



San Francisco, CA 94123  
(415) 724-9116

## Milestone 2

### MEET OUR AWESOME TEAM 5 MEMBERS

#### **Jeffrey Fulmer Gardner**

*Team Lead / Github Master/ [jfulmergardner@mail.sfsu.edu](mailto:jfulmergardner@mail.sfsu.edu)*

#### **Adele Wu**

*Front-end Lead*

#### **Eddy Yun**

*Back-end Lead*

#### **Jeffrey Friedrich**

*Database Lead*

#### **Jose Andres Quinteros**

*Team member of Front-end/Document Master*

#### **Kris Byington**

*Team member of Database Team*

### **CSC 648/848 Software Engineering - Fall 2021**

October 5th 2021

**Use Cases, High-level Requirements and Architecture**

**Milestone1: submitted September 21: No revisions**

Henry Villar, CEO & CTO, SFSU

[jvillar@mail.sfsu.edu](mailto:jvillar@mail.sfsu.edu)

Acknowledge

Content based on class material created by Dr. D. Petkovic & Anthony Souza

Team05 - [www.RoomM8.net](http://www.RoomM8.net)

<b>1. Functional Requirements - prioritized</b>	<b>3</b>
Priority levels: 1: Must have 2: Desired 3: Opportunistic	3
1 MUST HAVE	3
Guest Users	3
Registered Users	3
Admins	3
DESIRED	3
Registered Users	3
Admins	4
OPPORTUNISTIC	4
Guest Users	4
Registered Users	4
<b>2. UI Mockups and Storyboards (high level only)</b>	<b>5</b>
UI Mockups and Storyboards	5
Home page / Landing page	5
Browse-room page	6
* About Listing	8
* About Tenant	9
Tell Us About Yourself (this page follows registration page)	12
About Host	14
About Listing	14
Browsing Flow	15
<b>3. High level Architecture, Database Organization</b>	<b>19</b>
Database:	22
Users - All of the humans using our system	22
Posts - Apartment details created by Host users	22
Messages - Post comments created by Users	22
Interests - User interests such as horseback riding or dogs	22
Amenities - Post location features like parking or whether pets are allowed	22
Sessions - Internal structure for user session info	22
<b>4. High Level UML Diagrams</b>	<b>24</b>
Class Diagram and their connections.	24
Deployment Diagram	24
<b>5 .Identify actual key risks for your project at this time</b>	<b>25</b>
Skills Risks	25
Schedule Risks	25
Technical Risks	25
Teamwork Risks	26
Legal Risks	26
<b>6. Project management</b>	<b>26</b>

## 1. Functional Requirements - prioritized

### **Priority levels: 1: Must have 2: Desired 3: Opportunistic**

#### **1) 1 MUST HAVE**

##### **Guest Users**

- Guest Users shall be able to access the landing page.
- Guest users shall be able to search for rooms.
- Guest users shall be able to search for roommates.
- Guest users shall be able to register and create accounts.
- 

##### **Registered Users**

- Registered users shall be able to access the landing page.
- Registered users shall be able to access the about page.
- Registered users shall be able to access the login page.
- Registered users shall be able to access the landing page.
- Registered users shall be able to access the about page.
- Registered users shall be able to access the login page.
- Registered Users shall be able to search for rooms.
- Registered Users shall be able to search for roommates.
- Registered Users shall be able to post a vacant room.

##### **Admins**

- Admins shall be able to delete or ban any registered users.
- Admins shall be able to give and/or remove permissions and other users that are not admins.

#### **2) DESIRED**

##### **Registered Users**

- Registered users shall be able to edit their personal profile.
- Registered users shall be able to update their profile pictures.
- Registered users shall be able to change their passwords.
- Registered users shall be able to deactivate their account.
- Registered Users shall be able to search around their preferred location.

- Registered Users shall be able to set their *room* preferences such as: majors, school, pets, smoking, language, similar interests, and/or hobbies.
- Registered Users shall be able to filter *roommates* by majors, school, pets, smoking, language, similar interests, major, and/or hobbies.

## **Admins**

- Admins shall be able to view all logs of past and current list of registered users.

## **3) OPPORTUNISTIC**

### **Guest Users**

- Guest users shall not be able to utilize premium features.

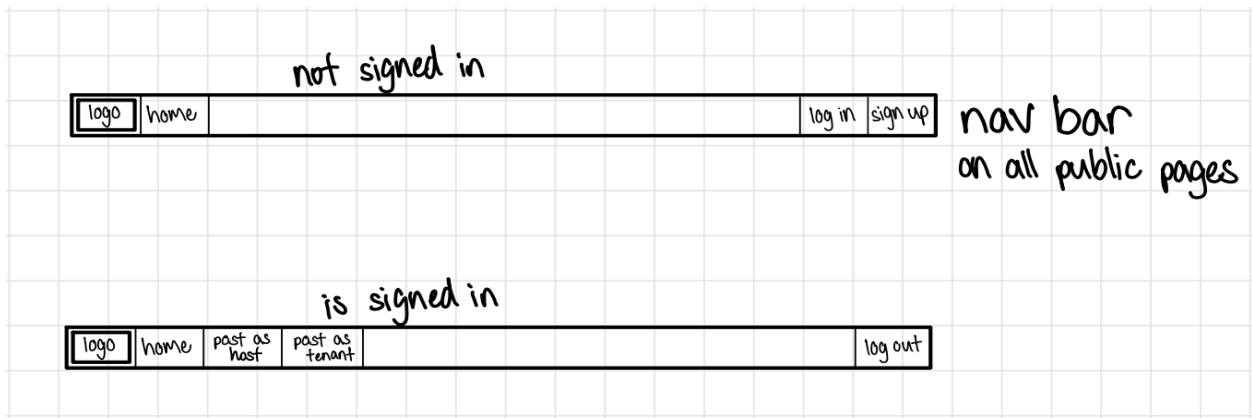
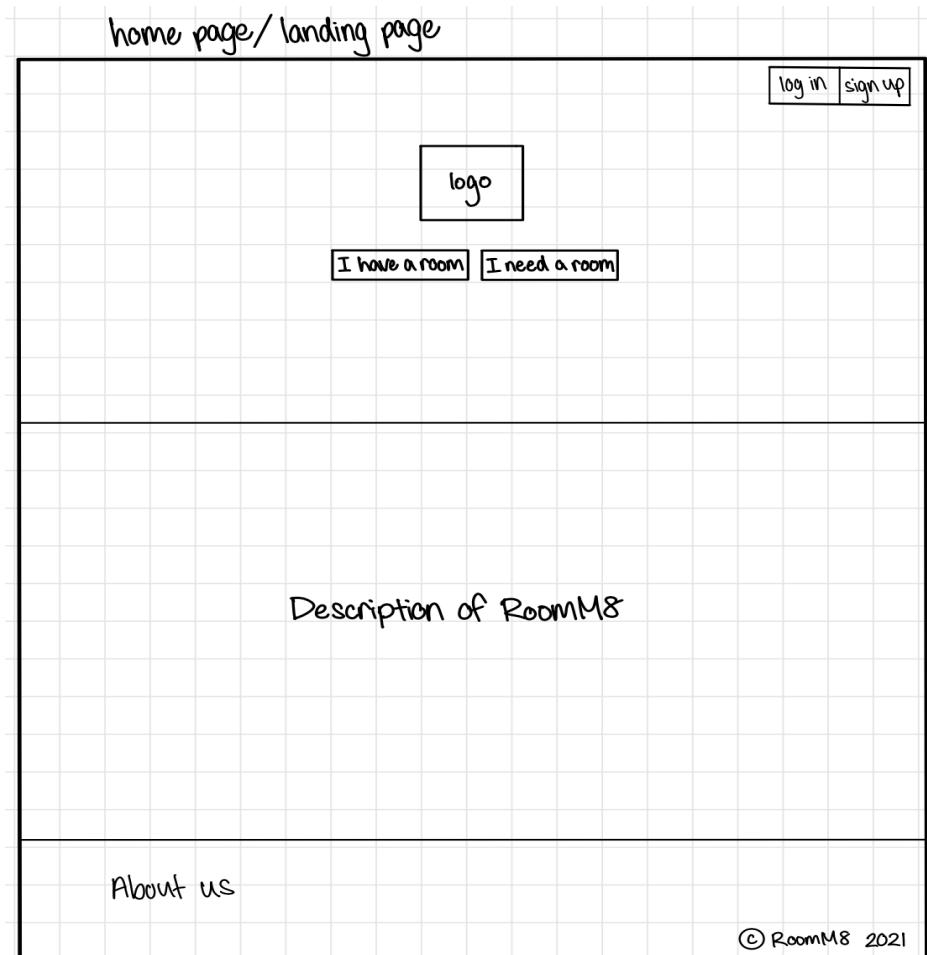
### **Registered Users**

