PROJECT REPORT ON
HouseHunt: Finding Your Perfect Rental Home

SUBMITTED BY

Team ID : LTVIP2025TMID55800

Team Size : 4

Team Leader : Madamala Yagnasridevi 223C1A0521

Team member : Annam Balaji 223C1A0504

Team member : Deva Chandra Raju Vaka

233C5A0502

Team member : Done Jyothi 223C1A0511

Department of Computer Science and Engineering

DMS SVH College of Engineering

Machilipatnam, Krishna District Andhra Pradesh – 521 002 , India

Affiliated to Jawaharlal Nehru Technological University, Kakinada (JNTU-K)

Submited To

Project Title : HouseHunt: Finding Your Perfect Rental Home

Abstract

HouseHunt is a web-based rental property search application that helps users find ideal rental homes using real-time data. The platform leverages MongoDB for scalable database management and is built using Node.js for backend logic. Developed with tools like IBM SkillBuild and Visual Studio Code, the app provides a full-stack solution for modern renters and landlords.

---

1. Introduction

With the increasing demand for rental housing, users need a streamlined way to discover, compare, and shortlist properties that suit their budget, location, and preferences. HouseHunt aims to simplify this process by offering a user-friendly web application that bridges the gap between landlords and potential tenants.

---

2. Technologies Used

- **MongoDB Atlas** – Cloud-based NoSQL database cluster to store property listings and user data.
- **Node.js** – JavaScript runtime environment for building REST APIs and server-side logic.
- **IBM SkillBuild** – Learning platform for skill development and project collaboration.
- **VS Code** – Integrated development environment used for coding, testing, and debugging.

---

3. System Architecture

- **Frontend**: HTML, CSS, and basic JS interface (optional React can be integrated)
- **Backend**: Node.js with Express to create routes and connect to MongoDB
- **Database**: MongoDB collections for users, listings, and saved properties
- **Hosting**: (Optional – Netlify, Render, or IBM Cloud if deployed)

---

4. Key Features

- **Search filters**: By city, rent range, number of rooms, etc.
- **User authentication**: Register, login, and secure sessions
- **Save favorites**: Bookmark properties

- **Listing dashboard**: For landlords to post and manage properties

5. Implementation

- **Database schema** includes collections for users, properties, messages
- **API routes** for login, registration, property search, and posting
- **Error handling** and validation for clean user experience
- **Modular code structure** using Node.js and Express middleware

---

6. Challenges & Learnings

- Working with real-time MongoDB Atlas cluster connections
- Structuring backend routes securely and efficiently
- Learning deployment best practices
- Enhancing UI/UX using minimal tools

---

7. Conclusion

HouseHunt successfully demonstrates how modern web technologies can be combined to create an efficient rental property search platform. The use of MongoDB ensures scalability, while Node.js provides a responsive backend to handle data and user interactions smoothly.

---

8. References

- MongoDB Documentation
- Node.js API Docs
- IBM SkillBuild Courses
- Visual Studio Code Tutorials
