Journal of Engineering, Electrical and Informatics
Vol.3, No.1 Februari 2023
e-ISSN: 2809-8706; p-ISSN: 2810-0557, Hal 38-53

Multiuser Based Inventory Information System In Kopel Dolog Semarang

Judia Septiana
Universitas Sains dan Teknologi Komputer
Email: yudiaseptiana@gmail.com

Didik Sofian Haryadi
Universitas Sains dan Teknologi Komputer
Email: yudiaseptiana@gmail.com

Andik Prakasa Hadi
Universitas Sains dan Teknologi Komputer
Email: yudiaseptiana@gmail.com
Jl. Majapahit 605, Semarang, tel/fax : (024) 6723456

Abstract. *Inventory of goods or inventory is goods or work equipment used in processing the business being carried out or operational equipment of a company. Without inventory, business activities will not be carried out well, for this reason the existence of inventory is very important. The Goods Inventory Information System in a cooperative has quite an important role. One of the problems that often arises in an inventory system is not being able to know the exact number and condition of goods available. In terms of presenting information, the inventory system is implemented on a multiuser basis, where a multiuser system is a computer system that can execute several applications owned by two or more users concurrently and independently. Concurrent means applications can be active simultaneously and compete with each other to use resources such as CPU, memory, hard disk, and so on. Independent means that each application can carry out its tasks without having to care about what other users are running This information system makes it easy to provide inventory information. Apart from that, this system also makes it easier and faster to access information, data and its processing. The new system aims to make it easier for a company to carry out its operational activities, where this system will always ensure that data or information is provided to users quickly, precisely, accurately and at any time it is needed. From the system that has been implemented previously with matters relating to system weaknesses in the company, information or data about the inventory system which was initially very slow to access has now become easier. So that the company's operational activities run smoothly and all weaknesses in the old system can be replaced automatically.*

Keywords: *Information Systems, Inventory, Multiuser*

1. INTRODUCTION

In an organization or company, an effective system is very necessary for carrying out work because in general a company has a lot of work and requires a relatively long time and also thoroughness. For this reason, the current development of science and technology has created an era of reform and industrialization, one of which is computer technology. Its accuracy and speed can help process any data. By utilizing computer technology, work will become easier and the expected goals will be more easily achieved. Progress in the computer field is one of the factors that supports technological development.

The Goods Inventory Information System in a cooperative has quite an important role. One of the problems that often arises in an inventory system is not being able to know the exact number and condition of goods available. Logistics Employees Cooperative or commonly abbreviated as KOPEL DOLOG which is located on Jl. Minister Supeno I/1 Semarang is a cooperative that was established under the auspices of Perum Bulog Divre Jateng, has 902

Received Desember 07, 2022; Revised Januari 2, 2023; Februari 22, 2023
* Judia Septiana , yudiaseptiana@gmail.com

members whose members are all employees of Perum Bulog Divre Jateng. This cooperative operates in business sectors such as shops, car rental and photocopying. The types of goods sold are various kinds of basic necessities. In the shop there are 3 sections, namely, the head of the shop, the cashier section and the warehouse section. The head of the shop is responsible for recording and is responsible for every transaction that occurs, the cashier carries out sales and purchase transactions for goods in the shop, and the warehouse department records the entry and exit of goods in the warehouse as well as the quantity and condition of the goods available. Transactions that occur every day reach 25 transactions or more, so the inventory information system has a quite important role.

At KOPEL DOLOG Semarang, the information system for goods inventory and cost calculations currently still uses manual methods, namely data on the number of goods available is stored in a file in the form of books or papers or separate archives. Because the system is still carried out manually, when information on remaining stock of goods is needed, employees have to open the stock record book, even though there are too many types of goods being sold or by looking at the physical condition of the goods available. This causes the information obtained to be not completely correct or inaccurate. This can lead to data manipulation, which will later be detrimental to the cooperative itself. In this cooperative there are 6 computer units but they have not been used optimally. The use of computers is only limited as a tool, namely only using general applications such as Microsoft Word and Microsoft Excel in preparing financial reports. This is not considered effective and efficient because in presenting the report it must be checked repeatedly to get accurate results. The database is still centralized in one section, namely the head of the shop, making it difficult to obtain item data information between the cashier and warehouse sections, because it still uses Microsoft Office where the database is centralized, located only in the head of the shop. Multiuser implementation is intended to make it easier to use the information system program created so that this information system can be run by several people or users at the same time without any conflict, namely avoiding data clashes.

