

SW Engineering CSC648-848

Spring 2024

Milestone 2 Part I - March 23rd, 2024

Project Title:

“From Here to There”

“The SFSU Exclusive Site for Buying and Selling Items”

Team 03

Gurpreet Natt (TL)	gnatt@sfsu.edu
Omar Dajani (GL)	odajani@sfsu.edu
Douglas Cheung (FL)	dcheung5@sfsu.edu
Justin Isidro (BL)	jisidro@sfsu.edu
Gursimran Singh	gsingh8@sfsu.edu
Gio Jung	gjung1@sfsu.edu

Date Submitted	March 23rd, 2024
Date Revised	April 3rd, 2024

1. Executive Summary:

Introducing "From Here to There, an SFSU Exclusive Site for Buying and Selling Items" a platform uniquely designed for the San Francisco State University (SFSU) community. Developed with the spirit of innovation and collaboration, this application offers an exclusive marketplace for buying, selling, and renting items within the SFSU community that consists of students, faculty, staff, and alumni. From essential class books to the perfect living room sofa, "From Here to There" facilitates a seamless exchange of goods and services among the aforementioned SFSU community and strengthens our bonds.

"From Here to There" is a unique marketplace platform that enables the SFSU community to buy, sell, and rent items within the SFSU community with the ease of entering their SFSU ID. From crucial academic resources to that perfect piece of furniture that makes a space feel like home, our application streamlines these exchanges, fostering a supportive, sustainable community.

Key features include a very useful SFSU-specific search function that allows users to navigate offerings by category, class archetype (CSC, MATH, ENGL, etc.), and specific course numbers, offering a level of specificity unmatched by other platforms. This precision ensures that users can find exactly what they need when needed, fostering an environment of support and mutual benefit.

Behind "From Here to There" is a dynamic student startup team from SFSU, bringing together diverse talents in technology, design, and business. This team not only understands the unique challenges of campus life but also shares a commitment to creating a solution that strengthens the sense of community and support among SFSU students, faculty, and staff.

2. List of main data items and entities:

1. Types of Users:

-**Description:** The main types of users registered on the marketplace app, which are:

- Unregistered users.
- Registered users.
- Administrators.

2. Sales Item and its Main Sub-items:

- **Description:** The primary entity representing items available for sale on the marketplace app. This includes various sub-items (which may be repeated) or categories, which include:

1. School supplies.
2. Office supplies.
3. Furniture.
4. Board games.
5. Miscellaneous.

3. User Registration Record:

-**Description:** The record associated with each user's registration on the marketplace app. It includes:

- Username.
- Email address.
- Password.
- Contact information.

4. **Messages:**

-**Description:** The communication system within the marketplace app that allows users to send and receive messages. Messages enable users to communicate with each other regarding:

- Message item.
- Date.
- Sender.
- Receiver.
- Item it refers to.
- Body of text.

5. **User Profile:**

-**Description:** The profile associated with each user account on the marketplace app. It includes:

- Personal information.
- Full name.
- Preferred names.
- Contact details.
- University level.
- Address.
- Profile picture.
- Bio.
- Wishlist.
- Reviews.
- Socials.
- Search functionality to search user's posts.

6. **Listing:**

-**Description:** Individual item listing created by users for sale on the marketplace app. Each listing includes:

- Item name.
- Item description.
- Price.
- Condition.
- Category.
- Photos (both a high resolution photo as well as a thumbnail)
- Contact information of the seller.
- Reviews.
- Reviews of the user.
- Date posted.

7. Purchase Record:

-**Description:** Record of purchases made on the marketplace app by users. Purchase records document details such as:

- Item bought.
- The buyer.
- The seller.

3. Functional requirements - prioritized:

**Priority 1:*

-Unregistered users:

1. Shall be able to create/register an account. (only with SFSU email)
2. Shall be able to view the post details, including the title, description, and images.
3. Shall be able to access help and FAQ sections.
4. Shall be able to navigate through the site's public sections without logging in.

-Registered users:

5. Shall inherit all functions of unregistered user.
6. Shall be able to login.
7. Shall be able to search for listings using text input, sorting, a category, and filters.
8. Shall be able to store the items they've posted in the inventory.
9. Shall be able to communicate with moderators, sellers, and buyers through given contact information provided by them.
10. Shall be able to edit or delete their own posts.
11. Shall be able to use the dashboard to view their messages and postings.
12. Shall inherit all the functions of a non-registered user.

-Admin:

13. Shall inherit all functions of registered user.
14. Shall be able to inherit all functions of a registered user and then some.
15. Shall be able to access the server and perform maintenance or updates as needed.
16. Shall be required to remove or edit any posts that do not meet site guidelines before they go live.
17. Shall be able to remove users who repeatedly violate the guidelines.
18. Shall be able to generate reports on site usage, popular listings, and user activity.
19. Shall be able to create and manage site-wide announcements or notifications.