- Registered Users shall be able to search for rooms with a search filter.
- Registered Users shall be able to search for roommates with a search filter.
- Registered Users shall be able to find a room by their budget.

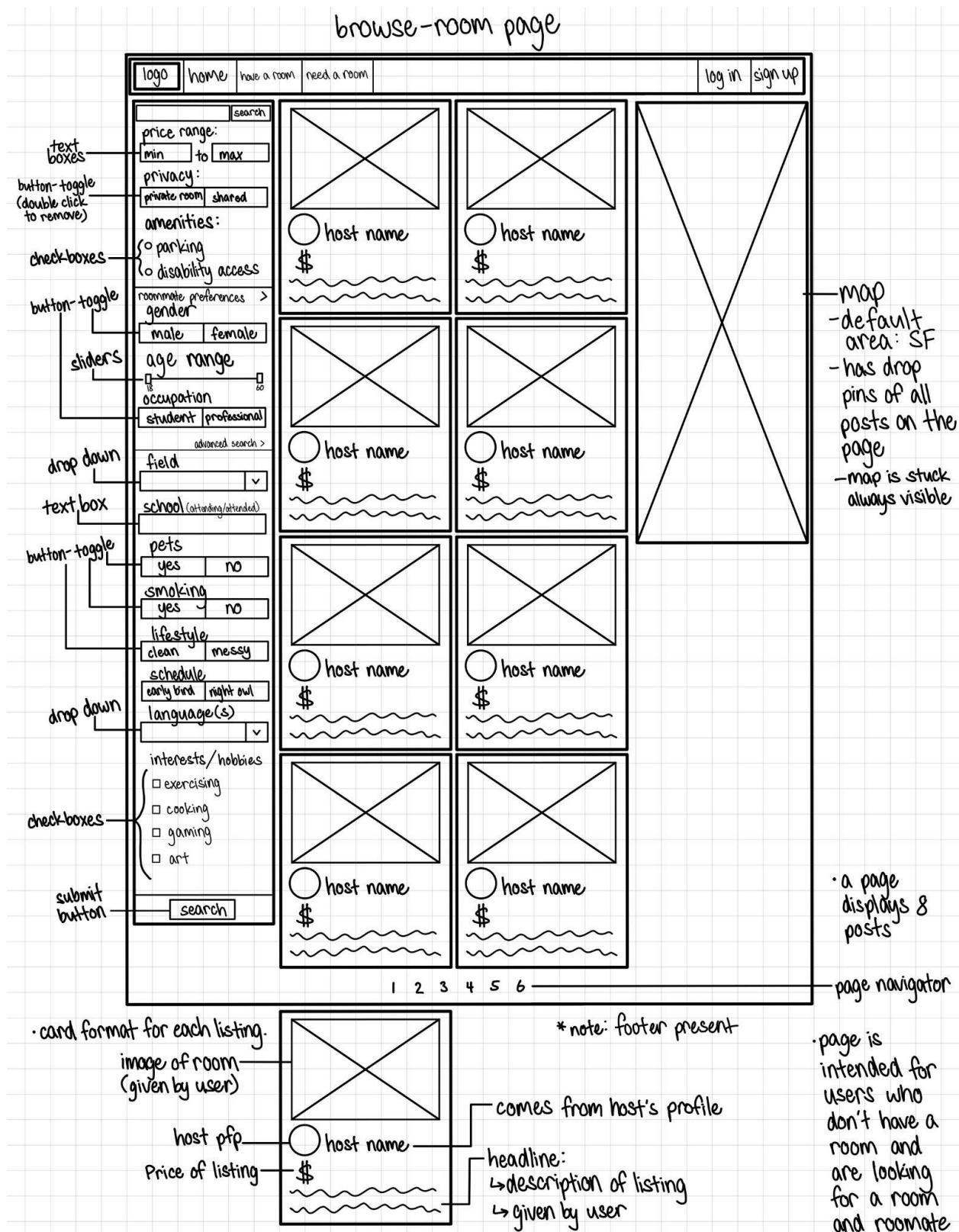
## 2. UI Mockups and Storyboards (high level only)

