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Research Article

Information System for Submitting Payment for Operational Costs of PT Selamat Makmur in Tangerang

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Abstract

Challenges arise from the manual submission of operational cost payments using Microsoft Excel. This manual process is susceptible to issues in payment submissions, complicates the tracking of approved payments, and lacks automated payment reminders. The author utilizes two approaches: the Data Collection method and the Software Development method. The Data Collection method entails conducting observations, interviews, and literature reviews. In regards to software development, the waterfall model is highlighted for its straightforward, sequential implementation. By adopting this system, PT. Selamat Makmur aims to streamline the submission and payment of operational costs, reduce errors, and improve transparency and accuracy throughout the company's operational cost management. This system is also vital for ensuring the efficient functioning of the cosmetic production process and supporting the company's growth in a competitive market.

Keywords: Information system, Operational cost payments, Automatic payment reminders

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1. Introduction

As PT. Selamat Makmur rapidly expands, it encounters challenges in effectively and promptly managing the submission and payment of operational costs. "Operational costs refer to the expenses incurred to carry out the company's activities to achieve its objectives" (Fathony and Wulandari, 2020). These operational costs typically include labor expenses, costs of inventory and raw materials, energy and utility expenditures, transportation and logistics fees, administrative and general expenses, maintenance and repair costs, as well as tax and licensing expenses.

Manual payment submissions at PT. Selamat Makmur are categorized into three areas: internal payment submissions, tax submissions, and import submissions, all of which are managed through Microsoft Excel. The internal payment file includes entries for cash advance realizations, logistics, stationery purchases, and permit applications. The tax submission file comprises raw material purchases, packaging expenses, BPJS Health and Employment contributions, as well as electricity and telephone payments. Lastly, the import payment submission file is utilized to create payment requests for imported goods from China.

Each division or department submits a payment request to the finance department using a physical form. This manual system often leads to the loss of submitted forms and delays in processing payment requests. This process also makes it difficult to monitor and control the budget, as information related to submissions and payment status is not always well-recorded and is not easily accessible. As a result, irregularities often occur in the submission, processing, and approval of payments, which can negatively impact the company's smooth operation
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The finance staff manually archives all payment application documents and payment proofs. In this process, it is often difficult to obtain proof of payment that has already been made. ‘‘A computerized accounting information system has become a very important necessity for both institutions and private companies, especially in financial calculations. If a company does not provide a computerized accounting information system for financial calculations, then institutions and private companies cannot perform calculations and present financial reports quickly’’. A system that can integrate and simplify the process of submitting operational cost payment requests is greatly needed, encompassing submission, approval, and payment (Wahyuni, 2023). With this system, it is hoped to increase efficiency, accuracy, and transparency in managing the company's operational expenditures. In addition, the development of this operational cost payment request information system is a strategic step in supporting the company's vision and mission to achieve sustainable efficiency and growth. This research aims to design a program that can assist in the timely monitoring of budgets, minimize the risk of document loss, and expedite the administrative process at PT Selamat Makmur.

2. Literature Review

The system functions as a cohesive entity, interconnected to perform specific activities collaboratively in pursuit of a defined goal (Fitriyana and Sucipto, 2020). Information systems consist of a network of related elements or components that collect, store, process, and distribute information, which ultimately supports decision-making processes (Nistrina and Lestari, 2024). A website serves as a compilation of pages designed to present information, videos, audio, and a combination of these, both static and dynamic, forming an interconnected structure where each page is linked through hyperlinks (Ramadhani Airmas Sahid, Hasna Nabila, and Prastya 2024). The development of the web-based financial system design at PT. Hevea Anugrah Natura aims to support the accounting and finance department (Mujur Effendy, Gama, 2022). The development process using the Waterfall Method allows developers to carefully detail requirements before starting the stage implementation (Ramadan, A. R., Junaidi, A., & Azis, M. A, 2023).

