

Software Engineering CSC 648/848 Fall 2019

Gator Trader

Section 2
Team 10
Milestone 1
10/02/2019

Team

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		Comments
Date Submitted	10/02/2019	<ul style="list-style-type: none">• Add another use case for administrator• Remove specifics from use cases• Removes paragraphs from the list of main data items and entities• Split list of main data items and entities into registered and unregistered users• Make minor fixes in functional requirements• Tweak the cost aspect in competitive analysis
Date Revised	10/20/2019	<ul style="list-style-type: none">• All suggested changes made as per feedback from Dr. Petkovic

1. Executive Summary

San Francisco State University caters a population of approximately 30,000 scholars, of which a good percentage consists of students housed at on-campus residential areas. Complementary to the large student body, the university offers 118 different bachelor's degrees, 94 master's degrees, and 5 doctoral degrees among six academic colleges. To fulfill their needs students depend on on-campus and off-campus resources such as the SF State bookstore, ebay , amazon, etc. However these resources are not always efficient in terms of cost and availability. SF State has always harbored a spirit of investing in its students, through provision of convenience and creating an environment that promotes education. Our team proposes to develop an application named 'Gator Trader' that will serve as an online e-commerce website specifically for SF State students. This web application will allow students to buy and sell items and will serve as a single centralized platform where needs will be met.

Gator Trader will allow SF State students to buy and sell items ranging across a number of categories i.e. books, furniture, electronics etc. Valid Students will be able to make posts of items they want to list for sale and browse already listed items to find products they may need to purchase. A potential buyer can direct message the seller and they can arrange to meet at a safe location on campus. All posts will be managed and scrutinized by an administrator to ensure that no university policy is violated and vulgarity is avoided. Gator Trader's model is essentially similar to that of ebay or craigslist but what makes it unique is that its a localized solution specifically for SF State students which gives it a competitive edge. Students would be able to browse books for specific SFSU classes and transactions can be completed in no time through meetups on-campus. Other university specific services can also be made available to students through this web application e.g. tutoring.

Our startup team consists of engineers skilled in full-stack web development work and have completed e-commerce application projects in the past. We have competency in both front-end and back-end development and can guarantee the delivery of a quality product.

2. Personae and Use Cases

Personae #1:

Beth- full time student at SFSU

About Beth



- Works stressful part-time job just to be able to afford SF rent
- In debt with student loans and is very frugal financially
- Despite busy schedule she is 4.0 college student with academic honors
- Motivated and positive person
- Just moved to new apartment
- Is about to start a new semester
- Free time is a privilege for her, only free during the hours when most stores are closed!
- Does not own a car

Goals and Scenario:

Beth wants to obtain the textbooks she needs and completely renovate her apartment before the semester starts and do so without breaking the bank! A friend tells her about a local SFSU market website she found.

Use Case:

After a busy shift at work Beth navigates to the SFSU market webpage to solve the problem described above. She searches for the first item she needs, a textbook, by choosing the appropriate category by name. A neatly displayed page with multiple results is then shown with a picture, price and other details posted by various sellers. Upon selecting one of the search results and choosing message seller, a simple account creation/login prompt is shown which takes Beth little time to complete. After filling this out, she messages the seller and organizes a meeting at 9pm after her last class of the evening at a safe location on campus. Beth loves how the site is tailored to SFSU locals and how easy it is to coordinate an on campus meetup. For this reason Beth decides starts browsing for more items on the site.

Personae #2:



David – part time faculty at SFSU

About David:

- Currently teaches Computer Science at the campus
- Plans of moving away from campus housing to a condominium downtown that he has already purchased
- Being a hoarder, he has loads of stuff to sell (His current fiancée says he needs to get rid of this “collection of useless junk”)
- Does not prefer shipping items
- Doesn’t have time to auction his goods on sites like “Ebay”
- Loves to help out students
- Social individual who loves bargaining

Goals and scenario:

David reluctantly wants to get rid of the contents in his apartment so he can appease his fiancée and move into his new place by the coming week. He remembers a student made SFSU market website mentioned in his department’s message board and decides to check it out.

Use Case:

David browses to the SFSU market website in hopes of both making a few extra bucks and helping out some students during his moving out process as described above. David decides on a first item to sell, his old Java for Dummies textbook, and chooses the sell option on the frontpage. He then fills out the required information presented and posts his item upon completion. Following a prompt to login/register David then repeats the process for all the rest of the items he has. The following afternoon David returns to the website and logs in. He is redirected to a page that shows all of his items have been approved by the system administrator and have been posted to the site. In addition to this, he has multiple new message notifications from people interested in his goods. After a short message exchange from one of these individuals, David schedules a meeting to sell his textbook at 9pm that evening.

Personae #3:



Nigel - full time student at SFSU

About Nigel:

- Works part time job in addition to attending university
- Passionate about security
- Hard working individual
- Introverted
- Responds quickly
- Highly skilled administrator
- School and work is his life

Goals and scenario:

Nigel recently transferred to SFSU from a local community college and found that despite taking 18 units he still had too much time on his hands. He decided to apply as an administrator for the SFSU tailed “Gator Trader” website and landed the job. Nigel plans on not taking this opportunity for granted.