### UI Mockups and Storyboards

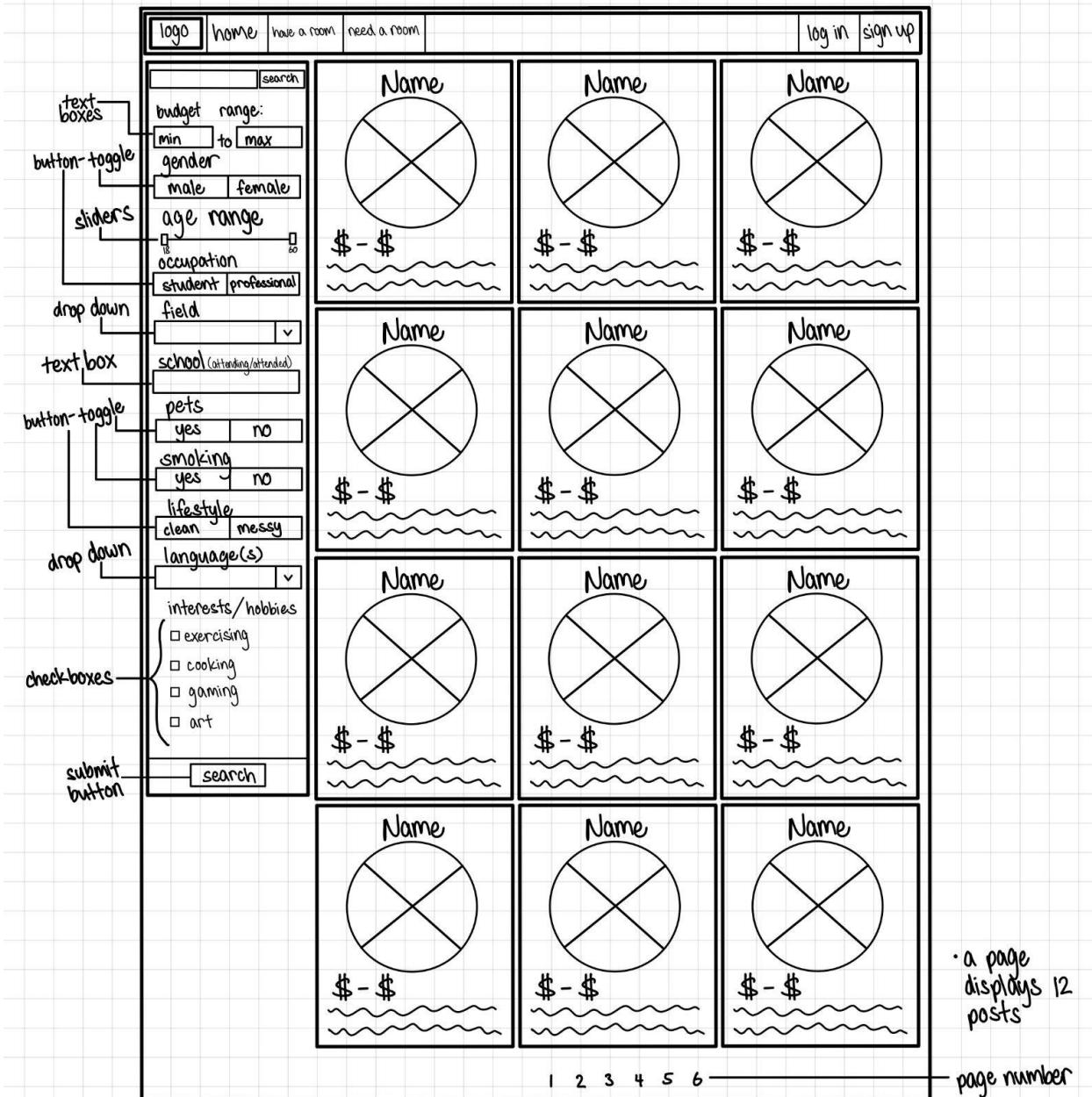
- Home page / Landing page



- Browse-room page



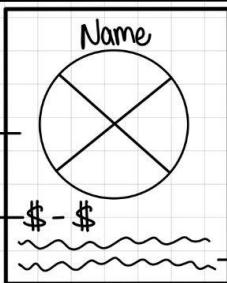
## browse - roommate page



• card format for each listing.

image of user  
(taken from profile)

