Final Report

Project Title: HouseHunt: Finding Your Perfect Rental Home

Team ID: LTVIP2025TMID58598

Team Members:

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1. INTRODUCTION

HouseHunt is a MERN stack-based full-stack web application that serves as a rental platform connecting renters, property owners, and administrators. The platform simplifies property discovery, inquiry, and booking processes while allowing property owners to list and manage properties.

This solution bridges the gap in the real estate rental market by providing a streamlined interface, verified listings, secure login, and seamless communication among all parties involved.

2. IDEATION PHASE

Problem:

Difficulty for renters to find reliable, available rental listings and challenges for property owners to showcase their properties.

Empathy Map & Brainstorm:

We assessed user needs and frustrations, such as outdated listings, non-transparent booking processes, and lack of owner verification. We brainstormed key features to solve these issues, including property filters, real-time updates, and admin moderation.

3. REQUIREMENT ANALYSIS

User Journey:

Renter signs up, browses listings, filters results, submits inquiry, and confirms booking.
Owner lists properties and updates availability.
Admin approves new owners and listings to ensure platform reliability.

Requirements:

Functional: Login/Register, List Property, View Listings, Booking System, Role-Based Access
Non-Functional: Responsiveness, Performance, Security, Usability

Technology Stack:

Frontend: React.js, Tailwind CSS, Bootstrap
Backend: Node.js, Express.js
Database: MongoDB

4. PROJECT DESIGN

Problem-Solution Fit:
HouseHunt solves core problems by digitizing the traditional rental workflow and ensuring transparency and trust.

Proposed Architecture:

- Presentation Layer: React + Bootstrap
- Business Logic: Express.js APIs with JWT-based Auth

- Storage: MongoDB with Mongoose schemas

Data Flow Diagram and ER Diagram illustrate the relationship between users, properties, and bookings.

5. PROJECT PLANNING & SCHEDULING

We followed an Agile sprint-based approach:

- ✞ Sprint 1: UI Design + Routing
- ✞ Sprint 2: Backend Setup + Database Models
- ✞ Sprint 3: Auth + Role Management
- ✞ Sprint 4: Listings, Booking Logic
- ✞ Sprint 5: Admin Panel, Testing & Hosting

6. FUNCTIONAL AND PERFORMANCE TESTING

Functional testing was performed on user registration, property listings, filters, and booking confirmation.
Performance testing included stress testing booking load and verifying database response under concurrent users. Tested on live Netlify deployment.

7. RESULTS

The website is live at:
https://house-hunt-4.onrender.com

Screens include:

- ○ Renter Registration/Login
- ○ Filter Listings ○ Property Detail Page ○ Booking Form
- ○ Owner Dashboard ○ Admin Approval Panel

8. ADVANTAGES & DISADVANTAGES

Advantages:
- Easy-to-use search and filters

- Real-time availability and booking updates
- Admin approval adds platform integrity

Disadvantages:
- No integrated payment gateway
- No built-in calendar for booking conflict checks

9. CONCLUSION

HouseHunt offers an efficient way to connect renters with verified property owners. The platform demonstrates scalable design and effective use of the MERN stack.

10. FUTURE SCOPE

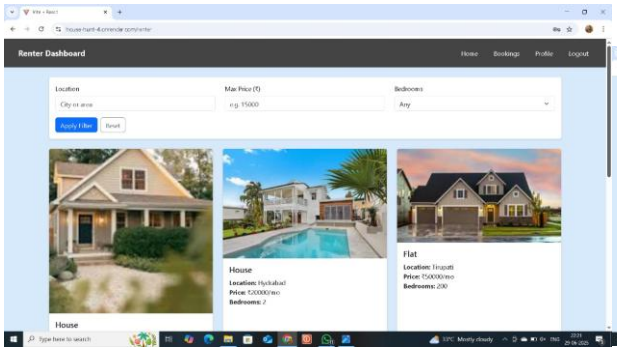
- Payment Gateway Integration (e.g., Stripe/PayPal)
- Chat System for Renter-Owner Communication
- Calendar Integration for Booking Conflict Resolution - Mobile App Deployment

