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Web-Based Cashier Application for Dunia Coin Laundry

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Abstract

Dunia Coin Laundry is a laundry service business based ini Simalingkar B, North Sumatra. As the number of customers increases, the manual recording system has become a challenge due to its tendency for errors and delays ini financial reporting. To address this, a web-based cashier application was developed to help record income from customers and operational expenses more quickly and neatly. The development process involved analyzing system requirements, designing using Data Flow Diagrams (DFD) and Entity Relationship Diagrams (ERD) and implementing the system with PHP, HTML, CSS and My SQL through XAMPP. This application allows cashiers and owners to manage transactions, monitor daily finances and generate reports efficiently. Additionally, customers can also check their transaction status through a dedicated dashboard. As a result, the overall laundry operations have become more structured and efficient.

Keywords: Web-Based, Laundry, Cashier, Application, MySQL

Introduction

Laundry businesses are rapidly expanding, particularly in urban areas and near educational institutions. Dunia Coin Laundry, located near Al-Azhar Medan School, serves a growing customer base but still relies on a manual system for transaction and customer data recording. This approach is prone to delays and human errors, which impact service quality and financial reporting. This study aims to develop a web-based cashier application to streamline operational processes, ensure real-time data processing, and provide better management tools for daily transactions and reports.

Literature Review

Application

An application is a software or computer program that operates on a system that is created and developed to perform commands. The term application comes from the English word "application", which can be interpreted as an application or user.

Cashier

A cashier is a person who is fully responsible for handling and managing financial transactions in a business or store. The main responsibility of a cashier is to receive payments from customers and provide the appropriate funds. (Aulia et al., 2021)

Laundry

The term "Laundry" is referred to as a method of cleaning clothes or other textile materials and also as a place for washing clothes or other textile materials. (Aga, 2020)

MySQL

According to (Ghozali et al., 2017) MySQL is a Relational Database management System (RDBMS) that is freely available under the GPL (General Public License) license. SQL is the concept of operating a database, especially for selection or selection and data entry, which allows data operations to be carried out automatically. MySQL excels at querying data compared to other database servers.

XAMPP

XAMPP is software that includes a MySQL server and is supported by PHP as a dynamic website development language, and is equipped with an apache web server that can operate on various operating systems such as OS X, Windows, Linux, Mac and Solaris. (Putra & Nita, 2019)

System Analysis and Design

Running System Analysis

Studying the system through observation and interviews. The laundry process that is currently running at Dunia Coin Laundry is still done manually. Recording transactions is done by employees through a recording book, then reported to the laundry owner five times a day according to a predetermined time. All transaction data is then manually recapitulated by the laundry owner into an Excel file at the end of each month for financial reporting purposes. Customer hands over clothes, cashier weighs and records. Cashier asks if you have paid in full or not. Three copies of the receipt are printed. Clothes are washed. Payments are checked before picking up. Cashier signs the payment. Receipt is handed over to the owner for a report.

