



Final Project for SW Engineering Class CSC 648-848 Fall 2019

Team 13

Gator Joe's

Tuesday, December 17 2019

Piero Calenzani (Team Lead): ptcalenzani@gmail.com

Grant Kennedy (Front-end Lead)

Mark Hammond (Back-end Lead)

Chuhao 'William' Yang (Front-end)

Varun Sura (Front-end)

Zhuoxin Tan (Back-end)

Project URL: <http://3.17.190.122/>

Product Summary

Gator Joe's Website – Gator Joe's is the online marketplace for SFSU students by SFSU students. GJ's is a local site for students in San Francisco State University that allows for buying and selling of various types of items including books, electronics, furniture and more.

Committed Functions

Unregistered Users:

- Users can view, search, and browse through all active listings
- Registration and login will be available to all new users, implementing lazy registration
- Website's unique feature is that it can specify an SFSU course and search for books specifically through that course
- Website will display the 12 most recent listings on the homepage
- Listings will display the uploaded image on its page and thumbnails in condensed views
- Users will be able to fill out a sell form for a listing and only be prompted to register after submitting their listing.
- Users can sort search results by price and category

Registered Users:


- Registered users can post listings and are prompted for the proper information in all categories
- Registered users can purchase items
- Registered users will be able to log in and log out
- Registered users can send and receive messages about listings
- Registered users can see their active listings

Admin Users:

- Administrators will perform all their tasks through an administrator page
- Administrators can approve or remove listings

Product Screenshots

SFSU Software Engineering Project CSC 648-848, Fall 2019. For Demonstration Only



All

Enter Search Here

Q

Find SFSU Textbooks

SellAboutLoginSign Up

Welcome to Gator Joe's


The only online marketplace
by SFSU students,
for SFSU students.

Find what you need, or sell your stuff fast!

Browse by Categories:


BooksClothingElectronicsFurnitureServicesVehicles

Recent Listings




USED razer laptop

\$450.00




Old winter jacket

\$78.00




Book


\$33.00





ART 230 Used

\$33.00









Home Page



All

test

Q

Find SFSU Textbooks

Sell

About

Login

Sign Up

Showing 5 Results: test

Sort By Price

Ascending

Descending

Lazy reg test

\$123.00

Lazy reg test

\$123.00

Lazy reg test

\$123.00

Lazy reg test

\$123.00

book110 test

\$332.00

Search Results



All



Enter Search Here



Find SFSU Textbooks

Sell

About

Login

Sign Up



Book

\$33.00

By John Doe

Category: Books

Course: AAS-510

Buy Now

Description

testetestest

You may be interested in other Books:



book110 test

\$332.00



book113

\$3232.00



230 Used

\$3232.00



ART 230 Used

\$33.00

[Browse more Books](#)


Listing Page



All ▾

Enter Search Here



Find SFSU Textbooks 

Sell

About

Login

Sign Up

Sell Books

Title

Enter Title Here!!

Course

AAS ▾

Number

Description

Say something about the product!!!

Price

\$0

Default will be \$0

Product Image

Choose file

Browse

File types allowed: png, jpg, jpeg

☐ It might take upto 24 hours to approve the post.

Cancel

Submit

Listing Sell Form



All ▾

Enter Search Here



Find SFSU Textbooks 

Sell

About

Login

Sign Up

Login

Email

Enter Email

Password

Enter Password

☐ Remember me

Cancel


Login

[Forgot password?](#)

Not a member? [Sign Up](#)

Login Page



All 

Find SFSU Textbooks 

[Sell](#) [About](#)

[Login](#) [Sign Up](#)

Register

Student email

SFSU email required (@mail.sfsu.edu). We won't share your email with anyone else.

Name

Password

Minimum 8 characters. Uppercase, lowercase and number required.

Re-type Password

☐ By creating an account you agree to our [Terms & Privacy](#).

Already have an account? [Sign in](#).


