Project Report

1. **INTRODUCTION**

   1.1 Project Overview :

   This project introduces a unified rental home platform that addresses the challenges faced by both renters and landlords in finding and listing reliable rental properties. The platform centralizes listings, verifies posts, provides advanced filtering, and supports direct connections between renters and landlords, all with enhanced usability and trust.
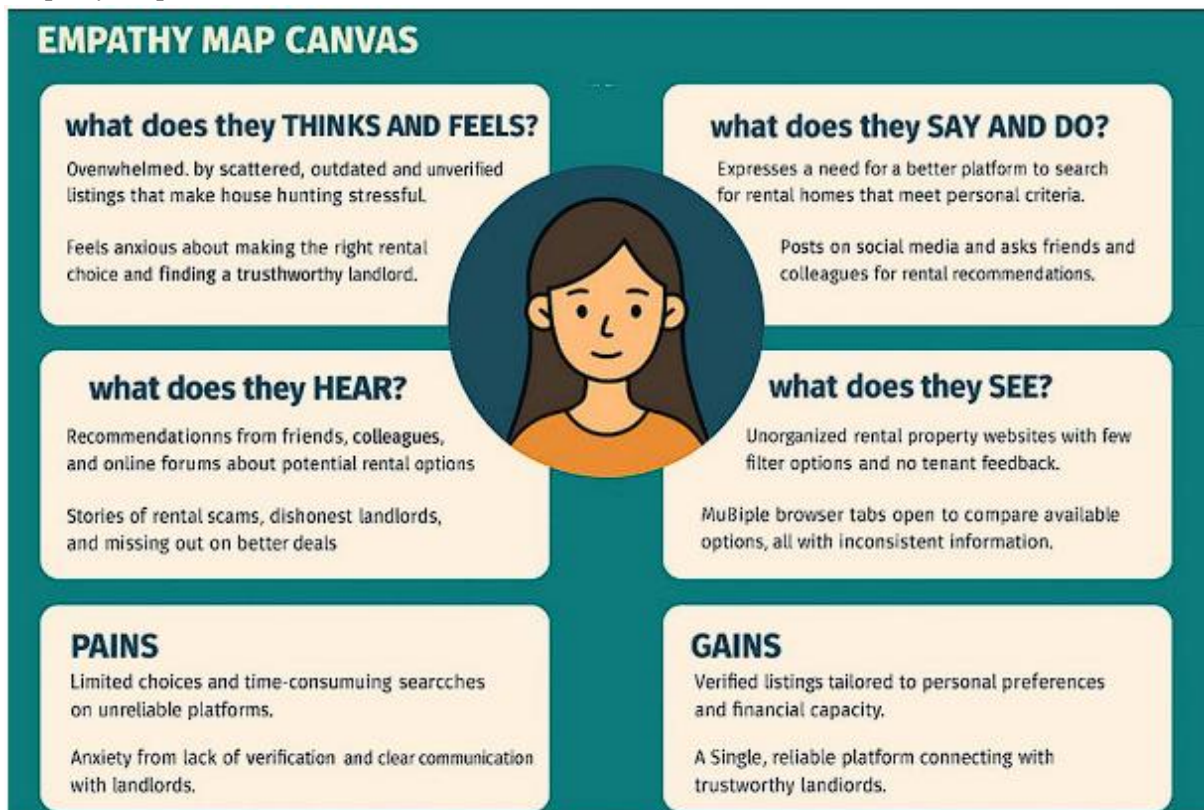
   1.2 Purpose:

   - **Simplify** the house-hunting journey for renters.
   - **Enable landlords** to list/manage properties efficiently and connect with quality tenants.
   - **Reduce fraud** through verified listings.
   - **Facilitate direct communication** between renters and owners, removing intermediaries.

2. **IDEATION PHASE**

   2.1 Problem Statement

   Renters struggle to find suitable, verified rental homes due to scattered, inaccurate, or outdated listings and inadequate filters. Landlords face issues finding reliable tenants with little visibility and control over their listings. There is no single, trustworthy platform that efficiently serves both groups.

   2.2 Empathy Map Canvas

EMPATHY MAP CANVAS

what does they THINKS AND FEELS?

Overwhelmed. by scattered, outdated and unverified listings that make house hunting stressful.

Feels anxious about making the right rental choice and finding a trustworthy landlord.

what does they SAY AND DO?

