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Designing a Website-Based Supiati Boarding House Application

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Abstract
The development of information technology has significantly influenced various sectors, including public accommodation services such as boarding houses. Supiati Boarding House currently uses a manual registration system, requiring prospective residents to contact the owner directly. This research aims to design and develop a website-based application to facilitate online registration for Supiati Boarding House. The system was developed using the System Development Life Cycle (SDLC) method with a waterfall model, encompassing planning, analysis, design, and implementation stages. The application was built using PHP, Laravel framework, and MySQL database. Key features include user and admin login, room selection, reservation confirmation, transaction processing, and a structured navigation and database system. Testing on multiple devices and browsers confirmed that the application performs reliably and meets its functional requirements. This online system improves service accessibility and efficiency, particularly for prospective residents located outside the boarding house area.
Keywords: Boarding House, Online Registration, Website Design, SDLC, Laravel, Web Application, Supiati Boarding House.

INTRODUCTION

Technology continues to evolve towards a more modern direction. In this increasingly modern era, human life is inseparable from technology. The existence of technology has impacted society and the surrounding environment, where it can help simplify human work, such as helping improve the community's economy by selling or promoting products sold online, such as food and beverages, electronics, household goods, clothing and transportation, apartments, rentals, villas, houses, and even boarding houses. Boarding houses are one of the public services in the accommodation sector needed by many groups as temporary housing, especially for students living in cities different from their campuses. This accommodation sector also requires technology to improve its services to make it easier for everyone, for example, to register as a new boarding house occupant.

In this era of rapid technological advancement, a network is needed that can facilitate and accelerate the widespread dissemination of information, making it easily accessible to anyone with internet access, such as a website. A website functions as a collection of pages within a domain that contains various types of information available online, simply by using a browser and entering the correct URL.

The registration process for Supiati Boarding House is currently manual. Registration is currently still done by contacting the owner through the number provided

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at the boarding house gate. Therefore, with The development of information technology through the use of a website for Kosan Supiati is expected to facilitate the registration process for prospective boarding house residents located outside the area, allowing them to register without having to visit the boarding house location.

This certainly saves time and makes things easier for both prospective and current boarding house residents. Based on this background, this research is entitled "Designing a Website-Based Kos-Kosan Supiati Application."

Scope

This website was created to provide information on boarding houses and registration for prospective and current boarding house residents. When registering, applicants can first select a boarding house location within the city provided, then fill in their personal information and any unoccupied rooms. After registration, residents can make transactions using the provided bank. Furthermore, the website also allows for adding, changing, and deleting data.

RESEARCH METHOD

The purpose of this research is to create an online registration website for the Supiati Boarding House, allowing users to easily register without having to visit or contact the boarding house owner for manual data entry.

Research Method

The method used in this paper is the SDLC (System Development Life Cycle), which is the process of creating or developing an information system aimed at solving problems effectively. The waterfall model used is a sequential process that begins with the planning, analysis, design, and implementation of the system.

Upon opening the website, the main page contains information about the boarding house, including the home page, rooms, about us page, and contact information, such as the owner's address and contact information.

The Supiati Kos-Kosan information application is online and web-based. Users who wish to book or learn more about a boarding house must first log in and fill out a biodata form. Users without an account can only view information about the boarding house, the list of occupants, and the rooms.

Logged-in users can register by reserving their desired room and making a reservation. After registering, users receive the owner's contact information via the contact us menu.

Registered users must confirm their registration to ensure they have correctly selected the room. Users will receive a reservation receipt after confirming their registration. The reservation receipt will include the room number and booking date.

RESULTS AND DISCUSSION

Application Design

Designing this website-based application requires several design stages, including designing the navigation structure.

Navigation Structure Design

The user navigation structure in Figure 1. uses a non-linear and hierarchical navigation structure model. When accessing the website, a page appears containing the home, rooms, about us, login, and register menus. To make a reservation, users must first log in.

