

Design and Development of a Website-Based Sales Information System at Roujee Bag Studio

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Abstract— Sales Information System "Roujee Bag Studio" is an application designed to facilitate the management and monitoring of the sales process at the Roujee Bag Studio company. This application aims to improve operational efficiency, increase the accuracy of information, and strengthen control over the entire value of purchases and sales. The method used in system development is the waterfall method and the black box testing method and interviews. The results of application development show that continuity between data and integrated systems can facilitate company performance. And the existence of a strong authentication system ensures that only authorized parties can access sensitive information. with the implementation of this Sales Information System Roujee Bag Studio is expected to improve operational efficiency and more precise and accurate decision making.

Keywords— sales information system, roujee bag studio, operational efficiency, data security, reporting module.

I. INTRODUCTION

The rapid development of digital technology during globalization, information is indispensable for people's lives. Information systems are very important and a must for business people to be implemented in the business world. The use of computer devices becomes an intermediary between humans and computers in completing a useful job. Design is to provide a complete

picture of related matters. Build is an activity in building or creating a system and improving the system as a whole.

Design is setting up applications or systems that do not yet exist at the institution [1]. The system is a unit formed from a number of interrelated parts trying to obtain complex goals [2]. Information system is a combination of information technology and human activities related to data management systems to support operations and management. Information systems as a combination of humans, hardware, software, databases that convert, deploy, and disseminate information in organizations. Information as an assembly of data processes that are appropriate and useful for users [3].

The purpose of the information system is to obtain information regarding important data that is completed to facilitate consumers in using the data. Data cannot be said to be information data because it must be supported by relevant, timely, accurate. The device on the information system is the benefit obtained from the information system in the business field is the ease of selling that can be felt through various social media platforms and various marketplaces circulating among the public that offer various facilities that are beneficial to sellers and buyers. Website is a set of pages that present information in the form of text data, illustrations, animations, sounds, and others whose characters cannot be changed or can be changed arbitrarily [4]. Hypertext Preprocessor (PHP) is a server-side-scripting computer language that blends through

Hypertext Markup Language (HTML) to create a dynamic website display.

Therefore, instructions from PHP will be implemented in reserves which are then shared with the browser in the form of HTML[5]. MySQL is a database server program that provides instant data transfer, multiple users, and implements normal SQL instructions[6]. Xampp is a web server package that is easily worn across all operating systems. Where the package contains Apache, MySQL, PHP and various other auxiliary libraries [7].

Sales are necessary in advancing every company, because the resulting income can be useful for the continuity of the company including the profits obtained by the company [8]. Sales information system is a system that compiles a series of methods and procedures made to be able to obtain, review, publish, and produce information to assist in collecting provisions related to sales data [9]. The sales information system utilizes the network as a computer intermediary that processes transaction data as sales reports. The sales information system is a system that involves working on all data from sales. So the conclusion obtained by the sales information system is to connect the need to cultivate transactions, assist systems, and scheme problems from a sales system and prepare reports required by external parties.

Financial management as a description of administrative actions carried out at several levels, such as: planning, storage, data collection, use, supervision of the cycle of income in and out of a certain period of time [10]. In the development of fashion trends that have developed in this era, making people do business in the fashion sector to innovate for the development of their business. Therefore, every company owner is competing to find fashion trends that are currently booming. Which with these trends, company owners can imitate and modify in order to produce a new fashion and be accepted by the community. In every company in the fashion sector has its own characteristics that are more prominent for

the company that can attract the hearts of the public.

This applies to the Roujee bag company as a manufacturing company that strives in the field of fashion, one of which is bags. The data recapitulation system at the Roujee company can be said to be still manual and has not used a professional and computerized system properly and optimally. With the establishment of a sales information system for Roujee companies that allows it to provide convenience for employees or users of sales information systems in checking data, managing data, transactions, product stock, sales reports, and ease of financial management effectively, controllably, and maximally [11].

