

Project Topic

1) Project Topic 1 (Project Name: LocalLens)

1. About

This project offers a location-based service designed to simplify users' search for amenities and services near any specified location. Whether users are seeking accommodations like PGs, hostels, flats, or mess facilities, or essential services such as kirana stores, barber shops, or nashta centers, this platform provides comprehensive information tailored to their needs.

By harnessing geolocation technology, the platform accurately pinpoints the user's current or chosen location. Leveraging this data, it retrieves relevant information about nearby businesses and services, empowering users to make informed decisions about where to stay or where to access essential services within their immediate vicinity.

Moreover, to cater to users who share accommodations, the platform incorporates intuitive functionality to manage this aspect seamlessly. This includes features to streamline roommate arrangements, facilitate communication, and ensure transparent coordination of shared living expenses. With this inclusive approach, the platform aims to enhance the overall user experience and meet the diverse needs of its audience effectively.

2. Problem Statement

The problem statement addressed by this project revolves around the challenges users face when trying to locate accommodations and essential services in unfamiliar or specific locations. These challenges may include:

- 2.1 Lack of Information: Users may struggle to find comprehensive and accurate information about nearby accommodations, such as PGs, hostels, or flats, as well as essential services like kirana stores or barber shops.
- 2.2 Time-consuming Search Process: Traditional methods of searching for accommodations and services often involve time-consuming processes, such as browsing multiple websites or making numerous inquiries.
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3. Models

There is main two basic models are available:

3.1 User Model:

➤ Attributes

- Username: The username chosen by the user for logging into the app.
- Email: The email address associated with the user's account.
- Password: The hashed password for user authentication.
- Location Preferences: Preferences set by the user regarding their preferred locations or areas of interest.

➤ Functionality

- User Registration: Allow users to create accounts by providing a username, email, and password.
- User Authentication: Verify user credentials during login to grant access to the app's features.
- Location Search: Enable users to search for locations and view information about amenities and services nearby.

➤ Relationship

- One-to-Many with Location: Users can have multiple location preferences, and each location can be associated with multiple users.

3.2 Customer Model:

➤ Attributes

- Business Name: The name of the customer's business (e.g., "ABC Flats", "XYZ Kirana Store").
- Business Type: The type or category of the business (e.g., flats, PGs, kirana stores, hotels).
- Contact Information: Contact details for the customer's business, such as phone number, email address, and physical address.
- Login Credentials: Username and password for customer authentication.

➤ Functionality

- Customer Registration: Allow businesses to create accounts by providing necessary details and login credentials.
- Business Listing: Enable customers to add their business to the app, providing information such as business name, type, and contact details.
- Manage Listings: Allow customers to update or remove their business listings as needed.
- Access Control: Provide access controls to ensure that only authorized customers can modify their business listings.

➤ Relationship

- One-to-Many with Location: Each customer's business listing can be associated with multiple locations, and each location can have multiple

business listings (e.g., a hotel chain may have multiple locations listed in the app).

4. Flow of Project

- User enters a location or allows the app to access their current location.
- The app retrieves the user's location or specified location coordinates.
- The app queries the database for amenities and services near the specified location.
- Results are displayed to the user based on proximity and relevance.
- Users can view details of individual amenities/services and choose to navigate or contact them.

5. Basic Functionality

- **User Registration/Login:** Allow users to create accounts or log in to access personalized features.
- **Location Search:** Enable users to search for amenities and services near a specified location.
- **Geolocation:** Utilize geolocation technology to determine the user's current location automatically.
- **Data Retrieval:** Query the database to fetch information about nearby amenities and services based on location.
- **Results Display:** Present the retrieved information to users in a user-friendly format, such as a list or map view.
- **Amenity Details:** Provide detailed information about each amenity or service, including contact details, address, and user ratings if available.
- **Navigation:** Integrate navigation functionality to guide users to their selected amenities or services using maps or directions.
- **Contact Information:** Display contact details (phone numbers, email addresses) for amenities/services, allowing users to contact them directly.