Register Page



All ▾

Enter Search Here



Find SFSU Textbooks 

[Sell](#)

[About](#)

[Login](#)

[Sign Up](#)

Search for SFSU Textbooks

AAS ▾

Number




Textbook Search



All ▾

Enter Search Here



Find SFSU Textbooks 

[Sell](#)

[My Listings](#)

[Messages](#)

[About](#)

[Admin](#)

[Logout](#)

Welcome Back, John Doe

Browse by Categories:

[Books](#)

[Clothing](#)

[Electronics](#)

[Furniture](#)

[Services](#)

[Vehicles](#)

Recent Listings



USED razer laptop

\$450.00



Old winter jacket

\$78.00



Book

\$33.00



ART 230 Used

\$33.00


Homepage, Logged in



All ▾

Enter Search Here



Find SFSU Textbooks 

[Sell](#)

[My Listings](#)

[Messages](#)

[About](#)

[Admin](#)

[Logout](#)

Messages with All Sellers

Message with John Doe

Recent message:

hey

[Chat Now!](#)

At: 2019-12-17 02:57:09

Message with John Doe

Recent message:

Hey there

[Chat Now!](#)

At: 2019-12-17 06:55:07


Messaging Hub



All ▾

Enter Search Here



Find SFSU Textbooks 

[Sell](#)

[My Listings](#)

[Messages](#)

[About](#)

[Admin](#)

[Logout](#)

Message Page with John Doe

123 Price: 123.00 \$

hello!!

from John Doe at 2019-12-15 20:36:33

1

from Tan at 2019-12-15 21:21:28

Hey there

from John Doe at 2019-12-17 06:55:07

Input

Type message!

send

Message Page



All



Enter Search Here



Find SFSU Textbooks 

[Sell](#)

[My Listings](#)

[Messages](#)

[About](#)

[Admin](#)

[Logout](#)



Lazy reg test

Listing ID: 14

\$123.00

Category: Clothing

Posted by: Tan

Description: 123

[Allow Post](#)

[Deny Post](#)

Administrator Page

Key Database Tables

TABLES

ADMIN

BOOK

CATEGORY

IMAGE














LISTING

MESSAGE










THUMBNAIL

USER






listing

 **listing_ID** int(11) (auto increment)
 **title** varchar(45)
 **description** varchar(5000)
 **sell_price** decimal(6,2)
 **category_ID** int(11)
 **seller_ID** int(11)
 **sold** tinyint(1)
 **approved** tinyint(1)
 **PRIMARY** (listing_ID)
 **listing_ibfk_1** (category_ID) → category (category_ID)
 **listing_ibfk_2** (seller_ID) → user (user_ID)
 **category_ID** (category_ID)
 **seller_ID** (seller_ID)






user

 **user_ID** int(11) (auto increment)
 **name** varchar(45)
 **email** varchar(45)
 **password** varchar(200)
 **PRIMARY** (user_ID)
 **email** (email)
 **password** (password)
 **email** (email) UNIQUE
 **password** (password) UNIQUE

book

 **book_ID** int(11)
 **dept** varchar(5)
 **course** int(11)
 **PRIMARY** (book_ID)
 **book_ibfk_1** (book_ID) → listing (listing_ID)

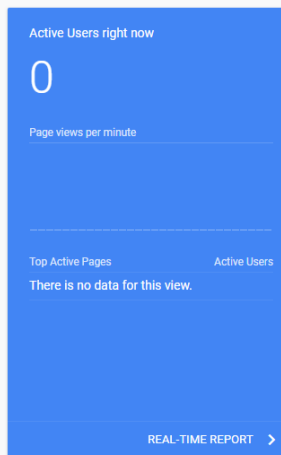
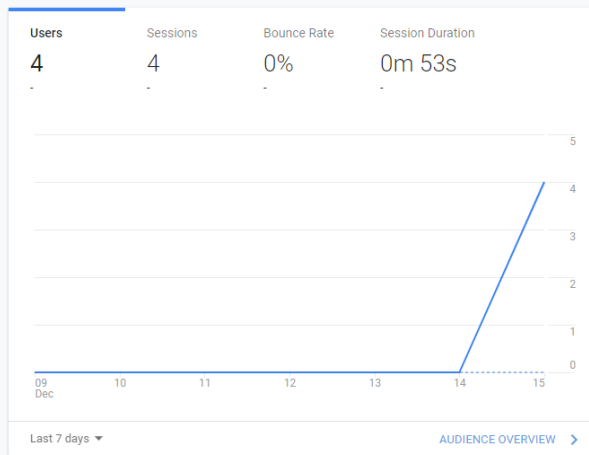
category

