Accounting System Design Using Microsoft Access At Pt. Nasional Global Karimun

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Abstract

Indonesia has many advanced companies which are the center of interest for foreign investors. These companies generally have a system to process the company's internal data, so it's easier for the company to eliminate fraud and error. Unfortunately, many companies in Indonesia, especially small-scale companies, still need to implement a accounting system using technology that is currently available for free. PT. Nasional Global Karimun is one of those companies that still use Microsoft Excel and records activities through company books. Through this community program, a more optimal and efficient accounting system was designed for PT. Nasional Global Karimun using the Microsoft Access. In collecting related data needed in system design, interviews were carried out with employees and direct observations at partner locations. The condition of the company before and after the implementation of the Microsoft Access-based accounting system is also documented. There are several differences that are perceived after implementing an accounting system using Microsoft Access. Employees find it easier to find unpaid receivables and errors in recording transactions. Financial reports that are formed automatically make it easier for employees because they are more efficient and effective. Although the implementation went smoothly, there is recommendation that can be given for further research, namely adding an online-based system to the accounting system.

Keywords: *Accounting System, Microsoft Access, Service Company, Community Service Programs.*

Introduction

The ever-developing technology makes it easier for people to carry out their activities (Chan et al., 2020). This technology innovation has given impetus to companies to develop a company transaction recording system. Manual transaction recording is considered inefficient and ineffective in processing company data, so it is necessary to have a transaction recording system that applies advanced technology to facilitate internal checking of the company (Hla & Teru, 2015). Indonesia has many advanced companies which are the center of interest for foreign investors. These companies generally have a system to process the company's internal data (Faccia et al., 2019). The purpose of this system is to

make it easier for each division to carry out its activities and guarantee the transparency and confidentiality of company data (Khasanah, 2022). Unfortunately, many companies in Indonesia, especially small-scale companies, still need to implement a recording system using technology that is currently available for free. One of the company's long-term losses is its inability to compete with other companies that have already implemented the system (Abayomi & Adegoke, 2016). Currently, the recording system used by PT. Nasional Global Karimun is still based on Microsoft Excel and records activities through company books. The manual recording makes it easier to record errors or increase fraud in the company's finances. Companies with manual records often experience data input errors, double records, or even numbers and dates of records that are not sequential. With no system regulating recording, employees need time to find the location of the recording error. This incident can be fatal for the company because it relates to the profit and loss generated by the company. In addition, the company still needs to follow the recording guidelines set out in the SAK-EMKM issued by the government. The purpose of designing this system is to increase accountability and transparency in recording transactions at PT. Nasional Global Karimun. In addition, the company can easily evaluate the results of the company's financial statements to consider and determine the next decision for the continuity of the company. Each activity has its benefits in the process, and so is in designing this system. Some of the benefits are neat and efficient recording system, improving the quality of record and report, ease in checking the data, reducing the recording errors, and auto generated annual reports. The benefits for academics are that this service activity can be a reference in designing and implementing accounting systems using Microsoft Access in small and medium companies. In this discussion, PT. Nasional Global Karimun has yet to implement a system for recording transactions and financial reports using this technology. Recording conducted by PT. Nasional Global Karimun is still based on Microsoft Excel and records activities through company books. This can cause an increase in errors or fraud in the company's finances. Therefore, a more optimal and efficient accounting recording system was designed at PT. Nasional Global Karimun using the Microsoft Access application.

Methods
A.   Preparation Stage
-      Company Determination Stage
       The first thing to do is determine the company that fits the criteria for implementing the activity. Conduct interviews with the person in charge of the company and explain the activities' objectives. Based on the final decision, the implementation of the accounting system was carried out at PT. Nasional Global Karimun, a shipping agent company located at Komplek Citra Supermall Blok G No 17, Harbour Bay Area.
-      Proposal Preparation Stage
       The author is directed to compile a proposal regarding the implementation of the accounting system by accompanying some information about the company. Information related to the company's description can be obtained through interviews, observing the company's activity flow, and documenting ongoing operations. After both parties have approved the proposal, the next stage is carried out.

B. Implementation Stage
- Design Stage

The author begins to compile and create an accounting system for recording transactions using Microsoft Access according to company needs. The designed system consists of the data processing up to the stage of making company financial reports.

- Implementation Stage

After the system is completed, the implementation of the accounting system is carried out in the company. Implementation was carried out for one period, namely in November.

C. Assessment Stage
- Evaluation and Analysis of Results

After implementation, interviews were conducted with company employees. Then, feedback or evaluations are obtained from the company regarding the transaction recording system. In addition, an observation was made of the company's system and compared the condition of the company before and after the implementation of the Microsoft Access-based accounting system.

D. Reporting Stage
- Reporting Preparation Stage

Each evaluation and improvement will be recorded and summarized sequentially. The results will then be compiled in the activity results report. This report is the output of community service activities.

Some steps must be taken in designing a system using Microsoft Access before producing an accounting system that functions optimally. The following describes the stages of the design process.

1. Determine the problems and needs of the company;
2. Adjusting the description of the system design that would help the company overcome these problems;
3. Create the system in Microsoft Access:
- Data in Microsoft Access is grouped by tables, queries, forms, and reports.
- Create a table that forms the basis of the next section.
- Compile SQL queries that are used on queries at the later stage. Compiled from table SQL code and unified with UNION.
- Make queries from these tables.
- The next stage is to create the forms the company needs. The forms are used to fill in, delete, and search for data stored in the company's Microsoft Access.
- The final stage is to make the company's financial statements. This report is the final result or output of the company.

The following is the implementation schedule during the system design process presented in the table below:

Table 1.
Schedule for Implementing Accounting System Design Activities

No	Activity Plan	Schedule
1	The stage of determining the company	01 July 2022 – 15 July 2022
2	Observations and interviews at partner locations	15 July 2022 – 20 July 2022
3	Preparation of MOA and MOU	21 July 2022 – 25 July

			2022
4	Proposal preparation stage		26 July 2022 - 10 August 2022
5	Interview partners regarding the design of the accounting system		11 August 2022 – 31 August 2022
6	System design stage		01 September 2022 – 31 October 2022
7	Implementation stage		01 November 2022 – 30 November 2022
8	Evaluation by observation, interviews, and documentation of activities		01 December 2022 – 10 December 2022
9	Preparation of the service activity report		11 December 2022 – 31 December 2022

Source: Processed Data (2022)

Next, the details of the budget needed during the implementation of community service activities are prepared based on the activities described in Table 1. Based on Table 2, at least IDR 5,200,000 is needed to carry out the design of an accounting system using the Microsoft Access application at PT. Nasional Global Karimun.

Table 2.
Budget for Implementing Accounting System Design Activities

No	Activity Plan	Budget Type	Volume	Unit	Budget	Total
1	Observations and interviews	Consumption Cost	10	times	IDR 50,000	IDR 500,000
		Transportation cost	10	times	IDR 50,000	IDR 500,000
		Internet Connection Fee	15Gb	month	IDR 100,000	IDR 100,000
2	Outer Design	Module Development Fee	1	piece	IDR 1,000,000	IDR 1,000,000
		System design costs	1	piece	IDR 1,000,000	IDR 1,000,000
3	Outer Implementation Assistance	Transportation cost	10	times	IDR 50,000	IDR 500,000
		Internet Connection Fee	15Gb	month	IDR 100,000	IDR 100,000
4	Preparation of Report	Cost of Consumables (ATK)	1	pack	IDR 500,000	IDR 500,000
		Other Cost			IDR 1,000,000	IDR 1,000,000
TOTAL BUDGET						IDR 5,200,000

Source: Processed Data (2022)

The implementation process will be carried out in November 2022. Before implementation at PT. Nasional Global Karimun, a test was carried out first by entering August 2022 data into the system. After being tested, the accounting system runs well and can generate financial reports automatically. This accounting system is then applied to PT. Nasional Global Karimun. Employees at PT. Nasional Global Karimun were given training and a prior understanding of the Microsoft Access program. It was also explained regarding the account number in the system and the flow of the accounting system after inputting transactions in the general journal. Furthermore, the employees were also taught how to fill out forms and relationships from tables and queries to the final report.

Result and Discussion

The implemented system produces new differences in the company's transaction filling flow. Interviews conducted with employees of PT. Nasional Global Karimun and received opinions regarding the Microsoft Access-based accounting system. The following are the differences resulting from these implementations.

1. Easier recording of transactions. Also, the general journal makes it easier for employees to group transaction nominal according to their account number.
2. Customer records make it easier for employees to search for customer information and check the service activities that have been carried out and the number of outstanding receivables for each customer.
3. The form assists employees in recording data and transactions efficiently and effectively.
4. An efficient and effective accounting system in which financial reports are generated automatically through pre-recorded transactions.
5. It is easier for employees to find mistakes and errors in recording.

Following is the appearance of the accounting system that has been made by using Microsoft Access.

1. Form Menu

The form menu directs the user directly to the intended form by pressing the form button. On the form menu, there are COA, customer, general ledger, and invoice buttons.

Figure 1.
Form Menu Display

Source: Processed Data (2022)

2. Report Menu
    The report menu form directs the user directly to the intended report by pressing the report button. On the report menu form, there are buttons for general ledger reports, income statement reports, trial balance reports, statements of changes in equity, statement of financial position, sales reports, and accounts receivable balance reports.

Figure 2.
Report Menu Display

Source: Processed Data (2022)

3. COA Form
    The COA form display helps users to fill in a new account number. The form contains the account head number, account head name, account number, and account name, which can be filled out. At the bottom, there are several buttons to help to fill in the data. The new button functions to add a new list of account numbers. The delete button is used to delete the existing account number list, and the save button is to save the new account number list that has been entered.

Figure 3.
COA Form Display

Source: Processed Data (2022)

4. Customer Form
    The customer form display helps users to fill in new customer data. The form contains the customer code, customer name, and customer address that can be filled in. At the bottom, there are several buttons to help fill in data. The new button functions to add a new list of account numbers. The delete button is used to delete the existing account number list, and the save button is to save the new account number list that has been entered.

Figure 4.
Customer Form Display

Source: Processed Data (2022)

5.   General Journal Form

The general journal form helps the user to fill in the general journal details. The form contains the transaction number, transaction date, and description of the general journal. Underneath, there is a general journal details subform that can be filled out. In this subform, there is the transaction number, account number, and debit credit transaction amount to be entered. At the bottom, there are several buttons to help fill in data. The new button functions to add a new list of account numbers. The delete button is used to delete the existing account number list, and the save button is to save the new account number list that has been entered.

Figure 5.
General Journal Form Display

Source: Processed Data (2022)

6.   Invoice Form

The invoice form helps the user to fill in the details of the sales to be invoiced. The form contains the sales number, date of sale, customer code, and description of the invoice. Underneath, there is the service sales details subform that can be filled out. In this subform, there is a sales number, service sales code, type of service, and the cost of the service. At the bottom, there are several buttons to help fill in data. The new button functions to add a new list of account numbers. The delete button is used to delete the existing account number list, and the save button is to save the new account number list that has been entered.
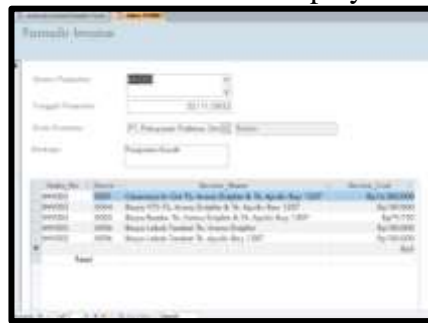
Source: Processed Data (2022)

7.   Navigation Form

The navigation form helps users to fill out COA forms, customer forms, general ledger forms, and invoice forms easily. In this form, users can easily and quickly fill in data without opening each form.

Figure 7.
Navigation Form Display

Source: Processed Data (2022)

8.   General Ledger Report

The general ledger report contains the grouping of each account according to the account head number. In addition, there are debit, credit, and ending balances for each account. The general ledger report contains data from transactions in that period. In addition, at the bottom of the report, there is a close button to close the report and a print button to print the general ledger report.

Figure 8.
General Ledger Report Display

Source: Processed Data (2022)

9. Statement of Financial Position Report

The statement of financial position contains a grouping of accounts based on company assets, liabilities, and equity. In addition, there is an ending balance for each account, and it is counted based on assets, liabilities, and capital. The total liabilities and equity must match the total assets on the statement of financial position. In addition, at the bottom of the report, there is a close button to close the report and a print button to print the financial position report.

Figure 9.
Statement of Financial Position Report Display

Source: Processed Data (2022)

10. Income Statement Report

The income statement displays the profits and losses from the company's activities. In addition, there is a revenue account that is reduced by the company's expense account. From the results of this reduction, the company's profit or loss is obtained. In addition, at the bottom of the report, there is a close button to close the report and a print button to print the profit and loss report.

Figure 10.
Income Statement Report Display

Source: Processed Data (2022)

11. Statement of Changes in Equity Report

The statement of changes in equity displays the total ending capital after adding or deducting income. This report serves to see the final amount of the company's capital. On the right side is the nominal of the account. In addition, at the bottom of the report, there is a close button to close the report and a print button to print capital change reports.

Figure 11.
Statement of Changes in Equity Report Display

Source: Processed Data (2022)

12. Trial Balance Report

The trial balance report displays the total balance of a company's debits and credits. This report serves to see whether the data entered is appropriate and correct. If there are differences in debits and credits, then there is a recording error that occurs in Microsoft Access. On the trial balance itself, each account is sorted according to the account number. Next to it is the final debit or credit nominal of the account. In addition, at the bottom of the report, there is a close button to close the report and a print button to print the trial balance report.

Figure 12.
Trial Balance Report Display

Source: Processed Data (2022)

13. Sales Report

The sales report displays the total sales earned by the company. In this report, there are details of sales, such as sales number, date of sale, customer code, customer name, and nominal services used. At the bottom, the total sales of the company's services will be displayed. In addition, at the bottom of the report, there is a close button to close the report and a print button to print sales reports.

Figure 13.
Sales Report Display

Source: Processed Data (2022)

14. Account Receivable Report

The accounts receivable balance report displays the total receivables accrued by the customer. In this report, there are details of accounts receivable, such as customer code, customer name, date of sale, sales number, amount of payment, and nominal receivables that must be paid. At the bottom, the total of service receivables will be displayed. In addition, at the bottom of the report, there is a close button to close the report and a print button to print the accounts receivable report.

Figure 14.
Account Receivable Report Display

Source: Processed Data (2022)

Conclusions

PT. Nasional Global Karimun is a service company that records all operational activities manually or through a book. Transactions were recorded by the finance department using Microsoft Excel without any system being implemented. Recording without this system increases the risk of recording, thus impacting the company's profit and loss.

Therefore, more optimal and efficient accounting recording system was designed at PT. Nasional Global Karimun using the Microsoft Access application. This new system is based on company needs and prioritizes ease of recording. The implementation of this new system has a significant impact on the recording of transactions by employees of PT. Nasional Global Karimun. It means that these programs managed to meet or fulfil the company's needs. Some of the differences received are the ease of recording transactions and sales. It is also easier for employees to find unpaid receivables and errors in recording transactions. The existence of an accounting system that directly forms financial reports automatically makes it easier for employees because it is more efficient and effective.

Advice for partners is to use this accounting system that has been designed effectively. Partners are also encouraged to keep abreast of the new operational flow to make it easier for employees to record transactions. Each part of the company is also encouraged to carry out work according to their respective SOPs. This aims to avoid the risk of recording errors or the risk of fraud in the company. For recommendation, it's better for the future researcher to add an online-based system to the accounting system.

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