

Web-Based Photography Services Rental Information System At Mars Dwi Jaya Photo Studio

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DOI : <https://doi.org/10.61796/jaide.v2i6.1533>



Sections Info

Article history:

Submitted: March 25, 2025

Final Revised: April 11, 2025

Accepted: May 20, 2025

Published: June 30, 2025

Keywords:

Website

Photograph

Rent

ABSTRACT

Objective: This study aims to develop a web-based application for Mars Dwi Jaya Photo Studio to address the lack of accessible information for consumers and the difficulties encountered in determining service prices. **Method:** The research follows a system development approach by designing and implementing a website-based application using a MySQL database operated on a localhost server. The system architecture includes modules for service promotion, price management, and online order transactions, allowing administrators to manage content and customers to interact directly with the platform. **Results:** The developed application successfully facilitates online promotion and rental service transactions, enabling users to access information, compare prices, and make service bookings efficiently without visiting the studio physically. The system also enhances operational efficiency by reducing manual processes in price determination and customer service. **Novelty:** This study provides an innovative solution for small-scale photo studios by integrating online rental management and interactive customer communication into a single web-based platform, thus supporting the digital transformation of local creative businesses.

INTRODUCTION

Information and Technology recently have become something considered important [1]. With the advancement of information and technology, we can quickly obtain all up-to-date information, which certainly has a significant impact on the development of Science and Information Technology [2]. Photography is a combination of two things: art and science [3]. Photography does not only depend on the camera, lens, light, or film, but also requires creativity from the user to turn ordinary images into something interesting and informative [4]. As time progresses and societal needs evolve, the use of cameras in Indonesian society has developed from a secondary necessity to one of primary importance. Many people want to document certain moments through photography, which motivates photo studios to become widespread and grow [5]. At present, technology using both analog and digital cameras is increasingly keeping up with the times, and likewise, the price of camera devices becomes more affordable every year [6].

Photography services have become one of the most needed services nowadays with the continuous advancement of technology, especially through social media, where people use photography services to capture important moments in their lives such as weddings, graduations, major holidays, celebrations, and so on, where the results of the photography can be shared on social media [7].

In this study, the authors studied several previous studies and obtained several conclusions, including Rosdiana, Denny Kurniadi and Asrul Huda creating a system that

can be used as a promotional event for service providers, both from photo studios and freelance photographers and videographers to offer their services to service users [8]. Service users are also helped in finding the desired services in choosing package orders provided by service providers. The next research that was considered was carried out by Fathur Rahman and Nico by compiling a website with an attractive system so that it is easy to understand by website visitors and the owner of Noni Studio Foto can manage and organize package orders so that customers can make ordering transactions without having to come to the location concerned [9].

Yulisman then conducted research, developing a rental application to make it easier for owners to store data on rented and returned cameras and studio equipment [10]. The camera and photo studio equipment rental list and schedule are well-organized and computerized. The application also provides automatic transaction reports, making it easier for customers to rent photo studio equipment.

Mars Dwi Jaya Photo Studio is a business that provides photo rental services. The problem encountered at Mars Dwi Jaya Photo Studio is that consumers have limited access to information about rental and service pricing, as consumers now prefer to choose products online via mobile phones. This also impacts financial accountability at the studio [11].

Currently, Mars Dwi Jaya Photo Studio still uses manual methods for rental transactions, with administrative staff writing and administering the transaction using notebooks. Therefore, a study entitled "Web-Based Photography Service Rental Information System at Mars Dwi Jaya Photo Studio" was conducted. It is hoped that this application will make it easier for consumers and owners to view the photography services available at Mars Dwi Jaya Photo Studio.

RESEARCH METHOD

In this research, the author designed an application system in the form of a website display. So that in carrying out data updates carried out by photo studio owners or admins, so that to fulfill these needs, several things are needed, such as data sources related to the research. The data consists of various forms, in the form of text and images. In addition, there is also a need for hardware and software used in the research to design programs in the form of a website. The preparation of the website displayed in this research can be used by users and can be accessed offline (connected to the network but not the internet) or online (connected to the internet) [12].

