" button is available.
- Aida Gibson** (black silhouette) is offering tutoring for BUS 450 Greening of Business. A "Contact!" button is available.

2) Login Page

The screenshot shows the TutorPal login page. The layout is similar to the landing page, with a navigation bar at the top and a banner below it. The main area is titled "Login" and contains a form with fields for "Email Address" (containing "alexandral@mail.sfsu.edu") and "Password" (containing "*****"). There is also a "Remember Me" checkbox and a "Forgot Password?" link. A large blue "Login" button is at the bottom of the form. Below the button, a link says "Don't have an account? [Register Here](#)".

3) Tutor Search Page

The screenshot shows a search results page for tutors. At the top, there are navigation links for 'About' and 'Offer Tutoring', and a search bar with dropdowns for 'Major' (set to 'Computer Sci') and 'Course' (set to 'CSC 648'), with a 'Search' button. On the right, a user profile says 'Hi Alexandra'.

Below the header, a message states 'Software Engineering Project CSC 648-848, Fall 2021 For Demonstration Only Fall 2021 | Section 3 | Team 3'. A 'Next' button is visible on the right.

The main content area displays two tutor profiles:

- Alexandra Baker**: Shows a photo of a woman with dark hair, smiling. Her course is 'CSC 648 Software Development'. She is willing to tutor for this class. A 'Contact!' button is present. The post was created on Sat, Dec 18 2021 17:21 PM.
- Aida Gibson**: Shows a silhouette of a person's head and shoulders. Her course is 'CSC 690 Interactive Multimedia Development'. She is a business alumni from SFSU interested in tutoring for BUS 690. A 'Contact!' button is present. The post was created on Sat, Dec 18 2021 17:20 PM.

4) Tutor Info Page

The screenshot shows a tutor details page for 'Oscar Holmes'. At the top, there are navigation links for 'About' and 'Offer Tutoring', and a search bar with dropdowns for 'Major' (set to 'Major') and 'Course' (set to 'CSC 648'), with a 'Search' button. On the right, there are 'SignUp' and 'Login' links.

Below the header, a message states 'Software Engineering Project CSC 648-848, Fall 2021 For Demonstration Only Fall 2021 | Section 3 | Team 3'.

The main content area shows a large photo of Oscar Holmes, a man with short hair, wearing a dark shirt. His name, 'Oscar Holmes', is displayed below the photo.

Tutor Details!

Oscar is offering tutoring for : *ENG 418 Grammar for Writers*

Post Description:

Hi, I took this course last semester and would like to help other English majors improve their grammar. Please let me know if you are interested. I am available any day after 7pm.

TutorPal does not handle communication between students and tutors. Make sure to include your contact information in your message.

Write your message here.

Contact Me!

5) Message Tutor Page – Lazy Registration

The screenshot shows a "Tutor Details!" page for a user named Oscar Holmes. A modal window titled "Sorry!" is displayed, asking if the user wants to log in to contact the tutor. Below the modal, there is a message input field and a "Contact Me!" button.

Tutor Details!

Sorry!

To contact this tutor you must first log in. Would you like to log in now?

Oscar Holmes

Message Input Field:

Write your message here.
Hello, I wish to connect with you for this class. Please find my attached phone number: +1 456 373 8222

Contact Me!

6) After login message sent notification

The screenshot shows the same "Tutor Details!" page for Oscar Holmes. A modal window titled "Congratulations!" is displayed, confirming that the message was sent. Below the modal, there is a message input field and a "Contact Me!" button.

Tutor Details!

Congratulations!

Your message was sent!

Oscar Holmes

Message Input Field:

Write your message here.

Contact Me!

7) User Dashboard Page

The screenshot shows the user dashboard for 'Oscar'. At the top, there are navigation links for 'About' and 'Offer Tutoring', a dropdown for 'Major' set to 'CSC 648', a search bar, and a greeting 'Hi Oscar'. Below the header, a message from 'Alexandra Baker' is displayed:

Software Engineering Project CSC 648-848, Fall 2021 For Demonstration Only
Fall 2021 | Section 3 | Team 3

My Dashboard

Message From Date Status Select

Hello, I wish to connect with you for this class. Please find my attached phone number: +1 456 373 8222 Alexandra Baker Sat, Dec 18 2021 17:36 PM Unread

8) User login landing Page

The screenshot shows the landing page for 'TutorPal'. The header includes the 'TutorPal' logo, navigation links for 'About' and 'Offer Tutoring', a dropdown for 'Major' set to 'CSC 648', a search bar, and a greeting 'Hi Alexandra'. The main content area features the 'TutorPal' logo and the text: 'A tutor website made by SFSU students, for SFSU students.' Below this are two blue buttons: 'Start Browsing!' and 'Become a Tutor!'. To the right, there is a section titled 'Recently Added Tutors' featuring two entries for 'Aida Gibson':

