

SW Engineering CSC 648/848 Fall 2018

Section 01

Gator Trader



Team # 02

Gayatri Pise, **Team Lead** | gpise@mail.sfsu.edu

Peter Malolepszy

Divam Shah

Dylan Wright

Moses Martinez

Charul Ramtekkar

Regine Manuel

“Milestone 1”

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History Table

Version	Date	Owner(s)	Description
1.0	09/28/18	Dylan, Moses, Peter and Divam	First Draft, Added Sections 1, 2, 4
1.1	10/02/18	Charul, Regine	Added sections 5, 6
1.2	10/02/18	Gayatri	Added section 3, 7, 8, 9
1.3	10/04/18	Gayatri	Document Review
1.4	10/4/18	Peter	Document Review and Formatting
1.5	10/4/18	Gayatri	Final M1 Document


1. Executive Summary:

We are a diverse group of students studying Computer Science at San Francisco State University. We as a student startup have seen a lack of local buying and selling options unique for students. We participate in team bonding activities and understand our equal contribution to the SFSU community and are aware of our impact within our communities. Hence, we have decided to launch our professional website named “**Gator Trader**”. Gator Trader would serve as a platform to students to sell their unused items, old class materials, etc. as well as buy essential items at a cheaper rate compared to the market price. The basic objective of developing this website is to help students to build relationships within the community, save their money, and boost the local economy market. Moreover, this website builds a direct communication between seller and buyer. This unique approach will eliminate long wait times and no shipping cost is involved.


Gator Trader would allow registered users to post the items they wish to sell on the website. Once posted, it has to be approved by admin before going live for selling. The post would contain sales item, title, single or multiple images of the item, price, brief description, etc. The website can be browsed by any unregistered or registered user for checking the required posts/items. Registered users, interested in the buying the item from respective sellers, can message the seller directly and could then set up a meeting point to complete the purchase. It would provide a safe exchange between the seller and the buyer. Moreover, we assume that this approach should attract more customers and increase the usage of this website.

The student startup building “Gator Trader” website is made by our Team - Team lead Gayatri Pise, followed by Peter as frontend UI lead, Divam as backend lead, Moses and Regine as frontend developers and Dylan and Charul as backend developers. The entire team would work collaboratively towards the documentations and security of this website.


2. Persona and Use Cases:

<p>Persona: Amanda</p> <ul style="list-style-type: none">❖ Freshmen Student❖ Lives near campus	
<p>Amanda needs art supplies for her introductory art course. She doesn't have enough money to buy the new supplies and buying them online would be too slow process for her considering the shipping time.</p>	<p><i>"A classmate told me about Gator Trader on my first day. Seems like a no brainer to look there first for my brushes and pencils, and they have a lot of other things I'll need too."</i> -Amanda</p>

Amanda finds about the Gator Trader website from her classmate. She goes to the Gator Trader website and browses through the contents as an unregistered user. She finds an item post that fits her needs and wants to buy it. Upon clicking buy, she is prompted to register. She registers on Gator Trader and contacts the seller through the website in order to buy the item.

<p>Persona: Bernie</p> <ul style="list-style-type: none">❖ Senior Student❖ Lives near campus	
<p>Bernie needs an Android Device for his Mobile App Design course. He needs it in the next two days so that he can complete his assignment on time.</p>	<p><i>"I missed the first class of the course, so I did not know that I needed an Android device until the homework was assigned. Gator Trader had a lot of people selling used android devices for cheap, and I could get it the same day!"</i> -Bernie</p>


Burnie needs an Android device as soon as possible for completing his homework. He is a registered user on Gator Trade, so he browses by category and finds lot of posts selling android devices. He contacts ten sellers so that he's more likely to get what he needs within the next 2 days.

<p>Persona: Chloe</p> <ul style="list-style-type: none"> ❖ Senior Student ❖ Lives in East Bay ❖ On campus 3 days a week 	
<p>Chloe has some textbooks to sell that she does not need once she graduates. She could use the money from her books while she is looking for a job.</p>	<p><i>"I have a lot of books from GE courses that I do not need. Gator Trader lets me find buyers on my schedule, so I can get some of my money back on old books." -Chloe</i></p>

Chloe is a senior student at SFSU graduating this semester. She needs to sell her old textbooks to make some money back. She registers on Gator Trader and navigates to the seller menu. She selects the appropriate category for textbooks, uploads picture of the book, enters the title of the book along with the price, writes a brief description, and then posts it. Upon posting, it is reviewed and approved by administrator before it goes live for selling.

