

Software Engineering CSC648/848 Fall 2020

The Gator Store

Team #2

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History Table

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Executive Summary

Gator Store is the latest and greatest new store to sell items among San Francisco State University students, faculty, and staff. Gator Store offers the fun of making money without the fees, and with an added layer of security of making sure that the users are verified. All members of the platform are going to have to provide a SFSU email to make sure that they are indeed SFSU students or students or faculty or staff. Gator Store administrators will need to approve the postings to make sure it meets the laws and regulations making sure nothing illegal is being sold on the website. The motivation behind Gator Store is that students that do not have a safe place where they can shop freely for books, and other items that would otherwise need to be bought for a lot more money elsewhere. It is important that students have a way to safely communicate together on a platform that makes sure all it's members are verified through SFSU emails.

Gator Store will include a unique feature where a student can search for a book or an item being sold using the course that it was used in and/or the professor that taught that course. This convenience feature will make students much more likely to use the app making sure that the searching criteria is well defined so that a student can look for a course's material quickly and effectively. A security feature that Gator Store offers is making sure that all incoming users need to be checked and verified to have an SFSU email. SFSU revokes email access as soon as the student or faculty or staff member leaves the University, which makes this way of verifying the students, faculty, and staff reliable.

The Gator Store web app is all based on suggestions and comments by SFSU students, faculty, and staff. It is our goal to come up with an app that is tailored for the needs and requests of SFSU Users. We took every suggestion and comment seriously and based on that we had gone ahead to create an app that would be best serving the needs of SFSU students, faculty, and staff. The Gator Store is aimed to be the best app that will be the hub of all university students, faculty, and staff to be able to buy/sell items to each other while saving money.

2. List of main data items and entities

1. Unregistered user
 - 1.1. An unregistered user does not have a User Account.
 - 1.2. An unregistered user can browse and search the website without login or registration.
 - 1.3. An unregistered user can register using their SFSU email.
2. Registered user
 - 2.1. A registered user has a User Account with their SFSU email.
 - 2.2. A registered user can buy, sell, or exchange items on the website.
 - 2.3. A registered user needs to log in before posting anything on the site.
3. Admin
 - 3.1. An Admin shall have a special Admin account to manage posts and registered user accounts.
 - 3.2. An Admin must verify/approve posts before they are posted to the website.
 - 3.3. An Admin shall be able to delete any illegal/inappropriate posts or user accounts.
4. User Account
 - 4.1. A User Account is an overall list of registered users on the site, confirmed by SFSU email domain.
 - 4.2. A User Account shall be managed by registered users.
 - 4.3. A User Account can be deleted by an Admin.
 - 4.4. A User Account has the following data: Email, Password, First name, Last name, Id,
5. Posts
 - 5.1. Posts is an overall list of products available for sale or exchange, sorted into different categories.
 - 5.2. Each post shall have a price, a category, a description, and an image.
 - 5.3. Each post shall have a visit count.
6. Categories (Sub-item of POST)
 - 6.1. Each post will be placed into an appropriate category for easy browsing/searching.
 - 6.2. Categories shall be managed by admins to ensure proper placement of item posts.

6.3. Values for Categories are: Books, Electronics, Furniture, Clothing, School Supplies, Household items.

7. Messaging

7.1. Shall be the only point of contact between all registered users.

7.2. No personal information shall be shared without consent. Phone numbers may be shared between registered users as an external point of contact.

7.3. A message shall be one way from buyer to seller.

7.4. Message recipient must be the seller.

7.5. Messages contain the following data: Date, Id, Content, Post(as fk)

3. Initial list of functional requirements

Priority 1:

→ Unregistered users

- ◆ Unregistered users shall be able to browse the home page
- ◆ Unregistered users shall be able to register for an account
- ◆ Unregistered users shall be able to view the product description
- ◆ Unregistered users shall be able to see public posts
- ◆ Unregistered users shall be able to search for the product by name, class number, Professor's name, category, title, and/or description

→ Registered users

- ◆ Inherits all from unregistered users
- ◆ Registered users shall be able to login
- ◆ Registered users shall be able to sign out
- ◆ Registered users shall have a dashboard to edit, see their posts, and see messages
- ◆ Registered users shall be able to contact the seller

→ Admin

- ◆ Admin shall be required to approve all posts before they go live
- ◆ Admin shall be able to delete inappropriate posts
- ◆ Admin shall have a dashboard to approve and report posts.