Expresses a need for a better platform to search for rental homes that meet personal criteria.

Posts on social media and asks friends and colleagues for rental recommendations.

what does they HEAR?

Recommendationns from friends, colleagues, and online forums about potential rental options

Stories of rental scams, dishonest landlords, and missing out on better deals

what does they SEE?

Unorganized rental property websites with few filter options and no tenant feedback.

MuBiple browser tabs open to compare available options, all with inconsistent information.

PAINS

Limited choices and time-consumuing searcches on unreliable platforms.

Anxiety from lack of verification and clear communication with landlords.

GAINS

Verified listings tailored to personal preferences and financial capacity.

A Single, reliable platform connecting with trustworthy landlords.

2.3 Brainstorming

Step-2: Brainstorm, Idea Listing and Grouping

Idea	Idea Description	Group/Category
1	Analyzer user preferences like budget, location, and house type	User Behavior Analysis
2	Compare rental trends across cities and years	Market Comparison
3	Identify cities with highest demand and listing density	Regional Insights
4	Study rental fluctuations during events like festival seasons or academic sessions	Event Impact
5	Use heat maps to show popular rental zones in major cities	Visualization Techniques
6	Embed property search dashboard in a React web app using Node.js backend	Deployment / Web Integration
7	Create a user journey/storyline from search to booking	Narrative & User Flow
8	Add filters for city, price range, property type, and number of rooms	Dashboard Interactivity
9	Visualize listings added, rented, or removed per quarter	Seasonal Market Analysis
10	Add calculated fields for average rent, availability per area	Data Processing / KPIs
11	Predict upcoming rental demand using past search and booking data	Predictive Analysis
12	Display total listings, active users, and successful bookings	KPI Overview / Platform Metrics

3. REQUIREMENT ANALYSIS

3.1 Customer Journey map

Stage	Awareness	Consideration	Decision	Transaction	Post-Rental
Actions	☑ Ad view,websrch	☑ Listing browse,inquiry	☑ Booking select,chat supp	☑ Pay,doc sign,check-in	☑ Review, share, supp
Touchpoints	☑ Ads,web,socmed	☑ Platform,listing, msg	☑ Booking page,support	☑ Payment,host,transptn	☑ Platform,host,support
Emotions	☑ Curious	☺ Hopeful	☑ Confident	☺ Relieved	☺ Satisfied
Pain Points	△ Unknown,trst,info	△ Option ovrld,delays	△ Price,uncer,supp	△ Pay trouble,wait	△ Issue,follup slow
Opportunities	☑ Brand,info trust	☑ Help search,fast answ	☑ CL pricing,support	☑ Easy pay,smooth chk	☑ Reward,quick resp

3.2 Solution Requirement

- User authentication and verification (both for renters and landlords)
- Advanced property search with comprehensive filters
- Listing approval workflow
- In-app messaging and document sharing
- Secure payment integration
- Dashboards for activity tracking (both parties)
- Rating and review system
- Responsive support channels