All of this can be achieved by conducting interview collection activities by communicating with the owners and employees who work at the "Mars Dwi Jaya" Photo Studio about the photography service rental system and a better rental system for the future for the Photo Studio. Interviews were also conducted with Photo Studio customers who rent photography services to obtain input and hopes to make it easier to get information about renting existing photography services, interviews were also conducted with experts who are experts in the field of website-based application development and information systems. In addition, by reading various literature on the Muhammadiyah

University of Sidoarjo library website at elibrary.umsida.ac.id as well as literature from trusted internet as well as books and ebooks related to research.

In previous research, the system can be used as a promotional platform for service providers, both from photo studios and freelance photographers and videographers, to offer their services to service users. Service users are also helped in finding the desired services in choosing package orders provided by service providers [13]. The application design allows admins or owners to store data on camera devices and studio equipment that are ready and have been rented or returned. Likewise, data on camera rental schedules and photo studio equipment is neatly arranged because it is in the form of a table on the server [14]. The settings use a website with an attractive and easy display so that it is easy to understand by website visitors and photo studio owners can manage and organize package orders so that customers can make ordering transactions without having to come to the location concerned [15].

RESULTS AND DISCUSSION

1. System Design

To rent photography services, log in first. If you don't have an account, it's recommended to create one. After logging in, the user will be taken to the main page, which displays the user's profile dashboard. Then, select the type of photography service they wish to rent or return to the user dashboard. After placing an order, the user will be directed to make payment for the photography service they have rented. Once payment has been made, the user will receive proof of payment for the photography service.

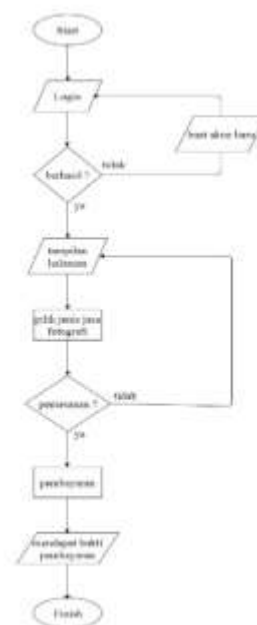


Figure 1. Application Flowchart

Meanwhile, in the application for the admin process, the admin will validate and obtain information about transactions entered on the rental page. The admin will then view the rental transaction report data in the database and manage the rental transaction

report data. Afterward, the admin will print the transaction report as proof of the transaction.

The content diagram contains two entities: customer and admin, and one system process: photography service rental.

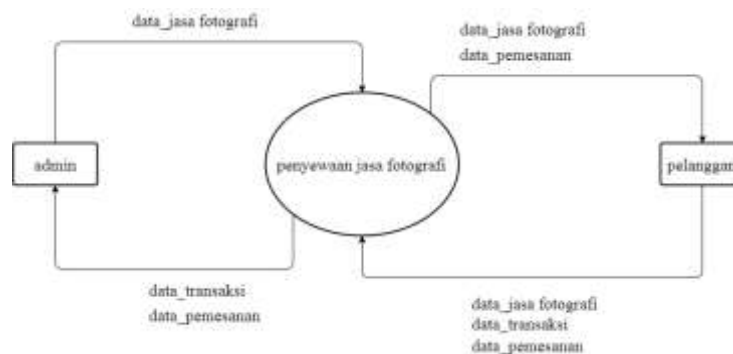


Figure 2. Context diagram

From Diagram 2, the admin updates photography service data, such as rental prices, equipment rented, users, and transactions. Meanwhile, the system can provide all the information to the admin according to their wishes and can execute or update data. Customers can create new accounts and send order transaction data to the system. Data regarding customer users can also be updated by the user and can also be corrected if necessary.

