

FRAMEWORK OF INVENTORY AND SALES INFORMATION SYSTEM AT UD. PAPILON TERARA

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Received : 03 April 2026	Accepted : 16 April 2026	Published : 22 April 2026
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Abstract

In the administration section, it is often overwhelmed when there are so many sales orders, because the work is still done manually. Not to mention if the leadership wants reports quickly. The administration section must open and search for the archives related to the report to be made. This work takes up a lot of time, resulting in delays in the reports that will be given to the leadership. Based on these problems, the researchers took the initiative to create and implement a new application system. The framework that will be designed will make it easier for the administration in managing goods data or incoming and outgoing sales data because the database for storing data uses a MySQL database and the system is made using Visual Basic Net version 17.5. The development methods used include observation, interviews, and system design using Activity Diagrams, Use Case Diagrams, and ERD, which are then implemented with VBNet. and MySQL. With this system is expected to overcome the problems mentioned above in order to help facilitate the working mechanism. Because the processing of inventory and sales data at UD. PAPILON TERARA still uses conventional methods.

Keywords: Framework, MySQL, Visual Basic NET

1. INTRODUCTION

Framework is an initial framework in developing and creating a program that will be built [1], the existence of framework then a program will be organized according to the steps to be taken [2] The framework to be developed is an inventory and sales information system that still uses conventional methods, overwhelming administrators with incoming and outgoing data. Inventory management is crucial for company administrators, and therefore, an information system is essential to assist with database-based data processing.

The problem that administrators often encounter when inputting goods and sales data is when there are a lot of goods coming in fever book, so that it makes it difficult for the admin to record incoming and outgoing goods data.

UD. PAPILON is a business engaged in the field of inventory and sales of goods which already has many customers spread across the Lombok area, especially in East Lombok. In carrying out its business activities, it often experiences problems in the warehouse and administration sections. The warehouse section is always busy with recording and counting activities when goods come in and go out. This activity is very prone to calculation errors. [3] In addition, making inventory reports is often late to be submitted to the administration section, so that purchase orders that should have been immediately carried out are also late. This can cause orders received from customers to be delayed, some are even canceled due to the absence or lack of stock. The cause of the



absence or lack of stock is the lack of control of stock. This would not have happened if the warehouse section had immediately identified the low inventory and reported it to the administration section, so that the administration section could immediately follow up by immediately placing purchase orders to suppliers.

Amidst the rapid development of information technology, competition in the industrial world is increasingly fierce. To survive and achieve excellence, every company is required to continuously innovate and improve efficiency in every aspect of its operations. One key factor playing a crucial role in supporting this success is a company's ability to manage inventory effectively, accurately, and in a controlled manner, thus supporting smooth business processes and informed decision-making[4].

Based on the problems above, the author is interested in further research to design a desktop-based information system so that data processing in the administrator field makes work easier and errors do not often occur in calculating incoming and outgoing goods data. This program aims to completely digitize the stock and sales management process, in order to minimize recording errors (human error), increase operational efficiency, and provide accurate and real-time analytical data as a basis for more effective decision-making.

Developing a desktop-based inventory and sales system is an effective approach to addressing operational challenges. This system provides real-time inventory monitoring, accelerates and improves transaction accuracy, and generates integrated sales and inventory reports to support more informed decision-making.

2. LIBRARY REVIEW

Based on research conducted by[5], it is explained that the inventory system for incoming and outgoing goods is an activity consisting of goods receipt data, goods sales data, return data and stock data that reports all incoming and outgoing goods activities at Inside Distro Jakarta on a daily and monthly basis. The purpose of this research is to create a design for an efficient computerized goods in and out system application and to implement it in programming. *Visual Basic .NET. 17.6*. The results of this study can assist and expedite the processing of incoming and outgoing goods data and the monitoring of incoming and outgoing goods flows, thereby making information delivery more effective and efficient. The company recognizes the importance of technology in accessing fast and accurate information to solve various challenges. Currently, many manual tasks, such as marketing, finance, administration products management, and checking product stock availability can take a lot of time and accuracy[6]. According to[7], explains that accuracy in the process of delivering data using a database-based system. With this database-based system, it will simplify the process of searching and updating data for more accurate and timely information according to the expectations and desires of users.

Based on [8] it says: Analyze the ongoing business stages, identify problems in the procurement process, and evaluate the impact and obstacles in implementing Supply Chain Management (SCM).

The applications used to create the sales inventory framework system at UD. PAPILON are:

1. Visual Basic Network

Visual programming is a method used to build a Graphical User Interface (GUI) without having to manually write program instructions in lines of code. Users simply utilize drag-and-drop techniques to place the required objects. One programming language that supports this approach is Visual Basic, which is based on Object-Oriented Programming (OOP). Furthermore, visual-based programs utilize an event-driven concept, where the program flow is not fixed from the start but rather depends on events that occur, allowing program execution to vary according to user interaction[9].

