

SW Engineering CSC648/848 Spring 2024

CSC 648/848 Milestone 2: More Detailed Requirements, Specs, Architecture, UI mock-ups

Application Title: GatorMarket

Date: 3/23/2024

### Meet The Team

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### History

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Date Submitted	Date Revised
3/23/2024	4/1/2024

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# Milestone 2

Team 2 - GatorMarket

## 1. Executive Summary

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GatorMarket 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 similarly 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. Main Items and Entities

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### 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)

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#### 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

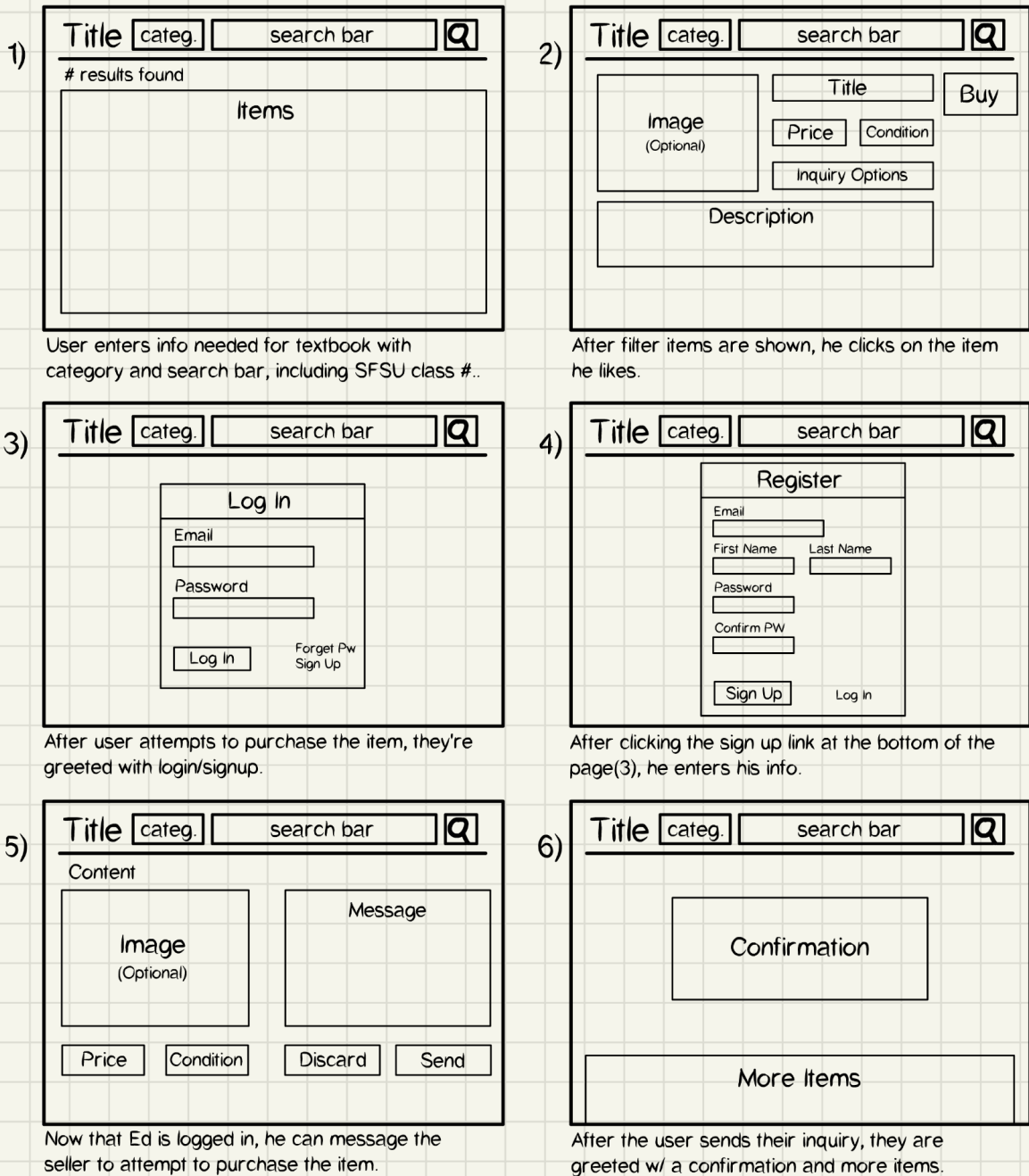
- Registered Users
  10. Shall be able to manage account settings
  11. Shall be able to access locations on campus to “meet up”
- Admin
  18. Shall be required to manage products
  20. Shall be required to handle customer support
  21. Shall be able to manage user accounts
  23. Shall be able to configure 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 1: Ed Spicer - Looking for Affordable Textbooks



## 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.

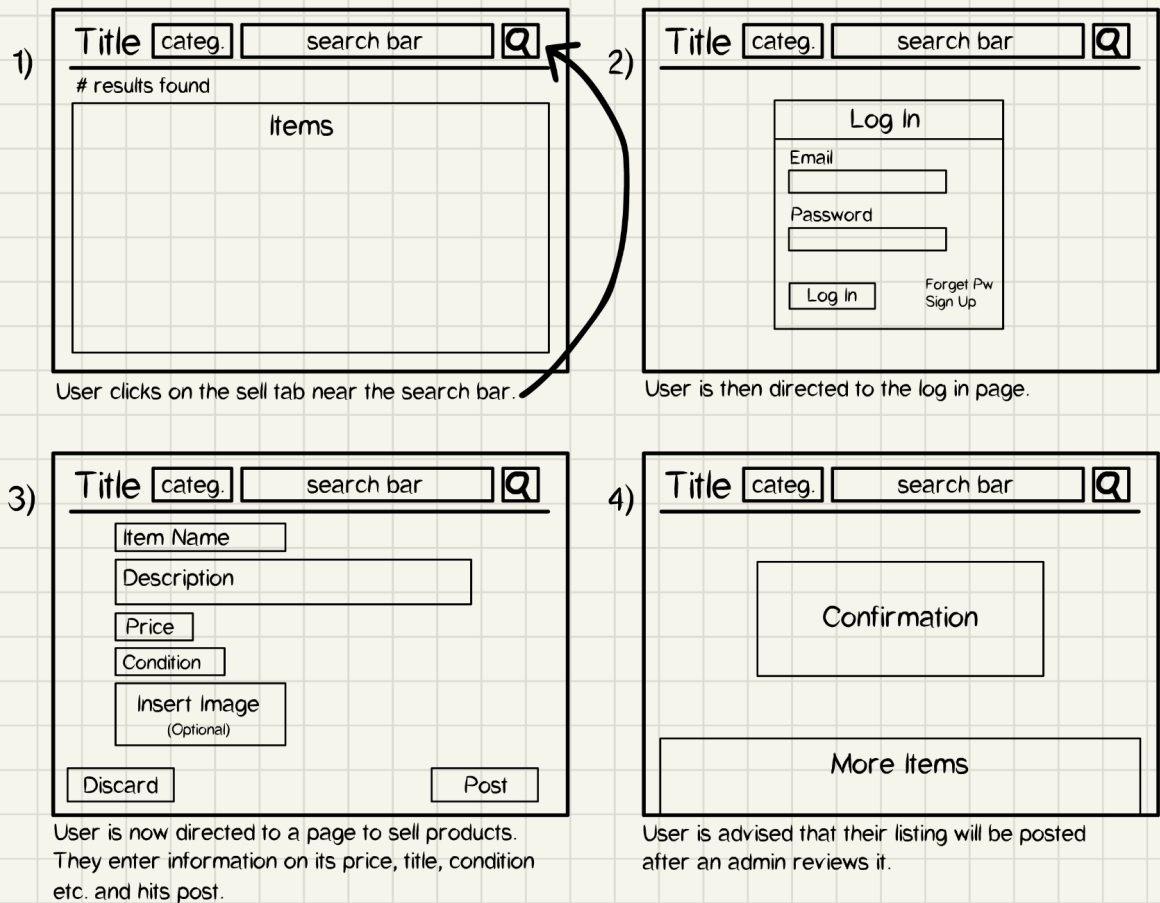
4)

