SW Engineering CSC648/848 Spring 2024
CSC 648/848 Milestone 5: Delivery
Application Title: GatorMarket
Date: 5/22/2024

Meet The Team

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URL: **http://ec2-18-224-202-27.us-east-2.compute.amazonaws.com**

Milestone 5

Team 2 - GatorMarket

1. Product Summary

GatorMarket is a specialized online marketplace designed to serve the San Francisco State University (SFSU) community, including faculty, students, and staff. The platform is meticulously tailored to the unique needs of the academic environment, facilitating the easy purchase and sale of a wide array of products relevant to educational and everyday needs. Users can browse, search, and filter products ranging from the latest electronics to essential textbooks and diverse teaching materials, ensuring the available options fit their budget and requirements. Unique features such as the ability to search by class number and a "meetup" feature, which integrates a campus map and real-time weather conditions, significantly enhance the user experience by simplifying the logistics of transactions and ensuring both safety and convenience. Furthermore, GatorMarket is committed to fostering a community-centric marketplace by providing a secure platform where users can exchange goods with trust and ease. This platform also encourages sustainable practices by facilitating the sale of used textbooks and other reusable materials, reducing waste, and promoting environmental consciousness within the campus community. With a focus on user-friendliness, GatorMarket includes features like detailed product descriptions, user ratings, and direct messaging capabilities that empower users to make informed purchasing decisions and maintain clear communication channels. By offering these comprehensive services, GatorMarket aims to become an indispensable resource within the SFSU community, enhancing campus life by making shopping for school supplies and personal items more accessible and efficient

At GatorMarket, we offer a seamless and user-centric shopping experience tailored for all users, from visitors to admins, each with distinct privileges and capabilities to enhance their interaction with the platform. Non-registered users can freely browse and view product details, add items to their cart, proceed to checkout, and even register as a user. They also have the unique ability to search products by class number, which is particularly useful for academic materials and can reach out to support for any assistance required. Once registered, users gain additional capabilities such as logging in and out of the platform, posting product listings, and messaging other users for queries or transaction details, fostering a dynamic marketplace environment. Admin users inherit all the privileges of registered users but with the added responsibility of verifying product reviews to ensure their authenticity and reliability. This role is crucial in maintaining the trustworthiness of the platform.

What sets GatorMarket apart is its specialized search functionality, allowing users to find textbooks and academic materials by class number. This feature directly caters to the academic community, aligning the shopping process with students' schedules and needs, making it a uniquely valuable resource for their educational journey.

List of Major Committed Functions

- Non-registered Users
    1. Shall be able to browse products
    2. Shall be able to view product details
    3. Shall be able to add items to the cart
    4. Shall be able to proceed to checkout
    5. Shall be able to register
    6. Shall be able to search by class number
    7. Shall be able to contact support
- Registered Users
    8. All of the requirements of non-registered users
    9. Shall be able to login/logout
    15. Shall be able to post listings of products to sell
    16. Shall be able to message sellers and buyers
- Admin
    17. All of the requirements of registered users
    19. Shall be required to verify product reviews from registered users

URL: http://ec2-18-224-202-27.us-east-2.compute.amazonaws.com/

2. Milestone Documents

Milestone 1

Team 2 - GatorMarket

Date Submitted	Date Revised
3/9/2024	3/20/2024

1. Executive Summary

This website will fundamentally be a simple-to-use buy and sell application that can be used by the faculty, students, and teachers of San Francisco State University (SFSU). It will allow users to browse and search for products, purchase, and sell products to their liking. Additionally, it will allow them to review the details of sales items and contact the seller of the item. What this provides is similar to Ebay's implementation, but will be exclusively focused towards the targeted audience of SF State. From the perspectives of the students, teachers, and faculty, this will assist with their needs in their education and everyday lives. We strive to create a resourceful space for SFSU that will provide assistance throughout their journey, for both learning and teaching purposes. Our team consists of students that understand the struggle of acquiring school supplies that work with our budget. We aim to bring forth an easier workflow when browsing for products. As we provide similar functions as other sites, we will also be providing our own functionality that further supports our objective.

For our site, guest users are able to browse products that are being sold, as well as purchase them, while registered users are able to upload sales items to sell. There will also be implementation for the site administrator to review each uploaded sales item for approval before it can go live, while also having permission to remove items or users from the site. What the users will be allowed to purchase can range from electronics in the forms of computers, phones, and other accessories, to books and supplies for students, and teaching material and equipment for faculty and teachers. This site will also provide a price range feature when browsing for products, which allows students and teachers to pick more affordable choices to their liking. For instance, students and teachers can choose to search for used school textbooks at a cheaper price than affording for brand new ones that may surpass their desired budget. Students will be able to search for textbooks by class number for a more effortless experience. Furthermore, it will provide opportunities to find certain places to hangout provided by the map hangout spots. This is a feature we plan to add to the site, which will be called "the meetup", with the purpose of pinpointing locations on the SFSU map to display where transactions will take place. Additionally, it will include the weather as well to inform users about the conditions they'll find themselves for meetups when making transactions.

To reach our objective, we assembled a team of 5 students, who will tackle the roles of front-end, back-end, and GitHub management. Our front-end lead will be in charge of the front-end implementation, which will handle designing the interface and to provide the necessary elements to display for the user. Three of our members, including team lead, will be in charge of the backend implementation. The backend lead and backend supporters will provide the data items and entities for our database that will be responsible for storing and organizing the necessary data and provide reliable communication between back-end and front-end. Lastly, we have a member that’s responsible for GitHub management, which is in charge of handling the repository and ensuring our progress doesn't get corrupted when merging branches.

2. Personas

- ➔ Name: Ed Spicer
- ➔ Title: Student
- ➔ Characteristics: Happy go lucky, Freshmen, Looking towards a bright future.
- ➔ Looking for: Classroom textbooks at cheap pricing, a new computer to do all the essays, and to find the best spots for food, hangouts, and labs.

- ➔ Name: Linda Marshall
- ➔ Title: Bio Professor
- ➔ Characteristics: Innovative, tech-savvy, and dedicated to student success, always seeking ways to integrate technology into her lessons to make it more engaging
- ➔ Looking for: A platform for affordable, high-quality educational and grading tools and resources

- ➔ Name: Fransico Rojas
- ➔ Title: Faculty (after-class tutor).
- ➔ Characteristics: Older faculty member of after-class tutors, helps students.
- ➔ Looking to: Sell excess computer parts that he has lying around

3. High level use cases

1) Looking for Affordable Textbooks:
   A hardworking freshman at SFSU with an eye on the future, named Ed Spicer, consistently maintains good grades and is a good student but does have little knowledge of how to utilize shopping websites due his low budget. He realizes that he needs a textbook for a specific course he is enrolled in. He stumbles upon our website, enters his class number to filter items specifically to what he is looking for and is given various textbook listings related to the course he has. Upon clicking on one of the listings to try to purchase them he is greeted with a sign up or login screen. He proceeds to register, contacts the seller and now awaits for a response to purchase the textbook.

2) Wanting to Buy Reliable Teaching Materials:
   With a commitment to meeting the diverse needs of her students, Linda Marshall seeks a platform within the college's on-campus app where she can find affordable educational resources. Here, Linda discovers sellers offering various types of textbooks pertaining to the many courses she teaches and was able to find them by filtering the selections by adding her courses to the filter setting. She continues to filter through the items listed entering her different course numbers that she teaches to see all the listings. Upon finding a listing for cheap, affordable material she can buy to share with her class, she clicks on the listing view modifications and tweaks with the filters, registers because she was prompted with a login/register panel and contacts the seller to purchase the items.

3) Computer Searching for Certain Needs:
   Francisco Rojas, a seasoned faculty member providing after-class tutoring, finds himself facing a technological dilemma. He finds his office to be overflowing with an excess amount of computer parts from various donors and projects. Aware of already having an account with our on-campus selling and buying app but never actually doing anything with that account before, Francisco goes on the app, logins in by clicking the “login” button on the home page and proceeds to the page where listings are posted. He goes to post an extra CPU he had lying around by entering its price, the listing title, its item category, and the condition of the item. He is now informed that he has to wait up to 24 hours to have his listing approved and posted to the public.

4) Admin Confirms Listings for Sale:
   The admin frequently looks at the marketplace website to look at what items are being sought after and what item listings need to be approved. The admin goes to the website, logins in, and clicks on the admin tool page which displays all the listings waiting to be approved. The admin has 2 buttons on each listing, one for denying the listing access to be posted publicly and another to grant access to be posted publicly. From there the admin goes on their daily check to see who contacted for support by clicking on the page admin support page where the support requests are stored. They then log off after doing their daily maintenance of their website.

4. List of main data items and entities

Types of Users

- Unregistered
    - Limited access to simply browse and purchase products
    - Start a message but not send it
- Registered
    - Access to posing **Sales Items**
    - Access to messaging features
    - Access to save info on profile details, billing, etc.
    - Access to view **Sales Items** from a Wishlist or Shopping Cart
- Admin
    - Full access to all features and administrative privileges
    - Required to approve all postings before they go live
    - Permission to delete messages

Sales Item

- Image
- Date Posted
- Owner Id
- **Category**
- Description
- Price

Category

- Books
- Merchandise
- School Supplies

Message

- Date
- Message
- Id of Buyer
- Id of Company
- Id of Product

5. High level functional requirements

Non-registered Users

1) Shall be able to browse products
2) Shall be able to view product details
3) Shall be able to add items to the cart
4) Shall be able to proceed to checkout
5) Shall be able to contact support
6) Shall be able to register for an account
7) Shall be able to search by class number

Registered Users - All of the above including…

8) All of the requirements of non-registered users
9) Shall be able to login/logout
10) Shall be able to manage account settings
11) Shall be able to access locations on campus to “meet up”
12) Shall be able to add products to wishlist
13) Shall be able to write product reviews and ratings
14) Shall be able to receive notifications for updates
15) Shall be able to post listings of products to sell
16) Shall be able to message sellers and buyers

Admin

17) All of the requirements of registered users
18) Should be required to manage products
19) Should be required to verify product reviews from registered users
20) Should be required to handle customer support
21) Shall be able to manage user accounts
22) Shall be able to access sales analytics
23) Shall be able to configure website settings

6. Nonfunctional 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 architectural 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. Interested users can only message 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 and GenAI tools
17) The application UI (WWW and mobile) shall prominently display the following exact text on all pages "SFSU Software Engineering Project CSC 648-848, Spring 2024. For Demonstration Only" at the top of the WWW page Nav bar. (Important so as to not confuse this with a real application).

7. Competitive analysis

Competitor	Item Filtration	Viewability Options	Purchasing Safety	Meet Up Clarity	Meet Up Conditions	Search by Class #
Facebook Marketplace	+	+	+	+	-	-
Amazon	++	+	-	-	-	-
OfferUp	+	+	+	+	-	-
Our Application	++	++	++	++	++	++

For item filtration, OfferUp and Facebook Marketplace have very rudimentary filters. Amazon has a very wide selection of filters, possibly due to the large number of items they have but as for our application we have SFSU student specific filters for courses and majors. As for viewability options, all the other applications have the same browsing UI, which are just simple squares. As for our application, the item sizes in the browsing section can be adjusted, making the items larger for those who want to see items better or making the items smaller to fit more items on the page to improve browsing efficiency. When it comes to purchasing safety and meet up clarity, this is irrelevant for Amazon because they do not have the same purchasing method as the rest, but Facebook Marketplace and Offerup include a chat feature to coordinate meetups and the customers can conclude themselves whether to meet up with that person or not in the first place. Our application assures the customer and seller safety by only including people who attend SFSU to partake in our application as well as including a map of SFSU with pinpoints to potentially provide meet up locations for a transaction. We are the only ones that also include the weather of SFSU to give an idea to the people meeting up about the conditions they'll find themselves in when the day of the transaction comes.

