SW Engineering CSC648/848 Spring 2019

Dormy Home Rental Services

Team 01

Zaur Melikov - Team Lead/ M1 Editor/ Backend Team
Email: zmelikov@mail.sfsu.edu
Ulises Martinez - Frontend Team Lead
Cyrus Riahi - Backend Team Lead
Kevin Reyes - GitHub Master/Frontend Team
Joe Binalinbing - Frontend Team
Siu Chun Kung - Frontend Team
Mahdi Massoodi - Backend Team

Milestone 1

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History

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1. Executive Summary

A big issue students face is housing. It is tough for students to find affordable housing around campus. Students are in a special predicament because they are usually typically low income students who are looking for short-term leases. There are some landlords who are looking for students to rent out their property while some prefer not to have any students at all. Most services on the market do not cater to students who are looking for this very specific type of housing. Every new school year brings a wave of students who are looking for housing but they do not have a specific tool to help landlords connect with these students.

Dormy is an app for students to find housing around campus. The main point of Dormy is to create a platform where university students can get into contact with potential landlords to find housing. This application focuses on needs of students who may only need temporary and long term housing while they attend school. The platform will focus on housing for students but will provide a wide range of options so user's needs and goals are met. Affordability it's another important aspect, thats why Dormy will provide a effective and simple tool for landlords to not only rent out their properties to students but to understand whats fit best for both parties. We plan to engage a market of incoming students that do not seem to be engaged.

Our team is a start-up of six San Francisco State Computer Science students and one Computer Engineering student. Together, we are a combination of talented front-end and back-end developers who are proficient in JavaScript and BootStrap. As students ourselves, we know exactly what it is like being a student trying to find housing in a big city and with our knowledge and experience we will be able to provide an efficient and enjoyable platform for students and landlords.

2. Personae and main Use Cases

Unregistered User:

- Inexperienced in the housing market.
- Willing to browse unfamiliar platforms.
- Seeking affordable options within their specified vicinity.
- Has basic internet skills/casually browses home rental sites.
- Reluctant to explore applications with overly sophisticated user interfaces.

Goals and scenario:

Will be attending San Francisco State University this upcoming fall and hoping to find a cost effective alternative to college dorms.

In need of a streamlined application in order to easily discover affordable housing. Takes to using the internet in hopes find options that fulfill their criteria.

Searching for listings of residences near campus; ones with which she can come in contact with their landlords immediately and with minimal effort required.

Registered User:

- Curious about new methods to discover and/or list housing options.
- Easy to establish communications with.
- Maintains a busy schedule that necessitates an application to carry the workload associated with finding home rentals/tenants to lease to.
- Has average computer/web browsing skills.
- Appreciates honesty/integrity throughout the home rental process.

Goals and scenario:

Looking to proceed with the process of renting out a property/posting a listing on Dormy home rental services website.

By registering on the website users are presented with vetted listings from which they can explore and in turn, contact the owners of through the website's integrated messaging option.

Admin:

- Enthusiastic about providing excellent service.
- Detail oriented individual with a passion for expansion.
- Finds eliminating all fake accounts significantly difficult.
- Would prefer that all visitors of Dormy.com become registered users.
- Skilled in software development and wishes for society's technological know-how to increase as a whole.

Goals and scenario:

Employee at Dormy home rental services whose focus is on building upon Dormy's strengths in order to expand its reach and usability outside of the college space.

Currently optimizing Dormy's user interface as well as scanning the platform in order the eliminate misuse and violations of terms and conditions.

Use Case: Unregistered User Joshua, who's seeking a last minute room/apartment:

Joshua is a recent high school graduate from Southern California who's been accepted to attend San Francisco State University in the Fall. Unsure about whether or not he would like to dorm on campus this semester, Joshua decides that he wants to browse local apartment rentals to see what San Francisco has to offer. By visiting Dormy.com, Joshua and his family are able to explore numerous potential homes and apartments in the area that he could stay at during the Fall. Through the use of added filters such as filtering by price and distance from campus, Joshua is able to narrow down the homes that are listed in order to find one that suits his exact criteria. Ever since discovering Dormy, living away from home doesn't seem so daunting.