2. MySQL

MySQL is an open-source relational database management system (RDBMS) widely used by various companies for data management. In a relational database, data is stored in separate, interconnected tables, rather than in a single large repository, making data organization and processing easier[10]

3. Crystal Report (Print Document)

The Print Document component is a built-in feature in Visual Basic .NET that is used to design reports, such as printing text, lines, images, and adjusting text alignment. To avoid printing directly to a printer, you can use a PDF printer to simulate the printout, displayed as a PDF file. One application that can be used to open and display PDF files is Adobe Reader[11].



3. RESEARCH METHODS

3.1 Method of collecting data

This research was conducted directly at UD. PAPILON TERARA, the research object. The data and information obtained were both primary and secondary.

a. Data Primer

Primary data, in the form of interview text, is obtained through interviews with informants who are being used as samples in the research. The data can be recorded or noted by the researcher.

The data collection methods used by researchers are as follows:

b. Observation

Observation is a method of collecting data by going directly into the field to observe problems that occur in the company directly at the scene, including systematically recording events, behavior, objects seen and other things needed to support the research being carried out.

c. Interview

An interview is a data or information collection technique conducted face-to-face, asking questions directly to employees in the information systems implementation sub-division. The interview discusses the current system in operation at the institution and the challenges frequently encountered when using it.

d. Secondary Data

Secondary data is data that is already available and can be obtained by researchers by reading, seeing or listening.

3.2 General Planning

System design begins with identifying the problem and progressing to testing. Broadly speaking, there are four stages: identification, conceptualization, formalization, or design, and testing[12]. Because each stage is interconnected and mutually supportive, these stages must be carried out sequentially. This simple system being designed is a small part of the overall analysis system.

a. Identification Stage

At this stage, the identification of problems for which an inventory and sales information system will be created at UD. PAPILON TERARA. Knowledge engineer must determine the specific and general problem boundaries regarding the ordering and shipping data sections and the management problems that frequently arise in these sections.

b. Conceptualization Stage

In this conceptualization stage, it is determined what elements are related to the symptoms and the causes that usually arise.

c. Plan Stage

In this design stage, all interrelated or interconnected problems will be formulated according to the software/programming language that will be used to describe the relational relationships according to the format used by the analysis system. This stage is often also called a knowledge base.

d. Testing Level

The completed system will be tested. If the system that has been created is still less than optimal, improvements will be made until all problems can be resolved completely and accurately[13].

The repaired system will be retested until the system is completely complete and accurate and suitable for use.

3.3 System Planning

This stage is crucial because it determines whether the new system is a suitable solution to the problems inherent in the old system[14]. The system design stage consists of two types of activities:

a. Process planning that includes Information System Flow (ASI), and data dictionary

b. Database design includes normalization, table relations, System Flow Diagram and codification.

Analysis of the current system was carried out in order to identify the problems faced by UD. PAPILON. This analysis is useful for providing the necessary alternative forms[15]. By analyzing the problems that arise and the various advantages and disadvantages of the current system, a system was obtained that can meet the desires and needs of information users in particular, both for parties outside the company and for the company's environment.[4]



Based on the details of the procedures for ordering and selling goods above, it can be described in the form of an information system flow in the image below.