<p>Persona: Mary</p> <ul style="list-style-type: none"> ❖ Graduate Student ❖ Moving out of dorm 	
<p>Mary wants to sell her items. She finds out about Gator Trader website. She quickly registers on it and posts her items.</p>	<p><i>"It was so easy to sell all my items on Gator Trader. I had a lot of stuff in my dorm room and wanted to get some cash from it. Gator Trader gave me an easy way to do it in less time." -Mary</i></p>

Mary is moving out of school dorm. She registers on Gator Trader and posts some of her items for sale. Upon posting, the items are in default pending status. She monitors her dashboard to check the status of her posts. The items are posted publicly on the website after being approved by the administrator. She checks messages from the buyers for her posted items. When she receives messages from buyers interested in items she is able to sell her stuff quickly and easily.

<p>Persona: Duke</p> <ul style="list-style-type: none"> ❖ Gator Trader Administrator ❖ Concerned with people making illegal, false, or misleading sales 	
<p>Duke keeps the site free of scams, illegal items, and accidental submissions. Also, his main task is to review and approve all the posts posted by sellers.</p>	<p><i>"I love my job as an admin for the Gator Trader website. I want to keep it scam free and help students to find their required items. I think Gator Trader is a great platform and I work hard to keep it that way." -Duke</i></p>

Duke is the administrator for the Gator Trader website. He continuously supervises the content uploaded and posted on the website. He removes the posted item if it is illegal or if it does not meet the required guidelines. Duke also has the authority to remove suspicious users from the website. When a registered user uploads a post, Duke ensures that the post meets all the requirements and approves it in order to go live on the website.

3. Data Definitions:

3.1 User(s) - Any person who uses Gator Trader is a user.

3.1.1 Unregistered User: They can only browse and search the website but would not be allowed to post or buy items.

3.1.2 Registered User: Users who have registered and created an account with Gator Trader can log in the website, to either sell their items or buy available items on the website. Registered users can be both sellers as well as buyers.

3.1.3 Administrator: An Administrator is a registered user having special privileges to access all data and content as well as modify the database. He is capable of monitoring Gator Trader website with tasks such as remove illegal posts, removing suspicious users, review and approve pending posts from sellers in order to be posted on the website, etc.

3.2 Item(s): The main item(s) listed for sale by a registered seller or for purchase by a registered buyer. Item consists of Name/Title of the item, Item/Sales Id, Price, Image(s), Description about the item, etc.

3.3 Gator Messages: The communication medium between a buyer and a seller used for in-site messaging in Gator Trader website. Once a buyer decides to buy an item posted on the website, he can contact the seller by sending him a message through Gator Messages. The seller can check for the messages received from buyers for his/her appropriate post.

3.4 Categories: Categories would help to sort and group posts into different sections. Users can browse by different categories to check for items as per their need. Moreover, sellers need to select a category for posting their item for sale. Category selection will be mandatory for sellers and they will have to select it from the list of categories listed by the administrator.

4. Initial List of Functional Requirements:

- 4.1 **Users** shall be able to browse the Gator Trader website.
- 4.2 **Users** shall be able to search any specific item as per their need on the Gator Trader website.
- 4.3 **Users** shall see search results initially organized by date posted.
- 4.4 **Users** shall be able to filter search results using below options:
 - 4.3.1 By Date Posted.
 - 4.3.2 By Category
 - 4.3.3 By Price.
- 4.5 **Non-registered users** shall not be allowed to buy or sell items.
- 4.6 **Non-registered users** shall be able to create an account by using valid name, email id and password.
- 4.7 **Registered users** shall be able to login into their Gator Trader account by using Email Id and Password entered at the time of account creation.
- 4.8 **Registered users** shall be able to post their item(s) for sale on Gator Trader website.
- 4.9 **Registered users** shall be able to buy item(s) on Gator Trader website.
- 4.10 **Registered users** shall be able to contact sellers to purchase items.
- 4.11 **Posts** of all item(s) shall be associated with a category.
- 4.12 **Posts** of all item(s) shall include a title.
- 4.13 **Posts** of all item(s) shall include a description.
- 4.14 **Posts** of all item(s) shall include a price.
- 4.15 **Posts** of all item(s) shall include real image(s) of products provided by the seller.
- 4.16 **Sellers** shall be able to view messages from buyers.
- 4.17 **Sellers** shall be able to view messages from administrator.
- 4.18 **Sellers** shall be able to remove a post after sale or for any reason.
- 4.19 **Sellers** shall be able to mark the post as sold.
- 4.20 **Administrator** shall be able to approve pending posts.
- 4.21 **Administrator** shall be able to remove inappropriate posts.
- 4.22 **Administrator** shall be able to remove suspicious users.

