SW Engineering CSC648/848 Fall 2018
Gator Trader - Milestone 1
Team 14
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Oct 3, 2018

# Gator Trader - Milestone 1

## Edit History

Oct 3, 2018 - First Draft

## 1. Executive Summary

Buying and selling things online has become increasingly easier over the years; people can buy and sell though various ecommerce sites. Most of these sites are created for general users and markets. They do not have features to provide certain people with a better, and more convenient experience. SFSU students have specific needs that aren't catered to by any other product. SFSU students have less time and expendable income than the average American, are tech savvy, and their courses need to be taken into consideration.

To fulfill this need, we are creating Gator Trader. A website that can be used at home, in class, or on the go. Students of SFSU will be able to buy and sell goods such as books, furniture, electronics, supplies, and more from other students. The site will include features that will cater to them specifically. Things such as the ability to filter results based on their registered course, specifying meeting locations on campus, and direct communication between one another within the application.

Gator Trader will be produced by a team of seven undergraduate SFSU students, who personally know the needs of the users of the website.

## 2. Personas and Use Cases

**Case 1:**

Jessica (busy student, tired and stress , lots of furniture to get rid of) -



Jessica is a SFSU Senior, about to graduate in two weeks. Jessica has big plans after school. She is moving to New York for her new exciting job in her field. Her problem is, she has a lot of furniture she does not need anymore. She goes online and scrolls for a local buyer/seller website and she stumbles upon "Gator Trader". Clicks on the website and is already in love with the simple UI and the environment that it provides for SFSU students. She follows through the application. Sees the seller post link and clicks it. Easy to follow instructions of what to provide on the post. As she finalize the post , she is prompted to sign in. Already committed to the post , she signs up. Within a few days, she signs in and checks her dashboard and finds a message asking to meet at the Cesar Chavez building for her dining table set. Soon enough all the items she needed to get rid of are gone and sold, easily by "Gator Trader".

**Case 2:**
John (Freshman , Moved From Out-Of-Town , Moved into unfurnished room) -



John just moved to San Francisco from Texas. He is a SFSU freshman and just leased his first ever apartment in Park Merced. As he enter his place, it

is empty and lonely. He hops onto his laptop to look for furniture. The first websites he sees are Ikea, Target and then "Gator Trader", it catches his eye. He reads the website is exclusively for SFSU students. The first thing he sees on the website is a list of items recently added onto the post. He scrolls around seeing items he is interested in. He sees he can bookmark items onto a list to look at later. He goes through all the categories quickly because of the simple UI provided for him. Now he got his little list finished. He goes to contact the seller for the first item and registration pops up. Since he already made a list, he signs up and is now able to save his bookmark list and contact the seller through "Gator Trader".  The seller calls back and they meet up near Thornton Hall. John now has a new chair for his apartment, but has much more to get from his bookmark.

**Case 3:**
Kelly (Junior SFSU, books , middle of semester)-



Kelly is in the middle of her semester and is an experienced buyer in the textbook industry. She knows it is best to wait to buy textbooks and find the best price. It is coming near the midterm season and she needs her books now. As she looks for the books online , she can not find any good deals on the textbooks she needs. Then she sees "Gator Trader". She reads that the website is for SFSU students. Clicks onto the link and she is on the move looking for her books. Kelly easily navigates herself through the page and finds the sidebar for categories. From there, she searches for her textbook and one by one makes a bookmark list. She is now ready to contact the seller. She signs up and starts to messaging each seller through "Gator Trader".  One of the seller's is willing to bargain to trade an item of equal value. Kelly offers a make-up lamp for the seller's textbook. The seller agrees and they exchange, win-win for both users. All of this is possible through "Gator Trader".

**Case 4:**
Michael (Admin , approves/rejects post )-
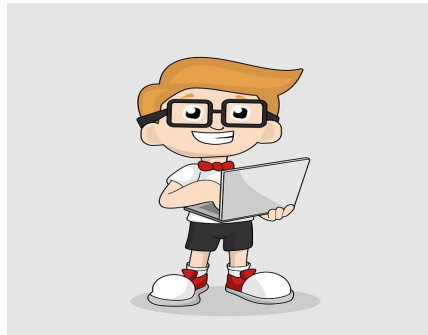


        Michael is a Administrator for the "Gator Trader" site. He was hired to handle the posts. He has the ability to approve/reject posts of registered users. One day Michael logs into the Administrator page to work on the pending post waiting for his approval. As he goes through the post, he sees one pending post with very inappropriate content and rejects it. He then goes along with the rest of the list of post. The following day, the same user tries to post the same content. Michael reviews the account activity and decides to ban the user from the website. "Gator Trader" does not approve such behavior and provides to keep it a safe environment.

