

SuiteMate

No More Gloomy Roomie :)

Project Track 1 : Stage 1

Team034 - TeamNescafe

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Project Summary

It's a web application enabling users to discover their ideal roommates and explore and lease properties listed by various leasing companies or their agents. It serves as a comprehensive hub catering to both individuals seeking roommates and multiple apartment owners.

This web application will be a one-stop solution for people looking for accommodation, offering the added benefit of making connections and forming friendships along the way.

Description

The process of moving to a different country alone is taxing for most students. Especially to find a compatible roommate which will directly impact your stress levels at home. It is absolutely essential to find someone who does not add stress to your already stressful student life.

Thus we are creating a web application which will help you find compatible roommates and also allow you to find and lease an apartment.

The application is designed for two types of users: Leasing Agents and regular Users. Agents have the power to manage properties by adding, updating, or removing them. They can also review lease applications and the associated user details, with the ability to approve or reject applications. On the user side, individuals can create or update their profiles, specify preferences based on their interests, and check out profiles of other users. The application even suggests potential roommates using a special algorithm that considers individual preferences, making it easier for users to find compatible living arrangements.

Creative Component

We are creating a custom algorithm that will take into account every user's weighted preferences and then return a sorted list of most compatible potential roommates. This is a unique offering that no one else provides. Until now, students have typically resorted to manually browsing through Excel sheets to find potential roommates.

Usefulness

Our application focuses on creating a Roommate Finder and Leasing Management system which enables the users to search for compatible roommates, simplifies property search, and facilitates efficient lease management. It aims at providing the following features to the users:

- Users can add their preferences and shared interests based on which our custom algorithm matches them with other users with similar interests.
- Our website will allow users to search and apply for available apartments.
- Agents from Leasing Agencies have the option in turn to accept/reject your application on our web portal.

There are some websites out there which provide the option to search for roommates and list properties but it does not provide the option combined in a single application. We also provide the option for agents from

leasing agencies to register with our website and handle the lease applications for the properties providing an efficient and more convenient leasing process.

Realness :

1. Users and Preference Management:

We have gathered an excel sheet filled up by students specifying their roommate preferences. To enhance the dataset for our project, we plan to apply data augmentation techniques and run a few scripts, effectively increasing its size. For privacy considerations, certain fields like phone numbers and names will be modified during this process.

2. Apartment and Leasing Management:

For data on rental apartments, we have acquired a dataset (<https://www.kaggle.com/datasets/karthikbhandary2/property-rentals/data>) from Kaggle, which has over 2000 rows and 9 columns. In order to integrate this data into our application, we intend to execute a script that will filter out only the relevant columns and introduce additional columns such as 'availability,' 'leasing company,' and so on.

Detailed Description of Functionality :

The application provides the following functionalities based on the user roles:

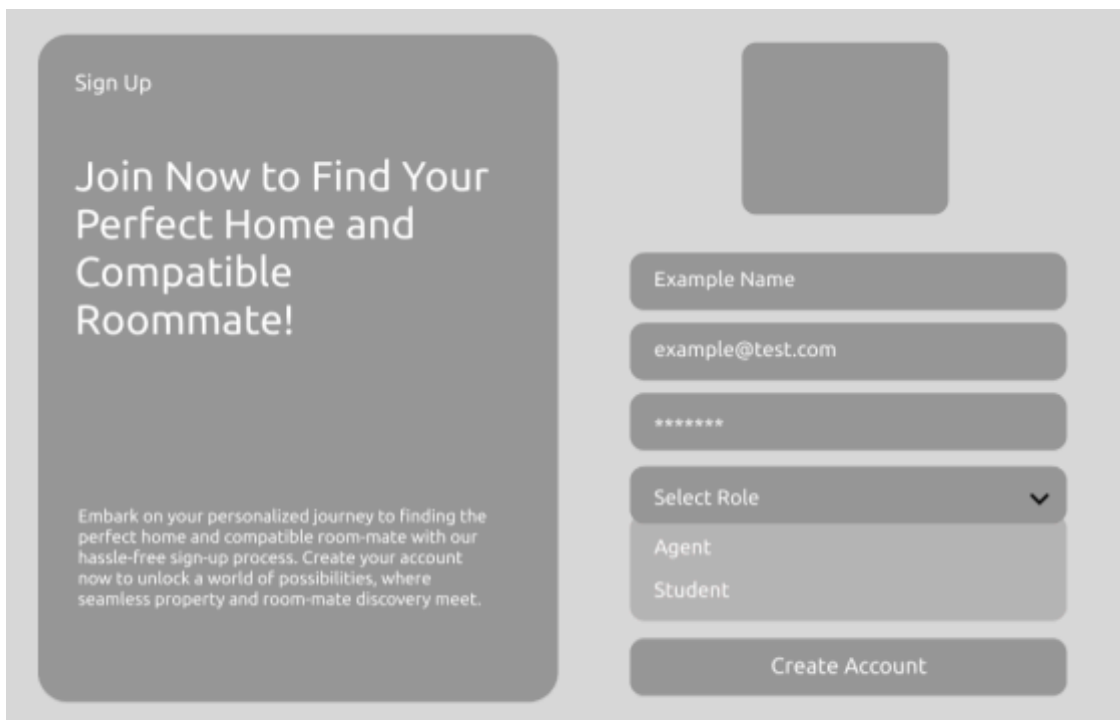
Agents :

- Agents can add/update/delete properties.
- Agents can view the lease applications and the user's details corresponding to the application.
- Agents have the option to approve/reject a lease application.
- As soon as one application is accepted, any other pending applications for the same unit are automatically rejected.

Users :

- Users can create/update their profile.
- Users can set their preferences based on their interests.
- Users can view other user's profiles.
- Users are suggested roommates through our custom algorithm based on their preferences.

UI Mockups :



The Sign Up page features a light gray background. On the left, a dark gray rounded rectangle contains the text 'Sign Up' at the top, followed by the heading 'Join Now to Find Your Perfect Home and Compatible Roommate!' and a paragraph: 'Embark on your personalized journey to finding the perfect home and compatible room-mate with our hassle-free sign-up process. Create your account now to unlock a world of possibilities, where seamless property and room-mate discovery meet.' On the right, a white rounded rectangle contains a placeholder for a profile picture, followed by input fields for 'Example Name', 'example@test.com', and '*****'. Below these is a 'Select Role' dropdown menu with 'Agent' and 'Student' as options, and a 'Create Account' button at the bottom.

Sign Up

Join Now to Find Your Perfect Home and Compatible Roommate!

Embark on your personalized journey to finding the perfect home and compatible room-mate with our hassle-free sign-up process. Create your account now to unlock a world of possibilities, where seamless property and room-mate discovery meet.

