

# **Software Engineering CSC648/848 Fall 2020**

## **The Gator Store**

### **Team #2**

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September 25, 2020

History Table

Date Submitted: 09/25/2020	Date Revised: 09/28/2020
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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 to be able to come and meet each other to exchange items and save SFSU Users money.

## 2. Personae and Use Cases

### Sally

- Characteristics
  - First semester at SFSU
  - Majoring in Communications
- Goals
  - To get straight A's
- Skills
  - Strong communication skills
  - Good amazon shopper
- Pain Points
  - Not having enough time to pursue her other interests



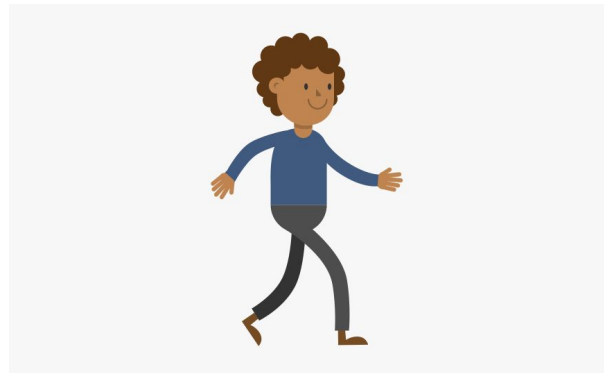
### Joe

- Characteristics
  - Junior at SFSU
  - Math Major
- Goals
  - To build his Resume
  - To score an internship
- Skills
  - Great hands on learner
  - Can solve math equations on the fly
  - Good at using The Gator Store
- Pain Points
  - Very shy in interviews



### Matt

- Characteristics
  - Computer Science Major
  - Natural Leader
- Goals
  - To create a website for his school (SFSU) to make buying and selling books easier
  - To make sure his website is safe and secure for users
- Skills
  - Great database skills
  - Efficient coder, specializes in Javascript
  - Can build a computer
- Pain Points
  - Very shy and would not want face to face contact with his users
  - Would prefer to solve problems over the web



### Professor Fox, Ph. D.

- Characteristics
  - Business Professor at SFSU
  - Passionate about teaching his students to the best of his abilities
- Goals
  - Submit a newer edition of his textbook
- Skills
  - Writing tips and tricks for his students
- Pain Points
  - Not good with a computer



## Use Cases

1. Function - Create an account, searching, buying books, messaging  
Sally is excited to start her first semester at SFSU. She goes to the Student Store and sees a line going out the door. Sally is a busy student and does not have time to wait so she goes onto The Gator Store. She looks up her classes by Professor and finds her class. Then she tries to buy a book, but is directed to creating an account. Sally creates an account and then is able to buy her textbooks from a student on campus after messaging them. She feels safe by setting the meeting point at the Library.
2. Function - Logging into account, buying a clicker, searching by categories  
Joe walks past the bookstore and sees the never ending line and laughs. He goes on his phone and logs onto his account at The Gator Store. Joe remembers the time before The Gator Store existed and doesn't like to dwell in dark places. He quickly looks up the electronics category and finds the clicker he needs. He buys his clicker after meeting with the seller at school.
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.
4. Function - mobile functionality  
Professor Fox wants to buy a used calculator quickly for his classroom. Usually he uses his desktop at home for shopping, but he is in a hurry. He goes on his phone and logs onto The Gator store. He finds the calculators in the electronics section and messages the seller. He meets with them on the school campus and pays.

### **3. 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.
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.
6. Categories
  - 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.
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.

#### **4. Initial list of functional requirements**

- 1. Unregistered users
  - 1.1. Users shall be able to browse the home page
  - 1.2. Users shall be able to search for the product by name and/or class number and/or Professor's name
  - 1.3. Users shall be able to register for an account
  - 1.4. Users shall be able to view the product details
  - 1.5. Users shall be able to see public posts
- 2. Registered users
  - 2.1. Users shall be able to login
  - 2.2. Users shall be able to sign out
  - 2.3. Users shall provide their email as part of registration
  - 2.4. Users shall be able to post an item for sale
  - 2.5. Users shall be able to contact the seller
  - 2.6. Users shall be able to respond back to a message from a potential buyer
  - 2.7. Users shall be able to report to the administrator about any illegal activity
  - 2.8. Users shall be able to modify their profile
  - 2.9. Users shall be a faculty member, staff or student
- 3. Admin
  - 3.1. Admin shall be able to delete inappropriate posts
  - 3.2. Admin shall be able to block, disable and enable any user accounts
  - 3.3. Admin shall be required to approve all posts before they go live