 **category_ID** int(11) (auto increment)
 **category_name** varchar(45)
 **PRIMARY** (category_ID)
 **category_name** (category_name)
 **category_name** (category_name) UNIQUE

Google Analytics

Google Analytics Home

INSIGHTS



Ask Analytics Intelligence

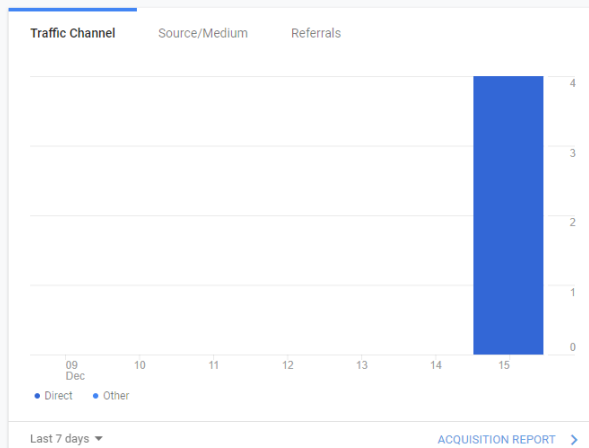
UNDERSTANDING USER BEHAVIOR
Distribution of count of sessions

TECHNICAL PERFORMANCE
Highest landing page average load times

WHERE YOU GET YOUR USERS FROM
What campaigns have the most sessions?

MORE INSIGHTS >

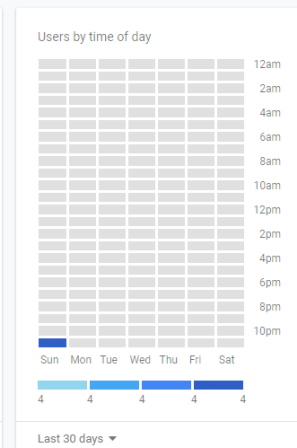
How do you acquire users?



Where are your users?



When do your users visit?

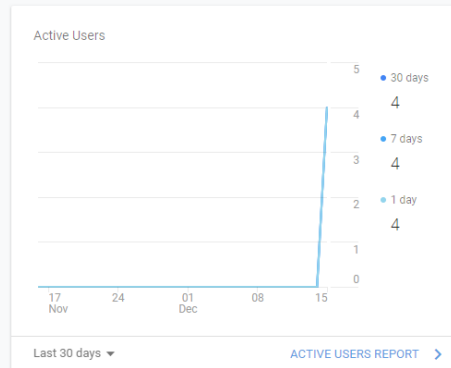


What pages do your users visit?

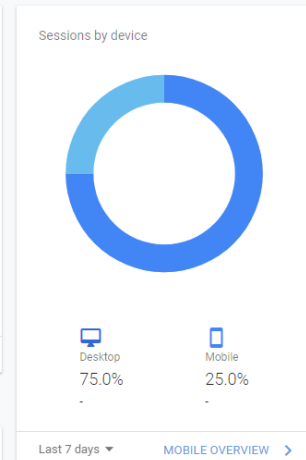
Page	Page Views	Page Value
/	9	\$0.00
/about	2	\$0.00
/listing/22	2	\$0.00
/about/mark	1	\$0.00
/buytextbooks	1	\$0.00
/listing/23	1	\$0.00
/message	1	\$0.00
/results	1	\$0.00
/results?search=&cat=All	1	\$0.00
/results?search=&cat=Books	1	\$0.00

Last 7 days ▾ PAGES REPORT >

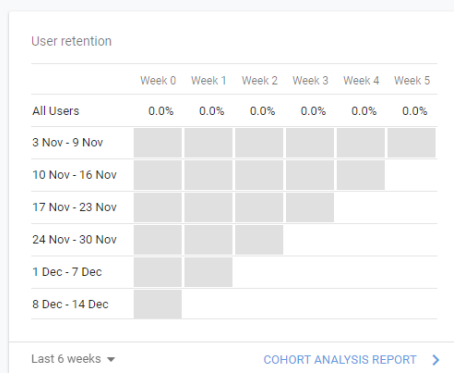
How are your active users trending over time?



