

Final Project for SW Engineering Class CSC 648-848 Summer 2020

Team 02

House-a-Gator

Team members:

Team Lead	Raviteja Guttula (rguttula@mail.sfsu.edu)
Front End Lead	Swetha Govindu
Front End Developer	Henry Meier
Front End Developer	Kevin Zhou
Front End Developer	Troy Turner
Back End Lead	Ashwini Uthirakumar
Back End Developer & Github Master	Fiona Senchyna

Demo URL:

<http://ec2-54-80-160-88.compute-1.amazonaws.com>

Date: 08/07/2020

1. Product summary:

Our team has created an apartment and housing website for renting and selling University real estate. The website is called House-a-Gator. It is specifically focussed on San Francisco State University students and faculty. The website design is centered around the San Francisco State community. Guest users can browse the listings, registered users can post listings. Only those registered with an @mail.sfsu.edu or @sfsu.edu email address can buy or rent on the site. The organized practices will allow the users to see the location of a property relative to the university campus. The website user interface is very user friendly and naturally invokes carefree campus life. We care very much about making SFSU a more affordable place to study and work for anyone who wants to study here. We believe that our product is the natural solution to the student real estate market. Most student real estate listings display housing information that is often incorrect, mismanaged, or overpriced. We wanted to create a site that accurately portrays local housing information and solves the issue of finding a place to live. The product is marketable as an easy to use and effective way to list housing. It takes the hassle out of finding a place to live. It makes it convenient for parents, students, and faculty to reference the site and plan their housing system.

To access the website go to <http://ec2-54-80-160-88.compute-1.amazonaws.com> . One unique feature about House-a-gator is that the houses can be filtered based on the distance from SFSU campus. This is a convenience since real estate is always in hot demand, especially in the city of San Francisco. The User Interface is also very clean and modern. We wanted the site to be easy to use and understand.

These are the features:


- All users shall be able to search based on title and description.
- All users shall be able to filter listings based on home type.
- All users shall be able to filter listings based on distance from SFSU campus.
- All users shall be able to filter listings based on listing type (Rent or Sell).
- Guest users shall be able to register.
- Registered users shall be able to post new listings.
- Registered users shall have a personalized dashboard to check listings.

- Registered users shall have a personalized dashboard to check the messages received.
- Admin shall be required to approve listings in 24 hours, before it goes live.
- Admin shall be able to delete flagged listings.
- Admin shall be able to delete flagged accounts and users.

2. Product Screenshots:

Home page:


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**House-a-Gator**


Rent/Sell ▾All Categories ▾Distance from SFSU ▾Search by titleSearch

About-usPost New ListingSignInSignUp


15 listings found.




Isolated House
House with a nice garden around
\$750
Beds: 2 Baths: 2




Amazing palace
Fully furnished palace
\$7500
Beds: 1 Baths: 4





Beach side house
A safe home with amazing view of a beach
\$1150
Beds: 1 Baths: 1




Victorian house
Victorian houses with funky colors
\$4200
Beds: 3 Baths: 2











About-us page:

**House-a-Gator**

All Listing Types 

PostAbout-usSign-inSign-up

About Us

We are computer science students at San Francisco State University

Our Team



Raviteja Guttula
Team lead
[About](#)



Swetha Govindu
Frontend lead
[About](#)




Ashwini Uthirakumar
Backend lead
[About](#)



Henry Meier
Frontend developer
[About](#)

Sign-in page:

SFSU SOFTWARE ENGINEERING PROJECT CSC 648-848, SUMMER 2020. FOR DEMONSTRATION ONLY

 House-a-Gator

Rent/Sell ▾ All Categories ▾ Distance from SFSU ▾ Search by title

About-us Post New Listing [SignIn](#) [SignUp](#)

Log In

Email Address


Password

New User? [Signup here](#)

[Forgot Password?](#)

Sign-up page:

SFSU SOFTWARE ENGINEERING PROJECT CSC 648-848, SUMMER 2020. FOR DEMONSTRATION ONLY

 House-a-Gator

Rent/Sell ▾ All Categories ▾ Distance from SFSU ▾ Search by title

About-us Post New Listing SignIn [SignUp](#)

Sign Up

First Name*

Last Name*

Email address*

We'll never share your email with anyone else.

Password*

Confirm Password*

☐ [Terms & Conditions*](#)

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

New listings page:

New Listing

* fields are mandatory

Title *

Two bed house with an amazing view

Description *

Two bed house with an amazing view

Address

1800 Holloway Ave. San Francisco, CA, 94132

Price *

\$ 1000000 .00

Beds *

3

Baths *

2

Type *

☒ Rent ☐ Sell

Category *

Select Category ▾

Square Footage *

850

Sample listing details page:



Listing Details

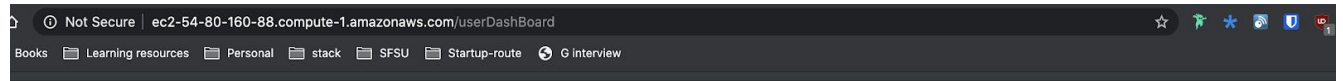
Title	Isolated House
Description	House with a nice garden around
Listing Price	750
Number of Baths	2
Number of Beds	2
Square Footage	750
Street Name	Wayne Branch
Zip Code	34212

[Send a message to Seller](#)

Listing View on a map




User Dashboard:




My Listings


Total Number of Listings: 3



Serene country-side cottage
Cozy cottage on a hill side
Verified



House on a lake between mountains
Floating house on the lake, ...
Verified




House with a nice pool
House with a nice garden a...
Verified

Recieved messages

Sender	House title	Message	Date
SFSU student	Serene country-side cottage	Good house, can i come check out ?	8/8/2020, 3:07:55 AM
SFSU student	House on a lake between mountains	How high is it from water ?	8/8/2020, 3:08:19 AM
SFSU student	House with a nice pool	What's the depth of the pool ?	8/8/2020, 3:08:46 AM

House-a-Gator unique feature (search based on Distance from SFSU):

**House-a-Gator**

Rent/Sell ▾

All Categories ▾

Distance from SFSU

Within 1 mile

Within 5 miles

✓ Within 10 miles

Within 50 miles

Search by title

Search

ENGINEERING PROJECT CSC 648-848, SUMMER 2020. FOR DEMONSTRATION ONLY


About-us

Post New Listing


SignIn

SignUp


3 listings found.