3.3 Data Flow Diagram

3.4 Technology Stack

Solution Architecture — HouseHunt
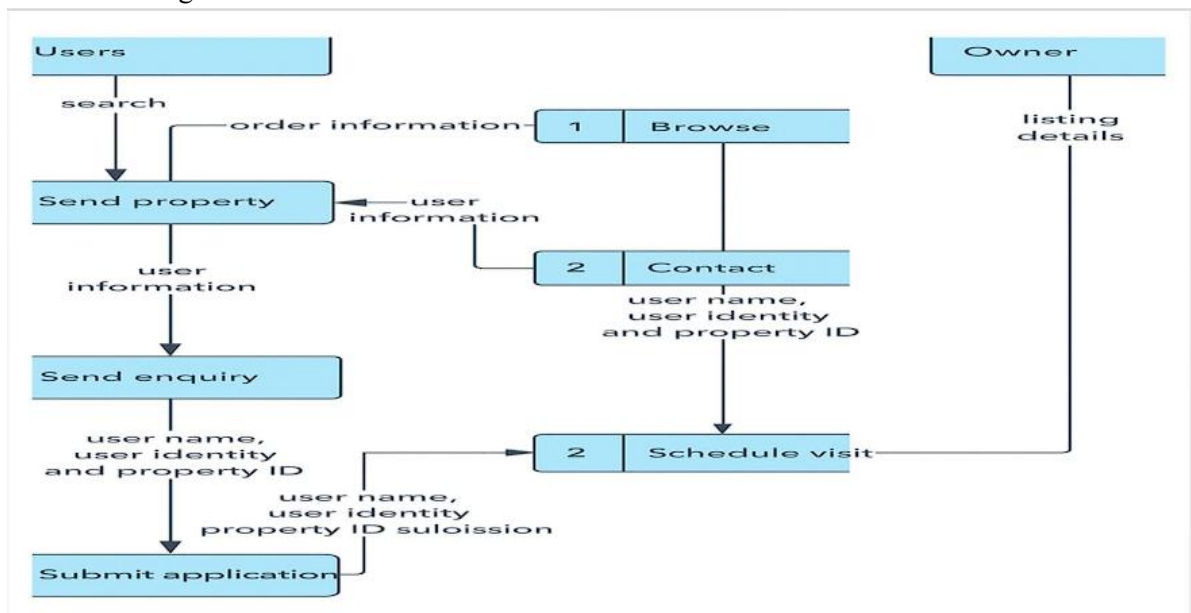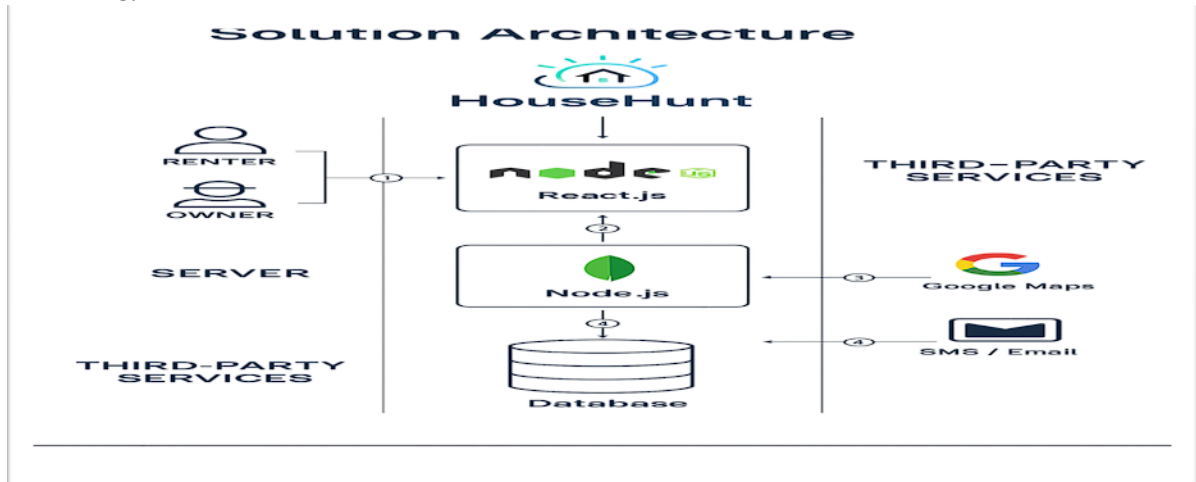
4. **PROJECT DESIGN**

4.1 Problem Solution Fit

4.2 Proposed Solution

- Centralized platform with end-to-end features for renters and landlords.
- Verified, continuously updated property listings.
- Direct renter-landlord communication, removing third-party delays.
- Advanced dashboards for tracking, reviewing, and support.
- Digital agreements and payments for complete process digitalization.