Monitoring is the routine process of collecting data and measuring progress towards achieving program goals, monitoring changes that focus on processes and outputs[12]. The purpose of monitoring is to ensure that policy implementation is in line with goals and objectives, reduce greater risks and change policies if monitoring results require it. Mysql is an open-source database management system that requires basic programming commands in the form of structure query language (SQL) which is popular in the MySQL technology world [13].

CRUD, which stands for Create, Read, Update, and Delete, is a set of basic functions used in database management. CRUD functionality includes creating, reading, updating, and deleting data, and is the essential foundation for most software applications related to data storage and retrieval[14]. QR Code is one of the developments created in Japan to develop one-dimensional barcodes or barcodes by displaying lines, numbers, and letters with two-dimensional barcodes called QR Codes that can accommodate and provide various types of information directly and larger and directly [15].

FIFO (First In First Out) is an inventory management strategy that prioritizes the use of stock items in accordance with the order in which they enter the warehouse. The goal is

to ensure that goods that arrive early in the warehouse will be used or sold immediately, thereby reducing the risk of damage due to prolonged storage [16]. Hypothesis comes from the Greek language which means hupo and thesis. Thesis is a statement or theory, while hupo is a preliminary. So it can be concluded that the hypothesis is a temporary statement [17].

II. METHOD

1. Research Objects and Location

The object of this research is Roujee Bag Studio Solo, located on Jl. Pelangi Raya Kav 8 Blok A No 10-11, Dusun I, Kadilangu, Baki District, Sukoharjo Regency, Central Java 57556.

2. Data Source

a. Primary Source

Primary data sources obtained in this study are through interviews with one of the employees at Roujee Bag Studio who is a user of the application to be built in this study.

b. Secondary Sources

Secondary Data Sources used in this study are sourced from scientific journals that discuss the Sales Information System (SIP) application as a tool that makes it easier for users to record purchase and sales data and conduct monitoring.

3. Population and Sample

a. Population

Population is the totality of research objects or all individuals to be studied in a context. In the context of this study, the authors chose the population as all staff working in the sales and purchasing department of a company.

b. Sample

The sample used in this study consisted of employees in the fields of purchasing, sales, and at Roujee Bag Studio.

4. Data Collection Methods

The data collection technique used in the research is qualitative with the following method:

a. Interview

This method is carried out by asking questions to Roujee Bag Studio employees regarding the information needed by Roujee Bag Studio in recording purchase and sales data and monitoring information.

b. Observation

This method is applied by directly studying what Roujee Bag Studio employees need in recording purchase and sales data and monitoring Roujee Bag Studio sales data.

5. Application Development Methods

This research method uses the waterfall development method, which is a development method starting from the approach used in descriptive research. And the resulting data will be formed qualitatively. Descriptive research aims to make descriptions systematically, factually, and accurately. Qualitative data can provide answers to the research conducted. The waterfall method is a software development process that is carried out sequentially, which can be analyzed as water that continues to go down (like a waterfall) through phases, namely planning, modeling, implementation and testing. In this study the authors analyzed the benefits of a website-based sales information system as a medium for data management and company monitoring for users. In this case the author will design a website-based Sales Information System Application at Roujee Bag Studio.

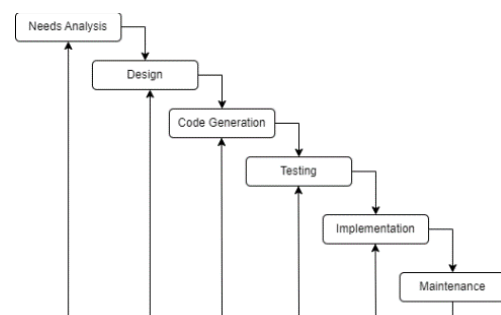


Figure 1. Waterfall Flowchart

III. RESULTS AND DISCUSSION

A. RESULT

Use Case is one type of UML (Unified Modeling Language) diagram used to show the interaction between actors and the system. Use Cases can help explain the types of interactions that occur between system users and the system itself [18]. Use Case is a type of UML (Unified Modeling Language) diagram that illustrates the interaction between actors and the system. Use Case helps explain the types of interactions that occur between system users and the system itself. The functions of Use Case are: Shows system activities sequentially, describing business processes and the sequence of activities in a process. Serves as a bridge between creators and consumers to explain a system.