budget range



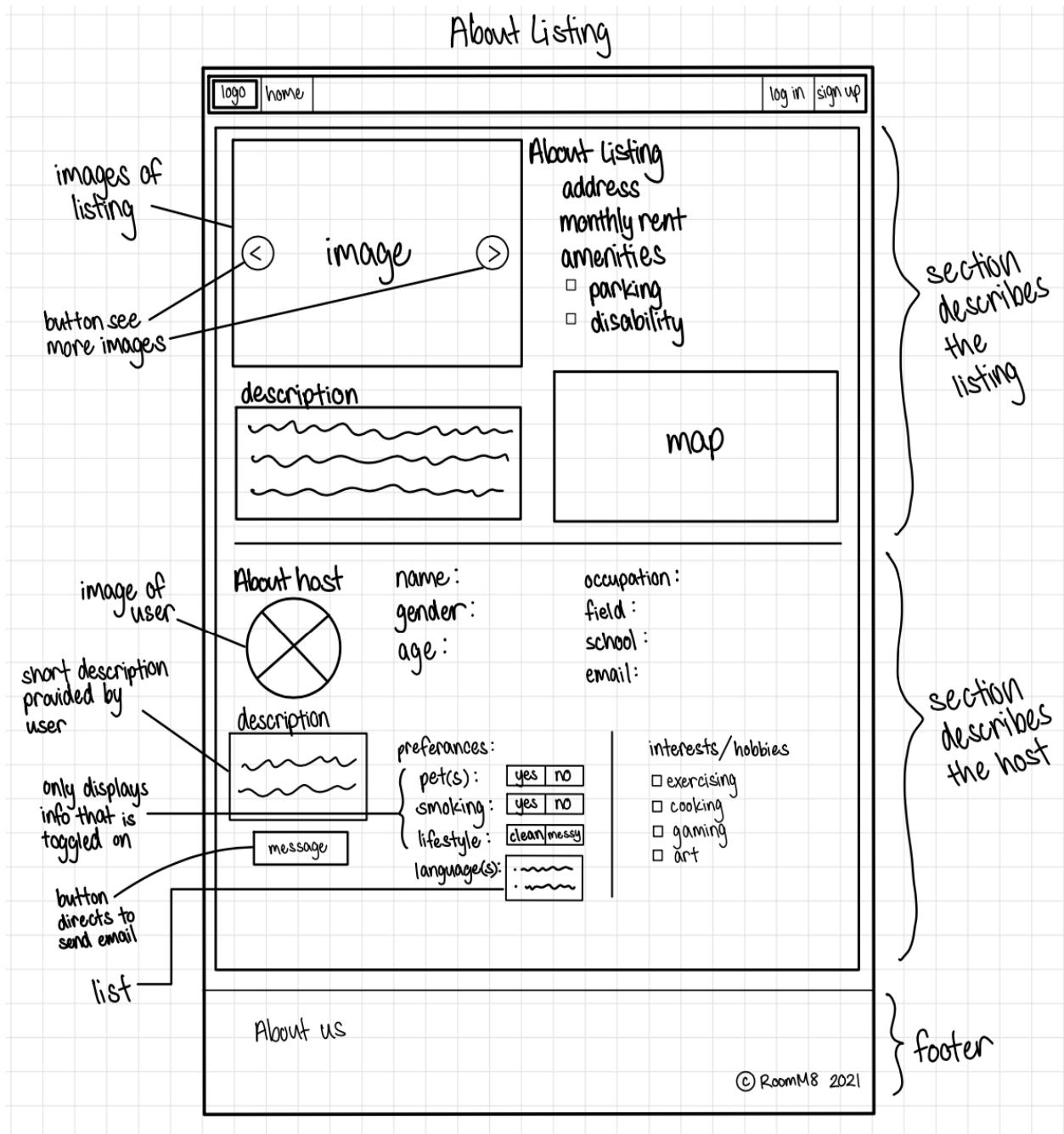
\* note: footer present

heading  
↳ title for room  
↳ name for mate

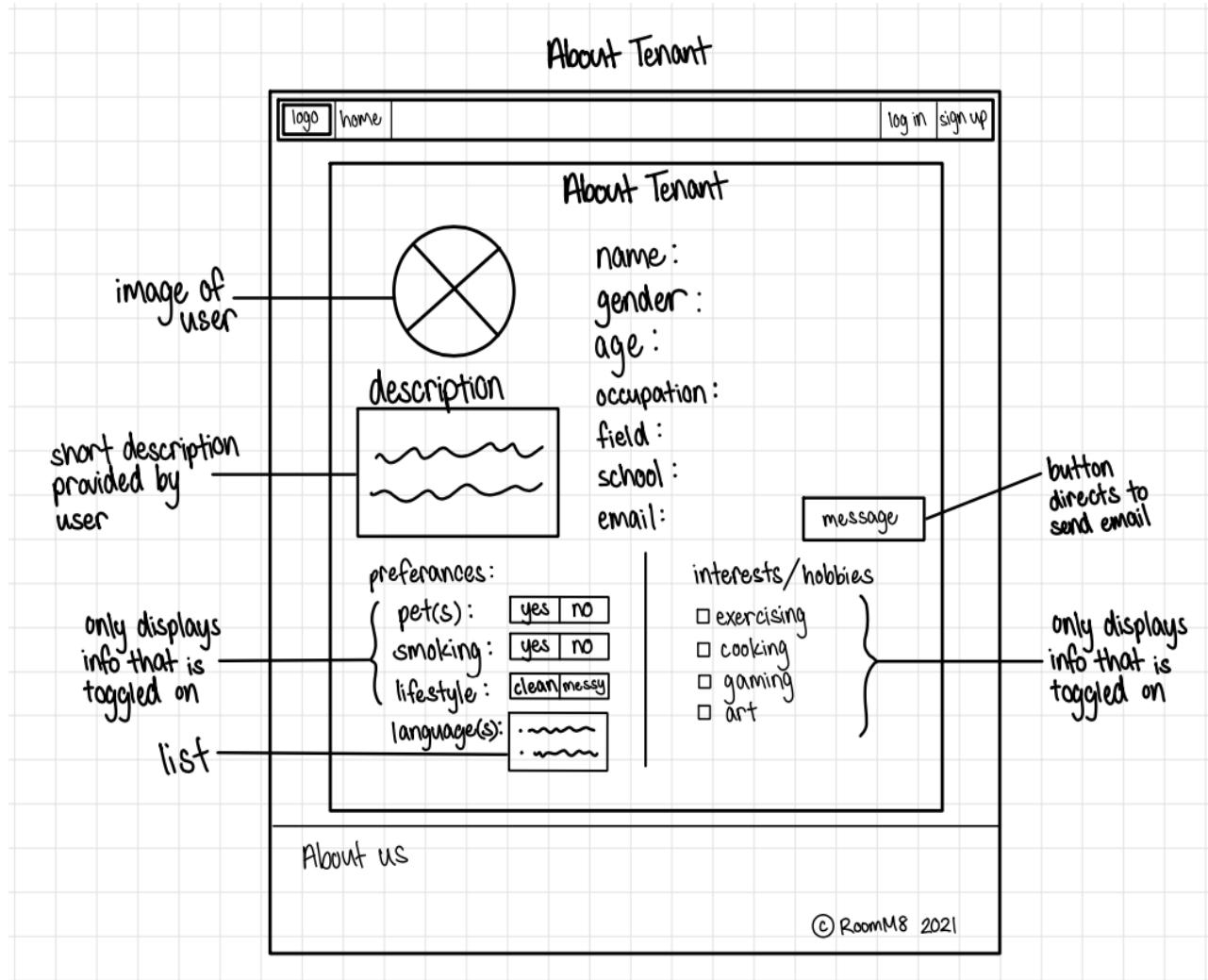
headline:  
↳ user describes post

• page is intended for users who have a room and are looking for roommate

## \* About Listing



## \* About Tenant



- Profile Edit

**Profile Edit**

The diagram shows a wireframe of a 'Profile Edit' page. At the top left is a placeholder for a 'User photo' with a large 'X' over it. The top navigation bar includes a 'logo' button, a 'home' link, and 'log in / sign up' buttons. The main content area is titled 'About Me' and contains several text input fields for 'name', 'gender', 'age', 'occupation', 'field', 'school', and 'email'. A curly brace on the right side groups these as 'textboxes'. Below this is a section for 'preferences' with dropdowns for 'pet(s)', 'smoking', 'lifestyle', and 'language(s)'. To the right is a section for 'interests/hobbies' with four checkboxes for 'exercising', 'cooking', 'gaming', and 'art'. A curly brace groups these as 'check boxes'. At the bottom, there's a large text area for 'anything else you want to add:' with a placeholder 'describe yourself in more detail or your ideal roommate'. A 'save' button is located to the right of this area. A note on the left says 'think of it as a bio or similar to LinkedIn's headline'. The footer contains an 'About us' section and the copyright notice '© RoomM8 2021'.

**Annotations:**

- User photo:** Placeholder for a user's profile picture.
- textboxes:** Curly brace grouping the text input fields for personal information.
- check boxes:** Curly brace grouping the checkboxes for interests/hobbies.
- textbox:** Note for the 'anything else you want to add:' text area.
- submit:** Label for the 'save' button.
- think of it as a bio or similar to LinkedIn's headline:** Note for the 'anything else you want to add:' text area.

## log in page

A hand-drawn wireframe of a login page on grid paper. The page has a header with 'logo' and 'home' buttons, and 'log in' and 'sign up' links. Below the header is a large rectangular form containing fields for 'username' and 'password', each with an input box, and a 'submit' button at the bottom.

logo	home		log in	sign up
<p>username [input box]</p> <p>password: [input box]</p> <p>submit</p>				

## registration page

A hand-drawn wireframe of a registration page on grid paper. The page has a header with 'logo' and 'home' buttons, and 'log in' and 'sign up' links. Below the header is a large rectangular form containing fields for 'name', 'address', 'email', 'username', and 'password', each with an input box, and a 'submit' button at the bottom.

logo	home		log in	sign up
<p>name: [input box]</p> <p>address: [input box]</p> <p>email: [input box]</p> <p>username [input box]</p> <p>password: [input box]</p> <p>submit</p>				

- Tell Us About Yourself (this page follows registration page)

Tell us about yourself

I have a room

I need a room

- About Tenant

About - Tenant

Tell us more about yourself...