Recently Added Tutors

Aida Gibson
is offering tutoring for:
CSC 690 Interactive Multimedia Development [Contact!](#)

Aida Gibson
is offering tutoring for:
BUS 450 Greening of Business [Contact!](#)

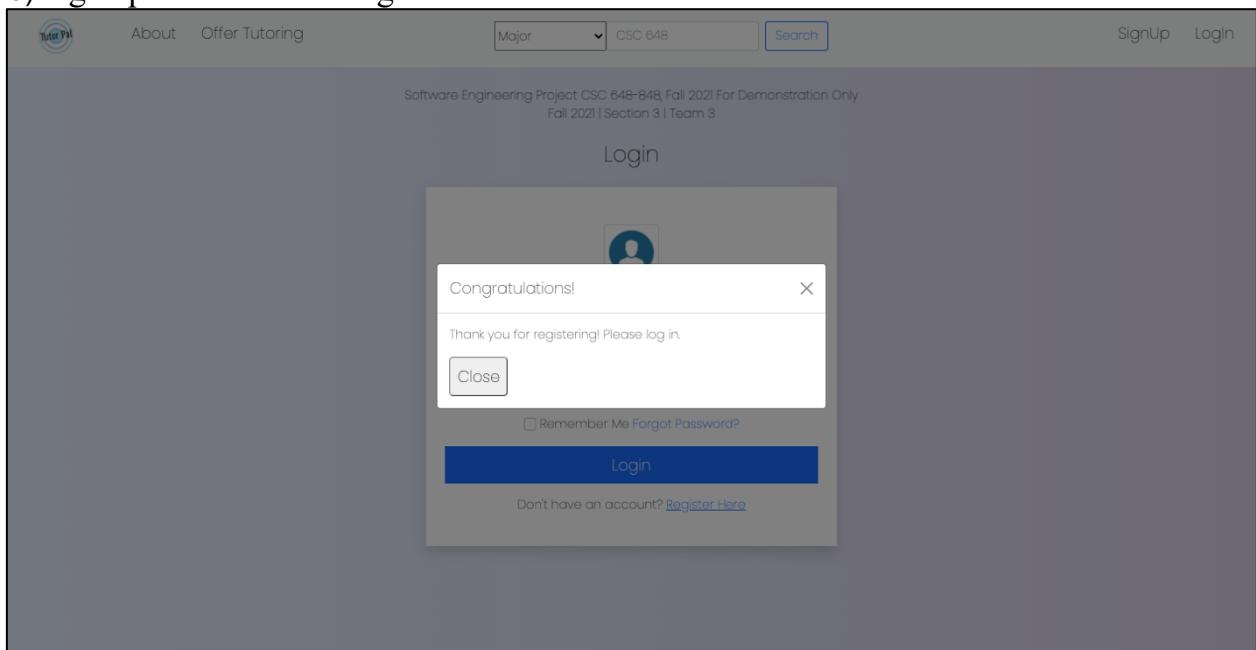
9) Sign Up

The screenshot shows the 'Register Here' form on the TutorPal website. The form fields are as follows:

- First Name*: Harry
- Last Name*: Brown
- SFSU Email Address*: harrybrown@mail.sfsu.edu
- Password*: (redacted)
- Confirm Password*: (redacted)
- Declared Major: History

A checkbox labeled "I agree to the site's terms and conditions*" is checked. A blue 'Register' button is at the bottom right. Below the button, a link says "Already have an account? [Login](#)".