# 3. Data Definitions

**1. Gator Trader** - The name of our product

**2. User** - Any individual using our website.
    **- Non-registered User** - Permission to search the site, open / read description and pictures on posted items. Allowed to click on "create a posting" but will be prompted after trying to submit post to either sign in or create an account.
    **- Registered User** - Permission to search the site, open / read / create a posting and pictures. Allowed to create a personal profile. <u>Should be a college student but students outside of SFSU are encouraged.</u>
    **- Administrator** - Granted permission to accept and remove posts. Ability to ban a user if they feel it's appropriate. Inherits permissions of registered users.

**3. User Profile** - Allows a user to display information describing themselves, such as which college they are attending, where they are located, etc. A picture of themself can be posted if they wish to do so.

**4. Administrator Page** - Interface where an administrator has the ability to perform their roles.

**5. Registration Page** - A form which requires an individual to input certain information regarding their identity. This can include their name, location, and even a short description about themselves.

**6. User Agreement** - A *not real* legal document between the website and registered user. In order to use the website's services, the user must "agree" with the website's terms of conditions and policies before becoming a registered user.

**7. CAPTCHA** - A security check to confirm if a user is a real-person or a computer bot. The security check can consist of re-typing a displayed word to clicking the requested images.

**8. Bookmark** - Registered users are able to save and favorite posted items they may be potentially interested in. This provides for quicker access as well as the ability to store all interested items in one location.

**9. Search Function** - Allows the user to search for an item by directly typing in the item they are interested in. This allows for quicker access version us searching through each post. A search field will be available on every webpage.

**10. Post** - Actual listing of a product posted by a registered user which contains information regarding the item they would like to sell or purchase. This can include a picture of the item followed with a description. The meetup location and contact information can also be found here.

> **- Category** - Sorts each post by the specific item posted to create an easier method to find an item. A user can then choose a category from a drop-down menu specified by a keyword.
> **- Title** - Name of the product listed.
> **- Description** - Thorough explanation describing the product listed. This can include the age of the product, condition, manufacturer, etc.
> **- Image** - A minimum of 1 image clearly showing the specific item listed.

**- Post status** - Displays if a registered users post was accepted or declined by an administrator.
**- Seller** - The User who made this post.
**- Status** - The state of the post. Can either be Pending Approval, Approved, or Removed
**- Price** - The amount of money the user who made the post is asking for the product they are trying to sell / buy.
**- Meetup Location** - Location where the selling and buyer both agree on to conduct the transaction of buying or selling an item.
**- Contact Information** - A method in which a buyer or selling can contact the owner of a specific post.

**11. Posting Section** - A page which contains all of the current postings listed on Gator Trader.

**12. Sort Function** - Allows the user to order the postings from the most recently posted, most expensive to least expensive posts, and least expensive to most expensive posts.

# 4. Initial List of Functional Requirements

## <u>Non-Registered and/or Registered User</u>

**1**.  **Non-Registered and registered users shall be able to search by category** - Items can be divided under certain subsections. For example, a sofa/table would be listed under furniture.

**2. Non-Registered and registered users shall be able to search by keyword** - For example, "Java Programming Book" for sale could have several keywords attached to the search result - programming and book.

**3. Non-Registered user shall register to contact seller** - Non-Registered users should go through the registration verification to prevent spammers, and to keep the registered-user accountable for their actions on their account.

**4. Non-Registered and registered users shall have access to contact information to a help desk** - An email listed on a contact us page or the bottom of every page to help resolve any issues or questions that may come up.

## Registered User

**5. Registered user shall be able to post listings** - The registered user will fill out required information regarding their post such as name, price, category, description, etc. as well as adding certain keywords to make their product more visible.

**6. Registered user  shall be able to delete listings** - If the registered user have sold the product elsewhere or no longer wish to sell, they have the option to delete the listing on the site.

**7. Registered user  shall register to post** - Non-Registered users will have to create an account before being able to post so their seller profile can be displayed. They will choose a login and password for their account. This will also show contact information/ messaging.

**8. Registered user shall be able to login with their credentials after registering** - They can access their user profile through with their username and password they had selected during registration.

**9. Registered user shall have postings automatically removed if they become banned** - If a registered user had postings listed and becomes banned, their postings will be removed from the site.