budget range:	
min	to max
gender	
male	female
age	
occupation	
student	professional
field	
school (attending/attended)	
preferences	
pets	
yes	no
smoking	
yes	no
lifestyle	
clean	messy
language(s)	
interests (separate by comma)	
<input type="button" value="submit"/>	
Users who don't skip have a greater chance of finding a roommate	
<input type="button" value="skip"/>	

- About Host

**About - Host**

Tell us more about yourself...

gender	<input type="radio"/> male <input type="radio"/> female
age	<input type="text"/>
occupation	<input type="radio"/> student <input type="radio"/> professional
field	<input type="text"/> <input type="button" value="▼"/>
school (attending/attended)	
<input type="text"/>	
preferences	
pets	<input type="radio"/> yes <input type="radio"/> no
smoking	<input checked="" type="radio"/> yes <input type="radio"/> no
lifestyle	<input type="radio"/> clean <input type="radio"/> messy
language(s)	
<input type="text"/> <input type="button" value="▼"/>	
interests (separate by comma)	
<input type="text"/>	
<input type="button" value="submit"/>	
Users who don't skip have a greater chance of finding a roommate	
<input type="button" value="skip"/>	

- About Listing

**About - Listing**

Tell us about your listing

attach images	<input type="button" value="attach images"/>
address	<input type="text"/>
monthly rent	<input type="text"/>
amenities	<input type="checkbox"/> parking <input type="checkbox"/> disability access
description	<input type="text"/>
	<input type="button" value="post"/>

check boxes

text boxes

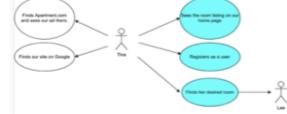
button

## ● Browsing Flow

### Main Use Cases

#### Moving to College

Actors	Tina, Lee
Description	Tina just got their acceptance letter to SFSU and is excited to move to the bay from her tiny town in rural Arkansas. She wishes to find someone that she can trust to move in with so she searches on google.com for roommates and finds Roomm8 - an application that allows ease of access to listings of current registered users, and their rooms. She then decides to register to Roomm8 and find a post that she is interested in and sends over an e-mail.



#### Job offer in the Bay Area

Actors	Gavin, Sarah
--------	--------------

home page/ landing page

Tina lands on page and clicks on sign up

registration page

Tina registers an account

browse-room page

About us

© RoomM8 2021

Tina browses for a room and roommate and finds Lee's post and clicks on the post

Tell us about yourself

I have a room | I need a room

About Listing

message

About host

name: Lee  
gender:  
age:  
description:  
preferences:  
pet(s):  
smoking:  
lifestyle:  
languages:

About Listing  
address:  
monthly rent:  
amenities:  
□ parking  
□ disability

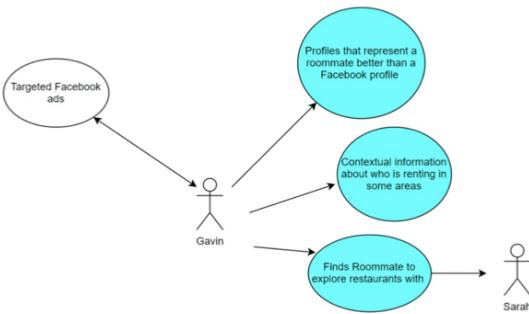
map

© RoomM8 2021

Tina looks over the information about Lee's listing and Lee. Looks good to Tina, so Tina messages Lee

### Job offer in the Bay Area

Actors	Gavin, Sarah
Description	Gavin has worked for a small web development firm in Austin, Tx. and just accepted a job offer with Salseforce. Gavin is from Houston and was lucky enough to move to Austin with a childhood friend. When looking at facebook groups for bay area housing he sees our facebook ad for <a href="http://www.roomm8.net">www.roomm8.net</a> . As he looks at profiles he learns about the neighborhoods in the city. He is a foodie and finds another avid foodie named Sarah living in the mission with an open room.



browse-room page

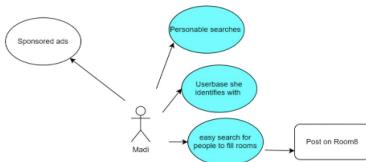
This wireframe shows the 'browse-room page' interface. On the left, there's a sidebar with various filters like 'room preferences', 'price range', 'privacy', 'amenities', 'roommate preferences', 'gender', 'age range', 'occupation', 'field', 'school', 'pets', 'smoking', 'lifestyle', 'language(s)', and 'interests/hobbies'. The main area displays a grid of room listings. One listing for 'Sarah' is circled in red, and a red arrow points from this listing to the 'About Listing' page.

About Listing

This wireframe shows the 'About Listing' page for 'Sarah'. It includes fields for 'address', 'monthly rent', 'amenities' (with checkboxes for 'parking' and 'disability'), 'description', 'map', 'About host' (with a placeholder image), 'name: Sarah', 'gender: f', 'age:', 'description' (with a placeholder image), 'preferences' (checkboxes for 'pet(s)', 'smoking', 'lifestyle', and 'language(s)'), and 'interests/hobbies' (checkboxes for 'exercising', 'cooking', 'gaming', and 'art'). At the bottom, there's a section for 'About us.' and a copyright notice: '© Roomm8 2021'.

**Looking for someone to split the cost**

Actors	Madi
Description	Madi is an incoming freshman at SFSU and has an apartment in the city. She has an extra room and wishes to find someone that she can trust to move in with her. She searches on Google on Apartments.com and sees our sponsored ad for Roomm8 - an application that allows ease of access to listings of current registered users, and their rooms. She then decides to register at Roomm8 and post her room.



**browse - roommate page**

The page features a header with 'log in' and 'sign up' buttons. Below is a sidebar with filters for budget, gender, age range, occupation, pets, smoking, lifestyle, and language(s). The main area displays a 3x6 grid of roommates. Each listing includes a placeholder for 'Name', a crossed-out circle icon, and a price range '\$ - \$'. At the bottom, there are navigation links for 1, 2, 3, 4, 5, 6.

**registration page**

The page has a header with 'log in' and 'sign up' buttons. It contains fields for 'name' (Madi), 'address' (wavy line), 'email' (@email.com), 'username' (madii), 'password' (dots), and a 'submit' button.

**Tell us about yourself**

I have a room I need a room

**About - Host**

The page has a header with 'log in' and 'sign up' buttons. It includes sections for gender, age, occupation, field, school, pets, smoking, lifestyle, language(s), interests, and a 'submit' button. A note at the bottom says 'Users who don't skip have a greater chance of finding a roommate'.

**About - Listing**

**Tell us about your listing**

The page includes fields for 'attach images', 'address', 'monthly rent', 'amenities' (with options for parking and disability access), and a 'post' button.

**Roommate breaks the lease agreement**

Actors	Tina, Lee, Mark
Description	Tina Julie and Mark have lived together for 2 years and just moved as a group into a new 1 year lease. However Mark just got news that his grandmother has died and has to break his lease to move back home and take care of his family. Tina and Julie cannot pay for the rent alone but don't want to live with a stranger. Tina remembers using Roomm8.net for the first year of college and goes straight there to start finding like minded candidates.

