

Team 2 Project Proposal

Roomble

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Vision Statement

Roomble makes the process of finding a roommate more rewarding and relaxed through connecting people who may have otherwise not met in their daily lives. We aim to connect people and promote the development of friendships between roommates based on trust and common lifestyles.

Identified Problem

In today's fast-moving and constantly changing world, it can become increasingly difficult to find like-minded and trusted individuals who can become reliable roommates. With the decline of Americans purchasing houses, the rise of rentals, and the increase of rental prices compared to income, the need for people to find roommates to split living costs and enjoy more social lifestyles is becoming ever present. This need is especially prevalent for college and graduate students, who frequently do not hold full-time jobs, lack disposable income, and who move away from their hometowns to pursue their education. With the difficulty of finding roommates outside of established social circles, people might have to settle for less than ideal roommates who can add stress, tension, and conflict into a living situation, or be forced to spend a larger percentage of their income and savings on individually renting an apartment.

Summary

Roomble is a web-based social application for individuals seeking housing and roommate accommodations. Utilizing a simple and effective swipe-based interface similar to other socialization and dating apps (Bumble, Tinder, etc.), finding a roommate with Roomble is a more streamlined and enjoyable process. Roomble seeks to eliminate the arduous process of filling out surveys, creating social-media posts, and calling upon a person's network to find a roommate. Roomble seeks to employ a modern user-interface to ensure that finding a roommate is a process that can keep up with the spontaneity and rapid pace of the housing and rental industry.

Target Demographic

In its initial phase, Roomble is targeting college and graduate students for its platform. For most students, attending college is the first time experiencing independent living, especially after living in a dorm, and do not know where to start. Being in a phase of their life dedicated to learning, college students are more open-minded and accepting of new methods and processes for solving problems in their daily lives. Newer generations are increasingly socializing on the Internet, with many people now meeting, whether platonically or romantically, online. Roomble believes that college students would welcome a one-stop-shop for finding living accommodations in a recognizable and easy to navigate format. Targeting Roomble to college students ensures that a steady supply of new users are interacting with the platform every year as there is always an annual or bi-annual influx of students looking for housing.

Initial Features

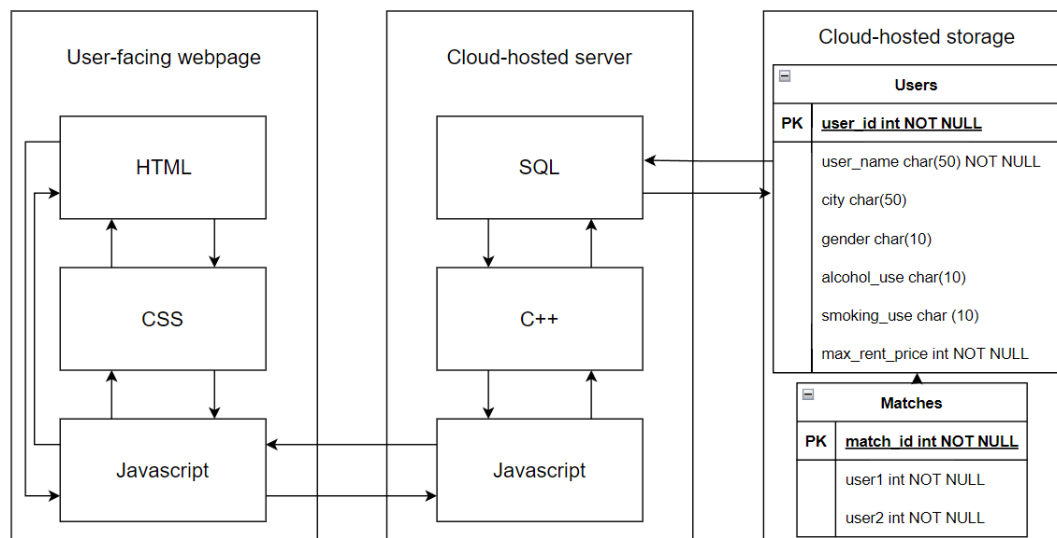
Upon its initial release, Roomble hopes to implement the following features:

- Categorization tools to allow users to filter potential matches by lifestyle choices including hobbies, sleep habits, and location.
- Registration page where users can create a new profile and input relevant data including preferences, price range, photos, gender, and location.
- Swipe left/right feature for users to interact with other people's profiles.
- Basic messaging service to allow matches to make introductions and determine true compatibility.
- Unmatching feature to ensure that users have the opportunity to cease contact with matches they find uncomfortable, unappealing, or incompatible.

Architecture and Algorithmic Summary

Roomble plans to utilize a combination of Hinge and Clovers algorithms, with categorization and similarity points to match users that are the most similar to them. Using these algorithms for filtration and matching will minimize the probability of incompatibility and provide users with the ideal first step in finding a good roommate.

For the backend, Roomble will have an SQL-based database to store user information and data regarding roommate preferences. MySQL will be used to design and develop the database. The connection between the front and backends will be developed in C++. The frontend will feature a combination of HTML, CSS, and Javascript. Animations and function handoff will be coordinated by Javascript while the CSS framework will be used for styling and HTML for markups. The webserver and the storage for the SQL database will be hosted on the Google Cloud Platform.



Development Method

Team 2 will be applying Scrum to the agile method due to the complexity of the project. Clear steps for each portion of the project and a clear vision of the end product will be required to ensure that a quality application is delivered on time. The Scrum framework will allow for easy tasking for each team member and to ensure all features are being tracked. The project will be stored on a GitHub repository where the main branch will be the most up-to-date and functional version.

Communication Plan

The team will employ several forms of communication throughout the development of Roomble. In addition to the already established weekly Zoom meetings, the team will create a Discord server for instant messaging. An SMS group chat will be created for urgent communications when team members are away from their computers. A shared Google Drive folder will be used to share documents.

Meeting Plan

Team Stand Up/Worksessions: Tuesdays + Thursdays 2 - 4pm via Zoom

Weekly TA Meeting: Fridays 12:15 - 13:30pm via Zoom

Project Deadlines

Working beta presentation to TAs: April 7, 2021

Final Project Presentation to class: April 28, 2021