Use of Databases to Manage Sales Results Data at the KDH Sancang Coffee Shop

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Abstract

Technological advances allow entrepreneurs to manage sales data efficiently. Governance management in micro, small and medium enterprises is often an obstacle to the continuity and development of the business. Based on interviews conducted, at KDH Sancang Coffee Shop, data management still uses Microsoft Excel, which sometimes makes it difficult for users to access the desired data. This research recommends using Microsoft Access to create a secure and organized sales database. This solution helps overcome data duplication problems and improve data accessibility and security. Based on the research results, the process of creating a database for sales results includes the creation of item and sales data tables, one to one relationship, Query total sales results, and Form Design for easy data access. This research activity aims to enable micro, small, and medium-sized enterprises to effectively organize their financial records, including providing owners with the necessary tools to manage their business finances more efficiently. The results showed that the use of Microsoft Access increased the efficiency of managing monthly sales data at KDH Sancang Coffee Shop which is expected to facilitate monthly sales evaluation activities at the coffee shop.

Keywords: database, Microsoft Access, relationship, query, selling.

Introduction

Technological advances in the current era open up opportunities for entrepreneurs to develop the business they are involved in by utilizing technology to manage data, whether for sales evaluation or other management purposes. (Aziz, 2012). Sometimes owners, when they want to see sales data for their business, often have difficulty because they have to look at bookkeeping that is still not organized, such as notes in notebooks, which will confuse the owner when looking for the data they want. To overcome this problem, technology is needed to manage data safely, organized, and easily to access information accurately regarding monthly sales results that occur. (Hidayat et al., 2022).

One of the appropriate technologies to overcome this problem is the use of the Microsoft Access computer application to create a database. Microsoft Access is a sophisticated database management application program for processing various types of data with very easy operation, this application was developed by Microsoft Corporation (Universitas Negeri Yogyakarta, 2015). A database or data base is a collection of structured data that is stored electronically in a computer system. Databases are usually controlled by a database management system (DBMS). Data in the most commonly used types of databases today is usually modeled into rows and columns in a set of tables for efficient data processing and querying. Data in a database can be easily accessed, managed, modified, updated, controlled and organized (Duggan et al., 1970). Viewing information or monthly sales data can now be done more easily using a database, using a
database will make it easier to find the desired data without having to search or read the data one by one (Charzon, 2018). The benefits of using this database can be a solution to problems such as data duplication, relationships between data, difficulties in accessing requested data, confidential data security, data consistency, etc. (Maellah, 2018). In this case, the database aims to make it easier for users to access or search for the desired monthly sales data so that the next month's sales strategy can be evaluated.

The activity of evaluating sales results in trading companies, especially in the F&B (Food and Beverage) sector, is a very important process to find out developments and problems in their business (Purwanto et al., 2021). Good management and processing of sales data for company evaluation is something that needs to continue to be developed so that the company can continue to develop and keep up with the flow of technological developments. Good data processing can produce data that is accurate and easy for users to access and analyze (Nur, 2019). A database processing application must be developed by the company to be able to produce sales evaluations which will later be used to formulate a monthly sales strategy because the company must compete with its competitors and continue to innovate to create new breakthroughs to remain attractive to consumers. (Hikam & Pradana, 2019).

In the research conducted, the KDH Sancang Coffee Shop company, the technology used in processing monthly sales data was still simple and manual, namely using the Microsoft Excel application. Therefore, a database data processing application is needed to easily manage their monthly sales data so they can continue to innovate amidst the intense competition between coffee shops in the city of Bogor. Based on this, this research will raise the problem with the title "Using a Database to Manage Sales Results Data at the KDH Sancang Coffee Shop".

Method
Research Location and Time
The research was carried out at one of the Micro, Small and Medium Enterprises (MSMEs) in Bogor City, namely KDH Sancang Coffee Shop, Jalan Sancang Number 15 B, Babakan, Central Bogor District, Bogor City, West Java 16128, on November 6 to 7 2023.
Method of collecting data
The data collection method used is an exploratory method by collecting primary data directly in the field based on interviews with employees of the relevant companies and assisted by supporting sources such as literature books and research journals related to database creation and Microsoft Access to support this research data to produce results. Accurate and more comprehensive data. Data obtained through interviews includes sales information, goods/product data, and expenditure data. Using this data, a database will be constructed to make it easier for users to access important data related to sales.
Data analysis method
The data analysis method used is a quantitative method by processing data statistically or mathematically which can be obtained from the results of previous data collection (Ali et al., 2022). From the data obtained, it will then be compiled into a database system or database so that later the user will be able to manage the data in a computerized manner so that it can make things easier for the company. (Meiliza et al., 2023). To be able to create a database, you need Database Management System (DBMS) software in Microsoft Access to handle programs with several components as follows. (Ismai, 2020):
A. Tables are the basis of a database
Tables are the main object in the form of a collaboration of rows (records) and columns (fields) which are used to process and store all the data required in database applications (Widyaniita et al., 2018). In the table, all quantitative data obtained during the interview is input into the table and then processed into a database. After
all the data has been entered in the table, then determine the unique data or data that is different from the others to be locked using the Primary Key as an identifier and link between the tables. (Rizki & Amijaya, 2019). Primary Key is a record identity field that is different or unique from other records to connect all tables so that they are related to each other (Maulidina, 2019). Placing the Primary Key when there is little data will not have a significant effect, but when there is a lot of row data it will affect the speed of reading the data (Pebrianto, 2022). After the unique data has been locked using the Primary Key, the data between tables will be connected by a relationship (Andria, 2015).