Amazing palace
Fully furnished palace
\$7500
Beds: 1 Baths: 4



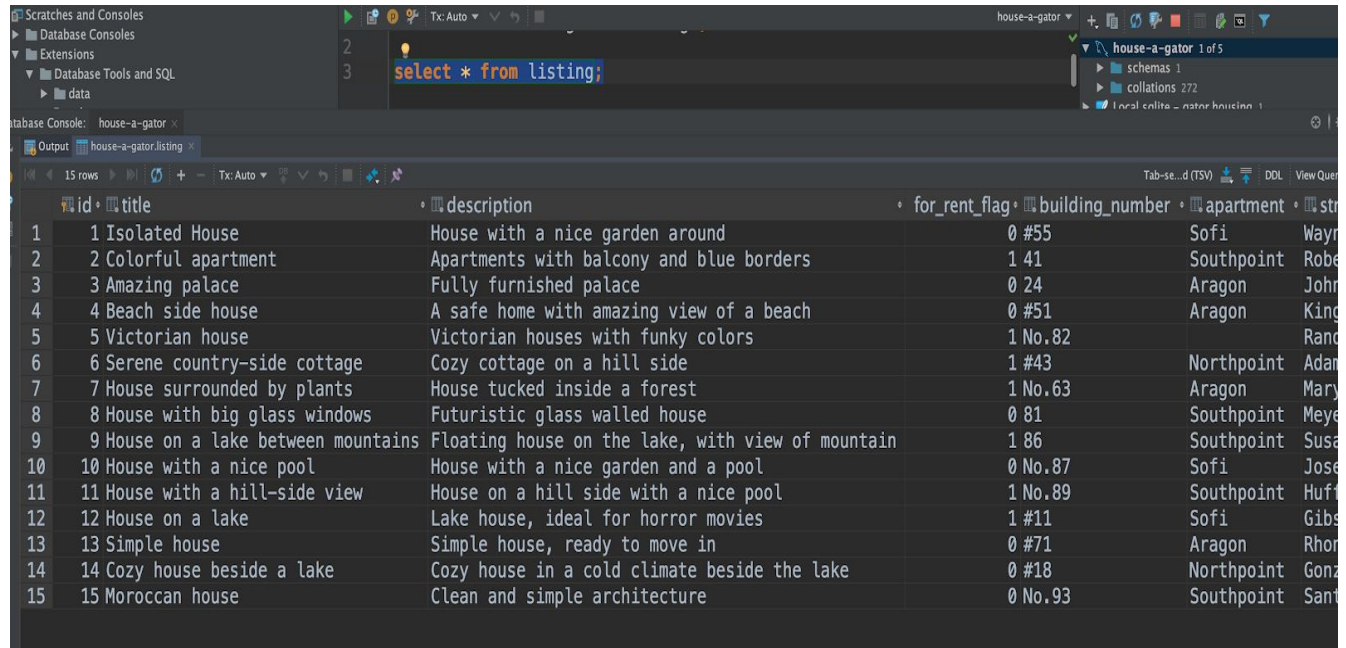
House with big glass windows
Futuristic glass walled house
\$1550
Beds: 4 Baths: 4



House on a lake
Lake house, ideal for horror movies
\$3000
Beds: 2 Baths: 2

3. Database Organization: Screenshots of key DB tables:

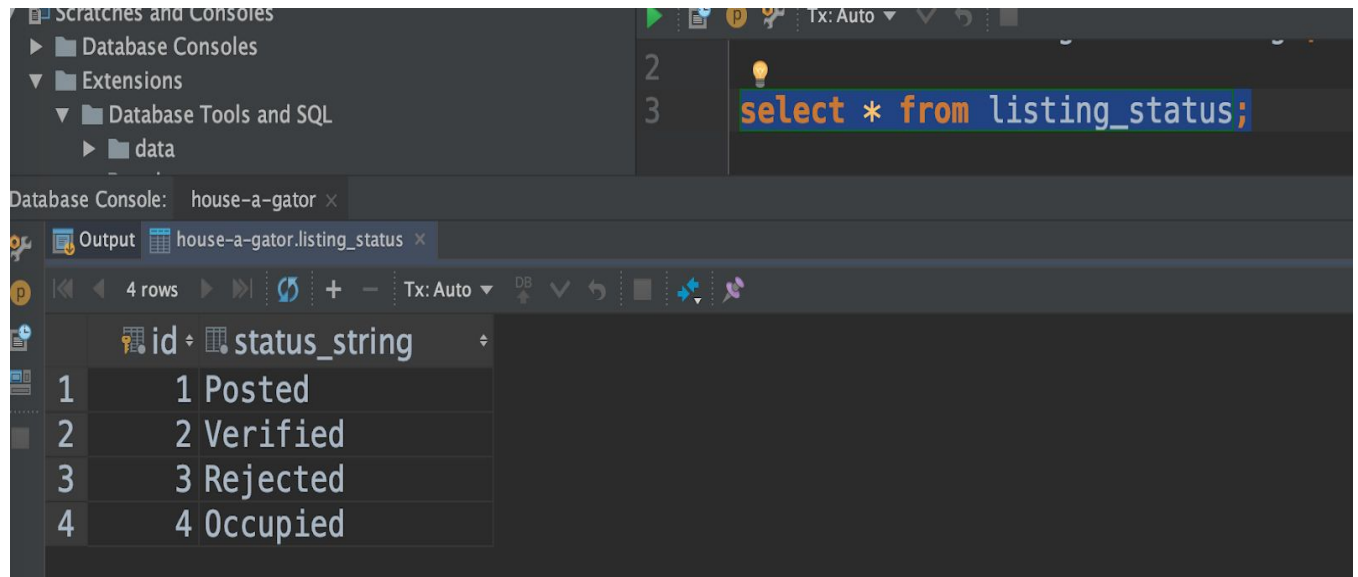
Listing table:



