



Inventory Control Information Systems With EOQ AND ROP Methods In Sales Of Building Materials In UD. Diqy Pasaman Barat By Applying To The VB Net Programming Language And Mysql Database

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ABSTRACT

Research that has been done at UD. DIQY Pasaman Barat by using field research methodology, library research. analyzing problems in the data processing system inventory products or goods that are running in the UD building shop. DIQY then designed a better system that is expected to improve the efficiency and effectiveness of the work of employees and to design information systems that can produce detailed reports and make it easier to find information when there is the correction of certain data. The design of the Information System for Selling Goods using the VB NET Programming Language will provide a better solution to the problems encountered. The level of error in processing data items and sales transactions can be minimized because the new system can speed up and simplify the administration in making reports, to produce accurate information.

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1. Introduction

UD. DIQY is a shop that sells a variety of building materials, in the process of buying and selling, of course, it does the data processing to produce the information needed. Most of the data management is still manual for example in the management of purchasing data, managing stock, and making reports that are less effective and require a long time. As a result, there are often errors in recording the sales memorandum, often errors in the calculation of inventor, and slow in making reports so that there are obstacles in decision making. So the old system must be replaced with a computerized system.

Method of EOQ (Economic Order Quantity), Economic Order Quantity is a method that determines many in the most economical number of purchases each make a purchase. Will know the costs of inventory, raw material prices, and also the estimated use of raw materials, the company can determine the policy in making the amount of material that must be ordered economically with minimal costs. Through this EOQ method can determine a large amount of inventory to provide security to the supply of goods each time operational or production.[1]

According to Sjahrial, the amount of inventory that must be determined is available when making an order (Reorder Point) and according to Sudana, the inventory made by ordering several products must be done so that the goods come within the time specified or determined Reorder Point (ROP).[2]

Sales and stock data processing systems that are currently running are less effective and efficient, for this reason, it is proposed to develop a computerized data processing and inventory data processing information system by referring to the ongoing manual document system.

2. Method

According to Kohler, Inventories are raw materials both in the form of finished goods and goods in the production process as well as available goods, which have a time process for the supply of these products while traveling in storage or to other parties at the end of the period. What is said is in the form of products or goods



owned by the company at a certain time, with the aim of resale or being consumed during the period of the company's normal operating cycle as goods held for sale or assumed for the future.[3]

Information technology is a system used by humans to convey messages or information as the use of computer devices to process, present, and manage data and information and assisted by communication equipment. Information systems consist of a collaboration of information technology and users of that technology to support work operations and management so that interactions between people, algorithmic processes, data, and technology.[4]

In Figure 1. Design the research method to carry out the stages that will be done based on the stages, among others. Identifying the problem namely How to design an inventory control application with the EOQ and ROP methods at the UD Store. DIQY Pasaman Barat by using visual basic.net programming language. Analytical problems namely how the EOQ and ROP method systems that are designed can control inventory, so there is no buildup or scarcity of products. Study of literature that is looking for sources of reference to the background of the problem in the form of scientific articles, relevant books, and theories accordingly. Collect data, i.e. Collect data in the form of tables, graphs, pictures, and so forth. Every research must have quantitative data, qualitative data, and combine data as well as grouping data based on time, productivity, both systemically and management. System Implementation, namely building an information system that has been done at the stage of analyzing problems in the form of- system description, hardware and software specifications, interface design, database design, and system reports designed using visualbasic.net software. System Testing is to test the system to see the weaknesses and weaknesses of the system that has been designed so that it can be repaired before it is given to consumers or users.

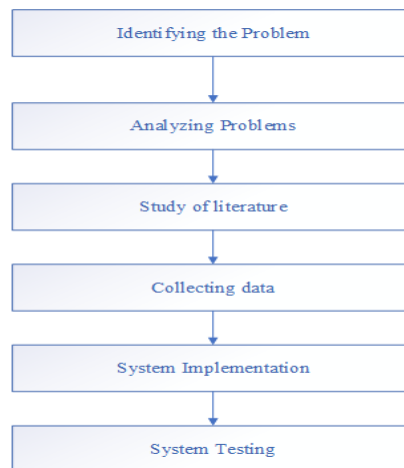


Fig 1. Design research method

3. Results and Discussion

3.1 Information Systems Flow

Figure 2. The Flow of Information Systems. The customer processes the goods inventory request to the sales department (admin), where a customer can make a purchase request, see the stock if the stock is available then a customer can make the transaction process.[5]



