Rentify – Online Property Booking

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Citation: Pranav, S., Sumit, G., Vaibhav, S., Rajendra, K. (2025). Rentify – Online Property Booking. *J Res Edu, 3*(3), 01-04.

Abstract
The growing demand for online platforms in real estate has created a need for a centralized, efficient, and user-friendly property booking system. Rentify, an online property booking application, connects property owners and tenants on a single platform. Users can list, search, view, and book rental properties based on their preferences, including location, price, and property type. The frontend is built with HTML, CSS, and JavaScript to create an interactive user interface, while MySQL manage server-side operations and data. The system can also be upgraded to a MERN Stack framework for better scalability and performance.

Keywords: Online Property Booking, Web Application, MySQL, MERN stack, Rentify, Real Estate Portal, Web Development.

1. Introduction

The housing rental industry has always been important for urban growth and individual mobility. As cities expand and populations increase, the demand for rental housing has risen sharply. Traditionally, finding or renting a home has been a manual and often stressful task. Tenants often rely on real estate agents, newspaper advertisements, or referrals to find suitable properties. These traditional methods can be slow, expensive, and often lack clarity. Property owners also struggle to promote their properties, manage inquiries, and verify tenant information.

The growth of information and communication technologies has changed how people interact with services. The internet is now the main source of information for many users, and digital platforms are central to areas like banking, education, and e-commerce. Despite this shift, many places still do not have an effective online platform for managing home rentals, creating a gap between property owners and potential tenants. This situation leads to problems like miscommunication, fake listings, and delays in decision- making.

Modern technologies, like web applications, cloud computing, and secure database systems, offer a great chance to address these issues. A web-based rental management platform can automate property listings, improve communication, and ensure safe transactions. These platforms save time and build user trust through verified listings, reviews, and clear pricing structures. "Rentify" was created to meet these needs. It aims to make the renting process easier by connecting landlords and tenants on one digital platform. Rentify allows property owners to upload information about available homes, including images, rental prices, and amenities. Tenants can easily search for properties that fit their needs and locations. By adding features like user authentication, secure payments, and a user-friendly interface, Rentify ensures a smooth and trustworthy rental experience for everyone.

Additionally, Rentify focuses on growth, data security, and easy access. Built with modern web technologies, it supports the ongoing digital shift and meets the changing expectations of users who want convenient and reliable online services. Overall, Rentify seeks to change the home rental process by reducing reliance on middlemen, removing unnecessary steps, and providing a transparent, efficient, and cost-effective solution for renting properties.

2. Literature Review
The literature survey lays the groundwork for understanding current trends, technologies, and challenges in developing online

rental management systems. It offers insights into the strengths and weaknesses of existing platforms and helps select suitable technologies and design approaches for Rentify.

In recent years, various web-based platforms like MagicBricks, 99acres, Housing.com, and NoBroker have emerged to support online property rentals and sales. These systems allow property owners to list available properties and enable tenants to search for homes using specific criteria. However, these platforms often encounter problems such as high brokerage or service fees, fake property listings, and limited direct communication between tenants and property owners. Many of these systems also lack effective verification methods, leading to trust and security issues.

Several research studies and academic projects have examined ways to improve real estate management systems through modern technologies. For example, researchers have suggested using cloud-based systems for data storage and scalability so that property information can be accessed anytime and anywhere. Others have recommended machine learning algorithms to suggest properties based on user behavior and preferences, enhancing the personalization of rental platforms.

From a security standpoint, studies emphasize the need for authentication systems like OTP verification and data encryption techniques to protect user information. In addition, RESTful APIs and modular software designs have been proposed to improve interoperability and integration with external services like payment gateways, Google Maps, and notification systems.

User experience is also highlighted as a crucial factor in the success of digital rental platforms. Research shows that responsive web design, simple navigation, and clear property presentations significantly impact user satisfaction. These features improve accessibility, especially for users accessing the system on mobile devices.

Based on this survey, it is clear that while numerous solutions exist for online property rentals, many still struggle with affordability, transparency, and usability. Rentify addresses these issues by offering a platform that allows direct interaction between owners and tenants, removes intermediary costs, and prioritizes verified listings. The system uses modern web technologies, database management, and secure communication to provide an efficient and reliable solution for online home rentals.

Thus, the literature survey highlights that Rentify not only keeps up with current technological trends but also creatively resolves existing problems in the real estate rental market.

3. System Architecture
The system has three main parts:

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Frontend (Client Side): HTML, CSS, JavaScript.
• Backend (Server Side): Node.js for MERN.
• Database: MySQL, or MongoDB for MERN.

System Architecture Diagram:
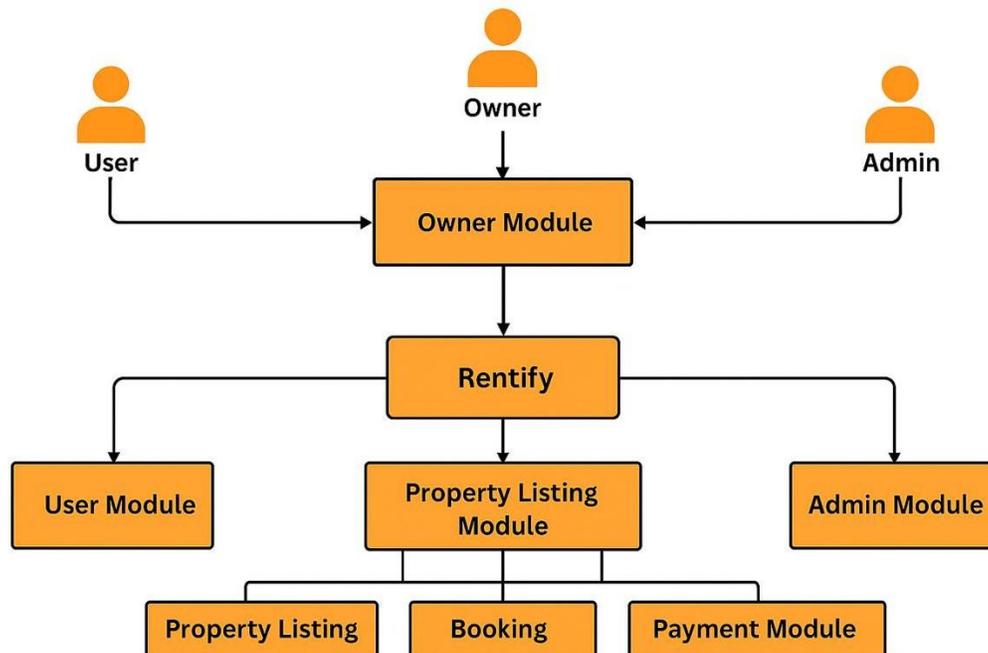
4. Methodology/Proposed System