5. List of Non-Functional Requirements:

5.1 Security

- **Users** data shall be securely stored in the backend database.
- **Users** shall not view the backend API protocols.
- **Users** shall not have access to change database values directly.
- **Users** shall have a secure password for their account.
- The **website** database shall be secured from unauthorized use.

5.2 Performance

- **Users** shall be able to access the website on computers as well as mobile devices.
- **Users** shall be able to access the website without any loading delay.
- The **website** shall be able to support 50 concurrent users.
- The **website** shall display accurate product information to the user.
- The **website** shall display product information in grammatically correct English language.
- The **website** shall be responsive to user actions.

5.3 Optimization

- **User** information shall not be duplicated in the database.
- The **website** shall fetch data from the backend only on user actions.

5.4 Best Practices

- The **website** shall be developed using licensed software development tools.
- The **website** shall display a disclaimer on all pages.
- The **website** shall have the title 'Gator Trader – SFSU Software Engineering Project, Fall 2018' on all pages.

6. Competitive Analysis:

Key Features	Ebay	Amazon	Craigslist	Gator Trader
Text Search	+	+	+	+
Browse	+	+	+	+
Message Center	+	+	+	+
Categorical Organization	+	++	+	+
Local Sellers	++	+	++	++
Private Organizational Use	-	-	-	++

+ feature exists; ++ superior; - does not exist

Key Feature Definitions:

Text Search: Searching by entering text in search bar.

Browse: Browsing the website freely or by category.

Message Center: Seller receiving messages from the buyer.

Categorical Organization: Groups made in order to organize the items posted on website.

Local Sellers: Sellers who are geographically near the buyer.

Internal Organizational Use: Can be privately used inside an organization.

Gator Trader's main goals is to provide SFSU students a platform which provides a local, student friendly, direct market for specific products geared towards students. The main key feature of our website includes local selling and private organizational use. This system is designed for SFSU student use and can be deployed similarly in any other school or organization campus. Thus, providing the school or organization a secure website for local trade. We believe that having a good organization based on categories would help to cater the buyer or seller, making it easier for students to find what they are looking for. Also, students would benefit from local options available around them to save time and money.

7. High-Level System Architecture:

Server Host: Heroku-18
Operating System: Ubuntu 18.04
Database: PostgreSQL 2.1.5
Web Server: Node.js HTTP Module
Server-Side Language: JavaScript 1.8.5

Additional Technologies:

Web Framework: Node.js 10, Express, Bootstrap, CSS, HTML
IDE: IntelliJ, Atom
Web Analytics: Google Analytics or Analytics-node

Supported Browsers: Chrome, Safari, Mozilla Firefox

8. Team:

Team	Roles
Gayatri Pise	Team Lead
Peter Malolepszy	Frontend Lead
Divam Shah	Backend Lead
Moses Martinez	Frontend Developer
Regine Manuel	Frontend Developer
Dylan Wright	Backend Developer
Charul Ramtekkar	Backend Developer

9. Checklist:

- A. Team found a time slot to meet outside of the class - DONE
- B. GitHub master chosen - DONE
- C. Team decided and agreed together on using the listed SW tools and deployment server - DONE
- D. Team ready and able to use the chosen back and frontend frameworks and those who need to learn and working on it - ON TRACK
- E. Team lead ensured that all team members read the final M1 and agree/understand it before submission - DONE