B. Relationship
A relationship is a combination of previously created tables that are connected to a parent table and will be interconnected from one table to another table (Rizaldi et al., 2018). In creating the KDH Sancang Coffee Shop database using a one-to-one relationship because there are only two tables, namely the main table in the form of goods data and a supporting table in the form of sales data for the month of October 2023. The tables will be connected if and only if the Primary Key placement is correct. then a Relationship will be formed (Dian Noviandri et al., 2022).

C. Query
Query is the ability to display data from a database that takes some of the required data from previously created tables, if something is not appropriate then it may not be displayed (Sinuraya, 2017). In creating a sales results database, a query is used to find the total sales results for each product in October 2023.

D. Form Design
Form Design is a feature that is used to make it easier for users to display or search for the desired data record and can be presented in an attractive appearance using the features contained in Microsoft Access such as insert picture, button, text box, web browser control, hyperlink, and etc (Michelle Larassati Ayusmara Latukolan et al., 2019).

Result and Discussion
To create a database in the Microsoft Access application itself, there are several stages that must be done sequentially, including creating tables, creating relationships, creating new tables using queries, and finally creating a database design form so that it will produce a database according to cafe needs (Anggraeni et al., 2018). Based on the results of interviews with the coffee shop, we obtained several data that we will process in this database application, including all existing menu names, code for each menu, price per menu, number of sales per menu in October 2023, and also expenditure data per days in October 2023, but we do not use expenditure data in creating the database because what will be used is only goods data and sales data to create a sales results database.

A. Creating a Table
The data obtained is arranged in a table to form rows which are then called Records and columns which are then called Fields (Oktarina, 2011). The table that will be used in creating a database consists of a main table which is the center of the data and supporting tables which will later be connected using relationships. Creating a database requires identification and analysis of the relationships between tables and fields so that when creating relationships all tables are connected to each other (Zerlinda et al., 2023).

The master table used in creating the database is the item data table which contains the main components for creating a sales results database, namely the code,
product name and product price. The data sheet view of the item data table can be seen in Figure 1.

Figure 1 Data Sheet View Goods Table

Another supporting table that will be used in the database is the sales table which contains supporting or complementary data to create a sales results database, namely the number of goods/products sold in October 2023. The data sheet view of the sales table can be seen in Figure 2.

Figure 2 Selling Data Sheet View

These two tables will be processed at the next stage to create a database of KDH Sancang sales results which will contain the total sales results for each product in October 2023.

B. Relationship

In the KDH Sancang Coffee Shop database, because the data obtained is only the goods data table as the master table and the sales data table, the Entity Relationship Chart (ERC) used is one-to-one to connect the goods data field (master data) to the sales data field (supporting data). Relationships are the basis for creating a database because data from one table will be connected to another table so that they are related or connected to each other (Rizaldi et al., 2018).
In the relationship above, it can be seen that the sales table and goods data table are connected one-to-one with the "code" field which is locked using a Primary Key which is a field that has a unique value and each data in the field will not the same as being used as a reference for defining a row or data record, apart from that, this Relationship will make it easier when creating queries (Wibagso & Lia, 2020).

C. Query

In creating a sales results database, the Query functions to generate new data that is needed by using a collaboration formula for previous data, and in the Query there is a process of selecting or filtering the required data so that not all data that has been created in the table can be entered but only those that meet the criteria will be displayed (Oktarina, 2011). In the context of creating the KDH Sancang Coffee Shop database, a query is used to generate new data, namely Total Sales Per Product by calculating using the formula [Total Sales Per Product] = [Unit Price] * [Sold]. By applying this formula, a new table will appear containing data on the results of the formula operation as shown in Figure 4.

The results of the Query design can be displayed after all the required data has been selected in the Query by selecting the "Run" option in the Microsoft Access toolbar. Then the results of the query are obtained which are shown in Figure 5.
D. **Form Design**

Form Design in Microsoft Access is a data input medium that can be displayed using an attractive appearance and can be modified according to taste or according to company needs (Anto et al., 2020). Forms are used with the aim of making it easier for users to access the desired table data (Meiliza et al., 2023). Form Design will provide a summary of sales data that has been made clearly and can be easily accessed without looking at the data in the table one by one. The results of the KDH Sancang Coffee Shop Database Design Form can be seen in Figure 6.

![Figure 6 Form Design Result](image)

The form can be modified according to the company's needs, as shown in the form, various navigation buttons are added to make it easier for users to move from one data to another, which consists of go to first record, go to previous record, and go to next record, go to last record.

**Conclusion**
Based on the results and discussions that have been made, it can be concluded that creating a database can manage all data entered into Microsoft Access. The sales results database can show the total sales results for each product during October, users can easily access the necessary data without having to look one by one in a table containing dozens of data.

References