Milestone One

Initial Proposal

Team 06

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Submitted to-

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1. **Executive Summary**

This project requires a website specifically for SFSU students to buy and sell products. The need of this website comes from three sources. International students need to sell their equipment before they graduate. Secondly, new books are too expensive for most of the students and used books may be a better choice. Lastly, SFSU students need a reliable third party tool to buy and sell their stuff safely and quickly.
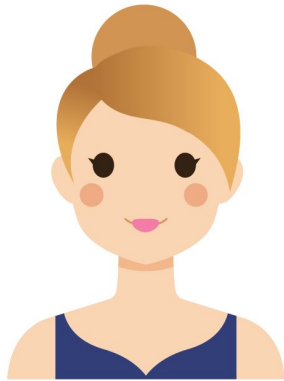
This project's initial concept for this website includes the fact that it's specifically catered for SFSU students, there are pick up spots for products within the campus, there is an easy search option within the website itself (e.g users can search for books by subject), there is a rating and review for each user and seller, there isn't a need for logging-in for browsing until users decide to sell or buy.

Our initial design concept is building a buy and sell website only for SFSU students, in order to recycle and help SFSU students to save money. All the buying and selling websites or applications on the market are wide open to the society which is less efficient and not safe enough for most of the college students. Some drawbacks include how far away the pick up spot is and how expensive the products are. So, this SFSU buy and sell website will cover these drawbacks and that's why we are building a new platform for SFSU students to help them to succeed in their college lives.

Our project contains a team of six college students. It is broken down into one sub-team for frontend development (3 students) and one sub-team for backend development (3 students), both of which include a frontend lead and a backend lead respectively. We also have different leads within our group of six-- a team lead as well as a git master. Our team meets very often and we work diligently and effectively in order to make our website as accurate and user-friendly as possible.

2. Personas

a. Persona: Mary

- A female SFSU student

- A non-STEM major student

- Know some basic internet browsing skills like using search tool, shopping online and so on.

- Wants to make money from selling used books

Goals and Scenarios:

- Wants to sell her used books after the end of this semester.

- Wants to sell by third party platform because she has no contacts to sell her used books.

b. Persona: John

- A male SFSU student

- Familiar with internet browsing skills

- A STEM major student

- Want to buy books at a low price

Goals and scenarios:

- Wants to buy books for upcoming semester

- Doesn't want to spend too much money buying new books

- Wants to use categorized search tools for easy filtering of items

c. Persona: Admin

- Admin is a team member.

- He / she is a Developer / In charge of the website

- Accepts products for approval

- Edit / Delete Users

- Edit / Delete Products

Goals and scenarios:

- Monitoring the website so it's clean, user friendly and safe for users on campus.

Use Cases

John

- John is a CS student at SFSU. He understands the basic functionalities of the website. He wants to buy some CS books for the next semester. Thus, he uses the easy search by categories function and gets the options of his desired book from different sellers with different prices. Then he chooses to buy the book from the seller of his choice.

- When he decides to buy the books, he will use messaging feature and later prompted to register or login page in order to log into his account before he completes the checkout process.

Mary

- Mary is an Art student at SFSU. She understands the basic functionalities of the website, but she has some difficulty selling her art stationeries. She goes to the site and sees that there is a "Sell Product" option where there are field for putting a picture of the product as well as a description of what it is as well as the price and pick up location. Once she clicks "Submit", however, she sees that a log-in requirement is needed. So, she creates an account for our website and moves on with selling her supplies.

Admin

- Admin notices that there are notifications on the upper right corner of his screen once he logs into his account with his credentials. He clicks on the most recent post that is pending for approval and sees that it's a provocative item and he needs to delete it immediately. There is a " ✔️ " button for approval and an " ❌" button for deletion on each post so he clicks the deletion button. Admin successfully blocked this post before posting it live.

- Admin later sees another pending post and realizes that there is improper content within that post. He then tries to change the content of the post, but he can't, since admin cannot change it for the user. Users should be allowed to type descriptions and post photos of products however they wish. Admins can only approve and decline products and users.

3. **List of main data items and entities**

The data items and entities attached to them includes:

- Users

   1. Non-Registered user

   2. Registered user

      ○ SFSU ID of user

      ○ Name of user

      ○ Phone of user

      ○ Email of user

   3. Admin

      ○ SFSU ID of admin

      ○ Name of admin

      ○ Phone of admin

      ○ Email of admin

- Products
  - ID of product
  - Image of product
  - Categories of products
    1. Books and stationary
    2. Clothing
    3. Furniture
    4. Electronics
    5. Sports and Gym accessories
    6. Events Passes
  - Details of product
  - Price of product
  - Type of product (new/refurbished)
  - Pick up spot
  - Owner ID

4. Initial list of functional requirements

Non - Registered User

1. Non-registered user shall be able to see the following points:

2. User shall not be asked to login / sign up

3. User shall Browse on the website

4. User shall be able to search for the products

5. User shall be able to select the products from the product categories

6. User shall be able to access the photos of the product

7. Compare the price of the product with multiple sellers

8. User shall add the product to the "Cart"

Registered User

9. Registered users will have benefits of non-registered users.

10. User shall proceed to checkout and purchase the product

11. User can shall decide the pickup spot and pickup time

12. User shall be able to add product for selling on the website

13. User can be a buyer / seller

14. Buyer can rate / write reviews of the seller if purchased product from the same user

Admin

15. Admin shall have the right of approving the products for posting live

16. Admin should not be able to change the content of the post, but can request the seller before approving the 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 by 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 SoftwareEngineering 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

	SFSU Bookstore	Craigslist	Amazon	Our product
Text searching	+	+	+	+
Shopping cart	+	-	+	+
Categories filter	+	+	++	++
Register	-	+	-	+
Create Post	-	+	-	+
Seller Rating	-	-	-	++
Searching by Classes	+	-	-	+
Buy and sell directly	-	+	-	++
Pick up locations	-	-	+	++

Comparing our product with the other big names in the market like Amazon, Craigslist and SFSU Bookstore, we share some basic common features such as similar search filters, user registration, and the "shopping cart" feature. Also, there are some features that make our product more unique like Seller rating. The best thing about our website, however, is that we have pickup locations within our campus (department buildings) which make it beneficial and accessible to all the students.

7. High-level system architecture and technologies used

Below is a list of the technologies used in Team 06's software stack:

Server Host: AWS 1vCPU 2 GB RAM

Operating System: Ubuntu

Database: MySQL

Web Server: NGINX 1.12.2

Server-Side Language: JavaScript

Additional Technologies :

Web Framework: Bootstrap

IDE: VS Code, IntelliJ

Web Analytics: Google Analytics

SASS

8. Team and roles

Manish Patil, Team Lead

Poulomi, Github Master, Backend Developer

Thomas Tran, Backend Lead

Jinan Huang, Frontend Lead

Zihao Wu, Frontend Developer

Ha Phuong Tran, Frontend Developer

9. **Checklist**

Github master chosen (Done)

Github organized (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 (On track)

Creating a persona and use cases (done)

Creating a database model (on track)

Having the idea of the product (on track)

Adding functions and features to the product (on track)

Milestone 0 (done)