Developing User-Friendly and Cost-Effective Sales Accounting Systems for the MSME Sector

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A B S T R A C T

This study aimed to develop and implement a user-friendly sales accounting information system for Manja Cheese Tea Macanan, a Small and Medium-sized Enterprise (SME) specializing in contemporary milk-based beverages. Employing a development research methodology, data was collected through interviews, observations, and document analysis to understand the existing sale process and information needs of Manja Cheese Tea Macanan. The sales accounting information system design process comprised constructing relational database tables, defining entity-relationship diagrams, creating data retrieval queries, and designing user-friendly forms, reports, and navigation menus (login, home, sales switchboard). The findings revealed that Manja Cheese Tea Macanan relied on a amnual sales system, highlighting the need for automation and improved data management. The designed sales accounting information system was tailored to the specific needs of Manja Cheese Tea Macanan and successfully implemented. The system demonstrated operational effectiveness in facilitating sales recording, data management, and information retrieval, addresing the identified limitations of the earlier manual system.
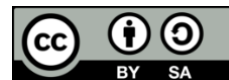
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1. INTRODUCTION

In the current era of advanced information technology, the demand for information has significantly increased. Computerized systems play a crucial role in various sectors, including the economic and business sectors. Nowadays, almost everything related to the business world can be carried out more easily through computerized systems, with the hope of facilitating fast,

practical, secure, effective, and efficient economic and business activities (Purba, 2020; Rogers, 2016).

The economic and business sectors in Indonesia are composed of various entities, including Micro, Small, and Medium Enterprises (MSME). The contribution of MSMEs to the economic development of Indonesia is substantial. According to Supriyanto (2006), MSMEs can be seen as a solution to poverty alleviation in Indonesia. Around 99% of the businesses operated by the Indonesian community fall under the small-scale category, with only approximately 1% categorized as medium and large-scale enterprises (Wahyudin, 2013). Common issues faced by small-scale businesses include insufficient capital for business development, limited managerial skills and operational expertise, absence of a formal business structure, weak organization, lack of financial administration, and limited marketing capabilities (Anggraini & Nasution, 2013).

Manja Cheese Tea Macanan is one of the MSMEs engaged in the beverage sales industry and has a target market in the Macanan area, RT 01/RW 05, Kel. Karangtengah, Kab. Semarang. In conducting its business activities, Manja Cheese Tea Macanan cannot be separated from accounting. According to Harrison (2007:4), accounting is an information system that measures business activities, processes data into reports, and communicates the results to decision-makers. With this understanding, it can be inferred that accounting is a vital aspect of any business, regardless of its scale. The application of accounting enables the compilation of income records from business activities conducted within a specific time period, which are then reported to the relevant parties with an interest in the business (Ruiz & Collazzo, 2020; Santosa & Wulandari, 2019).

The sales system is part of an information system that serves to address issues related to sales data processing. The sales recording system used by Manja Cheese Tea Macanan still relies on manual methods, including daily agenda books and monthly reports. The owner still employs manual procedures, which consume a considerable amount of time in report generation and pose the risk of errors in record-keeping. Such manual systems can impede the development of MSME Manja Cheese Tea Macanan, especially in terms of sales data recording and processing. According to Sam et al (2012) recording involves creating a daily chronological record of events through a systematic and orderly approach. Systematic implies that recording should be done efficiently and effectively.

According to Ferdinandus, Wowor & Lumenta (2011), an information system is a combination of information technology and human activities that utilize technology to support operational and managerial functions. Therefore, it is expected that by improving and developing a computer-based sales information system, it can help overcome challenges in the processing of sales record data at Manja Cheese Tea Macanan and make it more effective and efficient. An information system within an organization that fulfills the need for daily transaction processing can support operational functions that are managerial in nature and provide information to stakeholders in the decision-making process. The development of a computerized system serves as a means to facilitate and assist in the processing of sales transaction data for a product using programming media (Siyanbola et al., 2019; Ibrahim, 2015).

The use of computer-based information systems is expected to aid MSMEs in preparing business activity reports. Accounting information systems have a positive impact on MSME actors in measuring business performance (Aini & Rifani, 2015). Considering this, knowing that the system for recording sales at Manja Cheese Tea Macanan is still done manually and

there are still obstacles, then on the basis of the problem thinking above the researcher designed a sales accounting information system to be applied to Manja Cheese Tea Macanan.