The problem of the goods inventory system is one of the most important things and in the process of processing goods inventory data there are still several obstacles because of the considerations above, the author chose the title **"MULTIUSER-BASED GOODS INVENTORY INFORMATION SYSTEM ON COLLECTOR DOLOG SEMARANG"** which is expected to help provide a better alternative. good for the goods inventory system at KOPEL DOLOG Semarang

2. THEORETICAL BASIS

1. Understanding Systems

According to Raymond McLeod, Jr, (2001:11) the definition of a system is a group of elements that are integrated with the same intention to achieve a goal. An organization such as a company or a functional area fits this definition, the organization consists of a number of resources and these resources work towards achieving a certain goal determined by the owner or management. A system is an integration of elements that all work towards a goal. All systems include three main elements, namely input, transformation and output. Some systems can control their own operations, and are called closed-loop systems. A closed loop system includes a control mechanism, goals, and a feedback loop.

2. System Characteristics

A system has certain characteristics/properties, [8] namely:

a. System Components

A system consists of a number of components that interact with each other, which means they work together to form a single unit. System components or system elements can be a subsystem or parts of the system.

b. System Limits

A system boundary is an area that limits a system to other systems or its external environment. This system boundary allows a system to be viewed as a single unit. The boundaries of a system indicate the scope of the system.

c. External System Environment

The external environment of a system is anything outside the boundaries of the system that influences a system. The external environment of the system can be beneficial and can also be detrimental to the system. The favorable external environment constitutes the energy of the system and as such must be maintained and maintained. Meanwhile, the adverse external environment must be restrained and controlled, otherwise it will disrupt the survival of the system.

d. System Liaison

Liaison is a connecting medium between one subsystem and other subsystems. This link allows resources to flow from one subsystem to another. The output from one subsystem will become input for other subsystems through a link. By connecting one subsystem, it can be integrated with other subsystems to form a single unit.

e. System Input

System input is the energy put into the system. Input can be in the form of maintenance input and signal input. Maintenance input is the energy entered so that the system can operate. The input signal is the energy that is processed to obtain the output.

f. System Output

Output is the result of processed energy and is classified into useful output and residual waste.

g. System Processor

A system can have a processing part or the system itself as the processor. Processor that will convert input into output.

h. System Goals

A system has a goal or target. If a system cannot achieve a target, then the system's operation will be useless. The goals of a system really determine the input the system needs and the output the system will produce.

3. METHODOLOGY

In conducting research, it is necessary to collect data in accordance with the research object because this data will be used to look for problems and a true picture of the problem to be researched in order to obtain real data whose truth can be trusted. The research methods used by the author are:

1. Method of collecting data
   a. Field Research (Field Research)

      This is a fairly effective research method. Data was obtained by observing and going directly to the research object, namely visiting KOPEL DOLOG Semarang, so that this field research could obtain the materials and data that the author needed, both qualitative and quantitative data.

   b. Interview (Interview)

      Namely, holding direct questions to related parties in order to obtain information regarding the focus of the problem being faced, in this case with KOPEL DOLOG Semarang. Then it is recorded systematically and completely according to the research.

   c. Observation (Observation)

Conduct direct observations and monitoring of the object, namely KOPEL DOLOG Semarang, to closely observe the problems faced and make specific notes on the findings.

d. Library Research (Library Research)

Library research is a research method carried out to obtain data sourced from books or supporting literature available in the library, which is related to the writing of this thesis and strengthens opinions in analyzing the results of field research so that existing problems are resolved properly.

