SW Engineering CSC648/848 Spring 2019

Gatorbnb

Team 5

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Milestone 1

Date	Description
2/27/19	Draft Created
3/6/19	Submitted Version
3/11/19	Final Frozen Version

1. Executive summary:

The process of finding a place to live near the school while studying can be more complicated and a struggle than it has to be. The student is working hard for their college degree and now they have to put in the effort to find a place to live near the school. Is it possible to find a place near the school for an easier commute? Where should they look to find the best deal for their given situation? This project aims to solve this problem by offering a platform for San Francisco State University students to find a place to rent with ease. With us knowing our demographics being students, we can focus on their needs rather than an application using a larger demographic to hinder their ability to offer the best deal.

The problem that we solve is the difficulty of finding a place for San Francisco State students as they are going to school. Having a one-stop place to solve all their searching needs and easily giving them available listings will make their lives easier and reduce the stress of housing. Students can go to our website and search for rooms for rent that will match their need, as we are able to fit their needs and connect them to better sellers. This product is about connecting San Francisco State students to sellers who offer a place to rent. Allowing students and sellers to connect is the current dilemma that students are facing when they have a lot on their plant to search for a place. Showing available listings to students with the ability to select criteria that that would like us to accommodate for them.

This product is designed by a team of talented software engineers attends San Francisco State University. A team of seven students with different backgrounds and specialties are tasked with designing, developing, and maintaining the site. The team is split into two groups, which is the backend and frontend team which is in charge of the functionalities that are designated to that particular section by the team lead to create this product.

2. Persona and Use Cases

2.1 Groups

- San Francisco State Students / Potential Tenants
- Landlords / seller
- Admin

2.2a Persona: Buyer

Major responsibilities: studying yet also having fun
Demographics: 18-25 years of age

Goals and tasks: short on money yet, staying on track with school while enjoying their personal life
Environment: School and work
Skill level in mobile use: well
Reason to use application: to find a place to live and study in

2.2b Persona: Landlord
Major responsibilities: retired
Demographics: 60 -75 years of age
Goals and tasks: making money by renting out house, having time for family, enjoying hobbies
Environment: Family and friends
Skill level in mobile use: below average
Reason to use application: renting out a room to help students looking for a place to rent in

2.2c Persona: Admin
Major responsibilities: maintaining Gatorbnb
Demographics: 23 - 35 years of age
Goals and tasks: work
Environment: Friends and coworkers
Skill level in mobile use: good/ professional
Reason to use application: to maintain the application by monitoring new accounts and postings

2.3 Use Cases

2.3a Unregistered User - Jonathan

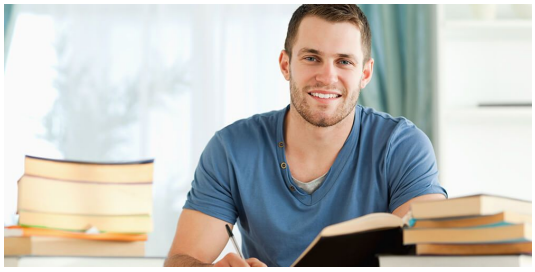
Jonathan is a transfer student looking for a place to live for his first year at San Francisco State University. He uses the Gatorbnb website believing he can quickly find a place to rent. As an unregistered user, he is only able to search for and see postings that's out on the market. To make searches faster to satisfy his needs he will be able to filter his searches by home type, distance, price, animal friendly, fully furnished and the amount of bedrooms. After reviewing the apartment that he likes, he attempts to contact the landlord. He clicks the contact button but a prompt pops up requiring him to log in before he is able to proceed. He realizes that he can't contact the seller of the house that has caught his attention unless he registers for an account.