## Administrator

**10. All products shall require administrator approval before posting** - After a registered user has posted an item, it will be sent to a moderator for approval. If the post is accepted, it will then be posted for public view. If it is rejected, a message/email will be sent to the poster listing what requirements the post failed to meet.

**11. Registered user shall be banned by the administrator for posting anything inappropriate** - To increase the positive experience for our non-registered and registered users, we do not allow any profanity, nudity, etc. to be posted in messages or listings. We don't allow registered users to use language that we consider to be defamatory, offensive, or that could be seen as abuse or harassment.

**12. Registered user shall be banned by the administrator for any phishing or scamming attempts** - An administrator may ban a registered user if there is any attempt or intention of scamming/phishing another registered user.

# 5. List of non-functional requirements

**System Specifications:**
1. Application shall be developed, tested and deployed using tools and servers approved by Class CTO and as agreed in M0.

2. Application shall be optimized for the latest 2 versions of the Safari and Google Chrome desktop browsers.

3. Application functions shall render appropriately on mobile devices.
4. Data shall be stored using MySQL.

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 shall be appropriately communicated to the users.

7. The language used shall be English.

8. Application shall be very easy to use and intuitive.

9. Google analytics shall be added.

10. No email clients shall be allowed.

11. Pay functionality, if any (e.g. paying for goods   and services) shall not be implemented nor simulated.

12. Site security: basic best practices shall be applied (as covered in the class).

13. Modern SE processes and practices shall be used as specified in the class, including collaborative and continuous SW development.

14. The website shall prominently display the following exact     text on all pages "SFSU-Fulda Software Engineering Project CSC 648-848, Fall 2018. For Demonstration Only" at the top of the WWW page.

**Privacy:**
1. Customer information and transactions shall be stored and executed via a secure internet connection.
2. Data is only used for tracking customer usage; this data shall not be shared with any third parties. Registered users may be contacted for promotional or inquiry purposes.

**Performance:**
1. Using the latest 2 versions of Mozilla Firefox and Google Chrome, our website shall load product pages and user dashboards in less than 4 seconds.

# 6. Competitive Analysis

URL for these website:
Ebay: https://www.ebay.com
Amazon: https://www.amazon.com
Craigslist: https://sfbay.craigslist.org/ (bay area)
Swappa: https://swappa.com

|  | **Gator Trader** | Ebay | Amazon | Craigslist | Swappa |
|---|---|---|---|---|---|
| Search | **+** | ++ | + | + | ++ |
| Post Details | **+** | + | + | + | + |
| Messaging | **+** | + | + | + | + |
| Meetup Location | **-** | - | + | + | - |
| Course Field in Post | **+** | - | + | + | - |
| Language Selection | **-** | ++ | + | ++ | - |

**Advantages:** Our product is mainly for SFSU students. Considering the income of students, our product has a great advantage in price. Moreover, our site allows users to buy and sell books from other students, so that books can be recycled and used many times to be green and environmentally friendly.

**Competitions:** One of the bigger problems is that students will compare multiple products from different websites to get the better one (eg price, quality, shipping time, etc..). The products they decide to buy depend on what kind of type they like.

# 7. High-level system architecture

**OS:** Ubuntu
**Server host:** Amazon Web Server
**Web server:** Node JS
**Database:** MySQL
**Server-sided Language:** Javascript
**Web Framework:** ExpressJS
**IDE:** Jetbrains  InteliJ
**Web Analytics:** Google Analytics
**SSL Cert:** Lets Encrypt (Cert Bot)
**Front End Frameworks:** Bootstrap, jQuery

# 8. Team

| Team Member: | Main Role: | Addition Roles: |
|---|---|---|
| Jack Cole | Team Leader | QA, Github Master |
| Christian Caeg | Front End Lead | Editor |
| Achin Kalia | Front End Engineer | |
| XiaoQian Huang | Front End Engineer | |
| Juan Ledezma | Back End Lead | Server Admin |
| Anthony Carrasco | Back End Engineer | |
| Ryan Jin | Back End Engineer | |

# 9. Checklist

| Task: | Status: |
|---|---|
| Team found a time slot to meet outside of the class. | DONE |
| Github master chosen: | DONE |
| Team decided and agreed together on using the listed SW tools and deployment server: | DONE |
| Team ready and able to use the chosen back and front end frameworks and those who need to learn and working on it: | DONE |
| Team lead ensured that all team members read the final M1 and | DONE |

| agree/understand it before submission: | |
|---|---|