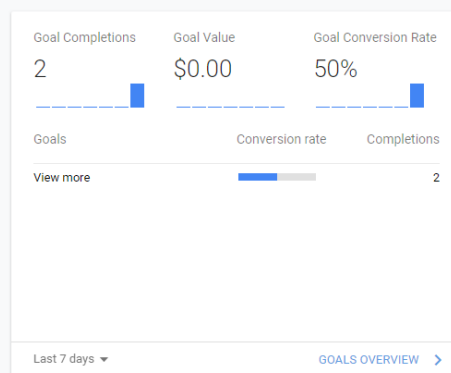
What are your top devices?



How well do you retain users?



How are you performing against goals?



Task Management – Trello and Slack

Trello snapshot of post-M3 tasks:

The Trello board displays tasks organized into three columns: Priority 1 Post-M3, Priority 2, and Priority 3. Each column contains several task cards with labels and assignees.

- Priority 1 Post-M3:**
 - Buy listing with lazy registration (Assignees: T, V)
 - Post listing with lazy registration (Assignee: PC)
 - User Registration (Assignee: MH)
 - Admin Page for Approving (Assignee: V)
 - Admin Approval (Assignee: T)
 - User Messaging back-end for sending messages (Assignee: T)
 - Messaging interface properly displaying messages (Assignee: WY)
 - Image and thumbnail implementation on back end (Assignee: MH)
- Priority 2:**
 - Admin deny listing (Assignees: MH, T)
 - Website logo (Assignee: WY)
 - Category browse buttons (Assignee: G)
 - Sorting buttons on search results (Assignee: G)
 - Admin page button on navbar only visible to admins (Assignee: G)
 - Message button available for registered users on navbar (Assignee: G)
- Priority 3:**
 - Listing Cancellation (Assignees: MH, T)
 - Order Status (Assignees: G, V, WY)
 - Order History (Assignees: MH, T)
 - Shopping Cart (Assignees: MH, T)
 - Shopping Cart Page (Assignees: G, V, WY)

The Trello Archive view shows a list of archived cards. Each card includes a title, a description, and a status (Archived). Below each card are links for "Send to Board" and "Delete".

- Seller form fields implemented with bootstrap** (Assignee: V)
[Send to Board](#) - [Delete](#)
- Proper field validations on registration form** (Assignee: WY)
[Send to Board](#) - [Delete](#)
- Home page displaying recent orders and introduction of project** (Assignee: V)
[Send to Board](#) - [Delete](#)
- Messaging back-end set up for displaying messages** (Assignee: T)
[Send to Board](#) - [Delete](#)
- 'buy textbooks' link leading to a results page for books** (Assignee: G)
[Send to Board](#) - [Delete](#)
- Navbar restructuring, add second row to accommodate changes as per professor.** (Assignee: G)
[Send to Board](#) - [Delete](#)
- User Sell Page** (Assignees: G, V, WY)
[Send to Board](#) - [Delete](#)

Tasks also directly assigned through slack to ensure everyone is updated on current state of project. Example slack announcement:

[@everyone](#) Just integrated everyone's branches together and remake branches so please do a fresh pull and be prepared to see changes. Time is winding down on our due date so please stay on top of your tasks. The templates have been reorganized and a new class has been created for non-routing functions. I've also added the login_required for the pages that needed them so make sure to log in when testing certain pages.

The last major things we need to implement is buying and 'lazy registration' which I will most likely be taking care of this weekend. I still need a few minor jobs completed by you guys:

[@Grant Kennedy](#) Aside from the admin button, please add a messages button to the navbar. These will route to /admin and /message, respectively. We also need two more buttons in the results page for sorting by price. One descending and one ascending, please add any extra UI element to make it clear what the sort buttons do.