In DFD level 1 shows three processes, namely the photography service data management process, which can be done by the admin by sending from the rental process and the data can be accessed by the customer. Customers can send customer data and rental data to the rental process and stored in the rental database and can be accessed by the admin for follow-up. The second process is the rental process that can be accessed by customers and saves data to the photography service menu and also to the rental database. And the payment process comes from the rental database carried out by the customer and then the data is saved to the payment database and the payment data can also be accessed by the admin to verify customer payment data.

The ER diagram in Figure 4 consists of four data entities: a user containing several data attributes such as the customer's name and ID, including the admin; a device containing several data attributes such as price, name, and photo; a package containing data attributes such as the package name and description; and a rental entity containing rental data attributes such as the renting user's name, duration, and supporting transactions.

In this study, the database uses SQL with a supporting application, XAMPP, which is used to manage the server and database in this application. The program code is located in the htdoc folder, and to run the application, the control panel is used and Apache and MySQL are run. The MySQL admin page (PHPMyAdmin) in this application is used to create, modify, and delete data.

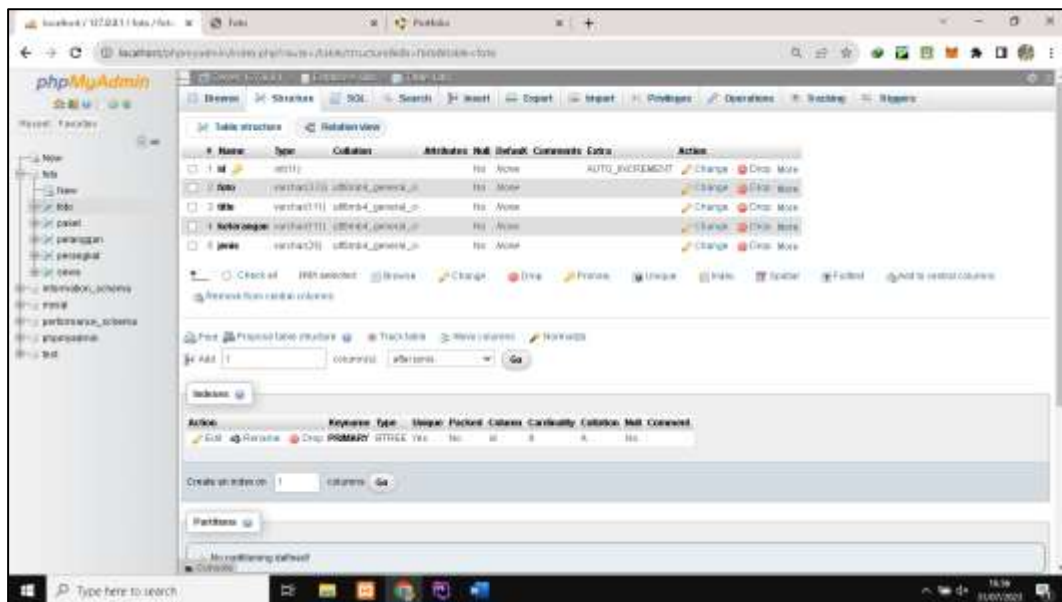


Figure 5. PHPmyADMIN database view

The image above shows Figure 5, which displays the MySQL admin page used in the application. Eleven tables are used, as described in chapter three, as the database structure. When opened, the website displays the homepage. This page also serves as a promotional page accessible to anyone, showcasing a variety of the best images taken, thus attracting potential buyers.



Figure 6. Front page view

There are buttons on the front page that can be used to open other pages freely without logging in: the services page, the about us page, the portfolio page, and the login page. The front page's photos automatically change, displaying different themes: weddings, parties, product documentation, and entertainment themes like nature. These photos showcase the best of the company's photography.