**Priority 2:*

-Unregistered users:

1. Shall be able to contact the site administration through a contact form.

-Registered users:

2. Shall be able to rate and review other users based on transactions.

**Priority 3:*

-Registered users:

1. Shall be able to report posts or users that violate guidelines to administrators.
2. Shall be able to save searches or favorite listings for easy access later.

3. Shall be able to update their profile information, including password, and profile picture.

4. High-level mockups and storyboards:



Use Case:

- Mia: She is just browsing the website to see what is available and scrolling through the different categories.
- Tom: He sees what has been posted recently and clicks on the categories to see a drop-down menu where he can choose office supplies and find a laptop.
- Rachel: As an admin, she is making sure that the recently posted listings are all appropriate.

Logo

The SFSU Exclusive Site for Buying and Selling Items. For Demonstration Only

Cart

From Here to There

Categories ▼

Search From Here to There

🔍

👤

Login/Signup

About

Dashboard

Rentals

Sell an Item

Results (4)

Message Seller

Product Details

Price:

Message Seller

Product Details

Price:

Message Seller

Product Details

Price:

Message Seller

Product Details

Price:

Sort By ▼

☐ Newest to Oldest

☐ Oldest to Newest

☒ Price: Low to High

☐ Price: High to Low

Use Case:

- Mia: She is filtering the results to see what has been posted recently or earlier and is currently looking at items in a low to high price range.
- Tom: He is scrolling through laptops looking for something on the cheaper end, therefore he is sorting by price low to high.

Logo

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Cart

From Here to There

Categories ▼

Search From Here to There

Q

Login/Signup

About

Dashboard

Rentals

Sell an Item

Rental Results (6)

Sort By ▼

Rent

Buy

Product Details

Price:

Return Date:

Rent

Buy

Product Details

Price:

Return Date:

Rent

Buy

Product Details

Price:

Return Date:

Rent

Buy

Product Details

Price:

Return Date:

Rent

Buy

Product Details

Price:

Return Date:

Rent

Buy

Product Details

Price:

Return Date:

Rent

Buy

Product Details

Price:

Return Date:

Rent

Buy

Product Details

Price:

Return Date:

Rent

Buy

Product Details

Price:

Return Date:

Use Case:

- Mia: She clicked on the rentals tab in the nav bar and is now looking at textbooks that she can rent or buy to be able to save money and help her peers while doing so.

Logo

The SFSU Exclusive Site for Buying and Selling Items. For Demonstration Only

Cart

From Here to There

Categories ▼

Search From Here to There

🔍

👤

 Login/Signup

About

Dashboard

Rentals

Sell an Item

Sell an Item

*Item Name Here:

*Price Here:

*Category: ▼

Description Here (Optional):

Upload an Image

Cancel

Post

May take up to 24h to be approved

Use Case:

- Dr. Patel: He is creating a listing for his old textbooks that he wants to sell and adding all of the information such as price, condition, image, etc.

Logo

From Here To There

Login

Email or Username

Password

[Forgot Password](#)

Login

New Here?

Create a new account

Use Case:

- Tom: He logs in to his account to be able to inquire about a listed laptop.
- Dr. Patel: He logs in to his account to be able to list some of his old textbooks for sale.
- Rachel: She logs in to be able to review and approve listings through her About page and make sure the website is running smoothly.

Logo

From Here To There

Create account

Your name

Email or Username

Password

Re-enter password

Continue

Already have an account? **Login ►**

Use Case:

- General: In case someone does not already have an account, they can create a new one here but if not they can also continue to use the site without an account. However, to access the dashboard and to be able to post a listing, you need to either create an account or log into an existing account.

Logo

The SFSU Exclusive Site for Buying and Selling Items. For Demonstration Only

Cart

From Here to There

Categories ▼

Search From Here to There

Q

User ▼

About

Dashboard

Rentals

Sell an Item

Messages

Listings

You have [Number] new Message(s)

Name	Time Sent Here	Message Title
Supplementary information Example: Product Details	Message goes here..	

Name	Time Sent Here	Message Title
Supplementary information Example: Product Details	Message goes here...	

Use Case:

- Tom: After logging in, he sees his messages where he received a reply back from the seller here telling him about the details of the laptop he inquired about.
- Rachel: Once she has logged in, on her dashboard she sees all of her received messages and can reply to them in a quick and convenient way.



Use Case:

- Dr. Patel: He can view all of his listings here after logging in, the textbooks he posted got approved and showed up on his dashboard listings.

