SW Engineering CSC648/848 Fall 2023

Project Title: Gators Tutor

Team 5

Team Members:

Daivik Purani

Jovanny Ramos

Esau Bojorquez Medina

William Ambriz

Siarhei Pushkin

Akshar Gothi

Milestone 4

Document Version	Date submitted	Description
1.0	12/13	Final

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Product Summary

Name of the Product: Gators Tutor

Gators Tutor is a user-friendly online tutoring platform exclusively designed for San Francisco State University (SFSU) students. Our primary goal is to empower SFSU students by granting them access to experienced tutors across various subjects. The distinctive feature of Gators Tutor is SFSU-specific search. For example, users searching for tutors on Gators Tutor can filter results by SFSU-specific classes, ensuring that they receive personalized support that aligns with their academic curriculum. We also empower SFSU students not only to seek academic assistance but also to become tutors themselves. Gators Tutor is the perfect place for any SFSU student seeking assistance in their classes or wanting to help others and earn extra money. Our user-friendly interface makes signing up as a tutor, searching for a tutor, or scheduling online tutoring sessions effortless.

Final P1 List:

1. Unregistered Users (students) shall be able to search for tutors by SFSU-specific subject;
2. Unregistered Users (students) shall be able to view details about tutors, including their pricing;
3. Unregistered Users (students or tutors) shall be able to register.
4. Registered Users (students) shall be able to send messages to tutors;
5. Registered Users (students) shall be able to apply to become a tutor;
6. Registered Users (tutors) shall be able to fill out a general description when applying to become a tutor;
7. Registered Users (tutors) shall be able to choose a topic in their application;
8. Registered Users (tutors) shall be able to edit their application;
9. Admins shall be required to approve tutors before tutors are added to the platform;
10. Admins shall be required to approve all posts before they go live on the platform;
11. Admins shall be able to delete tutor posts.

Product URL: http://3.101.225.46:3000/

Usability Test Plan

Test Objectives:

The primary objective of this usability test is to evaluate the effectiveness, efficiency, and user satisfaction of the Tutor search function on the Gators Tutor platform. We aim to identify potential usability issues, assess the ease of use for the intended users, and gather subjective feedback to improve the overall user experience.

Test Background and Setup:

System Setup:

The test will be conducted on a standard laptop or desktop computer with a recommended screen resolution of 1920x1080 pixels. Testers should have access to a stable internet connection and use commonly used browsers such as Chrome, Firefox, or Safari.

Starting Point:

Testers will start from the main landing page of the Gators Tutor platform.

URL:

The system to be tested can be accessed at http://3.101.225.46:3000/.

Intended Users:

The intended users are students and faculty members at San Francisco State University who are looking for tutoring services. Testers should have basic computer skills and familiarity with online search functionalities.

Test Environment:

The test can be conducted in a controlled lab setting or remotely from the tester's home. No external cameras or monitoring devices will be used during the test. There is no specific training required before the test.

Plan for Evaluation of Effectiveness:

Effectiveness will be measured by users' success rate in finding relevant tutors. This will be determined by tracking the number of successful searches against the total number of attempts.

Plan for Evaluation of Efficiency:

Efficiency will be measured by the time taken by users to complete the tutor search task. This includes the time from initiating the search to selecting a tutor.

Plan for Evaluation of User Satisfaction (Likert Scale Questionnaire):

A. Usability Task Description:

1. Log in to the San Francisco State University platform.
2. Navigate to the Tutor search function.
3. Search for a tutor in a specific subject area.
4. Review the tutor profiles and select one.
5. Provide feedback on the overall experience.

B. Likert Scale Evaluation Entries:

Task Clarity:

How clear were the instructions for the tutor search task?

(1) Not clear at all

(2) Slightly clear

(3) Moderately clear

(4) Very clear

(5) Extremely clear

Task Completion:

How easy was it to find and select a tutor?

(1) Very difficult

(2) Difficult

(3) Neutral

(4) Easy

(5) Very easy

Overall Satisfaction:

How satisfied are you with the overall tutor search experience?

(1) Very dissatisfied

(2) Dissatisfied

(3) Neutral

(4) Satisfied

(5) Very satisfied

QA Test Plan

Test Objectives:

The objective of this section would be to test specific parts about our system to analyze overall functionality.

HW and SW Setup:

LINK: http://3.101.225.46:3000/

Markup languages: HTML, CSS, JSON

Database System: MySQL (v8.0.33)

Server Host: AWS

Operating System: Ubuntu;

Platform details: Linux/UNIX;

Web Analytics: Google Analytics

IDE: Microsoft Visual Studio Code

SSL Cert: Let's Encrypt

Features to be Tested:

- Search Bar
- Contact
- Register
- Sign In
- Sign Up

WILL BE TESTED ON CHROME

CASE:	1	2	3	4	5
Name:	Contact	Search Bar	Sign In	Register	Sign Up
Results	Pass	Pass	Pass	Pass	Pass
Input	Straight from our home page, there should be a contact button on each of our tutor's cards. This button will be clicked and the user will be taken to a tutor information page.	Users will type in the name of a course "CSC 648," and click on Search. This should prompted	When the user is on our main page, they will click on the profile icon. This will prompt the dropdown menu and the user will click sign in. They will then sign in with their account.	An unregistered user will go to sign up and create a new account on that page. The link to sign up will be in the dropdown menu that is reachable via clicking profile picture.	When the user is on our main page, they will click on the profile icon. This will prompt the dropdown menu and the user will click sign up. They will then sign up with a new account.
Expected Results	For the expected output of test number 1, we should see a very easy to use contact button or view details button that promptly reveals any needed information about a tutor.	The expected result would be the user getting redirected to search page and results appearing for the class searched.	A successful login of a user is pretty standard.. Once the user enters the proper information they will then be redirected to the home page.	A successful registration of a user should look like a normal process. Once the user enters the proper information they will then be redirected to the home page.	We expect to see the new already signed in when then successfully create an account.

Description	This test will determine the reachability of the the contact via our tutor contact button.	The search bar test will determine how well we can search for a tutor and if we can get results.	This test will show if a registered user can access their account via the sign in button.	This test will show if an unregistered user can create their new account via the sign in button.	This test will show how well the intended purpose of recently applied tutors works.

5. Self-check on best practices for security

- Passwords was encrypted before store in database and while retrieve the data from database also.
- User authentication and user authorization breach
- For password we encrypted the password using hash and md5 algorithm.
- In Backend, We use bcrypt for encryption of password in nodejs.
- For validation, we used front-end validation of email, name and all input fields.

Asset to be protected	Types of possible/expected attacks	Your strategy to mitigate/protect the asset
Password	User information	Encryption
Database Info	Sql injection	Form Validation