Figure 2. Use Case Diagram of Sales information System Application “Roujee Bag Studio”

The flow of the Sales Information System process from the Owner's side is depicted in Figure 3. The beginning of the process in using this dashboard is login. Users in the role of company owner, can create data and monitor the development of sales that have been managed by their workers. What distinguishes access rights as an owner with access rights for his workers, namely access rights as an owner can see the entire menu such as the purchase menu, sales, events, financial reports, and there are also menus that are only intended for owners such as the profit menu. The menu display in the Sales

Information System application system is a Create, Read, Update, and Delete menu or called CRUD. In the profit menu section, in the profit menu, the owner can monitor the profit received, in this profit using the FIFO concept or what is called First In, First Out. Even with the addition and change of data. If the item that was first inputted has not been sold out, it will still be reduced in the data that was registered first.

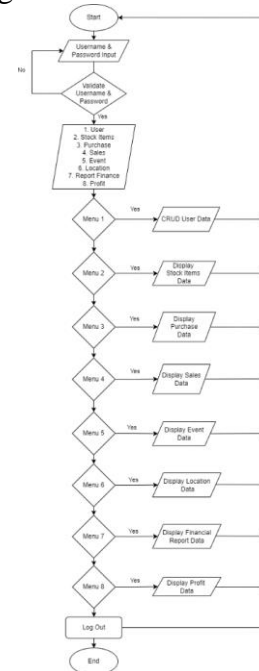


Figure 3. Flowchart of Owner Side Sales Information System

The flow of processes in the Sales Information System application "Roujee Bag Studio" from the Purchasing side which is depicted in Figure 4. The beginning of the process in using this application is logging in. Users on the purchasing side can enter username and password data that has been registered by the owner. Next, the system verifies the suitability of the data provided. After the data is verified, the system will direct the user to the menu display that is permitted or in accordance with his access rights or role. On the purchase side, it has three menus, namely the purchase menu, user, stock items. Where users can enter or add incoming item data relating to product codes, item names, cost prices, item images, barcodes. For the user menu, users can see the user's own username and can edit the

password. On the stock menu, users can monitor the stock of goods and goods at the exhibition or event.

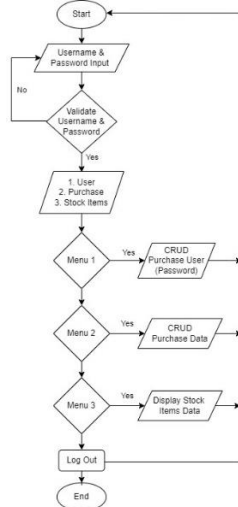


Figure 4. Flowchart of Purchase Side Sales Information System

The process flow in the Sales Information System application from the Sales side is depicted in Figure 5. The beginning of the process in using this application is logging in. Users on the sales side can enter username and password data that has been registered by the owner. Next, the system verifies the suitability of the data provided. After the data is verified, the system will direct the user to the menu display that is permitted or in accordance with their access rights or roles. On the sales side, there are four menus, namely the user menu, dashboard, sales, exhibitions or events, locations, stock items, financial reports.

On the user menu, users can see their own username and can change their password. Users can enter or add data on items sold every time the item is actually sold to the consumer's hands, whether the sale occurs through online, offline or during an exhibition. If the Roujee Bag Studio company holds an exhibition that requires a lot of goods, users can enter the data of the goods issued on the exhibition or event menu. If the item is sold during the exhibition, the item data can be entered into the sales menu. In addition, on the location menu, users can enter or add detailed information regarding the location of the sale of goods and the location of the exhibition to be held. Users

can see the amount of stock that is running low on the stock menu, so that it is easier to restock and can see the financial reports obtained.