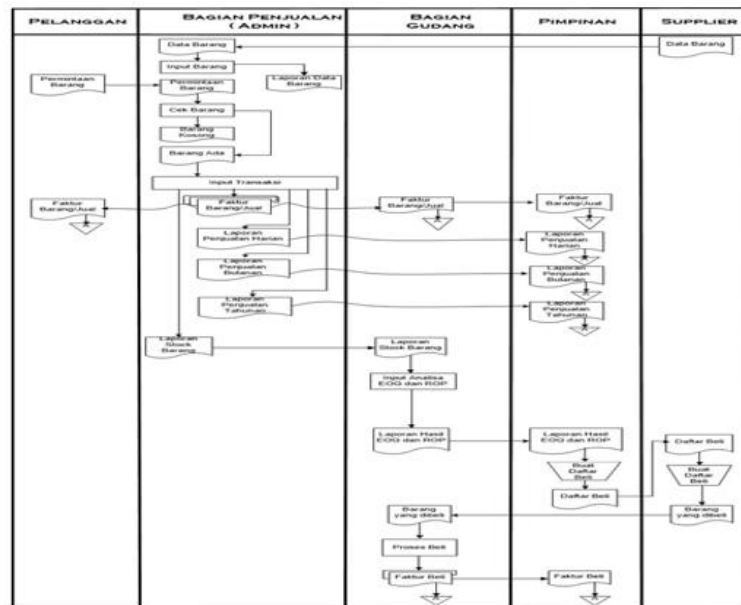


Fig 2. The Flow of Information Systems

3.2 Context Diagram

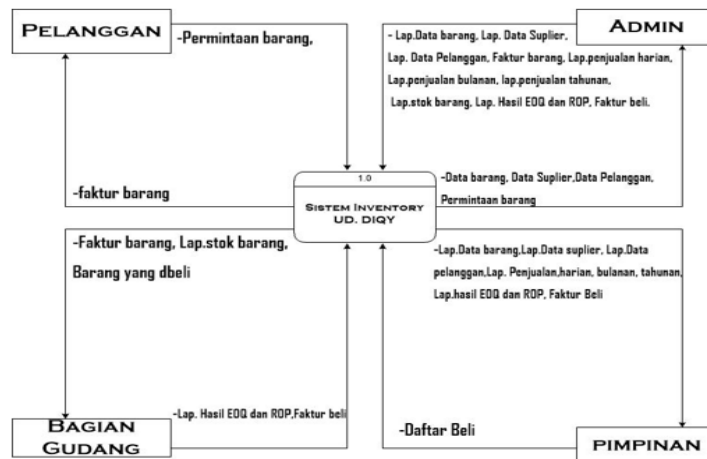


Fig 3. Context Diagram System

Figure 3. Context Diagram Customer inputting goods requests to the system, where the results of the following input will produce an output that is an invoice of goods, as well as an explanation for other entities.

3.3 Data Flow Diagram Level 0

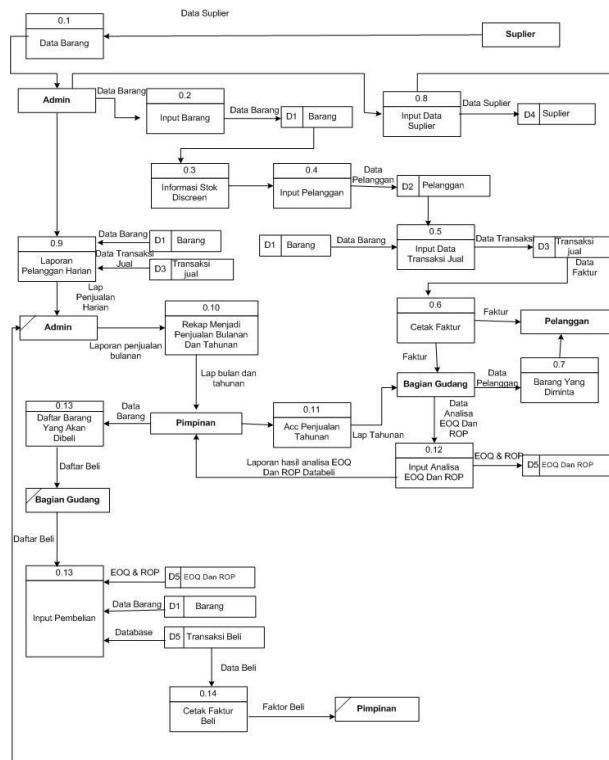


Fig 4. Data Flow Diagram Level 0

Figure 4. Data Flow Diagram Level 0 suppliers provide data of goods to the admin who has done the process of buying goods before, then the admin inputting the goods where later data input of goods will produce information on the data of goods available, transactions will occur between the seller and buyer.