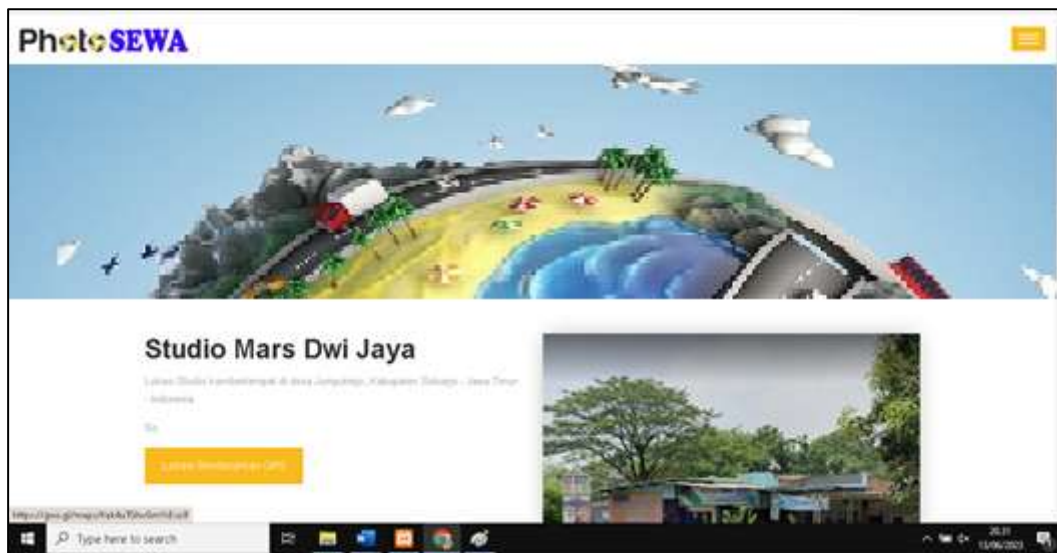


Figure 7. About us

The About Us page displays the location of the Mars Dwi Jaya Studio rental location, with photos and links clicking on them showing the location on Google Maps. There's also a services button that displays the service page.

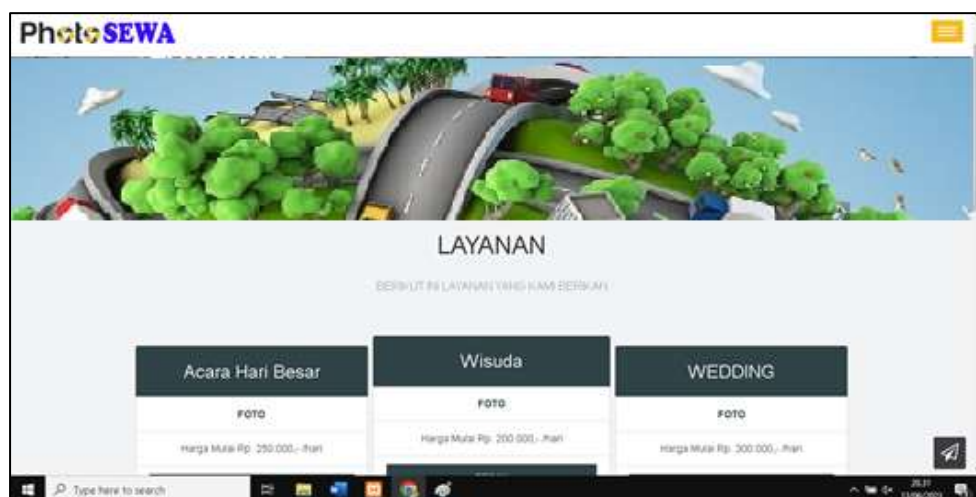


Figure 8. Service Page

The services page displays a menu of available rental services, along with prices and types of options. Examples include bookings for major events, graduations, or weddings. However, reservations don't have to be strictly based on the details on the display; they can also be customized to your specific needs. Clicking the "Order" button will bring up the booking page, where users can edit their details and make payments.