**About - Listing**

Tell us about your listing

attach images  
address  
monthly rent  
amenities  
checkboxes: parking, disability access  
description  
post button

**browse - roommate page**

Logo | home post as host post as tenant my profile log out

budget range: min to max gender: male female age range: occupation: student professional field: school: pets: yes no smoking: yes no lifestyle: clean messy language(s): interests/hobbies: exercising, cooking, gaming, art search

Name	Name	Name
\$-\$	\$-\$	\$-\$
Name	Name	Name
\$-\$	\$-\$	\$-\$
Name	Name	Name
\$-\$	\$-\$	\$-\$
Name	Name	Name
\$-\$	\$-\$	\$-\$

I am trust-worthy

1 2 3 4 5 6

**browse - roommate page**

Logo | home post as host post as tenant my profile log out

budget range: min to max gender: male female age range: occupation: student professional field: school: pets: yes no smoking: yes no lifestyle: clean messy language(s): interests/hobbies: exercising, cooking, gaming, art search

Name	Name	Name
\$-\$	\$-\$	\$-\$
Name	Name	Name
\$-\$	\$-\$	\$-\$
Name	Name	Name
\$-\$	\$-\$	\$-\$
Name	Name	Name
\$-\$	\$-\$	\$-\$

I am trust-worthy

1 2 3 4 5 6

**About Tenant**

name: gender: age: occupation: field: school: email: message

description: I am like minded and trust-worthy

preferences: pet(s): yes no smoking: yes no lifestyle: clean messy language(s): interests/hobbies: exercising, cooking, gaming, art

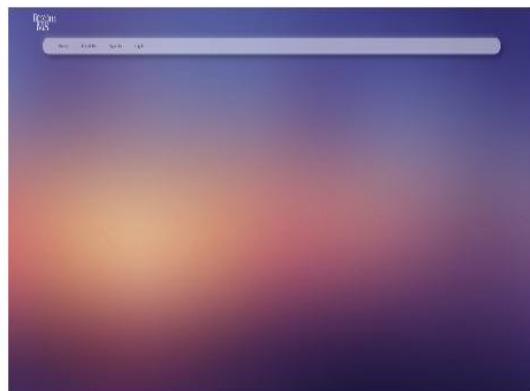
About us

© Roomm8 2021

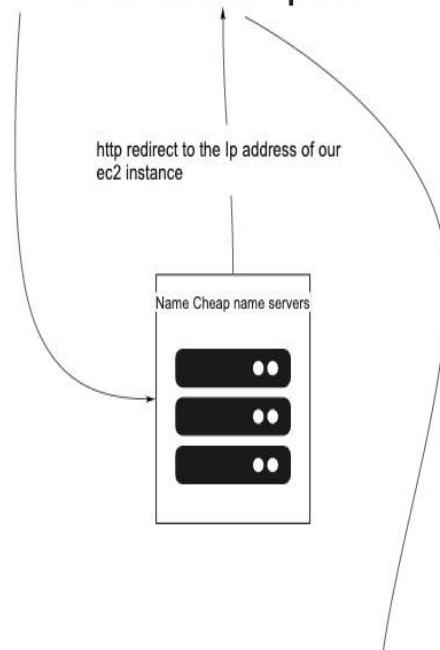
### 3. High level Architecture, Database Organization

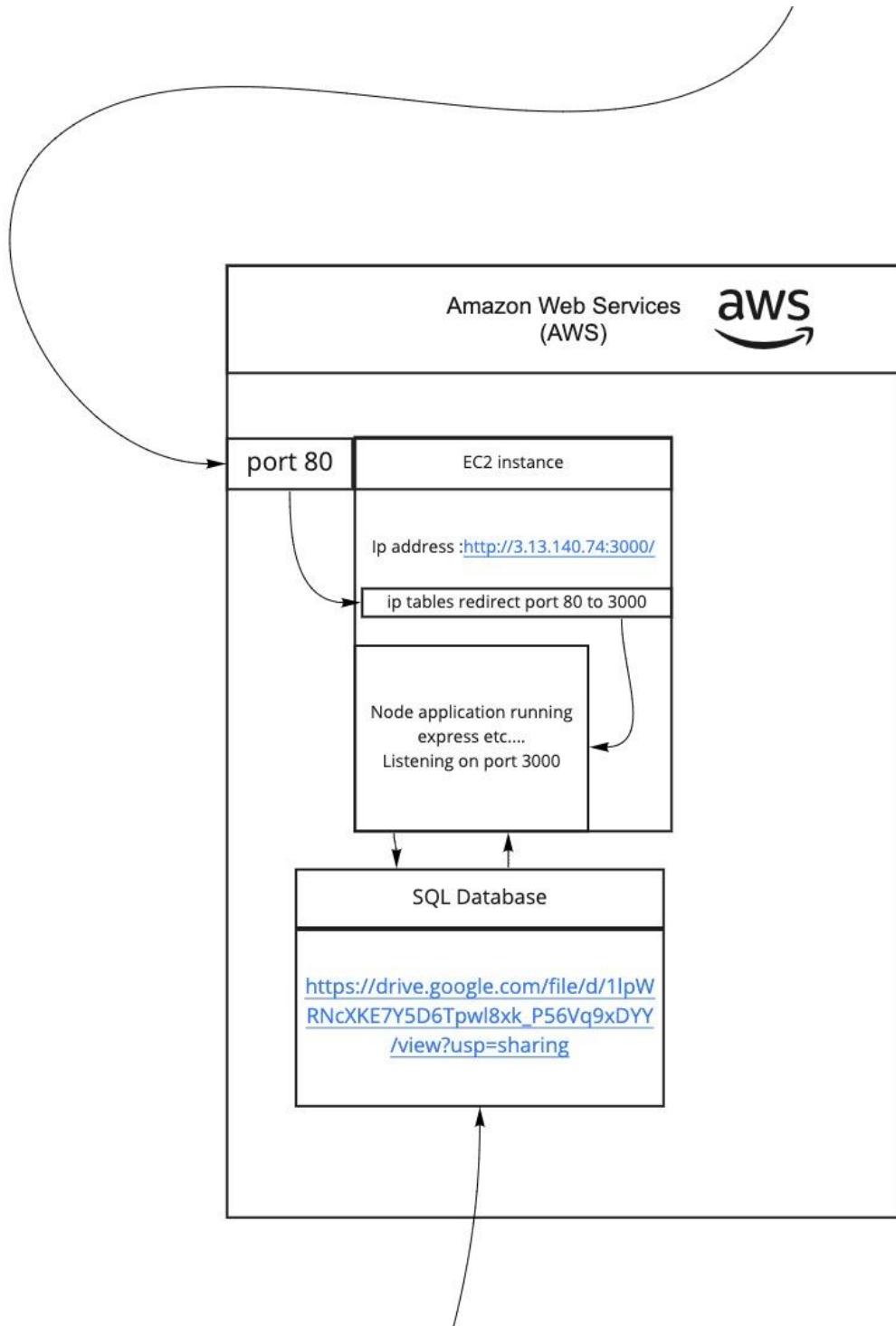
Because we wanted to use Name cheap for our hosting we bought the domain for our website through their service. Because that domain name is still sitting with name cheap we have a redirect from traffic to our AWS EC2 instance. As for our database it is sitting on the AWS servers just like our actual node application.

