

SW Engineering CSC 648/848 Fall 2018

Section 01

Gator Trader



Team # 02

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“Milestone 1”

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History Table

Version	Date	Owner(s)	Description
1.0	09/28/18	Dylan, Divam, Moses	Initial Draft
1.1	10/04/18	Peter	Document Review and Formatting
1.2	10/08/18	Charul, Regine	Changes according to feedback
2.0	10/15/18	Gayatri	Document review and freeze

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 for 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 build relationships within the community, save their money, and time. Moreover, this website builds direct communication between seller and buyer. This unique approach will eliminate long wait times and no shipping costs would be 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 title, single or multiple images of the item, price, category, 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. This website is specially designed for SFSU students as it would provide a safe exchange between students in less time and less money. Moreover, we assume that this approach should attract more customers and increase the usage of this website.

The student startup team 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.

2.1. Personas:

<p>Persona: Regine</p> <ul style="list-style-type: none">❖ Senior Student❖ Lives near campus❖ Very software literate❖ Hates waiting	
<p>Regine needs an Android Device for her Mobile App Design course. She needs it in the next two days so that she can complete her assignment on time.</p>	<p><i>"I missed the first class of the course, so I didn't know that I needed an Android device until the homework was assigned. Gator Trader had a lot of students selling used android devices for cheap, and I could get it the same day!" - Regine</i></p>
<p>Persona: Charul</p> <ul style="list-style-type: none">❖ Senior Student❖ Lives in the East Bay❖ On campus 3 days a week❖ Familiar with Amazon and similar sites❖ Takes her time when making transactions❖ Doesn't like talking on the phone	
<p>Charul has some textbooks to sell that she doesn't need once she graduates. She could use the money from her books while she looks for a job.</p>	<p><i>"I have a lot of books from GE courses that I do not need now... Gator Trader helped me find buyers on my schedule, due to which I got money from selling my old books." -Charul</i></p>

<p>Persona: Gayatri</p> <ul style="list-style-type: none"> ❖ Graduate Student ❖ Moving out of dorm ❖ Familiar with Craigslist ❖ Avid internet user ❖ Doesn't like uncertainty when selling items 	
<p>Gayatri 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."</i></p> <p style="text-align: right;"><i>-Gayatri</i></p>

<p>Persona: Dylan</p> <ul style="list-style-type: none"> ❖ Gator Trader Administrator ❖ Concerned with people making illegal, false, or misleading sales ❖ Took CS courses at Community College ❖ Worked as an Admin for a lab website ❖ Hates Ad Bots 	
<p>Dylan keeps the site free of scams, illegal items, and accidental submissions. Also, his main task is to review and approve all the items posted by registered users.</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."</i> -Dylan</p>

2.2. Use Cases:

2.2.1 Desperate Buyer:

Regine needs an Android device as soon as possible for completing her homework. She browse by category and finds lot of posts selling android devices on Gator Trader website. She tries to contact sellers which navigates her to the registration page. She quickly registers on Gator Trader and contacts ten sellers so that she's more likely to get what she needs within the next 2 days.

2.2.2 Casual Seller:

Charul is a senior student at SFSU graduating this semester. She needs to sell her old textbooks to make some money back. She posts her textbooks for sale on Gator Trader which prompts her to register as she is an unregistered user. She registers on Gator Trader and navigates to the seller menu, selects 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 and then goes live on the website for selling.

2.2.3 Serious Seller:

Gayatri is moving out of school dorm. She posts some of her items for sale on Gator Trader which prompts her to register. She registers on the website and then posts all her items for sale. Upon posting, the items are in default pending status. She checks that her items are approved. Once approved by the administrator, items are publicly viewable on the website. She checks gator messages from buyers for her posted items. On receiving gator messages from buyers interested in buying her posted items, Gayatri is able to sell her stuff quickly and easily.

2.2.4 Careful Administrator:

Dylan is a registered user on Gator Trader website. Also, he is the administrator of the website. He continuously supervises the items uploaded on the website. He removes item(s) if it is illegal or if it does not meet the required guidelines. When a registered user uploads a post, Dylan ensures that the item meets all the requirements, then approves it in order to go live on the website. Moreover, Dylan has the authority to remove suspicious users from the website as well.

