

# Full Stack Development with MERN

## Project Documentation

### 1. Introduction

- Project Title: HouseHunt – Finding Your Perfect Rental Home
- Team ID: LTVIP2025TMID57029
- Team Members:
  - Nittali Anantapadma (Team Leader)
  - Siddana Kiran Kumar
  - Dharmavarapu Pavan Kumar
  - Basetty Niharika
  - L Venkata Sai Vasudha

### 2. Project Overview

- Purpose: To simplify the home rental process by enabling renters to find suitable homes and property owners to list their rentals through a secure and interactive platform.
- Features: Role-based login (Renter, Owner, Admin), property listing, rental booking, approval system, and admin controls.

### 3. Architecture

- Frontend: Developed using React.js and Tailwind CSS.
- Backend: Node.js with Express handles APIs and server logic.
- Database: MongoDB stores application data securely.

### 4. Setup Instructions

- Prerequisites: Node.js, NPM, and MongoDB installed.
- Installation: Clone the repository and run ``npm install`` in both ``/client`` and ``/server`` directories.

### 5. Folder Structure

- Client: Contains the complete React frontend source code.
- Server: Contains the backend server logic using Express and MongoDB.

### 6. Running the Application

To start the application:

- Frontend: Run ``npm start`` inside the ``/client`` directory.

- Backend: Run `npm start` inside the `/server` directory.

## **7. API Documentation**

Backend exposes REST APIs for key operations:

- POST /api/users/register – User registration
- POST /api/users/login – User login
- POST /api/properties – Post a rental property (Owner)
- GET /api/properties – Retrieve listed rental homes
- POST /api/bookings – Book a rental home
- GET /api/bookings – Retrieve booking details (Renter/Owner/Admin)

## **8. Authentication**

- Email and password-based login for Renters, Owners, and Admins.
- JWT-based authentication planned for session management and enhanced security.

## **9. User Interface**

Screens provided in the system include:

- Login Page
- Home/Property Listing Page
- Property Details Page
- Booking Page
- Owner Dashboard
- Admin Panel

## **10. Testing**

- Backend: Tested using Postman for API validation.
- Frontend: Tested using Chrome DevTools and manual UI testing.

## **11. Screenshots or Demo**

Screenshots and demo videos are provided separately in the project folder.