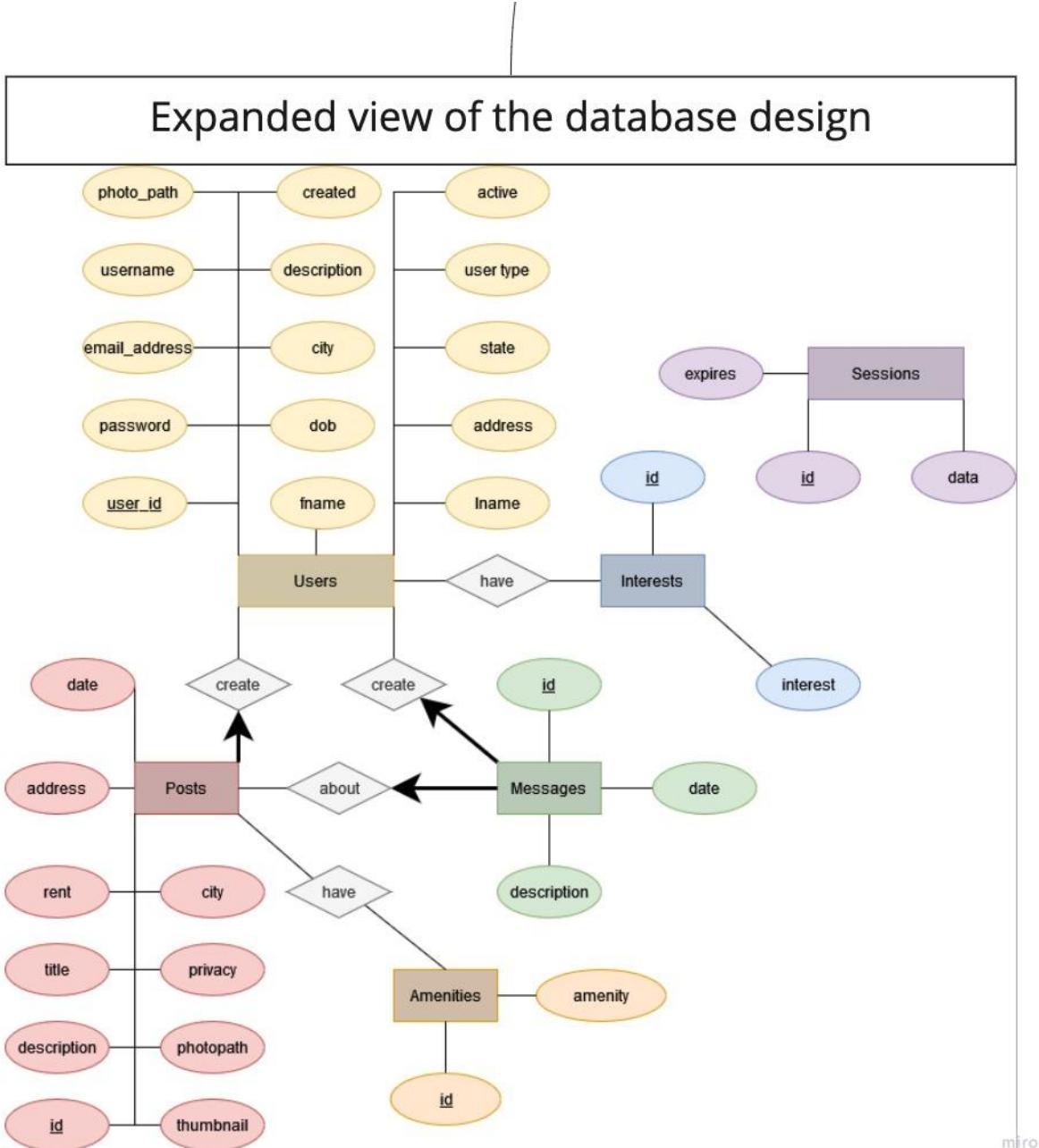
<http://roomm8.net>



Clients Computer





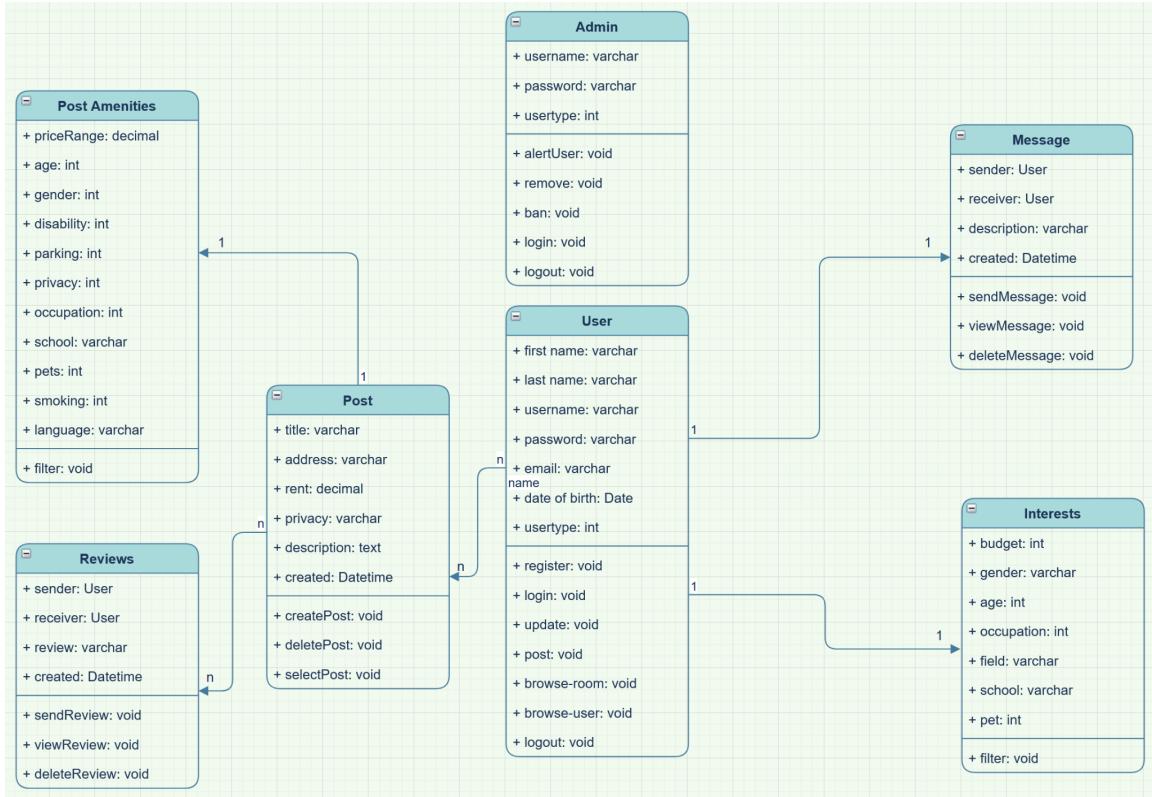


## Database:

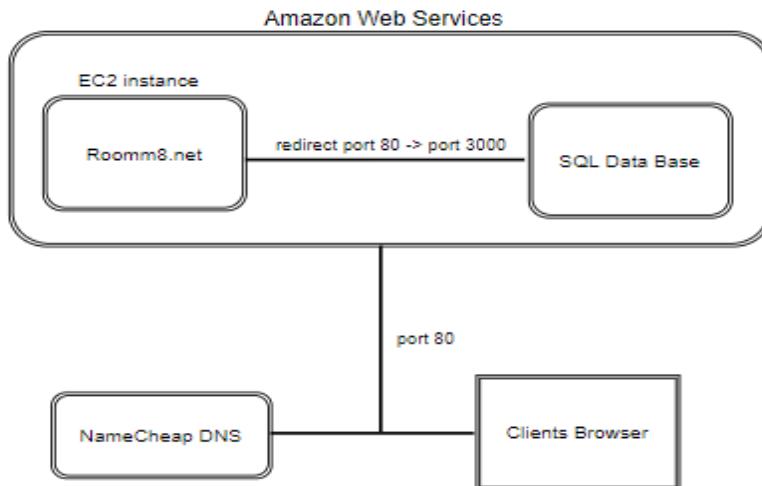
- Users - All of the humans using our system
  - user\_id - Internal unique user identifier
  - first name (fname) - User Provided first name
  - last name (lname) - User Provided last name
  - username - User Provided username for login and user reference
  - password - User Provided password for login
  - email - User Provided email for user verification and messaging
  - date of birth (dob) - User Provided date of birth for age verification
  - photopath - Internal location of User Provided personal photo
  - description - User Provided user "about me"
  - usertype - Internal account type determining whether user is a Tenant, Host, or Admin
  - created - External date of when user profile was created
  - active - External indicator of whether user is active
- Posts - Apartment details created by Host users
  - post\_id - Internal unique post identifier
  - title - User provided name of their post
  - address - User Provided address of the posted location
  - rent - User Provided monthly rental payment
  - privacy - User Provided indicator of whether the room available is shared or not
  - description - User Provided description of the posted location
  - photopath - Internal location of User Provided location photo
  - thumbnail - User Provided location mini photo
  - created - External date of when the post was created
- Messages - Post comments created by Users
  - message\_id - Internal unique message identifier
  - description - User Provided message content
  - created - External date of when the message was sent
- Interests - User interests such as horseback riding or dogs
  - interest\_id - Internal unique interest identifier
  - interest - User Selected interests that they have
- Amenities - Post location features like parking or whether pets are allowed
  - amenity\_id - Internal unique amenity identifier
  - amenity - User Selected features of a post
- Sessions - Internal structure for user session info
  - session\_id - Internal unique session identifier
  - expires - Internal date of when a session expires
  - data - Internal structure for other session related data

## 4. High Level UML Diagrams

### Class Diagram and their connections.



### Deployment Diagram



## **5 .Identify *actual* key risks for your project at this time**

### **1) Skills Risks**

The team has self reported current knowledge of our tech stack on a scale of 1-5. Most of the project's code will be in JavaScript and the average level of knowledge is 3/5.

To avoid potentially adding time for learning in 40% of tasks we the team picked roles based on the areas they were strongest.

- Adele Wu reported knowledge of 4/5 in CSS and 3/5 in our rendering engine handlebars so she took charge of the Front end development.
- Eddy Yun had even knowledge of 3/5 across the board and took lead of the backend development
- Jeffrey Friedrich reported knowledge 4/5 in SQL and is running the DataBase
- Jeffrey Fulmer Gardner has prior management experience and 4/5 knowledge of github. He took Team Lead.
- Andres Quinteros has experience with technical writing and he took the position of document master and front end support.
- Kris Byington is taking a class in databases so he took database support.

### **2) Schedule Risks**

None of our team members work similar hours and All of our team members have other commitments to their other classes. 2 of our team members work a job on top of school.