"PHP is a language commonly used for coding website scripts that is more efficient because it does not require connectors or third parties." (Choiriatin 2023). PHP is known to have good performance in managing dynamic data requests. In operational cost payment request information systems, frequently occurring data transactions can be processed quickly and efficiently using PHP, allowing the application to handle many users simultaneously. "JavaScript is a major program innovation that can consolidate those three focuses" (Aulia

and Yahfizham, 2024). JavaScript is a very powerful programming language for building interactive user interfaces. "RDBMS or relational database management system is one type of DBMS that supports relationships between tables. Examples of RDBMS include Oracle, MS SQL Server, MySQL, DB2, and MS Access." (Kalsum Siregar et al. 2024) The Information System for Operational Cost Payment Submission at PT. Selamat Makmur utilizes the MySQL Database Management System (DBMS) as its primary framework for storing and managing data. One of the advantages of MySQL is its scalable nature, which allows for easy scaling up and down. Therefore, MySQL is used by small programs to large programs. Even Yahoo, Google, and Facebook use MySQL to some extent (Rahmatiyah et al., 2023).

3. Methods

3.1. Software Development Model

The Waterfall method is one of the most classic approaches in software development, known for its linear and sequentially structured nature. This model comprises several main stages, including requirements analysis, design, implementation, testing, and operation and maintenance (Syaputri et al., 2024).
The software development model that is implemented includes:

1. System requirement analysis

   The first step involves gathering several system requirements for the company. The results obtained from direct observation and interviews can detail the required features to automate payment requests, enabling real-time and accurate payment status updates.
2. System Design

   After analyzing the comprehensive results of the observations, the author can proceed with the design by planning the required project using various modeling techniques. The author describes the system using UML (Unified Modeling Language) modeling, which includes Use Case Diagrams, Activity Diagrams, and Class Diagrams.
3. Code Creation (Implementation)

   In the third phase, the system development process is designed according to the features compiled with its needs. This design is based on the analysis results.
4. Testing

   After implementing the designed system, conduct testing on the program. This is done to identify any errors and ensure that all features are functioning properly.
5. Maintenance

   Maintenance must be performed to ensure the system always functions optimally. Software will certainly change, usually due to errors that arise during testing.

3.2. Data Collection

The data collection techniques used include:

1. Observation

   Observation is conducted by directly monitoring the submission and approval process of operational cost payments at PT. Selamat Makmur to understand the existing steps and identify areas that need improvement.
2. Interviews

   Interviews are conducted with relevant parties, such as finance staff, operational managers, and system users involved in the payment submission process, to obtain information about system requirements, issues faced, and expectations regarding the new system.
3. Literature Study

   This literature study encompasses a review of the literature on fundamental concepts in information systems, financial management, and various approaches to effective operational cost payment submission systems. The sources used include books, articles, scientific journals, and standards and guidelines for information technology, which provide insights into the implementation of information systems based on current technology. The results of this literature study will serve as a basis for designing a system that enhances the efficiency and transparency of operational cost payment submissions at PT. Selamat Malkmur.

4. Results

At this stage, the author will design the structure and relationships between entities in the operational cost payment submission information system being developed, as well as determine the relevant attributes for each entity.

4.1. Entity Relationship Diagram (ERD)

The Entity Relationship Diagram (ERD) is a diagram used to illustrate the entities and the relationships between the entities involved in the process of submitting payment requests for the operational costs of PT. Selamat Makmur, as shown in the Figure 1.

4.2. Logical Record Structure (LRS)

Logical Record Structure (LRS) helps in understanding the status through which operational expense claims are submitted and the relationships among those statuses. The system can automatically monitor status changes based on predefined rules, thus facilitating the management of operational expense claims and payments in companies or organizations. The design of the LRS is shown in Figure 2.