The screenshot shows a database console interface. At the top, a SQL query is entered: `select * from listing;`. Below the query, the results are displayed in a table with 15 rows. The table has columns: `id`, `title`, `description`, `for_rent_flag`, `building_number`, `apartment`, and `street`. The data is as follows:

id	title	description	for_rent_flag	building_number	apartment	street
1	1 Isolated House	House with a nice garden around	0	#55	Sofi	Wayn
2	2 Colorful apartment	Apartments with balcony and blue borders	1	41	Southpoint	Robe
3	3 Amazing palace	Fully furnished palace	0	24	Aragon	John
4	4 Beach side house	A safe home with amazing view of a beach	0	#51	Aragon	King
5	5 Victorian house	Victorian houses with funky colors	1	No.82		Rand
6	6 Serene country-side cottage	Cozy cottage on a hill side	1	#43	Northpoint	Adan
7	7 House surrounded by plants	House tucked inside a forest	1	No.63	Aragon	Mary
8	8 House with big glass windows	Futuristic glass walled house	0	81	Southpoint	Meye
9	9 House on a lake between mountains	Floating house on the lake, with view of mountain	1	86	Southpoint	Susa
10	10 House with a nice pool	House with a nice garden and a pool	0	No.87	Sofi	Jose
11	11 House with a hill-side view	House on a hill side with a nice pool	1	No.89	Southpoint	Huff
12	12 House on a lake	Lake house, ideal for horror movies	1	#11	Sofi	Gibs
13	13 Simple house	Simple house, ready to move in	0	#71	Aragon	Rhor
14	14 Cozy house beside a lake	Cozy house in a cold climate beside the lake	0	#18	Northpoint	Gonz
15	15 Moroccan house	Clean and simple architecture	0	No.93	Southpoint	Sant

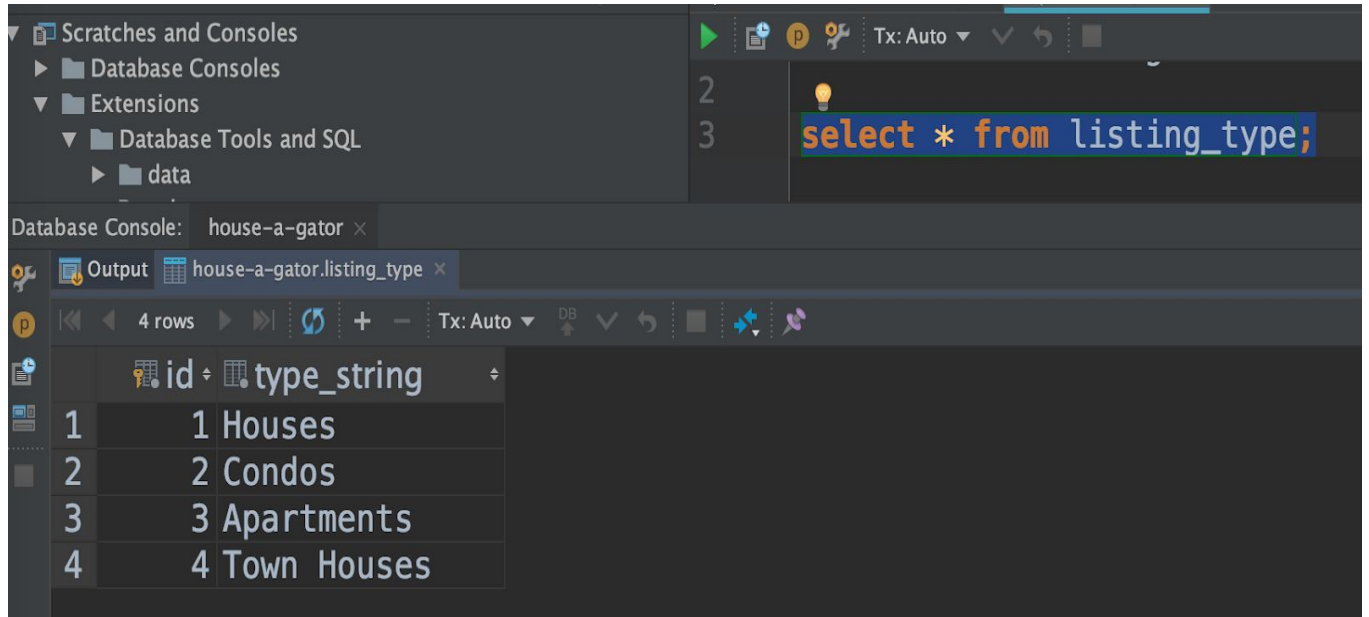
ListingStatus table:



The screenshot shows a database console interface. The top panel displays a SQL query: `select * from listing_status;`. The bottom panel shows the results of the query, which are 4 rows. The columns are labeled `id` and `status_string`. The data is as follows:

id	status_string
1	1 Posted
2	2 Verified
3	3 Rejected
4	4 Occupied

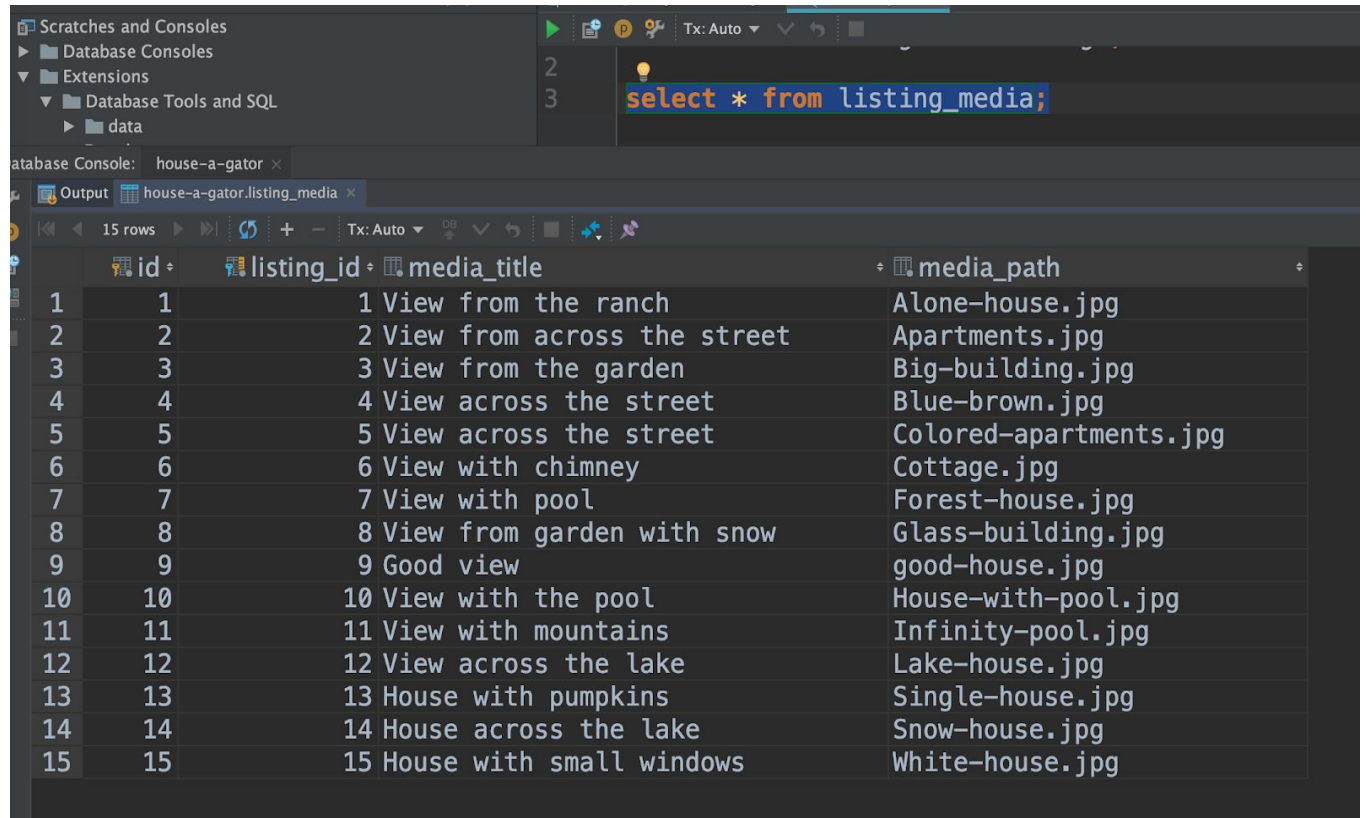
ListingType table:



The screenshot shows a database console interface. At the top, a SQL query is entered in a text editor: `select * from listing_type;`. Below the editor, the console output displays the results of the query. The output is a table with two columns: `id` and `type_string`. There are four rows of data:

	id	type_string
1	1	Houses
2	2	Condos
3	3	Apartments
4	4	Town Houses

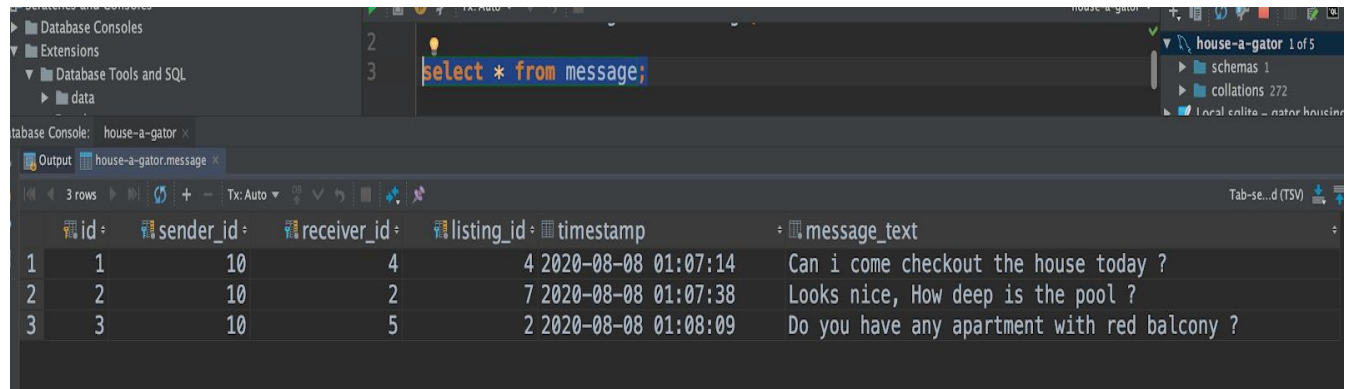
Media table:



The screenshot shows a database console interface. At the top, a SQL query is entered in the editor: `select * from listing_media;`. Below the editor, the results of the query are displayed in a table. The table has four columns: `id`, `listing_id`, `media_title`, and `media_path`. There are 15 rows of data, each representing a media entry for a specific listing.

	id	listing_id	media_title	media_path
1	1	1	View from the ranch	Alone-house.jpg
2	2	2	View from across the street	Apartments.jpg
3	3	3	View from the garden	Big-building.jpg
4	4	4	View across the street	Blue-brown.jpg
5	5	5	View across the street	Colored-apartments.jpg
6	6	6	View with chimney	Cottage.jpg
7	7	7	View with pool	Forest-house.jpg
8	8	8	View from garden with snow	Glass-building.jpg
9	9	9	Good view	good-house.jpg
10	10	10	View with the pool	House-with-pool.jpg
11	11	11	View with mountains	Infinity-pool.jpg
12	12	12	View across the lake	Lake-house.jpg
13	13	13	House with pumpkins	Single-house.jpg
14	14	14	House across the lake	Snow-house.jpg
15	15	15	House with small windows	White-house.jpg