2. METHOD

This study employs a qualitative research aims to uncover the challenges faced by MSMEs in recording their business finances. By identifying their specific needs, we will design a user-friendly sales accounting system for Manja Cheese Tea Macanan, a food and beverage MSME located in Semarang Regency. A qualitative approach was adopted to understand current sales practices and identify areas for improvement within the existing. Data collection involved semi-structured interviews with staff and the owner, observation of the sales process and record-keeping practices, and document review of invoices and receipts. The development process of sales accounting system are:

1. Designing relational database tables with entities like products, sales, and costumer
2. Developing Entity-Relationship Diagrams (ERDs) to visualize data relationships
3. Creating queries for efficient data retrieval and manipulation
4. Developing user-freiendly forms for data input
5. Generating reports for sales analysis and financial performance

Following system development, a pilot test will be conducted with a limited group to identify and address any initial issues. User feedback will be collected to refine the system for improved usability. Subsequently, the system will be implemebted for regular use within Manja Cheese Tea Macanan. Finally, the system's effectiveness in achieving its goals, such as improved sales tracking and financial reporting capabilities, will be evaluated. The following is a list of interview questions conducted with the owner and staff:

Table 1. Interview Questions

Aspect	Questions
Financial Record Keeping	What is the financial record keeping system you currently use?
	Do you use accounting software or do you keep records manually?
	Who is responsible for keeping financial records?
	How often do you keep financial records?
	What types of financial reports do you create?
	Are you satisfied with the financial record keeping system you currently use?
Challenges and Difficulties	What challenges do you face in keeping financial records?
	What difficulties do you experience in understanding financial reports?
	Do you have enough time and resources to keep good financial records?
Weakness	What are the weaknesses of the financial record keeping system you currently use?
	Do you feel that your current financial record keeping system helps you make business decisions?
	Do you feel that your current financial record keeping system helps you manage your business finances well?

3. RESULTS AND DISCUSSION

The sales process at Manja Cheese Tea Macanan in RT 01/RW 05, Kel. Karangtengah, Kab. Semarang still has many weaknesses, one of which is the manual sales recording system. This manual system is time-consuming, ineffective, and prone to errors or data loss as the recording is done using books or paper. Therefore, it is necessary to solve this problem by designing an

accounting information system using Microsoft Access for the sales recording system at Manja Cheese Tea Macanan Outlet. Such a system can facilitate users in recording transactions and generate final reports. By implementing this computerized system, it is expected that the business activities at Manja Cheese Tea Outlet can be carried out more effectively and efficiently.

The sales process is conducted either directly or in cash. The cash sales process starts with customers coming to view the available variants and toppings they want to purchase. The sales staff then records the customer's request in the manual record book owned by the Outlet. Sometimes, the Outlet provides customers with a manual sales transaction proof in the form of a single-copy receipt. The receipt copy is then stored as an archive and used to calculate total sales and revenue. The customer then pays the bill according to the amount stated on the receipt. While the staff member responsible for sales service prepares the customer's order, the customer pays the order amount in cash to one of the staff members handling payments. Once everything is completed, the order is given to the customer.

3.1 The Design of the System

The sales recording system to be used by Manja Cheese Tea Macanan will be developed using the Microsoft Access database, which is user-friendly and easily accessible. The system design at Manja Cheese Macanan aims to achieve the following objectives:

1. To meet the needs of Manja Cheese Tea Macanan.
2. To provide a clear and comprehensive overview of computer programming.

After analyzing the existing manual sales system at Manja Cheese Tea Macanan and identifying the problems that arise from the manual system, the solution proposed by the author is to design and develop a computerized information system to assist in managing the sales recording system at Manja Cheese Tea Macanan.

3.2 Database Design

The database design serves as a reference and consideration for the creation of the existing accounting information system. The database design process will begin by designing tables, establishing relationships, creating queries, designing forms, designing reports, designing a login menu, designing a home menu, and designing a sales switchboard.