Logo

The SFSU Exclusive Site for Buying and Selling Items. For Demonstration Only

Cart

From Here to There

Categories ▼

Search From Here to There

🔍

👤

User ▼

About

Dashboard

Rentals

Sell an Item

Enter Title Here:

Receiver Name Here

Contact Information goes here...

Message here....

Send

Use Case:

- Mia: She reaches out to her peers who have posted listings to get more information.
- Tom: He composes a message to the laptop seller to receive more information.
- Dr. Patel: This is where he can contact students to give them more details on his listings.
- Rachel: She uses this to compose messages to sellers, letting them know if their listings have been approved or denied.

5. High-level DB organization:

- **DB organization:**

PK - “Primary Key”

FK - “Foreign Key”

User:

- UserID (PK)
- Email (Unique, Mandatory)
- Password (Mandatory)
- FirstName (Mandatory)
- LastName (Mandatory)
- SFSUEmailVerified (Boolean, Optional)

Message:

- MessageID (PK)
- SenderID (FK to User)
- ReceiverID (FK to User)
- Date (FK to User)
- ProductID (FK to Product)
- Content (Text, Mandatory)

Product:

- ProductID (PK)
- UserID (FK to User.UserID, Seller/Buyer, Mandatory)
- Title (Text, Mandatory)
- Description (Text, Mandatory)
- Date (Text, Mandatory)
- CategoryID (FK to Category table, Text, Mandatory)
- Price (Numeric, Optional)
- RentalPrice (Numeric, Optional)
- IsRental (Boolean, Mandatory)
- CourseNumber (Text, Optional)
- High-res image (
- Image thumbnail (
- Name (Enum: Books, Furniture, Electronics, etc., Mandatory)

- **Media storage:**

- Decided to use File Systems for storing media files, with references (relative URLs/pointers to root of application directories) stored in the database

- **Search/filter architecture and implementation:**

- Columns including individual data characteristics (Item type, Description, Category, Seller, etc)
- Filtered Searches

- Will use a combination of indexed columns and possibly full-text search for efficient searching. Keywords can relate to product Title, Description, Category.Name, Price, and seller information (User.FirstName, User.LastName).

6. Risks with our project:

- **Skill risks:**

- Team members may not initially have all the necessary skills for the project, such as web development, database management, or UI/UX design. To solve this, we have been reviewing necessary material on our time outside of class and team meetings. That and we keep unnecessarily adding things that complicate our project, but we will ensure this does not keep happening moving forward. We will make this as simple as we can.

- **Schedule risks:**

- We need to make sure we get everything done in a timely manner so we have enough time to ask questions and do not need to keep revising our documents like this. Our project is complex and our skill level is not up to par, so starting on stuff early is essential and will be enforced moving forward.

- **Technical risks:**

- N/A

- **Teamwork risks:**

- Miscommunication, conflicts, or lack of collaboration among team members could hinder project progress. To correct this, we have set weekly team meetings and plan to use Trello in the future to make tasks aware to everyone and keep us on the same page.

- **Legal/content risks:**

- There *may* be an issue with us trying to match the SF State branding as much as we can with our website. Our final design will incorporate the SF State colors and even the mascot, but this should not be a problem as both don't seem to be copyrighted.

7. Project Management:

For this Milestone, we used Discord primarily to communicate. Team Lead made a TO-DO channel on Discord server to delegate tasks to the team. In addition, we hold team meetings to go over our tasks and questions we may have as a team. Starting now to ensure better time

management and such, we will incorporate Trello to manage our tasks.

8. Use of GenAI tools:

- *Omar*: N/A as none were used.
- *Gursimran*: N/A as none were used.
- *Gurpreet*: N/A as none were used.
- *Douglas*: N/A as none were used.
- *Justin*:
 - GenAI Used:** ChatGPT (4.0)
 - Tasks Used:** High level Architecture, Database Organization
 - Effectiveness:** MEDIUM
 - Details:** GPT was mainly used in the guiding of backend related to DB, seeking guidance. I found the usage to be very useful in giving a rough idea on how to set up the tables and its contents.
- *Gio*:
 - GenAI Used:** ChatGPT (3.5)
 - Tasks Used:** High level Architecture, Database Organization
 - Effectiveness:** MEDIUM
 - Details:** In this Milestone, GPT was used in #5 where we had to create tables for SQL. Once GPT generated the basic tables for our market system, we still had to edit/add for more columns or for new tables of certain functions. However, it was useful for us to have the basic tables of mySQL DB.

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. **DONE**
- 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 M2 and agree/understand it before submission **ON TRACK**

-Team shared and discussed experience with genAI tools among themselves **DONE**