3.4 Entity Relational Diagram (ERD)

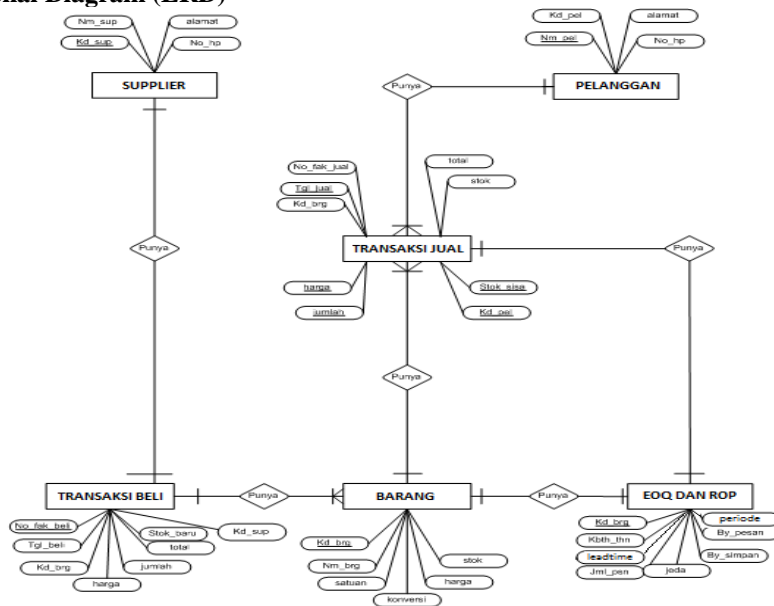


Fig 5. Entity Relational Diagram (ERD)

Figure 5. Entity Relational Diagram (ERD) In the Entity-Relationship process, one supplier can make one buy transaction, then one buy transaction process can have many goods, from the number of items the transaction can be carried out, then the selling transaction process will have many customers and the number of sales transactions will have many methods in selling goods.[6]



3.5 Login Page Display



Fig 6. Display Login Page

Figure 6. Login Page Display initial display when the application is run. In this login, the menu view there is a username and password that must be filled in to enter the system. To enter the system the username is filled with admin data then the password is filled in admin1234 data if the system is correct it will appear to the main menu of the system and if it is wrong it will return to the login page view.

3.6 Display of the Main Menu

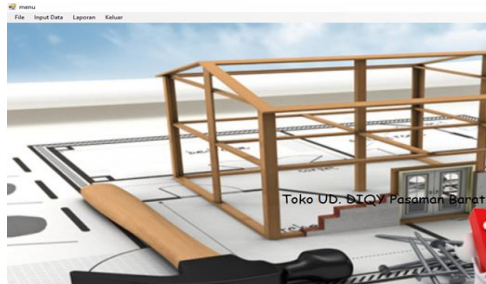


Fig 7. Main Menu Display

Figure 7. Main Menu Display start page after logging in. In this main menu, there are several options for activities on the system such as File Menu, Data Input Menu, Report Menu, and Exit Menu.

3.7 Display Item Form

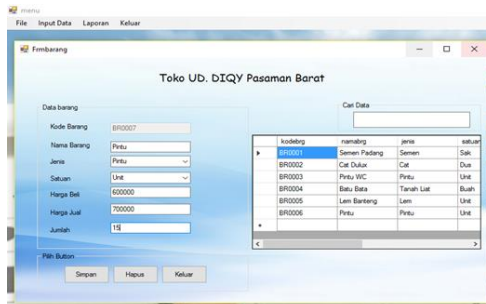


Fig 8. Display Item Form

Figure 8. Display Item Form about managing data items such as input, edit, and delete data. To enter the item form page, click the item file menu on the menu and it will appear as item data item code: BR0007, Item Name: Door, Type: Door, Unit: Unit, Purchase Price: 600,000, Selling Price: 700,000 Total: 15. The data is carried out in the process of entering data into the system to enter the data then the save button process, to delete the data entered the delete button process, while to exit the exit button system. The process of searching data by looking for data by searching for data by entering the item code will appear on the search results display.

4. Conclusion

By using this application can help the store in providing the best service to consumers. This application can help in managing inventory stock of goods making it easier for the store to do the management. Facilitate the store in dealing with business competition with a system built and make inventory reports. VB-NET application can facilitate the Shop in conducting various transaction processes that will be carried out. MySql

database as a place to store data, will make it easier for the Stores to see the various results of data that has been processed and stored previously.

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