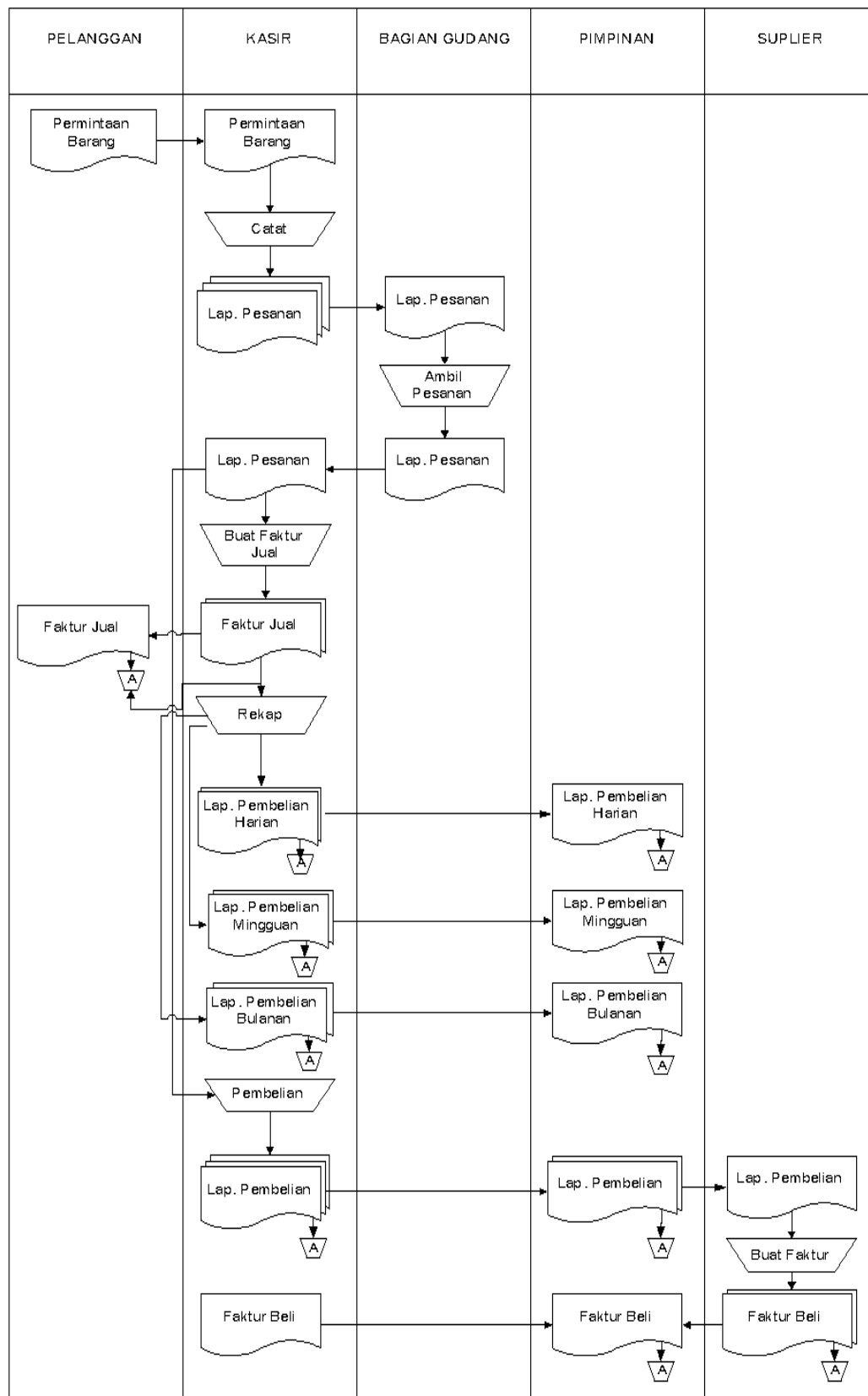


Figure 1.Old information system (ASI) flow

[Source: Author, 2026]

c. New Information Systems Analysis (ASI)

In the current information system (ASI) flow, transaction reports are generated manually. In the new Information System Flow, changes have been made, including computerization, as shown in the following figure.