3.2.1 Table Design

The table design has been tailored to suit the established. The tables are created using the table creation feature available in Microsoft Access. These tables serve to store data related to the sales recording system at Manja Cheese Tea Macanan. The types of tables in the sales system include the detail transaction table, invoice table, employee table, customer table, product table, and user table for login purposes.

a. Detail Transaction Table

The detail transaction table contains 3 fields: invoice code, product code, and quantity. The following is an illustration of the fields in the detail transaction table.
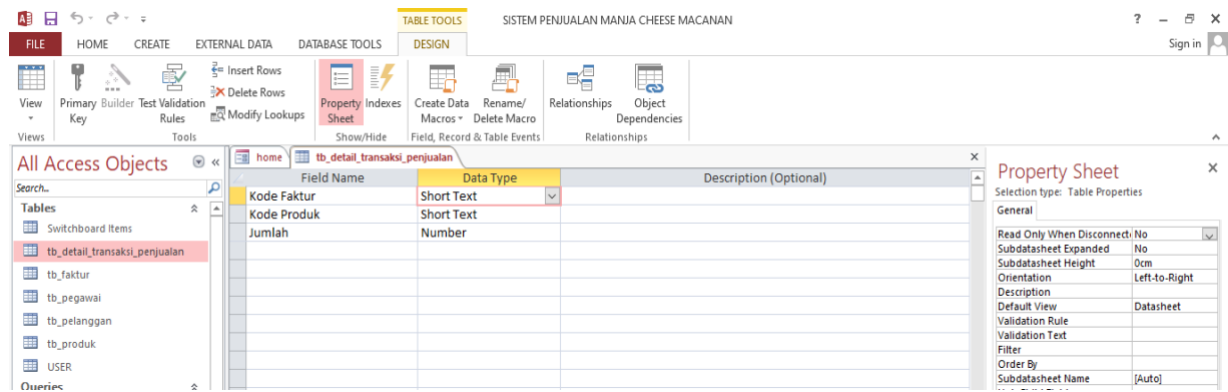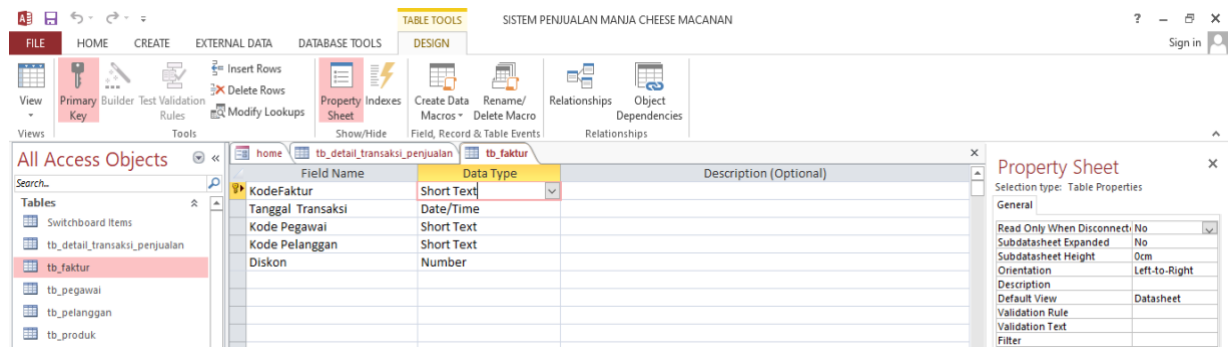
Figure 1. Sales transaction detail table field

The sales transaction detail table will be filled in automatically when there is data entered via the invoice form.

b. Invoice table

In the invoice table data there are 5 fields, namely invoice code, transaction date, employee code, customer code, and discount. The following is an image of the invoice table field.
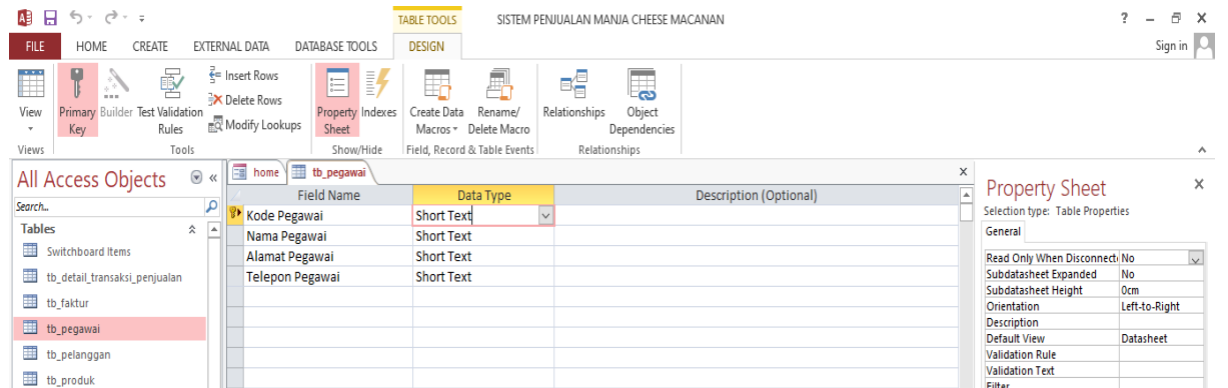

