

San Francisco State University

SW Engineering CSC648/848 Fall 2020



Team 08 Global

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In coordination with Fulda University, Germany

Milestone 2

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1. Executive Summary

The world has changed rapidly over the past few months as Covid-19 continues to impact the way we live. Obeying local governmental safety protocols, residents have largely chosen to stay home unless absolutely critical. This has given rise to an unparalleled explosion of online shopping. Shoppers have flocked to online outlets in search of everything from groceries to school supplies, and because of this, shipment delays are common. This is where we come in. While GatorGoods cannot fix the problem for everyone, we aim to at least alleviate some of the burden of waiting for those working, studying, and/or living at San Francisco State University (SFSU).

Our goal is to provide an online marketplace specifically designed and limited to students, faculty, and staff at SFSU. We will provide a single, consolidated web application where users can buy and sell items that others attending the university might need (no financial transactions will occur through the site). This includes school supplies, dorm furniture, clothing, and more. Due to our transactions being offered as an in-person meet-up agreement limited to safe spaces around campus, users will know for certain that they can get their supplies on their schedule, and without worrying about unnecessary shipping delays.

Our team is a small but highly dedicated start-up of four current students at SFSU, who will be joining forces with a separate development team from Germany for the latter stages of the project. We are passionate about providing an easy, quick, reliable, and safe way for those of us on and around campus to buy and sell school supplies. Moreover, our ultimate mission is to provide users an opportunity to develop new relationships with their peers, and in doing so, strengthen our great Gator family.

2. List of main data items and entities - data glossary/description

1. Unregistered Users

1.1. Users who have yet to register an account on GatorGoods

1.1.1. sessionId

2. Registered Users

2.1. Users who have already registered an account with GatorGoods

2.1.1. id

2.1.2. username

2.1.3. password

2.1.4. email

2.1.5. liked_listings

2.1.6. chat_log

3. Admin Users

3.1. Registered Users with elevated privileges and are responsible for content moderation on the site

3.1.1. id

3.1.2. password

4. Chat Log

4.1. User-to-user interactions

4.1.1. id

4.1.2. user_id

4.1.3. chat_messages

5. Chat Message

5.1. Individual messages specific to a unique Chat Log

5.1.1. id

5.1.2. parent_log

5.1.3. string

5.1.4. time

6. Product Listing

6.1. Listing belonging to a Registered User in order to sell an item, includes the following fields:

6.1.1. id

6.1.2. list_user_id

6.1.3. like_user_ids

6.1.4. chat_ids

6.1.5. images

6.1.6. time

6.1.7. approval_status

- 6.1.8. delist_status
- 6.1.9. description
- 6.1.10.category
 - 6.1.10.1. books
 - 6.1.10.2. electronics
 - 6.1.10.3. furniture
 - 6.1.10.4. other
- 6.1.11.title
- 6.1.12.price
- 6.1.13.brand
- 6.1.14.condition
- 6.1.15.location

3. Prioritized list of functional requirements

3.1. Priority 1 - *must have*

3.1.a. Unregistered Users

1. Users shall be able to browse items by category
2. Users shall be able to search items by category and/or text
3. Users shall be able to filter browse/search results
4. Users shall be able to register accounts by providing their username, password, and San Francisco State University email address

3.1.b. Registered Users

1. Users shall have complete functionality of an Unregistered User plus the following:
2. Users shall be able to log into their unique accounts by providing their username and password
3. Users shall be able create product listings
4. Users shall be able to select from a listing of safe meeting places around the San Francisco State University campus in order to meet with a buyer or seller
5. Users shall be able to contact the selling parties of product listings
6. Users shall be able to access their dashboard where they can view all their product listings, read messages from prospective buyers, and/or choose to delist a product listing

3.1.c. Admin Users

1. Users must moderate content on the site through the following means:
 - 1.1. Deleting a pending product listing which violates the terms and agreements
 - 1.2. Approving a pending product listing which conforms to the terms and agreements will allow it to be published

3.2. Priority 2 - *desired*

3.2.a. Unregistered Users

-intentionally blank-

3.2.b. Registered Users

1. Users shall be able to edit their product listings

3.2.c. Admin Users

1. Users shall receive notification of pending product listings

3.3. Priority 3 - *opportunistic*

3.3.a. Unregistered Users

-intentionally blank-

3.3.b. Registered Users

1. Users shall be able to modify their account information
2. Users shall receive notifications of new chat logs.
3. Users shall be able to add items to their favorites list
4. Users shall be able to delete items from their favorites list
5. Users shall be able to view number of likes per product listing