10) SignUp confirmation Page



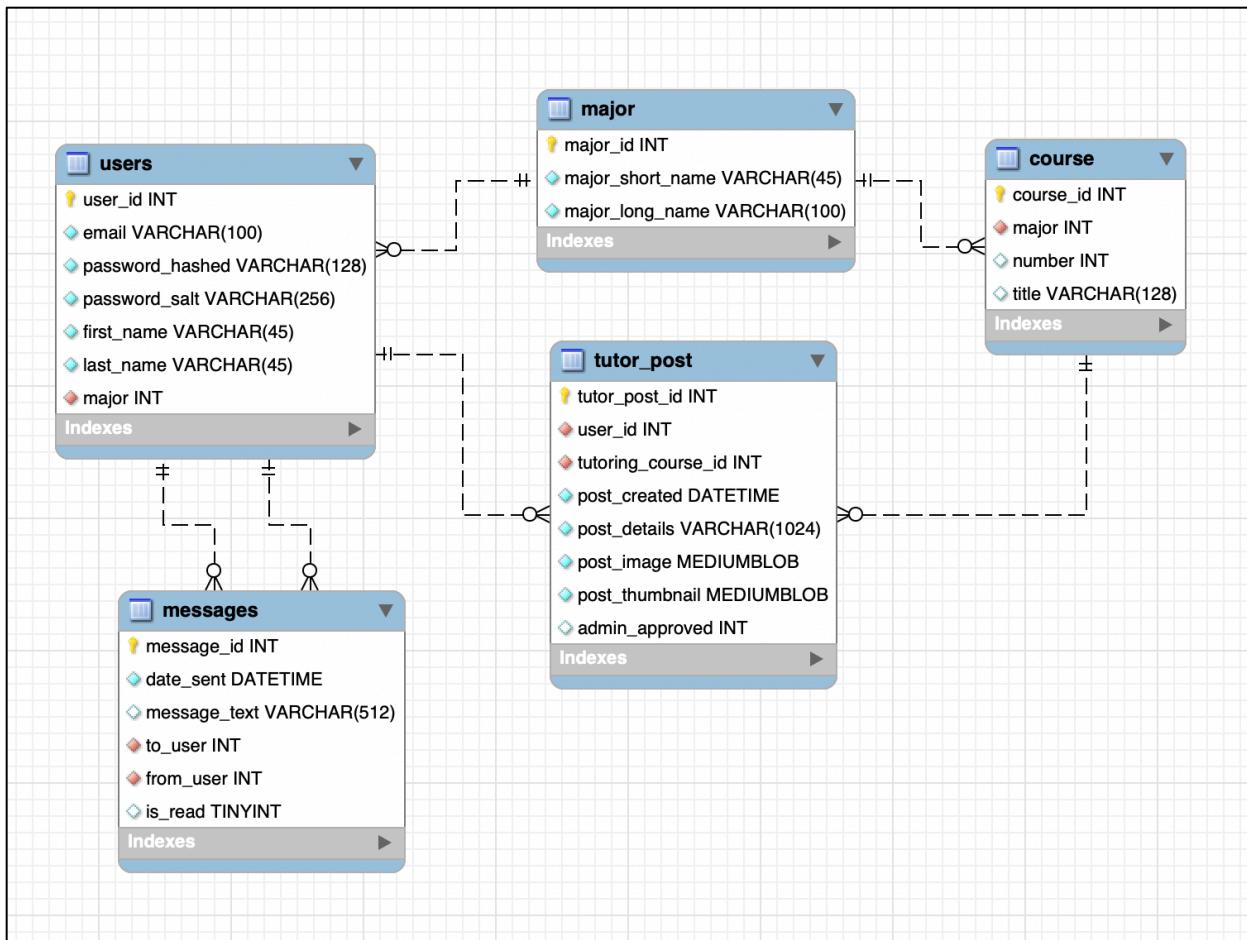
11) About Page

The screenshot shows the 'About' page of a website called 'TutorPal'. At the top, there is a navigation bar with links for 'About' and 'Offer Tutoring'. A dropdown menu is open, showing 'Major' selected, with other options like 'CSC 648' and a 'Search' button. On the right side of the top bar are 'SignUp' and 'Login' buttons. Below the navigation, a message reads: 'Software Engineering Project CSC 648-848, Fall 2021 For Demonstration Only Fall 2021 | Section 3 | Team 3'. A central heading says 'We are a Team of Six!!'. Below this, six team members are listed in a grid:

Snehal Patil	Team Lead	James Pratt	Github Master
Cameron Robinson	Backend Team Lead	Rollin Kung	Backend Developer
Daniel Elnaggar	Frontend Team Lead	Saptarshi Roy	Frontend Developer

In the bottom right corner, there is a logo for 'SAN FRANCISCO STATE UNIVERSITY'.