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

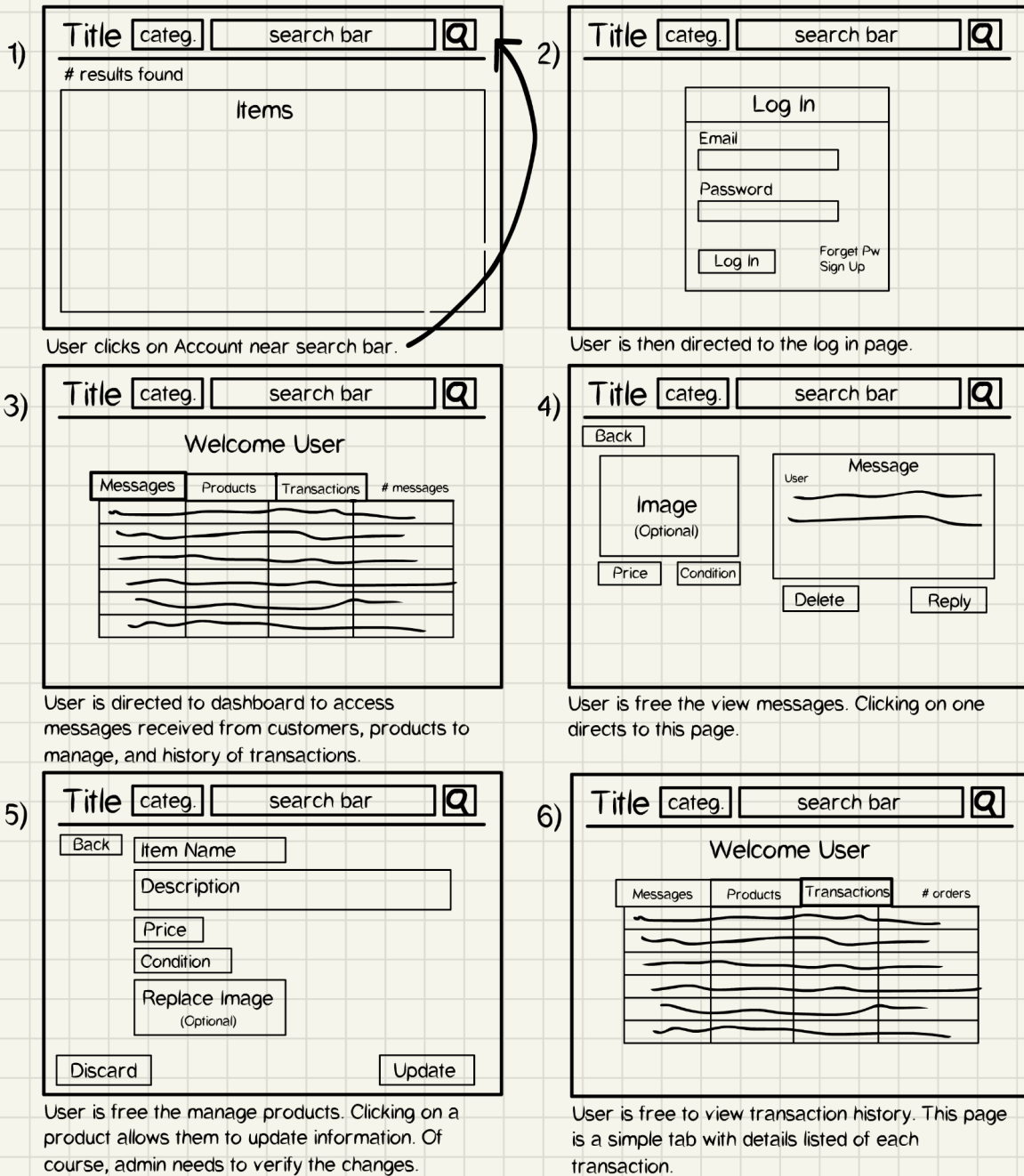
5)

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

## Use Case 3: Francisco Rojas - Selling computer



## Use Case 4: Dashboard





## 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\_writing: 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

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- **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 make 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

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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

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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

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- 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]**