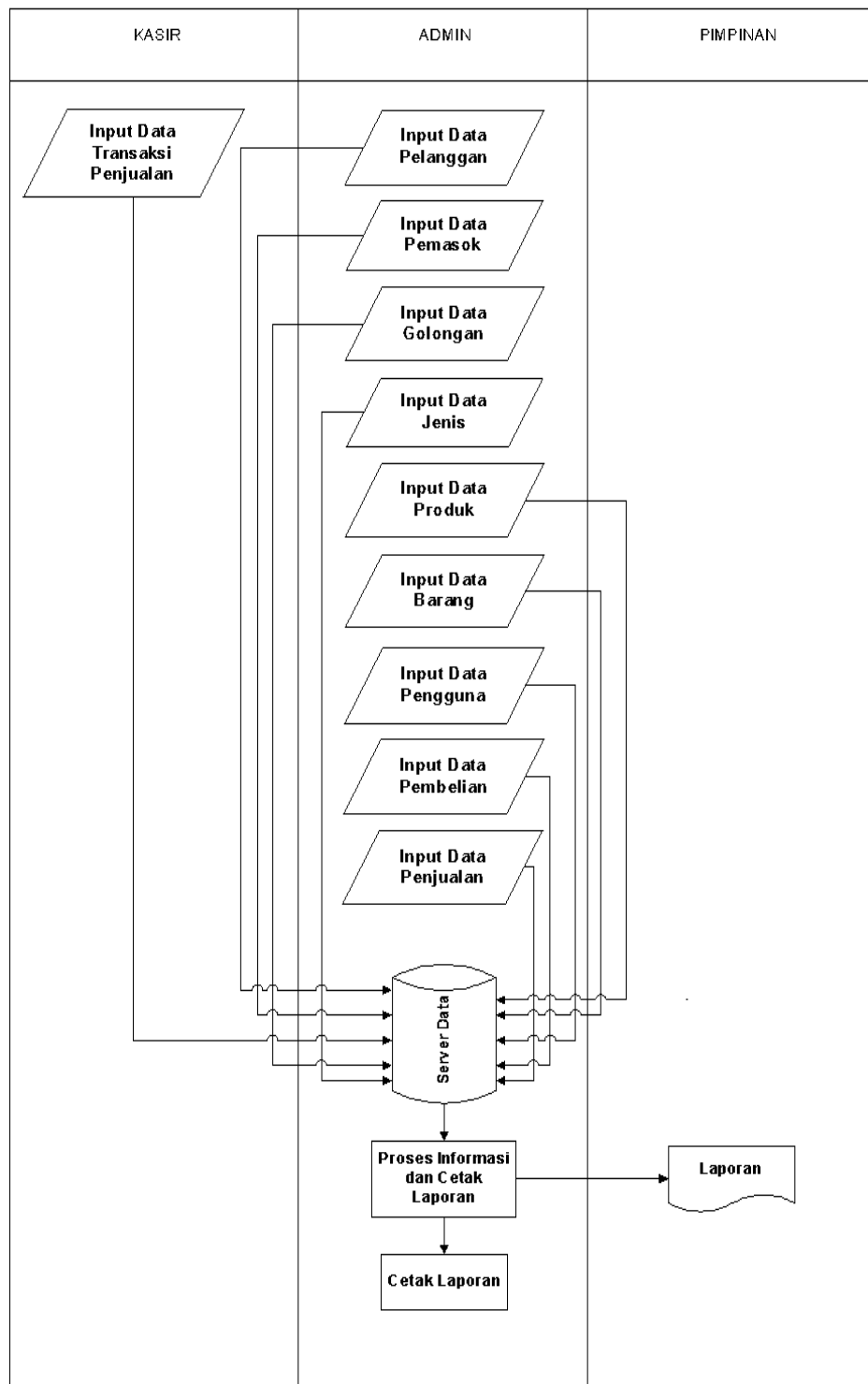


Figure 2. New information system flow (ASI)

[Source: Author, 2026]

4. DISCUSSION

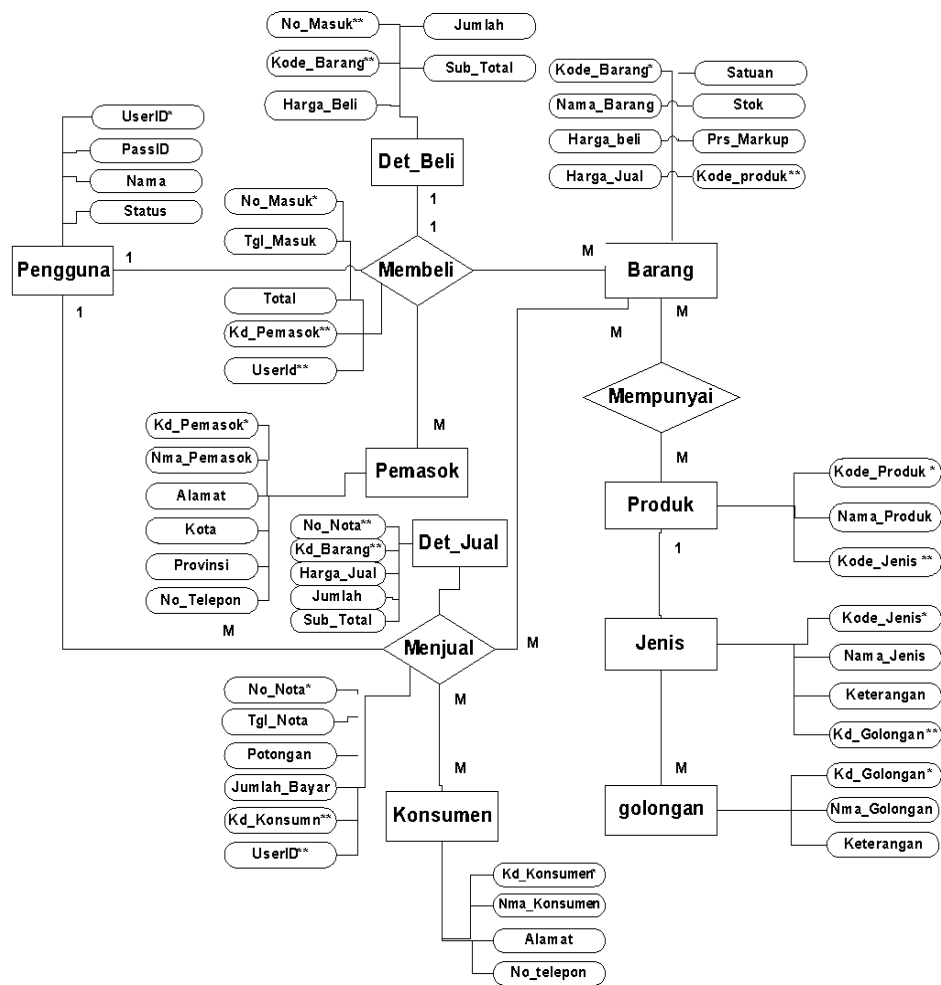


Figure 3.Data Structure Design
[Source: Author, 2026]

In creating this system, an adequate database design is required, according to the system's needs. This structural design outlines the entire computerized data processing process that will be carried out. Without a data processing system table, the computerization will not run. This design includes determining the primary key (*Primary Key*), guest key (*Foreign Key*) and other keys to link one table to another. The following are the tables used in the inventory and sales program at UD. PAPILON TERARA.

a. User Table

This table is used to store user data. The table design is as follows:

Table Name : User

Key Field : UserId

Table 1. User table structure

[Source: Author, 2026]