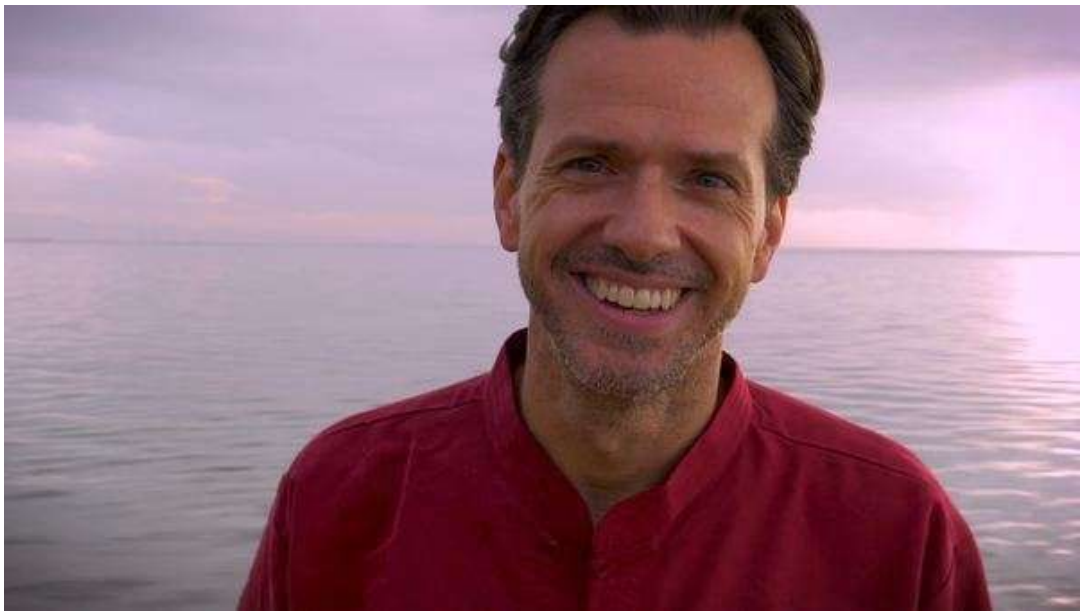
Use Case: Registered User Mae, who's seeking a residence separate from SFSU's campus:

Returning to San Francisco State University from her summer vacation, Mae is seeking a change from her previous semesters living on campus. As much as she enjoys school, Mae equally values time away from the University. By becoming a registered user on Dormy.com, Mae can not only scan for available residences near campus, but can also contact their landlords and schedule meetings all through Dormy's streamlined user interface. With the ability to communicate with the landlords of her most sought after listings, Mae is confident that she will soon narrow down her choices and find the home that best suits her. Thanks to Dormy Mae is entering the new semester more excited than ever.

Use Case: Unregistered User Natasha, who's trying to have her listing reach more people:

Natasha is the owner of a recently vacated property. In the past, she typically found renters through acquaintances and by word of mouth. Lately she's been struggling to find a tenant to occupy her property. Although unfamiliar with the use of online applications, Natasha discovers Dormy home rental services, and their easily navigable online user interface. By visiting their site, Natasha is exposed to a platform in which she can both see the competing available residences in her area and have the option to register and post her own listing so that those in search of a home like hers can contact her through the click of a button. While the idea of using online applications to advertise her listing is new to her, Natasha feels confident in her ability to navigate Dormy's streamlined user interface, and believes that once she becomes a registered user, finding a tenant to occupy her property will be much easier than she imagined.

Use Case: Registered User Laurence, who's looking to streamline his search for tenants:



Laurence is the owner of several small apartment complexes near SFSU. Due to his increasingly busy schedule, Laurence is seeking to find an avenue in which he can streamline his search for honest people in need of home rentals. While online, he stumbles upon the newly launched Dormy home rental services website. Pleased by its user friendly interface, and the fact that potential tenants are required to register in order to prove credibility, Laurence decides to register on Dormy's site as well. By becoming a registered user, Laurence is now capable of posting and managing all of his available listings, and quickly communicating with those interested in becoming one of his tenants. Dormy's built in messaging capability allows Laurence to seamlessly organize all of his communications between potential tenants within a single interface. With Dormy, Laurence's busy schedule just got a little easier.

