

D-ROOM: HOTEL BOOKING AND BEDROOM RENTAL APPLICATION FOR LHOKSEUMAWE AND NORTH ACEH REGIONS BASED ON ANDROID MOBILE

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Abstract

The hotel booking application, developed on the Android platform, presents a comprehensive and user-centric solution for accessing an extensive array of room information in the city of Lhokseumawe and the North Aceh Regency. Through its well-designed interface and intuitive functionalities, the platform offers users a seamless experience in searching, comparing, and booking accommodations that meet their specific needs and preferences. One of the application's key strengths lies in its capacity to aggregate a diverse range of room listings from various providers, encompassing hotels, guesthouses, and rental properties, all conveniently accessible within a single platform. This centralization of information empowers users with a plethora of choices, facilitating an informed decision-making process when selecting their ideal lodging. To ensure the utmost authenticity and credibility of the room listings, the application implements a robust admin review process for all submitted advertisements. This meticulous evaluation guarantees that only verified and genuine offerings are published, fostering a sense of trust and reliability among users. Additionally, the platform's user-friendly interface enables effortless navigation through the available listings, providing essential details such as room features, amenities, images, and transparent pricing for specific periods. Users can easily compare options, making it easier to find accommodations that align with their budget and preferences. By streamlining the booking process and offering a wide array of options, the hotel booking application aims to revolutionize how users access and manage room data. It empowers both travelers and property owners in Lhokseumawe and the North Aceh Regency by providing a valuable and efficient tool to optimize the booking experience and enhance customer satisfaction. Through this comprehensive solution, the application sets the standard for modern and convenient accommodation search and booking, contributing to a seamless and enjoyable travel experience for all users.

Keywords : *Booking, Hotel Management, Apps, Room Rentals*

INTRODUCTION

Currently, the world is entering the era of the Fourth Industrial Revolution or Industry 4.0, where technology has become the foundation of human life. Everything has become limitless and boundless due to the development of the internet and digital technology. Technology in this era plays an increasingly important role in supporting work activities in both government and private institutions or offices. Room rental is a business where room owners rent living spaces (rooms) to tenants. (Rizal et al., 2021) With the rapid growth of room rental businesses, there is a need for a system that facilitates the connection between renters and those looking to rent a room. Many rental businesses still rely on traditional marketing methods such as brochures and banners, limiting the reach of their promotions and not reaching several areas. Another challenge in promoting rental places is the intense competition that requires marketing strategies to differentiate from competitors. Therefore, there is a need for a technology that can provide information to customers via the internet, resulting in organized, clear, accurate, and fast information to ease the process of

finding available rooms for rent. The technology utilized for this purpose is the internet, a limitless global online network that provides vast amounts of information, in line with the ever-evolving modern technology. Smartphone manufacturers leverage this development to create flexible communication tools in the form of smartphones. By implementing this system, it can help property owners promote their rental places through internet media, accessible through smartphones with network connectivity. (Wibisono, 2019)

LITERATURE REVIEW

Room Rentals Apps

A room rental application is a software application or mobile application that facilitates the process of renting living spaces, typically individual rooms or apartments, to tenants or guests. It provides a platform for property owners or hosts to list their available rooms, along with relevant details such as rental rates, amenities, and location. On the other hand, potential renters or guests can use the application to search for available rooms, view property details, and make reservations or bookings directly through the platform. (Decena & Delfin, 2023)

Hotel Booking Apps

A hotel booking application is a software application or mobile application that enables users to search, compare, and reserve hotel accommodations for a specific duration of stay. These applications offer a comprehensive database of hotels, resorts, and other lodging options, allowing users to explore various properties, check room availability, compare prices, and make secure reservations. Hotel booking applications streamline the booking process, making it convenient and efficient for travelers to plan their stays at hotels around the world.