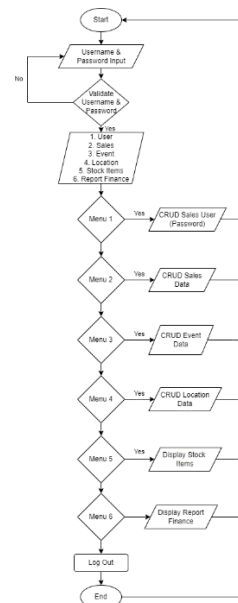


Figure 5. Flowchart of Sales Information System

B. DISCUSSION

In developing the Sales Information System application website, you must know what prospective users want so that the sales information system application can make it easier for prospective users to manage and display the expected data. Several things can be done by website developers to find out whether the website created has helped or facilitated the performance of prospective users in managing data. And here is an application that displays data and performs Create, Read, Update, and Delete (CRUD) operations on the application website that has been created:

The main page of the application is the login page that users will see to be able to enter a username and password to access this system. With a username and password that has been created by the business owner, who has a role for each user consisting of the role of owner, purchase, sales.



Figure 6. Home Page

When successfully logged in as the owner role, the user is directed to the dashboard menu display in Figure 7.

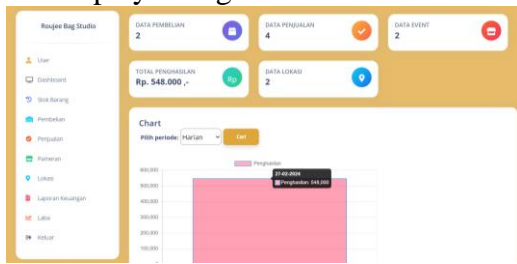


Figure 7. Dashboard Page Owner Side

The owner can add new users for his prospective employees so that they can access the roujee bag studio sales information system application in Figure 8.

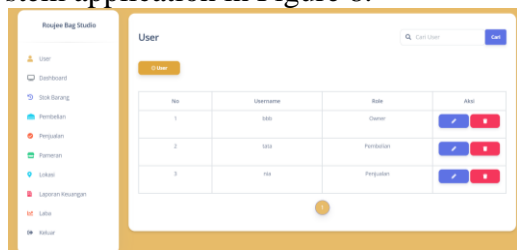


Figure 8. User Page

The owner can view and monitor the stock of available and sold items, and can view items at the exhibition in Figure 9.

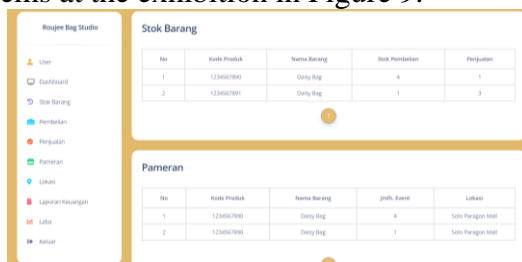


Figure 9. Stock Items Page

The owner can view purchase data that has been created by employees with a purchasing role, and there is a search bar to search for the required purchase data in Figure 10.

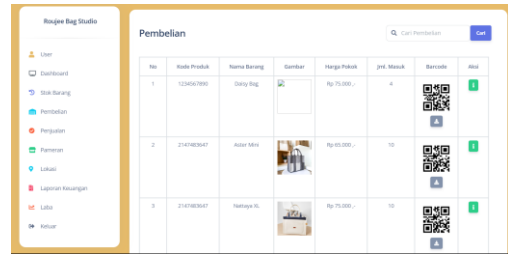


Figure 10. Stock Items Page

The owner can view sales data that has been created by employees with a sales role, and there is a search bar to find the sales data needed in Figure 11.