4. Database Organization



User table

	user_id	email	password_hashed	password_salt	first_name	last_name	major
1	1	alexandra1@mail.sfsu.edu	9da45e2892511dea945aba9be1f67aaaf649676ba4d20d7bfa0878e7e0c359c5536	b871Uy4wEFn8wRbH/Do3Yf+B88eN2sy70UXTzjFxmyAsj3QqigtU0kZMiQCrb7r	Alexandra	Baker	2
2	2	aGibson@sfsu.edu	ece2cca0cc703d6c77b0ab39fd53eac6572e5022078564f5dc5218a7b2ddd5fa83c	AI055B/ChrEuyeQ9QMGnoP3DKPr/lRbJRM37jU89AF4+22WR8yOMqF26Ek759FII	Aida	Gibson	5
3	3	oHolmes@sfsu.edu	c45f457fb9a8ede2816c27dfe5ae59ecdf5f77119bd96600ae06372d1666631	FLQZJQWJKelUqZ/Dx5s53Z8HE8WtAc/W3k/2ewGtKfMfRqd4ZUtSubErzpx+FF	Oscar	Holmes	8
4	4	rSullivan@sfsu.edu	2d0787850befa3d75b03ea214a41e54668ec783b59d7894f6ec63b1c41a5890e	0fTU0U082UoWa3lU9U7e+dzt5+AITDmF2ywUXlwKmpRnRfZ0ISCuPTNrltUKkvEM	Rafael	Sullivan	4
5	5	cSmith@sfsu.edu	fe241a852de1b3b86010c37a7f781aa5b2fc31810b902cf44e2d5ad22949c989aa	F3A124/89ohNk7SoznBdrIN4VTA2x2VJ5JF716yvQLcsZodHuufHYTg5PFGikuz	Cadie	Smith	10
6	6	builderbob@mail.sfsu.edu	f883df3066b1e47c634d935a8a2dfa724090978ebc914a56236f6275c84e46c81	RxKMWrtsRY8DHlkappVfFavajmNQ4Jep1uQZQfV7dv2eHrFAMT7zSozXzv8cCHxNl	Builder	Bob	10
7	7	harry.brown1@mail.sfsu.edu	d7a7b803b0225480831803584fe45fcfa94f8e4c11e241306686c4beb44c3700	K9QOemk0jOW2Mcp3f0WpAvs3+2JfLSILY1o4+6/xefBr69qvOPe4act.0m+gHSrI	Harry	Brown	8

Message table

	message_id	date_sent	message_text	to_user	from_user	is_read
1	1	2021-12-18 17:36:12.0	Hello, I wish to connect with you for this class. Please find my attached phone number: +1 456 373 8222	3	1	0

Post table

	tutor_post_id	user_id	tutoring_course_id	post_created	post_details	post_image	post_thumbnail	admin_approved
1	1	2	1	13	2021-12-18 17:12:27.0	Hi there, I am a business alumni from SFSU and I	PNG IHDR É ï ð ÷...[34009]	1
2	2	2	2	5	2021-12-18 17:20:26.0	Hi there, I am a business alumni from SFSU and I	PNG IHDR É ï ð ÷...[34009]	1
3	3	1	1	1	2021-12-18 17:21:13.0	I am willing to tutor for CSC 648 class. Please fr	JFIF H H ýá XICC_PROF... [2' ýóýÜ c	1
4	4	3	3	22	2021-12-18 17:23:02.0	Hi, I took this course last semester and would like	.. [85171] ýóýÜ c	1
5	5	4	4	10	2021-12-18 17:26:49.0	Hello, I am a graduate student and active CPA w	.. [9962] ýóýÜ c	1
6	6	4	4	9	2021-12-18 17:27:01.0	Hello, I am a graduate student and active CPA w	.. [449122] ýóýÜ c	1