3.3.c. Admin Users

1. Users shall be able to access a Control Panel to view pending product listings

4. UI Mockups and Storyboards

1. [Buyer] **Jessica** is an incoming freshman attending college for the first time in her life. She's incredibly excited but also extremely nervous because she's never lived on her own before. She's never gone through the process of scheduling college classes, so she doesn't know exactly what school supplies she'll need nor where to find them, and to top it off she doesn't have any dorm supplies either! Further, she barely knows the area surrounding the campus, let alone how the muni system works, so she isn't comfortable venturing into the city by herself yet. One of her suite mates tells her to check out GatorGoods for help getting settled in, so she finds the site on her phone and checks it out. Immediately she notices that there are easily browsable categories. She browses furniture for a bit before noticing a lamp she really likes. She clicks on the picture of the lamp which brings up additional information as well as an option to add the item to her favorites list. She tries to add the lamp to her favorites, but a prompt directs her to first create an account before favoriting an item. After entering her information, she receives notification that her account has been created and then navigates back to the lamp. In that brief moment during registration, Jessica has decided that she actually wants to purchase the lamp as soon as possible, so she messages the user who made the product listing for the lamp with an offer, and hopes they'll respond!

1.a. Homepage (Unregistered User).

GatorGoods

[Books](#)
[Furniture](#)
[Electronics](#)
[Others](#)
[About Team](#)

An online marketplace specifically designed and limited to students, faculty and staff at SFSU

Featured Categories

[Books](#)
[Furniture](#)
[Electronics](#)
[Others](#)

Books
45 listings for this category
[See more](#)

\$60

Brand new

\$60

Brand new

\$60

Brand new

\$60

Brand new

\$60

Brand new

\$60

Brand new

\$60

Brand new

\$60

Brand new

Furniture
45 listings for this category
[See more](#)

\$60

Brand new

\$60

Brand new

\$60

Brand new

\$60

Brand new

\$60

Brand new

\$60

Brand new

\$60

Brand new

\$60

Brand new

Electronics
45 listings for this category
[See more](#)

\$60

Brand new

\$60

Brand new

\$60

Brand new

\$60

Brand new

\$60

Brand new

\$60

Brand new

\$60

Brand new

\$60

Brand new

Other
45 listings for this category
[See more](#)

\$60

Brand new

\$60

Brand new

\$60

Brand new

\$60

Brand new

\$60

Brand new

\$60

Brand new

\$60

Brand new

\$60

Brand new

1.b. Category Selection

GatorGoods

[Books](#)
[Furniture](#)
[Electronics](#)
[Others](#)
[About Team](#)

Featured Categories

[Books](#)
[Furniture](#)
[Electronics](#)
[Others](#)

Furniture
45 listings for this category
[Sort by: Latest](#)

Subcategory
☐ Living room
☐ Bedroom
☐ Kitchen & Dining
☐ Bathroom
☐ Office
☐ Lighting

Popular items
☐ Sofa
☐ Mattress
☐ Table
☐ Chair
☐ Lamps

Condition
☐ Brand new
☐ Very good
☐ Good
☐ Acceptable

Price
☐ Under \$20
☐ \$20 - \$40
☐ \$40 - \$80
☐ \$80 - \$100
☐ \$100 and up

\$60

Brand new

\$60

Brand new

\$60

Brand new

\$60

Brand new

\$60

Brand new

\$60

Brand new

\$60

Brand new

\$60

Brand new

1.c. Product Listing

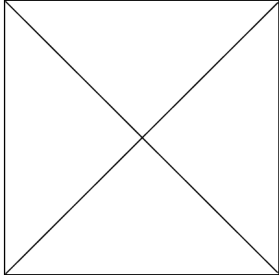
GatorGoods

All

Q

Create Listing
Log in

Books
Furniture
Electronics
Others
About Team



Mid Century Modern Mushroom Floor Lamp - from IKEA

\$25






Condition: Very good

Transaction location: Library, Building 1, Building 2

Details:

- Basic Ikea lamp, black base and frosted shade.
- Small dent in the base as pictured.

Clean and works well.

Contact seller

Seller: jellycat10
Posted: 2 hours ago
Updated: 1 hour ago

Beware of scams and frauds!

