System Epics and Functional Requirements

EPIC 1: Authentication & User Management

Enable users to securely register, log in, and manage their profiles. This includes functionalities for new users to create an account, existing users to authenticate via email/password, and all users to update or delete their personal information. Profile privacy and access control are integral to this epic.

Functional Requirements Covered:

- Users must be able to register and create profiles.
- Users must be able to log in using email and password.
- Users must be able to update or delete their profile.
- Every user should only access their own properties.
- System should verify tenants using documents.

EPIC 2: Property Management

Empower property owners with the ability to add, update, and delete property listings. The system should provide an intuitive interface for managing multiple properties and ensure inactive or occupied properties can be marked or removed efficiently.

Functional Requirements Covered:

- The property owner should be able to add, update, or delete properties.
- Properties that are now occupied or dormant should be removed.
- The properties should be presented according to user preferences.

EPIC 3: Feature-Based Search (Filters)

Enable tenants to search for flats and roommates using specific filters like budget, location, gender preferences, lifestyle choices, and amenities. Search results should dynamically reflect user preferences, improving the discovery of compatible listings.

Functional Requirements Covered:

- Filters must be applied to find the right property.
- Users should be able to select whether they are searching for a flat, a flatmate, or both.
- Nearby places around the property must be listed.

EPIC 4: Matching & Communication

Provide a matching mechanism that connects tenants with compatible roommates or suitable property owners based on shared preferences. Secure in-app chat should be enabled, allowing users to communicate without sharing personal contact information until they choose to.

Functional Requirements Covered:

- Roommates with similar preferences should be shown by default.

- Upon applying filters, matching roommates should be shown accordingly.

- In-app chats between interested tenants and property owners must be enabled.

EPIC 5: Notification System & Map-Based Search

Implement a system to notify users about important events—such as someone showing interest in their property or messaging them. Additionally, provide a map-based search interface using tools like Google Maps to help users visually locate properties and evaluate nearby amenities.

Functional Requirements Covered:

- A property owner should receive a notification if someone is interested.

- If the owner does not respond quickly, his property would be recommended less often.

- A map-based search feature should be available to help users locate properties.

EPIC 6: Natural Language Processing (NLP)

Integrate NLP to enhance search and matching capabilities. Allow users to type in natural language queries like "quiet female flatmate near XYZ college," and parse those into structured filters to generate accurate results.

Functional Requirements Covered:

- Natural language prompts should be properly broken down into keywords.

- NLP should be implemented to make the search more intuitive and user-friendly.

EPIC 7: Admin Management & Miscellaneous Features

Allow system administrators to monitor activity, handle reports, block malicious users, and manage the overall system integrity. Also includes smaller features such as listing verified lawyers for legal consultation and ensuring platform compliance with housing regulations and safety norms.

Functional Requirements Covered:

- Feedback should be collected from both tenants and property owners.

- The admin should be able to take action against reported or malicious users.

- Advocates must be listed for tenants and property owners.