Example Name

example@test.com

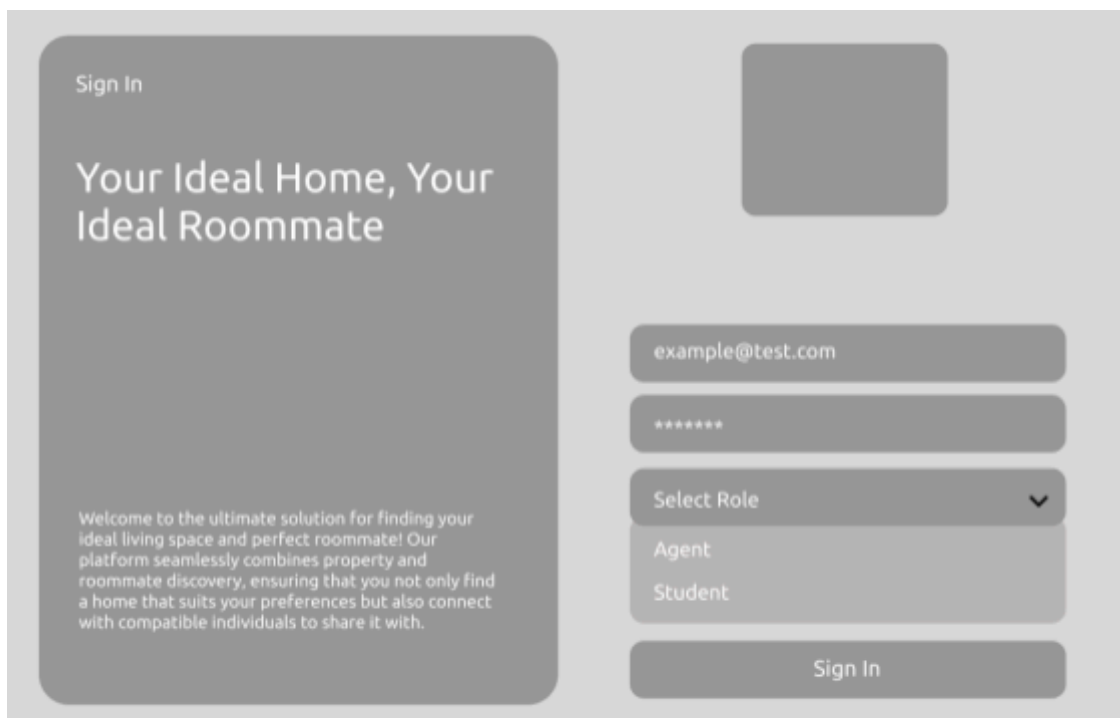
Select Role ▼

Agent

Student

Create Account

Sign Up Page



The Sign In page features a light gray background. On the left, a dark gray rounded rectangle contains the text 'Sign In' at the top, followed by the heading 'Your Ideal Home, Your Ideal Roommate' and a paragraph: 'Welcome to the ultimate solution for finding your ideal living space and perfect roommate! Our platform seamlessly combines property and roommate discovery, ensuring that you not only find a home that suits your preferences but also connect with compatible individuals to share it with.' On the right, a white rounded rectangle contains a placeholder for a profile picture, followed by input fields for 'example@test.com' and '*****'. Below these is a 'Select Role' dropdown menu with 'Agent' and 'Student' as options, and a 'Sign In' button at the bottom.

Sign In

Your Ideal Home, Your Ideal Roommate

Welcome to the ultimate solution for finding your ideal living space and perfect roommate! Our platform seamlessly combines property and roommate discovery, ensuring that you not only find a home that suits your preferences but also connect with compatible individuals to share it with.