Figure 2. Invoice table

The invoice table will be filled in automatically when there is data entered via the invoice form.
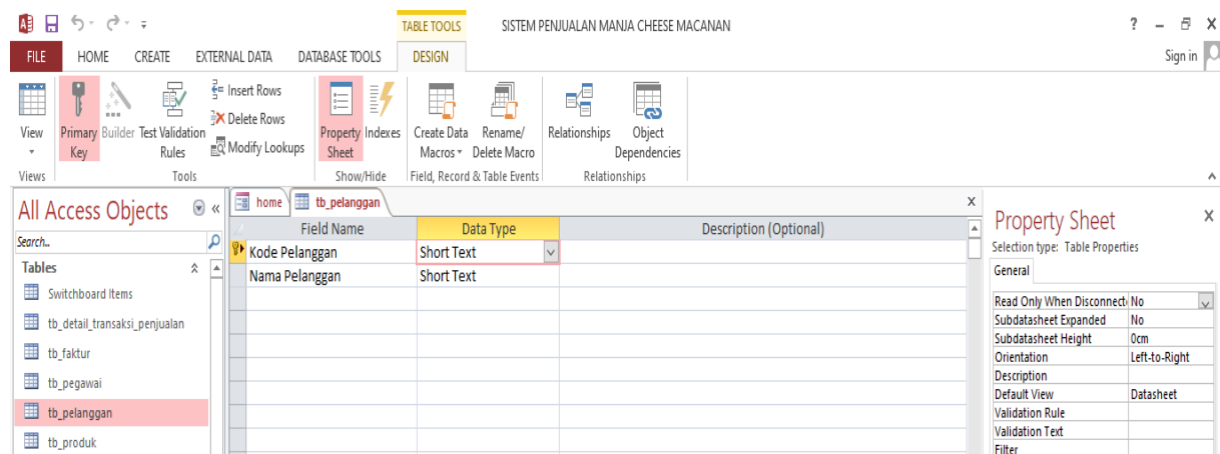
c. Employee table

In the employee data table there are 4 fields, namely employee code, employee name, employee address, and employee telephone. The following is a picture of the employee table fields.

Figure 3. Employee table

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d. Customer table

In the employee data table there are 2 fields, namely customer code and customer name. The following is a picture of the customer table fields.


Figure 4. Customer table

The customer table is filled with data and appears automatically when accessing and running the customer data form. So that when entering the customer data employee form, the customer's name is immediately stated, changes can also be made and adjusted to the conditions encountered when the system is used.