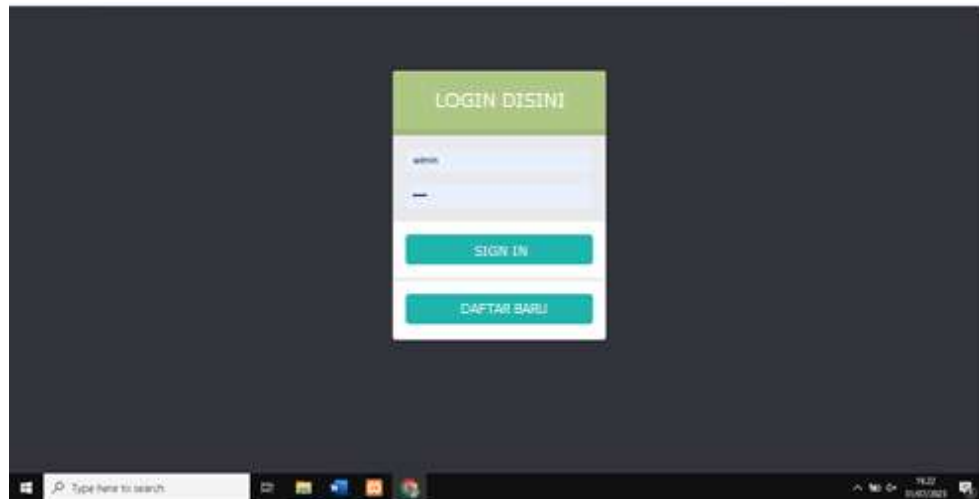


Figure 9. Login Page

The login page is used by admins to access the admin page or customers to access the customer page. This page displays a form for entering a username and password. If the password and username are correct, you will be taken to the next page; if not, you will be taken to the front page.

If a customer does not have an existing account, they can create a new account by clicking the "REGISTER NEW" button. The customer will then complete the registration form and be able to proceed with subsequent transactions.

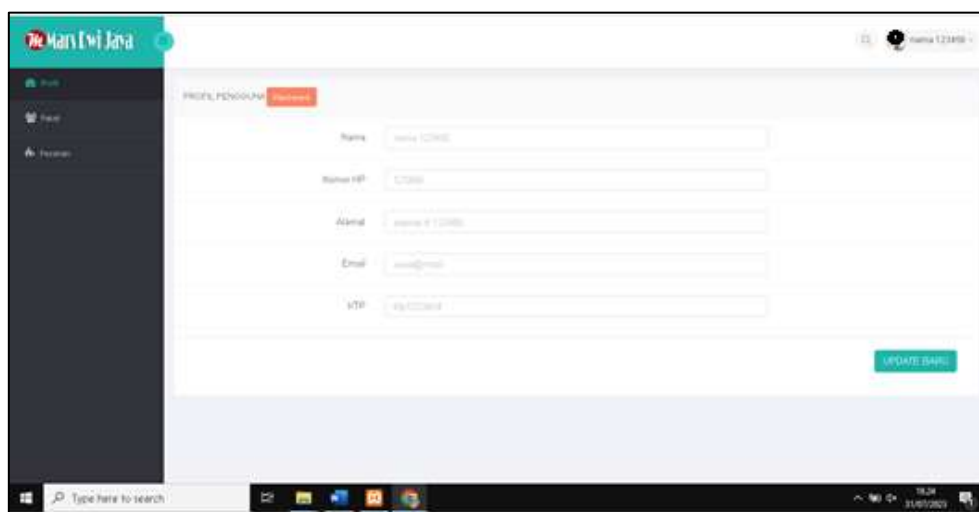


Figure 10. User Profile Page

The user profile page displays the profile data of the customer user. This page is used to view data for each user and make changes to that user data. The data contained in the profile account is the user's name which will be used to find out the customer's real name, a mobile phone number that can be used to log in and can be contacted by the admin regarding booking transactions, the real address used for carrying out rental activities, email and ID card which must match the customer. The pages that can be accessed by customers are only the profile page, package page and order page.