1.d. Lazy Registration

GatorGoods

All

Q

Create Listing
Log in

Home
Books
Furniture
Electronics
Others

Please log in to contact the seller

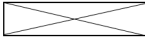
New users

Registered users

SFSU email address

User name

Password



☐ I agree with terms and conditions

Create account

SFSU email address / User name

Password

Forgot PW?

Log in

Beware of scams and frauds!

1.e. Product Listing - Contact Seller

GatorGoods

All ▾

Create Listing 

[Home](#) [Books](#) [Furniture](#) [Electronics](#) [Others](#)

×

Send to

jellycat10

Product name

Contact info

Message

Cancel


Send

Beware of scams and frauds!

2. [Seller] **Nate** is a senior student about to graduate, and has no issues going through the process of finding school supplies and simply waits for professors to state what materials are needed for their classes in person so he doesn't end up purchasing unnecessary items. At this point in his academic career, his main focus is graduating, finding a job, and finding a way to get rid of his dorm furniture that he'll no longer need! He already has a GatorGoods account and has used the site to buy a used textbook last semester, so he's familiar with how the process of buying and selling works and knows he can possibly find buyers for his dorm furniture. He accesses the site on his laptop, logs in, and clicks the link to make a product listing. He decides the first thing he'll list is his old desk chair. GatorGoods takes him step-by-step through the process, having him fill in information about the chair and requesting he upload a picture of it, and then directs Nate to either finalize the listing, or to cancel it. He clicks to submit his listing for review to a site admin, and then logs off. The next day, he logs onto his GatorGoods account and sees his product listing has been accepted, and he can now start receiving messages from interested buyers. Success!

