

# Full Stack Development with MERN: Project Documentation

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## 1. Introduction

**Project Title:** HouseHunt: Finding Your Perfect Rental Home

**Team ID:** LTVIP2025TMID58668

**Team Members:**

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## 2. Project Overview

**Purpose:**

House Hunt is a web-based rental management platform developed using the MERN stack (MongoDB, Express.js, React.js, Node.js). It aims to streamline the process of finding, listing, and booking rental properties for tenants, owners, and admins.

**Key Features:**

- Secure login/signup for Renter, Owner, and Admin roles
- Property listing with photos, amenities, and pricing
- Search filters for location, budget, property type, and amenities
- Owner property management (add, edit, remove listings)
- Inquiry and booking system with admin and owner approvals
- Admin controls for user verification and platform governance

### 3. Architecture

#### Frontend:

- Built using React.js
- Styled with Tailwind CSS and Bootstrap
- Utilizes Axios for API communication

#### Backend:

- Node.js + Express.js based RESTful API
- JWT authentication
- Modular routing and middleware-based access control

#### Database:

- MongoDB with Mongoose ODM
- Collections: Users, Properties, Bookings, Admin Approvals

### 4. Setup Instructions

#### Prerequisites:

- Node.js ( $\geq 14.x$ )
- MongoDB Community Edition

#### Installation:

1. Clone the repo
2. Run "npm install" in both "/client" and "/server"
3. Set environment variables (.env file) for MongoDB URI and JWT secret

### 5. Folder Structure

#### ➤ Client (React Frontend):

- /client
- /src
- /components
- /pages
- /assets
- /services

- /App.js
- **Server (Node Backend):**
  - /server
  - /controllers
  - /models
  - /routes
  - /server.js

## 6. Running the Application

### Frontend:

- ✓ cd client
- ✓ npm start

### Backend:

- ✓ cd server
- ✓ npm start

## 7. API Documentation

### Sample Endpoints:

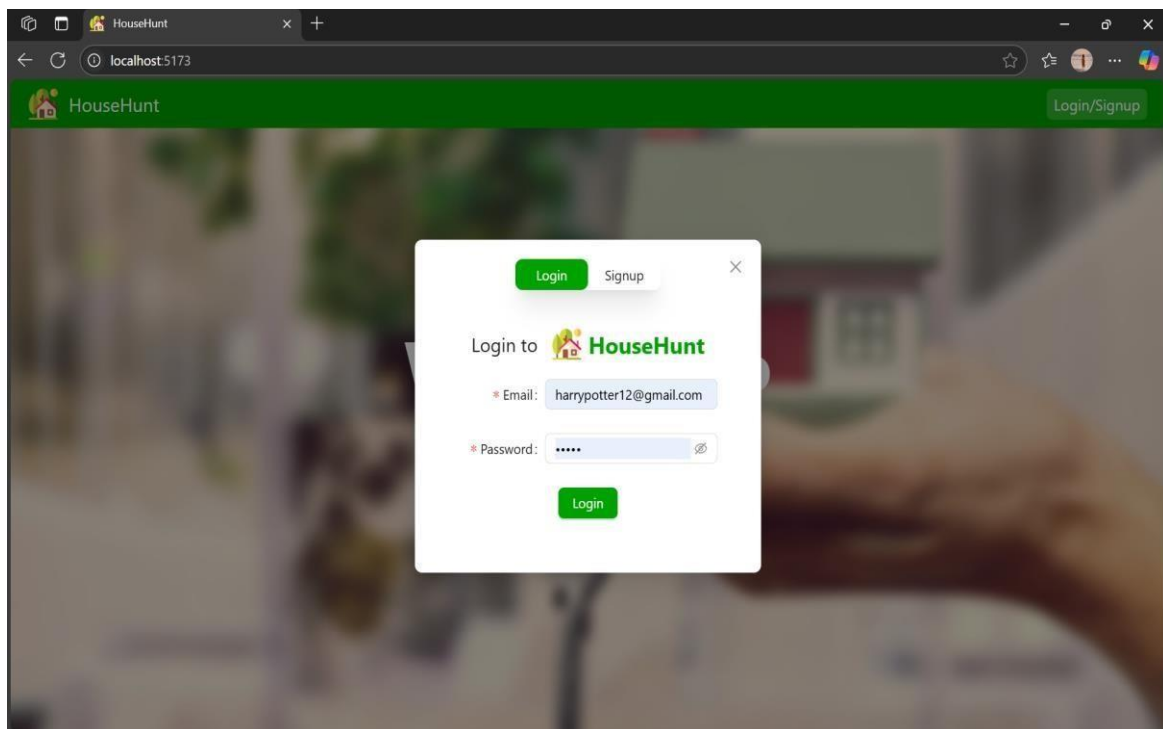
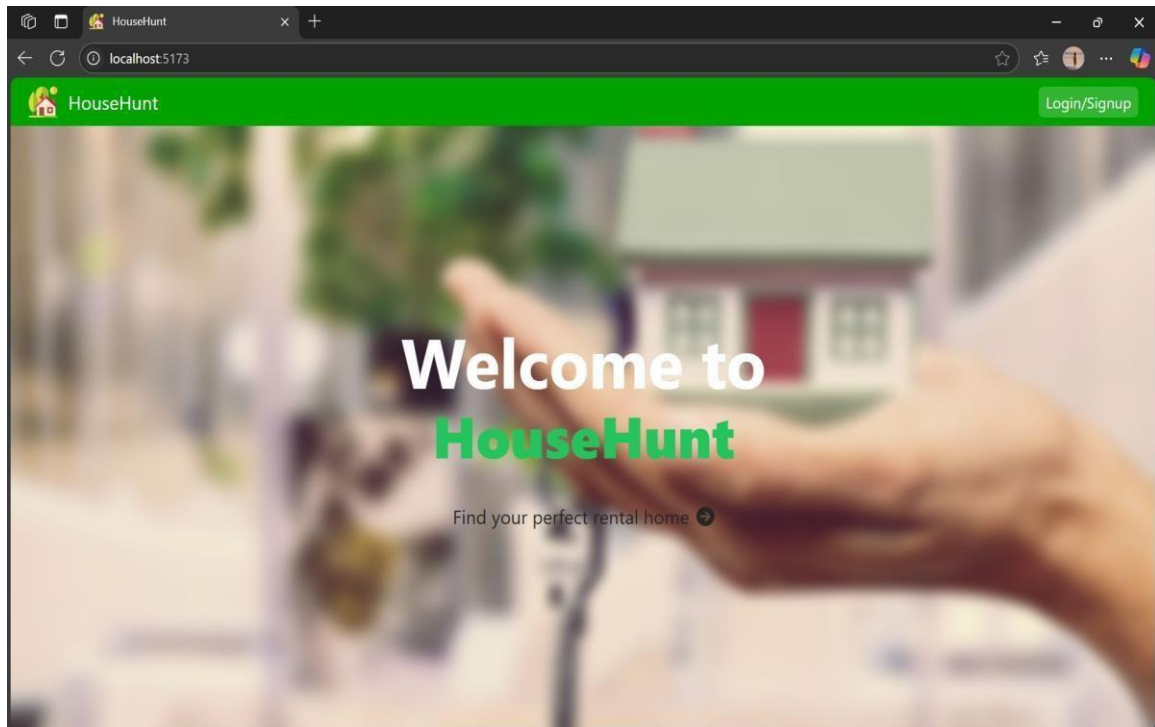
- POST `/api/auth/register` - User registration
- POST `/api/auth/login` - User login
- GET `/api/properties` - Fetch all properties
- POST `/api/properties` - Add new property (Owner only)
- PUT `/api/bookings/:id` - Booking update