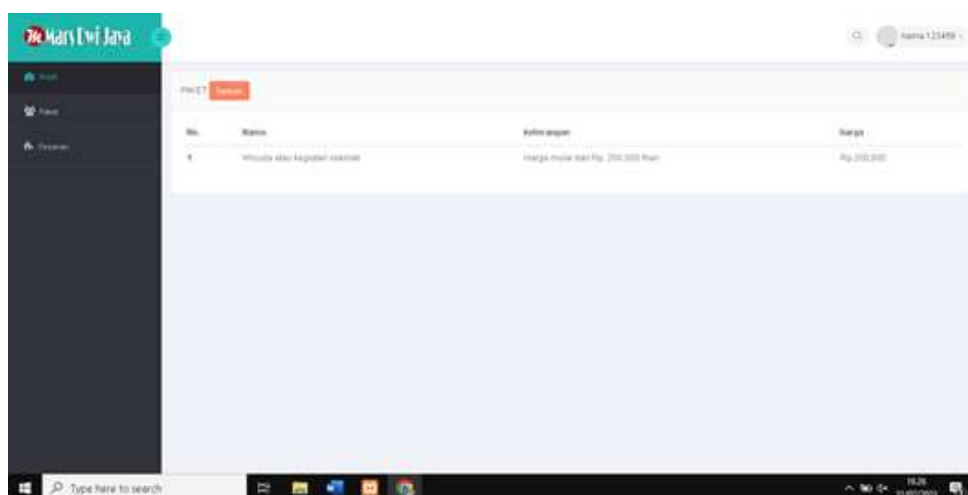


Figure 11. Packages Page

This page displays the rental packages available for booking. It contains the customer's name, a description (information added by the customer during booking), and the total price. To add a booking, customers can click the "Add" button and then select the desired package. Additional information can be added to the booking in the comments section. The top right corner displays the customer's profile, and clicking it displays a menu to log out of the application.

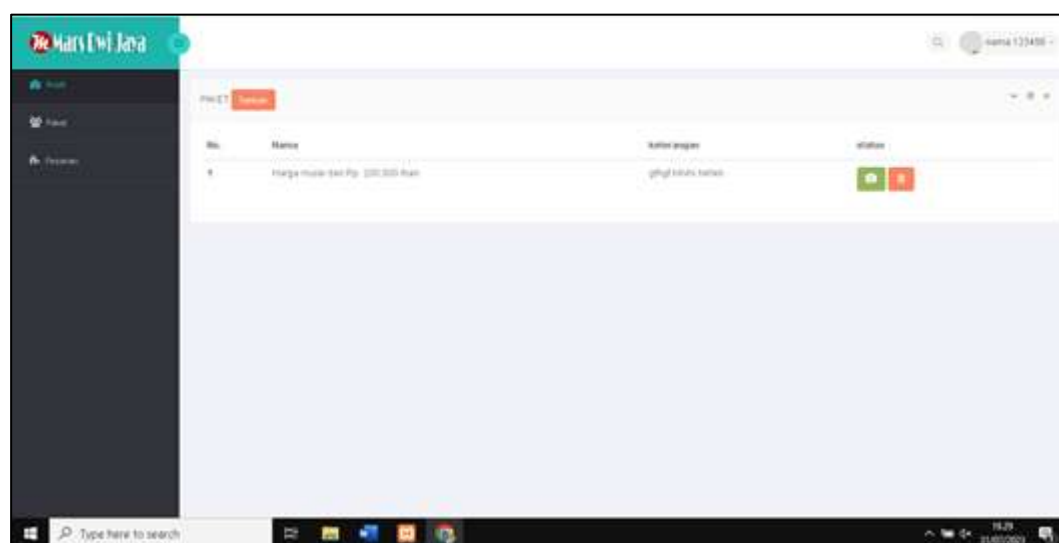


Figure 12. Order Page

The order page contains customer order data. This page displays the order and customer information. Customers can also provide proof of payment by submitting a photo of the transaction receipt.

In addition to the customer user page, there is also an admin user page used by the admin to conduct transactions or document rental or photography activities. To access the admin page, you must first log in. The admin page has several menus: the package page, the customer page, the rental page, the photo page, and the device page.

