Project Report

1. INTRODUCTION

1.1 Project Overview

Home-Rentals is a web platform that connects property owners with renters, enabling users to search, book, and manage rental properties online.

1.2 Purpose

To simplify the rental process, increase trust and transparency, and provide a seamless experience for both renters and hosts.

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2. IDEATION PHASE

2.1 Problem Statement

Finding reliable rental properties is time-consuming and often lacks transparency for both renters and property owners.

2.2 Empathy Map Canvas

Captures user feelings, needs, and pain points:

- Think: "Will this property meet my needs?"

- Feel: Frustrated by lack of verified listings

- Do: Search, compare, book, communicate

- Say: "I want a safe and easy rental experience."

2.3 Brainstorming

Ideas included: verified listings, secure payments, instant booking, host dashboards, review system.

3. REQUIREMENT ANALYSIS

3.1 Customer Journey Map

Stages: Discover → Search → Book → Pay → Stay → Review

3.2 Solution Requirement

- User registration/login

- Property listing and management

- Search and filter properties

- Booking and payment

- Notifications and messaging

3.3 Data Flow Diagram
Shows flow from user input to database, payment gateway, and notification system.

3.4 Technology Stack

- Frontend: React.js

- Backend: Node.js, Express.js

- Database: MongoDB Atlas

- Cloud: AWS/Vercel

- APIs: Stripe, SendGrid

4. PROJECT DESIGN
4.1 Problem Solution Fit
Platform solves trust, convenience, and efficiency issues in property rentals.

4.2 Proposed Solution
A unified platform for renters and hosts with verified listings, secure payments, and responsive support.

4.3 Solution Architecture
Multi-tier architecture:

- Presentation: React.js

- Application: Node.js/Express

- Data: MongoDB Atlas

- Integrations: Stripe, SendGrid

5. PROJECT PLANNING & SCHEDULING
5.1 Project Planning
Agile methodology, 4 sprints:

- Sprint 1: Registration, Login

- Sprint 2: Listing, Search

- Sprint 3: Booking, Payment

- Sprint 4: Dashboard, Reviews

6. FUNCTIONAL AND PERFORMANCE TESTING
6.1 Performance Testing

- Load testing for booking and payment

- Response time under 2 seconds for all major actions

7. RESULTS

7.1 Output Screenshots

- Registration page

- Property listing page

- Booking confirmation

- Dashboard

8. ADVANTAGES & DISADVANTAGES

Advantages:

- Easy to use

- Secure payments

- Verified listings
  Disadvantages:

- Requires internet access

- Limited to listed properties

9. CONCLUSION

Home-Rentals streamlines the rental process, increases trust, and provides a better experience for users and hosts.

10. FUTURE SCOPE

- Mobile app development

- AI-powered recommendations

- Integration with smart home devices

11. APPENDIX

- Source Code:

- Project Demo Link: