



INVENTORY TRANSACTION PROCESSING SYSTEM FOR INCOMING AND OUTGOING GOODS AT F.10 BERKAH STORE, TASIKMALAYA REGENCY

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Abstract. The advancement of information technology has significantly facilitated the management of accounting information systems, including inventory recording processes. Accurate and efficient inventory management is essential to ensure smooth operations and minimize recording errors. This study aims to develop a proposed system to support the recording of incoming and outgoing goods at Toko F.10 Berkah, located in Tasikmalaya Regency, with the objectives of reducing recording errors, simplifying the inventory process, and improving data accuracy in both recording and reporting. This research employs a descriptive method to analyze the current system and identify existing problems. System development utilizes the Rapid Application Development (RAD) methodology, which includes several key phases: requirement planning, prototype development, rapid construction, and implementation. The results indicate that the proposed inventory recording system, developed using C# based technology, is capable of improving the accuracy and efficiency of inventory data recording and reporting, enhancing recording performance, and supporting the daily operational activities of Toko F.10 Berkah.

Keywords: inventory; incoming goods; outgoing goods.

1 Introduction

1.1 Background

The development of information technology in the current digital era has encouraged various companies, institutions, and MSMEs to shift toward more computerized systems with the aim of improving operational efficiency and accuracy. However, advanced technology alone does not guarantee organizational success; effective management and a reliable information system are also required. In this context, a company's ability to design and manage appropriate systems determines whether technology can enhance operational efficiency and accuracy or merely add administrative burden. Nevertheless, despite rapid technological advancement, the adoption of digital systems among small enterprises remains suboptimal, particularly in the management of information systems and transaction recording.

This condition is clearly reflected at Toko F.10 Berkah, located on Jl. Sukratu, Tasikmalaya Regency, which still relies on manual book-based recording for its inventory transactions. The manual system has led to several issues, including the risk of data loss, recording errors, suboptimal management, and delays in reporting, all of which negatively affect decision-making processes. This situation indicates a discrepancy between the store's operational needs and the manual recording system currently in use. It highlights the necessity for a computerized information system capable of improving accuracy, accelerating the recording process, and minimizing errors.

This gap presents a relevant case for digital transition, positioning Toko F.10 Berkah as an appropriate subject for the development of a computerized transaction processing system aimed at enhancing the accuracy and efficiency of inventory recording.

1.2 Accounting Information System

According to Eni Endaryati (2021:1), an accounting information system is a framework that regulates how resources such as data, materials, equipment, suppliers, money, and capital are utilized to transform economically measurable input data into financial information used to carry out organizational activities and provide accounting information to relevant stakeholders.

1.3 Transaction Processing System

According to Afiffah et al. (2025), a transaction processing system serves as the primary gateway for organizations to collect and process transactional data. This system supports other information systems, such as management information systems and executive systems. It represents the most basic form of information system, as its functions include recording, processing data, and generating information.

1.4 Incoming and Outgoing Inventory

Inventory refers to a collection of resources, either raw materials or finished goods, that are maintained by a company to meet operational or consumer needs (Novilasari, 2023).

1.5 Goods

According to Supriyanto (2020–2021:134), goods are the final results of production that have undergone various stages of processing or assembly and are ready for sale.

1.6 Incoming Goods

According to M. Hudori (2020), incoming goods—also referred to as goods receipt—refer to activities related to receiving, storing, and distributing input products or services.

1.7 Outgoing Goods

According to Riyan Rahayu and Putu Arwana (2023), outgoing goods—also referred to as goods issuance refer to the process of removing goods from stores, warehouses, or other storage facilities, resulting in a reduction of stock levels to fulfill operational or customer needs.

2 Research Methods

This Study The research method used in this study is a descriptive method, which aims to present a detailed explanation of the results of a particular phenomenon or case study. The system development method applied in this research is the Rapid Application Development (RAD) method. RAD is a process used in software creation and development that involves designing, developing, implementing, and testing software.

According to Agung Riyanto Pratama (2023), RAD is a fast system development method that utilizes an iterative approach with the objective of creating an early working model of the system and identifying user requirements. Therefore, the author applies several stages of RAD as follows.

According to Ine Styte et al. (2024), there are several stages in the RAD method, namely Requirement Planning, Prototyping, Rapid Construction, and Implementation.

1. Requirement Planning

Requirement Planning is the stage of identifying and determining system requirements to be developed. In this stage, identification can be carried out in several ways, such as through literature studies (reading books, reviewing journals, and other references) or field studies (interviews, questionnaires, and observations). At the Requirement Planning stage, the author conducted identification through interviews and direct observations at Toko F.10 Berkah to understand the current sales recording process and the procedure for incoming goods. Additionally, data from previous sales reports were collected to serve as a reference for developing the system to be created.

2. Prototyping

A prototype is an early version of software that functions as a model of the final system to be built. The prototype is designed to be tested by users, allowing them to provide feedback regarding usability, interface, and functionality. Based on the feedback received, necessary revisions and improvements are made. At this stage, users tested the system developed by the author to determine whether it runs smoothly and meets their expectations in terms of design, features, and overall usability. Feedback was collected through interviews, focusing on the ease of use, system speed and accuracy, and any unclear features. The results from the prototype were then used to improve the system and adjust the data input workflow to align with the users' needs.

3. Rapid Construction

Once the prototype has been validated, the next step is the rapid construction and feedback collection stage. In this step, the system is developed through several processes such as design, programming, feature integration, and testing. Users can provide feedback during this stage to ensure that the developed system aligns with their needs and expectations. At this stage, users re-tested the updated system to determine whether it met their expectations, as all previous feedback regarding functions, features, or usability issues had been implemented in the next version of the prototype.

4. Implementation

The implementation stage is the final step, in which the results of the previous design stages are realized in the form of database implementation and coding. The goal of this stage is to build the system and apply appropriate programming methods to ensure the success of the designed system.

This research was conducted at Toko F.10 Berkah, located at Jl. Sukaratu, Kampung Ranca Kalong, Sukagalih Village, Sukaratu District, Tasikmalaya Regency. The data collection techniques used include interviews with the store administrator, direct observation at Toko F.10 Berkah, and literature studies.

3 Problem Analysis

3.1 Document Analysis

The documents used in the inventory recording activities, including incoming and outgoing goods at Toko F.10 Berkah, Tasikmalaya Regency, are as follows:

1. Product Data
2. Customer Data
3. Order Data
4. Sales Invoice
5. Outgoing Goods Report
6. Incoming Goods Report

3.2 Document Flow Diagram

The document flow diagram currently used in the inventory recording process and in managing incoming and outgoing goods at Toko F.10 Berkah, Tasikmalaya Regency, is illustrated in the following figure:

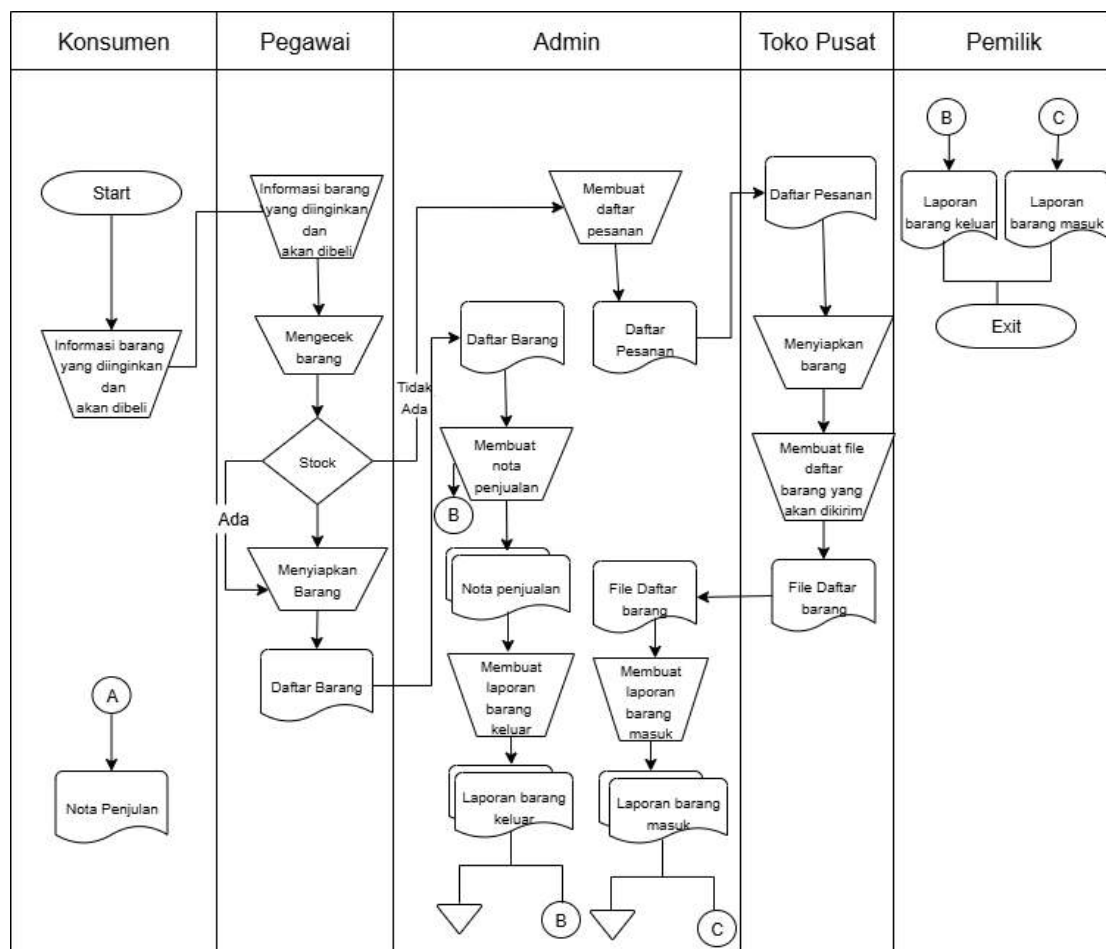


Figure 1. Flowmap of Incoming and Outgoing Inventory Process Currently Implemented at Toko F.10 Berkah, Tasikmalaya Regency

3.3 Technology Analysis

In carrying out its operations, the company requires technology to ensure smooth processes. However, the technology currently used by Toko F.10 Berkah in processing

The context diagram illustrates and describes the overall flow of information and data within the system. It represents the highest-level overview showing the interaction between the system and external entities, as well as the general depiction of the system as a whole. The proposed context diagram is presented as follows:



Figure 3. Proposed Context Diagram of Incoming and Outgoing Inventory

Data Flow Diagram (DFD)

The proposed Data Flow Diagram (DFD) is presented as follows:

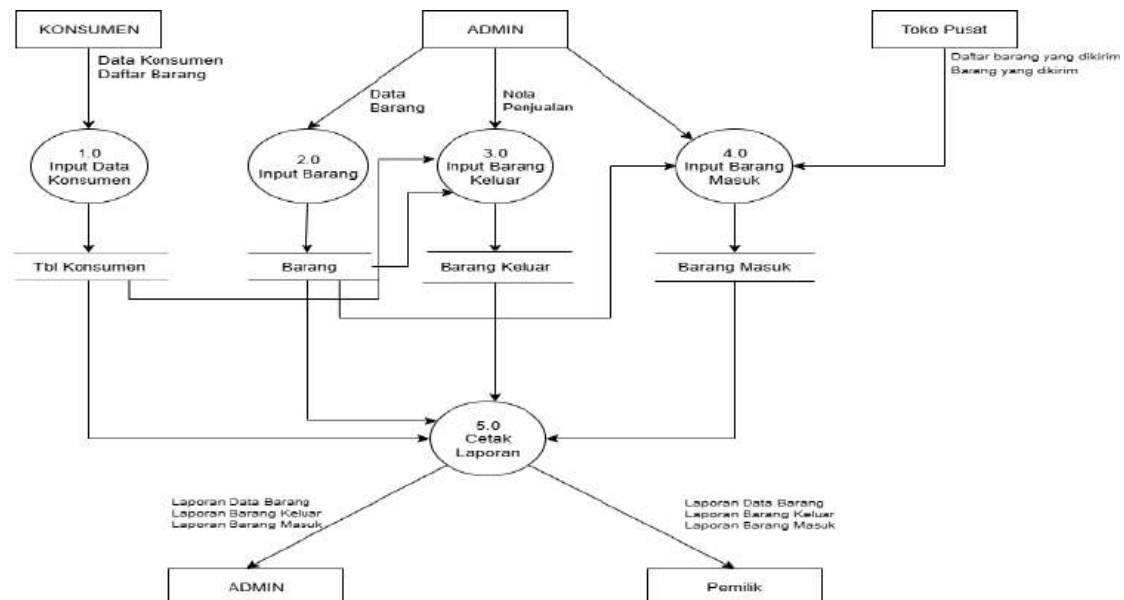


Figure 4. Proposed Data Flow Diagram (DFD) of Incoming and Outgoing Inventory

Entity Relationship Diagram (ERD)

The proposed Entity Relationship Diagram (ERD) is presented as follows:

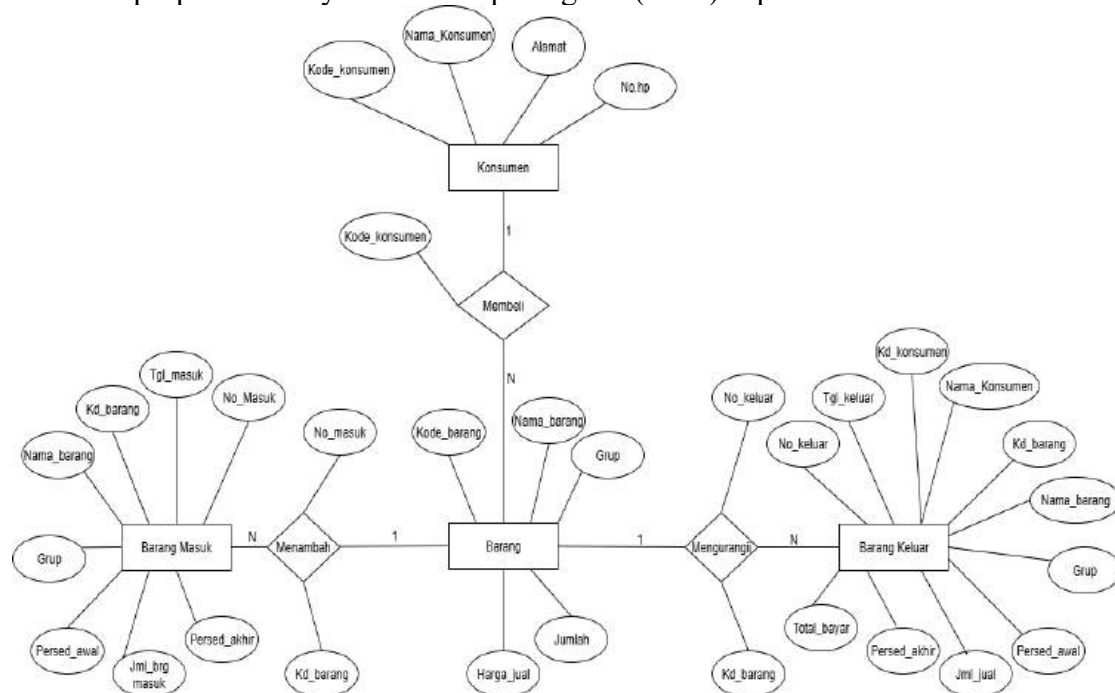


Figure 5. Proposed Entity Relationship Diagram (ERD) of Incoming and Outgoing Inventory

4.1 Interface Display

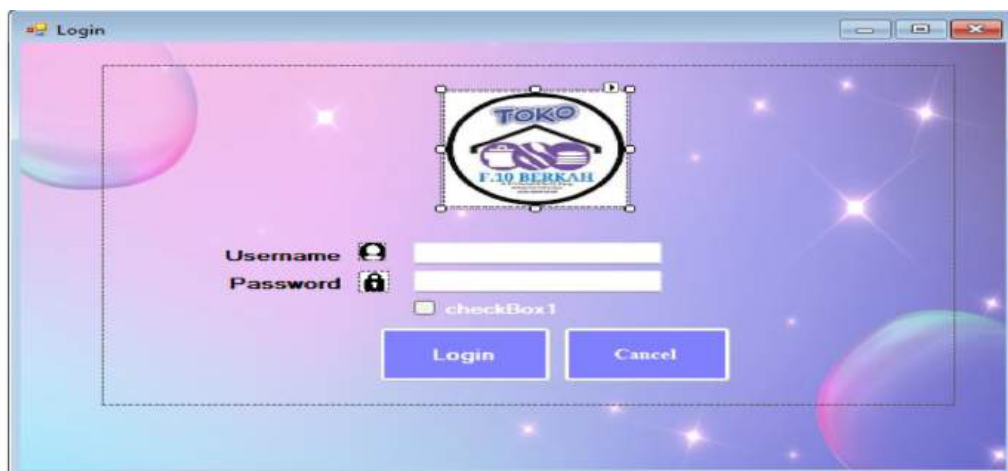


Figure 6. Login Form Design

Inventory Transaction Processing System for Incoming and Outgoing Goods at F.10 Berkah Store, Tasikmalaya Regency

add_user

Input Data User
Toko F.10 Berkah Kabupaten Tasikmalaya
Jl. Sukaratu kp.Ranca Kalong Sukagalih Kabupaten Tasikmalaya

Kode User

Nama User

Password

Figure 7. Add User Form Design

menu

TOKO F.10 BERKAH
Menyediakan Berbagai
Barang satuan/eceran
Dengan relatif harga yang murah

Add_user
Bantuan
Log_out

Barang Konsumen Barang Masuk Barang Keluar

Laporan

Laporan Data Barang Masuk
Laporan Data Barang Masuk
Laporan Data Barang Keluar

Figure 8. Menu Form Design

Data Konsumen

DATA KONSUMEN
TOKO F.10 BERKAH KABUPATEN TASIKMALAYA
Jl. Sukaratu kp.Ranca Kalong Sukagalih Kabupaten Tasikmalaya

Input Data Konsumen

Kode Konsumen

Nama Konsumen

Alamat

No.Hp

Figure 9. Customer Data Input Form Design

Inventory Transaction Processing System for Incoming and Outgoing Goods at F.10 Berkah Store, Tasikmalaya Regency

Persediaan Barang

PERSEDIAAN BARANG
TOKO F.10 BERKAH KABUPATEN TASIKMALAYA
Jl. Sukaratu kp.Ranca Kalong Sukagalih Kabupaten Tasikmalaya

Input Barang

Kode Barang Stok
Nama Barang Harga
Jenis

SIMPAN EDIT HAPUS REFRESH LAPORAN

Figure 10. Inventory Input Form Design

Barang Masuk

DATA BARANG MASUK
TOKO F.10 BERKAH KABUPATEN TASIKMALAYA
Jl. Sukaratu kp.Ranca Kalong Sukagalih Kabupaten Tasikmalaya

Input Barang Masuk

No Masuk Nama Barang Jumlah Barang Masuk
Tanggal Masuk Sunday, 13 J Jenis Stok Akhir
Kode Barang Stok Awal

Laporan

Figure 11. Incoming Goods Form Design

Barang_keluar

DATA BARANG MASUK
TOKO F.10 BERKAH KABUPATEN TASIKMALAYA
Jl. Sukaratu kp.Ranca Kalong Sukagalih Kabupaten Tasikmalaya

Input Barang Keluar

No. Keluar Kode Barang Jumlah Terjual
Tanggal Keluar Wednesday, 27 August Nama Barang Harga Jual
Kode Konsumen Jenis Stok Akhir
Nama Konsumen Stok Awal Total Bayar