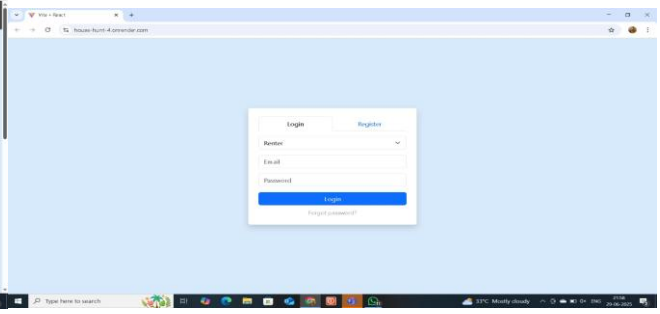
11. APPENDIX

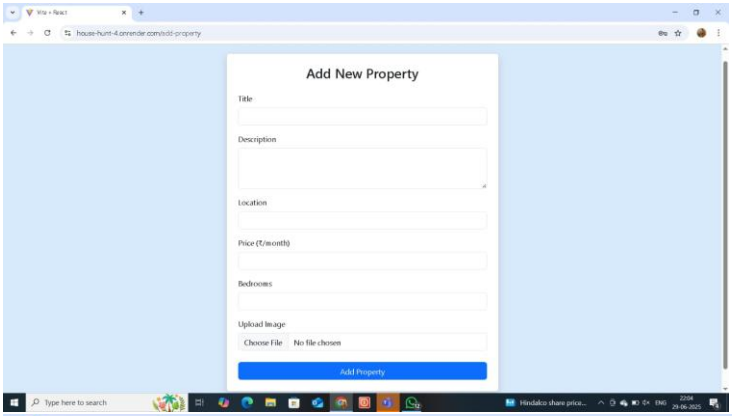
Live Demo:

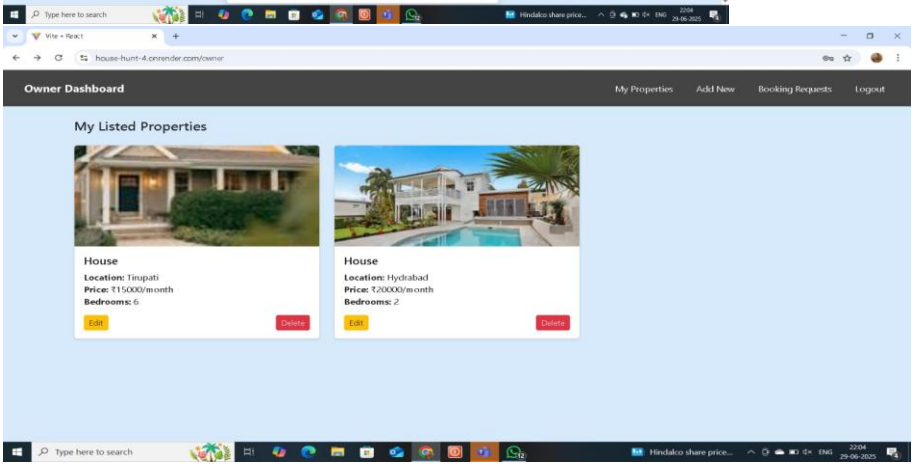
https://house-hunt-4.onrender.com

SCREENSHOTS:


Renter Dashboard
Home
Bookings
Profile
Logout
Location
Max Price (₹)
Bedrooms
Apply Filter
Reset
House
House
Flat


Login
Register
Email
Password
Login


Add New Property
Title
Description
Location
Price (₹/month)
Bedrooms
Upload Image
Choose File
No file chosen
Add Property


Owner Dashboard
My Properties
Add New
Booking Requests
Logout
My Listed Properties
House
Location: Tirupati
Price: ₹15000/month
Bedrooms: 6
Edit
Delete
House
Location: Hydrabad
Price: ₹20000/month
Bedrooms: 2
Edit
Delete