e. Product table

In the product data table there are 6 fields, namely product code, product name, product type, product price, initial stock, and ending stock. The following is a picture of the product table fields.
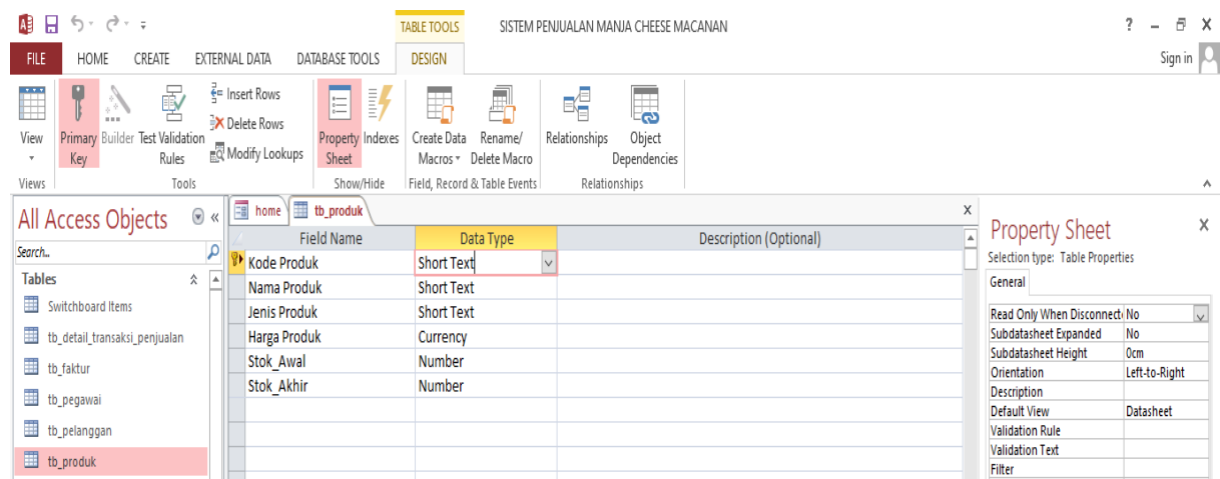
Figure 5. Product table

The product table is immediately filled with drink variant data and toppings and is automatically displayed when accessing and running the product data form. When you are about to input it into the product form, the drink and topping variant data is immediately listed.

f. Users table

In this user table there are 4 fields namely user id, name, status, password. The following is a picture of the user table fields.
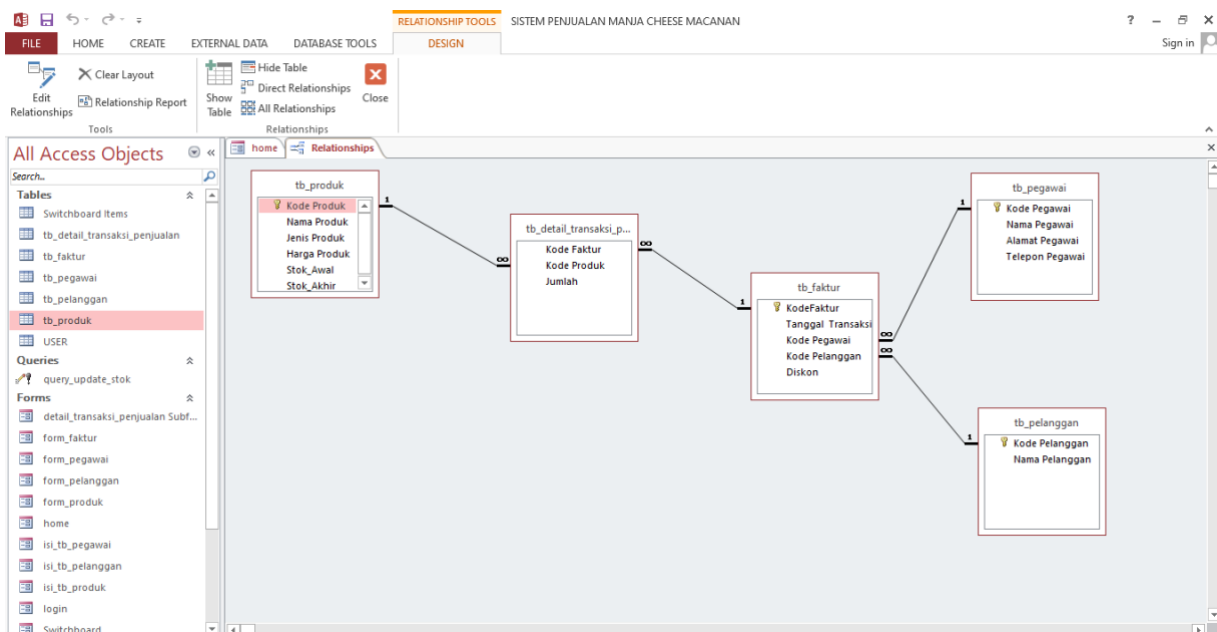

Figure 6. Users table

The user table is immediately filled with access data that can be carried out by store owners and employees. This data can be used as a first step for store owners and employees to be able to log into the system.

