

Full Stack Development with MERN

Project Documentation

1. Introduction

Project Title: Househunt: Finding Your Perfect Rental Home

Team Members:

Team Size: 2

Team Leader:

Kamisetty Jyothsna– Full Stack Development (Backend APIs, Database Integration, Project Integration) & Frontend Support & Testing **Team Members:**

Pinninti Ujwala Akshaya– Documentation & Presentation Support, Frontend Development (UI Components & Design) & Project Deployment

2. Project Overview

Purpose:

The purpose of this project is to develop a full-stack web application where users can search houses, rent houses, and view their areas and cost.

The system also provides an Admin Panel to manage houses and monitor all bookings.

This project demonstrates real-world MERN stack development skills.

Features:

 **User Features:**

- User Registration & Login
- View Available Houses
- Rent House
- Filter by address
- Search Properties
- View Available Properties

Admin Features:

- Admin Login
- Add New House
- Edit House Details
- Delete House
- View All Houses
- View All Bookings

3. Architecture

Frontend (Client – React)

- Built using React.js
- Component-based architecture
- React Router for navigation
- CSS for styling
- Runs on: http://localhost:3000

Frontend communicates with backend using REST APIs.

Backend (Server – Node.js + Express)

- Built using Node.js and Express.js
- REST API architecture
- Password hashing using bcrypt
- CORS enabled
- JSON request handling
- Runs on: http://localhost:6001
- House for rents
- House for sales

Database (MongoDB)

MongoDB used as NoSQL database.

Collections:

- User
- House for Rent
- House for Sales

Schemas created using Mongoose.

4. Setup Instructions

- **Prerequisites:**
- Node.js (v16 or above)
- MongoDB (Local or Atlas)
- Postman
- VS Code

Installation:

Step 1: Clone Project

```
git clone <your-repo-link>
```

Step 2: Backend Setup

```
cd server
```

```
npm install
```

```
npm start
```

Backend runs on:

<http://localhost:6001>

Step 3: Frontend Setup

```
cd client
```

```
npm install
```

```
npm start
```

Frontend runs on:

<http://localhost:3000>

5. Folder Structure

- Admin

admin/

```
|  
|---src/  
|   |---components/  
|   |---pages/  
|   |---styles/  
|   |---App.js/  
|   |---index.js
```

- Server:

Owner/

```
|  
|---schemas.js  
|---index.js  
|---package.js
```

6. Running the Application

1. Start MongoDB

2. Start Backend:

npm start

3. Start Frontend:

npm start

Open:

- Frontend → http://localhost:3000
- Backend → http://localhost:6001

7. API Documentation

- **Authentication:**

Method	Endpoint	Description
POST	/register	Register user
POST	/login	Login user

- **Houses:**

Method	Endpoint
GET	/fetch-Houses
POST	/add-Houses
PUT	/update-House/:id
DELETE	/delete-House/:id

- **Bookings:**

Method	Endpoint
POST	/rent-house
GET	/fetch-bookings/:userId
GET	/all-bookings
DELETE	/cancel-booking/:id

8. Authentication

- Passwords encrypted using bcrypt
- User login validation
- Admin access for House management
- Session stored in frontend (localStorage)

9. User Interface

- The UI includes:

- Home Page



- Login Page

The screenshot shows the RentEase login page. At the top, there is a navigation bar with the RentEase logo, Home, Login, and Register links. Below the navigation is a "Sign In" form. The form includes a purple circular icon with a lock symbol, an "Email Address" input field, a "Password" input field, and a blue "SIGN UP" button. Below the "SIGN UP" button are links for "forgot password? Click here" and "Have an account? Sign Up". At the bottom of the page, there is a footer with copyright information and an "Activate Windows" message.

All Properties that may you look for

Want to post your Property? [Addader to Online](#)

Filter by:

Activate Windows
Go to Settings to activate Windows.

RentEase

Home Login Register

Sign In

Email Address

Password

SIGN UP

forgot password? [Click here](#) Have an account? [Sign Up](#)

© 2026 Copyright: RentEase

Activate Windows
Go to Settings to activate Windows.

- Registration Page

RentEase

Home Login Register

Sign up

 Sign up

Renter Full Name/Owner Name

Email Address

Password

User Type

SIGN UP

Have an account? [Sign In](#)

Activate Windows
Go to Settings to activate Windows.

© 2026 Copyright: RentEase

10. Testing

- Manual testing performed for all APIs

Verified:

- Registration
- Login
- Add Flight
- View Bookings
- Admin Operations

Tested using:

Browser

Postman

11. Screenshots or Demo

- Demo Video Link:

https://drive.google.com/file/d/1-RnrqbmSex2uWHPPUE33BUgcx69J7pyz/view?usp=drive_link

Screenshots included in documentation.

12. Known Issues

- No payment integration
- No email notifications
- Basic admin authentication
- UI responsiveness can be improved

13. Future Enhancements

- Payment Gateway (Razorpay/Stripe)
- Email Rent/Sale Confirmation

- Area Selection
- Role-based Authentication (JWT)
- Deployment on Render / AWS