2.3b Registered User - Jaime

Jaime is working full-time while also maintaining a relationship with her friends. She enjoys family life and work life but has a busy schedule. Jaime's parents are asking for her help; her family has an empty house and her parents want to rent it out so it's being inhabited. Knowing that the house is relatively close to San Francisco State University, Jaime uses Gatorbnb to rent out the house so it caters towards university students. As a first time user, Jaime creates a post for the house. While creating her post, she adds many recent pictures of the house that display various perks and information about the house: a garage to park cars, 3 bathrooms, 5 bedrooms, fully furnished with plenty of kitchen appliances, a washer and dryer and a backyard with a sun patio. After finishing adding all the details about the house she attempts to click the "Post" button but is prompted to register first. To register she must add valid credentials such

as her full name, a username, password and her email (for registration purposes only). As she finishes her registration, she can then finally post her listing. With a registered account, she is now able to login and go to her dashboard where she can find the listing of her house and check for messages of students willing to rent.

2.3c Registered User - Max



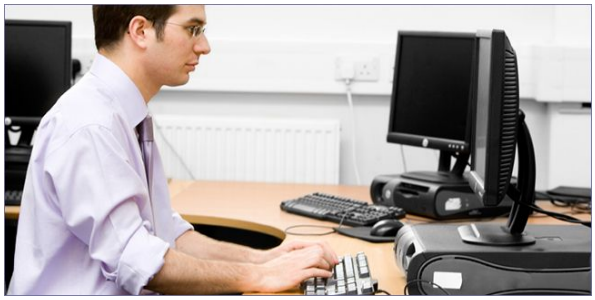
Max is a senior college student at San Francisco State University. He has to balance work and school. He's close to graduating and wants to focus on school work but needs to work in order to pay for his rent. His roommates have already graduated and left, so currently he is living in an empty house with just himself paying full rent. To avoid needing to work overtime to compensate for the lack of roommates, he will use Gatorbnb to post a listing of needing roommates. As a registered user Max is able to login to his already registered account. He creates a posting by clicking the "Post" button. He creates a description that he's looking for roommates willing to room with him. Max will constantly check his messages throughout the next few weeks until he has enough roommates and will be able to delete his post with the "Delete" button that is easily recognizable by its red color. By using the website, he will be able to focus his time on studying without the need to worry about his renting issue.

2.3d Registered User - Tabitha

Tabitha is a kind-hearted middle-aged woman who lives alone. Her children live away from home, so her house is relatively empty. She wants to rent out parts of her house she doesn't use. So she goes onto the website and clicks the "Post" button that is big enough to see for her elderly eyes. As she registers her house up for selling, she is able to add a label "Pet-friendly" which will allow renters to find a pet-friendly house easily through filtering. As a pet lover herself with her 2 cats, a snake, and a chicken she doesn't mind pet owners. In fact, prefers

them and adds that to the listing to encourage pet owners who go to SFSU to rent from her. She is allowed to add all this information for renters to read while adding her postings. By using the website she can use parts of her unused house and potentially be a pet watcher.

2.3e Admin - Josh



Josh is the website admin of Gatorbnb. His main job as an admin is to monitor all registered users accounts and reviewing content. Josh can log in to a dashboard type view which gives him information on all users and their listings in the order of most recent. He can click the registered users tab to give him a list of all registered users with newer ones at the top. Josh will be able to see all the users data and it's up to him to review their information to ensure they're accurate and valid. If Josh sees a spam account he can delete it by clicking to removing it from the database. Josh can also view all new listings that want to be posted by clicking the new listings tab which is only available to admins. Before any listing or post goes public, Josh has to approve that the listing is valid. The administrator dashboard gives him an overview of the database that allows him to review all content without having to have high-level knowledge of the database system itself.

3. List of main data items and entities:

- **Unregistered User**: any person utilizing the website application who does not hold an account on the website or is not logged in at the moment
- **Registered User**: a person who is logged in via an authentication method to utilize the website application and whose main purpose is to browse among listings as well as contact sellers or post possible listings for users to browse among
- **Site Administrator/Admin**: a person utilizing the website application to review listings and to be able to view as well as remove potentially unwanted listings, users, or content
- **Filter/Filter Option**: specifies a user-defined preference about what listings are to be displayed by the following possible guidelines: price, home type, bedrooms, bath distance, and/or type
- **Listings:** a reference to a house, apartment, or property for sale that contains the following detailed information: address, image(s) of location, price, home type, how many bedrooms and bathrooms, and seller contact materials
- **Log in**: references the action of authenticating yourself as a registered user to use the registered user functions of the website
- **Log out**: references the action of signing out of your logged in account to go to a basic unregistered user function of the website
- **Registration**: allows a user to fully utilize the website application and contains username, email and password