METHOD

The system requirement analysis aims to understand the needs of the system to be developed and create a system that fulfills those requirements or determine that a new system isn't necessary. The focus is on observing the details of the system to be built and using the analysis as a basis for designing the system. The project involves developing an information system for renting vacant rooms, which includes inputting various data directly by users. **Data Requirements:**

- A. User Data: Includes room owners' details like names, phone numbers, addresses, etc.
- B. Room Data: Contains information about available rooms for rent, such as photos, facilities, and prices.

Data Collection Techniques:

- A. Interview: Direct question-and-answer sessions with relevant personnel.
- B. Observation: On-site visits to gather information related to room rental.
- C. Library Research: Studying literature and references on room rental systems from various sources.

Data Types and Sources

The research primarily uses qualitative data in the form of verbal descriptions, images, and room information. Data is collected directly from primary sources through interviews and observations, as well as indirectly from documents, journals, and the internet.

Functional Requirements

The information system will have key functions like a main menu with options for Home, Gallery, Search, Register Vacant Room, and Login. Registering vacant rooms will be accessible only to registered users, authorized by the system admin.

System Scheme Design

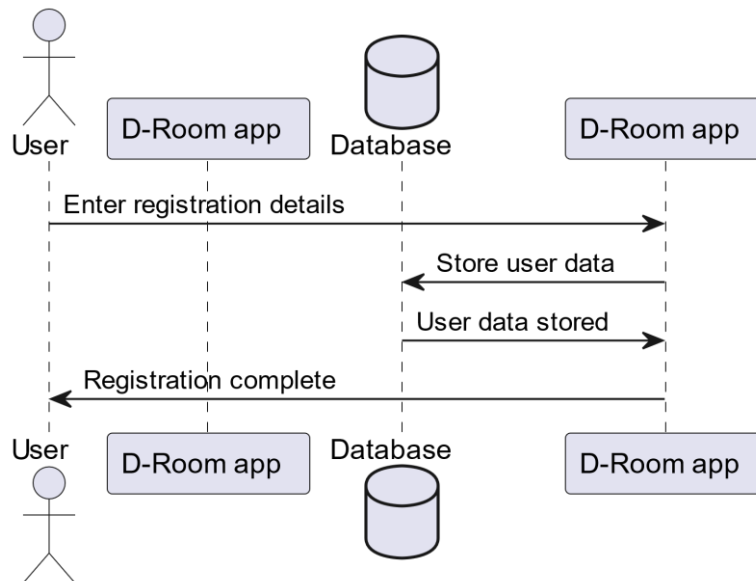


Image 1 System Scheme

RESULTS AND DISCUSSION

The hotel booking application, "D-Room," has been meticulously developed based on a comprehensive and detailed design. Every aspect of the application, from user registration and hotel search to booking management and payment processing, has been carefully crafted according to the intricately laid-out plan. This meticulous approach ensures that "D-Room" delivers a seamless and user-friendly experience, providing customers with a hassle-free and efficient way to find and book their ideal accommodations.

1. User Registration and Login:

- Users can download and install the hotel booking application from their respective app stores.
- New users need to register by providing their basic information like name, email, and password to create an account.
- Existing users can simply log in using their registered email and password.

2. Search for Hotels:

- After logging in, users can access the main menu and select the option "Search for Hotels."
- The application allows users to enter their destination, check-in date, check-out date, and the number of guests.
- Based on the user's input, the application fetches hotel data from its database and displays a list of available hotels.

3. Hotel Details and Filtering:

- Users can view more details about each hotel, such as room types, amenities, guest reviews, and photos.
- The application provides filters to help users refine their search based on price range, star ratings, facilities, and other preferences.

4. Room Selection and Booking:

- Once users find a hotel that suits their needs, they can select a specific room type and proceed to book it.
- The application prompts users to review their booking details, including the total cost and booking dates, before confirming the reservation.

5. Payment Processing:

- After confirming the reservation, the application securely processes the payment using various payment methods (credit/debit cards, mobile wallets, etc.).
- The user receives a payment confirmation and booking receipt via email or in-app notification.