2. System Development Methods

The system development method used is the SDLC (System Development Life Cycle) approach which is often equated with the waterfall approach. SDLC is an evolutionary process that is followed in developing a computer-based information system or subsystem. The stages of the SDLC Approach are:

a. Planning Stage

The first step taken in developing an information system is planning what will be created when developing it.

b. Analysis Stage

This is done to determine updates to existing systems

c. Design Stage

At this stage, the processes and data required by the new system are carried out, namely preparing a detailed system design.

d. Implementation Stage

At this stage is planning the implementation and transfer from the old system to the new system.

4. RESULTS AND DISCUSSION

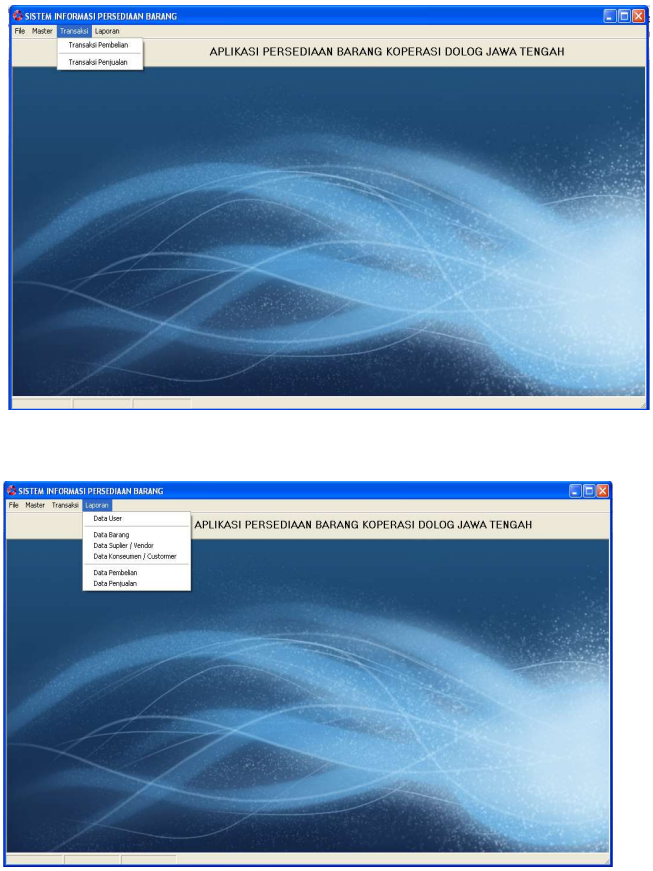
1. Program Implementation

After the program design is complete, then run or test the program including: Login to the main menu, main menu, data input forms and reports. The following is the implementation of the Inventory Information System program as follows:

a. Main Menu Form

Image Login to Program

b. Main course



Main Menu Design Image

c. Goods Data Input Form

This form is used to input inventory data, the form of the Input Form and the method for entering item data are as follows:

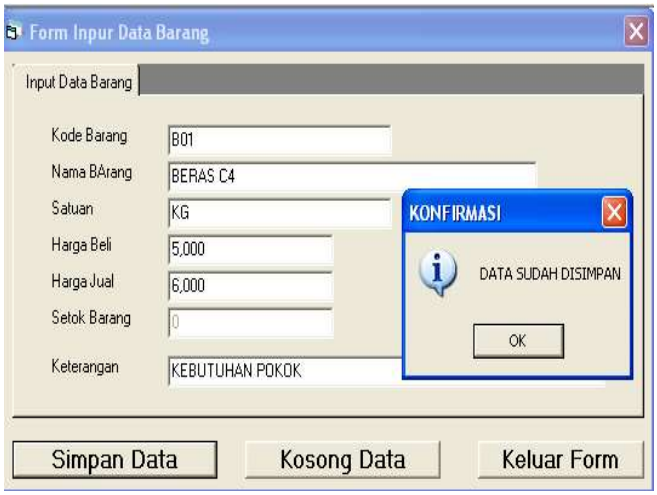


Image of Goods Data Form Design

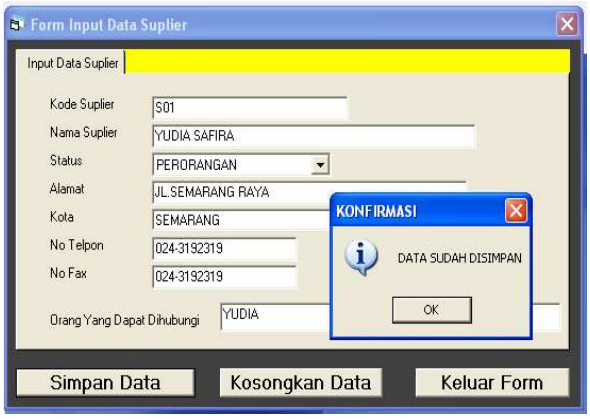
Information :

The following Goods Data Input Form is as follows:

1. Enter item code data
2. Enter item name data
3. Enter item type data
4. Enter the purchase price of the item
5. Enter the selling price of the item
6. Enter initial stock data for goods
7. Enter information data
8. Save Data button to save, Clear Data to clear and Exit Form to exit.

d. Supplier Data Input Form

This form is used to input Supplier data, the form is as follows:



Supplier Form Design Drawing

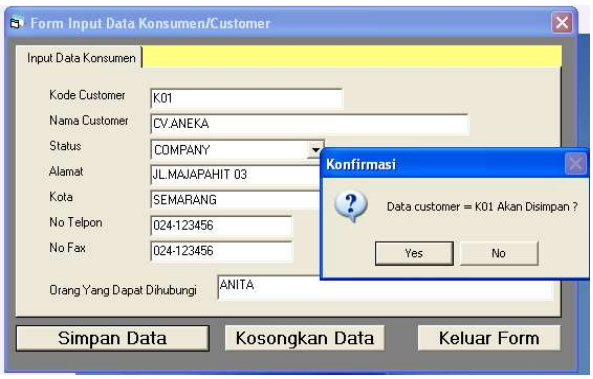
Information :

The following is the Supplier Data Input Form as follows:

1. Enter Supplier code data
2. Enter Supplier name data
3. Enter Supplier Status type data
4. Enter Supplier Address
5. Enter Supplier City
6. Enter Supplier Telephone Number data
7. Enter the fax number data that can be contacted by the supplier
8. Enter data on people who can be contacted by the company.
9. The Save Data button functions to save the data that has been entered
10. The Clear Data button functions to clear the data input form
11. The Exit Form button functions to exit the Item Data Input form.

e. Design Consumer Data Form

This form is used to input consumer data, the form is as follows:.



Consumer Form Design Image

Information :

The following Consumer Data Input Form is as follows:

1. Enter Consumer code data
2. Enter consumer name data
3. Enter Consumer Status type data
4. Enter the Consumer Address
5. Enter Consumer City
6. Enter consumer telephone number data
7. Enter fax number data
8. Enter data on people who can be contacted
9. The Save Data button functions to save the data that has been entered
10. The Clear Data button functions to clear the data input form
11. The Exit Form button functions to exit the Item Data Input form.

f. Purchase Data Input Form

This form is used to input Purchase data , The form of the Purchase form is as follows:

Design Image of Purchase Data Input Form

Information :

The following information in designing the Purchase Data Input Form is as follows:

1. The User Code functions to display the user name
2. Invoice No functions to display the Purchase Invoice serial number
3. Date functions to enter the purchase date
4. Supplier Code functions to enter or select the Supplier Code
5. Supplier Name functions to display the Supplier Name according to the Supplier Code
6. Item Code functions to select or enter the code for the item to be purchased
7. Item Name functions to display the name of the item
8. Item Price functions to display the price of the item
9. Number of Items functions to enter data on the number of items
10. Total Price functions to display the total price
11. The Process button functions to save the data that has been entered
12. The Clear All Data button functions to clear the data input form
13. The Clear Item Data button functions to clear the data input form per Item
14. The Exit button functions to exit the Item Data Input form.

g. Sales Data Form Design

This form is used to input sales data , in it there is a Dbgrid which functions to accommodate the following:

Sales Data Input Form Design Image

Information :

The following information in designing the Sales Data Input Form from the Inventory Information System at the DOLOG JATENG Cooperative is as follows:

1. The User Code functions to display the user name
2. Note No. functions to display the Sales Note serial number
3. Date functions to enter the sales date
4. Consumer Code functions to enter or select a Consumer Code
5. Consumer Name functions to display the Consumer Name in accordance with the Consumer Code
6. Item Code functions to select or enter the code for the item to be purchased
7. Item Name functions to display the name of the item
8. Item Price functions to display the price of the item
9. Number of Items functions to enter data on the number of items
10. Total Price functions to display the total price
11. The Process button functions to save the data that has been entered
12. The Clear All Data button functions to clear the data input form
13. The Clear Item Data button functions to clear the data input form per Item
14. The Exit button functions to exit the Item Data Input form.

h. Item Data Report

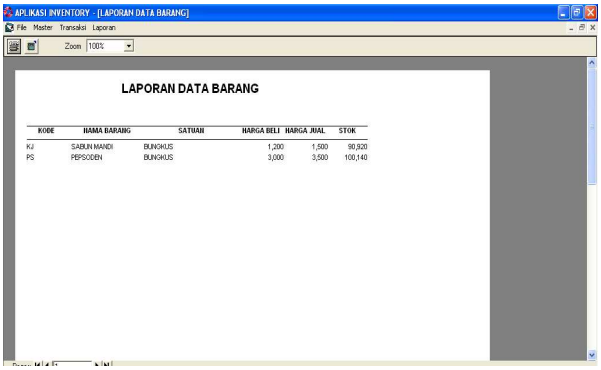
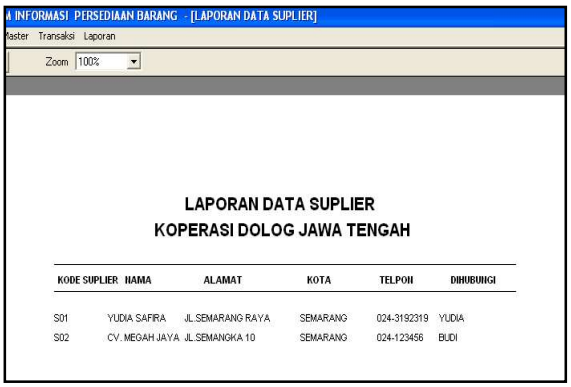


Image of Goods Data Report

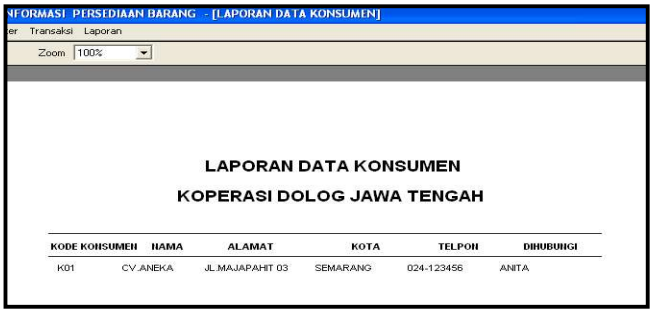
i. Supplier Data Report

Journal of Engineering, Electrical and Informatics
Vol.3, No.1 Februari 2023
e-ISSN: 2809-8706; p-ISSN: 2810-0557, Hal 38-53