No.	Field Name	Type	Size	Information
1.	UserId	Text	10	User Id
2.	Passport	Text	10	User Keywords
3.	Number	Text	30	Username
4.	Status	Text	15	User Status

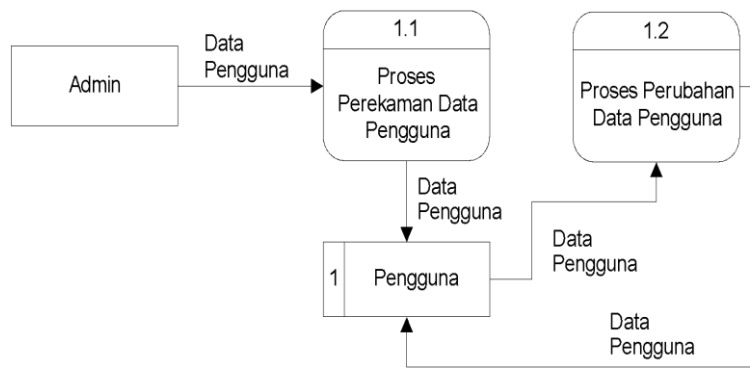


Figure 4. User data flow diagram
[Source: Author, 2026]

- 1) Process 1.1 is the process of directly recording user data, carried out by the admin. This recorded user data will be directly saved in the Users table.
- 2) Process 1.2 is the data change process carried out by the admin. This data change process will require data from the Users table, which will then be saved back into the Users table.

b. Brg_Group Table

Table Name : Brg_Group

Primary And : Group_Code

Table 2. Structure of the brg_golongan table
[Source: Author, 2026]

No.	Field Name	Type	Size	Information
1.	Group Code	Text	3	Class Code
2.	Group_Name	Text	15	Group Name
3.	Information	Text	100	Information

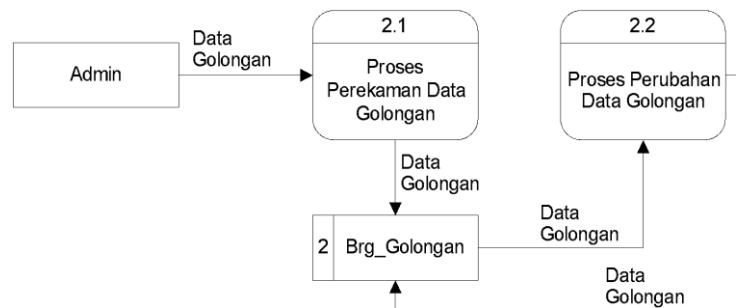


Figure 5. Group Flow Diagram
[Source: Author, 2026]

- 1) Process 2.1 is the process of directly recording group data carried out by the admin. The group data recording process will be directly saved in the Brg_Golongan table.
- 2) Process 2.2 is the data change process carried out by the admin. This data change process will require data from the Brg_Golongan table, which will then be saved back into the Brg_Golongan table.

c. Brg_Product Table

This table is used to store product data. The table design is as follows:

Table Name : Brg_Product

Primary Key : Product_Code

Table 3. Structure of the brg_produk table
[Source: Author, 2026]

No.	Field Name	Type	Size	Information
1.	Product Code	Text	11	Product Code
2.	Product name	Text	20	Type Code
3.	Code_Type	Text	7	Type Name

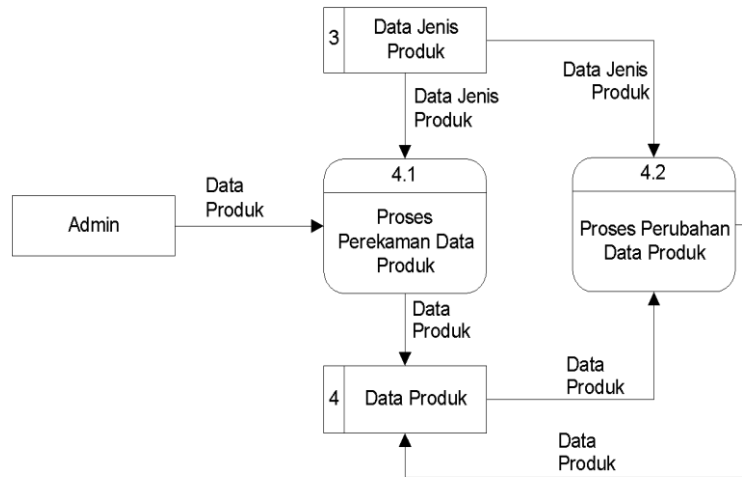


Figure 6. Product flow diagram

- 1) Process 4.1 is the product data recording process carried out by the admin. This product data recording process requires product type data from the Brg_Jenis table. This product type data is used as product type information in the product data to be recorded. After a product type is selected, the product data will be recorded in the Brg_Produk table.
- 2) Process 4.2 is the data change process carried out by the admin. This data change process originates from the Brg_Product and Brg_Type tables. After the data changes are made, the product data will be recorded back into the Brg_Product table.