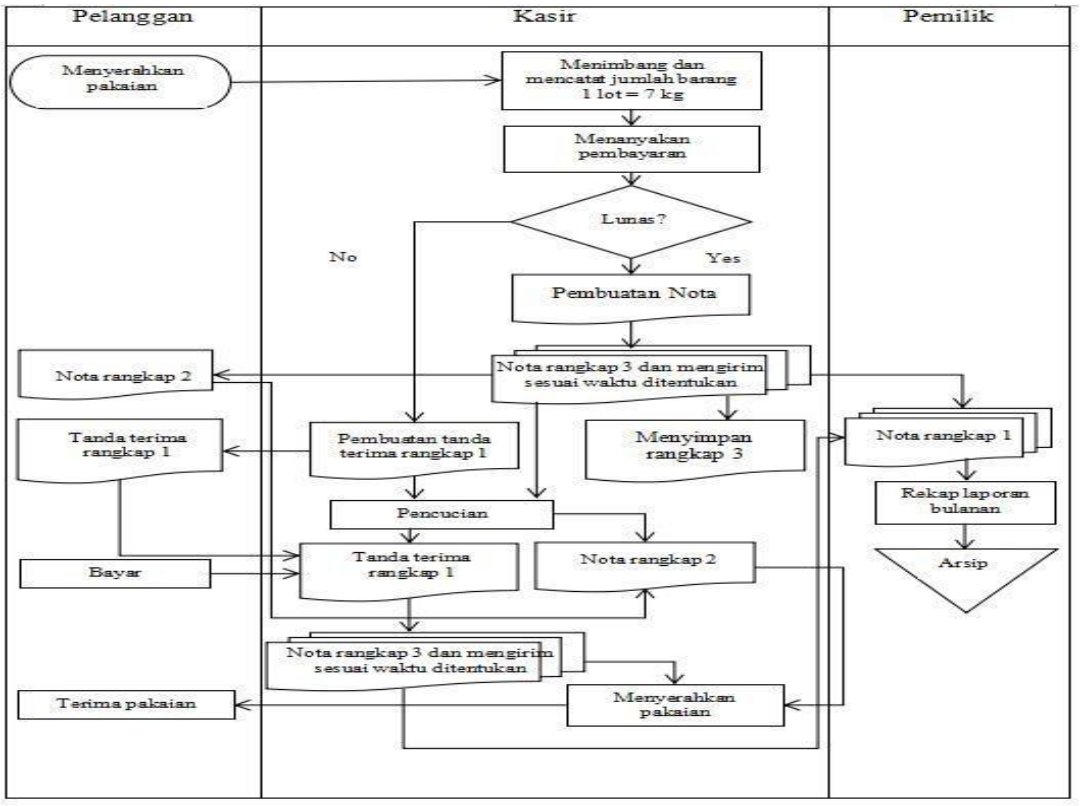

Figure 1 Flowchart in Progress

Proposed System Analysis

In carrying out the laundry cashier application process, the initial stage carried out by the author is to explain the design process using a context diagram in designing the application to be built in the system as follows:

Figure 2 Proposed System Analysis

Results and Discussion

Results

Login Page

The login page is the initial view of the system where users enter their registered username and password before taking full control of the website.

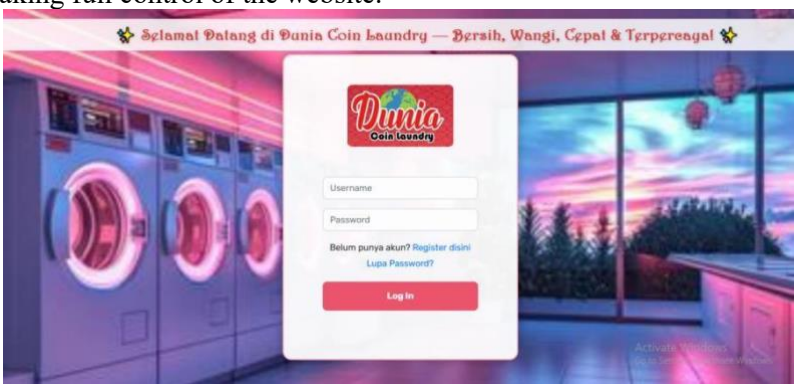

Figure 4 Login Page

Admin Dashboard Page

The admin dashboard page is the admin's main page after successfully logging in to the website, where on this page the admin can see the data processing obtained from the system which includes customer data, user data, service types, laundry transactions, expense data, report data.