8. High level system architecture and technologies used

- Server Host: Amazon AWS, EC2 instance
- Operating System: Ubuntu 22.04
- Database: MySQL 8.0.36
- Web Server: NGINX 1.25.3
- Web Framework: Vue.js
- IDE: Sublime Text
- Web Analytics: Google Analytics
- Authentication: Passport.js

9. Use of ChatGPT?

So far, there has been no use of ChatGPT or genAI for this milestone. (this may change)

10. Meet the Team!

Name	Role	Email	Github
Jackson Hill	Team Lead/Backend Support	jhill@sfsu.edu	sfsujackson
Maxwell Lewis	Github Master, Documenter	mlewis13@mail.sfsu.edu	Unagi6
Jose Rios	Frontend Lead	jrios7@sfsu.edu	Colorbomb1
Javi Buenrostro	Frontend/Backend Support	jbuenrostro@mail.sfsu.edu	fiy0x0
Rene Antoun	Backend Lead	rantoun@sfsu.edu	reneantoun

11. Team Lead Checklist

- So far all team members are fully engaged and attending team sessions when required. **[DONE]**
- Team found a time slot to meet outside of the class. **[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. **[ON TRACK]**
- Team reviewed class slides on requirements and use cases before drafting Milestone 1. **[DONE]**
- Team reviewed non-functional requirements from “How to start...” document and developed Milestone 1 consistently. **[DONE]**
- Team lead checked Milestone 1 document for quality, completeness, formatting and compliance with instructions before the submission. **[DONE]**
- Team lead ensured that all team members read the final M1 and agree/understand it before submission. **[DONE]**
- Team shared and discussed experience with genAI tools among themselves. **[DONE]**
- Github is organized as discussed in class (e.g. master branch, development branch, folder for milestone documents etc.). **[ON TRACK]**

Milestone 2

Team 2 - GatorMarket

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2. Main Items and Entities

Types of Users
- Unregistered
    - Limited access to simply browse and purchase products
- Registered
    - Access to posing **Sales Items**
    - Access to messaging features
    - Access to save info on profile details, billing, etc.
    - Access to view **Sales Items** from a Wishlist or Shopping Cart
- Admin
    - Full access to all features and administrative privileges
    - Required to approve all postings before they go live
    - Permission to delete messages

Sales Item
- Image
- Date Posted
- Owner Id
- **Category**
- Description
- Condition
- Trade option
- Location
- Price

Category
- Books
- Merchandise
- Electronics
- School Supplies
- Free items

Message
- Date
- Message
- Id of Buyer
- Id of Company
- Id of Product

Trust
- Reviews
- Ratings
- Transactions History
- Registration History

3. High level functional requirements (priorities)

Priority 1

- Non-registered Users
    1. Shall be able to browse products
    2. Shall be able to view product details
    3. Shall be able to add items to the cart
    4. Shall be able to proceed to checkout
    6. Shall be able to register
    7. Shall be able to search by class number
    8. Shall be able to contact support
- Registered Users
    8. All of the requirements of non-registered users
    9. Shall be able to login/logout
    15. Shall be able to post listings of products to sell
    16. Shall be able to message sellers and buyers
- Admin
    17. All of the requirements of registered users
    19. Shall be required to verify product reviews from registered users

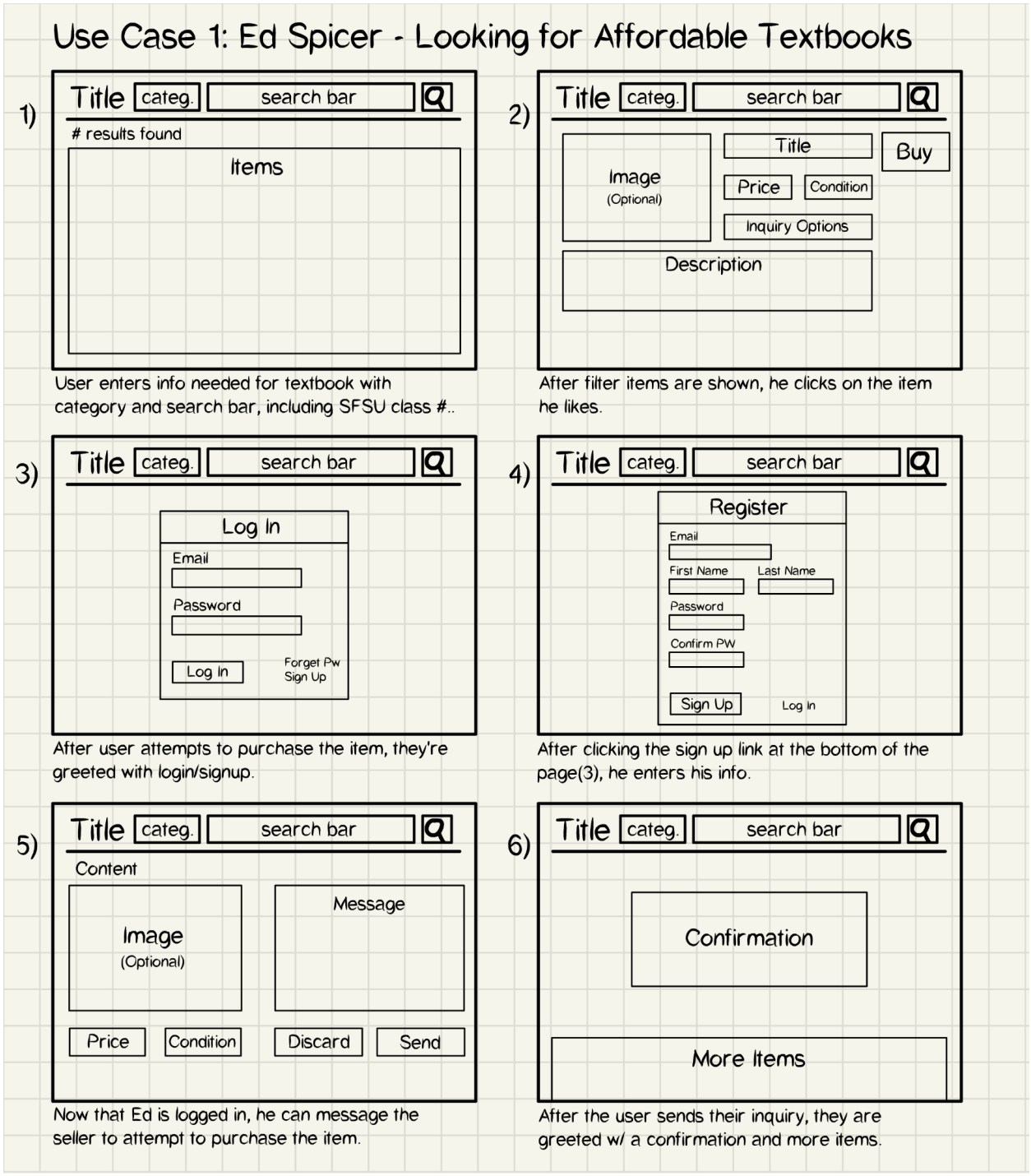
Priority 2

- Registered Users
    10. Shall be able to manage account settings
    11. Shall be able to access locations on campus to “meet up”
- Admin
    18. Shall be required to manage products
    20. Shall be required to handle customer support
    21. Shall be able to manage user accounts
    23. Shall be able to configure website settings

Priority 3

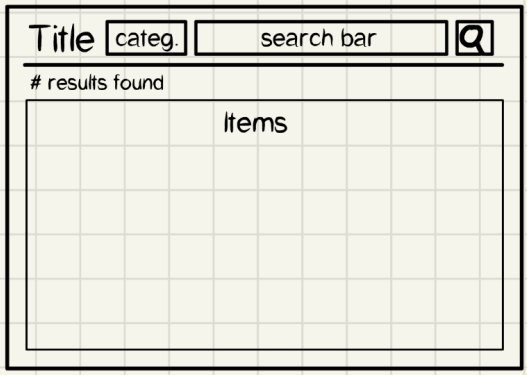
- Registered Users
    12. Shall be able to add products to wishlist
    13. Shall be able to write product reviews and ratings
    14. Shall be able to receive notifications for updates
- Admin
    22. Shall be able to access sales analytics

4. UI Storyboards



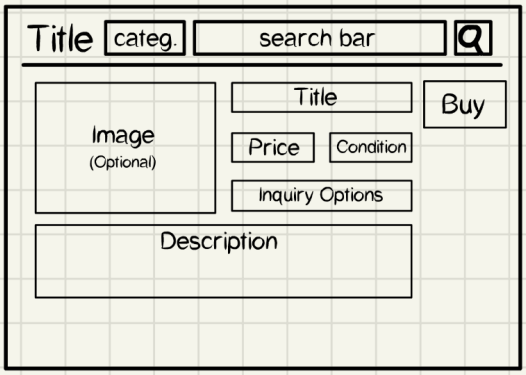
Use Case 2: Linda Marshall - Wanting to Buy Teaching Materials

1)



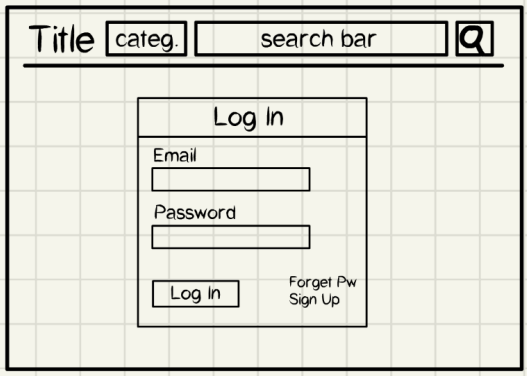
User looks at items being sold.

2)



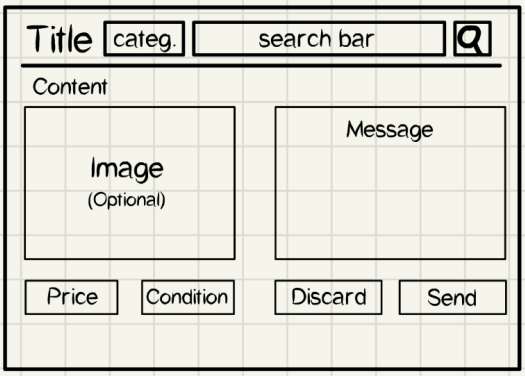
User then clicks on teaching materials she desires.

3)



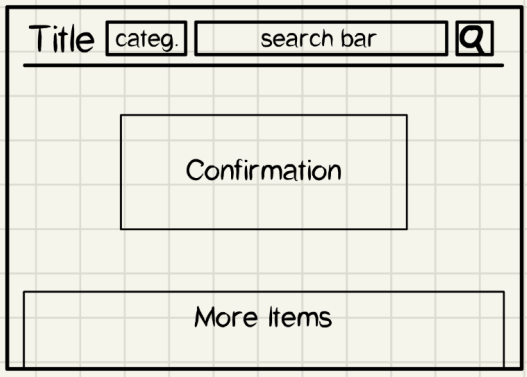
After attempting to purchase the item, user is greeted with login/signup. They log in.

4)



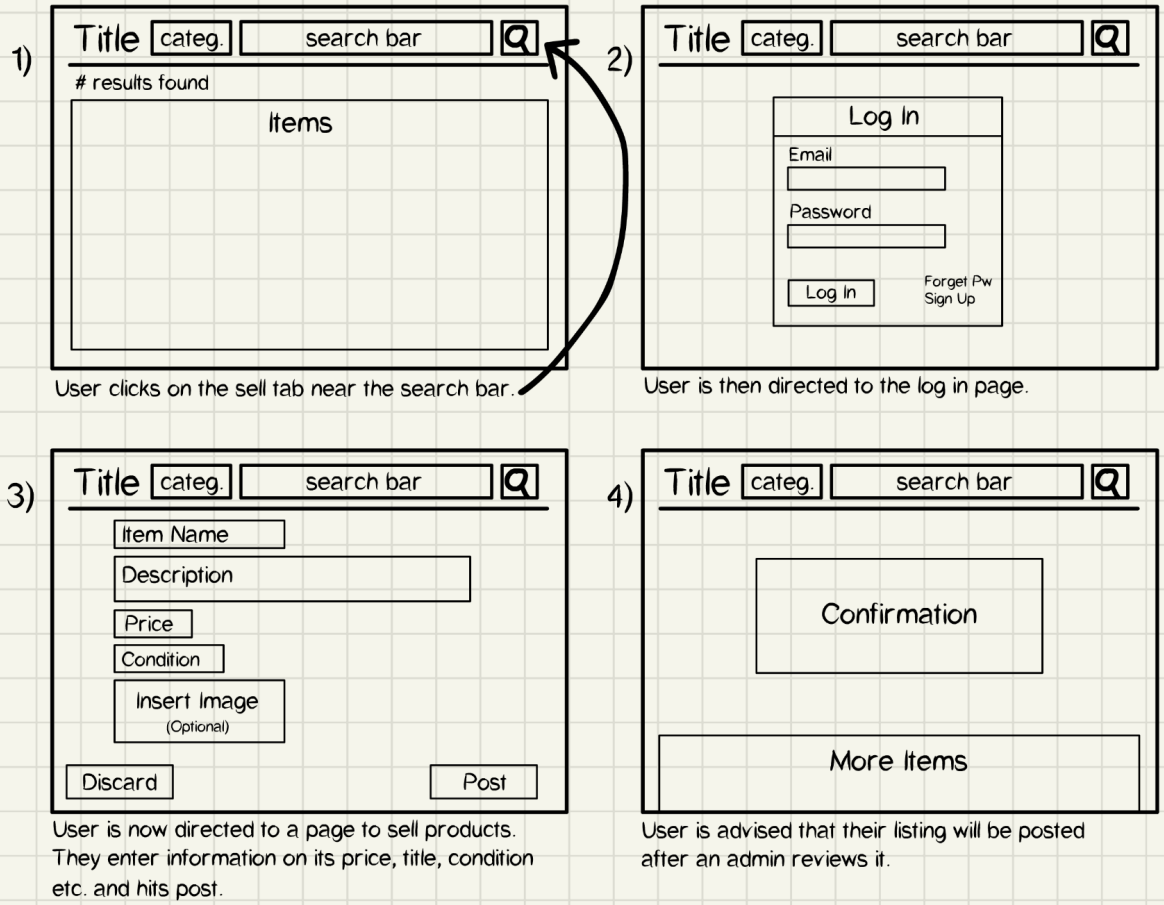
User is now able to proceed and is redirected to page to ask questions about the item.