d. Item Table

This table is used to store item data. The table design is as follows:

Table Name : Goods

Primary Key : Item_Code

Table 4. Item table structure
[Source: Author, 2026]

No.	Field Name	Type	Size	Information
1.	Item_Code	Text	15	Item Code
2.	Product Code	Text	11	Product Code
3.	Name of goods	Text	50	Name of goods
4.	Purchase_Price	Number	8	Purchase Price
5.	Selling price	Number	10	Selling price
6.	Unit	Text	15	Unit of Goods
7.	Stock	Number	10	Stock



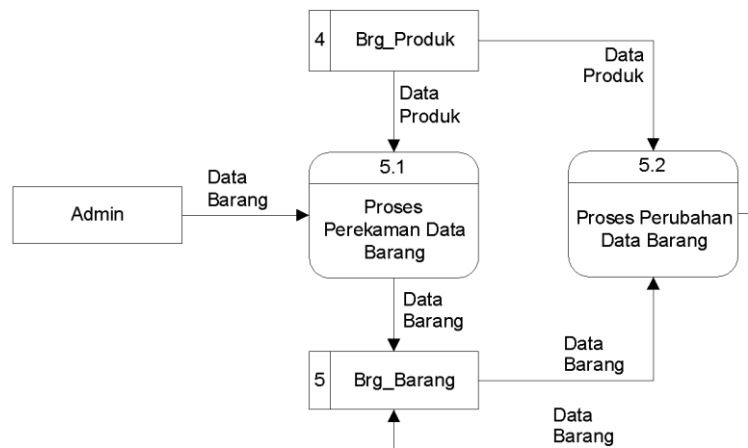


Figure 7. Goods data flow diagram
[Source: Author, 2026]

- 1) Process 5.1 is the process of recording item data carried out by the admin. This process requires product data from the Brg_Produk table. This product data is used as product information in the item data to be recorded. After a product is selected, the item data is recorded in the Brg_Barang table.
- 2) Process 5.2 is the data change process carried out by the admin. This data change process originates from the Brg_Barang and Brg_Produk tables. After the data changes are made, the item data will be recorded back into the Brg_Barang table.

e. Supplier Table

This table is used to store supplier data. The table design is as follows:

Table Name : Supplier

Primary Key : Supplier_Code

Table 5. Supplier table structure
[Source: Author, 2026]

No.	Field Name	Type	Size	Information
1.	Supplier_Code	Text	6	Supplier Code
2.	Supplier_Name	Text	35	Supplier Name
3.	Address	Text	30	Consumer Address
4.	No phone	Text	15	Consumer Phone

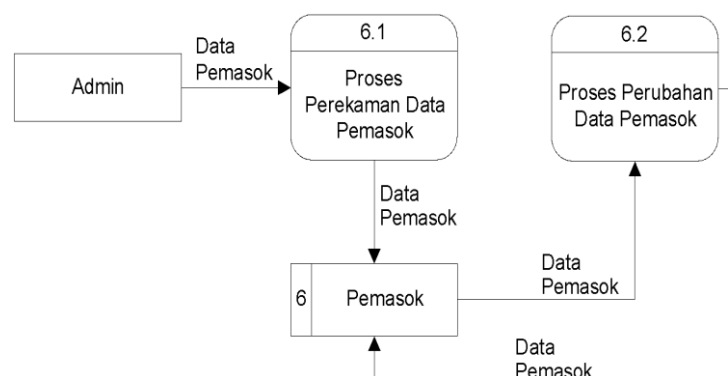


Figure 8. Supplier data flow diagram
[Source: Author, 2026]

- 1) Process 6.1 is the process of directly recording supplier data, carried out by the admin. This supplier data recording process will be directly saved in the Suppliers table.

- 2) Process 6.2 is the data change process carried out by the admin. This data change process will require data from the Suppliers table, which will then be saved back into the Suppliers table.

f. Purchase Table

This table is used to store purchase data. The table design is as follows:

Table Name : Purchase

Primary Key : No_Login

Table 6. Purchase table structure

[Source: Author, 2026]

No.	Field Name	Type	Size	Information
1.	No_Entry	Text	10	Entry Number
2.	Entry Date	Date	8	Date of entry
3.	Supplier_Code	Text	6	Supplier Code
4.	Total	Number	10	Total Purchase
5.	UserId	Text	10	User Id

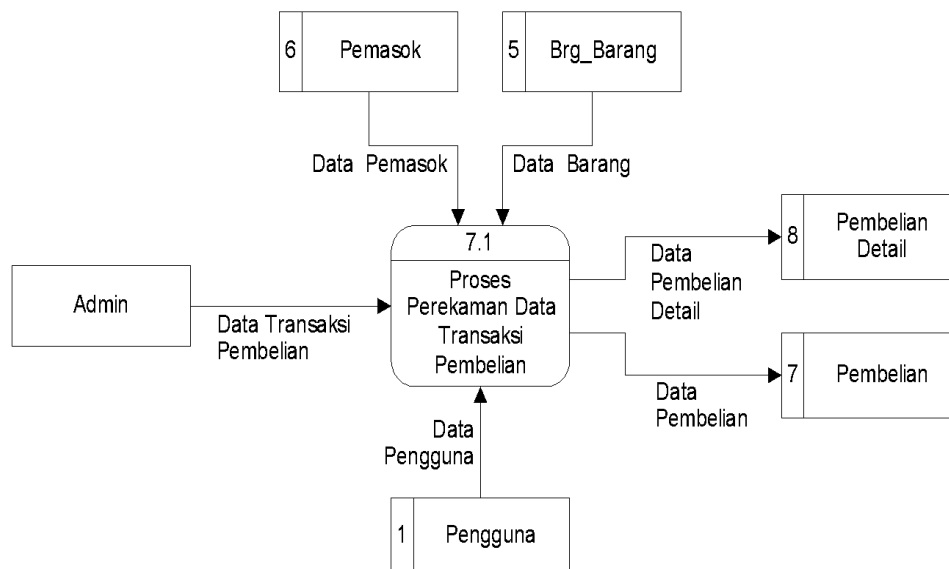


Figure 9. Purchase transaction data flow diagram

[Source: Author, 2026]

Process 7.1, Is the process of recording purchase transaction data carried out by the Admin. The process of recording purchase data requires item data from the Brg_Barang table, supplier data from the Supplier table, and user data from the User table. Item data is used as information on items to be purchased by Toko Bunafit, supplier data is used as information on goods providers for Toko Bunafit, and user data is used to determine the user (Admin) who makes the purchase transaction. Once the purchase data is complete, it will be recorded into the Purchase table.

g. Sales Table

This table is used to store sales data. The table design is as follows:

Table Name : Sale

Primary Key : -

Table 7. Sales table structure
[Source: Author, 2026]

No.	Field Name	Type	Size	Information
1.	No_Note	Text	10	Note Number
2.	Date_Note	Date	15	Note Date
3.	Amount_Paid	Number	10	Amount Paid
4.	Customer_Code	Text	6	Customer code
5.	UserId	Text	10	User ID

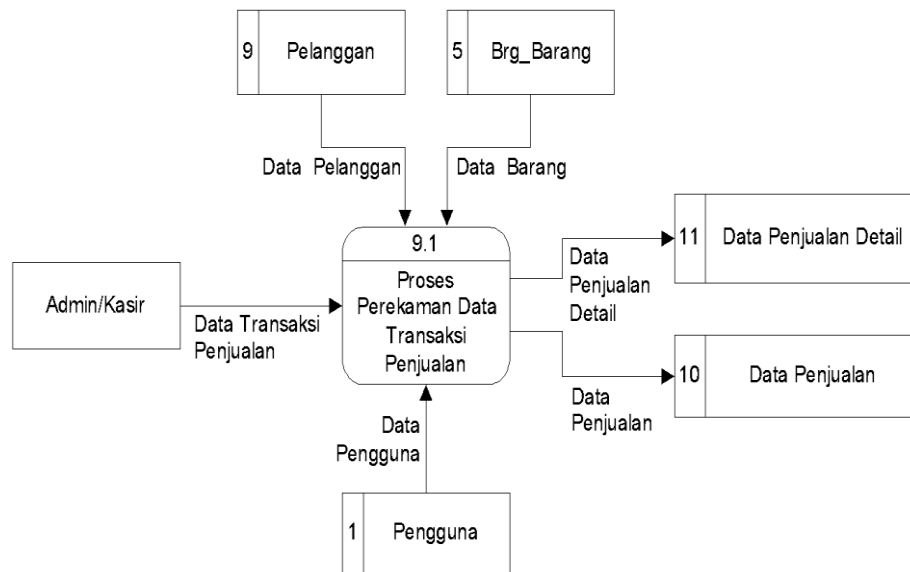


Figure 10. Sales transaction data flow diagram
[Source: Author, 2026]

Process 9.1, Is the process of recording sales transaction data carried out by the Admin and Cashier. In the process of recording sales data requires item data from the Brg_Barang table, customer data from the Customer table, and user data from the User table. Item data is used as information on items in UD. PAPILON, customer data is used as those who consume items in UD. PAPILON, and user data is used to determine the users (Admin and Cashier) who carry out sales transactions. After the sales data is complete, it will be recorded into the Sales table.

5. CONCLUSION

From the various explanations outlined in this report, the following conclusions can be drawn:

1. With the Inventory and Sales Information System, which the author developed, it will be easier to process goods data because the data is well integrated so that the possibility of data duplication no longer exists.
2. With this information system, UD. PAPILON can obtain more accurate information because it uses a computerized system to manage its data.