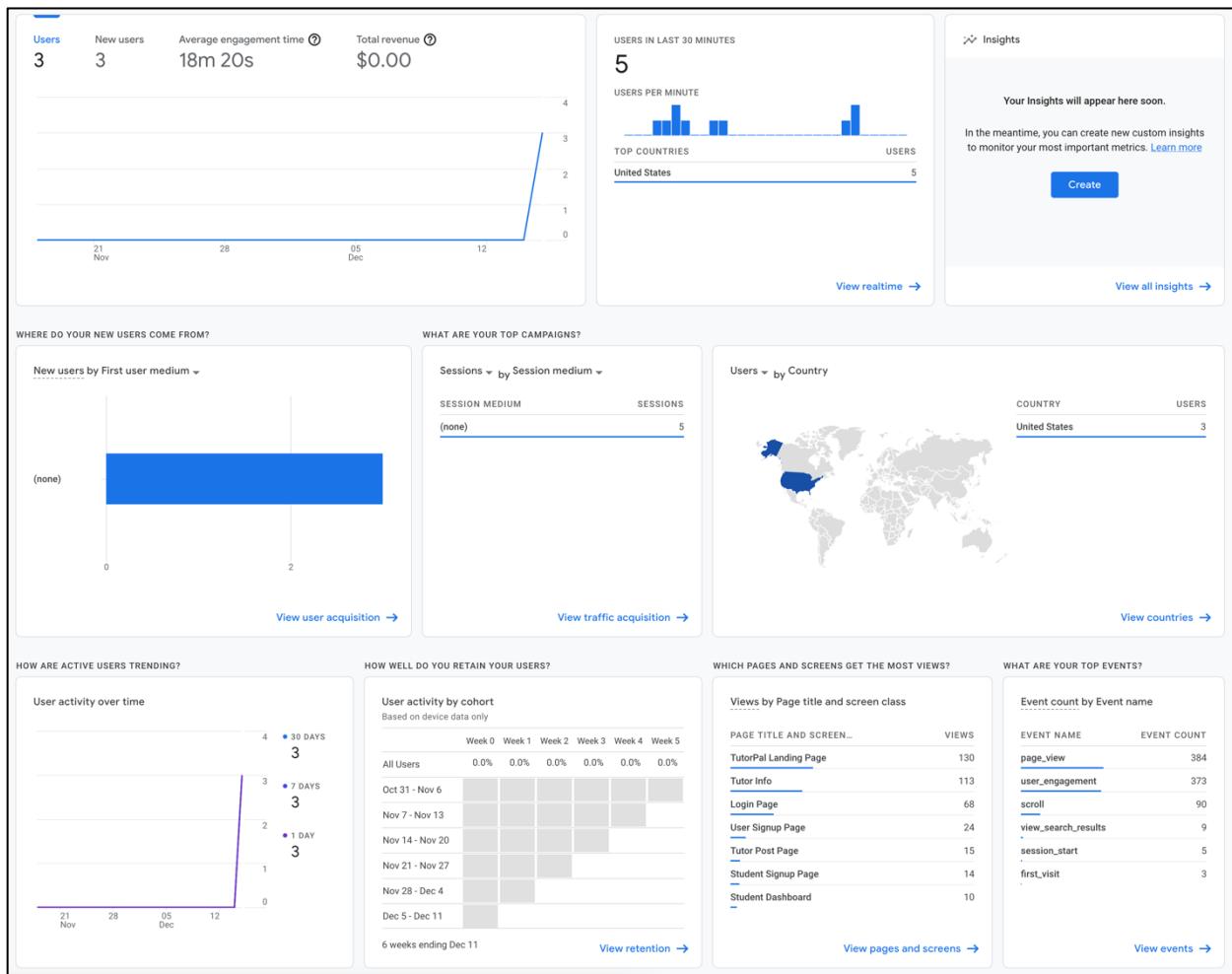
Course table

	course_id	major	number	title	
1	1	2 ↗	648	Software Development	↑ ↓
2	2	2 ↗	642	Human Computer Interaction	↑ ↓
3	3	2 ↗	600	Programing Paradigms and Languages	↑ ↓
4	4	2 ↗	645	Computer Networks	↑ ↓
5	5	2 ↗	690	Interactive Multimedia Development	↑ ↓
6	6	3 ↗	101	Introduction to Philosophy	↑ ↓
7	7	3 ↗	210	Great Thinkers: East and West	↑ ↓
8	8	3 ↗	621	Minds, Brains, and Computers	↑ ↓
9	9	4 ↗	100	Introduction to Financial Accounting	↑ ↓
10	10	4 ↗	301	Intermediate Financial Accounting I	↑ ↓
11	11	4 ↗	780	Financial Accounting	↑ ↓
12	12	5 ↗	350	Introduction to Entrepeneurship	↑ ↓
13	13	5 ↗	450	Greening of Business	↑ ↓
14	14	5 ↗	682	Seminar on Business and Society	↑ ↓
15	15	5 ↗	690	Seminar in Business Policy and Strategic Management	↑ ↓
16	16	6 ↗	101	Introduction to Microeconomic Analysis	↑ ↓
17	17	6 ↗	301	Introduction to Macroeconomic Theory	↑ ↓
18	18	6 ↗	312	Introduction to Econometrics	↑ ↓
19	19	7 ↗	114	Writing the First Year: Finding Your Voice	↑ ↓
20	20	7 ↗	300	Graphic Memoir and Biography	↑ ↓
21	21	7 ↗	402	Introduction to Professional Writing and Rhetoric	↑ ↓
22	22	7 ↗	418	Grammar for Writers	↑ ↓
23	23	7 ↗	465	Post-Apocalyptic Science Fiction	↑ ↓
24	24	8 ↗	450	History of California	↑ ↓
25	25	8 ↗	479	The History of Baseball	↑ ↓
26	26	8 ↗	690	Editing and Publishing the History Journal	↑ ↓
27	27	9 ↗	231	Introduction to Drawing	↑ ↓
28	28	9 ↗	434	Color Workshop	↑ ↓
29	29	9 ↗	671	Internship in the Visual Arts	↑ ↓
30	30	10 ↗	440	Computational Physics	↑ ↓
31	31	10 ↗	704	Electrodynamics	↑ ↓