- To ensure enough attention is paid to this class our team has one all hands meeting outside of regular class hours. In this meeting we get everyone up to speed on all milestone requirements.
- Team leads will schedule ancillary meetings as required in order to meet milestone deadlines during the all hands meeting
- The team has a discord server that all team members check daily.
- The Discord server has channels for many different types of documents tracking so the team can keep informed at all times.

### **3) Technical Risks**

- Implementation of the logging system requirements for admin users has yet to be started

- The website is hosted with AWS and they charge by volume of data which means that if we are not careful when testing we could rack up charges by accident.

#### 4) Teamwork Risks

Working remotely can be a barrier to connecting with teammates

- The team has regular all hands meeting once per week outside of class that creates cohesion
- The team leads hold meeting with their support members regularly to keep communication clear

#### 5) Legal Risks

- There is competitor [room8.io](https://room8.io) that is a roommate finder and their domain is one letter different from ours. They could have some claim for intellectual property infringement.
- We have dummy data in our database with a real San Francisco address and the home owners have not given us permission, we don't know if this is illegal but we are concerned.

## 6. Project management

While working as team lead I have tried to follow best practices when it comes to supporting my group mates. I have tried to make scheduling a key tenant of how this team works. The first way that we try to achieve good scheduling is by making it clear what is expected of us, this way we can try to plan ahead for how many resources and time we need to devote to a specific problem. When figuring out and planning who is going to do what the main goal is that we follow through with our deliverables and deliver a working product. Besides having the class decide milestones which have their own specific due date we break the milestone up into sections and clear dates when they need to be done by. Because we have a very talented team I can rely on them and use their skill set as a resource. Because we meet twice a week almost every week I

can check in with the different team members and see their progress and ask if they need help.

Besides scheduling, managing dependencies are a big part of software development.

We have run into more than one occasion when we need one part of the project to finish before starting on the next. This involves setting dates for when key parts of the project are due so work can start on the next of the project. Besides inter-project dependencies we manage our software stack by doing a lot of research and planning before we include any kind of package into our software stack.

Another key tenant of our group is communication. We all use discord and meet outside of class at least twice a week in order to really deliver on milestones. In order to allow for good communication we have decided to break up the group into a couple of overlapping teams which allows for intercommunication between the different teams.

We have front end back end and DB with a few group mates supporting multiple teams.

Breaking the teams up makes it clear who is working with who but allowing members to work with multiple groups opens new channels of communication.

I think because of our group's devotion to the scheduling, communications, and managing group dependencies, we have a very good group.