6. Booking Management:

- Users can access their booking details through the application, including booking dates, hotel information, and payment status.
- The application allows users to modify or cancel their bookings, subject to the hotel's cancellation policy.

7. Check-In and Check-Out:

- On the day of check-in, users can show their booking confirmation at the hotel reception for verification.
- Upon successful verification, users can check into their booked room and enjoy their stay.
- After the check-out date, the hotel marks the reservation as completed in the application.

8. Review and Feedback:

- After checking out, users may have the option to leave a review and rating for the hotel or their experience through the application.
- Reviews and ratings from previous guests help other users make informed decisions when booking hotels.

9. Customer Support:

- The application provides customer support channels (email, chat, or phone) for users to seek assistance or resolve any issues related to their bookings.

The hotel booking application works as a user-friendly platform that facilitates the entire hotel reservation process. Users can easily find and book hotels based on their preferences, making it a convenient and efficient way to plan their accommodations for travel or vacations. The application's database stores hotel information, room availability, and booking records, ensuring seamless communication between users and hotels. Additionally, the application enhances the user experience by providing essential details, reviews, and filters to help users make well-informed choices.

Apps and Web Development Result

We are delighted to present the culmination of our efforts – a fully developed mobile application and an admin web page designed to revolutionize the way we manage and organize data. The journey began with a meticulous planning phase, where we carefully laid out the blueprint for the application's functionality and the admin page's robust features. Leveraging cutting-edge technologies and innovative design, we have created a seamless and efficient platform that empowers users to access, search, and book accommodations effortlessly, while providing administrators with a powerful tool to manage data effortlessly. Through this comprehensive development process, we are confident that our mobile application and admin web page will redefine the landscape of how data is organized and accessed, enhancing the user experience and streamlining data management like never before.

