

SW Engineering CSC 648-848 Fall 2023
Wise Guidance And Tutoring Outreach Resource (wiseGATOR)
Team 6

Team Member	Role
Joaquin Warren jwarren3@mail.sfsu.edu	Team Lead
Ronnie Huang	Github Master
Karl Moreno	Front-end Lead
Darien Banuelos	Front-end Developer
Sean Ryan	Back-end Lead
Philip Karnatsevich	Back-end Developer

Milestone 1
Revision History

Date Submitted	10/01/23
Date Revised	

1.Executive Summary:

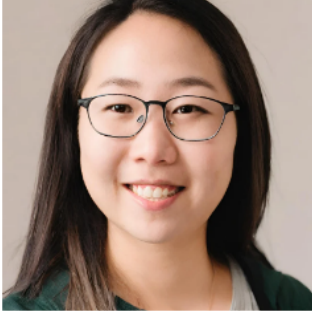
If you're a student, you're familiar with the struggle of juggling multiple classes and meeting overlapping deadlines. Time is money when you're in college, and with our new application, we can save our users both! We relate to the challenges students face when looking for convenient and affordable access to tutoring services on campus. That's why we started developing wiseGATOR, a brand new SFSU Guidance and Tutoring Outreach Resource. It's not only important to pass the classes, but to understand and retain the key concepts in each course. wiseGator allows students to find tutors relevant to their coursework, to get fast help and mentorship. SFSU students often depend on one another to get assistance with their classes and homework. This application will bridge the gap between students in need of tutoring services and experienced students that can offer specialized help.

Our application aims to quickly connect students to tutors and students interested in becoming tutors to paid mentorship roles. Students at SFSU are already footing the bill when it comes to tuition prices, and they're on the rise as of September 2023. We can save students time and money by skipping the Chegg membership or paying for Quizlet premium. Students can get 1 on 1, specific help with homework assignments, coursework, study guides, and more at a reasonable, cost-efficient rate. This is also a great opportunity for SFSU students that excel in their courses to make money by becoming a mentor and offering tutoring services on our site. It's a one stop shop for any SFSU student seeking or offering expert help. Our goal is to streamline the process of finding tutoring, by allowing students to filter by subject and by courses offered at SFSU. This way, students are learning from one another in the same courses, and they do not have to rely on outdated and irrelevant internet forums or paid services from people that have never even been in that class.

The team behind wiseGATOR is a group of 6 ambitious computer scientists at San Francisco State University. With a startup funded by Professor Petkovic of the College of Science & Engineering, this team is dedicated to bringing wiseGATOR to personal devices of SFSU students by the end of 2023. Team 6 has experienced team members with a strong background in both Web and Software Development. Our values are aligned with the interest of both students and professors alike to provide a successful experience for all of our users in their educational careers. It is important to us as students that we can make a meaningful positive impact on our peers and utilize our best talents to extend that to more students and alumni of SFSU.




2. Personae and main Use Cases:

Personas:



"I'm a little wary of using paid services to study, but I need to do well in college"

Kim

-  18
-  San Francisco
-  Undergrad Student

About:

Values thorough preparation and planning before tutoring sessions. Unwilling to meet in areas on campus they are unfamiliar with.

Wants & Needs

- Kim needs tutoring from experienced students that have previously been in her courses
- Convenience is important for Kim
- Affordable tutoring service


Frustrations

- Kim has such a busy schedule this semester at SFSU
- Security and safety is a big concern for her, as she is new to campus
- "Free services" don't let you browse your options until you sign up



"I could use a little extra money, so I ought to put my free time and talent to use"

Victor

 23
 San Francisco
 Graduate Student

About:

Desperately needs a part time job and has great tutoring experience and familiarity with other sites. Enthusiastic about helping fellow students succeed but grows impatient with unintuitively designed applications.

Wants & Needs

- Adamant on helping peers succeed in their academic journey and wants to sign up to be a tutor for SFSU
- Platform to advertise his skills and knowledge to acquire tutoring job




Frustrations

- Just transferred to campus, not aware of what is available yet
- Although willing to help students, not patient with bad UI/UX
- Does not need to learn how to use website



"I'm looking for a position that will allow me to apply my knowledge of databases and take on an administrative role"

Jamie

 22
 San Francisco
 Undergrad Student

About:


Aspiring database administrator, looking to work with a startup of students from SFSU. Needs to keep his schedule balanced while he studies

Wants & Needs

- Administrative role that complements his experience and area of interest
- Reasonable schedule as a grad student
- Meaningful work that helps him grow as a potential systems manager