5)



After the user sends their inquiry, they are greeted w/ a confirmation and more items.

Use Case 3: Francisco Rojos - Selling computer



User clicks on the sell tab near the search bar.

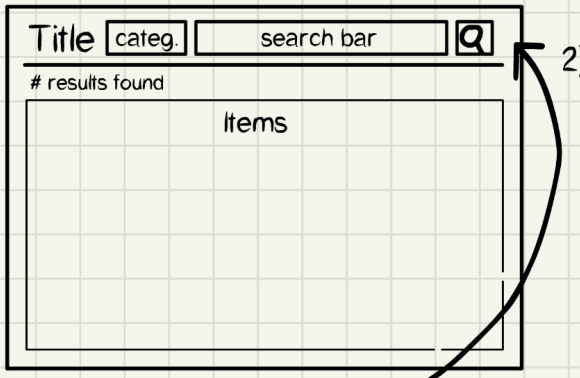
User is then directed to the log in page.

User is now directed to a page to sell products. They enter information on its price, title, condition etc. and hits post.

User is advised that their listing will be posted after an admin reviews it.

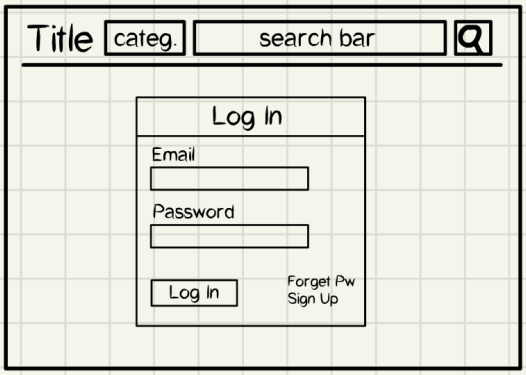
Use Case 4: Dashboard

1)



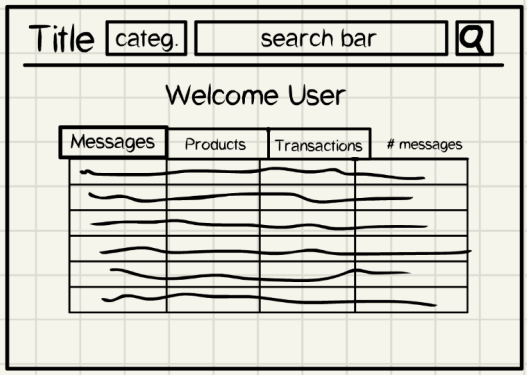
User clicks on Account near search bar.

2)



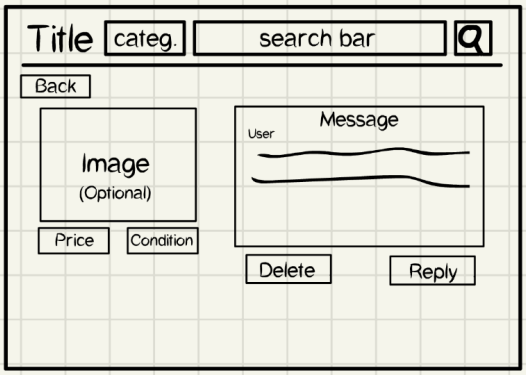
User is then directed to the log in page.

3)



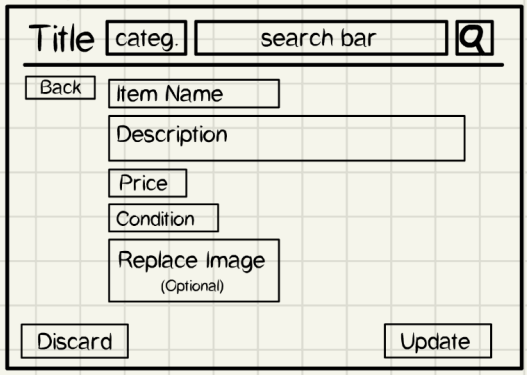
User is directed to dashboard to access messages received from customers, products to manage, and history of transactions.

4)



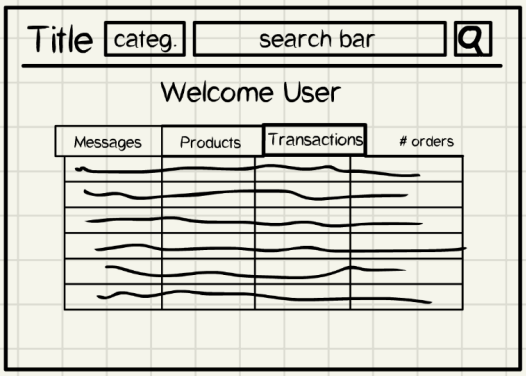
User is free the view messages. Clicking on one directs to this page.

5)



User is free the manage products. Clicking on a product allows them to update information. Of course, admin needs to verify the changes.

6)



User is free to view transaction history. This page is a simple tab with details listed of each transaction.

5. **Database Organization**
    - ★ Sales Item
        - Date: stored like <day>/<month>/<year>
        - Product FK
        - Description: description put there by the seller of the product
        - Price: the cost of the product
        - Seller: stores the seller's name
    - ★ Category
        - CATEGORY FK
        - Category_Name: where the categories will be entered
    - ★ CATEGORY
        - Category_id
        - Category_listings
    - ★ User
        - User_Name: the User name stored as an alphanumeric
        - User_id
    - ★ Product
        - Product_id
        - Category FK
        - Product_Name: storing the product's name
        - Image: an image of the product
        - media_link: a pointer to the link of the media
    - ★ Registration record
        - Registration_record_id
        - Registration_date
    - ★ Message
        - Message_id
        - Message_writting: where the message will be stored
        - Date: contains the date of the message

Media Storage: We will store the media in the filesystem having the database point to the media**.**

Search/filter architecture and implementation: We shall use a %like search on a free text field with an associated category table to drive the search.

6. Risks

➔ **Skills:** While our team all possess a strong foundational knowledge in software development, there are some skills such as Vue.js that we are not really familiar with and MySql which some members are still getting used to. To solve this we plan to have good communication if someone needs help so that someone more experienced in that skill could help.

➔ **Schedule:** Our project is pretty challenging so we want to make sure we don't take on more than we can handle in the set time so we will be checking in with each other regularly every week to see how we are doing and if anyone needs some support so we can stay on track. We shall also keep our priorities to a viable minimum so as to not waste more time than needed on a feature.

➔ **Technical:** We are building a safe platform for everyone at SFSU to use, which means we have to be really careful about keeping everyone's information safe and secure and making sure the website runs smoothly. We will keep updating each other on how it's going and on any new ideas to make sure we are all on the same page about the best way to tackle this.

➔ **Teamwork:** We are aware we all have different schedules so this could complicate finding times we are all free to meet. To tackle this, we will rely on constant communication when we are all free to ensure everyone can participate fully and effectively when we plan our meetings.

➔ **Legal/Content Risks:** Our site would need to be careful with selecting images for marketing, sales items, etc. One solution is to use sites that provide copyright-free images, but we can also decide to use pictures of our own to avoid this risk.

7. Project Management

For our team, we divided the necessary tasks based on our current knowledge and ability with front-end and back-end implementation. Our front-end lead was tasked to design the UX mockups based on the user cases from the previous milestone, while our back-end lead was tasked to design the organization of our database, with back-end supporters assisting with necessary adjustments. Furthermore, all of us members as a team looked through the requirements for this current milestone and planned reasonable deadlines for each task. Some have taken a few days while some have taken only an hour. We took that into account and planned to complete the tasks that'd take a fixed amount of time before tackling the others where the time we spend can vary. This is a fixed vs variable mindset that works well with accomplishing deadlines. For this milestone, we assigned tasks with deadlines using **Trello**, which was very useful to organize what needed to be done. Furthermore, it helps the team communicate with each other about the status of the front-end and back-end implementation. This method is what we'll be using for future milestones, and especially to assist us for our final product.

8. Use of genAI tools

We have used ChatGPT 3.5 to provide us with name ideas for our application. This was at a useful rate of MEDIUM, since we initially had ideas, such as SFSUSource, that we would use as backup, but it still provided us with more satisfying results.

> User: *"What are good names for a marketplace for SFSU?"*
> ChatGPT:

GatorExchange
StateStreetMarket
FogMarketplace
GoldenGatorMarket
SFSU SwapSpot
GatorTradeHub
StateSwapShop
CampusCornerMarket
GatorGoodsHub
GoldenGateMarketplace

9. Team Lead Checklist

- So far all team members are fully engaged and attending team sessions when required. **[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. **[ON TRACK]**
- Team reviewed suggested resources before drafting Milestone 2. **[DONE]**
- Team lead checked Milestone 2 document for quality, completeness, formatting and compliance with instructions before the submission. **[DONE]**
- Team lead ensured that all team members read the final Milestone 2 document and agree/understand it before submission. **[DONE]**
- Team shared and discussed experience with genAI tools among themselves. **[DONE]**

Milestone 3

Team 2 - GatorMarket

- Team number: 2
- Meeting Date: 4/24/2024
- Summary of feedback on UI (record all pages that need revision)
    - Connect filter to search (one bar split)
    - Gator market clickable home page
    - Post or sell instead of home button
    - Log in/ register instead of just log in
    - Have sfsu included somewhere
    - Make sure it shrinks correctly
    - Messaging button when clicking on item
    - Put message to sell on product on home page
    - Make sure picture shows up when the item is clicked on
    - Mouse hover has to be fixed
    - Placeholder text
    - Class number for books
    - Category should fit both pages in post page
    - Text on post page should say: it may take 24 hours
    - Add Description on post page that says all fields are mandatory
    - View listing instead of edit
    - Put first name and last name as a title so it stays on page when we press on view messages
- Summary of feedback on code and architecture
    - We need to add header comments
    - Make sure to use good variable names
- Summary of feedback on GitHub usage
    - Branches and commits are fine
- Summary of feedback on DB
    - Backend: needs to be done by saturday
    - Full size image thumbnail
    - Category should be foreign key
    - Create message table, user table, and category table
- Summary of feedback on teamwork and risk management
    -
- Confirm if team is following the MVC pattern, coding style, and minimal agreed documentation
    - OK
- The list below shows agreed upon P1 list of features for final delivery

    - Non-registered Users
        - 1. Shall be able to browse products
        - 2. Shall be able to view product details
        - 3. Shall be able to add items to the cart
        - 4. Shall be able to proceed to checkout
        - 5. Shall be able to register
        - 6. Shall be able to search by class number
        - 7. Shall be able to contact support
    - .Registered Users
        - 8. All of the requirements of non-registered users
        - 9. Shall be able to login/logout
        - 15. Shall be able to post listings of products to sell
        - 16. Shall be able to message sellers and buyers
    - Admin
        - 17. All of the requirements of registered users
        - 19. Shall be required to verify product reviews from registered users
- CP
    - After providing the professor with our current progress, we were given a CheckPoint to finish setting up the tables for our database. For the next two days, we will work to update the structure of the backend to include these changes.

Feedback summary Report

Overview:

The third milestone of our marketplace website has been reviewed and comprehensive feedback was provided to guide us on enhancing our project, the feedback covered several aspects such as user interface adjustments, code and architecture optimization, database structure, and our GitHub usage, implementing these adjustments were important for enhancing functionality and user experience making sure that the final product aligns with the user needs and project requirements.

Feedback:

User Interface(UI):

The user interface feedback emphasized simplifying and enhancing user interactions. The integration of filter and search functionalities into a single bar improves user experience and looks better, to make the home page more interactive we were advised to make the Gator market logo clickable so that it can direct users back to the home screen and replace the “Home” button with “Post or Sell” which makes it easier for user to list a product no matter where they are on the website, and adjusting “log in” to “log in/ register” makes it easier and faster for new users.

To make it more clear that the website is associated with the school we made sure SFSU was visibly included in the website design. It was also important to make sure the site is responsive on various devices which may have different screen sizes such as opening the website on a mobile rather than a desktop for example. Product interaction can be improved by enabling a message feature accessible by directly clicking on product listings and by making sure product images and details appear correctly when items are selected, we also made sure to add enhancements such as mouse hover functionality and placeholder texts.

