

RentalHub – Rental Management System

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1. Introduction

RentalHub is a web-based Rental Management System designed to simplify the process of managing rental properties such as houses, vehicles, and other rentable assets. The system provides a centralized platform where property owners can add, update, view, and manage rental information efficiently. It reduces manual work and helps maintain accurate rental and billing records.

This system is user-friendly and suitable for small to medium-scale rental businesses.

2. Purpose of the Project

The main purpose of the RentalHub system is to automate rental management tasks that are traditionally handled manually. It helps property owners track available and rented properties, manage billing details, and maintain organized rental records. The system also improves data accuracy and saves time.

3. Problem Statement

In many small rental businesses, rental data is still managed manually using notebooks, registers, or basic spreadsheets. This traditional method creates several problems such as data duplication, calculation mistakes, and difficulty in tracking rental status. When the number of properties increases, it becomes hard to know which properties are available, rented, or due for billing.

Manual systems also make it difficult to maintain billing records properly. Owners often forget billing dates or rent amounts, which can lead to financial loss. There is no centralized system to store and retrieve rental data quickly. Therefore, a digital rental management system is required to overcome these limitations and provide a reliable, efficient, and user-friendly solution.

4. System Overview

RentalHub is a web-based rental management system that provides a centralized platform to manage rental properties efficiently. The system allows users to add, update, delete, and view rental properties with ease. All rental-related data such as property details, rent amount, billing date, and availability status are stored in a structured manner.

The system follows a simple workflow where users interact with a clean frontend interface, and the backend processes and stores data securely in a database. RentalHub ensures smooth navigation between modules and allows users to manage rental operations without technical complexity.

5. Modules Description

5.1 Dashboard Module

The Dashboard module acts as the main control panel of the system. It provides a quick summary of rental information such as the number of available properties and featured listings. This module helps users understand the current status of their rental business at a glance.

From the dashboard, users can easily navigate to other modules like adding new rentals or viewing rental lists. The dashboard improves usability by reducing the time required to access important information.

5.2 Add New Rental Module

The Add New Rental module allows users to register new rental properties into the system. Users can enter important details such as property title, description, rent price, and billing date. This information is validated and stored in the database once the user submits the form.

This module ensures that all necessary rental information is captured accurately. It helps in expanding the rental inventory and keeps the rental data organized and easily accessible.

5.3 Edit Property Module

The Edit Property module allows users to modify existing rental property details. This includes updating the rent amount, changing the property description, editing billing dates, and updating availability status. This feature is useful when rental conditions change over time.

By allowing real-time updates, this module ensures that rental information remains accurate and up to date. It prevents inconsistencies and improves data reliability.

5.4 Rental List Module

The Rental List module displays all rental properties in a structured table format. It shows key information such as property name, rent price, billing date, and current status. Users can easily identify which properties are rented or available.

This module also provides edit and delete options, making rental management flexible and efficient. It acts as a central repository for all rental records.

5.5 Billing Module

The Billing module is responsible for managing rental payment details. It displays billing information including rent amount, billing date, and property status. This helps users track payments and upcoming billing schedules effectively.

The billing module reduces the chances of missed payments and helps maintain accurate financial records. It improves transparency and financial control for rental owners.

6. Technologies Used

The RentalHub system is developed using modern web technologies to ensure performance and scalability. HTML, CSS, and JavaScript are used to design a responsive and user-friendly frontend interface. Python with Flask framework is used for backend development to handle application logic and server-side processing.

SQLite is used as the database for storing rental information securely. The project is developed using VS Code and deployed on the Render platform, allowing online access to the system.

7. Advantages of the System

RentalHub offers several advantages over traditional rental management methods. It provides a simple and intuitive interface that reduces the learning curve for users. The system minimizes human errors by automating data storage and billing management.

It saves time by allowing quick access to rental data and improves efficiency by organizing information systematically. The system also ensures data consistency and can be easily enhanced with additional features in the future.

8. Applications

RentalHub can be used in various real-world scenarios such as managing house rentals, vehicle rentals, and small property rental businesses. It is suitable for landlords, rental agencies, and small entrepreneurs who want to digitize their rental operations.

The system can also be adapted for managing equipment rentals, shops, or other assets, making it a versatile rental management solution.

9. Future Enhancements

In the future, the RentalHub system can be enhanced by adding user authentication and role-based access control. Online payment gateways can be integrated to support digital rent payments. Automatic invoice generation in PDF format can also be implemented.

Additional features such as email or SMS notifications, mobile application support, and AI-based chatbot integration can further improve the usability and functionality of the system.

10. Conclusion

RentalHub is an efficient and reliable Rental Management System that simplifies rental operations. By automating property and billing management, it reduces errors and improves productivity. The system is scalable and can be enhanced with additional features in the future.