

Final Report

Project Title: HouseHunt: Finding Your Perfect Rental Home

Team ID: LTVIP2026TMID53603

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We assessed user needs and frustrations, such as outdated listings, non-transparent booking processes, and lack of owner verification.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 + Tailwind UI
- 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://lustrous-rugelach-aa4d9b.netlify.app/>

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

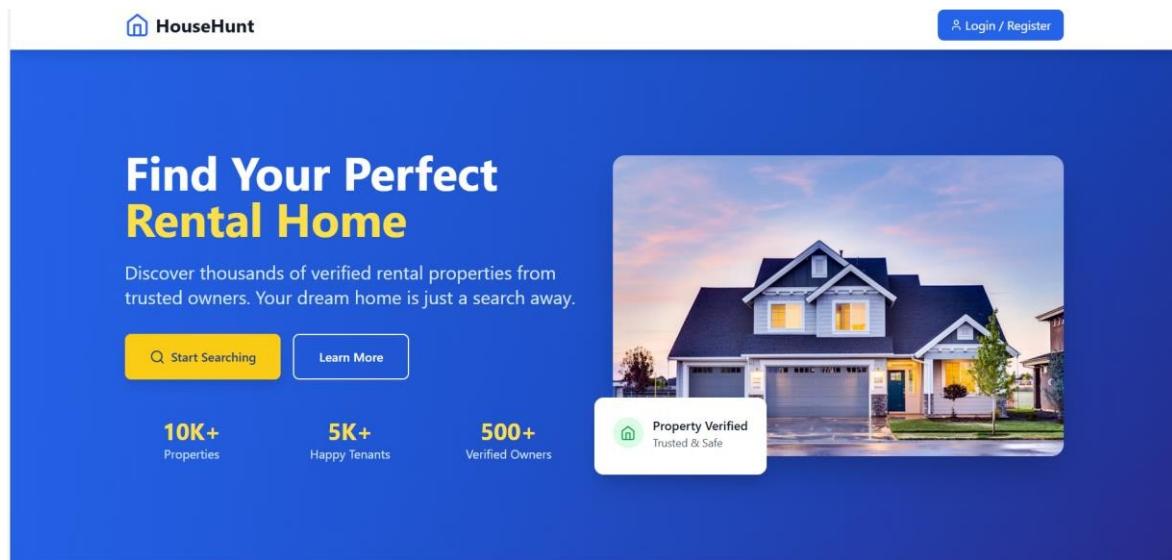
- Payment Gateway Integration (e.g., Stripe/PayPal)
- Chat System for Renter-Owner Communication
- Calendar Integration for Booking Conflict Resolution - Mobile App Deployment

11. APPENDIX

Live Demo:

<https://lustrous-rugelach-aa4d9b.netlify.app>

SCREENSHOTS:



Search Properties

Location

Min Price

Max Price

Bedrooms

Type

 Furnished Pet Friendly ParkingSearch Properties[Login / Register](#)

Featured Properties (6 properties)



Modern Downtown Apartment

NY New York, NY

Beautiful 2-bedroom apartment in the heart of downtown with stunning city views, modern...

2 bed 2 bath 1200 sqft

Parking Furnished

View Details

Cozy Family House

CA Los Angeles, CA

Spacious 3-bedroom house perfect for families, featuring a large backyard, modern kitchen, and qui...

3 bed 2 bath 1800 sqft

Parking Pet Friendly

View Details

Studio Loft in Arts District

IL Chicago, IL

Trendy studio loft in the vibrant arts district with exposed brick walls, high ceilings, and creative...

1 bed 1 bath 800 sqft

Furnished

View Details

Cozy Family House

NY New York, NY

Beautiful 2-bedroom apartment in the heart of downtown with stunning city views, modern...

2 bed 2 bath 1200 sqft

Parking Furnished

Description

Spacious 3-bedroom house perfect for families, featuring a large backyard, modern kitchen, and quiet neighborhood setting.

Amenities

Backyard

Fireplace

Hardwood Floors

Garage

Modern Kitchen

Parking

Pet Friendly

Contact Owner

Bob Smith

bob@example.com

Please log in as a renter to contact the owner

Email: bob@example.com

[Login / Register](#)