Code and Architecture:

The feedback on code and architecture stressed the importance of proper documentation and consistent coding practices such as adding header comments which facilitate better understanding and maintaining code, using meaningful variable names is important for keeping our codebase easily readable and manageable which will help when coding in the future or if we run into bugs.

GitHub usage:

Our branches and commits were well done which shows the effort done on code management it is very important to maintain these to ensure efficiency and clarity in our development process.

Database Configuration

Several adjustments were recommended for our database setup, we were asked to complete the backend by the upcoming Saturday to maintain our project timeline, we implemented full size image thumbnails which improved the representation of the products, the “category” was changed to foreign key and we created essential tables such as User, Message and Category to support all of the website features.

Conclusion:

The feedback was necessary for the progression of our project each team member had to address specific areas of improvement to ensure comprehensive development. By effectively implementing these changes we were able to meet the project requirements and user expectations and making sure we have a successful final result.

Milestone 4

Team 2 - GatorMarket

1. Product Summary

GatorMarket is a specialized online marketplace designed to serve the San Francisco State University (SFSU) community, including faculty, students, and staff. The platform is meticulously tailored to the unique needs of the academic environment, facilitating the easy purchase and sale of a wide array of products relevant to educational and everyday needs. Users can browse, search, and filter products ranging from the latest electronics to essential textbooks and diverse teaching materials, ensuring the available options fit their budget and requirements. Unique features such as the ability to search by class number and a "meetup" feature, which integrates a campus map and real-time weather conditions, significantly enhance the user experience by simplifying the logistics of transactions and ensuring both safety and convenience. Furthermore, GatorMarket is committed to fostering a community-centric marketplace by providing a secure platform where users can exchange goods with trust and ease. This platform also encourages sustainable practices by facilitating the sale of used textbooks and other reusable materials, reducing waste and promoting environmental consciousness within the campus community. With a focus on user-friendliness, GatorMarket includes features like detailed product descriptions, user ratings, and direct messaging capabilities that empower users to make informed purchasing decisions and maintain clear communication channels. By offering these comprehensive services, GatorMarket aims to become an indispensable resource within the SFSU community, enhancing campus life by making shopping for school supplies and personal items more accessible and efficient

At GatorMarket, we offer a seamless and user-centric shopping experience tailored for all users, from visitors to admins, each with distinct privileges and capabilities to enhance their interaction with the platform. Non-registered users can freely browse and view product details, add items to their cart, proceed to checkout, and even register as a user. They also have the unique ability to search products by class number, which is particularly useful for academic materials, and can reach out to support for any assistance required. Once registered, users gain additional capabilities such as logging in and out of the platform, posting product listings, and messaging other users for queries or transaction details, fostering a dynamic marketplace environment. Admin users inherit all the privileges of registered users but with the added responsibility of verifying product reviews to ensure their authenticity and reliability. This role is crucial in maintaining the trustworthiness of the platform.

What sets GatorMarket apart is its specialized search functionality, allowing users to find textbooks and academic materials by class number. This feature directly caters to the academic

community, aligning the shopping process with students' schedules and needs, making it a uniquely valuable resource for their educational journey.

List of Major Committed Functions

- Non-registered Users
    1. Shall be able to browse products
    2. Shall be able to view product details
    3. Shall be able to add items to the cart
    4. Shall be able to proceed to checkout
    5. Shall be able to register
    6. Shall be able to search by class number
    7. Shall be able to contact support
- Registered Users
    8. All of the requirements of non-registered users
    9. Shall be able to login/logout
    15. Shall be able to post listings of products to sell
    16. Shall be able to message sellers and buyers
- Admin
    17. All of the requirements of registered users
    19. Shall be required to verify product reviews from registered users

URL:http://ec2-18-224-202-27.us-east-2.compute.amazonaws.com/

2. **Usability Test Plan**

Search usability test plan

- **Test objectives**
  - Ease of use, to gauge how easy searching is for users
  - Reliability, the search consistently working
  - Responsive, to gauge how fast searching is
  - Efficiency, to figure out if it takes too many clicks to do simple tasks on the site
  - Accurate, to figure out if the search needs any algorithms added or changed to make it more accurate if need be
  - Satisfaction, to gauge how satisfactory the search is for users to use
- **Test background and setup**
  - System setup
    - Use one of the approved browsers for your computer and use the link below under URL to proceed. Follow the test plan provided in the QA test plans in the table below.
  - Who's the audience
    - The audience to be tested are SFSU students and faculty, faculty involving older SFSU faculty but younger ones are included
  - URL
    - http://ec2-18-224-202-27.us-east-2.compute.amazonaws.com/
  - Test environment
    - Done in a classroom, with no cameras present but some monitoring (depends on how many show up but around 3-4), with untrained individuals (not shown how to use the search by one of us), the focus being SFSU students and faculty.
- Plan for Effectiveness
  - We could have the testers try out the search and have them note if they found the item they searched for, leaving room for any comments about missed searches on some form that then calculates a %number of completed searches and the other two columns for errors and comments
- Plan for Efficiency

    - Either the testers note down the time it took them to complete a search (successful one preferable) or a monitor does it to then be compiled into an average time taken to complete the tasks.
    - Have some algorithm to count the clicks or have a monitor there to note them down along with the pages taken to complete a search which will then be averaged out into an average for both
- Plan for Evaluation of User Satisfaction
    - Usability task descriptions
        - Search for an item
            - Find item searched
            - Report time taken
        - Sort a search
            - Sort your search
            - Find item searched
            - Report time taken
        - Go to the dashboard
            - Find your messages
            - Report time taken
- Likert scale evaluation entries
    - will calculate the standard deviation once we get all the data

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Searching was easy to do					
Space for comments					
Sorting helped me find my item faster					
Space for comments					
It was easy to access my dashboard					
Space for comments					

3. QA Test Plan and QA Testing

- **Test Objectives:**
  - Test for application to operate with at least 2 different browsers.
  - Test for successful #LIKE functionality using the search bar at the top of the homepage.
- **HW and SW Setup:**
  - URL: http://ec2-18-224-202-27.us-east-2.compute.amazonaws.com/
  - Use one of the approved browsers for your computer and use the link above to proceed. Follow the test plan provided in the QA test plans in the table below.
- **Feature to be tested:** Search Functionality

Browser: Google Chrome

#	Title	Desc	Input	Output	Results
1	Search by Category	Test % like In search with category	Select the “Books” category, and leave the search bar empty.	Check that you get 3 results, **with images resembling a book**.	**PASS**
2	Search by Term	Test % like In search with term	Select the “All” category, and enter “game”.	Check that you get 2 results, **Wooden Chess Set** and **Gaming Console**.	**PASS**
3	Searby by Category and Term	Test % like In search with both category and term	Select the “Electronics” category, and enter “headphones” in the search bar.	Check that you get one result, **Noise-Canceling Headphones**.	**PASS**

Browser: Opera GX

#	Title	Desc	Input	Output	Results
1	Search by Category	Test % like In search with category	Select the “Books” category, and leave the search bar empty.	Check that you get 3 results, **with images resembling a book**.	**PASS**
2	Search by Term	Test % like In search with term	Select the “All” category, and enter “game”.	Check that you get 2 results, **Wooden Chess Set** and **Gaming Console**.	**PASS**
3	Searby by Category and Term	Test % like In search with both category and term	Select the “Electronics” category, and enter “headphones” in the search bar.	Check that you get one result, **Noise-Canceling Headphones**.	**PASS**

4. Peer Code Review

RA

Rene Antoun
To: Maxwell Lewis

Sat 5/18/2024 1:01 AM

Hi Max,

I hope all is well with you. I'm reaching out because I've been working on refining the database query functionality of our web application, and I could really use your insight. This particular piece of code is vital as it directly affects both the performance and user experience of our app. Given its importance, I'd love to get your perspective to ensure everything runs smoothly for our upcoming Web Application and usability tests.

Here's the code snippet I'm focusing on:

```
database.query(query, (err, result) => {

  if (err) {
    req.searchResult = "";
    req.searchTerm = "";
    req.category = "";
    next();
  }

  req.searchResult = result;
  req.searchTerm = searchTerm;
  req.category = category;

  next();
});
```

This section is crucial because it handles how our application responds to and recovers from database errors,something that directly impacts how users experience our service. I'm particularly interested in your insights on several specific aspects:

1. **Error Handling Efficiency**: How effectively does the code manage errors? Are there any potential edge cases that I might have missed which could cause unexpected behavior or failures?
2. **Code Clarity and Maintainability**: Is the code easy to understand at first glance? Could the readability be improved through better naming conventions or more detailed comments?
3. **Performance Optimization**: Do you see any opportunities to optimize the code for better performance? For instance, are there any redundant operations or possible improvements in the way we handle the database results?

2. **Code Clarity and Maintainability**: Is the code easy to understand at first glance? Could the readability be improved through better naming conventions or more detailed comments?
3. **Performance Optimization**: Do you see any opportunities to optimize the code for better performance? For instance, are there any redundant operations or possible improvements in the way we handle the database results?
4. **Best Practices Compliance**: Does this implementation adhere to known best practices in Node.js and MySQL interactions, especially in regards to security and data handling?

Could you please take a look and let me know what you think? If there's more information you need, or if other parts of the code could help you form a better review, just let me know. Your feedback will be invaluable as we prepare for further development and testing.

Thanks so much for your time and help. I'm looking forward to your thoughts.

Best regards,

Rene

ML

Maxwell Lewis
To: Rene Antoun

Reply | Reply all | Forward

Sat 5/18/2024 4:08 AM

Why hello Mr. Antoun,

I have received the code that you have provided in the email. So far, the code you have provided is an amazing piece of work. I can 100% say that this code does fit number 4 as it does fallow the best practices compliance. For number 2 I see that it's very easy to understand from the if statement and the req functions. It seems to handle the errors very well but as a suggestion make error console for terminal reading so we can see if we are dealing with a 404 error, for example to show the error it should display something like this for example:

"res.status(500).json(error: "404 server failed to connect")" after making the proper if statement that associated and if we are using express.js extension.

This could also be used for related errors. For optimization you seem to be doing pretty well in terms of keeping it simple, fast, and easy to read. I think your on the right track but in the future please do add comments for better documentation efforts. All and all this were a very good snippet of code you have sent and wish you luck on your project.

Best regards,
Maxwell Lewis

Hi Maxwell,

Thank you for the thorough review and the positive feedback on the code snippet I sent over. I appreciate your insights and I'm glad to hear that the code aligns well with best practices and is easy to understand.

I've noted your suggestion about enhancing error handling by using more specific error messages in the console, such as implementing res.status(500).json({error: "404 server failed to connect"}). That's a great point, and I'll incorporate it into the project to improve our error reporting and make debugging easier for the team.I also acknowledge your comment on the need for better documentation through comments. Moving forward, I will ensure that each significant block of code is well-documented to make the codebase more maintainable and easier for new team members to understand.

Thanks again for your constructive feedback and encouragement. I'll make these adjustments and keep you updated on the progress. If there's anything else you'd like to add or a new area you think we should focus on, please let me know.

