

SW Engineering CSC648/848 Spring 2019

GatorRooms.com

Team 9 Milestone 2

Product Requirements Document

Inez Wibowo

Team Lead & Document

Editor

iwibowo@mail.sfsu.edu

Aliaksei Siarheyeu

Front End & Back End Lead
Github Master

Marcus Wong

Front End & Back End Lead

Romeel Chaudhari Ismael San Juan

Back End Developer Front End Developer

Hang Li
Front End Developer

Jia Nan Mai Front End Developer



History Table

Version	Date	Notes
1.0	3/22	First version for submittal.

1. Data Definitions and Entities

Listing -	The advertisement post of the apartment by the landlord. It includes the date it was posted, images, number of rooms, address, distance, and price of the apartments. This 'Listing' class will include the 'description' method.
- Image -	An image of the apartment within acceptable size and resolution.
	Image formats supported:- jpeg, png, bmp. gif, tiff. dicom.
	A maximum image size of 7 MB per picture.
	No video.
	The listing will include 'image' field if provided.
- Address -	A valid residential address that follows a defined format.
	A valid address contains the following:
	All capital letters, No commas or periods
	A valid and deliverable address
	Included company name, apartment number, or suite number if applicable
	Valid acronyms and abbreviations
	A valid ZIP CODE
	The example below shows a valid address:
	JACK SMITH
	COMPANY LTD
	123 N MAIN ST STE 45
	SF CA 94132
	This 'Listing' class will include the 'address' method.
	The 'Address' class will include street address, city, state, zipcode.
- Price -	This 'Listing' class will include:
	A price (amount method) of the listing per month in <u>US dollars</u> . Filters will be available.
	Amount type (amountType method) is also available for listings showing per month, per semester, per year.

- Distance -	A distance in <u>miles</u> to SF State campuses. Filters will be available.
- Type -	A category of listings available, for example a room for rent in a house, in an apartment, the whole house/apartment.
User-	
-Guest User -	A user that can browse website and see the listings and contact Landlords. Their information will not be stored.
-Registered User-	The same abilities as a guest user, but their information will be stored. Information will be stored are, at a minimum: email address, password, first and last name. 'Roles' will capture the user as registered user.
-Admin User -	A user who will be able to approve listing before they are published and reject the posting without editing it. Data will be flagged "is_admin".
-Landlord User-	A user will have an ability to create the listings and send them for review.
-User Email -	Email address of the user that will needed to be verified to validate this is a legitimate address. Validation will include that the address was entered, then an "@" symbol, and then something else followed @.
User Phone Number-	Phone numbers to connect to the user for admin purposes. These are the valid formats. (123) 456-7890 (123)456-7890 123-456-7890 1234567890
Message -	A communication unit that will be used by Users. Includes content(text), date, sender's and recipient's name. Text field will have ability to include one standard text version only. Message class will include fields from, to, message, date, and status "is_read".
Favorite -	A rental listing can be added to the set of saved info of user's database. A

	"heart" heart-shaped icon can be clicked to indicate to the user that the listing will be saved.
Registration record -	A set of information obtained during registration such as first name, last name, email address

2. Functional Requirements

User - Guest User

First Priority

- User shall be able to browse the list
- User shall be able to sign up and register

Second Priority

- User shall be able to sort the list ascending, descending date of posting, monthly rent price.
- User shall be able to review the listings quickly whether they are on mobile or desktop.
- User shall be able to review the About page and read team's profile on mobile and desktop easily.

Last Priority

- User shall be able to sort based on distance to the campus, distance to popular study spots, and filter amenities (i.e., garage, community amenities, heating/cooling and more types of filters).
- User shall be able to review a listing and find commuting directions and time estimate.
- User shall be able to click a different way of viewing the listing and display the property's larger version of the image.
- User shall be able to print their listings in a printer-friendly format from the site.
- User shall be able to view the Frequently Asked Questions(FAQ) page.
- User shall be able to have access to a built-in rental calculator to help students avoid commiting to a property they cannot afford and keep rental expectation in check.
- User shall be able to access the forum page where they can contact other students or landlords for assistance.
- User shall be able to fill out a "Refer a friend" form for their friends, families and relatives.
- User shall be able to view GatorRooms.com's social media platforms.

<u>User - Registered User</u>

First Priority

- Users shall be able to login to their accounts.
- Users shall be able to post after the post have been approved by admin.