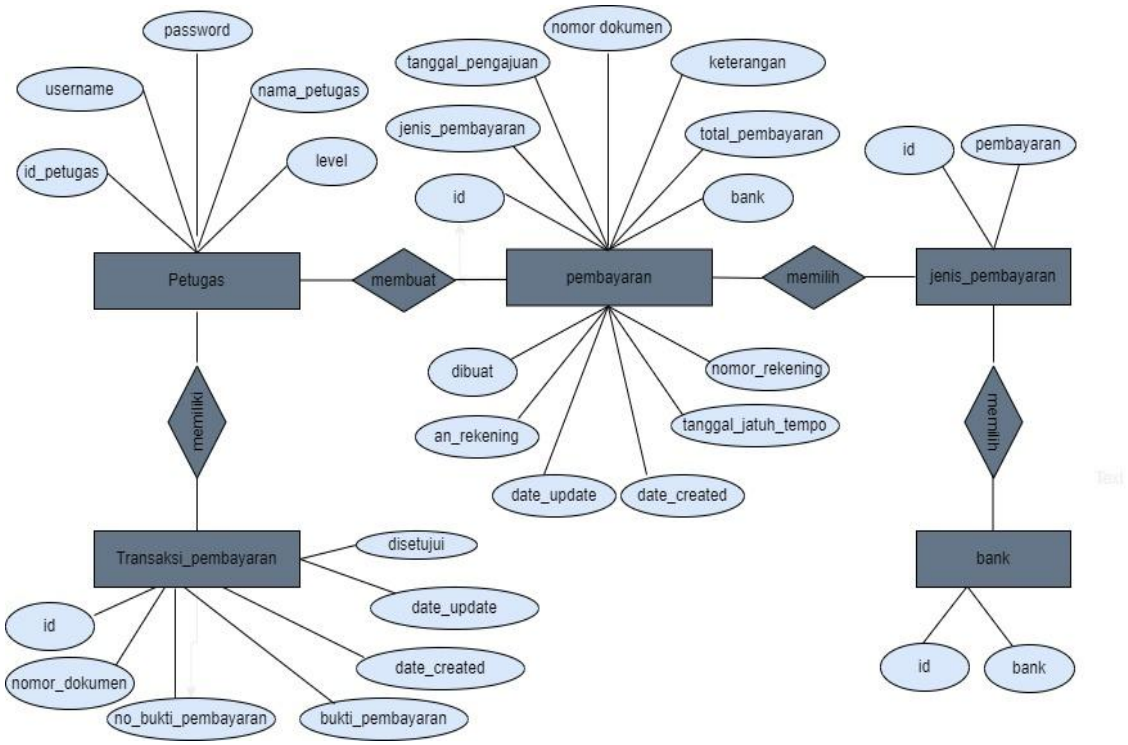

Figure 1. Entity Relationship Diagram (ERD)

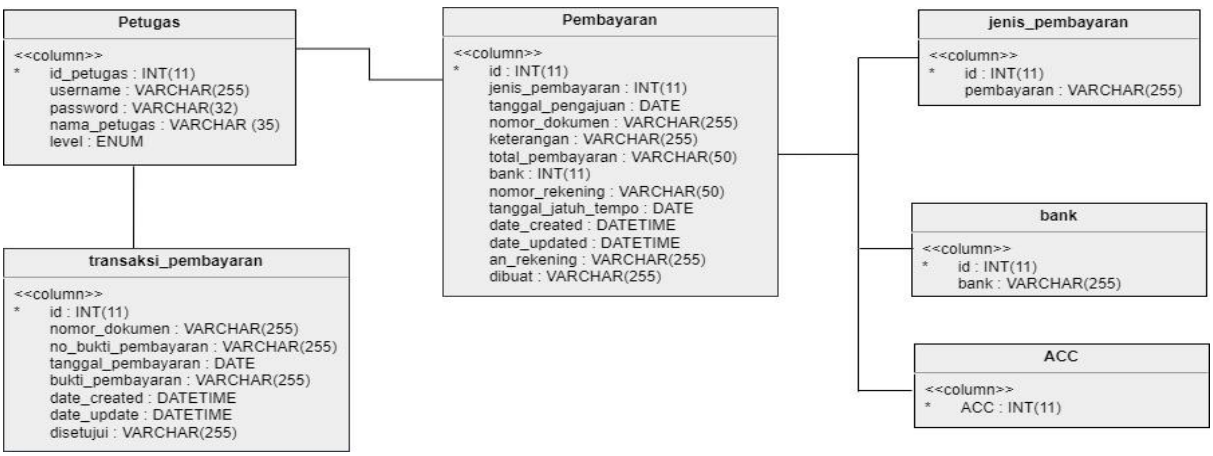

Figure 2. Logical record structure (LRS)

4.3. Activity Diagram

The activity diagram in Figure 3 depicts two actors: the officer and the admin. The process begins with the officer submitting a payment, which the admin then approves.