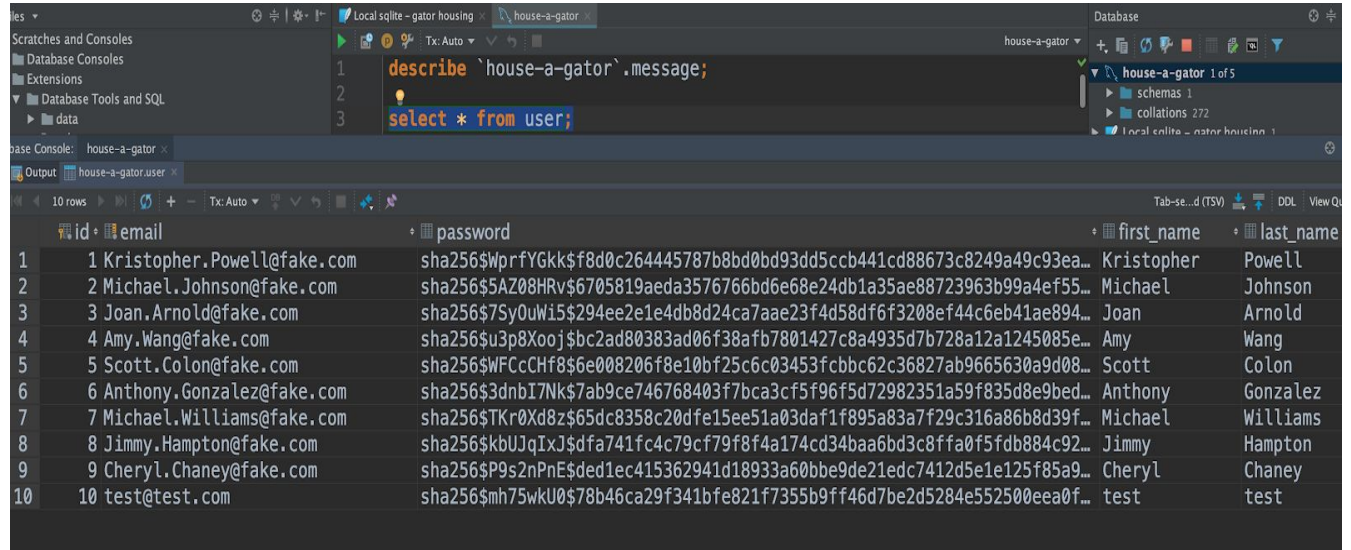
Message table:



The screenshot shows a database console interface. At the top, a SQL query `select * from message;` is entered. Below the query, the results are displayed in a table format. The table has six columns: `id`, `sender_id`, `receiver_id`, `listing_id`, `timestamp`, and `message_text`. There are three rows of data. The first row shows a message from sender 1 to receiver 10, listing 4, at timestamp 2020-08-08 01:07:14, with the text 'Can i come checkout the house today ?'. The second row shows a message from sender 2 to receiver 10, listing 2, at timestamp 2020-08-08 01:07:38, with the text 'Looks nice, How deep is the pool ?'. The third row shows a message from sender 3 to receiver 10, listing 5, at timestamp 2020-08-08 01:08:09, with the text 'Do you have any apartment with red balcony ?'.

id	sender_id	receiver_id	listing_id	timestamp	message_text
1	1	10	4	2020-08-08 01:07:14	Can i come checkout the house today ?
2	2	10	2	2020-08-08 01:07:38	Looks nice, How deep is the pool ?
3	3	10	5	2020-08-08 01:08:09	Do you have any apartment with red balcony ?

User table:



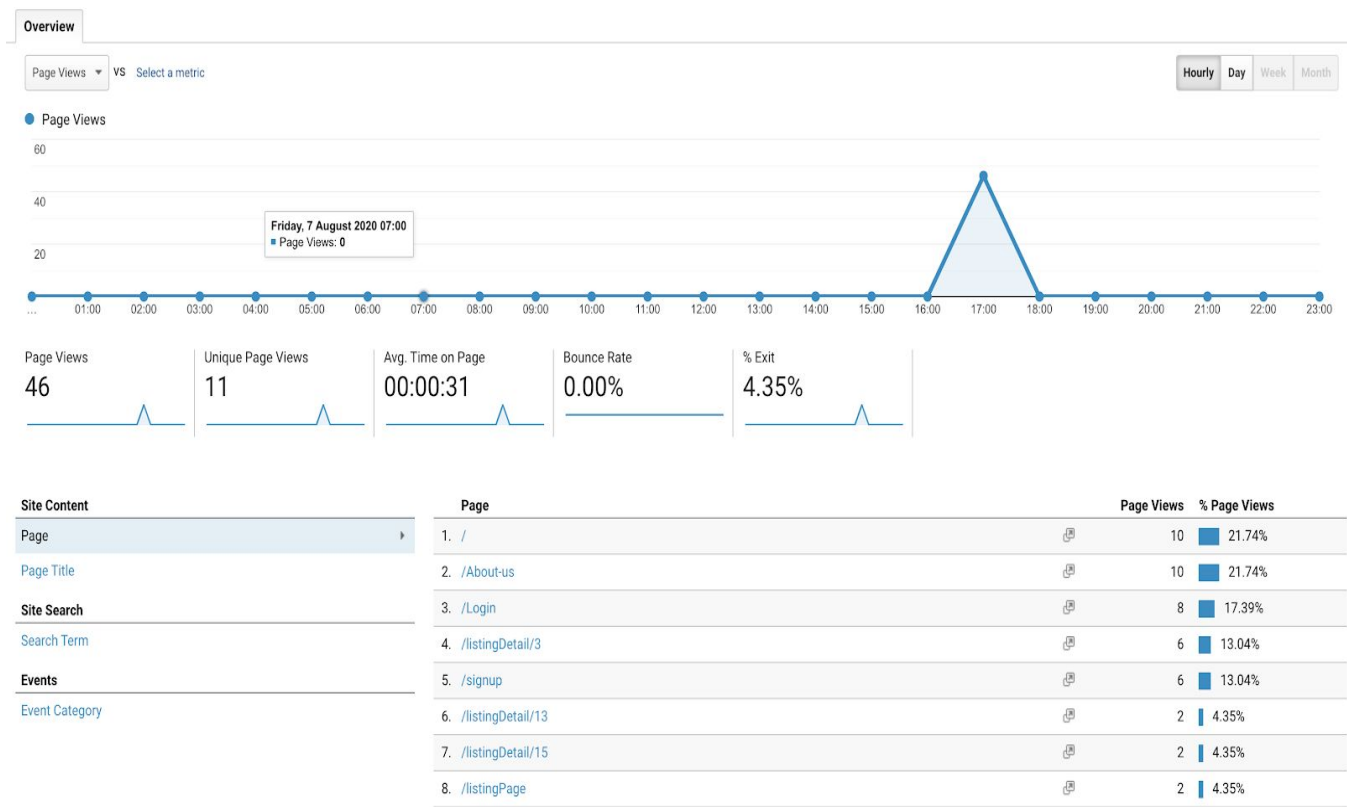
The screenshot shows a SQLite database interface with the 'house-a-gator' database selected. The SQL console contains the following queries:

```
1 describe `house-a-gator`.message;  
2  
3 select * from user;
```

The output displays the structure of the 'user' table, which has columns: id, email, password, first_name, and last_name. The table contains 10 rows of data, including test users and users with fake email addresses.