## 5. List of non-functional requirements

High-level non-functional specifications (how the app is delivered and other constraints) that MUST be adhered to

1. Application shall be developed, tested and deployed using tools and servers approved by Class CTO and as agreed in M0 (some may be provided in the class, some may be chosen by the student team but all tools and servers have to be approved by class CTO).
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 must 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 and all privacy policies will be appropriately communicated to the users.
7. The language used shall be English (no localization needed)
8. Application shall be very easy to use and intuitive
9. Application should follow established architecture 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 to 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 practices shall be used as specified in the class, including collaborative and continuous SW development
17. The application UI (WWW and mobile) shall prominently display the following exact text on all pages "SFSU Software Engineering Project CSC 648-848, Fall 2020. For Demonstration Only" at the top of the WWW page. (Important so as to not confuse this with a real application).



## 6.Competitive analysis

Features	Facebook Market	Amazon	Ebay	SFSU Book store	The Gator Store
Search by SFSU Class				✓	✓
Direct contact to Seller	✓	✓	✓		✓
Restricted to only SFSU students, faculty, and staff					✓
Easy to use on a mobile device	✓	✓	✓	✓	✓
Admins must verify post before its uploaded on site					✓
Item exchange					✓

What makes The Gator Store different from other the other competition on the market like Amazon, Ebay, Facebook Marketplace, and SFSU bookstore was that The Gator Store was built and designed on the idea of providing a services that allows San Francisco State University students, faculty, and staff to buy, sell, or exchange goods for a very cheap price. In comparison to our competitors, The Gator store will offer many of the key features that are offered by our competitors like being able to have direct contact with the seller and being easy to use on a

mobile device, but will also have features that are exclusive to the Gator Store that will create a unique experience. For example, The Gator Store will only allow San Francisco State University affiliates to be able to buy, sell, or exchange items on the websites, the university is widely considered a commuter school so by making The Gator Store exclusive to San Francisco State University we help build a better sense of community and safety with our users. Users of The Gator Store will be able to search items by categories and by SFSU Class and Professors. Also all posts made by students, facilities, or staff will be reviewed by an admin before it will be uploaded on the site in order to make sure that nothing inappropriate will get posted to the website.

#### **7. Backend languages/Frameworks:**

- SQL for queries and database operations.
- Javascript 1.8.5
- NodeJs 14.9.0 (runtime environment)
- ExpressJS 14.17.1 (Server)
- **Database:**
  - MySQL 8.0.21

#### **Frontend languages/Frameworks:**

- HTML.
- CSS.
- Javascript 1.8.5
- Bootstrap 4.5.2

#### **Tools:**

- Visual Studio Code 1.48
- Chrome inspection tools (85.0.4183.102) ^

#### **Systems for development:**

- MacOS (UNIX)
- Windows

#### **System for deployment:**

- Ubuntu 20.04.1 (Linux)

#### **Supported browsers:**

- Firefox (80.0.1) ^
- Chrome (85.0.4183.102) ^

#### **Deployment platform:**

- AWS EC2 instance.

8. Team and roles:

Student Name	Student Email	GitHub Username	Role
Giovann Fox	<a href="mailto:gfox@mail.sfsu.edu">gfox@mail.sfsu.edu</a>	giovannfox	Team Lead / Backend Lead
Beatriz Ribeiro	<a href="mailto:bribeiro1@mail.sfsu.edu">bribeiro1@mail.sfsu.edu</a>	beatrizmribeiro	Frontend Lead
Ikenna Eke	<a href="mailto:ieke@mail.sfsu.edu">ieke@mail.sfsu.edu</a>	Ikenna-Eke	Backend Member
Jessica Serrano	<a href="mailto:jserrano5@mail.sfsu.edu">jserrano5@mail.sfsu.edu</a>	jserrano5	Frontend Member
Ramy Fekry	<a href="mailto:rfekry@mail.sfsu.edu">rfekry@mail.sfsu.edu</a>	Ramy1951	Github Master

## 9. Checklist

1. So far all team members are engaged and attending ZOOM sessions when required  
DONE
2. Team found a time slot to meet outside of the class  
DONE
3. Back end, Front end elads and Github master chosen  
DONE
4. Team decided and agreed together on using the listed SW tools and deployment server  
DONE
5. 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
6. Team lead ensured that all team members read the final M1 and agree/understand it before submission  
DONE
7. Github organized as discussed in class (e.g. master branch, development branch, folder for milestone documents etc.)  
DONE