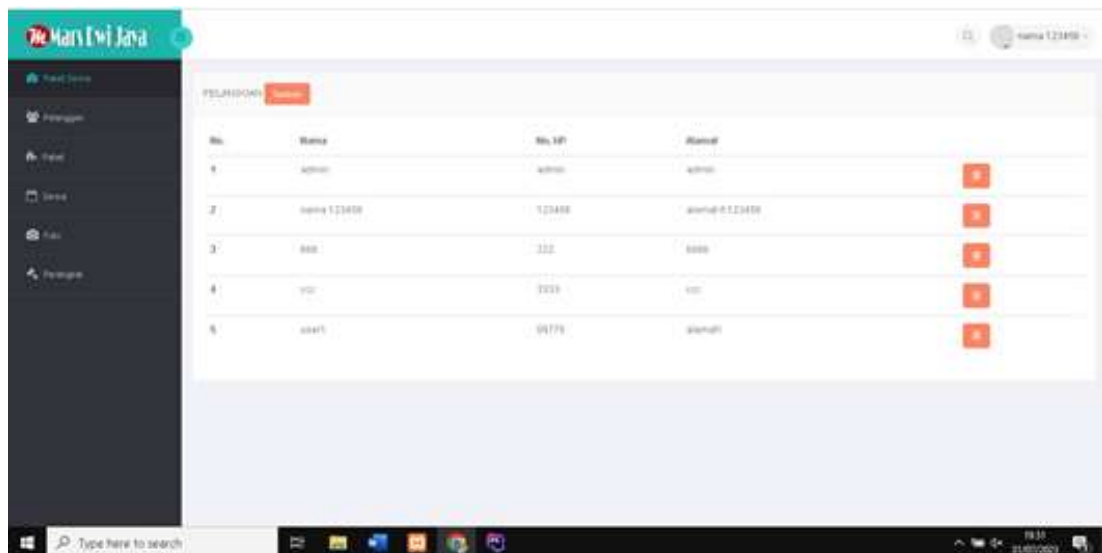


Figure 14. Customer Page

The customer page displays the data of registered customers. This page allows for adding and deleting customers. Customers can also add customer data by registering on the registration page.

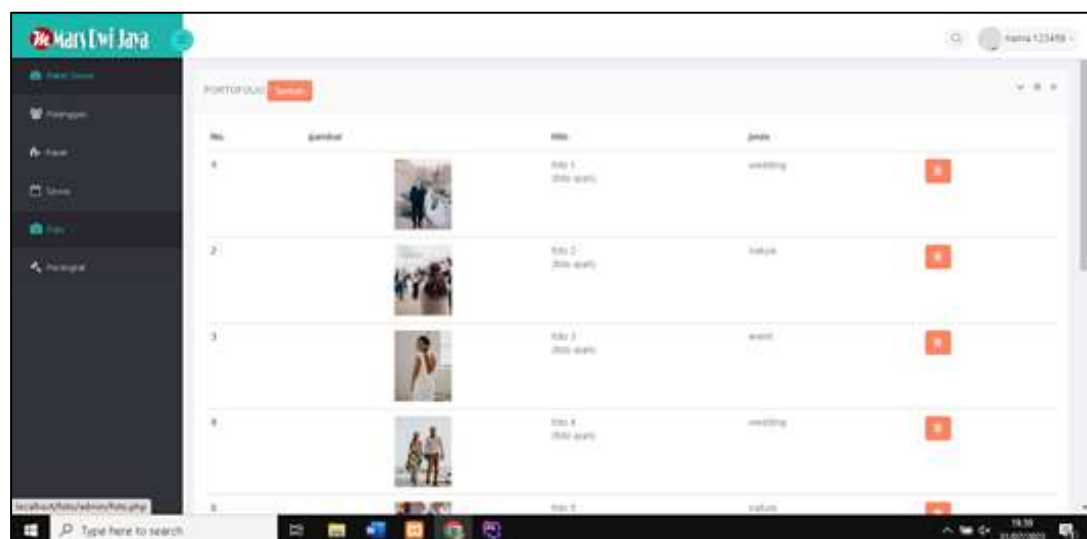


Figure 16. Portfolio Page

The portfolio page is used to display the studio's existing photographs and previous photo shoots. These photos will be displayed on the front page for promotion and exhibition purposes. Admins can add photos by clicking the orange "Add" button at the top. They can also delete photos by clicking the orange "trash can" symbol.

