Full Stack Development with MERN
Project Documentation

1. Introduction

Project Title: HouseHunt: Finding Your Perfect Rental Home
Team ID: LTVIP2025TMID54676

Team Members:
- Maddipudi Venkata Surya Kiran - Full Stack Developer
- M Harshitha Bramaramba - Frontend Developer
- Maadana Jyothirmayi - Backend Developer
- Madugula Anusha - UI/UX Designer

2. Project Overview

Purpose:
HouseHunt is designed to simplify the rental property search process by offering a user-friendly platform where

Core Features:
- User registration and login
- Property listing by owners
- Search/filter by location, price, and type
- Property booking request system
- Admin dashboard for property/user management
- Fully responsive user interface

3. Architecture

Frontend:
- Built using React.js
- Routing handled by React Router
- State management via Context API
- API integration with Axios

Backend:
- Developed with Node.js and Express.js
- RESTful APIs for business logic and routing
- Middleware for authentication and error handling

Database:
- MongoDB with Mongoose

4. Setup Instructions

Prerequisites:
- Node.js
- MongoDB (local or cloud)
- npm or yarn
- Git
- .env with MONGO_URI and JWT_SECRET

Installation:
1. Clone the repo:

```
git clone [your-repo-link]
```

2. Install frontend dependencies:

```
cd client
npm install
```

3. Install backend dependencies:

```
cd ../server
npm install
```

4. Configure environment variables
5. Start MongoDB server

5. Folder Structure

```
/client
■■■ public/
■■■ src/
■   ■■■ components/
■   ■■■ pages/
■   ■■■ App.js
■   ■■■ index.js

/server
■■■ controllers/
■■■ models/
■■■ routes/
■■■ middleware/
■■■ config/
■■■ index.js
```

6. Running the Application

Frontend:

```
cd client
npm start
```

Backend:

```
cd server
npm start
```

7. API Documentation

User Registration: POST /api/users/register
Login: POST /api/users/login
Add Property: POST /api/properties/add (Auth Required)
Get Properties: GET /api/properties

8. Authentication

- JWT-based authentication
- Passwords hashed using bcryptjs
- Token verification with middleware
- Authenticated users can post/book properties

9. User Interface

Key Screens:
- Home Page
- Login/Register Page
- Property Listings
- Add Property
- Admin Dashboard

10. Testing

Tools:
- Postman for API testing
- Jest for backend tests

Strategy:
- Functional endpoint testing
- UI and booking flow validation

11. Screenshots or Demo

Deployed Site: [Insert URL]

Include screenshots of:
- Home Page
- Property Details
- Admin Panel

12. Known Issues

- Filter options may not work on older browsers
- Admin panel lacks sorting
- No 2FA or OTP

13. Future Enhancements

- Payment gateway integration
- User-owner chat
- Map-based property search
- Notifications
- React Native mobile app