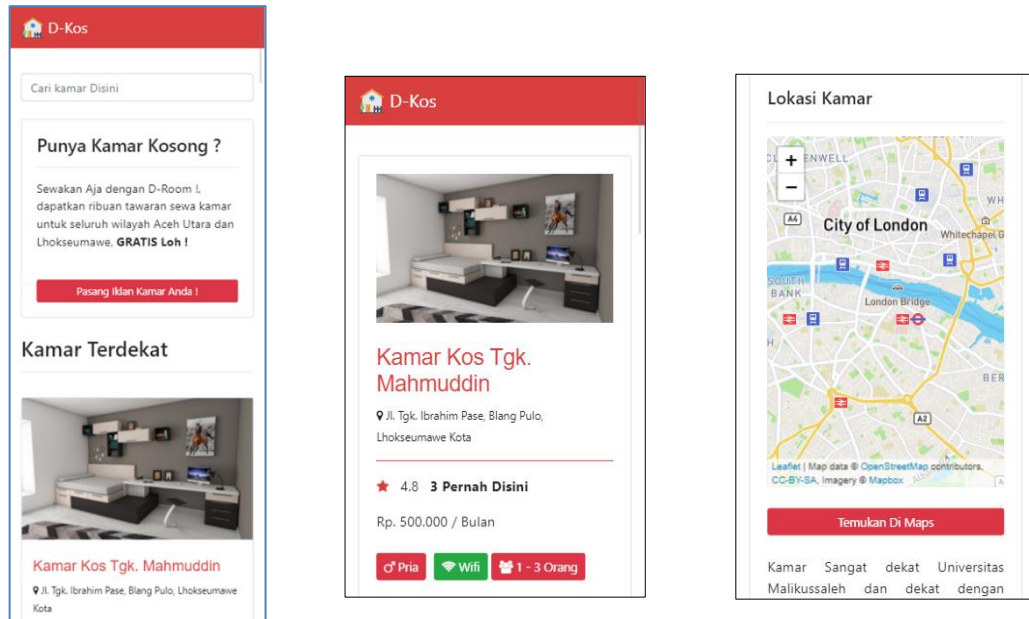


Image 2 User Experience Apps for Online Booking

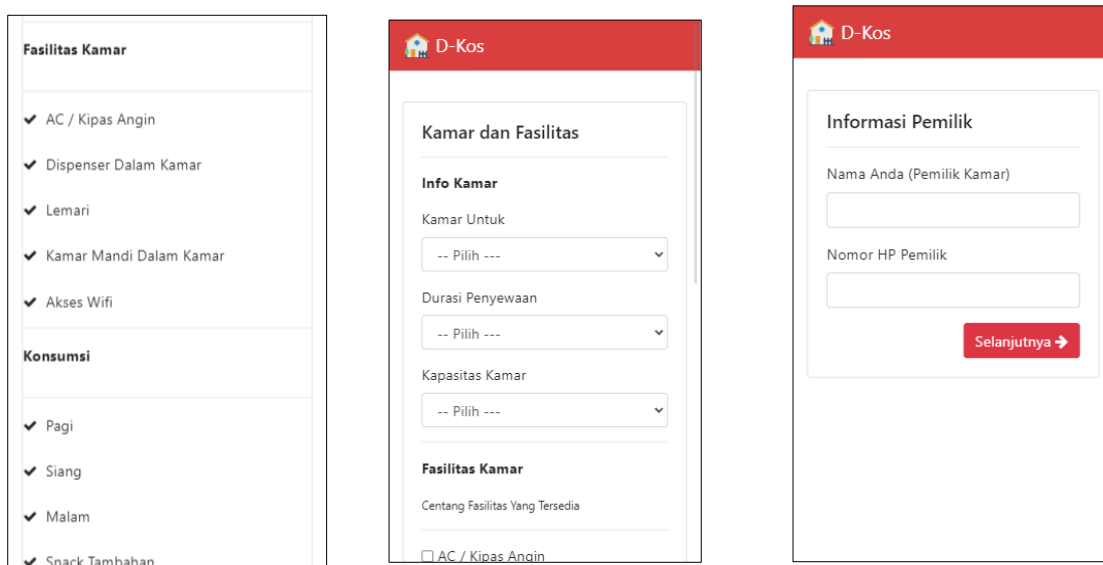


Image 3 User Experience For Room Owner



Image 4 User Experience For Admin Control

CONCLUSION

Based on the conducted research and testing regarding the, the following conclusions can be drawn:

- A. The hotel booking application is developed using the Android platform, aiming to centralize all room information available in and around the city of Lhokseumawe and the North Aceh Regency. By incorporating room advertisements, these listings will be reviewed by the application's admin team. Once the advertisements meet the necessary criteria, they will be published on the platform. The information within the application includes details about the rooms, their locations, amenities, and the prices offered for a specific period.
- B. With this Android-based platform, users can easily access a wide range of accommodation options in the specified regions, making the process of finding suitable rooms more convenient and efficient. The app acts as a comprehensive repository, gathering all relevant data related to available rooms, ensuring that users have access to a diverse selection of accommodations to choose from.
- C. Additionally, the advertisement review process conducted by the admin guarantees that only genuine and reliable room listings are made available on the platform, thus ensuring the users' trust and satisfaction. This critical step helps maintain the quality of the platform and prevents any false or misleading information from being displayed.
- D. Furthermore, the provided room information, including location, facilities, and pricing, allows users to make informed decisions when choosing accommodations that suit their preferences and budget. The platform's user-friendly interface ensures that users can effortlessly navigate through the various listings, making the booking process simple and straightforward.
- E. Overall, the development of this Android-based hotel booking application is a step towards creating a centralized and reliable platform for room bookings in the specified regions. By gathering comprehensive information and maintaining a stringent review process, the application aims to enhance the overall booking experience, providing both users and property owners with a valuable and efficient tool for managing and accessing room data in Lhokseumawe and the North Aceh Regency.

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