Second Priority

- Users / Landlords shall be able to publish multimedia like images so that students can view it.
- Users shall be able to send message from their dashboard to the landlord/listing owner.
- Users / Landlord shall have a dashboard allowing them to review messages from user and contact the student.

Last Priority

- Users shall have a dashboard viewing status of their postings, i.e. under review, approved.
- Users/Landlords shall be able to publish videos (virtual tour) of their properties so that students can view it.
- Users shall be able to bookmark or save their favorite listings.
- Users shall be able to create alerts and be emailed when the listing fitting their criteria is posted.

User - Admin

First Priority

- Admins shall be able to login as admin.
- Admins shall be able to review and approve listings before they go live.

Second Priority

- Admins shall be able to have a dashboard allowing them to review and reject posting in bulk.
- Admins shall be able to reject but not modify the listings from customers.

Third Priority

• Admins shall be able to help users troubleshoot issues with registration such as logging in,

3. UI Mockups and Storyboards

Admin Dashboard - Reviewing, Approving (Jia Nan)

Registered User/Landlord Dashboard - Write Posting, Submitting for admin review (Ish)

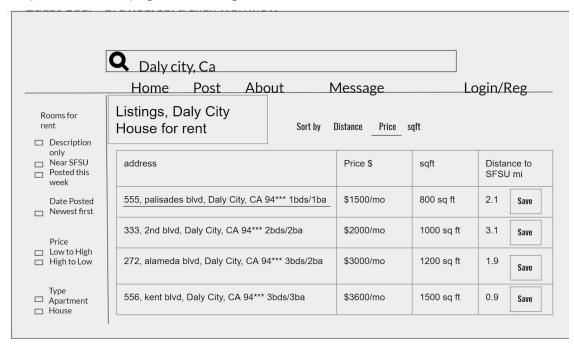
Guest User Dashboard - Reviewing communication from landlord (Inez)

Guest User - Browsing, Sorting (Hang)

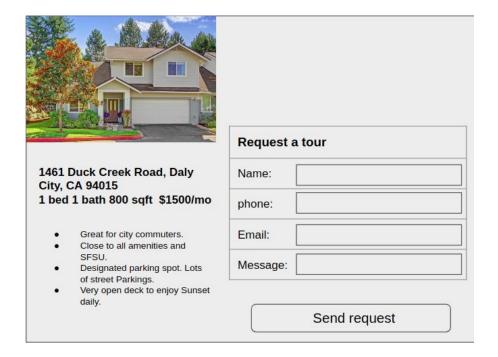
3.1. Use Case: Guest User Mary

Mary, an SFSU student, needs a rental apartment. She finds GatorRooms.com and enjoys the simplicity of the site since she can use the site **without registering**. She **logs in** and **reads** messages from the landlord, or she can **post a reply** message. She can easily, and securely find a rental apartment without taking too much time out of her studies.