[@Chuhao Yang](#) I've made a new branch for you named logo, please commit the image of the logo you created and replace the 'GJ' in the navbar with it. Make sure to test that it will fit and resize for different screen dimensions. After that I'd like you to go over the code in listing.html and make sure the rest of the webpage will scale properly with different dimensions of the image.

[@Varun_01](#) Admin page is looking good, but it is throwing a server error when there are no unapproved listings. I need you to encase the listing approval with an if statement that checks if a listing was passed into the page. If it wasn't, display a message saying there are no unapproved listings. This should be similar to the "no results found" set-up you had for search results. Your next task after that is to implement the 'Buy' button in the listing page. I presume it would be similar to the approve/deny so I'd like to give it to you. I also have a few low priority tasks for you that are optional. Please message me if you are interested in them.

[@Mark](#) Please go over the sell functions for posting a listing and take care of the error as we last discussed. This will be your last real task aside from the presentation so please be working on an outline/script. Also, remember to remove the unhashed passwords from the database before our server deployment, in case I forget.

[@zhuoxin Tan](#) Need a function for deleting a listing. This should work similarly to the way updates work in our db model. I've redone the update functions already following what mark said so I'd like for you to read those and make a delete function. In addition, I need someone to test our website and you have the least number of tasks currently. Right now, trying to sell a book does not work but everything else should expectedly be fine aside from 'buying', which hasn't been made yet. Please go through our website doing as many things as you can: selling, registering, going through all our routes while logged in AND logged out. Please report anything that does not work in one of our channels.

Team Member Contributions

Team Contribution- Piero



Piero Thomas Calenzani <asmodeus@mail.sfsu.edu>

17:26



To: Mark Edward Hammond; Chuhao Yang; Zhuoxin Tan; Varun Sura; Grant Ward Kennedy
Cc: Piero Thomas Calenzani



Hello team,

This is Piero, the project's team lead.

Here is the contribution I have done in the project:

- Set-up of deployment server and installation of Flask
- Project file structuring
- Milestone document organization
- Slack and Trello task management
- Setting up of meetings in-person or via zoom call
- General integration of all team members' tasks
- Jinja 'macro' file for listing previews, registration, login
- Content management dictionary for templates to access
- Lazy registration through selling forms
- Listing page
- About and member pages
- QA throughout development

Commit count: 184

Team Contribution- Mark



Mark Edward Hammond <mhammond4@mail.sfsu.edu>

12/16/2019 23:29



To: Piero Thomas Calenzani; Chuhao Yang; Zhuoxin Tan; Varun Sura; Grant Ward Kennedy

Hello all. This is Mark Hammond, the project's back-end lead.

Here are some of the contributions I am responsible for:

- Creation and maintenance of all used database schemas
- Creation of all Object-Relational Mapper classes (User, Message, etc.)
- back-end support for sending, receiving, and displaying messages
- back-end support for uploading and displaying images
- back-end support for user authentication
- back-end support for user creation
- back-end support for listing creation and display
- SSH tunneling so we could work on the database from our personal machines
- Determining needed modules beyond the initial choice of Flask
- Reorganizing code layout into several modules

I feel like I'm forgetting a few things. If it touched the database in any way, I was involved with it.

Commit count: 44



Varun Sura <vsura@mail.sfsu.edu>

12/16/2019 21:00



To: Grant Ward Kennedy; Piero Thomas Calenzani; Mark Edward Hammond; Chuhao Yang;...



Hello team,

This is Varun, the project's front-end developer.

Following are my contributions towards the project:

- Contributed to Milestone 0 front-end along with Grant.
- Formatting of Milestone 1 document
- Designed storyboards for Milestone 2.
- Home page formatting.
- Selling modal on header.
- Textbook selling form.
- General Listing form
- Validation of listing form and login as well as signup modal.
- Admin page designing and Allow/Deny post functionality.
- Flash messages.

Commit Count: 20

Thanks,

Regards,

Varun Sura,

920716066.



Grant Ward Kennedy <gwk@mail.sfsu.edu>

12/16/2019 18:53



To: Piero Thomas Calenzani; Mark Edward Hammond; Chuhao Yang; Zhuoxin Tan; Varun Sura

Hello team,

This is Grant, the project's front-end lead.