4. Initial Functional requirements:

1. **Unregistered Users:**
    a. Unregistered users shall be able to register as renter or seller and log in
    b. Unregistered users shall be able to browse through all of the listings
    c. Unregistered users shall be able to filter the listings by price, beds, baths, home type and pets
    d. Unregistered users shall be able to view the public details of any listing
    e. Unregistered users shall be able to register for an account

2. **Registered Users:**
    a. Registered Users shall be able to do everything an unregistered user is allowed to do
    b. Registered Users shall be able to log in and log out of an account
    c. Registered Users shall be able to contact other Registered Users through the website
    d. Registered Users shall be able to save listings in the website
    e. Registered Users shall be able to post listings
    f. Registered Users shall be able to edit their listings
    g. Registered Users shall be able to remove their listings

3. **Site Administrators:**
    a. Site Administrators shall be able to view all listings on the database
    b. Site Administrators shall be able to view all Registered Users and Sellers on the database
    c. Site Administrators shall be able to view all messages between Registered Users and Sellers
    d. Site Administrators shall be able to approve or reject listings for posting
    e. Site Administrators shall be able to remove any listing on the site
    f. Site Administrators shall be able to remove the account of a Registered User or Seller

5. List of non-functional requirements:

1. Application shall be developed, tested and deployed using tools and servers approved by Class CTO and as agreed in M0 (some may be provided in the class, some may be chosen by the student team but all tools and servers have to be approved by class CTO).
2. Application shall be optimized for standard desktop/laptop browsers e.g. must render correctly on the two latest versions of two major browsers
3. Selected application functions must render well on mobile devices
4. Data shall be stored in the team's chosen database technology on the team's deployment server.
5. No more than 50 concurrent users shall be accessing the application at any time
6. Privacy of users shall be protected and all privacy policies will be appropriately communicated to the users.
7. The language used shall be English.
8. Application shall be very easy to use and intuitive.
9. Google analytics shall be added
10. No e-mail clients shall be allowed
11. Pay functionality, if any (e.g. paying for goods and services) shall not be implemented nor simulated.
12. Site security: basic best practices shall be applied (as covered in the class)
13. Before posted live, all content (e.g. apartment listings and images) must be approved by the site administrator
14. Modern SE processes and practices shall be used as specified in the class, including collaborative and continuous SW development
15. The website shall prominently display the following exact text on all pages *"SFSU Software Engineering Project CSC 648-848, Spring 2019. For Demonstration Only"* at the top of the WWW page. (Important so as to not confuse this with a real application).

6. Competitive analysis:

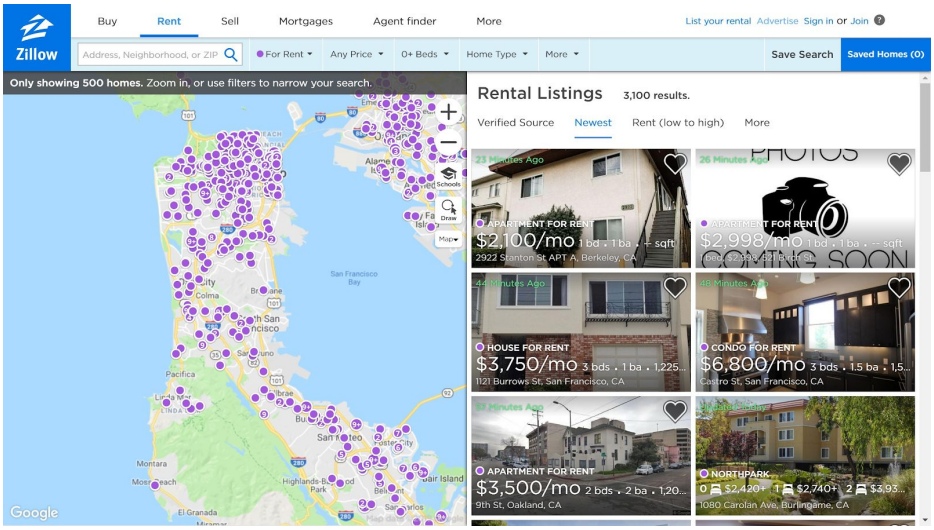
	Zillow	Trulia	Craigslist	SFSU apt roommate fb group	**Gatorbnb**
Design of UI	+	+	-	-	+
Filter Option/ Tags	+	+	-	n/a	+
Map Integration	++	+	+	n/a	+
Contact	-	-	-	+	++
Caters to SFSU students	-	-	-	+	++

