

Project Design Phase

Problem – Solution Fit Template

Date	27 June 2025
Project Name	HouseHunt: Finding Your Perfect Rental Home
Team ID	LTVIP2025TMID58422

1.Problem

Renters struggle to find reliable rental properties due to outdated listings, poor filtering, lack of verification, and no standardized booking process. Owners face trouble managing properties and communicating with genuine renters. Admins need control over listing authenticity.

2. Solution

HouseHunt offers a web-based platform where renters can search and book verified rental listings. Owners manage their properties through dashboards. Admins oversee platform integrity and approval workflows.

3. Unique Value Proposition

- Verified listings and user roles
- Full booking + lease agreement flow
- Search filters and smart dashboards
- Admin-controlled governance

4. Target Users

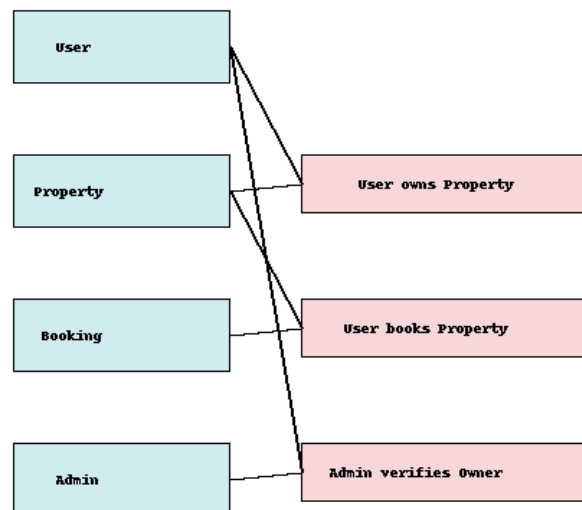
- Renters: Students and professionals looking to move
- Property Owners: Individual landlords or small managers
- Admins: Platform moderators

5. Benefits

- Reduces rental fraud
- Enables quick property discovery
- Simplifies rental workflow from inquiry to move-in

Entity-Relationship (ER) Diagram

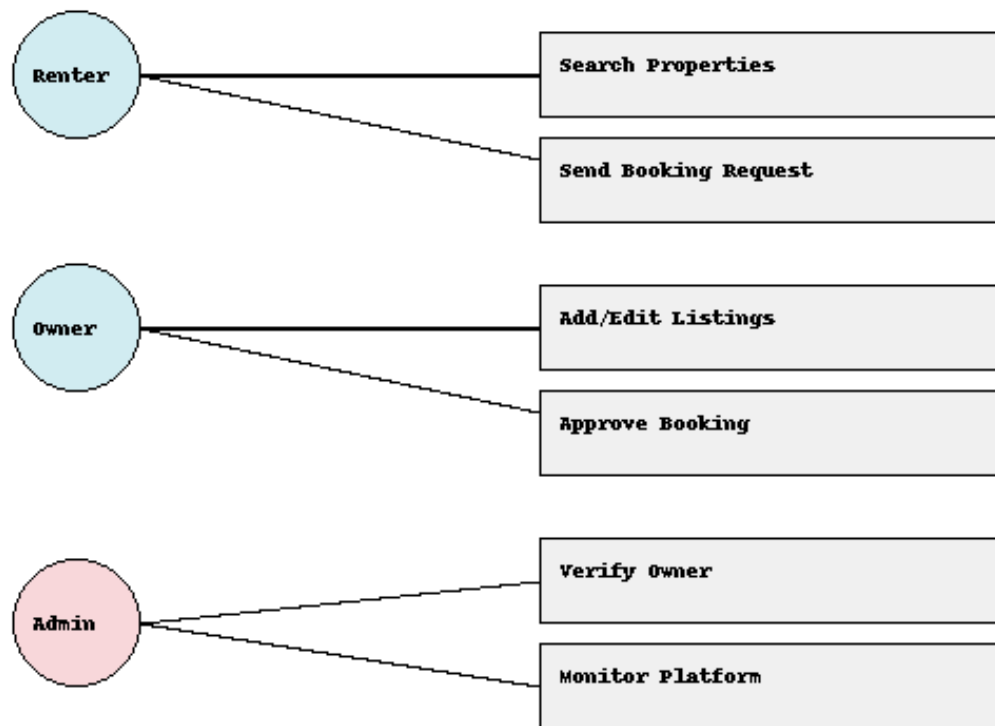
This diagram shows how major entities interact in the HouseHunt system:



- Users can be renters or owners.
- Owners can post Properties.
- Renters can send Booking requests for properties.
- Admins verify and manage Owner accounts.

Use Case Diagram

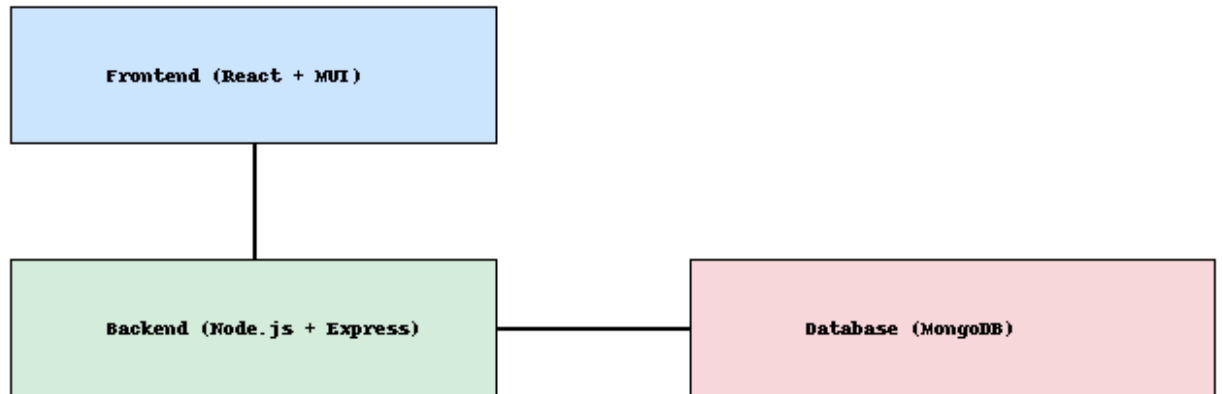
This use case diagram shows how renters, owners, and admins interact with the system:



- **Renters:** can search properties and send booking requests.
- **Owners:** can manage listings and approve bookings.
- **Admins:** can verify owners and monitor the platform.

System Architecture

Below is the system architecture diagram representing the MERN stack used in HouseHunt:



- **Frontend:** Built with React.js and styled using Material UI and Bootstrap for a responsive user experience.
- **Backend:** Uses Node.js and Express.js to handle routing, APIs, and business logic.
- **Database:** MongoDB for storing users, properties, and booking data.
- **Communication:** Axios facilitates frontend-backend RESTful API communication.