example@test.com

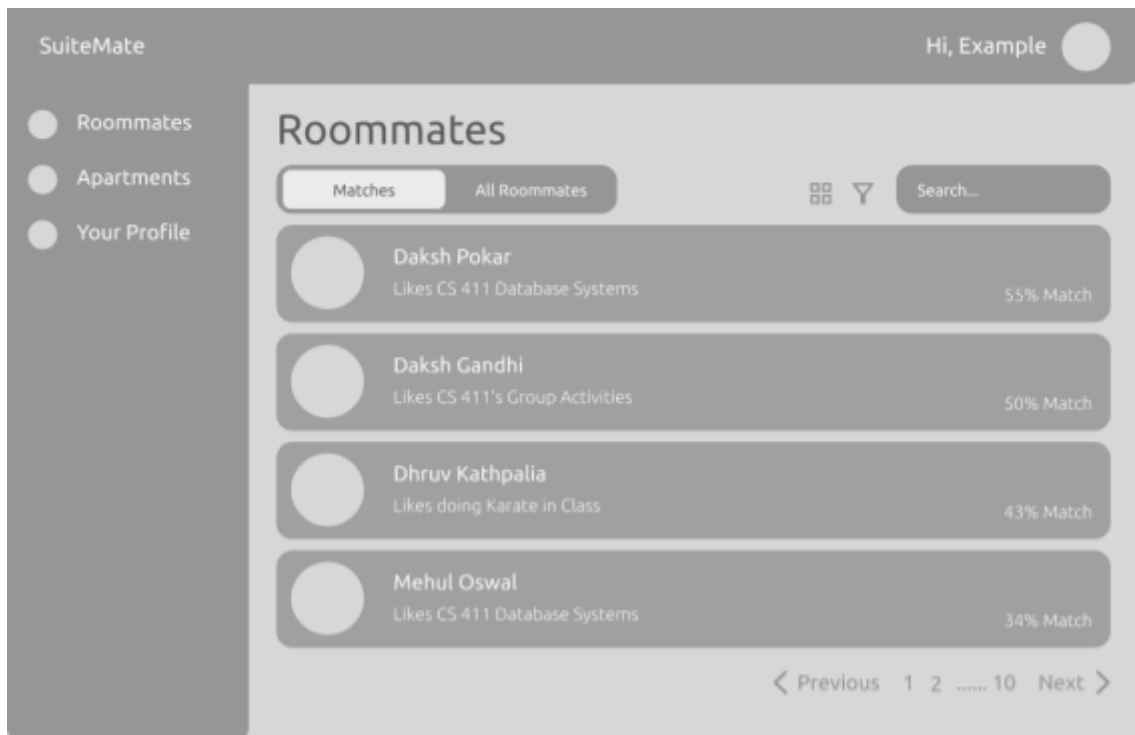
Select Role ▼

Agent

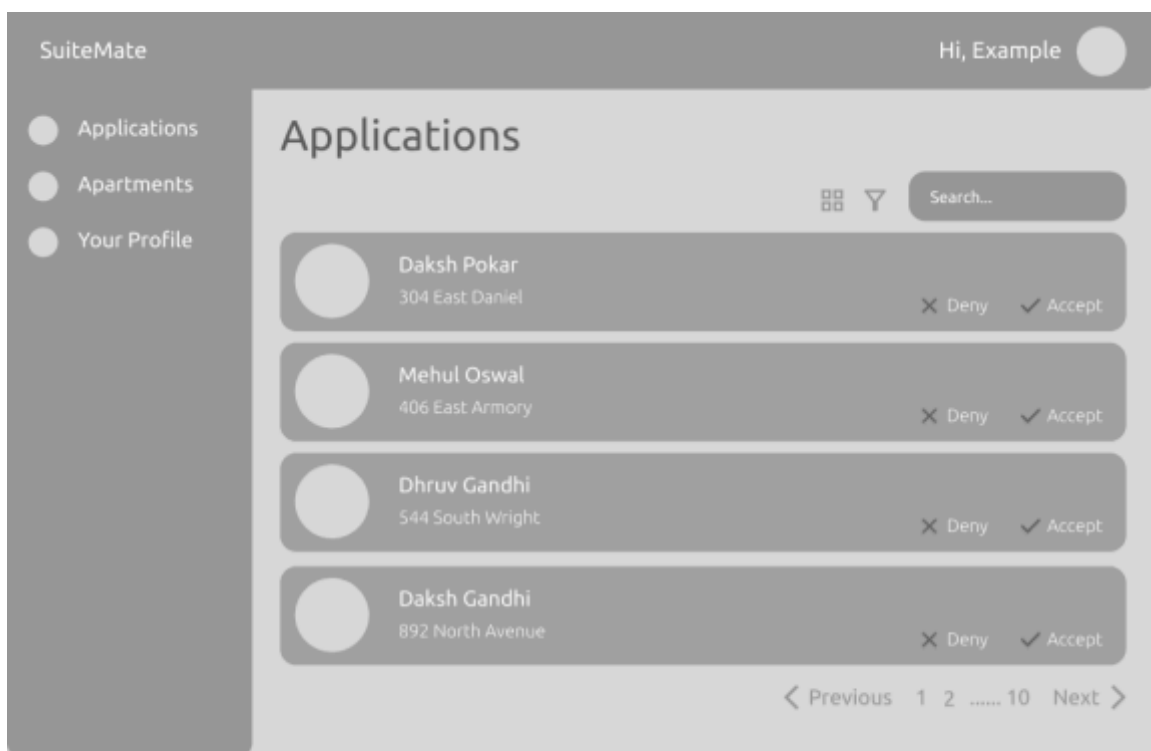
Student

Sign In

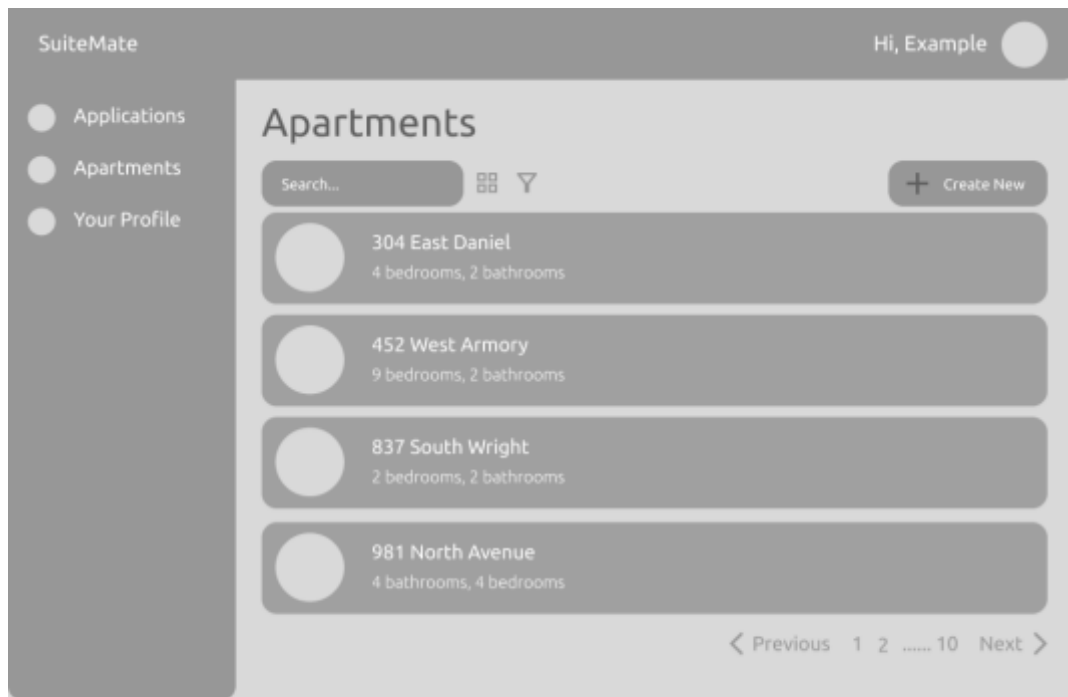
Sign In Page



Roommate Listing



Applications Listing



Apartments Listing

Project Work Distribution

We have identified the following tasks at a high level

1. User Authentication and Profile Management - Daksh Gandhi
 - a. Develop APIs for new users and storing information on database
 - b. Separate endpoints for users and agents for registering
2. Preferences Management and Matching Algorithm - Daksh Pokar
 - a. Handle User Preference Storage and design database schema to store user preferences
 - b. Develop custom algorithm to retrieve potential roommates
3. Property Management and Listing - Dhruv Kathpalia
 - a. Develop APIs for property listing management including adding, updating and deleting property listings.
 - b. Implement features for property search and filtering based on location, price range, amenities etc.
4. Lease Management and Reviews - Mehul Oswal
 - a. Develop APIs for lease applications through Users portal
 - b. Develop APIs for lease management through Agent portal.

While each part can be worked on independently, we plan to contribute to technologies used across the tasks to maximize learning.