1. Create Relationships

There are 5 tables that are the basis for creating relationships. The five tables are connected so that they can become the basis for making queries, forms, reports, and switchboards so that the system can run properly. The way to connect is to drag a table that has a fielded primary key to a field with the same name or in a table that doesn't have a primary key so that there can be a connecting line between the two.

Figure 7. Relationship

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2. Make Queries

Creating a relationship is the basis for creating a query, so once a relationship is created, a query can be created. If these tables have been linked, it is possible to retrieve the fields in the five tables in one query. There is 1 query that is made to be the basis for making reports, namely the stock update query. In making this stock update query, the tables used are invoice tables, tables, sales transaction details, and product tables. These three tables are used because they contain each information that is interrelated and can be used as a basis for processing stock update queries when there is a change in each final stock data for each product on the impact of the sales transaction made.
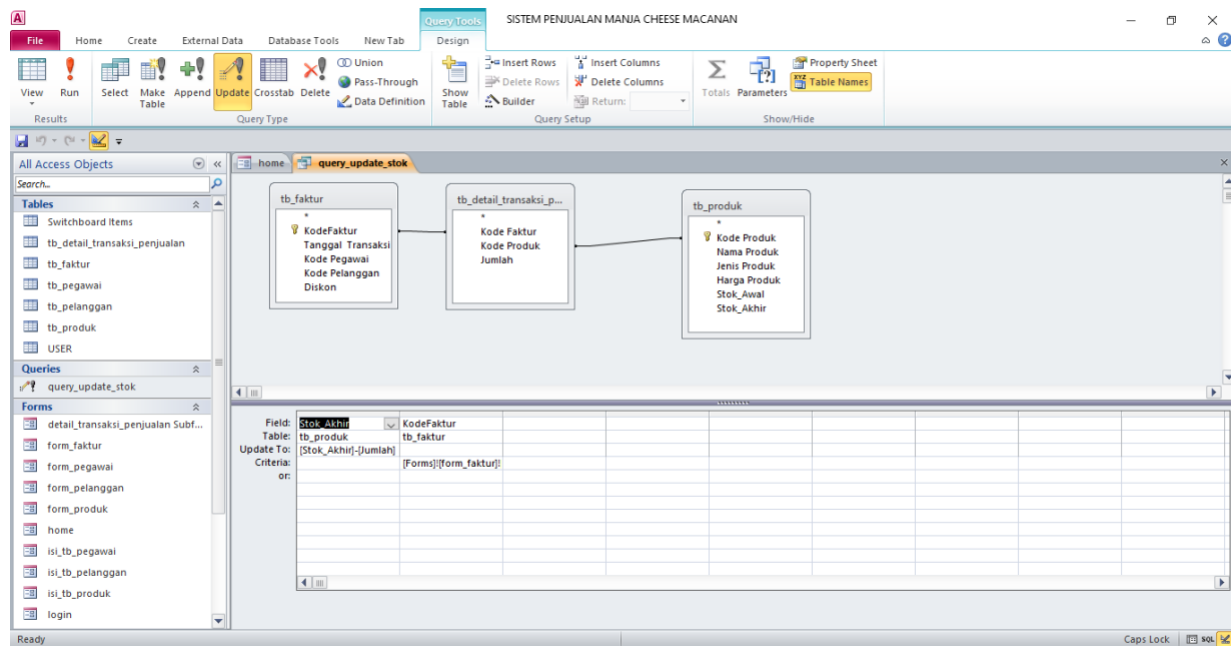
Figure 8. Queries update

3. Form creation

The design of the form has been adjusted to the data obtained from the outlet. Form creation is based on table creation data that was created previously. This form is created by using the form creation feature available in Microsoft Access, namely using the Form Wizard. This form functions to run and view data related to business activities carried out. This form can be used to store data related to the sales recording system at the Manja Cheese Tea Macanan Outlet. The types of forms in the Manja Cheese Stall sales system are invoice forms, employee forms, customer forms, product forms, main menu forms, sales transaction detail forms, login forms, and switchboards.

a. Invoice form

In this invoice form, it consists of invoice code data, transaction date, customer data, employee data, product data purchased, and the total transaction. Activities that occur in this invoice form can later be used as evidence regarding the quantity provided by employees serving the sales process, as well as providing data on the results of the appropriate product orders. This form will be filled in when there is a sales transaction.

b. employee forms

In the detailed data from this employee form, there are 4 fields, namely employee code, employee name, employee address, employee telephone. This form can also be adjusted later with existing employee data. This form will display one by one data from each employee. Through this table later you will also be able to add or subtract data from employees. This is anticipated if there are conditions when changing or adding new employees.

c. customer forms

In the detailed data from this customer form, sourced from the customer table. The customer table consists of 2 fields, namely customer code and customer name.

d. product forms

In the detailed data from this customer form, sourced from the product table. The product table consists of fields, namely product code, product name, product type, product price, initial unit. final unit. The product form will describe the available products one by one.

e. Sales transaction detail form

In the detailed data from the sales transaction detail form, it is sourced from the sales transaction detail table. The product table consists of fields, namely product code, product name, product price, amount, and total transactions. The data in the form is the same as the table information. This form will be filled in automatically when input via the invoice form.

4. Making a Report

From this form there is some information that can be obtained so as to be able to make several reports at once. The types of reports made at the Manja Cheese Tea Macanan outlet are product reports, employee reports, customer reports, invoice reports, and detailed sales transaction reports (Najla et al., 2022). All five will provide information on sales transaction data.

a. Product reports will provide information on how the condition of many initial stock changes becomes final stock data for drinks and toppings ordered by customers from sales transactions. With this data, the owner can easily find out the amount of final data on the product stock for the beverage variants and toppings they have. These reports can be printed to be used as hard file data.
b. Employee reports provide information on which employees serve sales. This is used as the stage of internal control of accountability for sales services performed. These reports can be printed to be used as hard file data.
c. Customer reports provide information about the names of customers who place orders for beverage and topping products. These reports can be printed to be used as hard file data.
d. Invoice reports provide proof of transactions to customers and owners as a form of internal control. Information about the date on which the transaction was made, who was the employee who served, the name of the customer, what products the customer had purchased, the amount of the bill to be paid by the customer for the order. These reports can be printed to be used as hard file data.

e. Finally, the detailed sales transaction report provides data on the amount of sales revenue for one day which is used as a sales report. This report also provides detailed information about sales transactions that occurred during one day.

5. Designing the Login Menu

Login is the process of entering the sales recording system at Microsoft Access, by entering the username/user account and password to get access rights into the system.

Figure 9. Login View

6. Designing the Home Menu

The home menu form or the main display is the core form of this application. The home menu is used as a follow-up action to open data and close the system and provide information related to system users.

Figure 10. Home Menu View

7. Designing Switchboards

Switchboards can be used to create menus that are inside a form and report. The menu itself can be regenerated by having sub menus in it. The menu on the switchboard is the input menu which is used to access all forms that have been designed in the database. In the input menu there are invoice forms, employee forms, customer forms, product forms, and return to the main menu. In addition, there is an output menu that is used to access all reports that have been generated after creating tables and queries. In the output menu there are product reports, employee reports, customer reports, invoice reports, detailed sales transaction reports, and return to the main menu. Next is the exit menu.
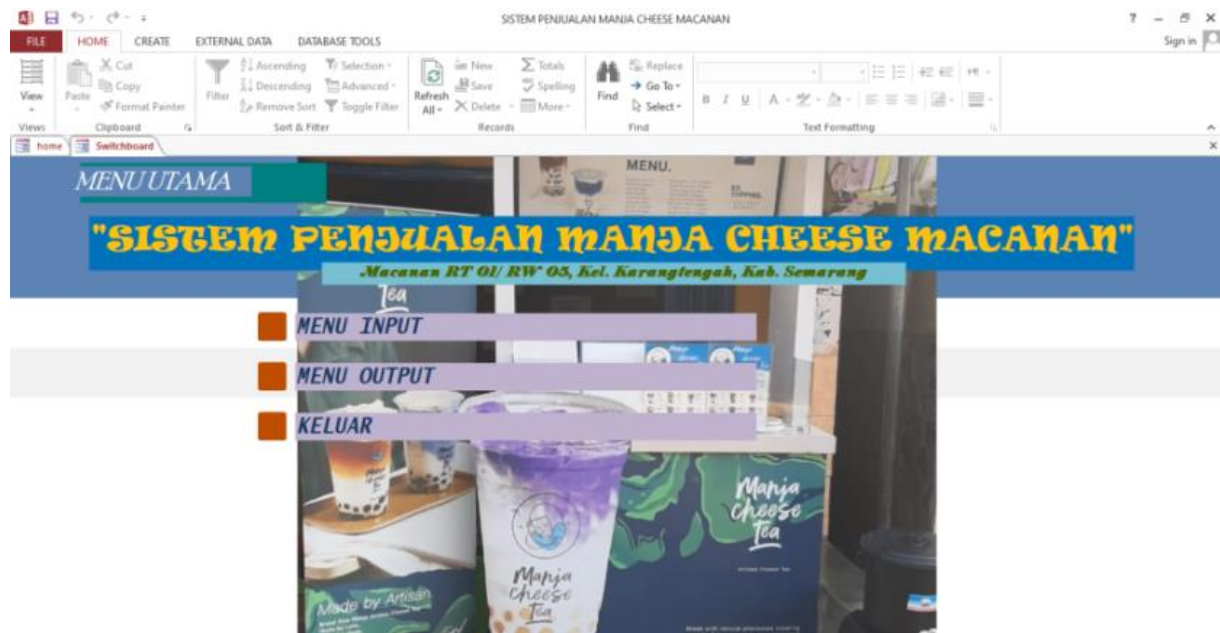
Figure 11. Switchboards View