In making this Inventory and Sales of Goods information system, the author first identified what problems arose when still using a non-computerized system, after the problem identification was completed, the author offered UD. PAPILON a new system where with this new system the author hoped to reduce the problems that usually arise when data processing is running, after UD. PAPILON accepted what the author offered, the author began to design and design the system, after the design and design of the system were completed, then entered the final stage, namely the implementation and testing stage of the system.



REFERENCES

- [1] L. O. M. Saidi, “Pengembangan Framework untuk Investigasi Email Forensics Menggunakan Metode Systems Development Life Cycle (SDLC),” *ILKOM Jurnal Ilmiah*, vol. 117, p. 14917145, 2017.
- [2] Nukman, Y. Prayudi, and F. Yudha, “Pengembangan Framework Digital Forensics Investigation (FDFI) Pada Sosial Media Dengan Metode System Development Life Cycle (SDLC),” *JATISI (Jurnal Teknik Informatika dan Sistem Informasi)*, vol. 9, no. 3, pp. 1852–1860, 2022, doi: 10.35957/jatisi.v9i3.2151.
- [3] M. N. Al Jumah, B. Sugiantoro, and Y. Prayudi, “Penerapan Metode Composite Logic Untuk Perancangan Framework Pengumpulan Bukti Digital Pada Media Sosial,” *ILKOM Jurnal Ilmiah*, vol. 11, no. 2, p. 135, 2019, doi: 10.33096/ilkom.v11i2.442.135-142.
- [4] F. Razi, A. Itb, and J. Dahlan, “SISTEM INFORMASI INVENTORY PENJUALAN BARANG (STUDI KASUS : TOKO ARU RAYA),” vol. 4, no. 1, pp. 12–23.
- [5] R. A. Wibowo, “Sistem Informasi Persediaan Keluar Masuk Barang Pada Inside Distro Jakarta,” *Speed*, vol. 1, no. 4, pp. 19–24, 2009.
- [6] P. Hadeya Shabrina *et al.*, “Putri Hadeya Shabrina Rancang Bangun Sistem Informasi Rancang Bangun Sistem Informasi Inventory Menggunakan Metode Rapid Application Development (RAD) Pada Toko Abadi Jaya INFORMASI ARTIKEL ABSTRACT.”
- [7] R. Janah and Y. Syafitri, “Membangun Aplikasi Pemesanan Barang Berbasis Web Dengan Menggunakan Framework Ajax Pada Penamart Bandar Lampung,” *Jurnal JUSINTA*, vol. 3, no. 2, pp. 11–15, 2019.
- [8] E. Kurniawati and A. Ikhwan, “Perancangan Sistem Informasi Manajemen Inventaris Kontrol Stok Barang Berbasis Web,” *Jurnal Teknologi Sistem Informasi dan Aplikasi*, vol. 6, no. 3, pp. 408–415, Jul. 2023, doi: 10.32493/jtsi.v6i3.30881.
- [9] Bagus Sudirman, “VB .NET UNTUK PEMULA,” vol. 2, pp. 4–4, Apr. 2022.
- [10] Y. Sari Siregar, B. Oktaviana Sembiring, E. Rahayu, and R. Franchitika, “Pemanfaatan Aplikasi MySQL untuk Membantu Siswa SMK Swasta Nur Azizi dalam Pengolahan Data Utilization of the MySQL Application to Assist Nur Azizi Private Vocational School Students in Data Processing,” 2024. [Online]. Available: <https://jurnal.unity-academy.sch.id/index.php/japamas>
- [11] K. Rozikin and U. Achlison, “MEMBUAT REPORT DI VISUAL BASIC .NET MENGGUNAKAN KOMPONEN PRINT DOCUMENT,” *Universitas STEKOM Jl. Majapahit*, vol. 2, no. 1, p. 6723456, 2022, [Online]. Available: <http://journal.politeknik-pratama.ac.id/index.php/JTIM#page35>
- [12] D. Hay’s Naufal Riyan, “Aplikasi Inventory Terintegrasi Order System Konsumen Pada Oto Bento Perumnas Cilegon,” *Jurnal ProTekInfo Vol. 5*, vol. 5, no. September, pp. 22–25, 2018.
- [13] S. Tyowati and R. Irawan, “Implementasi Framework Codeignter Untuk Pengembangan Website Pada Dinas Perkebunan Provinsi Kalimantan Tengah,” *Jurnal SAINTEKOM*, vol. 7, no. 1, p. 67, 2017, doi: 10.33020/saintekom.v7i1.22.
- [14] Amiruddin Alnas and M. Fakhriza, “Sistem Informasi Manajemen Persediaan Barang pada Toko Bangunan UD. Alnas Menggunakan Eqonomic Order Quantity (EOQ),” *Jurnal Teknologi Sistem Informasi dan Aplikasi*, vol. 7, no. 2, pp. 419–425, Apr. 2024, doi: 10.32493/jtsi.v7i2.38714.
- [15] T. Firdaus, “Perancangan Aplikasi Inventory Barang Pada Puskesmas Balida Berbasis Web,” *Proceeding SENDIU 2021*, pp. 978–979, 2021.