Use case:

In between classes Nigel stops by the library and pulls out his laptop. He immediately goes to the market’s website and logs in using his administrator credentials on the normal login page. After being redirected to an admin page, Nigel checks all the sell item proposals that have accumulated during the last few hours. Nigel accepts all of them, except for one particularly inappropriate post that was clearly meant to be a prank. He then checks the info of the user who made this post and decides to delete their account since this user has acted up multiple times in similar ways. Satisfied with his work he logs off and closes his laptop before heading class.

3. List of main data items and entities

*Unregistered users

(No data stored)

* Registered Users

- * Name

- * Email

- * Password

- * Username

* Admins

- * Name

- * Email

- * Password

* Item

- * Name

- * Category

- * Price

- * Picture

- * Description (Optional)

- * Item Location (Optional)

- * Meeting Location

4. Initial list of functional requirements

Unregistered users

1. shall be able to register for an account.
2. shall be able to browse through the website.
3. shall be able to use the search bar to search for items.
4. shall be able to view all item details.
5. shall be able to fill out a form to post an item for sale.
6. shall be able to see a list of meeting spots at the sfsu campus for pickup or sale of an item.

Registered Users

7. shall be able to do whatever an unregistered user can do.
8. shall be able to log into the web application.
9. shall be able to post items for sale.
10. shall be able to contact other registered users about products.
11. shall be able to receive messages from other registered users.
12. shall be able to edit their post.
13. shall be able to add items to a shopping cart
14. shall be able to view previous transactions

Administrator

15. shall be able to log into an admin portal to scroll through the posts.
16. shall be able to approve pending posts before they go live.
17. shall be able to approve pending edits to existing posts.
18. shall be able to reject post proposals from registered users.
19. shall be able to send messages to users.
20. shall be able to see the info of a registered user.
21. shall be able to ban users.
22. shall be able to remove a post.

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 two major browsers
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 in UI.
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 Software Engineering Project CSC 648-848, Fall 2019. For Demonstration Only"* at the top of the WWW page. (Important so as to not confuse this with a real application).

6. Competitive Analysis

Ebay, craigslist, sf state bookstore

	Craigslist	Ebay	SFSU Bookstore	Gater Trader
Range of products	+	+	-	++
Price	++	++	+	++
Time to get product	+	-	++	+
Safety	-	++	++	+
Buyer handle product	+	-	+	+
		++ = Superior		
		+ = Good/Fair		
		- = Minimal or not existant		

Our service will provide a similar service to craigslist but for San Francisco State University students only. Our goal is to offer a more directed selection of products that will be more relevant to the students using the service. While you are allowed to sell items on ebay and craigslist, it is generally a hassle and potentially dangerous to set up an appointment with a stranger on craigslist and it costs time and money to ship items using ebay. Our service will suggest places and times to meetup that are public and safe. We also offer more products than the on campus bookstore as well as offer services such as tutoring and personal training. The SFSU bookstore only sells at full price or a large markup on used books, our service will allow students to sell their used books for more then the book buyback offered by the bookstore.

Services offered:

Ebay and craigslist has a wide range of products.

Bookstore and we will have more limited range of products aimed towards students.

We will also allow for advertising services like tutoring or general handyman work.

Price:

Using our service, the buyer and seller would save money on postage as they would be meeting in person. Items sold on ebay and sometimes on craigslist have to be shipped which costs extra money.

Time to get product:

Ebay you have to wait for a product to be shipped and could take a few days/weeks.

Craigslist, bookstore and our website will allow for in person pickup.

Safety:

Craigslist has the potential to lead to an unsafe situation.

Our site will have safeguards to use to allow for a safe meetup (safe, well lit location suggestions)

Bookstore and ebay safe to buy from.

Product handling:

Craigslist, bookstore and our site allow buyer to see/handle product before purchase.

Ebay does not allow the buyer to see/handle product before purchase.

7. High-level system architecture and technologies used:

Frameworks:

- Bootstrap
- Node.js 10.16.3
- Express.js

DateBase:

- MySQL 8.0.17

API:

- Google Analytics

Tools:

- Git & Github
- Visual Studio Code
- IntelliJ
- Brackets
- Sublime text

Browsers:

- Google Chrome version: 76.0.3809 - 77.0.3865
- Firefox version: 69.0.1 - 69.0.2

Deployment Platforms:

- AWS EC2
- AWS Linux AMI

Additional Technologies:

- Web

8. Team and Roles:

Name	Role
Ibraheem Chaudry	Team Lead
Tom Sechrist	GitHub Master, Back-end Engineer
Saleh Zahra	Document Master, Back-end Engineer
Alexander Beers	Back-end Lead
Paul Lueng	Front-end Engineer
Lance Santos	Front-end Lead

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 are working on learning and practicing	DONE
Team lead ensured that all team members read the final M1 and agree/understand it before submission	DONE
Github organized as discussed in class (e.g. master branch, development branch, folder for milestone documents etc.)	DONE