++ Superior, + Good, - Not Good

6.1 Competitive Summary and Advantages

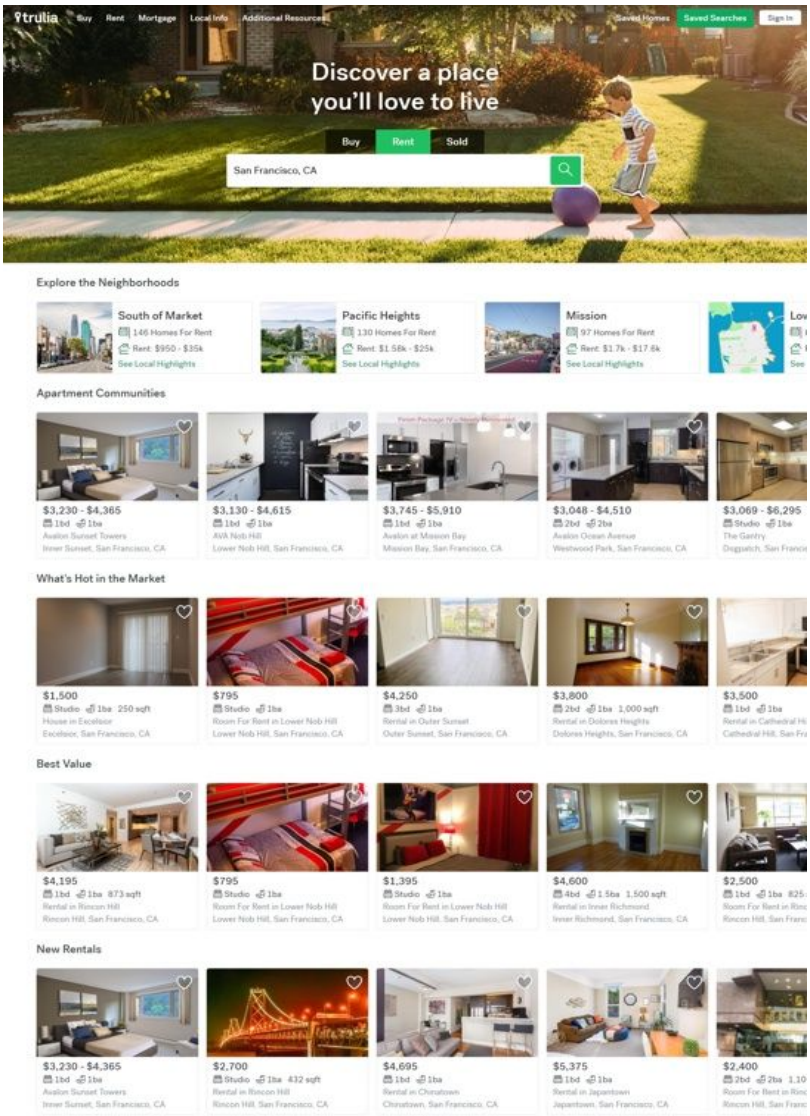
Websites such as Zillow and Trulia offers nice design of user interface, however they don't do well in muc of the other categories. Facebook group and Craigslist offers good contacts and caters well towards SFSU students, but their design and filters lack in that department. Gatorbnb offers good design of user experience, good filter / tags, and map integration. It however excels in being able to connect sellers and buyers, along with being catered towards SFSU students allowing for better results in terms of rooms and comfortability for the user.