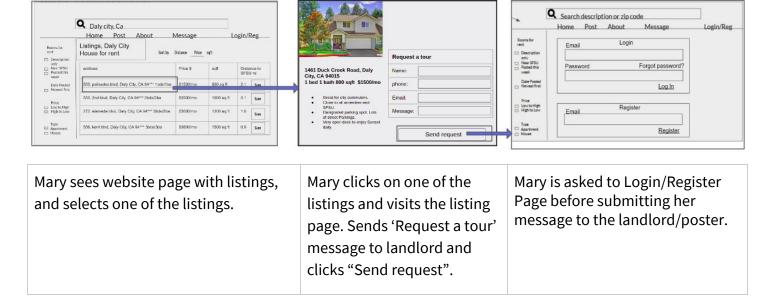
Mary sees website page with listings



Mary clicks on one of the listings and visits the listing page



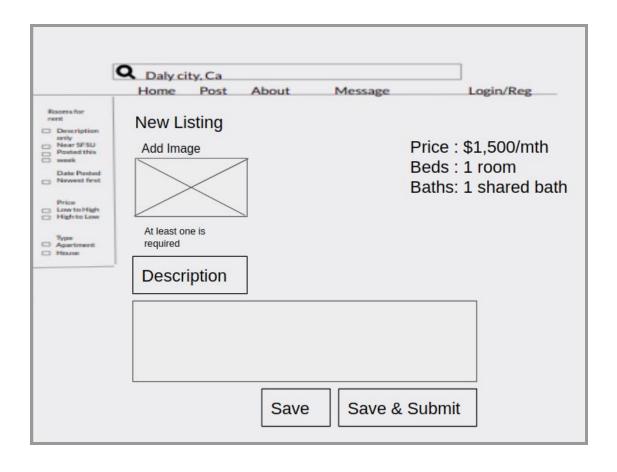
Guest User Mary's Storyboard



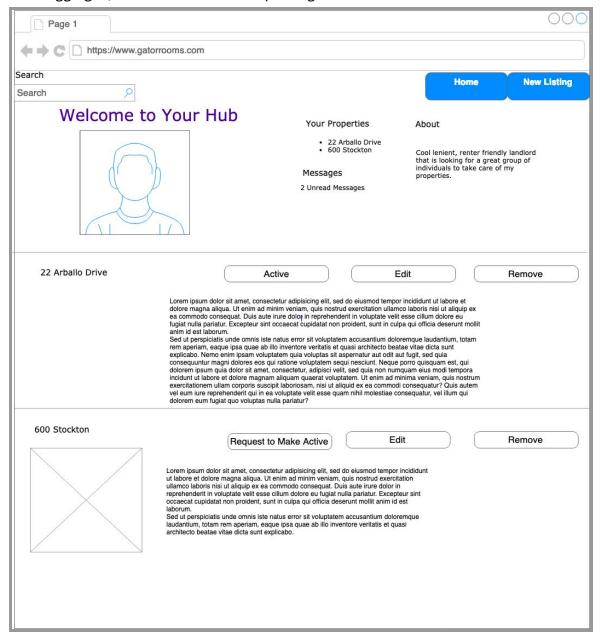
3.2. Use Case: Registered User/Landlord Jill

Jill is a busy realtor and she is always in her car, ...finds GatorRooms.com and finds the website **easy to** access on her laptop and can create a post between meetings. She is a realtor so she likes that she can use her business email address as a contact and does not need a masked email address.

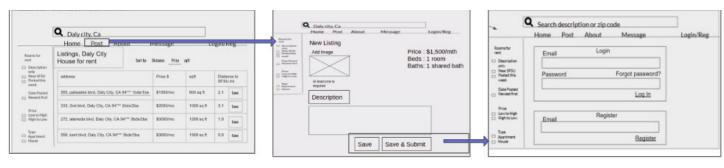
Jill creates her posting on New Listing page



After logging in, Jill can view her list of postings and its status



Registered User/Landlord Jill's Storyboard



Jill sees website page with listings and clicks on "Post".

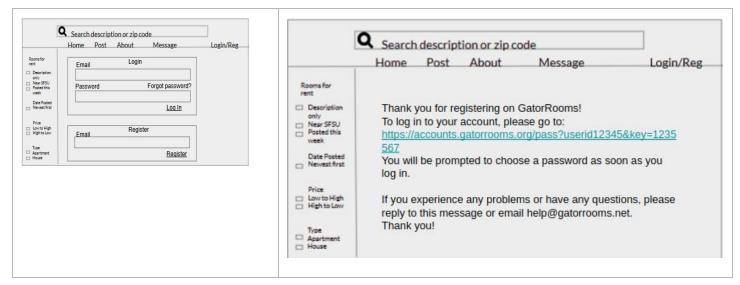
Jill fills out her listing details and clicks "Save" or "Save & Submit".

Jill is asked to Login/Register Page before submitting her listing to the admin for review.

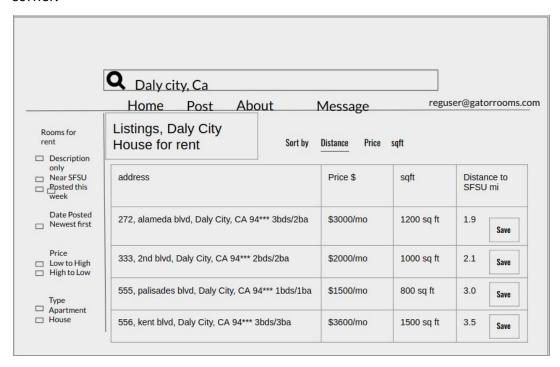
3.3. Use Case: Registered User/Landlord Jon's Login Experience

Jon represents all users who want to login/register. They are looking to complete the login/registration process painlessly with minimum clicks and forms to fill out.