Frustrations


- Overly complicated applications make it hard for him to effectively utilize his time
- Does not want to learn any brand new technologies but rather practice with familiar ones




"I heard about this website from a flier, I should check it out in the chance I'm stuck with an assignment"

Peggy

 29

 San Francisco

 Postgrad Student

About:
A passionate student who is majoring in business. Prefers to be well organized and takes care of all her work in a quick yet easy manner

Wants & Needs

- Wants to find a website to use if they're ever caught up in a tight spot in the future
- Goes through the website to see all of the its features

Frustrations

- Doesn't want to create an account due to the lack of an easily accessible email
- Prefers to not wait until last minute to do their tasks

Use Cases:

- Kim wants to efficiently set up a safe tutoring appointment. She filters through her choices of tutors with the conveniently accessible interactive calendar. Here she can put in classes where he needs help and is prompted with multiple openings that month. She also is able to safely choose the location e.g. "Burk Hall" while setting up an appointment. Before setting up an appointment she is prompted to log in or register. She is able to discuss further details with her client via direct messaging, such as to confirm the tutoring appointment time, location, or even to easily send her homework to her tutor.
- Victor wants to become a tutor on our site. After accessing our website he selects the easy to select tutor application button and is requested to log in or register, as tutors must be registered users. He is given a list of subjects to choose from and is then presented with SFSU exclusive classes related to the subject(s) selected; he then chooses the classes he wishes to tutor for. After appropriately moving forward he is able to input his available times to tutor and will promptly receive any related session information regarding potential tutees.
- Jamie wants to be an admin for our site. Upon applying to become an admin he is swiftly requested to log in or register, this is because to administer our website you must be a registered user. As an admin he will have access to various databases in relation to our website e.g. students, tutors, times, etc. Admins will

also have full access to our site's functionalities and features for admin or tutoring related use.

- Peggy is a smart college student who's just browsing the site. In the past she's gotten a lot of spam emails from her time at applying to college, and is now very hesitant on giving her email in applications. One day, while walking around campus, she sees a flier advertising the tutor website and decides to check it out. She's aware of places advertising tutoring (such as Discord servers or users on "Twitter/X"), but they're all different in terms of features, price, and accessibility, so she has no clue what to expect from this site. Upon visiting, she notices the option to sign-up, yet she ignores this, assuming that they'll likely require her to enter her email. She checks out the features of the site such as available tutors and searching by name of course. After seeing the site, she takes note of it for future use.

3.List of main data items and entities:

Types of users:

User

A user is any person who is using a web tutoring service. This user can browse tutoring web services and perform searches but can't schedule an appointment for tutoring services, get session information, get feedback from the tutor, or write a review.

Users with permission:

Admin

Admin is logged in to the web service or registered user. Admin is a person who is responsible for managing and supporting a tutoring web service. Admin has full access to all features and functionalities of the web service.

Tutor

The tutor is the person who is logged in to the web service or registered user. A tutor is a person who is responsible for providing tutoring services. The tutor has access to web service functions, such as scheduling tutor appointments, getting session information, and sending feedback to the student.

Student

The student is logged in to the web service or registered user. Students can browse tutoring web services and perform searches for tutors to receive tutoring services.

Students can schedule an appointment for tutoring services, get session information, get information about the tutor, get feedback from the tutor, and write a review.

Types of actions:

Search/Browse

All kinds of users can perform searches. The search function allows users to find tutors based on the subject, rating, review, availability time, and meeting form (in-person or online).

Schedule/Reserve an appointment

Only students and tutors can schedule an appointment for tutoring services. It allows students to select a tutor according to their needs and preferences. That function helps to connect students and tutors.

Meeting/Session

All the info about upcoming/past meetings (Time and date, Place of meeting or Online meeting, Duration, Subject, Tutor info)

Feedback

Allows students to get feedback from the tutor after the meeting. It can contain references to resources and directions to which students need to pay attention.

Review

After a tutoring session, students can provide feedback to the tutor. The review may include their experience of the tutoring service, whether the meeting was helpful, and recommendations for future improvement. Students can rate the tutor and leave comments about their experience.

4.Initial list of functional requirements:

Non Registered Users:

1. Non registered users shall be able to have convenient access to tutor information
2. Non registered users shall be able to filter through tutors based on their class, date, and time preferences.
3. Non registered users shall be able to interact with a calendar that populates based on specified filters.
4. Non registered users shall be able to view all available tutors.
5. Non registered users shall be able to learn about tutoring options (In-person or zoom).