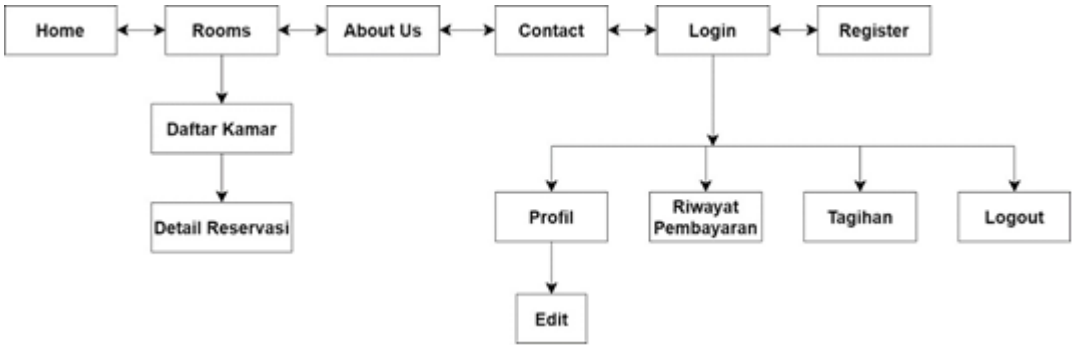


Figure 1. Non-Linear and Hierarchical Navigation

This admin navigation structure uses a hierarchical navigation structure. This is because a hierarchical navigation structure is often called a branching structure, and each selected page becomes the master page. Figure 1. shows that the admin must log in to access the admin page. Afterward, the dashboard, Boarding House Data, and Logout menus will appear. The boarding house data contains admin data, user data, room data, reservation data, and transaction data. Admins can edit the data in these menus.

Database Structure Design

This section will discuss the tables needed to build the Supiati Boarding House website, including the file structure, which specifies each attribute contained in a table or file within the database system. The following is the file structure for the following tables:

Table 1. Database Structure Design

No	Nama	Tipe Data	Panjang	Keterangan
1	Id	Bigint	20	Auto Increment, NotNull
2	Name	Varchar	30	Not Null
3	Alamat	Varchar	30	Not Null
4	Tempat_lahir	Varchar	30	Not Null
5	Tanggal_lahir	Bigint	30	Not Null
6	Email	Varchar	30	Not Null

7	Email_veritified_at	Timestamp		Null
8	Password	Varchar	30	Not Null
9	Remember_token	Varchar	30	Null
10	Created_at	Timestamp		
11	Updated_at	Timestamp		

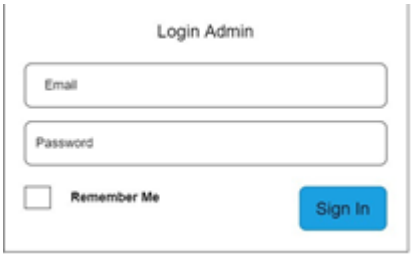
The User table is used to store user data. The primary key of this table is the ID, which is auto-incremented and not null. The auto-increment function ensures that if new data is entered, the value will follow the sequence of the previous ID. The User table consists of several fields: ID, name, address, place of birth, date of birth, email, email_verified_at, password, remember_token, created_at, and update_at.

User Interface Design

The user interface design, or user interface display, is used to illustrate the desired appearance of the Supiati Kos-kosan website. This user interface design also simplifies implementation when creating a website.

The display consists of user case pages, which are used to illustrate the actions that application users can perform. In this research, there are two types of use case diagrams: an admin diagram and a user diagram. The following is an explanation and images of these diagrams.

1. Admin Login Page Design



Description

• Email: Enter the name used to log in to the admin account.

• Password: Enter the password used to log in to the admin account.

• Sign in: The button to log in to the admin website.

2. Dashboard Page Design

Description

a. New Orders: displays the number of orders received that day.

b. Income: displays the percentage of orders received that day.

c.Occupant Data: displays the amount of data entered

CONCLUSION

The design of the Supiati Boarding House website has been completed using PHP as the programming language, the Laravel framework, and MySQL as the database. Based on the results of trials conducted on three web browsers and different devices, including Android, iOS, and Windows, the tests ran smoothly and without any issues. Based on the test results, it can be concluded that the Malika Princess Boarding House website was successful and runs according to the desired output. Therefore, the application is successful and runs well, and can be accessed online

The Supiati Boarding House website still has shortcomings, such as the payment history system and the lack of automatic login and registration via Google or Facebook. Therefore, the author hopes that future website developers can provide interesting features or add to this gap. This will allow applicants and boarders to gain more detailed information about the Supiati Boarding House.

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