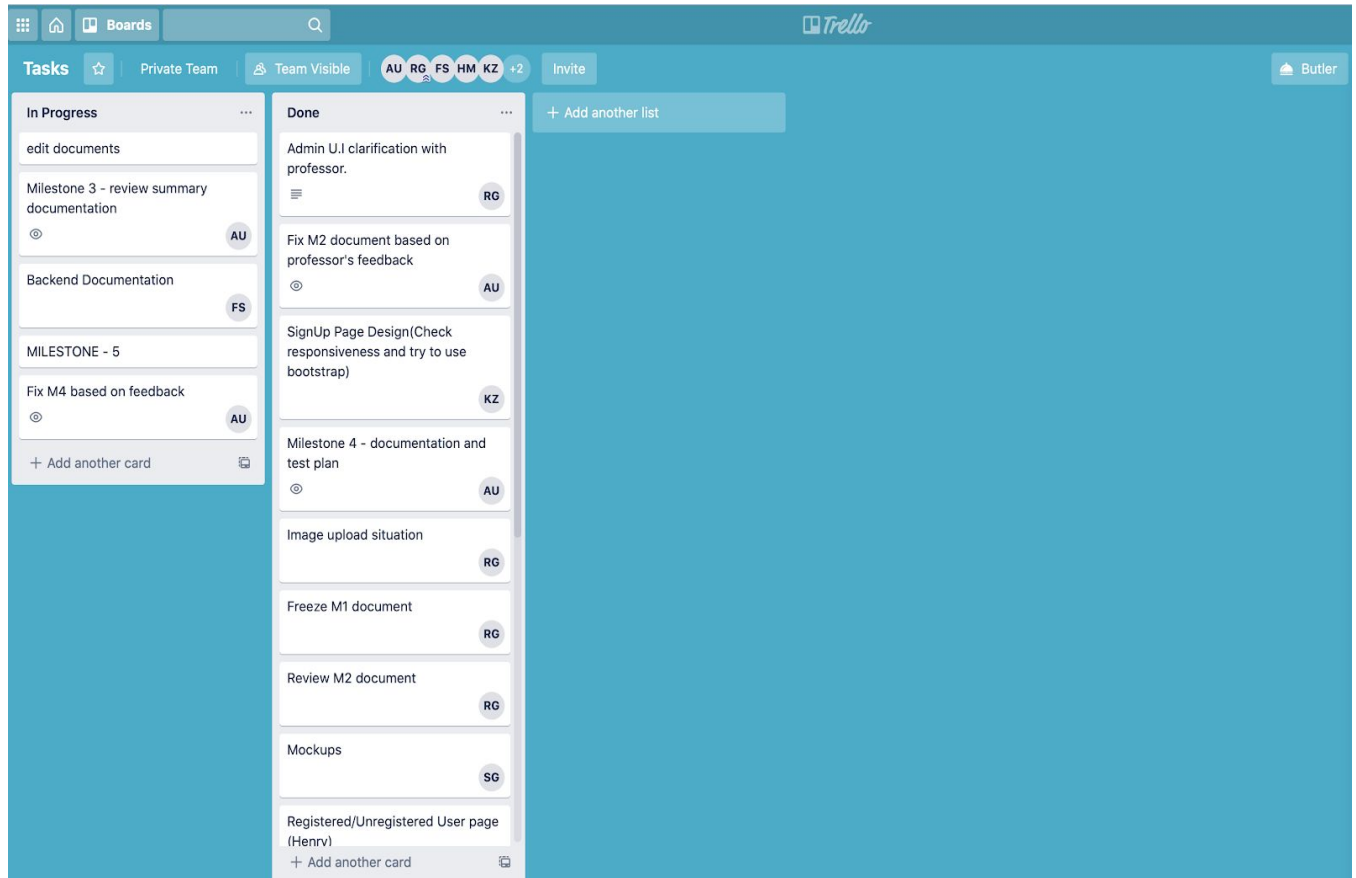
	id	email	password	first_name	last_name
1	1	Kristopher.Powell@fake.com	sha256\$WprfYGkk\$f8d0c264445787b8bd0bd93dd5ccb441cd88673c8249a49c93ea...	Kristopher	Powell
2	2	Michael.Johnson@fake.com	sha256\$5AZ08HRv\$6705819aeda3576766bd6e68e24db1a35ae88723963b99a4ef55...	Michael	Johnson
3	3	Joan.Arnold@fake.com	sha256\$7Sy0uWi5\$294ee2e1e4db8d24ca7aae23f4d58df6f3208ef44c6eb41ae894...	Joan	Arnold
4	4	Amy.Wang@fake.com	sha256\$u3p8Xooj\$bc2ad80383ad06f38afb7801427c8a4935d7b728a12a1245085e...	Amy	Wang
5	5	Scott.Colon@fake.com	sha256\$WFCcCHf8\$6e008206f8e10bf25c6c03453fcbbc62c36827ab9665630a9d08...	Scott	Colon
6	6	Anthony.Gonzalez@fake.com	sha256\$3dnbI7Nk\$7ab9ce746768403f7bca3cf5f96f5d72982351a59f835d8e9bed...	Anthony	Gonzalez
7	7	Michael.Williams@fake.com	sha256\$TKr0Xd8z\$65dc8358c20dfe15ee51a03daf1f895a83a7f29c316a86b8d39f...	Michael	Williams
8	8	Jimmy.Hampton@fake.com	sha256\$kbUJqIxJ\$dfa741fc4c79cf79f8f4a174cd34baa6bd3c8ffa0f5fdb884c92...	Jimmy	Hampton
9	9	Cheryl.Chaney@fake.com	sha256\$P9s2nPnE\$ded1ec415362941d18933a60bbe9de21edc7412d5e1e125f85a9...	Cheryl	Chaney
10	10	test@test.com	sha256\$mh75wku0\$78b46ca29f341bfe821f7355b9ff46d7be2d5284e552500eea0f...	test	test

4. Google analytics:





5. Project management:


Trello:





Google docs:


 Drive


 New


 My Drive

 Shared with me

 Recent

 Starred

 Trash

 Storage

2.8 GB of 15 GB used

[Buy storage](#)


Search in Drive

?


