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# Design Of Accounting Information System for Transaction Management and Financial Reports at the Medan Pratama Haji Clinic

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ABSTRACT

The rapid development of information technology requires healthcare institutions to digitize their financial data management to make administrative processes more effective and accurate. Medan's Pratama Haji Clinic currently still uses a manual system for recording transactions and preparing financial reports, resulting in frequent reporting delays, recording errors, and difficulties in tracking historical data. Based on these conditions, this study formulates three main problems, namely: how is the manual accounting information system currently implemented at Medan's Pratama Haji Clinic, what are the obstacles faced in managing financial reports manually, and how to design an accounting information system for managing transactions and financial reports. The purpose of this study is to design and build a computer-based accounting information system that can assist the process of recording transactions and preparing financial reports effectively at Medan's Pratama Haji Clinic. The research method uses the System Development Life Cycle (SDLC) with stages of analysis, design, implementation, and testing. Data were obtained through observation, interviews, and documentation. The system was designed using PHP and MySQL with the help of DFD, ERD, and Context Diagram tools. The results show that the system built is able to integrate all financial transaction processes and produce reports automatically, accurately, and efficiently. This system also facilitates management's oversight and decision-making. The study concluded that a computer-based accounting information system can replace manual systems and improve the efficiency of the clinic's finance department. A recommendation for further research is to develop this system with a web-based automated reporting module to make financial information more transparent and accessible.



## INTRODUCTION

The development of information technology has had a significant impact on various aspects of life. It plays a crucial role in work processes, where to increase productivity and efficiency and enable professional work, a company information system is required. A superior company must have an effective management and accounting information system that can provide timely and accurate information to its users, which can be used as a tool to help achieve the company's main goals (Muslih, 2022).

Utilizing information systems in financial administration greatly supports an organization in terms of effectiveness, efficiency, accuracy, and data management (Riyadli et al., 2020). The use of technology can support daily activities. As we can see, nowadays, the need to obtain information has become very important. Similarly, in an organization, the presence of an information system is very much needed for organizations that aim to seek profits in the field of financial reporting (Abdullah & Kurniawan, 2021). Financial reports are a very important tool for obtaining data on financial statements and achievements made during a certain period. This information has a significant influence on decisions related to the company (Arsana & Lestari, 2021).

The difficulty of manually recording financial reports makes it hard to find existing data. Therefore, computerized data management emphasizes the importance of database management and application information system management so that the process of recording, searching, and reporting financial data can be done more quickly, accurately, and efficiently (Aswiputri, 2022). To achieve this, an accounting information system is needed to prepare for potential future problems, reduce existing obstacles, and facilitate data management. An accounting information system is also capable of effectively managing data related to company operating costs and can provide the necessary information related to company operating expenses (Rahmadani et al., 2020).

The Haji Medan Primary Clinic still uses a manual financial reporting system utilizing Microsoft Excel. The work environment, which is still based on Microsoft Excel, has limitations in terms of data integration and real-time accessibility, which can affect the efficiency and accuracy of the financial reporting process. To overcome this problem, an appropriate strategy is needed, namely by developing a financial information system that can support more efficient financial reporting and recording (Sukmawati, 2020). Frequent obstacles and problems encourage researchers to design accounting information systems for managing transactions and financial reports. These systems aim to simplify work and improve transparency in financial reports. The benefits of using these applications include ease of use for users, making it easier for them to access the information they want.

## METHOD

This study uses a qualitative descriptive method with an accounting information system development approach. This approach was chosen because it provides a comprehensive overview of the manual system used at the Haji Medan Main Clinic, as well as a basis for designing a new system that is more effective and efficient. This study began with the problem identification stage to identify obstacles that arise in managing transactions and financial reports. Based on the results of observations, it was found that the transaction recording process was still carried out manually using Microsoft Excel, which caused various obstacles such as delays in reporting, recording errors, and difficulties in tracking old data. Therefore, a computer-based accounting information system capable of managing financial data quickly, accurately, and in an integrated manner was needed.

The next step is to collect data through direct observation, interviews with the finance and administration departments, and documentation of transaction archives and financial reports. The data obtained is used to analyze the current system and determine the requirements for the new system. The analysis is conducted to identify functional requirements, data flows, and business processes that must be accommodated in the system. Based on the results of this analysis, the system is designed using tools such as Context Diagrams, Data Flow Diagrams (DFDs), and Entity Relationship Diagrams (ERDs) to describe the data structure, information flow, and relationships between entities. The purpose of this system design is to produce a design that is easy to understand, structured, and can be applied according to the clinic's needs.

The system implementation stage was carried out using the PHP programming language and MySQL database with the support of the XAMPP platform as a local server. The system was developed to record all financial transactions, manage user data, and generate financial reports automatically. Testing was carried out using the System Development Life Cycle (SDLC) approach to ensure that all system functions ran properly and met user requirements. An evaluation was conducted with the finance department to assess the effectiveness of the system. The results of the study showed that the system built was able to improve work efficiency, speed up the reporting process, and minimize errors in financial data processing at the Haji Medan Primary Clinic.

## RESULTS AND DISCUSSION

### Results

### Proposed System Design

By analyzing and monitoring the existing system, a design for an Accounting Information System for Transaction Management and Financial Reporting was created at the Medan Pratama Haji Clinic. This system can assist employees in managing transactions and financial reports more effectively and efficiently. Designed using the PHP programming language and a MySQL database, the system is expected to assist employees and simplify the process of recording financial reports.

### Proposed System Flowchart

The following is the proposed design of the Accounting Information System for Transaction Management and Financial Reports at the Medan Hajj Pratama Clinic, as follows.

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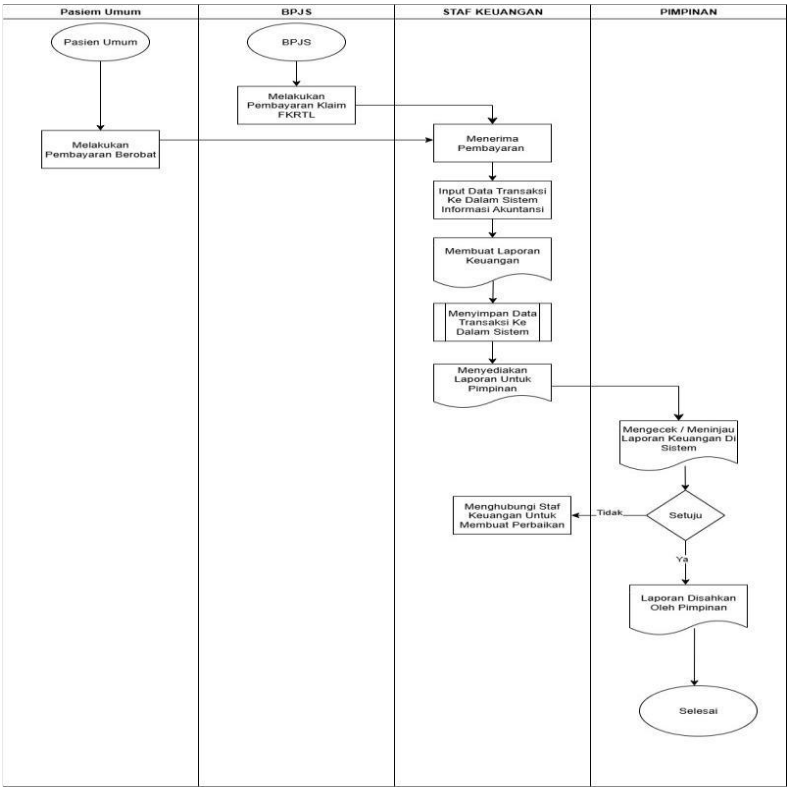

Figure 1. Flowchart of the Proposed System

The following is a flowchart for designing the financial reporting system that occurred at the Medan Haji Pratama Clinic in the image above.

1. General patient
   a. Making medical payments
2. BPJS
   a. Make FKRTL claim payments
3. Financial staff
   a. The finance staff receives the payment.
   b. The finance staff logs into the system.
   c. The finance staff inputs the transaction data into the system.
   d. The finance staff creates a financial report.
   e. The staff saves the financial report to the database.
   f. The finance staff creates a report for management.
   g. If the report is not approved, the management will contact the finance staff to return it.
4. Leader
   a. The manager logs into the system.
   b. The manager reviews the financial report.
   c. If they disagree, they contact the finance staff.
   d. If they agree, they approve the financial report.

**Context Diagram**

A context diagram is the most basic representation of the information flow of a system. It defines the situation in which the system functions; namely, who the users are, what data is entered into the system, and what data is received by the system.

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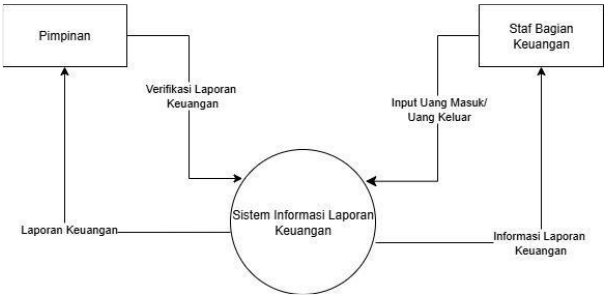


Figure 2. Context Diagram

The following is an explanation in Figure 2 of how the financial report context diagram works:

1. Financial Reporting Information System
   a. Receives transaction input from finance staff
   b. Receives payment data from BPJS and general patients
   c. Produces financial reporting information
   d. Presents financial reports to management for review and approval
   e. Saves report status
2. Finance staff
   a. Inputs financial reporting transactions into the system
   b. Receives financial reporting information generated by the system for review
3. Management
   a. Receives financial reports from the system
   b. Approves or rejects reports

**Data Flow Diagram (DFD) Level 0**

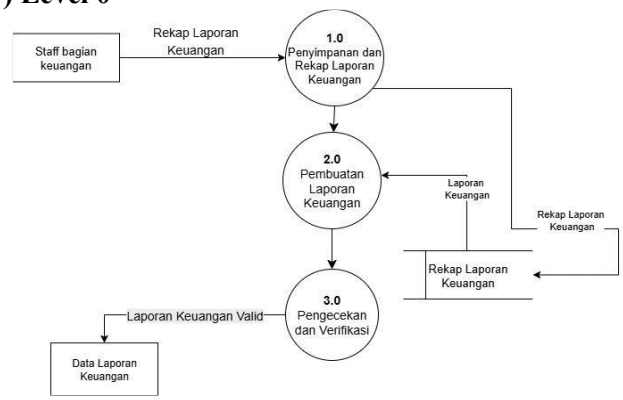


Figure 3. Data Flow Diagram (DFD) Level 0

The following is an explanation of the process in Figure 3 DFD Level 0 as follows:

1. External Entity
   a. The Finance Department staff is tasked with providing a Financial Report Summary as initial input to the system.
2. Financial Report Storage and Recapitulation (Process 1.0)
   a. Receive summary reports from finance staff.
   b. This data is then stored and processed to form the basis for report creation.
   c. The summary results are then forwarded to the next process.
3. Financial Reporting (Process 2.0)
   a. Processing existing report summary data into Financial Reports.
   b. The output in the form of a financial report is then sent to the checking stage.
4. Checking and Verification (Process 3.0)
   a. Reports that have been created are verified to ensure validity and accuracy.

b. If it is valid, the final result will be a Valid Financial Report which will be saved as Financial Report Data.

**Database Design**

Database design is the depiction, planning, and sketching or arrangement of several separate elements of a complete and functional unit (Putra & Juliana Putri, 2020). Database design is carried out using ERD to describe the relationships between tables. Each table will reflect the main entity and the relationships between entities needed to support the system's operations. The following is a depiction of the database table of this system.

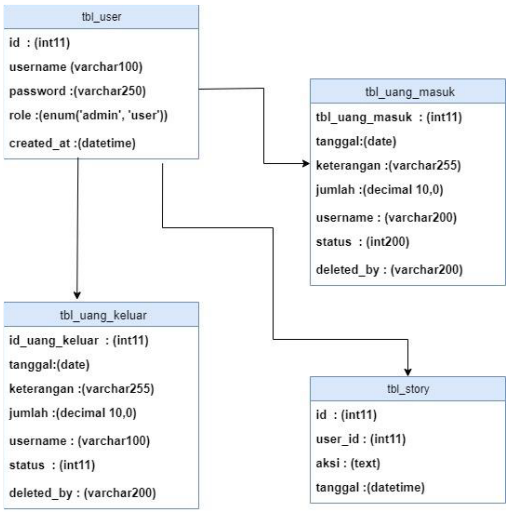


Figure 4. Database Design

The flow of relationships between tables in Figure 4 is as follows:

1. tbl_user → tbl_uang_masuk
   One user can record multiple income transactions (One-to-Many relationship). The username and deleted_by fields indicate the identity of the user recording and deleting the data.
2. tbl_user → tbl_uang_keluar
   A single user can record multiple expense transactions (one-to-many relationship). Just like cash receipts, the username and deleted_by fields connect the user.
3. tbl_user → tbl_story
   A single user can have multiple activity records (One-to-Many relationship). This relationship ensures that every user action in the system is documented.

**Discussion**

**Login Page View**

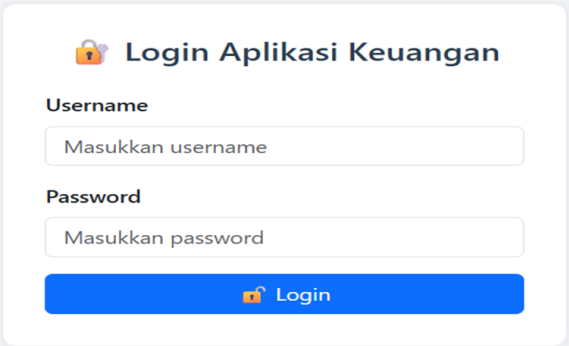


Figure 5. Login Page View

The login screen in Figure 5 serves as the user's primary gateway before entering the system. This form typically includes username and password input to ensure only authorized users can access the system. With a login, data and financial transaction security can be further safeguarded because only registered users have access rights.

**Dashboard Page View**

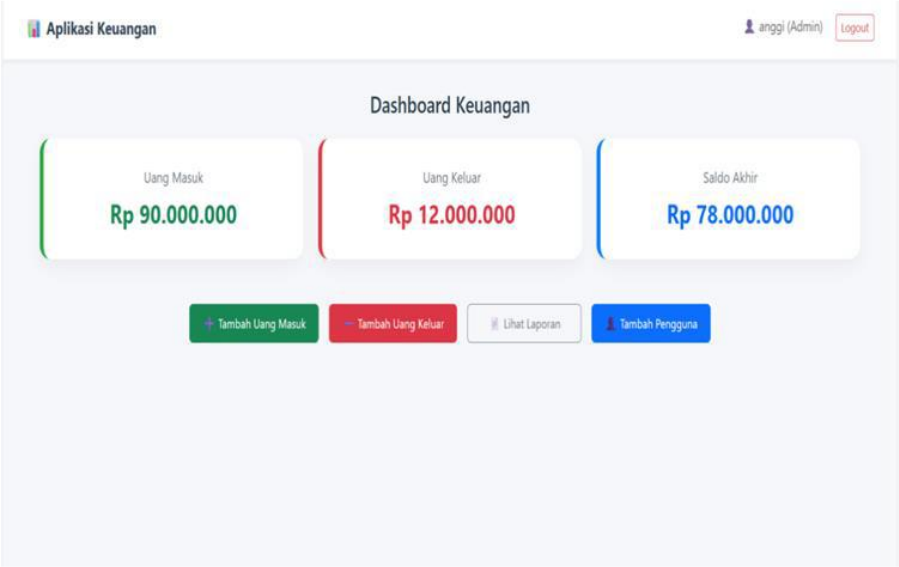


Figure 6. Dashboard Page View

The dashboard in Figure 6 is the main display after a user successfully logs in. It displays a summary of important information such as the number of transactions, balance, recent income, and expenses. The dashboard also provides a navigation menu for easy access to other features, allowing users to quickly and comprehensively view their financial situation.

**View the Money In and Money Out Input Page**


Figure 7. Cash Input Page Display


Figure 8. Cash Out Input Page Display

The input displays in Figures 7 and 8 are used to record financial transactions, both income and expenses. These forms typically contain fields such as transaction date, transaction type, description, amount, and category. The goal is to ensure all financial data is stored neatly and systematically, making recording and reporting easier.

**Financial Report Page View**

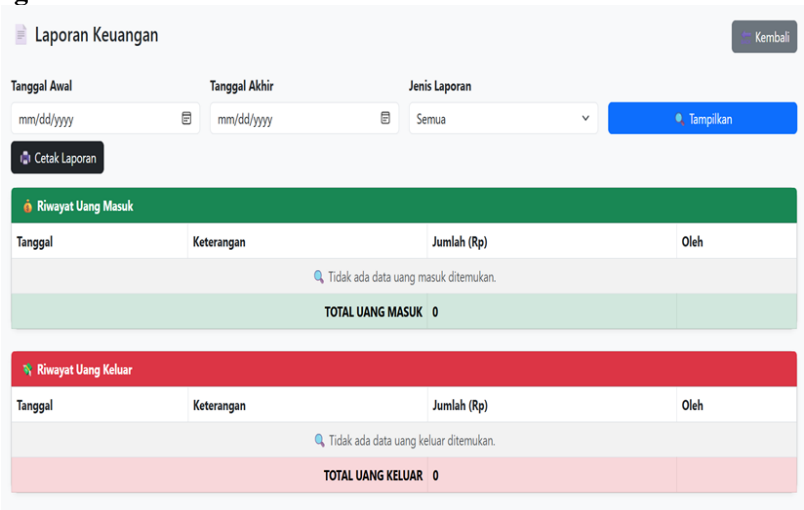


Figure 9. Financial Report Page View

The report display in Figure 9 displays a summary of the transaction data entered into the system. This report can be in the form of a table or graph, detailing income, expenses, and the ending balance. The report feature helps users evaluate financial conditions, make decisions, and serves as the basis for official reporting when necessary.

## CONCLUSION

Based on the research results, it can be concluded that the designed accounting information system can replace the manual Microsoft Excel-based recording process at the Medan Pratama Haji Clinic. This PHP and MySQL-based system simplifies recording income and expenses, generates real-time financial reports, and improves data efficiency, accuracy, and security. Thus, this system helps management make faster and more accurate decisions.

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