**RoomHatch Application Documentation**

**1) Introduction**

The RoomHatch application aims to connect university students in the USA who are seeking accommodation or roommates. The platform will provide a verified and trusted way for students to find suitable accommodation near their universities.

**2) Background Research**

* A Student(user) from other country coming abroad for education doesn't know how to find accommodation nearby university.
* He follows whatsapp,instagram,facebook and other social media to connect through people and inquire for accomodation.
* This is a very tedious process it would consume a lot of time to find accomadation for an unknown person who doesn't connect with anyone.
* There are some certain applications which can help find the roommate for you but the trust component is missing in this application.
* For Instance, people from india wish to stay with their people from their own culture and ideas but when no indian uses the application which is already built how can his upcoming roommate use it.

**3) Solution Overview**

* RoomHatch addresses this problem by offering a website where students can create verified listings for available rooms.
* Verification is done through valid ID proof and university ID card.
* This establishes trust and authenticity in the listings.

**4) User Control Flow**

**i)User Registration and Verification**

* 1. Students sign up with their basic details.
  2. They provide a valid ID proof and university ID card for verification.
  3. The university verifies the provided information.
  4. Once verified, the user's account is approved.

**ii) Creating a Listing:**

a. Verified users can create listings for available rooms.

b. They provide details about the room, including rent, amenities, and preferences.

**iii) Searching for Accommodation:**

a. Users search for accommodation based on their university name and move-in date.

b. They can view verified listings that match their criteria.

**iv) Contacting Potential Roommates:**

a. Users can send messages to the listing agent expressing interest and initiating communication.

**5) Technologies to be Used**

**Frontend**: React

**Backend**: Java, Spring Framework (including Spring Boot, Spring MVC, Spring Security), Hibernate, JPA

**Database**: MySQL

**6) Data Model**

User:  
 First Name, Last Name

Email, Password

University ID, Verified Status

Profile Picture

Listing:

Title, Description

Rent, Availability Date

Rental Documents(Lease)

Amenities, Preferences

Verified Status, Listing Agent

**7) Security Measures**

* User data is stored securely using encryption.
* Access to certain functionalities is restricted to verified users.
* Spring Security is used for authentication and authorization.

**8) Future Enhancements**

* Real-time messaging between users.
* Integration with university systems for seamless verification.
* User reviews and ratings for both listings and roommates.