Priority 2:

→ Registered users

- ◆ Registered users shall be able to modify their profile

Priority 3:

→ Unregistered users

- ◆ Unregistered users shall be able to filter posts by most visited and by price

→ Registered users

- ◆ Inherits all from unregistered users

→ Admin

- ◆ Admin shall be able to block, disable and enable any user accounts

4. Mockups and Storyboards

Case 1.Function - Create an account, searching, buying books, messaging
Categories Page: Sally, as an unregistered user, she can browse the categories.

Logo

All ▾

Q

Home About Sell Account ▾

The Gator Store is the latest and greatest new store to sell items among San Francisco State University students, faculty, and staff.

Categories

Books

Electronics

Furniture

Clothing

School Supplies

Household Items

Recent Posts

Item 1

Item 2

Item 3

Item 4

Item 5

Contact

Term

Privacy

Search result page: She searches for the textbook that she is looking for. She found the textbook, but cannot contact the seller without being a registered user. Sally clicks on the Sign Up button to create an account.

Logo

All ▾

🔍

Home About Sell Account ▾

Search result: textbook

Displaying 1-8 out of 100

Next Page ⇌

Textbook 1

Textbook 2

Textbook 3

Textbook 4

Textbook 5

Textbook 6

Textbook 7

Textbook 8

Next page ⇌

Contact

Term

Privacy

Create Account Page: Sally fills the create Account form with her information, but a very important detail, that she needs to use her SFSU email to be able to create an account at The Gator Store.

Logo

All ▾

🔍

Home About Sell Account ▾

Create Account

👤 Full Name

✉ Email (sfsu.edu)

🔒 Password

🔒 Confirm Password

☐ I read and agree to **Terms and Conditions**

Create Account

Already have an account? **Login**

ContactTermPrivacy

Item's page: Now that Sally is a registered user, she can message the seller about the textbook that she needs to buy.

<div>Logo</div>	<div>All ▾</div>	<div><input type="text"/></div>	<div>🔍</div>	<div>Home About Sell Account ▾</div>
<div><div><div>Book Title:</div><div><div>Book Image</div><div>Course: Instructor: Description: Price:</div></div></div><div><div>Message:</div><div><div></div><div>Send</div></div></div></div>				
<div>ContactTermPrivacy</div>				

Case 2. Function - Logging into account, buying a clicker, searching by categories

Login and User Dashboard pages: Joe, a registered user, logs into his account before looking for the item he needs. After he logs in he is brought to his account dashboard, where he can view the verification status of any items he may have posted for sale and any messages sent to him regarding the items.

Logo

All ▾

🔍

About

Sell

Login

Sign Up

Log In

✉ Email (sfsu.edu)

🔒 Password

Forgot Password?

LOGIN

or

Create an account

Contact

Term

Privacy

Electronics Category page: After logging in and viewing his dashboard, Joe goes to the Electronics category page to browse through the selection of items and find the clicker he needs for his class.

Logo

All ▾

🔍

Home About Sell Account ▾

← Return to Categories

Electronics

Item 1
Description:
Price:

Item 2
Description:
Price:

Item 3
Description:
Price:

Item 4
Description:
Price:

Item 5
Description:
Price:

Item 6
Description:
Price:

Item 7
Description:
Price:

Item 8
Description:
Price:

Contact

Term

Privacy

Case 3:

Function - Approving submitted posts, delete users not following rules, email verification
Matt logs onto The Gator Store through his administrator account and reviews the website and database. He checks the newest editions to his website that students or professors may have submitted. Then makes sure illegal or dirty posts have been unapproved before going live. He approves all the posts that were acceptable. Matt also deletes the users who posted inappropriate things. The school year has just started and he has a busy checklist to go through. He sees his website is doing well and has many new users. All SFSU students of course, he prioritized student emails in the registration process.