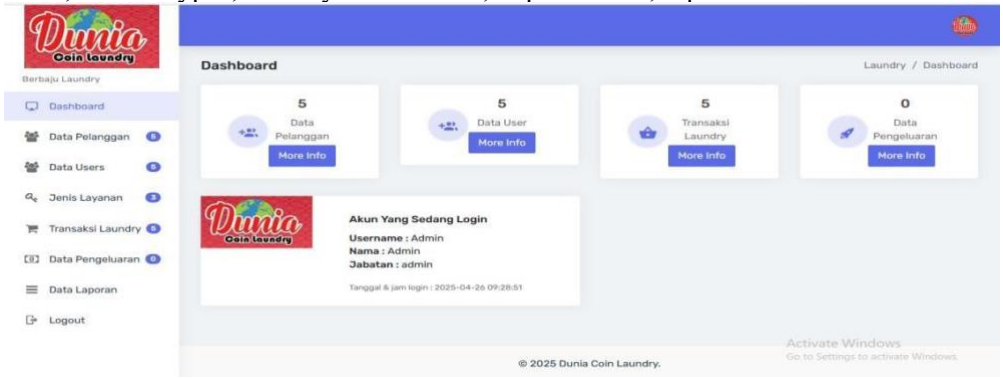

Figure 3 Admin Dashboard Page

Cashier Dashboard Page

The cashier dashboard page is the cashier's main page after successfully logging in to the website, where on this page the cashier can see the data processing obtained from the system which includes customer data, user data, laundry transactions, expense data, report data, and other data.

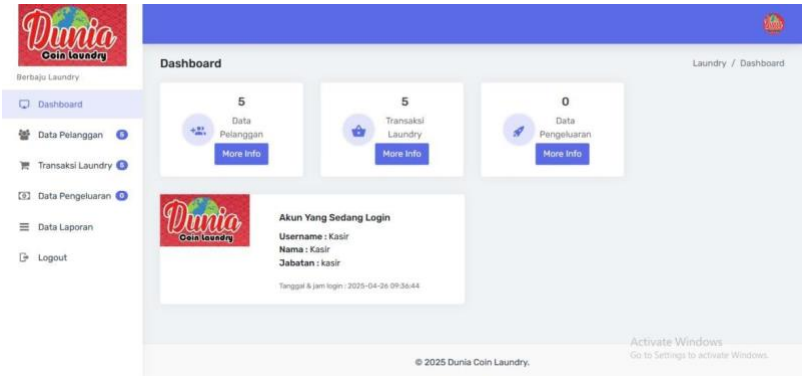

Figure 4 Cashier Dashboard Page

Customer Dashboard Page

The customer dashboard page is the customer's main page after successfully logging in to the website, where on this page the customer can see a summary view of their account information, such as laundry code, name, date of transaction, type of service, weight of clothes, payment or collection status and also the total price.

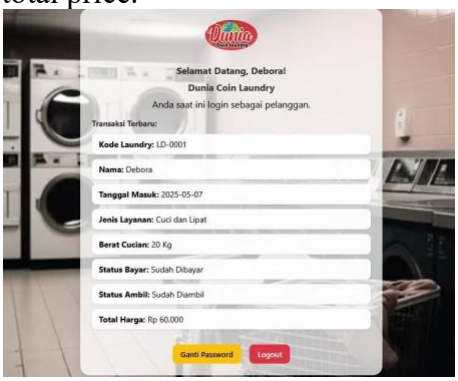

Figure 5 Customer Dashboard Page

Customer Data Menu Page

The customer data menu page is a page where cashiers and admins can view customer data from those who have made transactions at Dunia Coin Laundry.

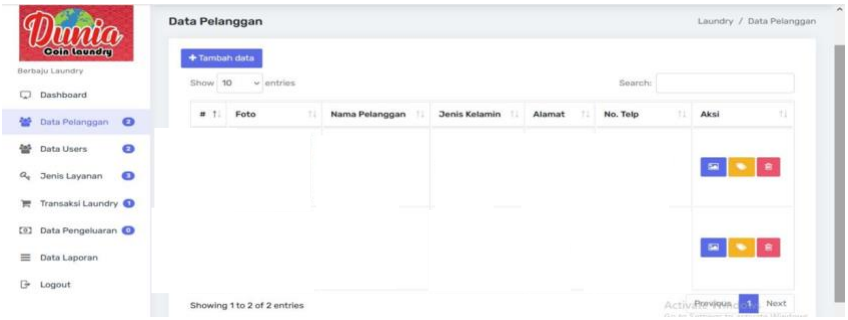

Figure 6 Cashier Dashboard Page

User Data Page

The user data page is used to manage user accounts that have access to the system such as admin and cashier.