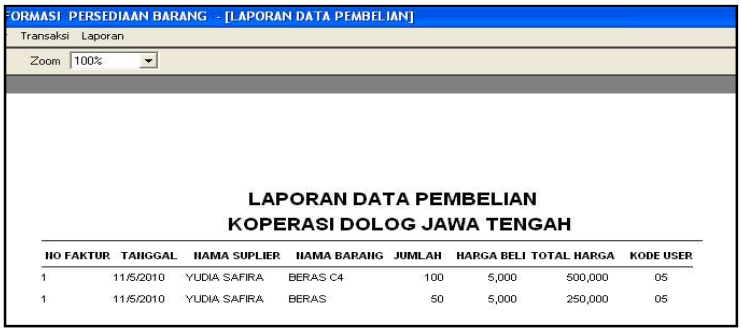
Supplier Report Image

j. Customer data reports



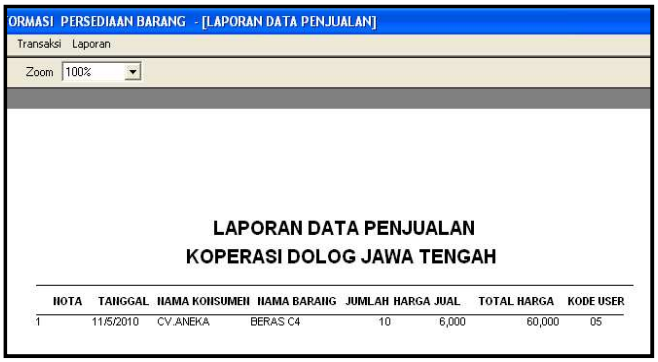
Customer Report Image

k. Purchase Report



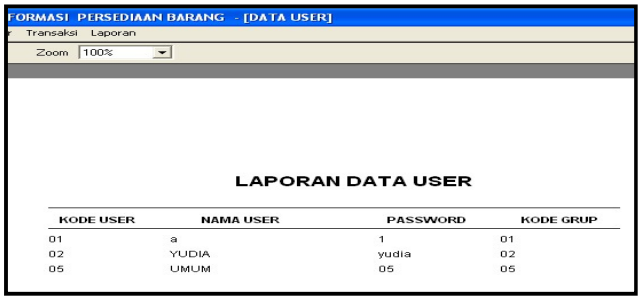
Purchase Report Image

l. Sales report



Sales Report Image

m. User Reports



User Report Image

5. CONCLUSION

With the existence of a goods inventory information system at the DOLOG Cooperative, Central Java Province, it can be concluded as follows:

1. Providing convenience in terms of Goods Inventory Information so that the information obtained is more accurate and can avoid the possibility of data manipulation.
2. Implementing a Multiuser-based Inventory Information System using the Microsoft Visual Basic 6.0 programming language and a database using Microsoft SQL Server 2000, has been able to make it easier for the cashier and warehouse departments to obtain inventory information.
3. Providing convenience in preparing financial reports, so that the presentation of financial reports is more effective and efficient.
4. Can overcome the weaknesses of the manual work system in terms of processing inventory data into the form of a computerized work system.

BIBLIOGRAPHY

1. Arief, Ramadhan, 2000, SQL Server 2000, PT. Elex Media Komputindo, Jakarta.
2. Baridwan, Z., 2000, Accounting System Preparation of Procedures and Methods, Print V, 5th Edition, BPFE Publisher, Yogyakarta.
3. Davis, GB, 2001, Computer Data Processing, Mc Graw Hill International Book Company.
4. Koniyo, Andri and Kusrini M.kom, 2007, Building an Accounting Information System with Visual Basic and Sql Sever, Andi Offset, Yogyakarta.
5. Kurniadi, 2000, Microsoft Visual Basic 6.0 Programming, PT. Elex Media Komputindo, Jakarta
6. Kusumo, 2000, Building Databases Using Visual Basic 6.0. PT. Elex Media Komputindo, Jakarta.
7. Kusrini, 2007, "Database Design and Management Strategy" Andi Offset, Yogyakarta.
8. Kusrini, 2007, "Practical Guide to Building Information Systems Using Visual Basic and Microsoft Sql Server", Andi Offset, Yogyakarta.
9. Martina, Inge, Ir., 2003, Microsoft SQL Server 2000, PT. Elex Media Komputindo.
10. McLeod, R., 2001, Management Information Systems, Volume 1, 7th Edition, Linguist Hendra Teguh, PT. Prenhalindo, Jakarta
11. Pamungkas, Ir, 2001, Tips & Tricks for Microsoft Visual Basic 6.0, PN. PT. Elek Media Komputindo, Jakarta.
12. Sumarsono, Sony, 2007, "Cooperative Management", Graha Ilmu, Jakarta.
13. Yuswanto, 2001, Microsoft Visual Basic 5.0 Study Guide for Multiuser Programming, Achievement Pustaka, Jakarta.