2.b. Create Product Listing

GatorGoods All ▾

Create Listing 

Home Books Furniture Electronics Others

Create a Listing

Posting Title

Description

Upload Images

Category

Price

Brand

Condition

☐ Brand New
☐ Very Good
☐ Good
☐ Acceptable


Transaction Location

☐ Location 1
☐ Location 2
☐ Location 3
☐ Location 4

2.c. My Dashboard - Product Listings

GatorGoods

All ▾

Create Listing 

Books Furniture Electronics Others About Team

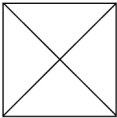
My Dashboard

Product Listings

Messages

Delist

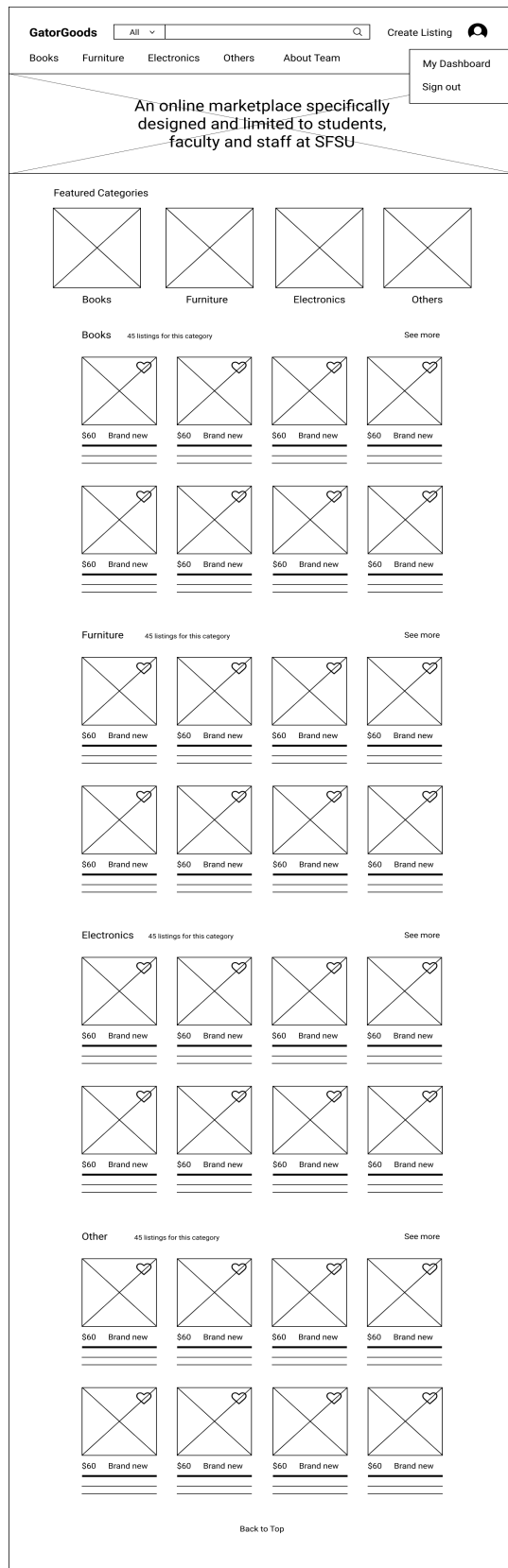
Edit




\$60 Brand new

3. [Seller] **Professor Anderson** is a tenured and dedicated geography professor at SFSU. He loves teaching, and is always excited to greet the students in his new classes. However, he's decidedly less enthusiastic about cutting down trees to print new textbooks for courses that haven't changed their content from the previous semester. This, combined with the fact that he just recently received news that his new course was approved for lecture and will be offered next semester, means that he was in the perfect position to give his previous class' textbook a new home. Despite not being tech-savvy, Professor Anderson has found the process of registering an account with GatorGoods and making a product listing for his old textbook easy, even for him. One day between classes, he sits down in front of the aging desktop computer in his office and opens his browser to GatorGoods, where he logs into his account. He checks the status of his product listing, and sees that some interested users have recently messaged him with potential offers. He reads their offers and decides that he will accept one which seems like a fair price. The next day after meeting with the buyer in-person and selling his textbook, he goes back to his office happy that no trees had to be culled for his old class, and marks his product listing as sold so that he stops receiving notifications of offers for the textbook he no longer owns.

3.a. Homepage + Profile Options

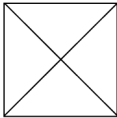


3.b. My Dashboard - Product Listings


GatorGoods All ▾ Create Listing 

Books Furniture Electronics Others About Team

My Dashboard







Product Listings	<div><div>Delist Edit</div><div></div><div><div>\$60 Brand new</div><div></div><div></div></div></div>
Messages	

3.c. My Dashboard - Messages

GatorGoods All ▾ Create Listing 

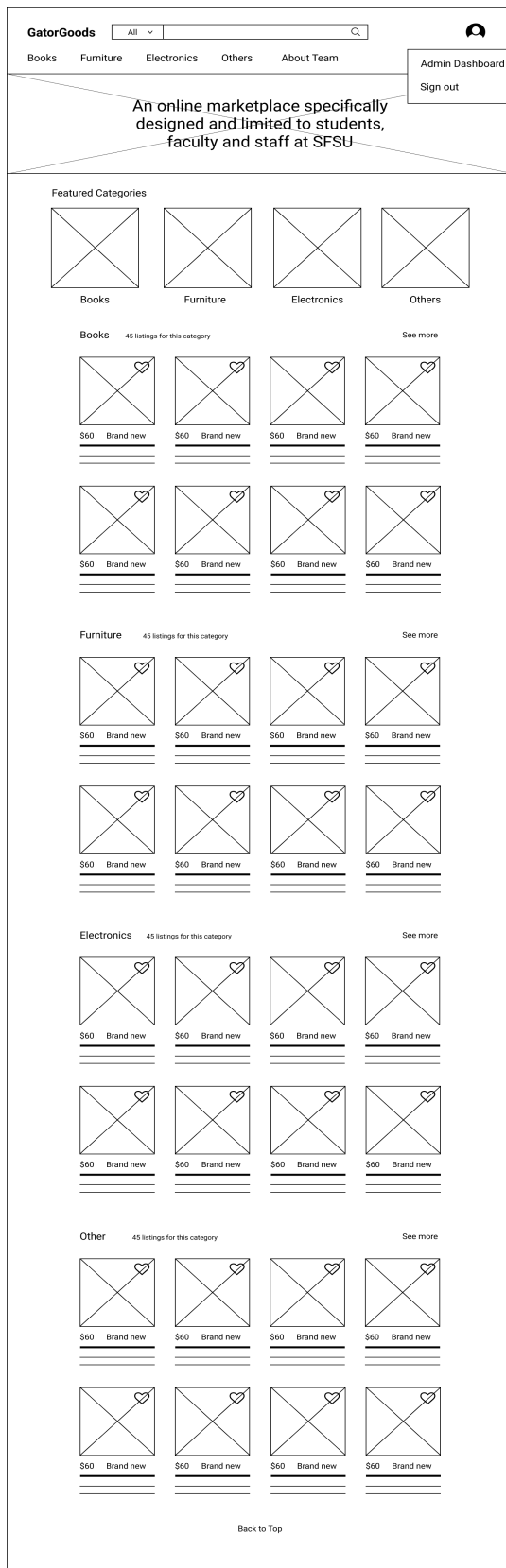
Books Furniture Electronics Others About Team