6. Non registered users shall be able to view meeting locations.
7. Non registered users shall be able to set their preferred times for tutoring and distinguish between types/sessions based on their appointed times.
8. Non registered users shall be able to benefit from our structured database system containing information on students, tutors, available times, dates, classes, and days.

Registered Users: (Will have all previous permissions listed above)

9. Registered users shall be able to have access to the interactive calendar.
10. Registered users shall be able to choose an appointment location.
11. Registered users shall be able to perform a search.
12. Registered users shall be able to book an appointment.
13. Registered users shall be able to edit an appointment.
14. Registered users shall be able to delete or cancel previously booked appointments.
15. Registered users shall be able to message the tutor about upcoming appointments.
16. Registered users shall be able to apply for a tutoring role.
17. Registered users (Tutor) shall be able to choose what subject they tutor.
18. Registered users (Tutor) shall be able to accept tutoring requests.
19. Registered users shall be able to receive session information about scheduled sessions.

Administrator: (Will have all previous permissions listed above)

20. Admin shall be able to view database
21. Admin shall approve registered users to become tutors
22. Admin shall be able to reject user posts
23. Admin shall be able to approve user posts

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 M0
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 shall render well on mobile devices
4. Data shall be stored in the database on the team's deployment server.
5. No more than 50 concurrent users shall be accessing the application at any time
6. Privacy of users shall be protected
7. The language used shall be English (no localization needed)

8. Application shall be very easy to use and intuitive
9. Application shall follow established architecture patterns
10. Application code and its repository shall be easy to inspect and maintain
11. Google analytics shall be used
12. No email clients shall be allowed. Interested users can only message to sellers via in-site messaging. One round of messaging (from user to seller) is enough for this application
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. Media formats shall be standard as used in the market today
16. Modern SE processes and tools shall be used as specified in the class, including collaborative and continuous SW development
17. The application UI (WWW and mobile) shall prominently display the following exact text on all pages "SFSU Software Engineering Project CSC 648-848, Fall 2023. For Demonstration Only" at the top of the WWW page nav bar. (Important so as to not confuse this with a real application).

6.Competitive analysis:

Feature	Gator Wise	Competitor A	Competitor B	Competitor C
Tutor has taken same course and professor	++	-	-	-
On campus appointment location selector	++	+	-	-
Ease of registering for tutors	++	-	-	+
Lazy Login	++	-	+	+
Interactive Calendar Scheduling	++	+	+	-
Search tutor	+	+	+	+

** – Lacking Feature ** + Has Feature ** ++ Has Superior Feature

We plan to introduce an interactive calendar that filters openings on it in real time as you schedule and look for your appointments. There will be a filter on the side and corresponding classes will appear on the calendar. When you click on the class on that day a side bar will open with tutors along with their times. From there you can select multiple times. The layout will make it easy to schedule and encourage multiple sign ups leading to more interaction. When you submit to confirm those times you will also be able to see who your tutor is and submit to them any files you want them to review before your time. Also at the start we make it easy for anyone to become a tutor and sign up for times and days they are available. Other schools all offer similar tutoring services and lack the incentive to create any sort of ease of use for their students.

7.High-level system architecture and technologies used:

Software Stack:

Server Host: AWS

Operating System: Ubuntu 16.2

Database: MySQL v8.0.34

Web Server: NGINX 1.24

Server-Side Language: JavaScript

Additional Technologies:

Web Framework: ExpressJS

IDE: VSCode

Web Analytics: Google Analytics

SSL Cert: Lets Encrypt (Cert Bot)

We plan to use ChatGPT: YES

Browsers:

Google Chrome

Mozilla Firefox

ChatGPT:

Not used for M1

8.Use of ChatGPT:

ChatGPT was not used for this milestone. The AI text to image generator provided by Canva was used in the creation of the Personas' pictures.

9.Team and roles:

Joaquin Warren - Team Lead

Ronnie Huang - Github Master

Darien Banuelos - Front-End Lead

Karl Moreno - Front-End Team Member

Sean Ryan - Back-End Lead

Philip Karnatsevich - Back-End Team Member

10. Checklist:

So far all team members are engaged and attending team sessions when required

Issue: Out of our two meetings, one team member was very late to one and missed the other. We also need to make sure communication is quicker and effective so everyone is up to speed on tasks.

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 reviewed class slides on requirements and use cases before drafting Milestone 1

On Track

Team lead ensured that all team members read the final M1 and agree/understand it before submission

Issue:

Github organized as discussed in class (e.g. master branch, development branch, folder for milestone documents etc.)

DONE