Figure 11. Sales Page

The owner can view exhibition data that has been created by employees with a sales role, and there is a search bar to search for the exhibition data needed in Figure 12.

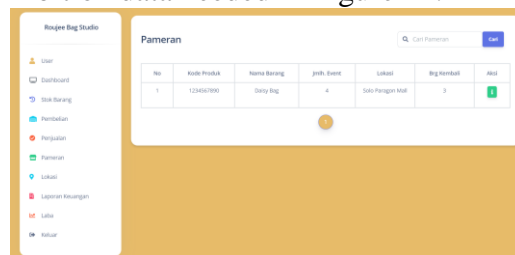


Figure 12. Exhibition Page

The owner can view location data that has been created by employees with a sales role, and there is a search bar to search for the location data needed in Figure 13.

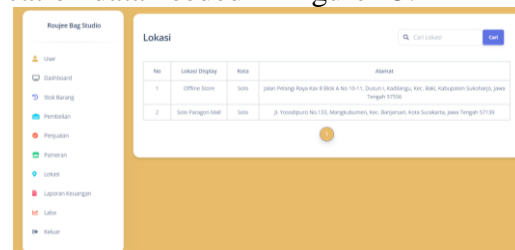


Figure 13. Location Page

The owner can view financial statement data based on products that have been sold in Figure 14.

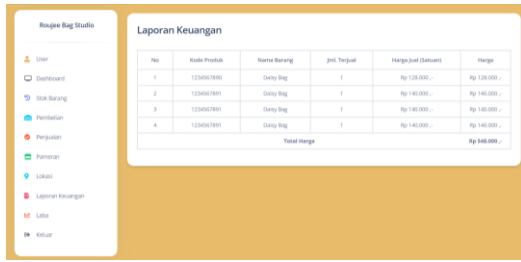


Figure 14. Finance Report Page



Figure 18. Purchases Page

The owner can view profit data based on selling price and cost of products in Figure 15.



Figure 15. Profit Page

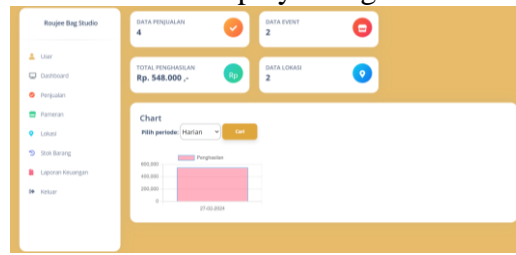


Figure 19. Dashboard Page

When successfully logged in as a purchasing role, the user is directed to the purchase menu display. Users can add purchase data based on purchase CRUD which consists of product code, item name, price, image, barcode. for barcodes automatically appears when the user has saved new purchase data in Figure 16.

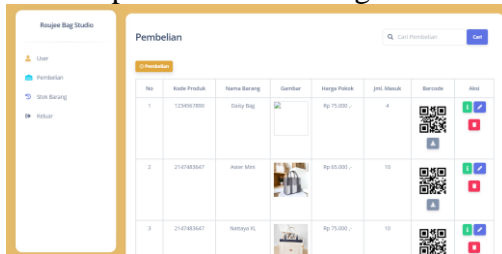


Figure 16. Purchases Page

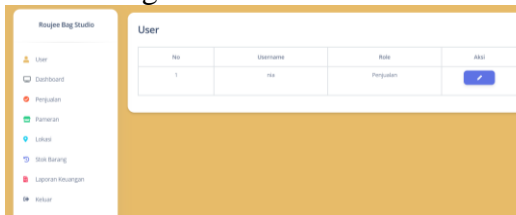


Figure 20. User Page

On the user menu, users can view their own account and can edit the password as desired in Figure 17.



Figure 17. User Page

On the stock menu, users can view and monitor the stock of goods available and sold and monitor the items in the exhibition in Figure 18.

On the sales menu, users can add and display item sales data consisting of product code, item name, selling price, number of items sold in Figure 21. And there is a search bar to search and display sales data.



Figure 21. Sales Page

On the exhibition menu, users can add data on ongoing exhibitions related to product code, item name, number of items for the exhibition, location. And there is a search bar to search and display the data needed in Figure 22.

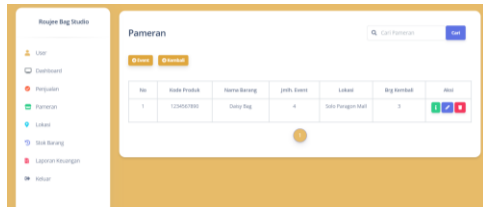


Figure 22. Exhibition Page

On the location menu, users can view and add sales location data related to the location of the exhibition, city, and address in Figure 23. And there is also a search bar useful for searching and displaying location data.

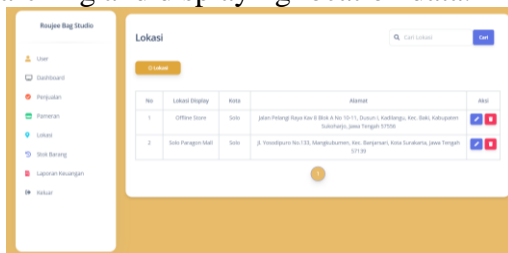


Figure 23. Location Page

On the stock menu, users can view and monitor the stock of available items and sold items, and can monitor items at the exhibition in Figure 24.



Figure 24. Stock Items Page

On the financial report menu, users can see the income earned from goods sold in Figure 25

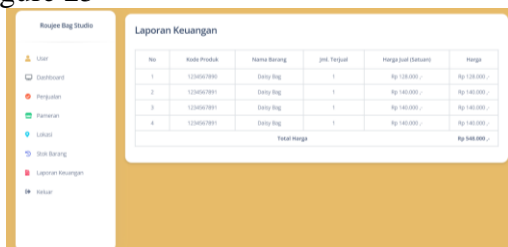


Figure 25. Finance Report Page

The system that has been developed is tested using the black box testing method which shows that the application functionality can operate as expected and interviews with employees involved in sales as can be seen in table 1. From the results of these interviews it can be concluded that the system meets the needs of the company and provides the information needed

regarding purchases and sales. The menu and appearance of the application are considered easy enough to understand and the existence of access rights in the application is considered to reduce the level of fraud between employees.

Table 1. Interview with Staff

No	Question	Answer
1.	Does this application meet the needs of the company?	Already
2.	Do you feel this app provides the information you need?	Yes, because this app displays important things related to purchases and sales.
3.	Are the available menus and displays easy to understand in use?	Easy enough to understand
4.	Does this app meet the company's needs?	Already fulfilled
5.	Is the information displayed on the application easy to understand?	It is quite easy to understand, and there is clear information.
6.	Whether the existence of these access rights can reduce the level of fraud between employees.	Yes, it is very helpful because it can avoid unwanted things.

IV. CONCLUSION

Roujee Bag Studio Sales Information System application is an integrated solution that gives owners full control over the operational aspects of the business. With the ability to monitor all sales activities, purchases, and events, owners can make strategic decisions based on accurate data. The role-based access feature ensures data security and gives owners the flexibility to determine the appropriate level of access for each employee. This not only improves information security but also simplifies task delegation within the organization.

Efficient inventory management allows owners to optimize stock items, avoiding shortages or excess inventory. Real-time financial monitoring that provides a clear picture of the financial health of the business.

With this app in place, owners can take proactive steps in increasing operational efficiency and improving overall business performance. This not only provides advantages in day-to-day management but also opens up opportunities for long-term growth through in-depth data analysis. In conclusion, the Roujee Bag Studio Sales Information System application becomes a critical tool in dealing with business

challenges, providing owners with the necessary tools to make timely and strategic decisions.

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