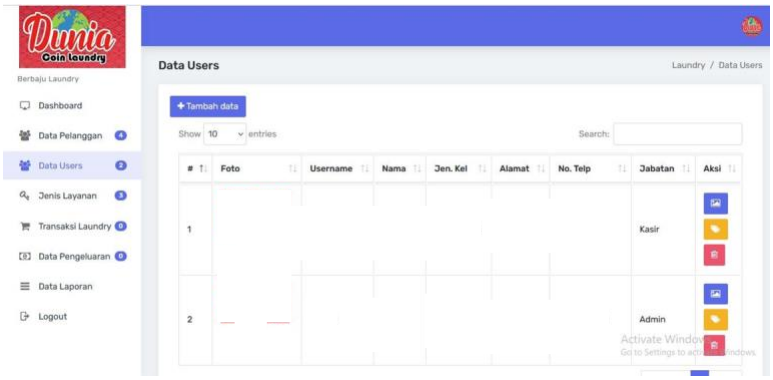

Figure 7 User Data Page

Service Type Page

The various laundry services available at Dunia Coin Laundry, such as wash and fold, dry and fragrance, and economy wash, are organized on the service type page. The name, description and cost of each service can be changed. Units per lot are used by each service, where one lot is equivalent to seven kilograms of clothes.

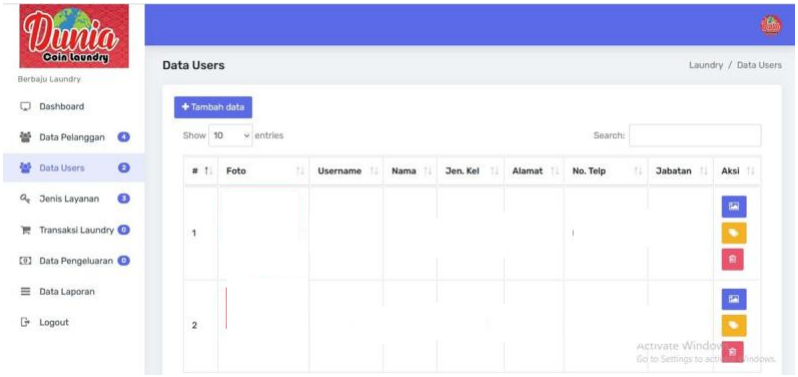

Figure 8 Service Type Page

Laundry Transaction Data Page

The laundry transaction data page is used to record and display all transactions made by customers.

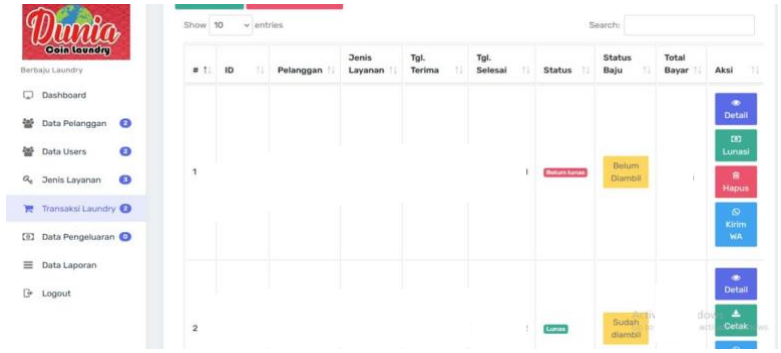

Figure 9 Laundry Transaction Data Page

Expense Data Page

The expense data page is used to record and display all operational costs incurred by Dunia Coin Laundry.

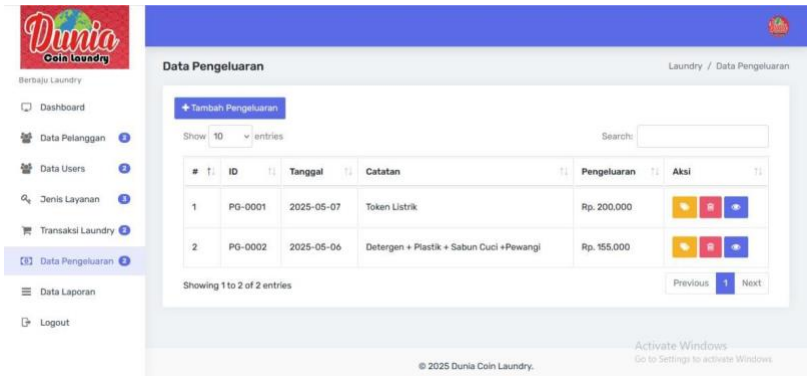

Figure 10 Expense Data Page

Report Data Page

The report data page displays a recap of income and expenses that have been recorded in the system.