6.2a Zillow



Zillow is an online real estate database where users go to for finding listings that are available on the market. They allow tags such as verified source, newest, rent (low to high), rent (high to low), bedrooms, bathrooms, square feet, year built, lot size, zestimate (high to low), zestimate (low to high) as well as a search bar. They include a map showing number of listings in an area that updates when you zoom in. The map has built information when you hover / choose a listing. They allow the ability to request a tour of the listing, save listing, show similar listing, save listing, and description of the listing. Our website differs from Zillow by us being specifically targeting San Francisco State Students, therefore we can have better tags and search features. Our map will have details that will be more a lined with our users.

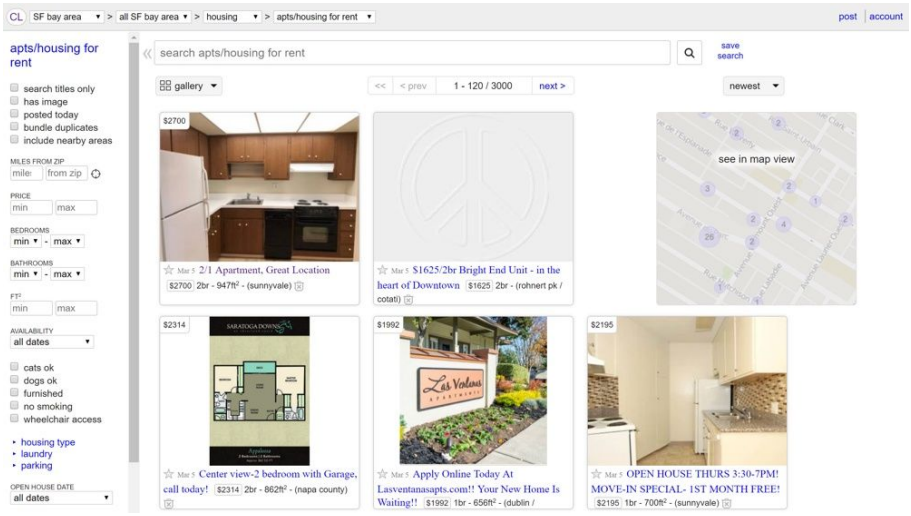
6.2b Trulia



Trulia is a home and neighborhood site for buyers and renters to find locations that fit their needs. They allow tags such as houses for rent, apartments for rent, rooms for rent, specific