We decided to use Workbench for our admin dashboard.

Case 4. Login- Desktop version which will be responsive and mobile friendly. Professor Fox is in a rush, needs a calculator as soon as possible, so on his way to school he logs onto The Gator Store and browse on the Electronics section.

Logo

All ▾

🔍

About

Sell

Login

Sign Up

Log In

✉ Email (sfsu.edu)

🔒 Password

Forgot Password?

LOGIN

or

Create an account

Contact

Term

Privacy

Electronics section page's - He browses through the posts, to find the calculator that he has been looking for.

Logo

All ▾

🔍

Home About Sell Account ▾

← Return to Categories

Electronics

Item 1
Description:
Price:

Item 2
Description:
Price:

Item 3
Description:
Price:

Item 4
Description:
Price:

Item 5
Description:
Price:

Item 6
Description:
Price:

Item 7
Description:
Price:

Item 8
Description:
Price:

Contact

Term

Privacy

Item's page - After finding the calculator that Fox was looking for, he messages the seller hoping that the calculator was still available and would be possible to meet the seller to finalize the purchase.

Logo

All ▾

🔍

Home About Sell Account ▾

[← Return to Electronics](#)

Item Title:

Book Image

Description:

Price:

Message:

Send

Contact

Term

Privacy

5. High level Architecture, Database Organization:

Users:

- Email
- Password
- First name
- Last name
- Id

Posts:

- Date
- Id
- Title
- Description
- Full Size Image
- Thumbnail Image
- Visits
- Approval flag
- Instructor
- Course
- Reported flag
- Price
- Category

Messages:

- Date
- Id
- Content
- Post (as fk)
- Sender ID

Category foreign key:

- Name
- Id

Digital Media Storage:

Our digital media storage will be stored as files in AWS S3 which is protected. We will store the link, to the images, on each post or wherever needed.

Search/Filter Architecture and Implementation:

We will have a text search that will use SQL's %Like. Also you will be able to search by categories. Our categories are: Books, Electronics, Furniture, Clothing, School supplies, Household items.

API's:

Frontend- AWS SDK

Backend- AWS SDK

The backend will send a presigned url based on the file name and file type and that will be used by the front end application to initiate a PUT request to the AWS S3 server to be able to upload the specified image and also show progress of the upload. The server will only provide the presigned url and will not upload the image to aws s3. The frontend is going to be initiating the PUT request to the URL provided by the backend.

New or removed Software Tools and Frameworks:

None

Non-trivial algorithm or process:

Most visited - This sorting algorithm will ensure that users get the most trending items first to keep them engaged with the app. This will be done by keeping track of visits per post and that will give a more relevant search to the user since they will be the items that have the highest demands. For each query on the posts being pulled from the database the results will be ordered by the visit count.

6. Key Risks

Technical risk - We had trouble connecting to MySQL.

Resolution - We all made sure to download MySQL and wrote down our root password so we can connect. To connect to the server we searched online if anyone had a similar problem and we found the solution. We took out the database key and added an injection to the database, then it worked.

7. Project Management

We have decided to use Trello for our project management. Ramy has experience with Trello so he gave us a tutorial on how to use it. It was fairly easy to learn and we have assigned tasks on it now. Trello is nice because it gives a section for things that need to be done. We have our to do lists and from there we assign them to the different sections. The sections we use are backend and frontend as well as our individual tasks. Our individual tasks are all of our names and from there we can assign those to the backend or frontend section, depending on where they belong. For milestone 2 we have the frontend doing the mockups and storyboards, while the backend does the high level database architecture and vertical prototype. For the smaller tasks we did those as a group instead of breaking them up by team. Trello will help us organize our tasks better and finish them on time. Everyone will know what they are supposed to be doing and any confusion will be avoided.