Best regards,

Rene

5. Self-Check on Security

Asset to be protected	Types of possible attacks	Consequence of security breach	Your strategy to protect the asset
Information System	System Confidentiality and Integrity	Financial loss, Restoring system, Communication	Grant users minimal permissions necessary and use data encryption
User Database	Data Confidentiality	Financial loss, Harm to Users	Require users to authenticate themselves
Individual User Record	MySQL attack (SQL injection)	Direct loss is low, Loss of Reputation	Validate searches

- Confirm PW Encryption in DB **[DONE]**
- Confirm Input Data Validation **[DONE]**

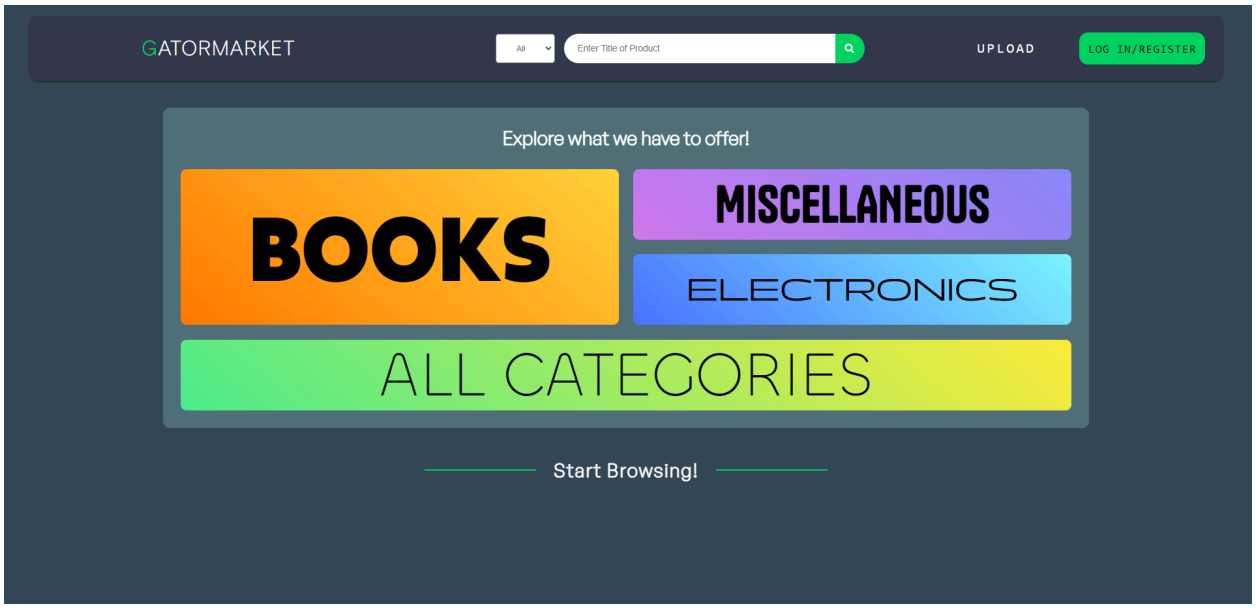
6. Self-Check on Adherence to Non-Functional Specs

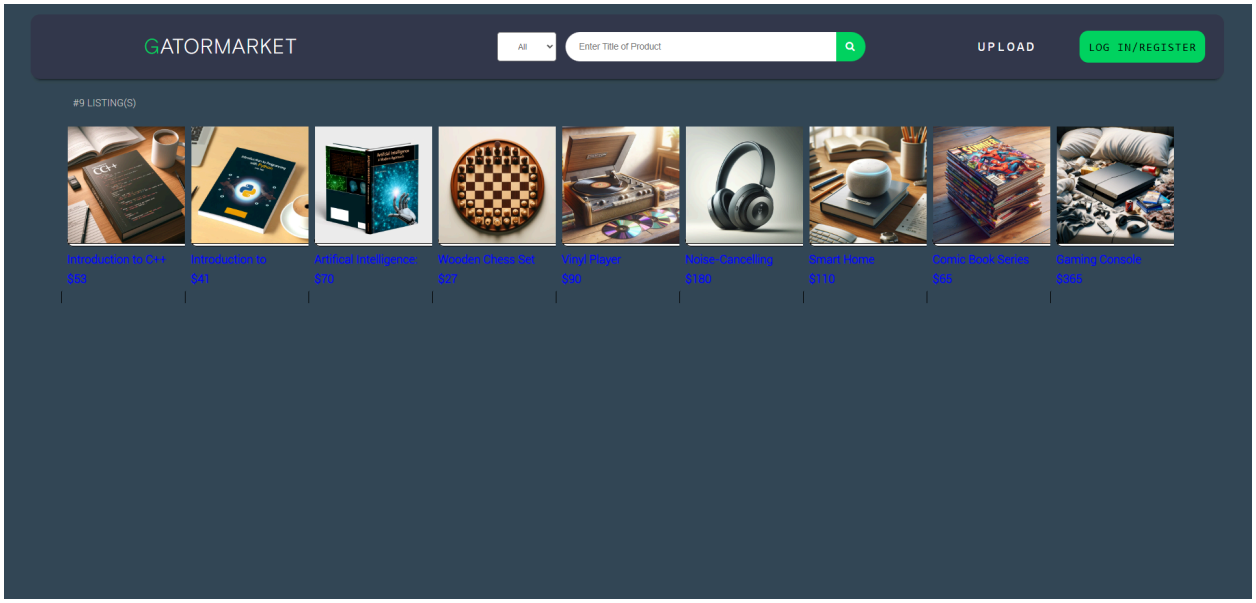
1) Application shall be developed, tested, and deployed using tools and servers approved by Class CTO and as agreed in M0 **[DONE]**
2) Application shall be optimized for standard desktop/laptop browsers e.g. must render correctly on the two latest versions of two major browsers **[DONE]**
3) All or selected application functions shall render well on mobile devices **[DONE]**
4) Data shall be stored in the database on the team's deployment 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 **[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 shall follow established architectural 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. Interested users can only message sellers via in-site messaging. One round of messaging (from user to seller) is enough for this application **[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) Media formats shall be standard as used in the market today **[DONE]**
16) Modern SE processes and tools shall be used as specified in the class, including collaborative and continuous SW development and GenAI tools **[DONE]**
17) The application UI (WWW and mobile) shall prominently display the following exact text on all pages "SFSU Software Engineering Project CSC 648-848, Spring 2024. For Demonstration Only" at the top of the WWW page Nav bar. (Important so as to not confuse this with a real application). **[DONE]**

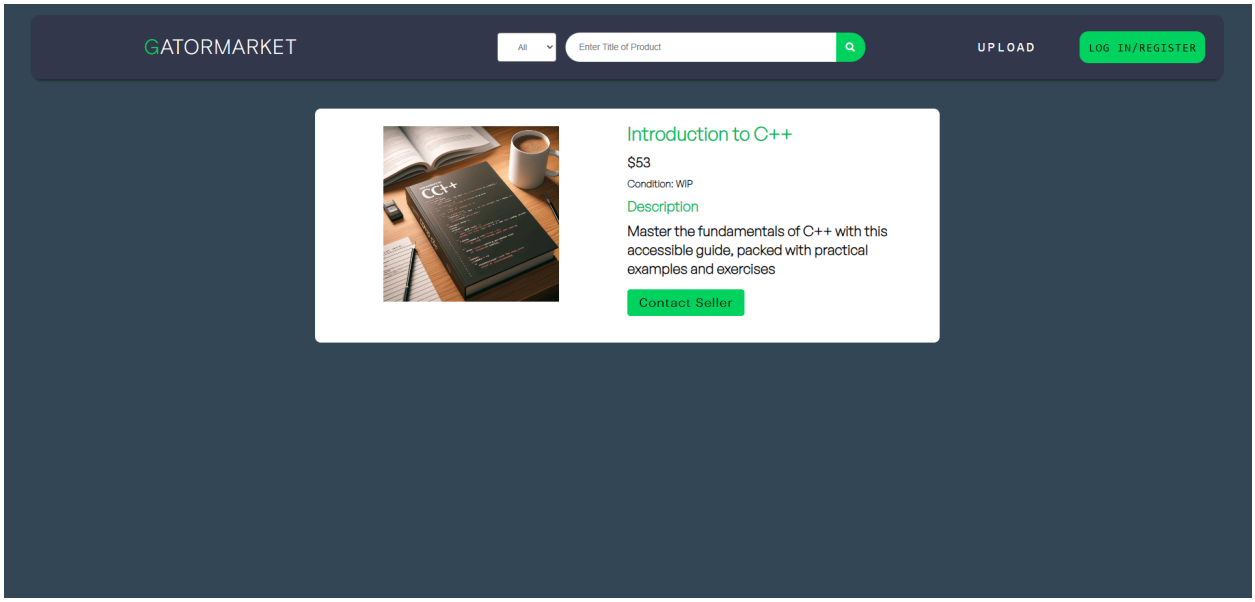
7. Use of genAI tools

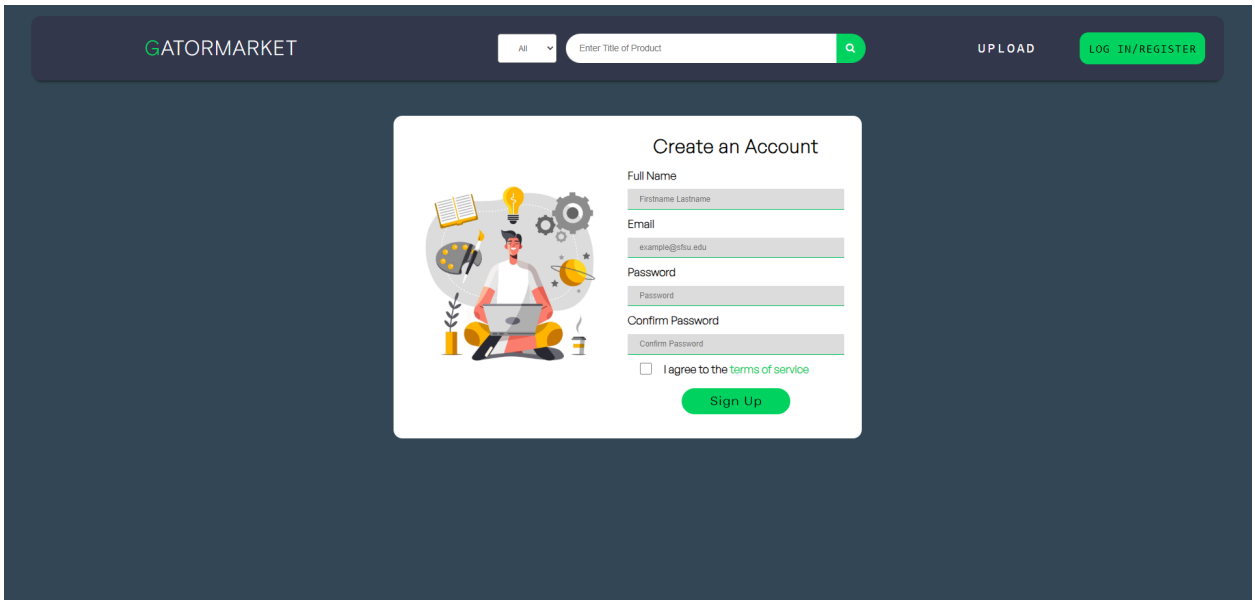
There has been no use of ChatGPT or genAI for this milestone.

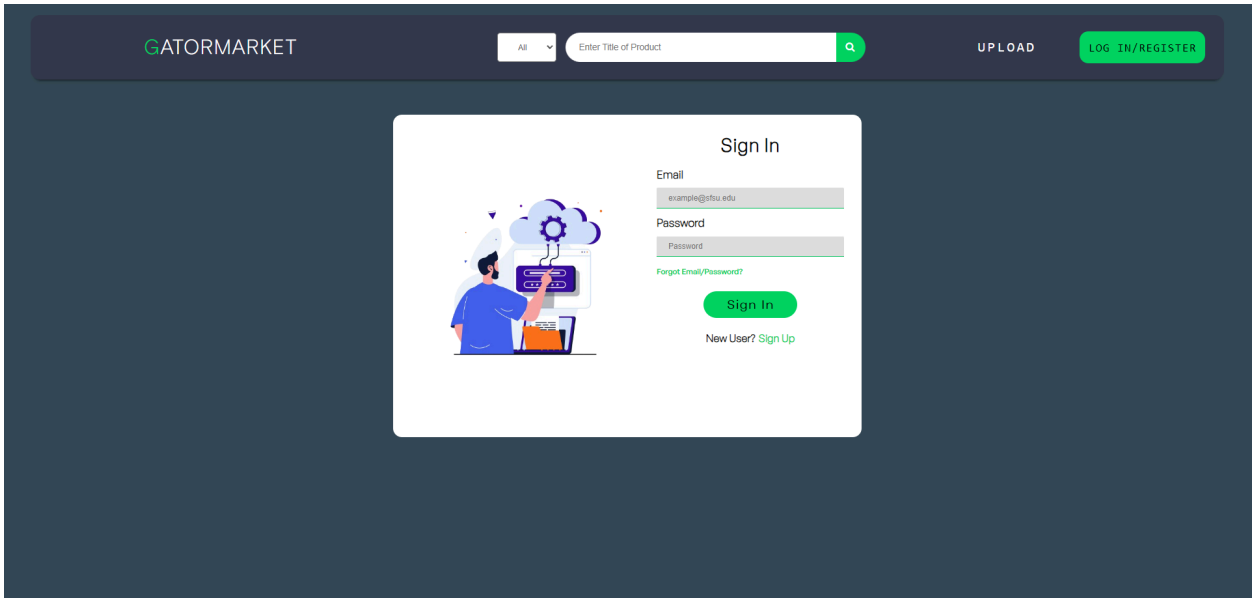
3. Product Screenshots

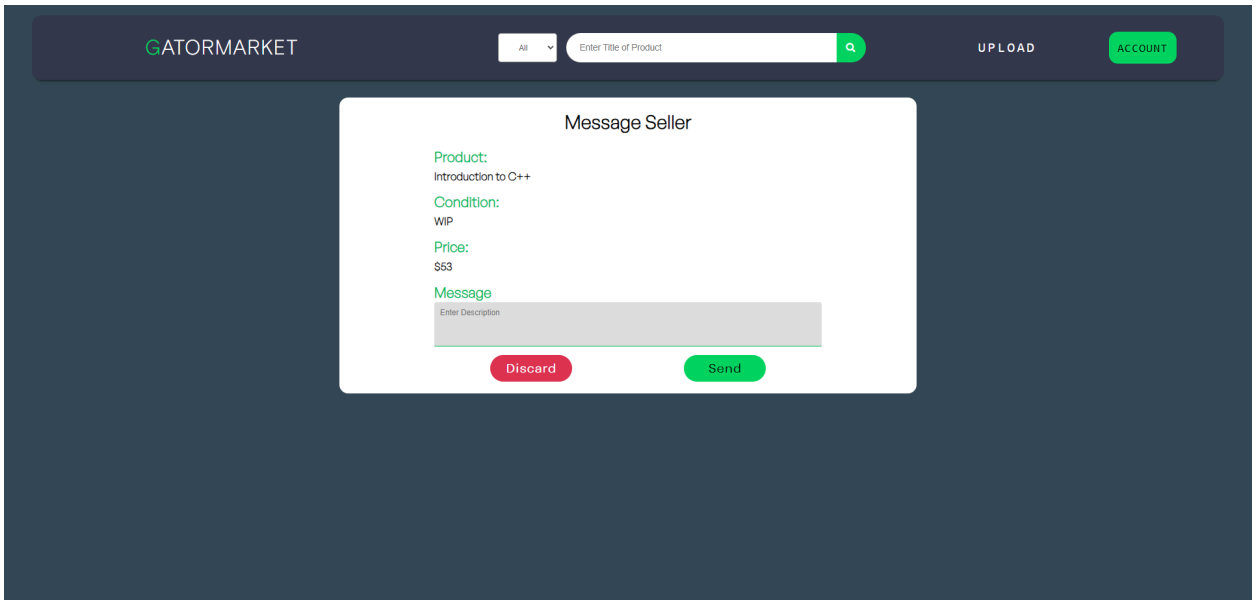





GATORMARKET
All
Enter Title of Product
UPLOAD
LOG IN/REGISTER
Introduction to C++
$53
Condition: WIP
Description
Master the fundamentals of C++ with this accessible guide, packed with practical examples and exercises
Contact Seller