My Dashboard

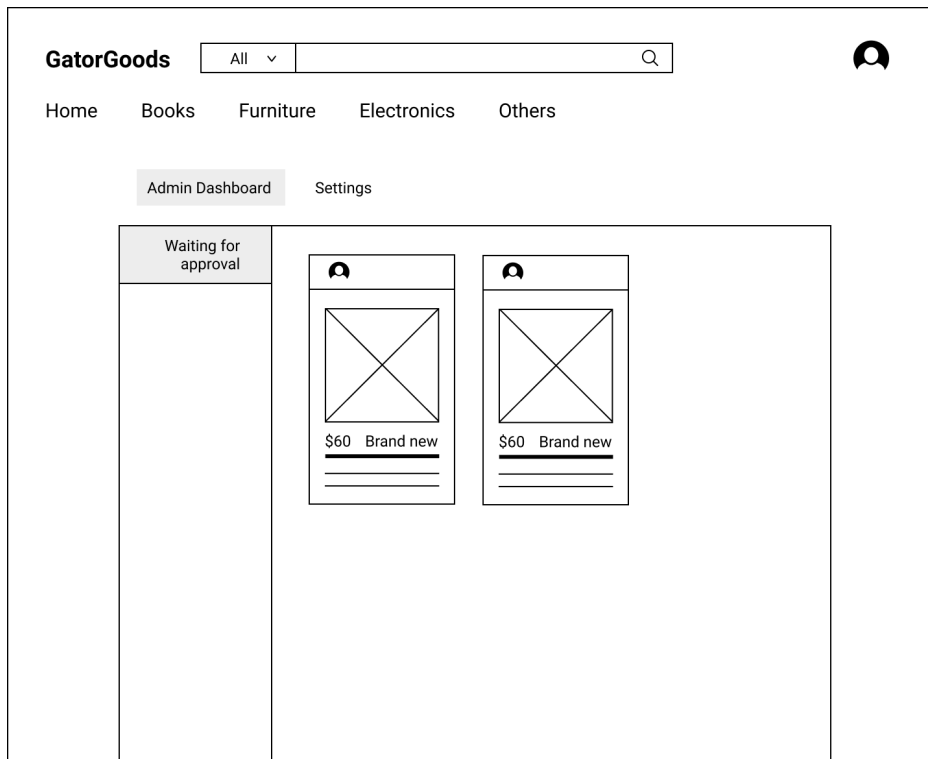
Product Listings	<div> sfhgg12 Aug. 12 You: Hi, the lamp is \$30 dollors, made in U.S.</div> <div></div>
Messages	<div><div> sfhgg12 Aug. 12 You: Hi, the lamp is \$30 dollors, made in U.S.</div><div></div></div> <div><div> sfhgg12 Aug. 12 You: Hi, the lamp is \$30 dollors, made in U.S.</div><div></div></div>

4. [Admin] **Julie** is a computer science major in her third year at San Francisco State University who's recently accepted an admin role for GatorGoods. She knows computers and technology like the back of her hand, and is well-versed in the layout and functionality of GatorGoods. While she has no struggles with accessing the site on her phone or laptop, her main concern is that she'll have to spend too much of her study time approving or denying product listings, meaning that she'll have to decide whether or not those product listings violate the terms and agreements users must sign when creating an account. While she enjoys the role of admin, and has performed similar roles on online forums related to her computer science classes, she hopes the process will be streamlined enough so that she can make decisions quickly and efficiently and then get back to her studies. On the first day of her new role of admin, she logs into GatorGoods and sees a notification that there are product listings requiring her approval. After reviewing the first product listing, she decides that it does not break the terms and agreements of the site, and allows it to be posted. When reviewing the second product listing however, it only takes a precursory glance to know it's not allowed on the site, so she opts to immediately delete the listing. That hardly took any time at all! She's relieved to find that moderating content on GatorGoods is as easy as it is efficient! Now back to her studies!