Shared with me > csc-648-848

Name	Owner	Last modified by me	File size
API response format	Raviteja Guttula	Jul 25, 2020	—
API's high level overview - Jul 25.mp4	Raviteja Guttula		116 MB
Data items	Raviteja Guttula	Jun 23, 2020	—
Data modelling	Raviteja Guttula	Jul 12, 2020	—
M3 Feedback	me	Aug 5, 2020	—
Meeting minutes	Raviteja Guttula		—
Milestone 1 - requirements.pdf	Raviteja Guttula		165 KB
Milestone 1 - draft	Raviteja Guttula	Jul 9, 2020	—
Milestone 2 - draft	Raviteja Guttula	Jul 27, 2020	—
Milestone 2 - requirements.pdf	Raviteja Guttula		472 KB
Milestone 3 review.mp4	Raviteja Guttula		72 MB
Milestone 4 - draft	me	Aug 6, 2020	—
MILESTONE 5 - draft	me	4:07 PM	—
Tech stack - investigation (Please add all the links you found helpful)	Raviteja Guttula		—
Things to clarify with prof	Raviteja Guttula	Jun 20, 2020	—
UI Screens	Raviteja Guttula		—


Discord:


**AshU** 07/27/2020
Listed all the feedback points ==>
<https://docs.google.com/document/d/1bxD33oe7FtP2dsgxV97RqGwkyJKUhgvpbT88XL5zrpA/edit>


Google Docs - create and edit documents online, for free.
Create a new document and edit with others at the same time -- from your computer, phone or tablet. Get stuff done with or without an internet connection. Use Docs to edit Word files. Free from Google.


 3


July 28, 2020


**Henry Meier** 07/28/2020
thank you AshUY


**Henry Meier** 07/28/2020
what pages can I work on

**thisisgvrt** 07/28/2020
[@swetha](#) what else is pending on F.E front ?

**Henry Meier** 07/28/2020
she is fixing a merge conflict
Are we going to re-edit any of our milestone documentation


**thisisgvrt** 07/28/2020
i don't think so, we can push the M2 edits soon



**Henry Meier** 07/28/2020
can I get a link to that document again
im on my laptop

**thisisgvrt** 07/28/2020
give me a second
https://docs.google.com/document/d/1ht_x0vBfStronDbdet3GMngHPvpYBfbzoinYsru-PUA/edit?usp=sharing



Google Docs - create and edit documents online, for free.
Create a new document and edit with others at the same time -- from your

BACKEND-TEAM—2


**AshU**


**thisisgvrt** 


FRONTEND-TEAM—1


**GIFT OF LOVE**
twitch.tv/giftoflovstv 


OFFLINE—5

**Ashwini**

**fsenchyna**

**Henry Meier**

**swetha**

**Troy**

6. Team member self assessment and contributions:

Raviteja Guttula (rguttula@mail.sfsu.edu) (Team Lead)

CSC 648-848 Team 02 Contributions



Raviteja Vidya Guttula

Fri 8/7/2020 5:39 PM

To: Swetha Govindu; Kevin Zhou; Troy William Turner; Henry Carl Meier; Fiona Senchyna; Ashwini Uthirakumar



Hi All,

Raviteja Guttula (Team Lead)

Contributions

- Bootstrapped backend
- Took responsibility for deployment
- Created docker files to ease deployment
- Developed Messaging API

Number of submission to GitHub

- 80 commits to Github

Main challenged encountered

- This was the first time for me working in a team that has more than 3 members.
- Integration and work allocation to ensure that none of the team members are blocked because of each other.
- Had challenges with git strategy, few learnings in terms of allocating works to reduce overlaps of files being worked on.

Learning outcomes

- Most of my learnings are with team work and how to ensure that all of us are on the same page. Being under a tight deadline made only more challenging.

Regards,
Raviteja Guttula

Swetha Govindu (Front End Lead)



Swetha Govindu

Fri 8/7/2020 4:18 PM

To: Raviteja Vidya Guttula; Ashwini Uthirakumar; Kevin Zhou; Troy William Turner; Henry Carl Meier; Fiona Senchyna



Hi All,

Swetha Govindu (Frontend Lead)

Contributions to team project and teamwork

- Designed Figma mockups
- Contributed to the Personae and Main Use Cases Section.
- Helped in integration of frontend and backend.
- Code reviews
- Implemented About-us page.
- Form validations and made minor fixes for responsiveness in sign-in ,signup ,new listing and user dashboard page

Number of submissions to github

35 commits to github

Main challenges encountered

The course and the project itself were immensely interesting. However, the major challenges were related to learning new UI technologies. Making website responsive was a lot tougher than I expected. Also, the duration of the course was only 10 weeks so, the learning curve was steeper than expected.

Learning outcomes

As the coursework was completely online, I learnt to be a better communicator and learnt how to better work with team virtually. I also learned more about bootstrap and all the technologies used in the project..

Regards,
Swetha.

Henry Meier (Front End Developer)



Henry Carl Meier

Fri 8/7/2020 7:53 PM



To: Fiona Senchyna; Swetha Govindu; Raviteja Vidya Guttula; Ashwini Uthirakumar; Kevin Zhou; Troy William Turner

Hey guys,

Henry Meier (Frontend Developer)

Contributions to team project and teamwork

1. Contributed to writing the milestones .pdf documents, edited these documents professionally. Created UI and Design of sites for Milestones.
2. Contributed to About Us pages.
3. Backend of listings search, listings filter, and listings upload.
4. Helped with github issues.
5. Helped with design of website.
6. Contributed to User Dashboard and User Registration pages.
7. Helped fix various code problems and plan the scheme of the site.
8. Helped my colleagues juggle other classes and coursework so we could focus on this class.