Major table

	major_id	major_short_name	major_long_name	
1	1	undc	Undeclared	↑ ↓
2	2	csc	Computer Science	↑ ↓
3	3	phil	Philosophy	↑ ↓
4	4	acct	Accounting	↑ ↓
5	5	bus	Business	↑ ↓
6	6	econ	Economics	↑ ↓
7	7	eng	English	↑ ↓
8	8	hist	History	↑ ↓
9	9	art	Art	↑ ↓
10	10	phys	Physics	↑ ↓

5. Google Analytics Stats



6. Project Management

Milestone 2 Version 2 Document changes

- 1. Few changes in Executive summary - updated in google doc (J)
- 2. changes in Data items (SP)
- 3. Functional requirements: we cleanly requested to first group by priority then by type of users, you did it the other way around, very hard to read - prof comment (CR, RK)
- 4. StoryBoard update (DE, J, SR, SP)
- check DB Organization changes (RK)
- Skill Risk changes (SR)

Milestone 2

- Executive summary from milestone 1 - to be added from Milestone 1 (J)
- Expand data items (SP)
- Expand Functional requirements (Oct 27) (J)
- Create UI Story board for use cases (Oct 27, DE, J, SR, SP)
- High Level Architecture, DB Organization Summary - Vertical prototype instructions given in document. (Oct 27, CR, RK)
- Document creation and verification - Snehal, James (Oct 28, J, SP)

Milestone 1

- Executive Summary (J, RK, SP)
- Persona and uses cases (J, RK, SP)
- Functional and Non Functional requirements (CR)
- Competitive Analysis (SP)
- Architecture, checklist and team roles (J)
- Create Milestone 1 Document (J, SP)
- Milestone 1 Data Items and entities- Make the changes mentioned in the comment (J)

Milestone 0

- Setup Github Repository (CR)
- Create introduction web page (CR, DE, RK, SR, SP)
- Setup Software Stack - webserver, DB, etc (CR)
- Setup local server (DE, RK, SR, SP)

Logo

- Navigation Bar
- Logo in the upper left to look more like a logo (SR)

Milestone5

- Form field Validation All of the form fields across the site need to properly validate the information provided before the submission is completed. EG: The email field in registration should check that the email ends with "sfsu.edu" (SP)
- message sent popup (SR)
- Get user registration working User registration needs to add a new user to the database. There are helper methods in project that are used to hash the password once the data reaches the server. (RK)
- Show "5/20" text on the search page. (J)

Milestone4

- Adding content and Organizing M4 document (CR, DE, J, RK, SR, SP)
- Solve the "Lazy registration / Lazy login" problem (CR)

Milestone 3 feedback

- Messaging This is working in a basic form. The GUI for the dashboard and the send message page needs updating but the back end is working. (1)
- Password hashing Passwords shall be properly encrypted in the database to protect user data. (1)
- Image thumbnails (CR)
- "Contact" Form We need a contact form that can allow for users to send messages. The simplest way we can accomplish this would be a form on the tutor info page. So underneath the image and tutor description there can be a text box and a submit button rather than another page. (1)

Milestone 3

- Search Page backend Connectivity (CR)
- Landing Page (J)
- LogIn, Register, Tutor Apply, Student and Tutor Dashboard (SP)
- Tutor info (SR)

7. Team Member Self-assessment and contributions

James Pratt Summary of Contributions to TutorPal

JP James Pratt
Fri 12/17/2021 2:41 AM

To: Snehal Shrinivas Patil; Saptarshi Roy; Daniel Safwat Elnagar; Cameron Kekoa Robinson; Rollin F Kung



Summary of contribution...
37 KB

Hello team,

Here is a summary of my contributions to TutorPal. Thank you for a wonderful semester!

Summary of contributions to TutorPal by James Pratt:

- My main contributions to TutorPal include frontend additions, milestone document updates and github master. More specifically:
 - Milestone 0 and Milestone 1 contributions:
 - Creation of github repo
 - Addition of Executive Summary and one persona for M1 Documentation
 - Creation and management of master and develop branches, and added tags for each milestone release
 - Milestone 2 contributions:
 - Addition of executive summary, 3 use case summaries, and key risks for M2 Documentation
 - Creation of mockups on fidelity
 - Addition of nav bar and footer bars to every web page
 - Milestone 3 contributions:
 - Helped present and script feedback from professor
 - Milestone 4 and Milestone 5 contributions:
 - Added "Recently Added tutors" to landing page
 - Created "Previous" and "Next" buttons for the list of tutors on landing page, as well as numbering which lists how many tutor posts there are.
- My number of submissions I have made to github team dev branch is 49.
- The main challenges I encountered in this team project were keeping the scope of the project minimal. It is easy to say you will add several features, however once you sit down and start coding everything out it can be a long and daunting process. We worked closely with our team lead and back end developer to make sure we were only doing what tasks were needed for TutorPal, because it is too easy to take on more responsibility than we bargained for!
- What I would like to improve on next time based on what I learned in this class about SE management and processes would be to know when to step up and take on responsibility and when to delegate work to other team members. What I learned from this class is to know when to depend on your team mates to finish a feature so you can build on it. It was very relieving to know that some features were already complete when I thought I needed to work on them – communication between everyone is very important!