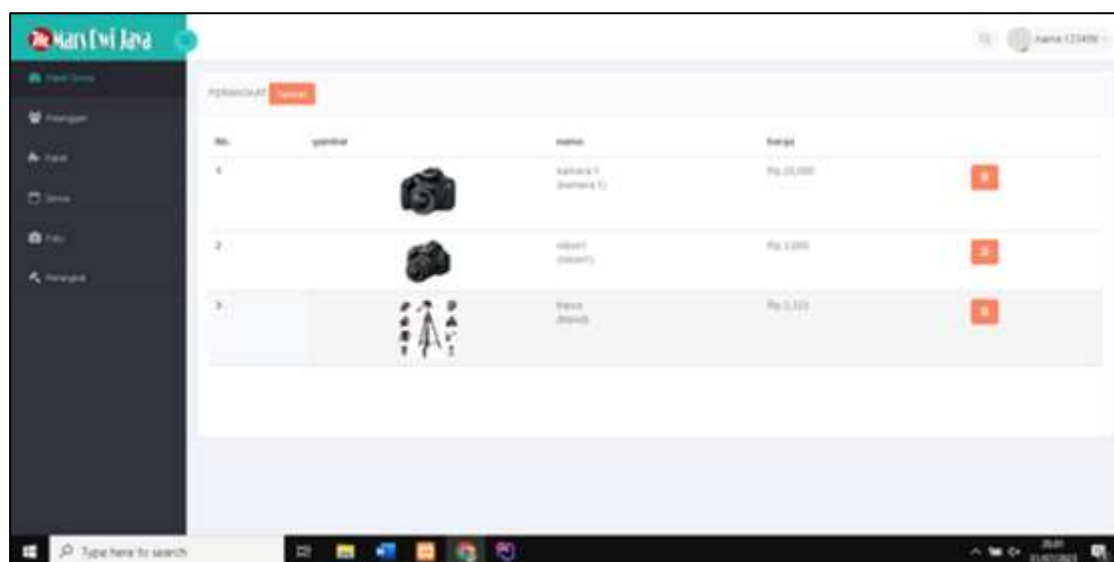


Figure 17. Devices Page

The devices page is used to store the inventory of devices owned by the rental company. Device data contains a photo of the device, the device name, and the rental price. Admins can add devices to their collection by clicking the orange "Add" button, filling out the form, and uploading a photo of the device. It's best to use a PNG image for transparency. To delete data, admins can click the orange "trash can" symbol.

2. Implementation Testing

In this study, testing was conducted using the Blind Box method, which examines the performance of the website's display during use. The display testing of the application performed well and was able to assist with documentation and data storage in the rental facility.

CONCLUSION

Fundamental Finding : The study successfully developed a web-based application for Mars Dwi Jaya Photo Studio using a MySQL database and XAMPP platform, effectively digitalizing service promotion, rental transactions, and inventory management. **Implication :** The implementation of this system demonstrates the potential of web-based solutions to enhance business efficiency, accessibility, and customer satisfaction by reducing manual processes and facilitating online interactions between service providers and clients. **Limitation :** However, the current version of the application lacks integration with secure and diverse online payment systems, which limits its functionality and convenience in handling real-time financial transactions. **Future Research :** Therefore, future studies are encouraged to improve the system by incorporating advanced payment gateways, user authentication mechanisms, and mobile compatibility features to enhance overall usability, scalability, and transactional accuracy.

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