Number of submissions to github

12 commits to github

Main challenges encountered

1. Learning to work as a team online.
2. Learning new programming languages such as python, javascript and using web development IDEs.
3. Collaborating with teammates and staying organized in a global catastrophe.
4. Learning to use the git programming language and work as a team.
5. Learning to follow orders completely and contribute what is necessary.
6. Observing my mistakes and improving them.

Learning outcomes

I learnt a lot about web development. I had hardly any knowledge of front end coding. I learnt about HTML, CSS, and JS as well as some python and SQL from code academy and online resources. I used this knowledge along with some bootstrap tutorials to contribute to the design of the websites. I helped to build a "skeleton" for the backend and allowed further improvements from my front end team. I also ran into trouble committing and losing parts of code. I would work on properly understanding Git and committing work from the console rather than my IDE. I had an awesome time working with my team and learnt about professional software development, thank you guys!

Thank you everyone!

Henry

Kevin Zhou (Front End Developer)



Kevin Zhou

Fri 8/7/2020 5:41 PM

To: Raviteja Vidya Guttula; Swetha Govindu; Troy William Turner; Henry Carl Meier; Fiona Senchyna; Ashwini Uthirakumar



Hi All,

Kevin Zhou (Front End Developer)

a. Contributions to team project and teamwork:

Helped to implement the Sign Up Page for House-A-Gator Team Project.

Added the HTML and CSS UI design for individual About Us Page.

Contributed to the Personae and Main Use Cases Section.

Helped the Team Develop the House-A-Gator Team Logo.

b. Number of submissions to github:

24 Commits to Github.

c. Main challenges encountered:

This semester was pretty challenging for me and many of my group members as well since this Software engineering course was taken during a 10 week session in summer. Also faced difficulties due to the pandemic and had some issues adjusting to the new online zoom system. But aside from this, one of my major obstacles I dealt with this semester and prior to this semester was dealing with health issues and had to contact my doctor multiple times and to this day, it still hasn't fully healed, but did some minor improvements.

d. Learning outcomes:

Although this course was pretty difficult, especially during summer, the professor did a great job managing the pandemic situation and I learned alot from his lectures such as how to be more effective and efficient as a software engineer and tackle many of the common issues other developers encounter. Another crucial learning component I learned was how to communicate and handle teamwork in any environment or situation regardless which group member I work with. Hopefully I will value this software engineering project as a project for my portfolio and take what I learned and use this skill for my future career.

Troy Turner (**Front End Developer**)



Troy William Turner

Fri 8/7/2020 7:34 PM



To: Fiona Senchyna; Swetha Govindu; Raviteja Vidya Guttula; Ashwini Uthirakumar; Kevin Zhou; Henry Carl Meier

a. Contributions to team project and teamwork:

Put together front-end design for the login and listing page which consisted of the JS and the CSS file. Went back over the App portion to reformat so that the page could be easier to look at. Being at the meetings to give some feedback or just listen in on the updates.

b. Number of Submissions to GitHub

23 Commits

c. Main challenges encountered

Various challenges pertaining to styling so that I could get the layout to look aesthetically pleasing to the eye. What I thought would be an easy fix turned into hours of going back and checking various solutions

d. Learning outcomes

Learned a good bit more about teamwork in a project and using github alongside them so that our code does not overwrite that of another on the team. Got more of a grasp on github as a whole. Was able to get more information about JavaScript during this whole project and how HTML plus CSS could be implemented within a JS file.

Ashwini Uthirakumar (**Back End Lead**)



Ashwini Uthirakumar

Fri 8/7/2020 5:45 PM

To: Raviteja Vidya Guttula; Swetha Govindu; Kevin Zhou; Troy William Turner; Henry Carl Meier; Fiona Senchyna



Hi team,

Ashwini Uthirakumar (**Back End Lead**)

a. Contributions to team project and teamwork

- Helped with the basic set up of AWS EC2 instance
- Listed out functional requirements and later prioritized them
- Developed the sign-in and sign-up API for the backend
- Helped creating the usability and QA test plan (selenium testing)
- Revised the Milestone documents based on professor's feedback

b. Number of submissions to GitHub

10 github commits

c. Main challenges encountered

Being stuck in my home country, the most challenging part was waking up at 2 AM to attend software engineering classes twice every week. But my team was very supportive and understanding to setup the team meetings that went with both our time zones (USA & India). I initially struggled with the vertical prototype due to minimal knowledge about API's. I later did some reading on API's and some python libraries which helped me understand more on the same. I did have some basic knowledge about github but working with a team of 7 made using github a bit more challenging.

d. Learning outcomes

This course is a good combination of learning about SE process and applying those concepts to build a website working in a team. I have never been a part of software development in general and through this course I got a good idea on how to build something working in a group. In the future, I would like to work more on time management while working as a team. I would start code reviews little early in the process to make sure the team is on the same page .

Regards,
Ashwini Uthirakumar

Fiona Senchyna (**Back End Developer & Github Master**)



Fiona Senchyna

Fri 8/7/2020 5:46 PM



To: Swetha Govindu; Raviteja Vidya Guttula; Ashwini Uthirakumar; Kevin Zhou; Troy William Turner; Henry Carl Meier

Hello,

Fiona Senchyna (Backend Developer and Github master)

Contributions to team project and teamwork

1. Contributed to writing the milestone pdf documents, e.g. executive summary in milestone one and database organization section in milestone two.
2. Contributed to Aboutus page
3. Backend of listings search, listings filter, and listings upload
4. Helped with github issues.

Number of submissions to github

23 commits to github

Main challenges encountered

1. Learning to work as a team online.
2. Learning new technologies and the details involved in website development in a short space of time.
3. Keeping the focus and motivation to complete the project during a pandemic.
4. Learning to use git and github as a team

Learning outcomes

I learned a lot about web development, specifically the backend, and working on projects in a team setting. Also felt much more at ease using online forums such as zoom to communicate with my team by the end of the semester.

Best,

Fiona