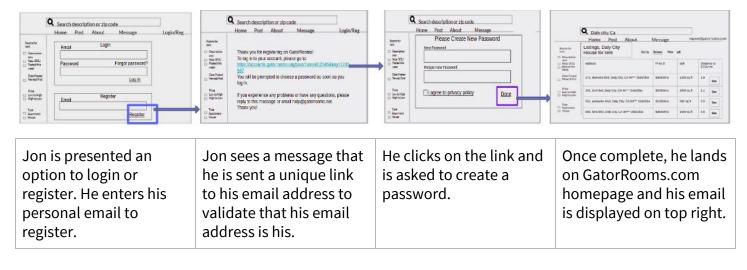
Jon wants to register. GatorRooms.com informs him that a unique link has been sent to his email.



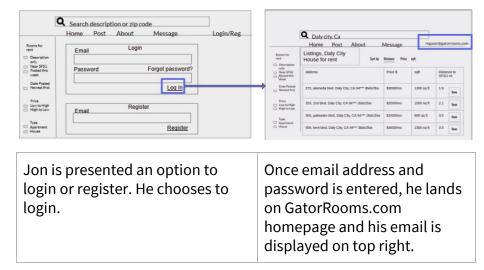
Following login, he lands on GatorRooms.com homepage with his email address displayed at top-right corner.



Storyboard - Jon's registration flow



Storyboard - Jon's login flow



3.4. Use Case: Admin Dashboard David

David is a new website administrator... using the **Admin dashboard** on GatorRooms, he can review, approve, and reject, several listings **all on one page, in bulk.** He can also **review and approve all postings** on the website **before they go live, on the same dashboard page**.

David's dashboard where he can see the status of listings he has reviewed: "x" for Reject, "✓" for Approved.

	Search description or zipcode
	Home Post About Message Login/Reg
Rooms for Tent	Listings, Daly City sort by Distance Price soft
I description only	address Price & Spft Distance & SFSU mi
D Nebr SPSU D Postcol this Week	272, atameda Daly City, CA 94** 348/260 \$5000/mb 120059 ft 1.9 500 EY
Price	333, and blud, Daly City, CA 94** Zbbs/2ba 52000/mo 100059 ft 2.1 115ave 18 555, pairsades blud, Daly City, CA 94** Index 91500/mo 800 S9 ft 3.0 Format - 21.
D Low to High D High to low	556, Kent blud, Daly City, CA 94*** 36ds/20 \$360/mo [5009] ft - 35 [50.08]
D House	

David's dashboard and the listings he can edit, to either approve or reject.

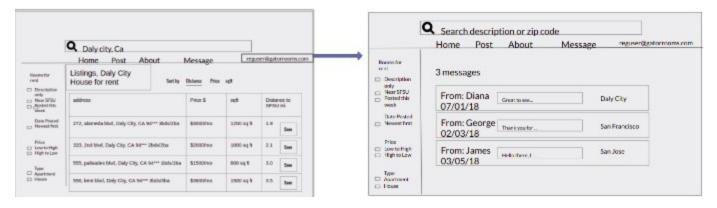


3.5. Use Case: Renter Nancy & Diana Landlord Messaging Dashboard

Nancy can use the same website without having to go to another mail app. She **logs in** and **reads** messages from the landlord, or she can **post a reply** message. She can easily, and securely find a rental apartment without taking too much time out of her studies.

Diana does not need a masked email address. She prefers to keep it all in her business email account because she highly monitors that one inbox but likes the **convenience of the dashboard** while she is checking in with **all of her listings/renters at once**.

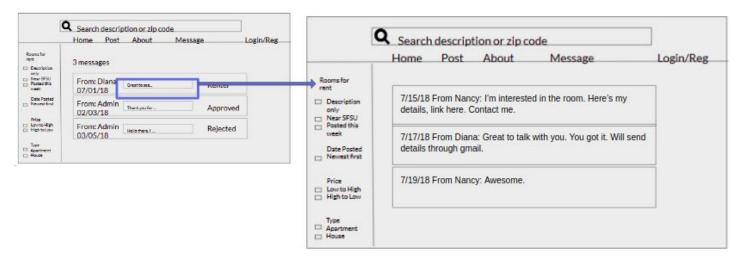
After Nancy the renter logs in, she can view the messages from the landlords she contacted.



Nancy clicks on her email address at the top line to

She sees a list of messages dashboard between her

After Diana the landlord logs in, she can view the messages from Renters or from Admin.

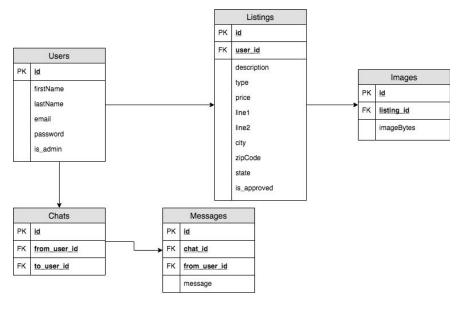


Diana clicks on the message from the Renter.