## 8. Authentication

- JWT-based token system
- Role-based access (Renter, Owner, Admin)
- Tokens stored in localStorage

## 9. User Interface

Screenshots:



Hi Harry!

Find

Rent

Liked

City filter

Rooms filter

Price filter

₹ 50000/month

SDA Market, Saket, Delhi

♡ 17

₹ 45000/month

Malviya Nagar, Delhi

♡ 12

₹ 60000/month

Andheri, Mumbai

♡ 12

₹ 46000/month

Gurgaon, Delhi

♡ 6

₹ 43000/month

Khar, Mumbai

♡ 4

₹ 56000/month

Lal Bagh, Bangalore

♡ 3

₹ 67000/month

Cubbon Park, Bangalore

♡ 2

₹ 70000/month

Rajrajeshwari Nagar, Bangalore

♡ 5

₹ 45000/month

Gandhi Nagar, Hyderabad

♡ 3

₹ 40000/month

Kondapur, Hyderabad

♡ 5

₹ 60000/month

Kothrud, Pune

♡ 3

₹ 35000/month

Khed Shivapur, Pune

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♡ 0

Price: ₹ 50000/Month

Rooms: 4 BHK    Area: 120 Yards

Location: SDA Market, Saket

City: Delhi

Nearby Facilities:

School, Hospital, Supermarket, Park, Mall, Metro, Bus Stop, Petrol Pump, ATM, Bank, Market, College

Seller Info: Email: harsh.rzf@gmail.com    Phone Number: 8745946064

♡ Like    Get Quote

## 10. Testing

**Manual testing with demo credentials:**

- Renter: <https://rentify-harshpx.vercel.app/>
- Owner: <https://rentify-harshpx.vercel.app/>
- Admin: <https://rentify-harshpx.vercel.app/>

## 11. Screenshots or Demo

**Live:** <https://rentify-harshpx.vercel.app/>

Screenshots:

- Homepage, Filters, Listings, Booking Modals, Contact Forms, etc.

## 12. Known Issues

- No integrated payment gateway
- Booking conflicts not handled via calendar
- Needs optimization for mobile responsiveness

## 13. Future Enhancements

- Payment integration (Stripe/PayPal)
- Calendar-based booking
- Chat system between renter and owner
- Progressive Web App (PWA) version