

Software Engineering CSC648/848 Section 01 Spring 2017

Gator 2 Gator

Team 05

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Milestone 1

February 28, 2017

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1) Executive Summary

The “Gator 2 Gator” web application is for SFSU students to buy and/or sell their possessions in a safe, exclusive community. There are 2 main user types in “Gator 2 Gator”, those who are registered and those who are non-registered. Both registered and non-registered user types shall browse items listed on the website. Registered users shall create item listings based on the various possessions they would like to sell such as: furniture, electronics, and textbooks. Additionally, registered users shall sell items they have listed or purchase items which have been listed by other fellow students. Communication through messaging will be provided to registered users who wish to contact one another through the purchasing process and thereafter. Monitoring of the web application for safety and legitimacy shall be designated to one or more admin users as needed.

There are many advantages offered with this web application. Most importantly being that it is exclusive to students of SFSU. This means every buyer and seller will be a verified SFSU student, granting the additional ease of mind when going through the financial transaction and physical meet up. Also, due to the campus being a common meeting area, it serves as a very convenient way to exchange items in both a familiar and public location. Products being sold will also be relevant to students needs as many share the same or similar courses.

Our web application is unique when matched up to the competition. Registered users may upload multiple images to better advertise their items, rather than the typical single image constraint offered by our competition. This provides buyers with more opportunities to view the items in several different ways which allow them to make better purchasing decisions. Sellers also benefit from this advantage as they can improve the visual experience of their item in anyway necessary. Communication is also easier for both parties when the images speak for themselves, as this eliminates many questions a buyer may have. Gator 2 Gator users also benefit from having the SFSU campus as a central, familiar location to meet at. This provides our users with a safe location to meet and finalize their transactions.

Team 5 of CSC 648-848 Section 1 is a diverse group of individuals who all bring a unique style to the web app development. Our range of expertise covers a wide spectrum that allows our vision to cover all angles. We have backgrounds in front end, back end, and some of both. When we first met, we knew agreed that our number 1 goal would be to develop a web app easy enough for anyone to use. Our team dynamic allows for a fun and open-minded environment where even bad ideas are considered. Through both Continuous Software Development and Agile techniques, our team is dedicated to making the best web app experience possible.

2. Use Cases

2.1 – Browse/Search Listing (Guest, Registered User - Buyer)

Alice is a sophomore student at SFSU. She is double majoring in Psychology and Computer Science. After she enrolls for all her seven classes, she realizes that the list of required books is very long and that each of them costs a small fortune. Likely, as she complains about the amount of money she will need to spend in books this semester, her roommate who is also a SFSU student, refers her to the SFSU Gator 2 Gator buy and sell application in which she could easily look for the books she needs, buy them for a fraction of the cost and receive them much faster than if she were to buy them from another online source. In addition to that, Gator 2 Gator provides the safety of having buyers and sellers meeting on a public location on SFSU Campus. Alice feels very hopeful about this, especially about the security that comes from trading on SFSU Campus, since she has previously had problems with in person transactions with unknown sellers. She navigates to the web application and can browse through the items. She finds all the books she is looking for and in addition to that, she finds great deals on furniture for her new apartment. When she decides which items to buy, since she is a **Guest User**, she is prompted to register so she can contact the seller, find out about the meeting location and finish the transaction.

2.2 - Post/Edit/Delete Listing (Registered User - Seller)

Ron is moving back to his hometown in Germany after spending a year as an exchange student at SFSU. He has various pieces of furniture such as a bed, an office table and chair, as well as books from his last semester that he no longer needs. Since Ron is moving back to Germany and cannot take his furniture with him, he decides to sell all his possessions using the Gator 2 Gator web application that one of his friends introduced him to when he started studying at SFSU. Ron finds this application very useful because he can be confident that he will only make transactions with SFSU students and will avoid getting into difficulties when he sells his items. Therefore, as a **Registered User** Ron can easily create a listing for the items he would like to sell. After that, Ron can view all his posted items and choose to edit or delete any of them.

2.3 - Delete User/Delete Listing (Admin)

Jacky is the system **Admin** in the Gator 2 Gator SFSU buy and sell web application. She is responsible for preventing bad users from disrupting the application. As an Admin, she can view all the users, their listings and can delete any of them. If a Registered User posts improper content, Jacky promptly removes the listing from the application to ensure that all the Guests and Registered Users have access to only the listings that are suitable for the application. Further, Jacky may remove any Registered Users from the system so that they are no longer able to log into the application in the future. When the Gator 2 Gator application employs a new system Admin, Jacky shall grant Admin privileges to them, so that they can start managing the system.

3. Data Definitions

- 1) Guest User
 - a) Shall be able to register an account using SFSU e-mail
 - b) Shall be able to filter items
 - c) Shall be able to browse items
- 2) Registered User
 - a) Shall be able to provide a username or e-mail address, and a password to sign in
 - b) Shall be able to browse items
 - c) Shall be able to buy items
 - d) Shall be able to filter items
 - e) Shall be able to sell items
 - f) Shall be able to send and receive message from Registered User
- 3) Admin
 - a) Shall be able to provide a username or e-mail address, and a password to sign in
 - b) Shall be able to browse items
 - c) Shall be able to remove items
 - d) Shall be able to delete Registered User
 - e) Shall be able to send and receive message from Registered User
 - f) Shall be able to filtered items
 - g) Shall be able to grant permission to other Admin
- 4) Item
 - a) Price: the amount of money required for the item
 - b) Description: a written representation of the item
 - c) Post date: the date which the Registered User-seller make the item for sell
 - d) Item name: an identification by which the item is known
 - e) Category: a division of items regarded as having particular shared characteristics.
 - f) Photo: photo that are relevant to the item
- 5) Message
 - a) Title: a heading or a brief summary of the matters between sellers or buyers (can this be called subject instead?)
 - b) Recipient: a Registered User who receive the message
 - c) Sender: a Registered User who send the message
 - d) Text: a body of paragraph describing the matters between sellers or buyers

4. Initial List of Functional Specs

Guest Users

- 1) Shall be able to browse the site and filter through postings.
- 1.1) Shall have the option to create account by providing a valid sfsu.edu email, when accessing the buy/sell option.