She sees a historical view of the messages between her and the renter, Nancy.

4. High Level Architecture, Database Organization

- Database Organization
 - There will be several tables that will store the users, chats, messages, and listing information.

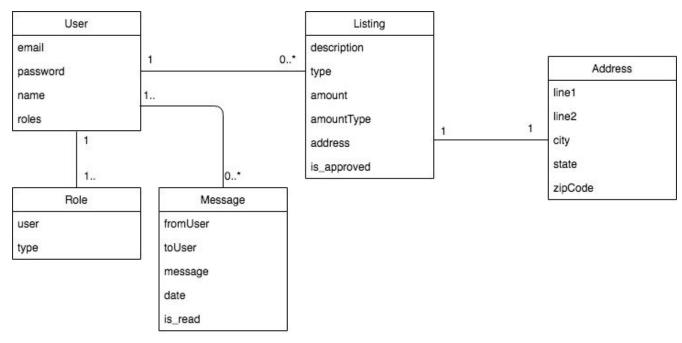


- Media Organization
 - The listing images will be stored in the database using BLOB (Binary Large Object) in the high resolution format, the client will resize the image based on its needs.
- Search / Filter architecture and implementation

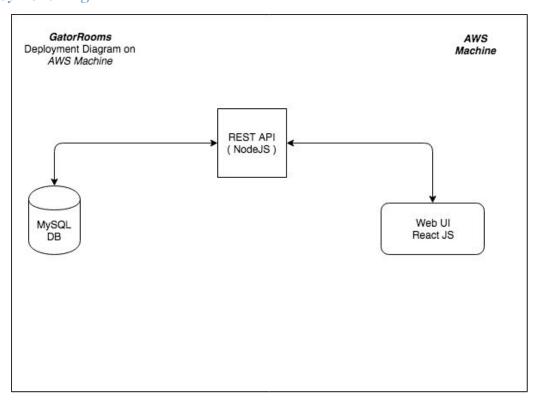
- A client will be sending the keywords entered by the user and their type (All, Zip code, Name Address, City, Name, and Description) based on the type a SQL query will be picked and the results will be returned if there is a match in the Database, "DB".
- For 'All' type, all the query will be executed. For name, city, description and address, SQL %like will be used.
- APIs
 - Application will be divided into two parts, front-end and back-end.
 - Back-End will expose REST-API that will be used for communication between client and back-end application
- Listing Sorting
 - o DB will be used to sort the data and return it to the client.
 - Listing will default and sorted by date it was posted, following approval by admin.
- Tools/Frameworks
 - No Changes

5. High Level UML Diagrams (Alex)

Class Diagram



Deployment Diagram



6. Risks (Inez & Anyone else)

1. Skills risks

 Team is ramping up on learning React. In order to efficiently work through the pages in the later milestones, the team will have to continue self-study every week, and follow along even though tasks of learning React, creating pages, are not officially assigned.

2. Schedule risks

 Team has one 30-minute time slot and majority of time works remote. We have used Slack and Google Drive for M1. We are starting to use Trello heavily to assign tasks that lead up to bigger tasks/to-dos in Trello

3. Technical risks

 We are starting to think about the pages for the prototype and how the data will be structured. Need to test and ensure the page displays the correct list of data, as organized the data tables.

4. Teamwork risks

• Need to touch base with the team periodically to make sure the level of work is manageable and equally shared across individual team members.

5. Legal/Content risks

• We are going to ensure we use royalty free images, and fictional listing, therefore we won't need to create legal/content risk.

7. Project Management

1. After class:

- a. We discuss any changes since the last meeting/milestone.
- b. We discuss dividing up tasks and later record them using a tool like Trello.
- c. Answer any questions from the previous milestone.

2. Between class / team meetings:

- a. We ask/answer questions on Slack, assign tasks on Trello, and set up Zoom meetings whenever necessary.
- b. Team lead set up templates and docs on Google Docs & Google Slides so that everyone can collaborate on one tool.
- c. We create tasks in Trello with our names as the Title, assign to ourselves or teammate, and provide due date when applicable

3. Before class:

- a. We meet for 30 min to whiteboard, troubleshoot, answer questions
- b. Walk through any questions that require more collaboration
- c. Set up next steps/to-dos