The sales accounting information system implemented by Manja Cheese Tea Macanan has been predominantly manual. This can be observed from the documents, records, and procedures that are currently in place. The risks associated with using a manual system include the possibility of recording errors, invalid transaction evidence, damage or loss of records, and even employee fraud (Felix, 2022; Eddy et al., 2023). Implementing a computerized sales accounting information system is beneficial for Manja Cheese Tea Macanan as it enhances the performance of their sales operations (Kareem et al., 2021; Igwe, 2020).

Within the sales accounting information system, there are several related functions, namely sales function, cash function, inventory function, and accounting function. However, in the case of Manja Cheese Tea's sales system, only the cashier function is present. The cashier is responsible for processing sales transactions, which involve accepting payments from customers for their ordered beverages and issuing receipts upon request. Additionally, the cashier function is also responsible for maintaining sales records. Ideally, the responsibility for record-keeping should fall under the accounting function. This indicates that there is a dual role for the cashier, which creates a significant opportunity for fraudulent activities (Akuh, 2017). Such activities can result in financial losses for the owner and inaccurate sales reports.

By implementing a computerized sales accounting information system, the aforementioned issues can be minimized (Setyowati et al., 2021). The designed system restricts employee access so that they can only access the sales transaction process, specifically the transaction input process. The required reports are automatically generated based on the input data, ensuring their accuracy and eliminating the risk of loss or damage as they are stored in the system's database.

Manja Cheese Tea currently utilizes duplicate notes as proof of customer payments. These notes contain the date, quantity of items, beverage types, quantities, and total amounts. However, these notes are only provided upon customer request, which is not in line with good sales practices.

Regarding record-keeping, Manja Cheese Tea relies on a daily journal book to record all sales transactions conducted by their employees. This book is used to compile sales data and generate sales reports. However, this record-keeping method lacks security measures as the documents are not properly archived, and the sales records are susceptible to damage or loss. The designed system overcomes these weaknesses as it eliminates the need for physical notes, replacing them with automatically generated sales receipts upon data input (Yulandha et al., 2020). The daily journal book is also no longer used since the data is stored in soft file format in the database.

4. CONCLUSION

This research conducted at the Manja Cheese Tea Macanan outlet revealed the limitations of their current sales recording system. The existing manual system, while functional, suffered from ineffiviencies in data gathering, processing, and presentation, ledaing to extended processing time and impacting decision-making effectiveness.

This research addressed these limitations by proposing a computerized sales recording system. The system is built upon a relational database design consisting of six tables, facilitating efficient data management and retrieval. Additionally, the system incorporates one query, five user-friendly forms, five reports, and a comprehensive navigation menu (login, home, and sales switchboard) for intuitive user interaction.

The implementation of this system is expected to provide Manja Cheese Tea Macanan with improved access to various data and information related to sales activites. This improved data accessibility and efficient processing hold the potential to enhance their decision-making capabilities and optimize overall business operations.

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