6. Future Scope

- **Integration with Local Businesses:** Partner with local businesses to offer exclusive deals and discounts to users, creating a win-win situation for both users and businesses.
- **Real-Time Availability and Booking:** Enable real-time availability checks and instant booking options for accommodations and services to streamline the user experience.
- **Global Expansion:** Scale the platform to cover more cities and countries, providing a valuable resource for traveller's and locals worldwide.
- **AI-Powered Chatbots:** Implement AI-powered chatbots to assist users with their queries, provide recommendations, and support booking processes, enhancing customer service

7. Diagram

7.1 Entity Relation Diagram

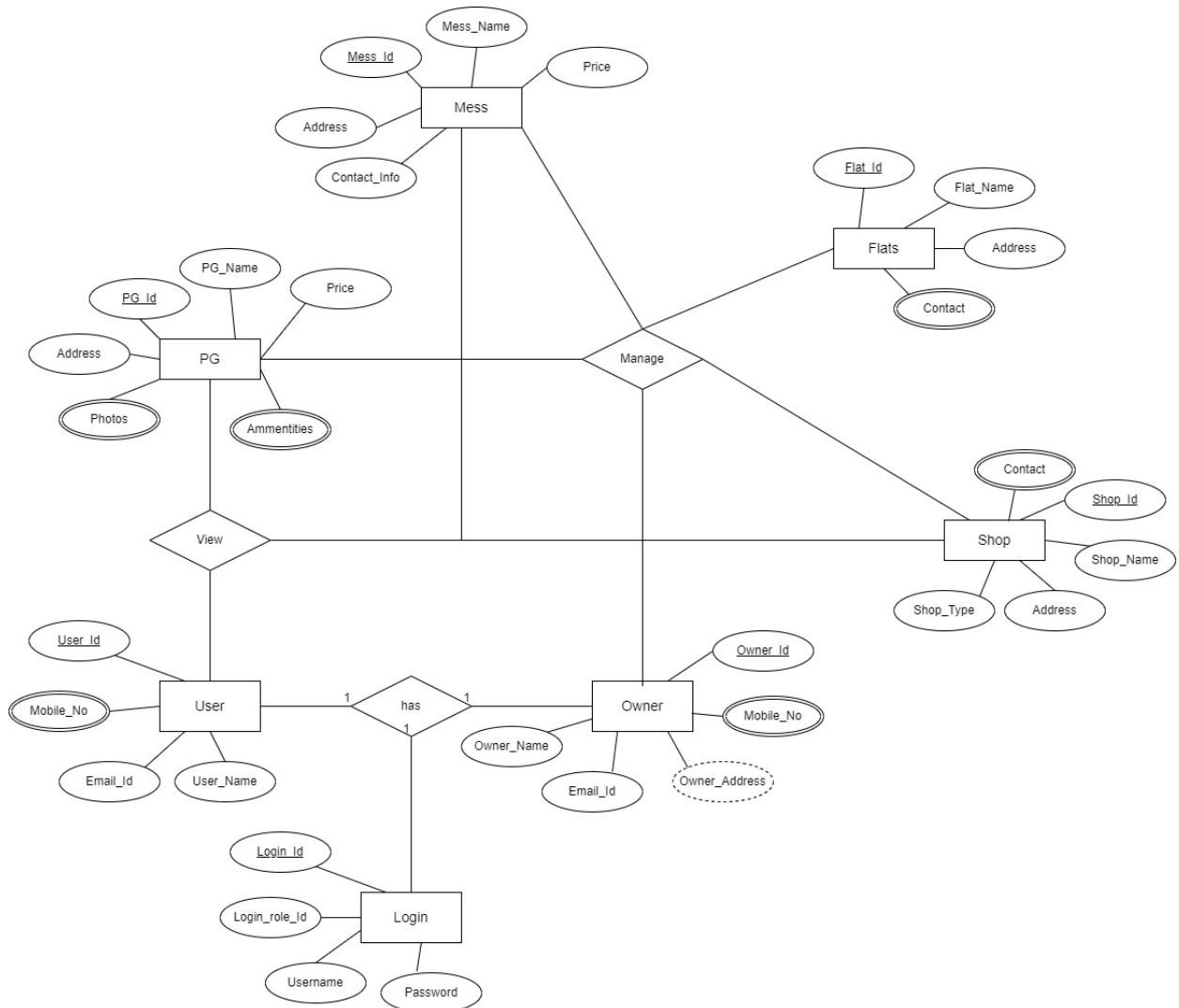


Fig:7.1 ER Diagram

7.2 Use Case Diagram

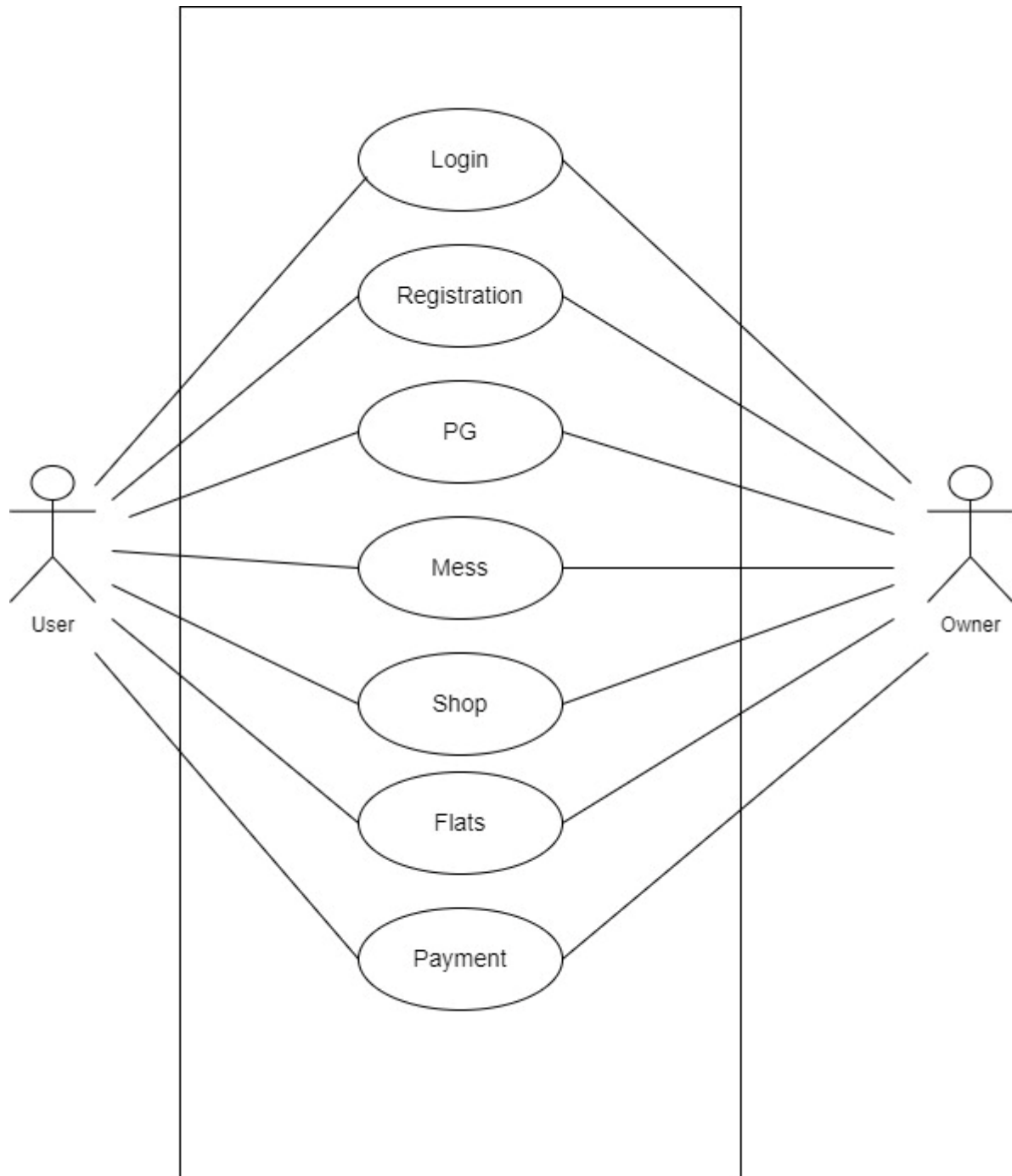


Fig:7.2 Use Case Diagram