GATORMARKET
All
Enter Title of Product
UPLOAD
LOG IN/REGISTER
Create an Account
Full Name
Firstname Lastname
Email
example@sfsu.edu
Password
Password
Confirm Password
Confirm Password
I agree to the terms of service
Sign Up


GATORMARKET
All
Enter Title of Product
UPLOAD
LOG IN/REGISTER
Sign In
Email
example@sfsu.edu
Password
Password
Forgot Email/Password?
Sign In
New User? Sign Up


GATORMARKET
All
Enter Title of Product
UPLOAD
ACCOUNT
Message Seller
Product:
Introduction to C++
Condition:
WIP
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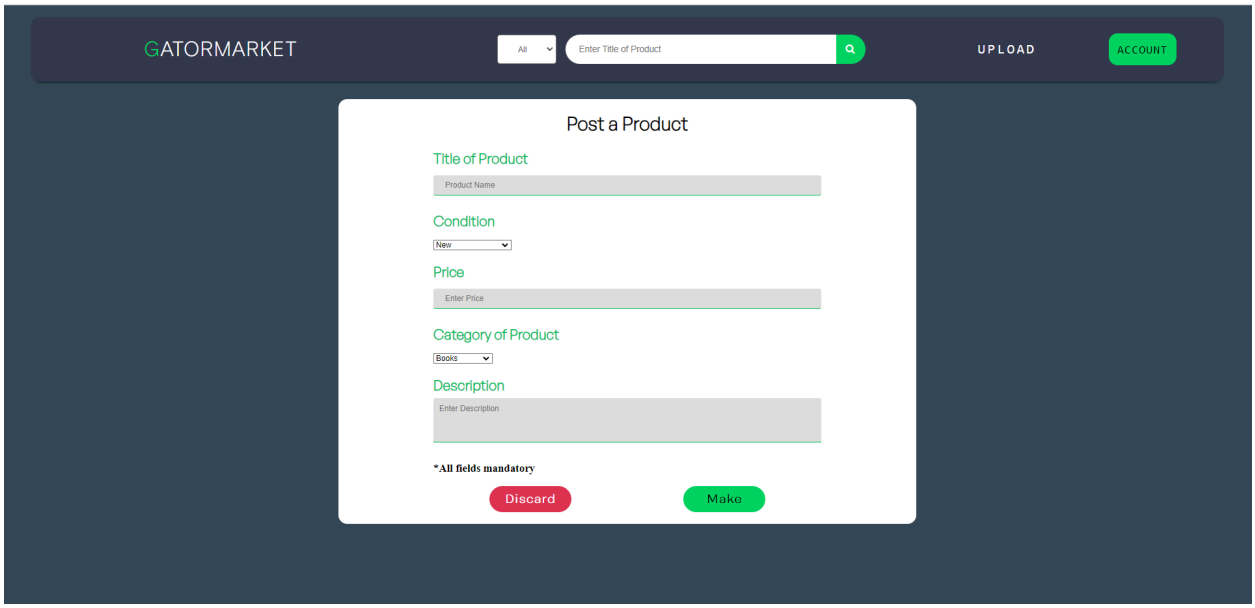
$53
Message
Enter Description
Discard
Send


GATORMARKET
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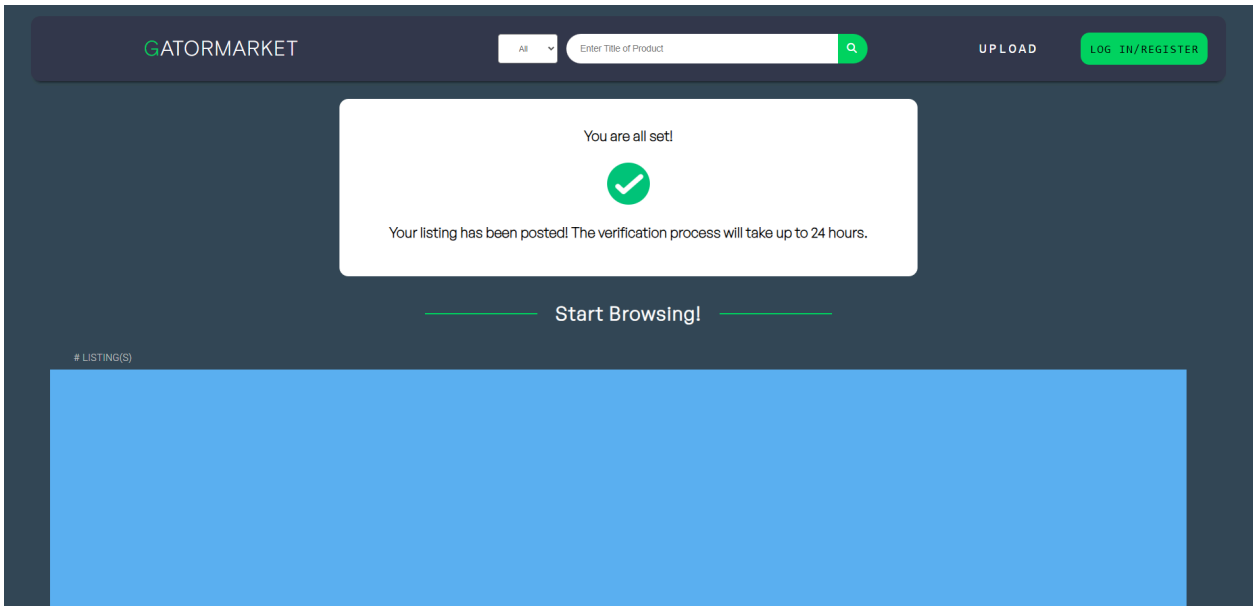
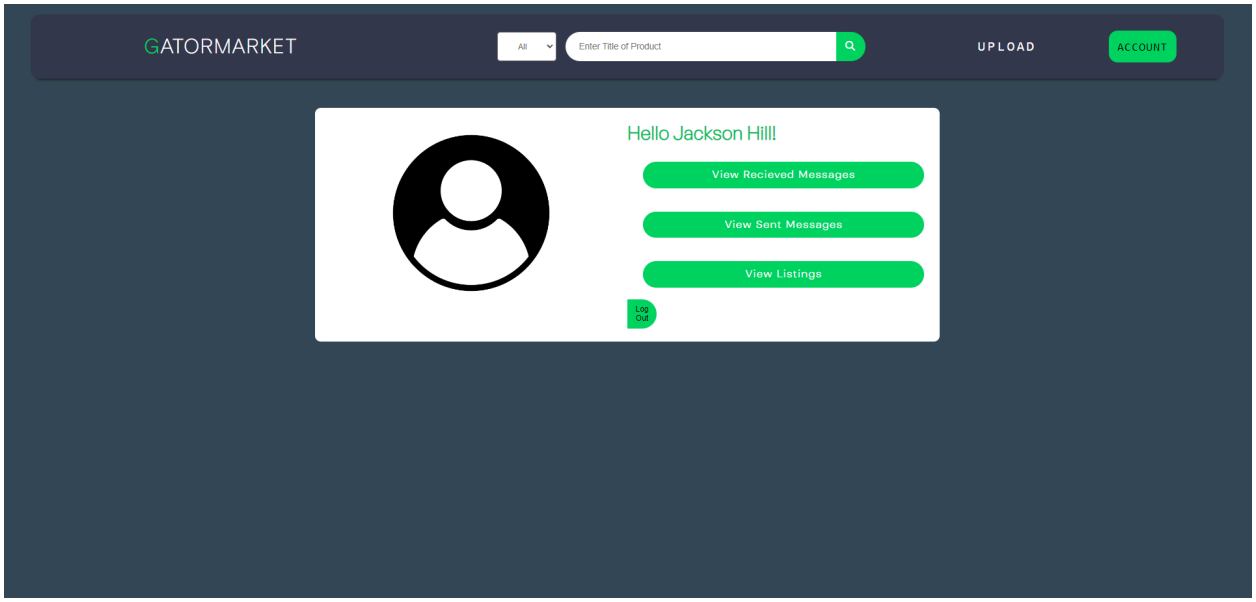
Enter Title of Product
UPLOAD
ACCOUNT
Post a Product
Title of Product
Product Name
Condition
New
Price
Enter Price
Category of Product
Books
Description
Enter Description
*All fields mandatory
Discard
Make


GATORMARKET
All
Enter Title of Product
UPLOAD
LOG IN/REGISTER
You are all set!
Your listing has been posted! The verification process will take up to 24 hours.
Start Browsing!
LISTING(S)



4. Database Organization

Categories

```
1 •  SELECT * FROM student_username.categories;
```

Result Grid | Filter Rows: | Edit: | Export/Im

categories_id	category_name
1	Books
2	Electronics
3	Misc
4	Merchandise
5	Free Items
NULL	NULL

Message

```
1 •  SELECT * FROM student_username.Message;
```

Result Grid | Filter Rows: | Edit: | Export/Import:

MessageId	Date	Message	BuyerId	CompanyId	ProductId
1	NULL	Test message	1	2	3
2	2024-05-09 00:00:00	TEST MESSAGE #2	2	2	1
3	2024-05-09 00:00:00	TEST MESSAGE #3	3	2	1
5	2024-05-22 00:00:00	Hello World!	10	1	3
6	2024-05-22 00:00:00	This is a message test, ...	10	1	1
7	2024-05-22 00:00:00	This is a second messa...	10	1	2
NULL	NULL	NULL	NULL	NULL	NULL

User

```
1 •  SELECT * FROM student_username.user;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

user_id	first_name	last_name	password	email	registration_date	username
1	Rene	Antoun	renedb	rantoun@sfsu.edu	2024-03-20 12:00:00	rene22
2	Aman	Natt	nattsfsu	anatt@sfsu.edu	2024-04-26 13:38:46	anattsf
3	Michael	Porter	Mp3	mporter@sfsu.edu	2024-03-02 17:55:29	mp3nav
10	Jackson Hill		test	jhill@sfsu.edu	2024-05-22 00:00:00	user
NULL	NULL	NULL	NULL	NULL	NULL	NULL

Sales_Item