4.3 Solution Architecture
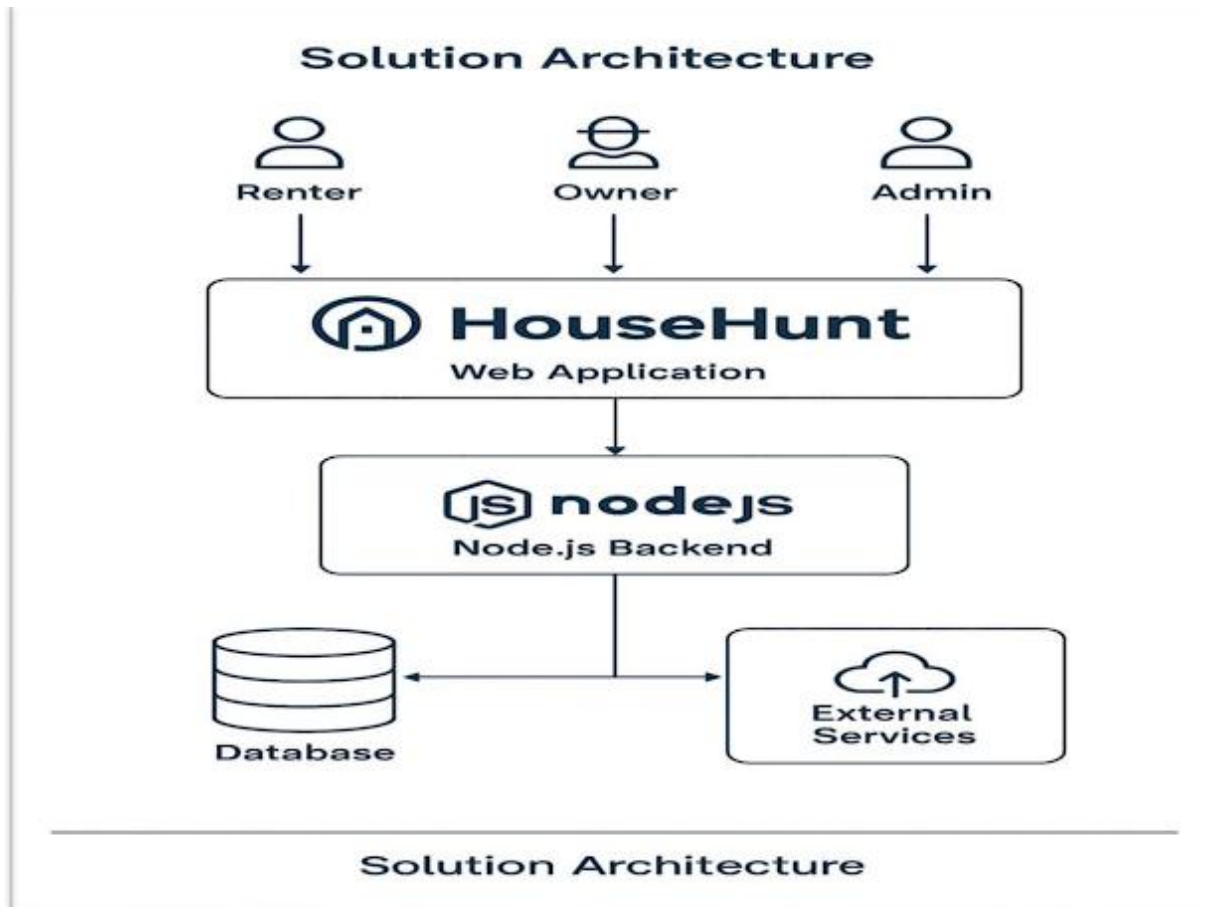
5. PROJECT PLANNING & SCHEDULING

5.1 Project Planning

- **Phase 1:** Requirement gathering and technology setup
- **Phase 2:** Design and prototyping (UI/UX)
- **Phase 3:** Core module development (listing, search/filter, messaging)
- **Phase 4:** Integration (verification, payments, dashboards, support)
- **Phase 5:** Testing and feedback iteration
- **Phase 6:** Deployment and monitoring

6. FUNCTIONAL AND PERFORMANCE TESTING

6.1 Performance Testing

- Load and stress testing on the search/filter functionality
- Response and uptime measurement for key workflows (listing, messaging, payments)
- Security audits for user data protection and payments

7. **RESULTS**

    7.1 Output Screenshots

8. **ADVANTAGES & DISADVANTAGES**
   - **Advantages:**
     - Saves time with consolidated, trusted listings
     - Reduces fraud via verifications
     - Enhances transparency and user control
     - Streamlined digital transactions and documentation
   - **Disadvantages:**
     - Requires initial adoption by both renters and landlords for network effects
     - Platform success depends on constant verification oversight and support availability

9. **CONCLUSION**

    This unified rental platform bridges longstanding gaps in the rental market by combining trustworthy listings, advanced tools, and direct communications. It simplifies the rental journey, enhances trust, and delivers value to both renters and landlords.

10. **FUTURE SCOPE**
    - Incorporation of AI-powered property recommendations
    - Virtual property tours with augmented reality
    - Smart contract-based rental agreements
    - Deeper integration with city/locality data for insights

11. **APPENDIX**

    GttHub Link: https://github.com/teju-27/Househunt-Finding-Your-perfect-Rental-Home.git