Here are the contributions I have made to the project:

- Set-up Bootstrap 4 as front end Framework
- Header for all pages containing Navigation Bar
- Category Search Bar in the Navigation Bar
- results page formatting
- SFSU Textbook search page
- Navbar and home page responsive to logged in-users
- Browse-By-Category buttons on home page
- Sort By Price functionality on results page

Commit count: 42



Zhuoxin Tan <ztan4@mail.sfsu.edu>

12/16/2019 18:50



To: Piero Thomas Calenzani; Mark Edward Hammond; Chuhao Yang; Varun Sura; Grant War... 

Hello team,

This is Tan, the project's backend developer.

Here is the contribution I have done in the project:

- Milestone 1: Initial list of functional and non-functional requirements
- Content management dictionary for templates to access
- Milestone 2: diagram for DB organization
- Backend Message functions
- Backend initial set up listing function
- Set up google analytics

Commit count: 20



Chuhao Yang <cyang4@mail.sfsu.edu>

12/16/2019 22:00



To: Varun Sura Cc: Grant Ward Kennedy; Piero Thomas Calenzani; Mark Edward Hammond;... 

Hello team,

This is Chuhao Yang, the project's front-end developer, and github master.

Following are my contributions towards the project:

- Contributed the milestone 0
- Formatting of Milestone 1 document merge pull request the github part for M0,1,2
- Design graph and and table for Milestone 2.
- Login signup formatting.
- Message modal on header.
- All message page form.
- Message box design
- Github checking
- Message page design and functionality
- Thx for sign up page design
- Forgetpsw page design
- Terms and privacy page design
- Logo and Icon design

Commit Count: 50

Thanks,

Regards,

Chuhao Yang,

[916421550](https://github.com/916421550)

Post Analysis by Team Lead

The main challenges my team faced during the development and teamwork of our project included programming language familiarity, motivation, deadlines, coding skills, and language barriers. From the first week, we knew that Python was going to be problematic for most of the team despite it being the most familiar language from the available three. A mistake I made, as a leader, was not easing the team members who were new to the language into our project. I had set up the project and sent out tasks which led to a lot of confusion with members who had never experienced coding with it. If I could re-do the start of our semester, I would have spent more time setting up the skeleton of the project and commenting out everything we needed as well as finding guides and tutorials for coding basics in our chosen language. Although this is something more common in school projects, I believe it can make a difference in a professional environment as well. Additionally, some of our group members were not native English speakers which caused problems when giving out tasks and worsened the state of any other issues mentioned. In the future, I would take the extra steps to make helpful and impactful comments to help explain the project and coding architecture to struggling members.

The recurring problems with teamwork included team motivation and deadline obedience. As my first time being responsible for a team's workflow, I was very lenient in the beginning and allowed many delays with the start of the project. This propagated into problems later in the project pipeline where all tasks, small or imperative, were bleeding out our development time. The most serious cases were taken to the project CEO to be dealt with formally. This was not a good display of our project's teamwork and would be something to improve on in the future. Enforcement on project deadlines is the main factor that was missing in our first half of development.

The coding skills in the team had large discrepancies between members. Some members were able to independently get tasks done while others struggled every step of the way. This is another issue that I am sure will occur in future projects. The challenge of skill discrepancy was a troublesome one to deal with due to the extra work it places on other team members. I would mainly address this issue in the future with stricter code reviews. Coming into this project, I had never dealt with code reviews and when giving tasks out, I would point them to examples of relevant work. The result was confusion of the project's implementation outside of someone's given task. Towards the end of the project development, I've learned the significance and procedure of significant code review as well as tools on GitHub that facilitate this. Enforcing strict code reviews is my largest takeaway from this project and what I will bring to future projects when I get the chance. Something our team missed out on was collaborative coding sessions in person. Due to everyone's work and class schedules, it was difficult to consistently find times where everyone was available. This led to a lot of our meetings being online which robbed us of the advantages that collaborative sessions would provide. I strongly believe that work sessions as a group would have aided in a lot of the problems that my team faced, and it would be something I'd put more effort toward promoting in future teams.