The development of Rentify follows a clear and methodical approach to solving problems. This ensures that each stage of the project is done efficiently and logically. The method used is based on the principles of the Software Development Life Cycle (SDLC). This includes stages like problem identification, requirement analysis, system design, implementation, testing, and deployment. This approach helps turn the initial idea into a fully functional web-based rental management system.

The process started with a detailed study of existing house rental systems and their limitations. Key issues included lack of transparency, reliance on brokers, unverified property information, and delays in communication between tenants and owners. From this analysis, clear objectives were set—to create a platform that allows direct interaction between users, verified listings, and a secure digital interface for property management.

During the requirement analysis phase, both functional and non-functional requirements were gathered. This included defining user roles (tenant, owner, and admin) and features like login authentication, property listing, search and filter tools, and secure database management. The system design phase involved creating data flow diagrams, entity-relationship diagrams, and interface designs to outline the system's workflow.

The implementation stage focused on coding the platform using appropriate web technologies and frameworks. Database integration ensured that property and user data could be stored and retrieved effectively. To ensure system reliability, the testing phase was conducted to find and fix any bugs, confirming that all features worked as intended. Finally, the project went through deployment, making the system available to users in a real-time environment.
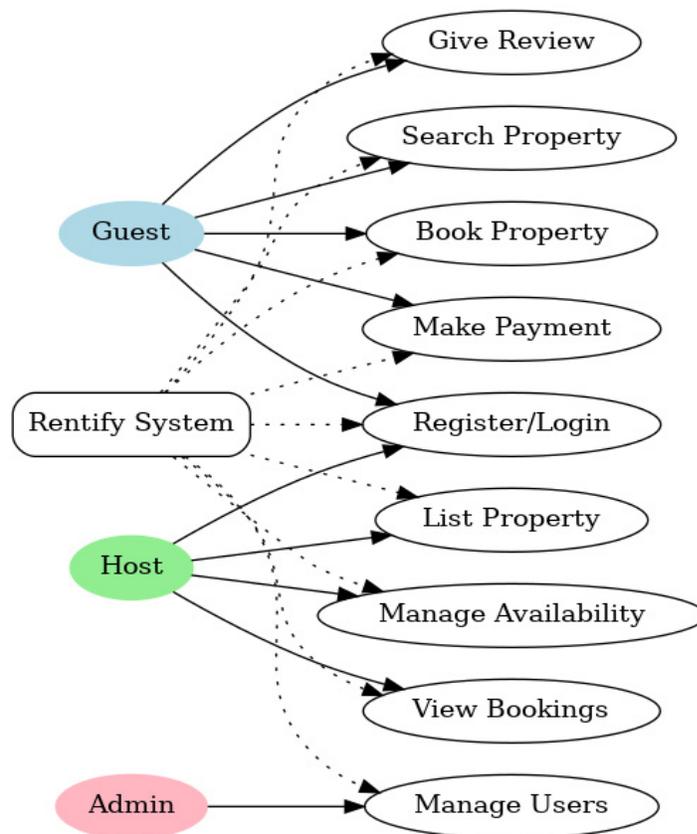
5. Results and Discussion

Testing with sample data showed efficient search results and fast response times. The system allows real-time updates to property listings and bookings. Upgrading to the MERN Stack can provide API-based scalability and an improved experience for mobile apps.

6. Conclusion and Future Work

The Rentify project is a web-based platform that aims to simplify the house rental process for both property owners and tenants. It addresses common challenges in traditional rental systems, like poor communication, unreliable listings, and slow manual processes. With its easy-to-use digital interface, Rentify allows users to search, list, and rent homes conveniently from anywhere at any time.

The system uses a strong mix of frontend and backend technologies, including HTML, CSS, JavaScript, and (or Node.js/), along with a reliable database management system like MySQL or MongoDB. This setup ensures smooth functionality, secure data handling, and quick response times. It also includes modules for user registration, property management, search filters, and admin control, which improve usability and system dependability. From a technical viewpoint, Rentify shows effective use of software engineering principles such as modular design, data validation, and secure authentication. The platform protects all transactions and user interactions, maintaining privacy and data integrity. Its user-friendly interface makes it accessible, allowing even non-technical users to navigate and perform tasks easily.

Socially and practically, Rentify removes the need for middlemen and unnecessary brokerage fees, enabling direct communication between landlords and tenants. It saves time, cuts costs, and creates a transparent environment for rental transactions. In conclusion, Rentify is a step toward digital transformation in real estate. It provides a modern solution for online home renting by combining convenience, security, and scalability. In the future, the project could be improved with features like online rent payment, AI-based property recommendations, real-time chat, and mobile app integration, creating a complete rental ecosystem for users everywhere.

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