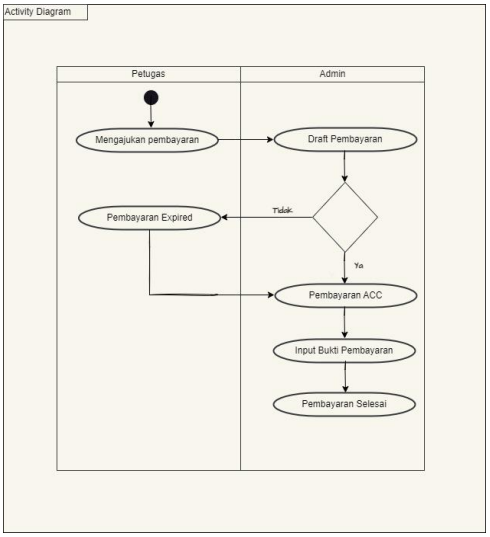

Figure 3. Activity Diagram

4.4. Flowchart

A flowchart is a graphical representation of a process or workflow that illustrates the steps involved in a procedure or system, visually depicting the sequence of events. Each step is depicted in the form of specific symbols or geometric shapes, and the steps are connected by arrows that illustrate the order of the process flow, as displayed in Figure 4.

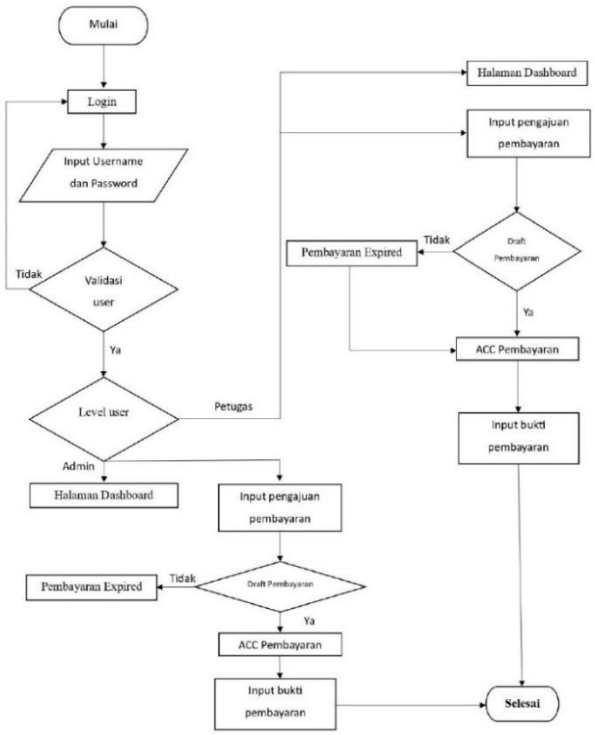

Figure 4. Payment system proposal flowchart

The flowchart in Figure 4 begins with the user entering their password during login, followed by the submission of payment for operational costs until the proposal is approved.

5. Discussion

PT. Selamat Makmur currently relies on a manual process for inputting payment requests, which involves filling out an Excel form and then printing it for the supervisor's signature. This method is prone to input errors and increases the risk of misplacing documents. The lack of integration in the payment request process makes it challenging to track the status of requests and directly assess the approval status of payments. Additionally, payment proof is solely maintained by employees responsible for archiving documents, complicating the retrieval of such proof for the requesting party when needed. The absence of an automated payment reminder system often results in payment delays, and schedules for payments are not well organized.

Therefore, a method is needed to expedite the process of submitting operational cost payment requests, thus reducing errors in data entry and the calculation of operational payment costs. With this system, work becomes more efficient and minimizes the administrative costs that have been required.

6. Conclusion

The conclusions drawn from the research findings in the field and the development of the payment application system website for the operational costs of PT. Selamat Makmur can be summarized in several key points: 1) The implementation of this payment application website significantly reduces the likelihood of errors and data loss. 2) It expedites the payment approval process and enables real-time visibility of approved payment applications. 3) This system allows the managing party to monitor outstanding payments effectively. 4) The payment reminder feature ensures that approaching due dates are adequately controlled.

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