Best,
James Pratt

Saptarshi Roy Summary of Contributions to TutorPal

SR Saptarshi Roy
Fri 12/17/2021 4:24 AM

To: Daniel Safwat Elnagar; Cameron Kekoa Robinson; James Pratt; Rollin F Kung; Snehal Shrinivas Patil



Hello Team 3,

Here is a summary of my contributions to TutorPal. Thank you for a wonderful semester!

Summary of contributions to TutorPal by Saptarshi Roy:

- My main contributions to TutorPal were all mainly in the frontend
 - Milestone 0 and Milestone 1 contributions:
 - Addition of Data items and Entities
 - Addition of high-level system architecture and technologies used
 - Milestone 2 Contributions:
 - Creating UI Storyboards for each use case provided in Milestone 1
 - Milestone 3 Contributions:
 - Created tutor info page
 - Milestone 4 and 5 Contributions:
 - Created TutorPal logo
 - Added TutorPal logo to header
 - Changed Logo background to transparent
 - Created a 'contact me' button for tutor info page
 - Created Pop up template
 - Created Pop Ups for 'contact me', login, and message button
 - Addition of Q&A Test Plan
- My number of submissions I have made to GitHub team dev branch: 8
- The main challenge I faced during the overall course of this project was having to balance 2 other projects as well. Dividing up my time between all three was difficult as I needed to not only meet up with my team in order to see what progress we made but it was also difficult to keep track of what I had to do. I often needed to write down on a piece of paper what I needed to work on as well as list what project that task corresponded to. This was also my first introduction to working with a team. So this was all very new to me. It was easy to work with my team members since they had prior experience working with teams before. This was also my first time working on the frontend side of things. I had little experience but it was a fun challenge to tackle seeing that I could see what work I had done with every refresh on the website. Bootstrap made this whole process so much easier and due to this I no longer have any 'fear' of the front end!
- For the next team based project, I would take what I learned in this class and apply it. The most useful thing I learned was definitely the Analysis and Planning bit. A team cannot function without coming up with a proper plan as well as milestones to follow.

Best,
Saptarshi Roy

Rollin Kung M5 Email

 Rollin F Kung

Sat 12/18/2021 6:46 AM

To: Snehal Shrinivas Patil; Saptarshi Roy; Daniel Safwat Elnaggar; Cameron Kekoa Robinson; James Pratt



Hello everyone,

Thank you all for your work on this project and I hope you have a wonderful break!

a) Some of the contributions I have made to the team project include:

- Milestone 1:
 - created a user persona and two use cases
- Milestone 2:
 - added list of how database would be organized
 - added priority levels to functional requirements
 - added key risks
- Milestone 3:
 - recorded professor's feedback and organized it into the M3 document
- Milestone 4 and 5:
 - added test background and setup as well as usability task description into the usability test plan
 - added code for registration backend

b) The number of my submissions to our github develop branch is 13.

c) One of the main challenges I encountered was learning how to work with new technologies for our project. While I had some experience using Javascript, I was not familiar with using MySQL at all. Another challenge was keeping track of everything I needed to do while balancing it with my other classes because they also had group projects. Fortunately, my team was able to help with any problems that I had which helped a lot.

d) One thing that could be improved upon next time is designing the website. This class was the first time where I learned about how to plan and design a website. For example, I learned about creating personas and use cases as well as functional and non-functional requirements. This is useful because in all of my other group project experiences so far, the group did not have a clear idea of what they wanted for the application and the end result would be messy.

Sincerely,
Rollin Kung

CSC648 Team3 - Cameron Robinson Contributions

 Cameron Kekoa Robinson

Sat 12/18/2021 10:13 AM

To: Snehal Shrinivas Patil; Saptarshi Roy; James Pratt; Rollin F Kung; Daniel Safwat Elnaggar



Hello all, here is my list of contributions and self assessment for the project.

- Acted as team backend lead
- Set up and maintained the AWS host, apache server, and mysql database.
- Wrote an equal share of all milestone documents.
- Worked mostly in NodeJS / Express in developing the main structure of the web app as well as setting up essential middleware APIs for other team members to use.
- Helped other team members in learning NodeJS and integrating their code into the codebase.
- Assisted as much as possible in troubleshooting technical problems.
- Added 113 submissions to GitHub

The biggest challenge I had with this project was project scope. Having the foresight to know what was and wasn't possible in the time allotted was a problem for me. It was not until late in the project that I fully understood the actual requirements of the project everything clicked. Although after that the project seemed much more doable however that meant most of our documentation work from earlier in the semester was going to need to be cut.