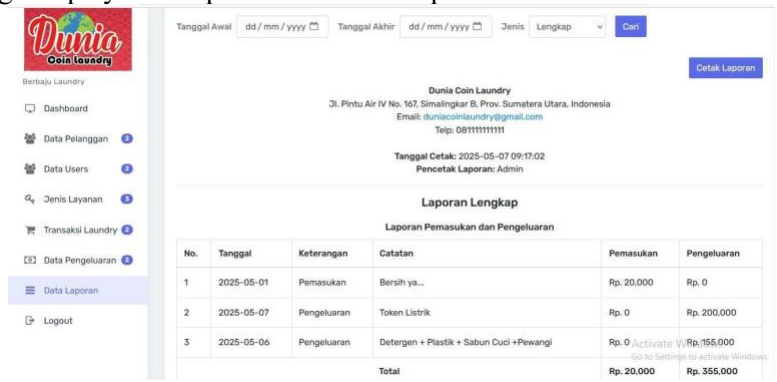

Figure 11. Report Data Page

Discussion

Based on the system that has been designed, the author will describe the system tests carried out on Admin and Cashier. The following is system testing in the form of a balck box.

1. Testing on Admin and Cashier

Table 1. Testing On Admin and Cashier

No	Function Tested	Result	Status
1	Admin enters username and password data	Successfully enter the admin dashboard	*Valid*
2	Complete data (username, name, password, etc.)	Account is successfully saved and can be used for login	*Valid*
3	Admin can view member data that has been registered on the system	1. Editing user data: Admin can edit user data, it will be verified that the user data changes are saved in the system. 2. Deleting user data: Admin can delete user data from the system.	*Valid*
4	Admin adds a new user	Username, password, name, gender, address, phone, job title.	*Valid*
5	Admin changes user data	Change name, title, etc.	*Valid*
7	Admin views customer data	1. Editing customer data: Admin can edit customer data, it will be verified that the customer data changes 2. Delete customer data: Admins can delete customer data from the system.	*Valid*
8	Admin adds customer data	Name, address, phone number, etc.	*Valid*
9	Change address or phone number	Updated customer data	*Valid*
10	Admin edits customer profile photo	Upload photos via webcam or file	*Valid*
11	Service Type Data	1. Editing service types: Admin can edit service type data, it will be verified that the service type changes are saved in the system. 2. Deleting service types: Admin can delete service type data from the system.	*Valid*
12	Change service rates	Service data is updated in the system	*Valid*
13	Select customer, service, lot quantity	Total paid, automatically appears and transaction is saved	*Valid*
14	Settled/un-settled transactions	Proof of transaction is printed according to the data	*Valid*
15	Admin can view expense data on the system	-	*Valid*
16	Admin adds expense data	Date, expense record, rate	*Valid*

2. Testing on Customer

Table 2. Testing On Customer

No	Function Tested	Result	Status
1	Customer enters username and password data	Successfully enter the customer dashboard	*Valid*
2	Complete data (username, name, password, etc.)	Account is successfully saved and can be used for login	*Valid*
3	Old Password, New Password and Confirm Password	Password changed successfully	*Valid*

Conclusion and Suggestions

Conclusion

The results of research on Web-Based Cashier Applications at Coin Laundry World show that:

1. This web-based cashier application will help cashiers record transactions automatically and neatly.
2. This web-based casino application helps owners view income and expense reports quickly and monitor laundry operations more efficiently.
3. The web-based Cashier application can make it easier for customers to track their transactions through WhatsApp notifications and customer login pages.

Suggestions

Suggestions that can be given to the author for the development of this web-based cashier application design are:

1. This application can still be expanded to include a laundry shuttle feature that can be accessed directly by customers through the application, without the need to use services from third parties such as Gojek or Grab.
2. So that the application can be accessed directly by customers and officers via mobile devices, it is recommended to be developed in the form of Android or IOS-based applications.

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