Laporan

Figure 12. Outgoing Goods Form Design

Inventory Transaction Processing System for Incoming and Outgoing Goods at F.10 Berkah Store, Tasikmalaya Regency

Laporan Persediaan

LAPORAN PERSEDIAAN BARANG
TOKO F.10 BERKAH KABUPATEN TASIKMALAYA
Jl. Sukaratu kp.Ranca Kalong Sukagalih Kabupaten Tasikmalaya

Laporan Per
Jenis

Main Report

Laporan Persediaan Barang
Toko F.10 Berkah Kabupaten Tasikmalaya
Jl. Sukaratu kp.Ranca Kalong Sukagalih Kabupaten Tasikmalaya

Figure 13. Inventory Report Form Design

Laporan_Brgmasuk

LAPORAN DATA BARANG MASUK
TOKO F.10 BERKAH KABUPATEN TASIKMALAYA
Jl. Sukaratu kp.Ranca Kalong Sukagalih Kabupaten Tasikmalaya

Laporan Per
From Date: Wednesday, 30 July 2020
To Date: Wednesday, 27 August 2020

Main Report

Laporan Data Barang Masuk
Toko F.10 Berkah Kabupaten Tasikmalaya

Figure 14. Incoming Goods Report Form Design

Laporan_Brgkeluar

LAPORAN DATA BARANG KELUAR
TOKO F.10 BERKAH KABUPATEN TASIKMALAYA
Jl. Sukaratu kp.Ranca Kalong Sukagalih Kabupaten Tasikmalaya

Laporan Per
From Date: Wednesday, 27 August 2020
To Date: Wednesday, 27 August 2020

Main Report

Laporan Data Barang Keluar

Figure 15. Outgoing Goods Report Form Design

5 Conclusion and Suggestion

5.1 Conclusion

Based on the background, problem formulation, analysis, and discussion presented earlier, the author draws the following conclusions:

1. The current inventory data processing system, including incoming and outgoing goods activities at Toko F.10 Berkah, Tasikmalaya Regency, has not yet been computerized and still relies on manual book-based record-keeping.
2. The proposed system developed by the author using Microsoft Visual Studio based on C# has been proven to assist, simplify, and streamline the management of sales data, incoming goods data from the main store, and inventory data at Toko F.10 Berkah, Tasikmalaya Regency.
 - a. The advantages of the proposed system include:
 - a. A relatively short operational time, with a recording time reduction of approximately 35% compared to the manual system.
 - b. More comprehensive and structured reporting according to user needs, facilitating analysis and decision-making.
 - c. A significant reduction in data processing errors, from 7–8 errors to fewer than 3 errors after implementing the system.
 - d. Overall improvement in operational effectiveness and efficiency, both quantitatively and qualitatively, including reduced processing time and errors as well as increased ease of use.

5.2 Suggestions

Based on the background, problem formulation, analysis, discussion, and conclusions above, the author provides the following recommendations:

Since the inventory transaction processing system developed using Microsoft Visual Studio with C# has been proven to function effectively and provide benefits, it is recommended that this system be implemented to facilitate and streamline the management and recording of sales data, incoming goods from the main Toko F.10 Berkah, and inventory data at Toko F.10 Berkah, Tasikmalaya Regency. The implementation of this system is expected to reduce recording time and minimize data entry errors.

It is recommended to enhance the necessary computer system facilities to facilitate operations in managing the computerized system. This improvement is expected to ease and streamline the processes of managing and recording inventory data, customer data, incoming and outgoing goods, while minimizing errors in data recording at Toko F.10 Berkah, Tasikmalaya Regency. Additionally, consideration should be given to system scalability to ensure long-term usability, and user training should be provided to ensure proper operation and successful sustainable implementation.

Although the author has made efforts to design and refine this system and proposal, there are still several shortcomings that need improvement. Therefore, constructive criticism and suggestions from readers are highly appreciated to further improve and perfect the proposed system.

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