Use Case: Admin Felix, who's diligently using user feedback to improve Dormy.com:

Felix is employed as an administrator at Dormy home rental services. As an admin, Felix uses his passion for software development in order to listen to the suggestions and concerns of its users and implement methods such as user verification and spam filtering in order for Dormy to reach new heights of success. Felix also routinely scans Dormy's listings in order to confirm that all of its users are abiding by the terms and conditions of the application. As a result of his impeccable attention to detail, Felix ensures that Dormy remains a professional platform on which users can search for and post available home listings in the area. With admins like Felix behind the scenes, users can remain assured that Dormy is running to its fullest potential.

3. Data Definitions and Entities

Unregistered User: Any entity viewing our service without registering. Users without an account shall be able to view listings, but are not able to interact with other users without making an account first.

Registered User: Registered Users shall be able to view, add, remove, report listings.

Admin: A user that will monitor post requests from sellers and verify whether a post is safe.

Listing: Items available should be displayed with minimal information.

Login: Users shall be able to log in to their respective dashboards where they will access their prospective students/landlords detail information.

Register: Individuals should be able to make a personal account to either lease or rent a place.

Search: students shall be able to surf a list of departments with little to no initial filtering.

Filters: Students should be able narrow down their options base on their criteria.

4. List of Functional Requirements

1. Unregistered Users

a. Shall be able to browse through available housing options.
b. Shall be able to browse based on housing type (apartment, house, etc).
c. Shall be able to sort available housing options by price.
d. Shall be able to browse through housing options within a certain radius of SFSU (1mi, 2mi, 3mi)
e. Shall be prompted to register or sign in upon choosing to message the owner of a housing option.
f. Shall be able to register.
g. Shall be required to accept terms and conditions upon registration.

2. Registered Users

a. Shall have all of the functionality of registered users other than the ones which would create registration redundancies (v. vi. vii.).
b. Shall be able to login.
c. Shall be able to access their own dashboard upon login.
d. User dashboard shall display information about each housing option they have messaged about.
e. User dashboard shall display information about each housing option they have “Starred” or “Favorited”
f. Shall be able to compare listings.
g. Shall be able to edit property details of listings they post.
h. Shall have and manage notifications.
i. Shall be able to review sellers.
j. Shall be able to remove listings they’ve posted.
k. Shall be able to message buyers or sellers.

3. Admin Users

a. Shall be able to remove or edit listings deemed inappropriate.
b. Shall be able to review listings before being uploaded to the site.
c. Shall be able to remove outdated listings.

5. 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
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 email 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 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.

6. Competitive analysis

Feature	Airbnb	Craigslist	Facebook	Dormy
Clean User Interface (UI)	xx	x	xx	xx
Reliable listing(s)	xx		x	xx
Search by filter(s)	xx	x	x	x
For students		xx	xx	xx
User Profiles	xx		xx	x
Distance from SFSU				xx

Legend: `xx` -> nice, `x` -> okay, ` ` -> does not have

Dormy will provide an aesthetically pleasing and easy interface comparable to our competitors. We will conduct thorough checks before approving a listing to be public in detail for our users. Our site will allow students to search by filters tailored to them, such as radius to school and mobility to nearest public transit center. Other factors may include pricing, area, etc. Dormy is made for students which allows allows us to specifically tailor our features and indexes for better search results and provide a better user experience. Landlords can be assured they are renting to students.

7. System Architecture and Technologies

Deployment Platform:

1. Server Host: Amazon Web Services (AWS)
2. Operating System: Ubuntu 18.04.1 LTS
3. Database: PostgreSQL 11.1
4. Web Server: NGINX 1.15.8
5. Server-Side Language: JavaScript 2018 version (1.8.5)

Frameworks:

1. Bootstrap 4.3.0

2. Node JS 10.15.1 LTS
3. Express 4.16.4

Supported Browsers:

All browsers

8. Team

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Siu Chun Kung - Frontend Team

9. Checklist

✓ Team found a time slot to meet outside of class : ON TRACK
✓ 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
✓ Team lead assigns M1 editor: DONE
✓ Team lead/M1 editor assign individual chapters to team members: DONE
✓ M1 editor collect chapters, edits/corrects then integrates them into a well formatted document (with same font and formats): DONE
✓ M1 editor posts final candidate full document on team repo so that all team members read full document for one more review and any feedback: DONE
✓ M1 editor completes the final version as per feedback: DONE
✓ Team lead submits M1 info for review as per submission instructions. Submission instructions (below) must be followed precisely and completely or grade penalty will be

imposed: DONE