Final Report

Project Title:

HouseHunt: Finding Your Perfect Rental Home

Team Members:

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1. INTRODUCTION

1.1 Project Overview

HouseHunt is a full-stack web application built using the MERN stack to simplify the rental process for both property owners and tenants. It allows renters to browse verified listings, filter by amenities, and request bookings,

while owners can list properties and manage requests. Admins oversee user and listing approvals.

1.2 Purpose

To bridge the gap between property owners and renters by providing a centralized, easy-to-use digital platform that improves transparency, speeds up the rental process, and minimizes fraud.

2. IDEATION PHASE

2.1 Problem Statement

Finding rental homes involves multiple hurdles: unreliable listings, lack of verified information, and difficulty communicating between owners and

tenants. HouseHunt solves these by providing a verified, user-friendly rental platform.

2.2 Empathy Map Canvas

Think & Feel: "Is this listing trustworthy?"
See: Scattered information, unverified listings
Say & Do: "I wish there was a simple rental app!"
Hear: Complaints about scams and delays
Pain: Inconvenience, wasted time, uncertainty
Gain: Convenience, speed, verified listings

2.3 Brainstorming

- Verified user onboarding
- Property images & filters
- Booking requests
- Admin approvals
- Feedback and ratings

3. REQUIREMENT ANALYSIS

3.1 Customer Journey Map

1. Renter visits website
2. Searches/filter homes
3. Requests booking
4. Owner approves/rejects
5. Admin monitors activity
6. Property is booked

3.2 Solution Requirement

- Three roles: Renter, Owner, Admin
- Secure login and signup
- Property management system
- Booking workflow
- Dashboard for all users

3.3 Data Flow Diagram

Frontend → Backend → MongoDB
User interactions are sent via REST API to Express.js backend, which handles business logic and interacts with the database.

3.4 Technology Stack

- **Frontend:** React.js, Tailwind CSS
- **Backend:** Node.js, Express.js

- **Database:** MongoDB with Mongoose
- **Others:** JWT, bcryptjs, Multer, CORS, dotenv

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4. PROJECT DESIGN

4.1 Problem Solution Fit

A structured platform reduces dependency on brokers, improves transparency, and speeds up the rental process for both parties.

4.2 Proposed Solution

An all-in-one platform for home rental with authenticated users, property

listings, booking requests, and admin moderation.

4.3 Solution Architecture

- Client (React)
- Server (Node.js + Express)
- Database (MongoDB)
  All layers communicate via RESTful APIs with secure endpoints.

5. PROJECT PLANNING & SCHEDULING

5.1 Project Planning

Phase	Duration	Team Member(s)
Requirement	3 days	All

Phase	Duration	Team Member(s)
Analysis		
Frontend Development	3 days	Boddu Siri, Sunkara Sravya
Backend Development	3 days	Surni Kurma Rao, Jahnavi
Testing & Debugging	3 days	All
Final Review	3 days	All

6. FUNCTIONAL AND PERFORMANCE TESTING

6.1 Performance Testing

Tested with multiple user roles and simulated booking operations. Response time under 500ms for most endpoints. Frontend loads in under 2s.

7. RESULTS

7.1 Output Screenshots

- Homepage
- Login/Register
- Owner Dashboard
- Renter Booking Page
- Admin Panel

(*Screenshots to be attached in final document*)

8. ADVANTAGES & DISADVANTAGES

Advantages:

- Secure login system
- Streamlined rental process
- Admin verification ensures data integrity

Disadvantages:

- No native mobile app yet
- Internet access required

9. CONCLUSION

HouseHunt provides a reliable and intuitive platform for home rental needs. It ensures a smoother experience for renters, owners, and

admins by digitizing the rental workflow.

10. FUTURE SCOPE

- Add chat feature between renter and owner
- Launch mobile application (React Native)
- Integrate payment gateway for rent transactions
- Implement property recommendation using ML

11. APPENDIX

Source Code (if any):

Included in GitHub Repository

Dataset Link:

Not applicable (data is user-generated)

GitHub & Project Demo Link:

https://github.com/Kurma9676/Househunt-MERN-

https://drive.google.com/file/d/1JOuIEj23lDud6ZFT7HjqIdCFi2JqHrbx/view?usp=drivesdk