In the future I think I would spend more time on the initial design phases, laying out requirements and prototyping to make sure the design is solid before fully diving into the actual development. Even though we went through those phases during the project I feel like the end sprint could have been less hectic had the initial design been more thoroughly thought out.

Thanks for a great semester everyone, in my opinion this was a great team and we really worked well together. Have a great winter break, and congratulations to those of us graduating.

Cameron.

CSC648/848 Team3 Summary of Contribution- Daniel Elnaggar

 Daniel Safwat Elnaggar

Sat 12/18/2021 10:13 PM

To: Snehal Shrinivas Patil; Cameron Kekoa Robinson; Rollin F Kung; Saptarshi Roy; James Pratt



Hello TutorPal Team,

Here is my self-assessment and a list of contributions for this project,

- Acted as team frontend lead
- Contributed to planning of site functionality (i.e. similar to craigslist)
- Created storyboards/use cases on Figma
- Ensured color scheme matches across all pages
- Ensured scale/sizing of elements on page match
- Created clickable buttons
- Worked on milestone documents
- Helped take notes and pointers from professor during our presentation, and ensured all changes were done
-

The number of submissions made to GitHub team dev branch: 22

There were several challenges I faced during this project, mainly coordination and learning about new technologies. I found it to be somewhat difficult to coordinate with this large of a group a set time that worked for everybody. I had also never used bootstrap before, so there was a bit of a steep learning curve in the beginning. The other challenge I faced was allocating enough time to this project without neglecting all of my other classes. Even with these challenges, having a great team like we had, enabled us all to support one another to accomplish our goals.

For the next project I am in of this scale, I would like to spend more time in the planning phase. I found that the more we planned out every detail, the easier it was to actually create those details correctly the first time. I had a bit of a bad tendency to start working before the plans were concrete, which often leads to having to redo the work.

Thank you all for a great semester and for wonderful team support

- Daniel Elnaggar

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

CSC648/848 Team3 Summary of Contribution- Snehal Patil

 Snehal Shrinivas Patil

Sat 12/18/2021 9:38 PM

To: Cameron Kekoa Robinson; Rollin F Kung; Saptarshi Roy; James Pratt; Daniel Safwat Elnaggar



Hello Team,

Here we are to the end of the project, please find below the list of my contributions and self-assessment for this project.

- Worked as Team lead and document master.
- Added content to the milestone documents for my share then later reviewed and organized all milestone documents after it was updated by our whole team.
- Worked on the use cases, personas, competitive analysis.
- Worked on designing how the UI of our application would look and started creating storyboards, modifying the requirements and data items.
- Worked mostly on the frontend part of the application like login, register, tutor post, user dashboard, tutor search page, tutor info page. Tried making the website look decent!
- Coordinated with the team members regarding any issues they were facing and tried resolving them as much as possible.
- Updated all the tasks on the Trello board and coordinated and discussed the task on Zoom and Discord servers.
- Follow with all the team members with the assigned tasks.
- Added 40 submissions to GitHub.

The main challenge I faced with this project was understanding the actual requirements of the project i.e. what users want the software to be able to do and determine what to build to meet those needs. Also, see that the deliverables were delivered on time for every milestone. I had to manage and divide the tasks between the team and get updates about them during the zoom sessions and see the progress of the project was on time. Before M3, I thought we could add several features to our application but sooner we realized that things could be made simple and started working accordingly. This made me realize that we could finish the project on time and everyone took their responsibilities and started working on it to deliver all milestones on time. Also, I did not have prior experience of working with these tools and after connecting with my teammates I learned a few things and started exploring for example bootstrap and started the frontend development which helped me create a basic outline of all the web pages which were used later for all the pages. This has helped me develop and integrate things easily with the help of my teammates.

Next time, I would keep in mind that before starting the project I would thoroughly go through all the requirements and try learning the technology I will be using in the project as early as possible so that I would be able to deliver as much as I plan for. From the perspective of the team lead, next time I would try to make learning new things an integral part of the project development and let the team explore the topics that were assigned to work on. I would try to give deadlines so that the tasks were started early and deliverables could be done on time. Also, would try to ensure visibility and transparency between the team members.

Thank you so much everyone for coordinating and working together to achieve all the project milestones. It was a wonderful experience working with you all. As you all are in your last semesters of your undergraduate, All the very best for your future endeavors!!!

Warm Regards,
Snehal Patil