```
1 •  SELECT * FROM student_username.sales_item;
```

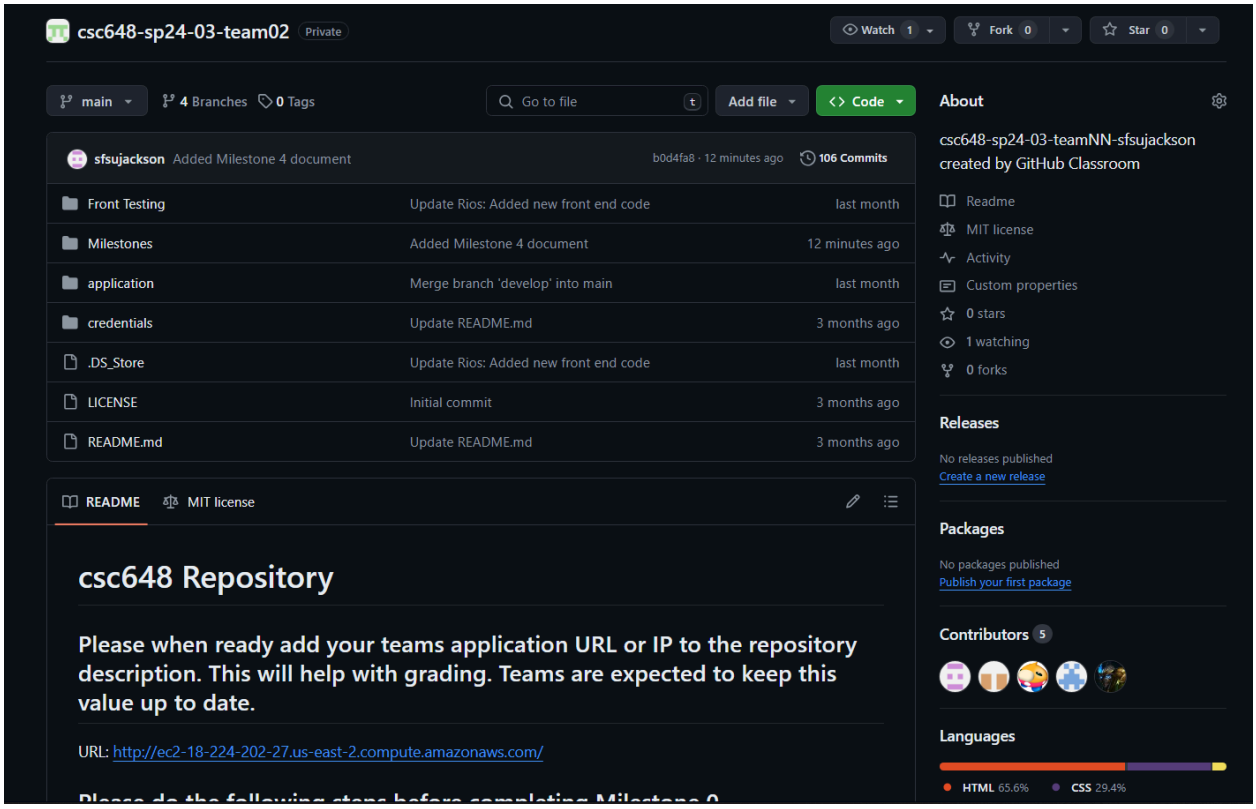
Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

id	Name	Description	Date	Image	Price	Seller	Category	Verified
1	Introduction to C++	Master the fundamentals of ...	2024-04-02	cpp.jpeg	53	1	1	1
2	Introduction to python	Jumpstart your programming...	2022-03-17	python.jpeg	41	1	1	1
3	Artifical Intelligence: ...	Explore the forefront of AI w...	2023-01-29	aibook.jpeg	70	1	1	1
4	Wooden Chess Set	Elevate your game with this ...	2024-02-08	chessboar...	27	1	3	1
5	Vinyl Player	Rediscover the classic hits of...	2018-03-19	vinyl.jpeg	90	1	3	1
6	Noise-Cancelling Hea...	Immerse yourself in pure, uni...	2023-12-06	headphone...	180	1	2	1
7	Smart Home Assistan...	Transform your living space ...	2024-02-13	homeassist...	110	1	2	1
8	Comic Book Series	Dive into epic adventures wit...	2023-08-22	comics.jpeg	65	1	3	1
9	Gaming Console	Experience next-level gamin...	2024-03-22	console.jpeg	365	1	2	1
21	Test Product 2	Desc	2024-05-22	template.png	39	10	1	0
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

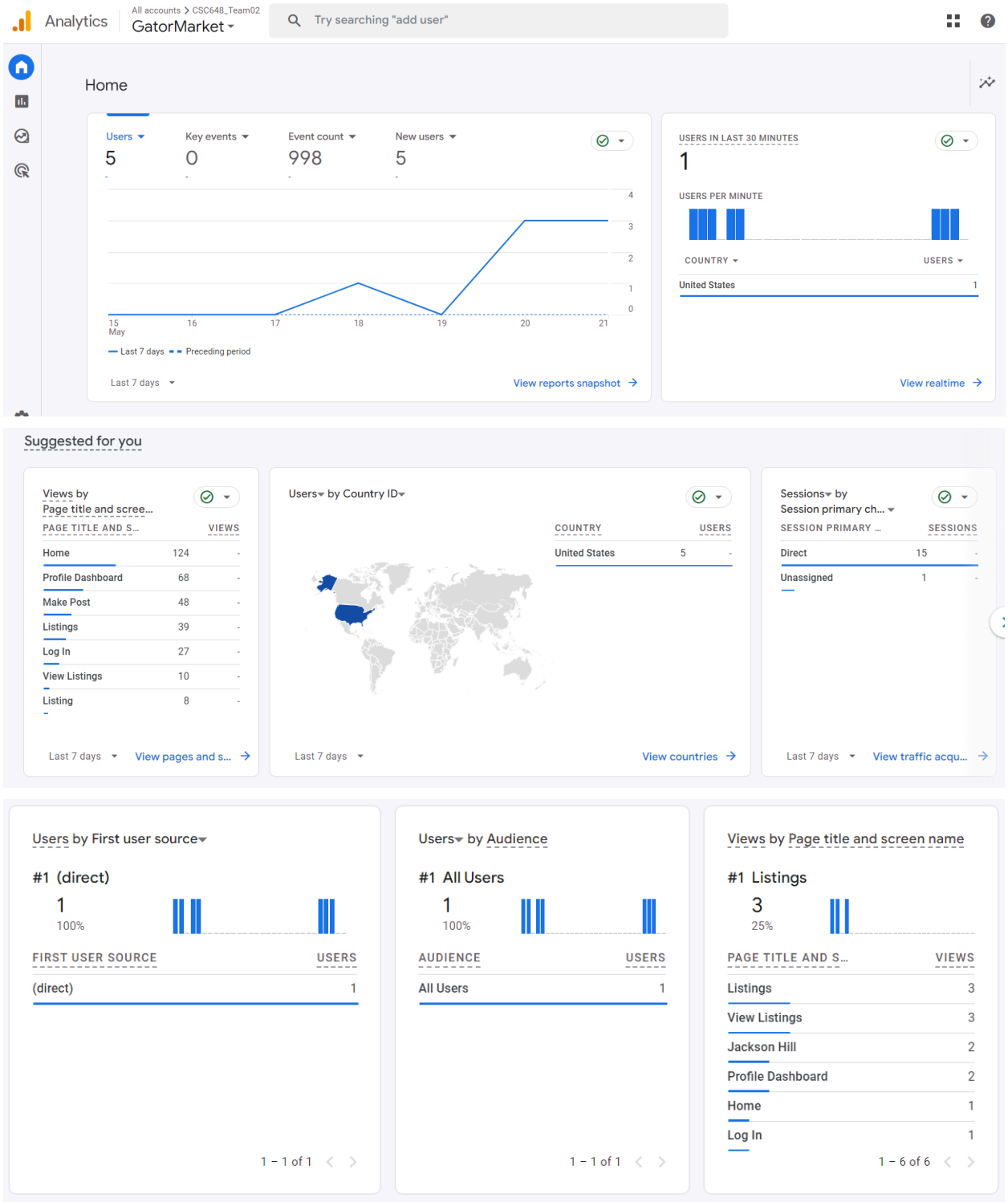
5. GitHub Organization

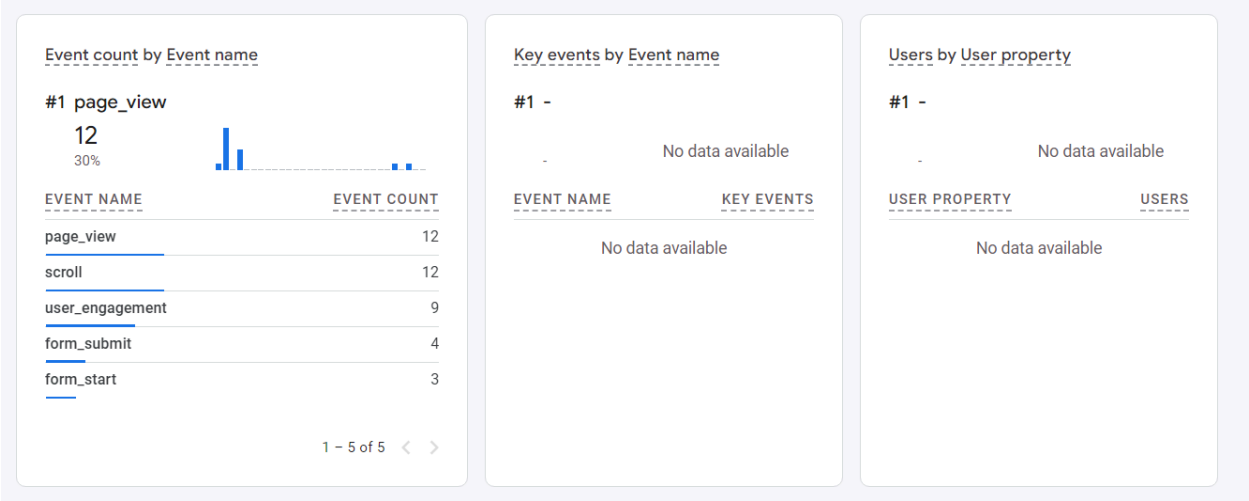
- **Main Branches Used**
    - main ->
        - develop ->
            - front
            - back

- **Branch Permissions**
    - The backend team had access to the back branch and would merge their code to develop.
    - The frontend team had access to the front branch and would merge their code to develop.
    - Once the code passed code review, the code would proceed to move to the main branch by our Github Manager.


csc648-sp24-03-team02
Private
Watch 1
Fork 0
Star 0
main
4 Branches
0 Tags
Go to file
t
Add file
Code
sfsujackson Added Milestone 4 document
b0d4fa8 · 12 minutes ago
106 Commits
Front Testing
Update Rios: Added new front end code
last month
Milestones
Added Milestone 4 document
12 minutes ago
application
Merge branch 'develop' into main
last month
credentials
Update README.md
3 months ago
.DS_Store
Update Rios: Added new front end code
last month
LICENSE
Initial commit
3 months ago
README.md
Update README.md
3 months ago
README
MIT license
csc648 Repository
Please when ready add your teams application URL or IP to the repository description. This will help with grading. Teams are expected to keep this value up to date.
URL: http://ec2-18-224-202-27.us-east-2.compute.amazonaws.com/
About
csc648-sp24-03-teamNN-sfsujackson created by GitHub Classroom
Readme
MIT license
Activity
Custom properties
0 stars
1 watching
0 forks
Releases
No releases published
Create a new release
Packages
No packages published
Publish your first package
Contributors 5
Languages
HTML 65.6%
CSS 29.4%

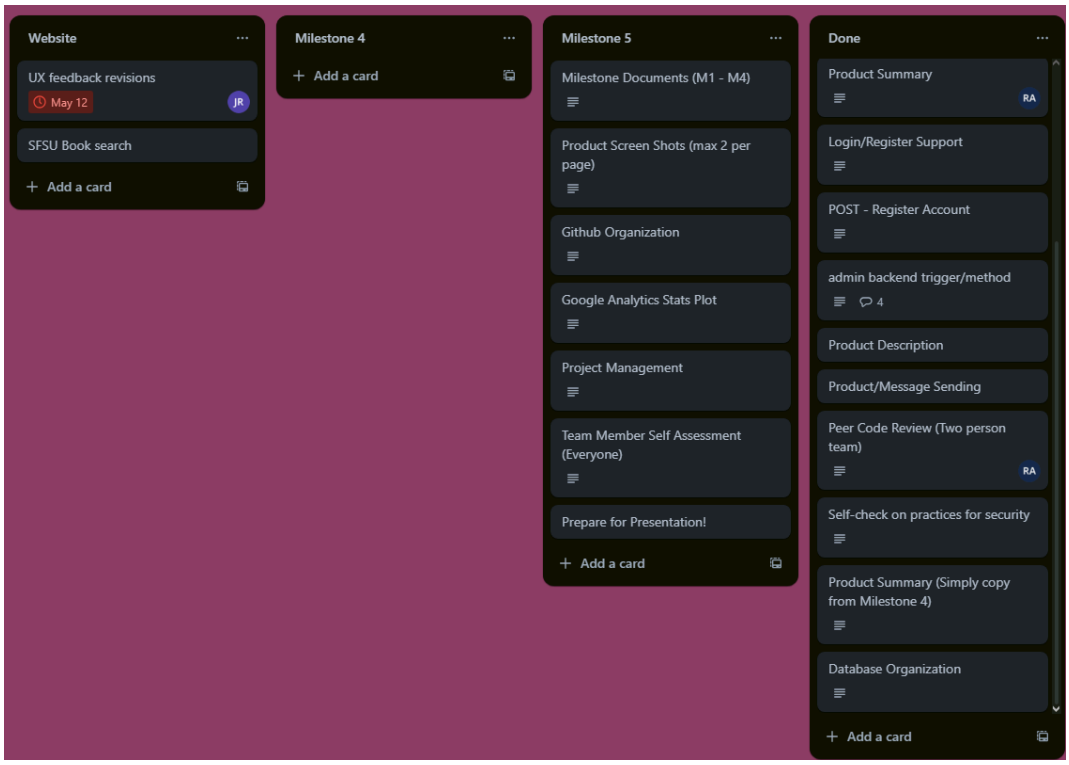
6. Google Analytics Stats Plot





7. Project Management

For this project, we used **Trello** to track our tasks and progress between the milestones. Here's an example of our board.



8. Team member self-assessment and contributions

JH Jackson Evan Hill

Reply Reply all Forward

To: Maxwell Lewis; Jose De Jesus Rios; Javi Alejandro Buenrostro; Rene Antoun

Wed 5/22/2024 5:01 AM

Maxwell Lewis

a. Role: Github Manager
   - Managed branch permissions to the team
   - Organized code commits
   - Milestone 1 - Executive summary & Personas
   - Milestone 4 - Code Review
b. 3 submissions
c. Unfortunately, not many tasks were assigned, which limits the extent of challenges I can provide through their contributions. Moving forward, I recognize the importance of more evenly distributing tasks to ensure that all team members have the opportunity to fully engage and contribute to the project's success.
d. No use of GenAI
e. One contributing factor would be to read the instructions carefully, which had lead to misunderstandings of the criteria, such as the executive summary.
f. As team lead, I initially underestimated the significance of a GitHub manager. I considered it a critical individual role, but I didn't realize how straightforward the responsibilities actually were. In hindsight, I see that the role could have been combined with other tasks, which would have streamlined our workflow and made the project more efficient. Recognizing this oversight, I now understand the importance of thoroughly assessing task complexity before assigning roles. This experience has taught me to better evaluate team responsibilities to ensure optimal resource allocation and project efficiency.

Jose Rios

a. Role: Front-End Lead
   - Constructed the entirety of the front end.
   - Provided team with storyboards, using references from use cases
   - Fixed UI revisions
   - Milestone 1 - Use Cases
   - Milestone 2 - UI Storyboards
   - Milestone 3 - Constructed all of the pages
b. 32 submissions
c. He was the sole team member dedicated to the front-end development, which meant he faced numerous challenges at every milestone. As the backend was being implemented, various issues emerged across the pages that needed urgent fixes within tight deadlines. Despite these pressures, he diligently addressed and resolved each bug promptly, ensuring that no issues remained unresolved on his end. His ability to manage and overcome these obstacles demonstrated his exceptional

remained unresolved on his end. His ability to manage and overcome these obstacles demonstrated his exceptional problem-solving skills and commitment to the project's success.

d. No use of GenAI
e. The only significant issue was the frequent close calls in wrapping up feedback and bug fixes. Noticing these issues during the last week before each deadline was particularly stressful to manage. This tight timing added considerable pressure, highlighting the need for a more proactive approach in identifying and addressing issues earlier in the development cycle. Despite this, the ability to handle these last-minute challenges showcased the team's resilience and dedication to meeting project goals.
f. He's done so much throughout this project, I'm grateful he was there throughout the semester to tackle most of the hard work.

Javi Buenrostro

a. Role: Back-End Lead
   - Structured database plan
   - Created ban trigger system for admin use
   - Milestone 1 - Main Data Items and Entities
   - Milestone 2 - Database Organization
   - Milestone 4 - Usability Test Plan
b. 7 submissions (He worked mainly on the admin-side for the backend, rather than the code itself)
c. As the lead for the backend, he meticulously planned the database structure. Throughout the project, conflicts arose regarding the choice of tools and the naming conventions for each column, stemming from differing opinions among team members. Despite these challenges, he diligently worked to find a consistent structure that not only satisfied the team's diverse viewpoints but also adhered to the assignment's criteria. His ability to navigate these conflicts and establish a unified approach was instrumental in ensuring the project's success.
d. No use of GenAI
e. Originally, he created a database plan that had flaws, such as not providing categories as their own table. This oversight highlighted the importance of properly structuring every major entity in the database. Through this experience, he has gained a deeper understanding of the necessity for a well-thought-out database design to ensure the backend functions effectively. He now appreciates the critical role of comprehensive planning in constructing a robust and efficient database structure.
f. He was tasked in constructing the backend plan, but ultimately, I ended up implementing the backend myself. I take responsibility for not distributing the work properly, and with each deadline approaching rapidly, my attempts to teach him the intricacies of the backend code felt futile. Despite my efforts on two separate occasions, there was limited progress in this area. Consequently, he focused on the administrative side, while I handled the backend coding. I'm still grateful for his assistance, and this experience has taught me the importance of effective task delegation and providing adequate time for knowledge transfer to ensure a more balanced workload and better team collaboration.

Rene Antoun

a. Role: Back-End Support
   - Provided images for products
   - Helped create tables for database
   - Milestone 1 - Competitive Analysis
   - Milestone 2 - Risks & Project Management
   - Milestone 4 - Project Summary & Code Review
b. 5 submissions (He mainly worked on the documents and quick tasks that needed to be done close to the deadline)
c. The main challenge this member faced was working with strict deadlines. However, due to the limited number of tasks assigned to him, there isn't much specific feedback I can provide on his contributions. Moving forward, I recognize the need to ensure that all team members are given a fair share of tasks to maximize their engagement and contributions, and to better understand and support their ability to meet deadlines under pressure.