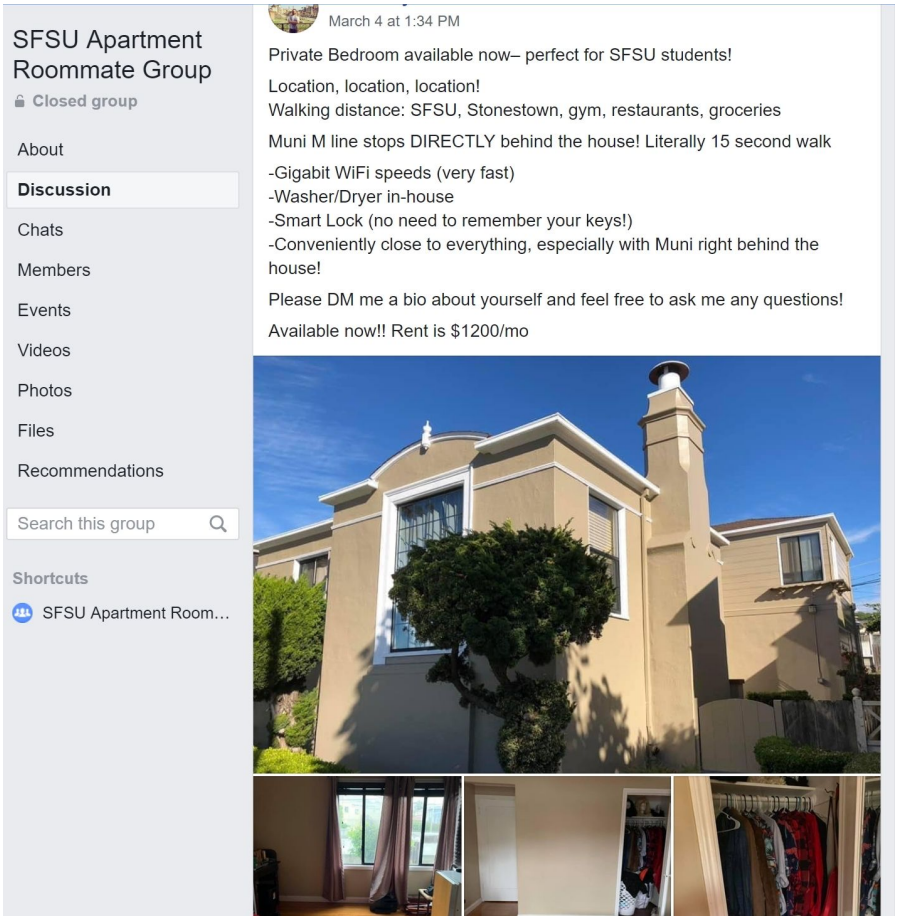
neighborhoods and apartment communities, ‘hot on the market’, ‘best value’, new rentals, and a search bar. The listings have options for map and street view, crime rate in the area, schools, common commute choices, and other local information that a buyer / renter would like to know. Our website differs from Trulia by us being specifically targeting San Francisco State Students, therefore we can have better tags and search features. Our details will be more geared towards the students giving them more control over the information that they want to see.

6.2c craigslist



Craigslist is a buy and trade website where users can post anything they want to offer. The have a section where users can search for housing, which offers options such as tags, and search for details / restricts on the place to rent. The contact is dependent on the poster, which is not regulated by craigslist. Our website differs from Craigslist in the sense that it is a housing / real estate website and not just a buy and trade page. This means that we are more geared for offer better search results for the users as well as better communication between the renter and the seller since we regulate the information that is posted by the seller.

6.2d SFSU apartment roommate group on Facebook



SFSU apartment roommate group is a Facebook group where users can post information about housing. Post tends to get buried and all the post on the group looks similar to one another making it difficult to tell the difference between buyers and sellers. The page is not updated since there is no moderator, therefore it's also not as safe to use. Our website will differ from facebook group by us offering better search results rather than a feed. Having the ability to have the same format for each housing / apartment also gives user the peace of mind of not going to a 3rd party website.

7. High-level system architecture and technologies used

1. **Frameworks:**
    a. React
    b. Bootstrap
    c. NodeJS 11.0.0
    d. Npm
    e. Postgres

   f. Express
2. **APIs:**
   a. Google Maps
   b. Google Analytics
3. **Tools and Systems:**
   a. GitHub
   b. pgAdmin 4.2
4. **Supported Browsers:**
   a. Chrome
   b. Mozilla Firefox
5. **Deployment Platforms:**
   a. Ubuntu
   b. Amazon Web Services

8. Team:

- Peter Le: team lead
- Franky: front end lead
- Wesley Goldfisher: back end lead
- Mehi Ledwon: front end
- Tanya Wong: front end
- Anthony Owyeong: back end
- Jay Sunga: back end

9. Checklist: (answer each bullet point with DONE or ON TRACK or ISSUE)

- Team found a time slot to meet outside of the class: DONE
- Github master chosen: DONE
- Team decided and agreed together on using the listed SW tools and deployment server: DONE
- Team ready and able to use the chosen back and front end frameworks and those who need to learn are working on learning and practicing: DONE
- Team lead ensured that all team members read the final M1 and agree/understand it before submission: DONE
- Github organized as discussed in class (e.g. master branch, development branch, folder for milestone documents etc.): DONE