SW Engineering CSC648/848 Spring 2019

Dormy Home Rental Services

Team 01

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Milestone 1

History

March 6th, 2019 (First Submission)

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Contents

1.Executive Summary

One of the most glaring issues students planning on attending San Francisco State University face is housing. It is difficult to find affordable housing around campus. Students are in a special predicament because often times they are typically low-income individuals who are looking for short-term leases. There are some landlords in the surrounding area who are looking for students such as those attending SFSU to rent out their property, yet most services on the market today 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 however they are constantly burdened by the fact that there has yet to be a specific tool created in order to help them connect with the potential properties in the area.

Dormy is an app aiming to help students who are planning on attending San Francisco State University find housing around campus. Through the application, users will be able to take advantage of Dormy's available filtering mechanism which allows SFSU students to narrow their search down based on listing type, price of listing, and distance from campus, in order to find the residence that best suits their needs. The main goal of Dormy is to create a platform where SFSU students can get into contact with potential landlords to find housing. This application focuses on the needs of students such as these, who need temporary and or long-term housing while they attend school. The platform will focus on housing for SFSU students, however will also provide a wide range of options so that the needs of users outside of the university setting also have their criteria met. Affordability it's another important aspect of the college experience, that's why Dormy will provide an effective yet simple tool for landlords to not only rent out their properties to students but to understand what fits best for both parties. With Dormy we intend to engage a market of incoming students that are seeking an easier way to find an alternative to college dorms. Through our easy to use interface, a new home could be a few simple clicks away.

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 SFSU students ourselves, we know exactly what it's like being in the position of a student trying to find housing in a big city. With our knowledge and experience we will be able to provide an efficient and enjoyable platform for both SFSU students and landlords seeking to fill their listings.

2. Personae and main Use Cases

Tenant:

- 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 they can come in contact with their landlords immediately and with minimal effort required.

Landlord:

- 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 posting listings /contact 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 using Dormy's Home Rental Services application, landlords are able to post all their available listings to Dormy's dashboard and conduct communications with vetted potential tenants 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 take advantage of the website's services.
- 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: 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. Using standard search options, he can pick whether he would like to browse a home, apartment, or single room, where he is then presented with images of vacant residences in his area along with a brief description of each. By clicking on one of these listings, he can reveal more details about

the listing such as expanded review of what it has to offer. In order to reduce the scope of what's presented on screen, the use of added filters such as filtering by price and distance from campus allow Joshua to narrow down the homes that are listed in order to find one that suits his exact criteria. After finding his match, Joshua has the option to register on Dormy in order to message the landlord of the property he's interested in and be one step closer to finding a home away from home. Ever since discovering Dormy, living away from home doesn't seem so daunting.

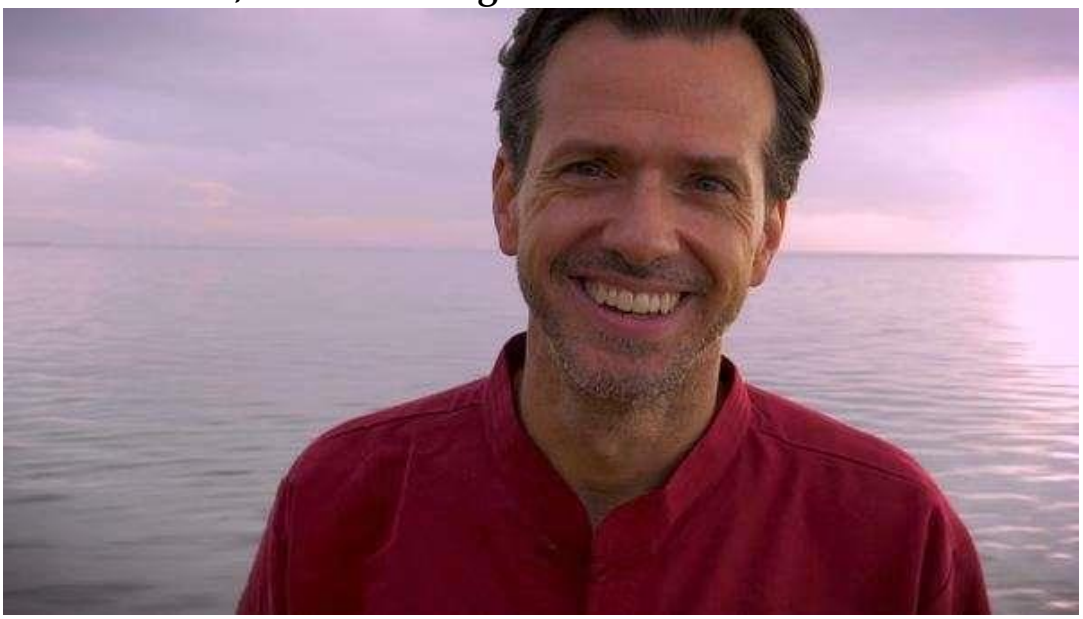
Use Case: Mae, who's seeking a residence separate from SFSU's campus:

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 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: 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. Through this new platform, Natasha can create a post for her property composed of an image, asking price, and brief description of what it has to offer. Once she's ready to make her listing live, all Natasha has to do is easily register on Dormy's website and submit her post. 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: 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 within his personal dashboard, which allows him to quickly communicate with those interested in becoming one of his tenants. Dormy's built in messaging capability and user dashboard allows Laurence to seamlessly organize all of his communications between potential tenants within a single interface, where he can view manage his listings, read new messages, and update the status of his properties. With Dormy, Laurence's busy schedule just got a little easier

Use Case: 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's job is to approve all listings before they are made live, and to use his passion for software development in order to listen to the suggestions and concerns of Dormy's users in order to maintain a platform that is both useful and enjoyable. 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, and has the ability to remove users who are in violation of Dormy's policies. 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: Image, price, and distance from campus 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: Visitors of the website shall be able to surf a list of departments with little to no initial filtering by selecting whether they would like to see a home, apartment, or room.
Filters: Students should be able narrow down their options base on their criteria, such as filtering by price of listing and distance from SFSU campus.

4. List of Functional Requirements

1. Unregistered Users

a. Shall be able to browse based on housing type (apartment, house, etc.).
b. Shall be able to sort available housing options by price.
c. Shall be able to browse through housing options within a certain radius of SFSU (1mi, 2mi, 3mi).
d. Shall be prompted to register or sign in upon choosing to message the owner of a housing option.
e. Shall be able to register.
f. 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.
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 post a listing.
h. Shall be able to edit property details of listings they post.
i. Shall have and manage notifications.
j. Shall be able to review sellers.
k. Shall be able to remove listings they’ve posted.

l. Shall be able to message buyers or sellers.

3. Admin Users

. Shall be able to remove or edit listings deemed inappropriate.

a. Shall be able to review listings before being uploaded to the site.

b. 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, yet unique to students attending San Francisco State University. We will conduct thorough checks before approving a listing to be public in detail for our users. Our site will allow SFSU students to search by filters tailored to them, such as radius from campus and mobility to nearest public transit center. Other factors may include pricing, area, etc. Dormy is made for SFSU students which allows us to specifically cater our features and indexes to those attending the University, which in turn, allows for better search results and provides 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:

Chrome and Firefox (Current Version & One Release Prior To Current Version)

8. Team

Zaur Melikov - Team Lead/Backend Team
Kevin Reyes - GitHub Master/Frontend Team
Ulises Martinez - Frontend Team Lead
Cyrus Riahi - Backend Team Lead
Mahdi Massoodi - Backend Team
Joe Binalinbing - Frontend Team
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