d. He utilized GenAI to create images for the products, leveraging his experience to provide the team with original product art that did not violate copyright laws. His contributions were invaluable in ensuring that the visual aspects of our project were both creative and legally compliant.
e. No use of GenAI
f. More tasks could've been assigned to make this project easier, but I'm still thankful he assisted throughout this project.

JB Javi Alejandro Buenrostro
To: Rene Antoun
Wed 5/22/2024 3:55 PM

1. Role: backend lead
    i. Structured database plan
    ii. Created ban trigger system for admin use
    iii. Milestone 1 - Main Data Items and Entities
    iv. Milestone 2 - Database Organization
    v. Milestone 4 - Usability Test Plan
    2. Github: I made 7 submissions as I was doing backend work and documentation fixing the few I had was some fixes for frontend work
    3. Issues: I didn't have enough experience doing backend work with node.js
    4. GenAI? No use of GenAI
    5. I messed up doing the design for the backend and while setting up the trigger for admin I couldn't figure out how to fix the error I was getting thus Jackson had to finish it
    6. I should have just outlined more in preparation so that Jackson wouldn't need to do so much. In the future, I should have used more guides to figure out how to do it

RA Rene Antoun
Reply Reply all Forward
To: Jackson Evan Hill; Maxwell Lewis; Jose De Jesus Rios; Javi Alejandro Buenrostro
Wed 5/22/2024 7:48 AM

1. Role: Backend Support
   Technical Contributions:
   • I utilized GenAI technology to create legally compliant images for out product listings making sure they meet all copyright requirements.

   • I helped by creating and managing the database tables while focusing on schema design and data integrity to support efficient data retrieval.
   Other Contributions:
   • I worked on the competitive analysis to identify possible weaknesses which helped shaped our design decisions.
   • I worked on the risk assessment and project management efforts to help identify potential project risks and thinking about ways to tackle them to stay on track.
   • I contributed to the project summary and worked on the code review process acting as the person submitting the code for review.
2. GitHub Submissions: 5 submissions. The relatively low number reflects my focus on documentation, critical time-sensitive tasks towards project deadlines, and working on database management, which required significant attention but fewer commits.
3. Main Challenges: The primary challenge was managing tasks under strict deadlines especially as they were often critical and time-sensitive. Managing quick tasks and work on the backend and documentation tested my ability to organize and prioritize effectively.
4. I mainly used GenAi to make images four our product listings, This tool was super helpful for making sure our pictures matched the product and didn't break any copyright rules. Working with GenAI made it easier to create pictures and really helped make our project look good without any legal worries.
5. Reflecting on what I learned about software engineering, I see the importance of distributing tasks more fairly among team members in future projects, this approach would keep everyone more engaged and also balance the development workload better, I wish I had the opportunity to contribute more to the coding aspect of our project, looking ahead I would also focus on improving my time management because a lot of times I left tasks until just before the deadline which made it more difficult for my team to work around.

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JB **Javi Alejandro Buenrostro**
To: Rene Antoun
Thu 5/23/2024 1:55 AM

1. Role: backend lead
    i. Structured database plan
    ii. Created ban trigger system for admin use
    iii. Milestone 1 - Main Data Items and Entities
    iv. Milestone 2 - Database Organization
    v. Milestone 4 - Usability Test Plan
    2. Github: I made 7 submissions as I was doing backend work and documentation fixing the few I had was some fixes for frontend work
    3. Issues: I didn't have enough experience doing backend work with node.js
    4. GenAI? No use of GenAI
    5. I messed up doing the design for the backend and while setting up the trigger for admin I couldn't figure out how to fix the error I was getting thus Jackson had to finish it
    6. I should have just outlined more in preparation so that Jackson wouldn't need to do so much. In the future, I should have used more guides to figure out how to do it

ML Maxwell Lewis
Reply Reply all Forward
To: Rene Antoun; Jackson Evan Hill; Jose De Jesus Rios; Javi Alejandro Buenrostro
Thu 5/23/2024 1:55 AM

1.Role: GitHub Master
Technical contributions:
- GitHub oversight and techniques
- Used GenAI as a search engine for git hub commands not shown in GitHub Documentation
- Created the Git branches from main, develop, front, and back.
- Git merger to developer branch now main.
- Helped with documentations on files, write ups, and helping fill in for the write ups
- Worked on code review on recent milestone
- Made sure nothing important got deleted in the merge process

2.GitHub submissions: 4, not much but I was keeping an eye on the changes and merging files when they do change and time on other projects. I focus more on the documentation side of the project while also reviewing the code to see if they went through or not.
3.Main challenges:
4.Gen AI was used to Seach for facts on git commands, branching, and merging just in case the git documentations was not making sense and needed a short explanation then a whole paragraph. Nothing was copyright just information gathering on git.
5.Reflecting back on this project, I wish I did more than just documentation and git command, I see the progress of the commits and I very much love watching the changes. Backend and Frontend seem cool, but I did not have the confidence to do them because I'll be honest, I'll always make some form horrible mistake that will take weeks to fix. I just need more confidence when it comes to these type of coding projects which the lack of skill put me in GitHub position. I need to focus on contributing more plus time management needs an improvement.

J **Jose De Jesus Rios** Reply Reply all Forward ···

To: Jackson Evan Hill; Rene Antoun; Javi Alejandro Buenrostro; Maxwell Lewis Thu 5/23/2024 2:02 AM

From: Jose De Jesus Rios <jrios7@sfsu.edu>
Sent: Wednesday, May 22, 2024 3:59 PM
To: Jackson Evan Hill <jhill@sfsu.edu>
Subject: Re: Self-Assessment - Jackson Hill

A) a) Role: Front-End Lead Technical contributions: •Constructed the entirety of the front end, ensuring seamless integration and functionality. • Developed and provided detailed storyboards based on use case references, facilitating a clear visualization of the intended user interface. •Implemented and revised UI components as needed, maintaining high standards of design and usability. Milestones Contributions: •Milestone 1: I developed use cases that guided the design and functionality of the website. •Milestone 2: I created UI storyboards that served as a blueprint for front-end development. •Milestone 3: I constructed all website pages, effectively translating storyboards into functional, user-friendly web interfaces.

B) Github Submissions: I made 34 submissions because I was always updating everything on the front end to make sure it was right, I wanted our website to only great but also work smoothly, so I put a lot of effort into making constant improvements.

C) Being the only front-end developer, I faced numerous challenges, especially as backend implementations affected the front end, requiring me to make immediate adjustments. Managing these frequent issues under tight deadlines tested my problem-solving skills and adaptability.

D) I didn't use GenAI but seeing how my teammates used it showed how helpful it can be and will definitely think about using it in the future.

E) From what I learned in this class I would work on improving time management from the beginning and make sure we check in on our progress regularly, ill push for better communication so we can stay on the same page and avoid last minute deadlines this way we can work more efficiently.

From: Jackson Evan Hill <jhill@sfsu.edu>
Sent: Tuesday, May 21, 2024 7:01 PM
To: Maxwell Lewis <mlewis13@mail.sfsu.edu>; Jose De Jesus Rios <jrios7@sfsu.edu>; Javi Alejandro Buenrostro <jbuenrostro@mail.sfsu.edu>; Rene Antoun <rantoun@sfsu.edu>
Subject: Self-Assessment - Jackson Hill

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