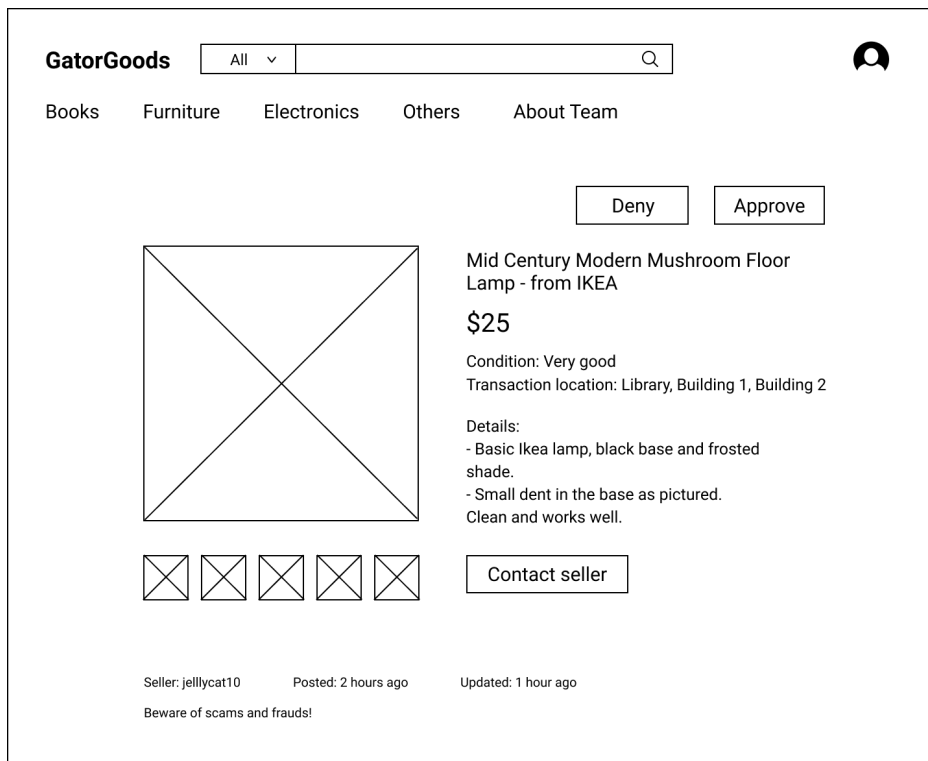
4.a. Homepage + Admin Options



4.b. Admin Dashboard - Pending Listings



4.c. Pending Listing - Approve/Deny



5. High-level Architecture, Database Organization

5.1. Database Organization

Registered Users	Admin Users	Chat Log	Chat Message	Product Listing	Category
id	id	id	id	id	books
username	password	user_id	parent_log	list_user_id	electronics
password		chat_messages	string	like_user_ids	furniture
email			time	chat_ids	other
liked_listings				images	
chat_logs				time	
				approval_statuses	
				delist_status	
				description	
				fk_category	
				title	
				price	
				brand	
				condition	
				location	

5.2. Media Storage

1. Images will be stored as BLOBs in our MySQL database.

5.3. Search & Filter Implementation

1. Search will be conducted through %like.
2. Filtering will be based upon specified price, category, brand, and/or condition through the use of basic SQL.

5.4. Additional APIs

1. Create Product Listing
2. Retrieve Product Listing
3. Create Chat Log
4. Retrieve Chat Log
5. Upload Image
6. Retrieve Image
7. Register User
8. Authenticate User
9. Register Admin User
10. Authenticate Admin User
11. Approve Product Listing
12. Deny Product Listing

6. Key Risks

At this time, we do not anticipate any skill, schedule, teamwork, or legal risks within our local division. We do however, foresee that a lack of MySQL familiarity might impact our ability to meet database-specific deadlines should we encounter issues.

In addition to our local risk, we anticipate that coordinating with Fulda University, Germany might become a major hurdle down the line.

7. Project Management

We are using Trello to track tasks as well as keeping an active Discord server in which our members are in constant communication. For the storyboarding, we are implementing a shared project in Figma. As we are starting shorthanded compared to the other groups, we are still assigning tasks based on their content, e.g. front-end tasks are designated as such, and back-end tasks are sent to the back-end; however, our Team Leader and GitHub Master are functioning as flex operators, filling in and providing additional help as needed. Further, due to our small size, while a task may be assigned to a specific lead, should they request additional help, all members are free to contribute where possible.