3. Data Definitions:

3.1 User(s) - Any person (**Unregistered/ Registered/ Administrator**) who uses Gator Trader is a **User**.

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

3.1.2 Registered User: Users who have registered and have an account with Gator Trader can log in, 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 who has special privileges. He is capable of monitoring the Gator Trader website with tasks such as removing illegal items, reviewing and approving pending items 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, Item Id, Category, Price, Images(s), Availability and Description about the item.

3.3 Gator Message: The communication medium between a buyer and a seller used for 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 item.

3.4 Category: Category would help to sort and group item(s) into different sections. Users can browse by different categories to check for item(s) as per their need. Moreover, sellers needs to select a category for posting their item(s) on sale. Category selection would be mandatory for sellers and they would not be allowed to enter his choice for category.

3.5 Seller Dashboard: A dashboard is a place where registered users who have posted item(s) on sale on the Gator Trader website are able to track the items, view Gator Messages from buyers, change the availability of the item to sold once sold as well as remove items due to some reason.

3.6 Registration Record: It is a record that gets created when a Unregistered user registers on Gator Trader website by entering information such as First Name, Last Name, User Id, Email Id, password, contact number, etc.

4. Initial List of Functional Requirements:

4.1 **Registered User/ Unregistered User/ Administrator** shall be able to browse the Gator Trader website.

4.2 **Registered User/ Unregistered User/ Administrator** shall be able to search any item as per their need on the Gator Trader website.

4.3 **Registered User/ Unregistered User/ Administrator** shall be able to search as per Category on the Gator Trader website.

4.4 **Registered User/ Unregistered User/ Administrator** shall be able to see search results initially organized by posted date.

4.5 **Registered User/ Unregistered User/ Administrator** shall be able to filter search results using below options:

 4.5.1 By Date Posted

 4.5.2 By Category

 4.5.3 By Price

4.6 Unregistered **Users** shall not be able to buy or sell items.

4.7 **Unregistered Users** shall be able to create an account by using valid name, email id and password.

4.8 **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.

4.9 **Registered Users** shall be able to post their item(s) for sale on Gator Trader website.

4.10 **Registered Users** shall be able to check the selling item(s) on the Seller Dashboard.

4.11 **Registered Users** who are selling item(s) shall be able to check Gator Messages on the Seller Dashboard from Registered Users interested in buying the item(s).

4.12 **Registered Users** shall be able to buy item(s) on Gator Trader website.

4.13 **Registered Users** interested in buying an item shall be able to contact the Registered User selling that item.

4.14 **Registered Users** shall be able to contact Administrator if required.

4.15 All **item(s)** shall include:

 4.15.1 Category

 4.15.2 A Title

 4.15.3 A Description

 4.15.4 A Price

 4.15.5 Real image(s) of products provided by the seller

 4.15.6 Availability of the item(s)

4.16 **Registered Users** who are selling their item(s) shall be able to remove the item(s) posted for any reason (such as no longer wishes to sell the item).

4.17 **Registered Users** shall be able to mark the item as sold once sold out.

4.18 **Administrator** shall be able to approve pending item(s).

4.19 **Administrator** shall be able to remove item(s) if found inappropriate or illegal.

4.20 **Administrator** shall be able to remove suspicious users.

4.21 **Administrator** shall be able to contact Registered Users.

5. List of Non-Functional Requirements:

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 all major browsers: Mozilla, Safari, Chrome.
3. Selected application functions must render well on mobile devices
4. Data shall be stored in the team's chosen database technology 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.
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. (Important so as to not confuse this with a real application).

6. Competitive Analysis:

Key Features	Ebay	Amazon	Craigslist	Gator Trader
Text Search	+	+	+	+
Browse	+	+	+	+
Message Center	+	+	+	+
Categorical Organization	+	++	+	+
Local Sellers	++	+	++	++
Internal 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: different categories made in order to organize items posted on website.

Local Sellers: sellers nearby the locality.

Internal Organizational Use: privately used inside an organization.

Gator Trader's main goals is to provide SFSU students a student friendly platform in order to buy and sell items locally and securely within the school campus. The key feature of our website includes local selling and internal organizational use. This website is designed for SFSU students for buying and selling item(s) in less time and with no shipping cost. Students would benefit from local options available around them to save time and money. Similar to SFSU Gator Trader, such websites can be deployed in any other school/ organization campus providing the school/ organization a secure website for buying and selling items. We believe that having a good organization based on Category can help us to cater the users, making it easier for them to find what they are looking for.

7. High-Level System Architecture:

Server Host: Heroku-18z

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:

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