Registered Users Buyers

- 2) Shall be able post an item to sell and buy an item from other users.
- 2.1) Shall have messaging option to contact the seller.
- 2.2) Shall be able to browse the website and filter through postings.

Registered Users Seller

- 3) Shall be able to post an item to sell and buy an item from other Registered Users.
- 3.1) Shall have a messaging option to contact the buyer
- 3.2) Shall be able to browse the website and filter through postings.
- 3.3) Shall be able to edit/delete their post.

Admin

- 4) Shall be able to message buyer and sellers.
- 4.1) Shall have the option to delete posts.
- 4.2) Shall be able to browse and filter through posts.

5. List of Non-Functional Specs

1. Application shall be developed using class provided LAMP stack
2. Application shall be developed using pre-approved set of SW development and collaborative tools provided in the class. Any other tools or frameworks must be explicitly approved by Anthony Souza on a case by case basis.
3. Application shall be hosted and deployed on Amazon Web Services as specified in the class
4. Application shall be optimized for standard desktop/laptop browsers, and must render correctly on the two latest versions of all major browsers: Mozilla, Safari, Chrome.
5. Application shall have responsive UI code so it can be adequately rendered on mobile devices but no mobile native app is to be developed
6. Data shall be stored in the MySQL database on the class server in the team's account
7. Application shall be served from the team's account
8. No more than 50 concurrent users shall be accessing the application at any time
9. Privacy of users shall be protected and all privacy policies will be appropriately communicated to the users.
10. The language used shall be English.
11. Application shall be very easy to use and intuitive. No prior training shall be required to use the website.
12. Google analytics shall be added
13. Messaging between users shall be done only by class approved methods to avoid issues of security with e-mail services.
14. Pay functionality (how to pay for goods and services) shall not be implemented.
15. Site security: basic best practices shall be applied (as covered in the class)
16. Modern SE processes and practices shall be used as specified in the class, including collaborative and continuous SW development
17. The website shall prominently display the following text on all pages *"SFSU Software Engineering Project, Spring 2017. For Demonstration Only"*. (Important so as to not confuse this with a real application).
18. Payment exchanges will not be done by the site and all exchanges shall be done by the users choosing.

6. Competitive Analysis

	Gator 2 Gator	Competitor 1	Competitor 2	Competitor 3	Competitor 4
No Service Fees	+	-	+	+	+
Filtering	+	+	+	-	+
Photos	++	+	+	++	+
Messaging	+	-	++	++	-
Wide Variety of Items	+	+	+	-	+

Competitor 1: [eBay.com](http://www.eBay.com)

Competitor 2: <http://www.sellstudentstuff.com/>

Competitor 3: <https://www.facebook.com/groups/433277273395380/>

Competitor 4: <http://www.tbxn.com>

The Gator 2 Gator web application is designed with SFSU students in mind. Therefore, it will not require the payment of any service fees through its use. SFSU students will also be able to sort through the various listings from fellow students to help them acquire their desired possessions more efficiently. Registered users will also benefit from being able to post multiple photos of their items to make the sale quicker and more honestly. Messaging will also be available for buyers and sellers to assist in the transactional process. Most importantly, buyers and sellers will benefit from having ease of mind that their experience will be secure as all registered users will be verified SFSU students. They will also benefit from having the SFSU campus as close, convenient and safe location to meet and finalize their transaction.

7. High Level Architecture

- Linux – The operating system the site will be hosted and deployed from is Ubuntu Linux Server version 16.0.4 provided by Amazon Web Services.
- Apache – The web server application installed and utilized is Apache (Current Version).
- MySQL – For database management this project will implement MySQL Version 5.7.
- PHP – The primary scripting language for this deployment is PHP version 7.0.13.
- Symfony – The full-stack framework this project will be implementing is Symfony version 3.2.
- MySQL Workbench - The primary tool for accessing and interfacing server side MySQL is MySQL workbench version 6.3.
- SSH – Accessing the remote server will be accomplished using OpenSSH version 7.2.
- PhpStorm – The team's primary Integrated Development Environment is PhpStorm Version 2016.3 by Jet Brains under student license. DDD is this approved by Anthony?/DDD
- Git – Version control will be achieved using Git version 2.7.4
- GitHub – Online Version Control and management will be provided through github.com.
- Google Analytics – Website data collection and analytics services will be provided by Google's Analytics Reporting API version 4.

8. Team

Andrew Lesondak, CEO

Tim Bauer, CTO

David Rodriguez, Back-end Developer

James Lee, Front-end Developer

Mayara Dusheyko, Back-end Developer

Chengjiu Hong, Back-end Developer

Jeffrey Hu, Front-end Developer

9. Checklist

Team decided on basic means of communications: **DONE**

Team found a time slot to meet outside of the class: **DONE**

CTO chosen and working out well so far: **DONE**

Github master chosen: **DONE**

Team ready and able to use the chosen framework: **DONE**

Skills of each team member defined and known to all: **DONE**

Team lead ensured that all team members read the final M1 and agree/understand it before submission: **DONE**