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ANALYSIS AND DESIGN OF ACCOUNTING INFORMATION SYSTEMS AT PURI CIPTA SENTOSA PHARMACY WITH METHOD RAD (RAPID APPLICATION DEVELOPMENT)

Famisyar Astrid Rachariah[1]

[1]Universitas Negeri Jember, Jl. Kalimantan Tegalboto No.37, Jember, Indonesia
Email: famisyar@gmail.com

Abstract. *The information technology development, which is growing fast, give the opportunities for business holder to implement computer-based information system in order to record company operational activities. The aim is the owner can get information quickly and accurately for decision-making process. Puri Cipta Sentosa pharmacy is one of the pharmacy in Bondowoso that still use manual recording system to record daily operations. Manual recording system has some weakness, in order to solve these problems, it is necessary to design a computer-based information system. RAD (Rapid Application Development), which is made through a model (prototype), is prioritizing accuracy of system. RAD method consists of several steps. They are: identification the problem, problem analysis, system required analysis, and the design prototype. The design of a prototype using Microsoft Visual Basic 6.0. Microsoft Visual Basic 6.0 is a simple technology to create a picture database. The output that will be generated from the computer -based information system is a accounting system that can be used to record company operational activities quickly and accurately.*

Keywords: *Computer-Based Information System, Microsoft Visual Basic 6.0, RAD Method, Pharmacy.*

Abstrak. Perkembangan teknologi informasi yang semakin pesat memberikan peluang kepada para pelaku bisnis untuk menerapkan sistem informasi berbasis komputer dalam mencatat kegiatan operasional perusahaan. Tujuannya adalah agar pemilik dapat memperoleh informasi dengan cepat, tepat dan akurat untuk proses pengambilan keputusan. Apotek Puri Cipta Sentosa merupakan salah satu apotek di Bondowoso yang masih menggunakan sistem pencatatan manual dalam mencatat kegiatan operasional sehari-hari. Sistem pencatatan manual memiliki beberapa kekurangan, oleh karena itu diperlukan perancangan sistem informasi berbasis komputer. Pengembangan sistem yang dilakukan menggunakan metode RAD (*Rapid Application Development*) yang memprioritaskan ketepatan dan keakuratan sistem yang dibuat melalui suatu model (*prototype*) Tahapan dalam RAD antara lain: identifikasi masalah, analisis masalah, analisis kebutuhan sistem, dan perancangan *prototype*. Perancangan *prototype* menggunakan program Microsoft Visual Basic 6.0. Microsoft Visual Basic 6.0 merupakan teknologi sederhana untuk membuat gambaran *database.* Output yang nantinya akan dihasilkan dari sistem informasi berbasis komputer ini adalah sistem akuntansi yang digunakan untuk mencatat kegiatan operasional perusahaan secara cepat dan akurat.

Kata Kunci: Apotek, Metode RAD (*Rapid Application Development*), Microsoft Visual Basic 6.0, Sistem Informasi Berbasis Komputer

INTRODUCTION

Information systems imply the use of computers in an organization in order to provide information to its users. A computer-based information system is a combination of hardware and software designed to transform data into useful information for users and owners in the decision-making process (Bodnar and Hopwood, 2007). In the accounting information system all data is collected, classified, processed, and analyzed so as to produce information that is used for the decision-making process. Business competition in the era of globalization requires business actors to implement accounting information systems in companies. Not only large companies that need accounting information systems, small and medium-sized companies also need accounting information systems in their operational activities. Trading companies that provide health service facilities to the public such as pharmacies also need a computer-based accounting information system related to cash sales transactions, cash and credit purchases, drug supplies, and others.

Previously, in recording its operational activities, Apotek Puri Cipta Sentosa had used a computerized system, but the system often experienced problems. This has resulted in pharmacies using a system of manual recording system in the company's operational activities that include cash sales transactions, cash purchases, credit purchases, payment of salaries and bonuses to employees, payment of doctor's commissions, claims for health insurance prescriptions, recording of cash in and cash out. The manual recording system has many shortcomings, for example pharmacists and Pharmacist Assistants (AA) do not know for sure how much drug inventory is in the warehouse. The inventory card can actually help pharmacists and AA to find out the mutation of drug supplies in and out of the warehouse. However, Apotek Puri Cipta Sentosa does not use a stock card, because the estimated inventory amount is 1,000 medicinal products, it is not possible to make a stock card for each product. Stock taking is done every 6 months. As a result, pharmacists and AA do not know the exact number of supplies but also the expiration date cannot be known. Often, many expired drugs are destroyed during stock taking. In addition, the possibility of human error or human error is also a weakness in manual recording.

These problems make it difficult for owners to obtain fast, precise, and accurate accounting information for decision making. Another problem is that service to consumers is also delayed and hampered. Thus, it is necessary to design a computerized accounting information system to overcome the various problems experienced by the Puri Cipta Sentosa Pharmacy. The expected output is a computer-based accounting information system which includes: a sales system, a purchasing system, an inventory system, a salary and bonus payment system to

employees, a doctor's commission payment system, a health insurance prescription claim system, a cash-in and cash-out recording system, and financial reports. which can provide information about the company's finances to the owner.

Based on this description, this study tries to develop an accounting information system that was originally manual into a computer-based accounting information system using the RAD (Rapid Application Development) system development method, where the system development process only requires a short or fast period using a prototype. The system development using the RAD method consists of: the initial investigation stage, the system analysis stage, the system requirements analysis stage and the prototype design stage. The prototype design uses Microsoft Visual Basic 6.0 application which is a fairly simple technology. It is hoped that by replacing this computer-based system, it can increase the efficiency and effectiveness of employees' work, as well as in reducing the possibility of human error.

METHOD

This research is a qualitative research. Qualitative research method is a research method used to examine the condition of natural objects, where the researcher is the key instrument, the data collection technique is done by triangulation (combined), the data analysis is inductive, and the results of qualitative research emphasize meaning rather than generalization (Sugiyono, 2011). The approach used in this research is a case study or case study. This case study was conducted to solve the problems contained in the company.

The research site is Apotek Puri Cipta Sentosa which is located at Jalan Letjen Suprapto Number 57 Bondowoso. Puri Cipta Sentosa Pharmacy was used as the object of research because in daily operational activities, such as cash sales, cash purchases, credit purchases, sales returns and purchase returns still use the manual system, where the manual system has many weaknesses, such as: the possibility of human error, mutation merchandise inventory, and so on. The types of data used in this study are (1) primary data is data obtained directly from the source. This data comes from the results of interviews with the owners and direct observations of the management and business operations of the Puri Cipta Sentosa Pharmacy, and (2) secondary data is data obtained indirectly from the source. This data is in the form of company records such as organizational structure, consumer data, supplier data, transaction evidence, management reports, and financial reports.

Data collection methods used in this study are (1) interview method; interviews were conducted directly by asking questions to the person in charge of the pharmacy, namely

Mohammad Ridwan and also the pharmacist at Puri Cipta Sentosa Pharmacy, namely Dra. Dwi Astuti, apt regarding business operations processes and problems that arise at Puri Cipta Sentosa Pharmacy, (2) observation method; observations were made by looking at the entire business operation process at Apotek Puri Cipta Sentosa starting from the purchasing system, sales system and inventory system. The results of these observations can then be used as additional guidelines in solving problems faced by Apotek Puri Cipta Sentosa, and (3) documentation method; documentation at Puri Cipta Sentosa Pharmacy is obtained from various documents in the form of organizational structure, supplier data, goods data, bookkeeping records, transaction evidence, and business reports.
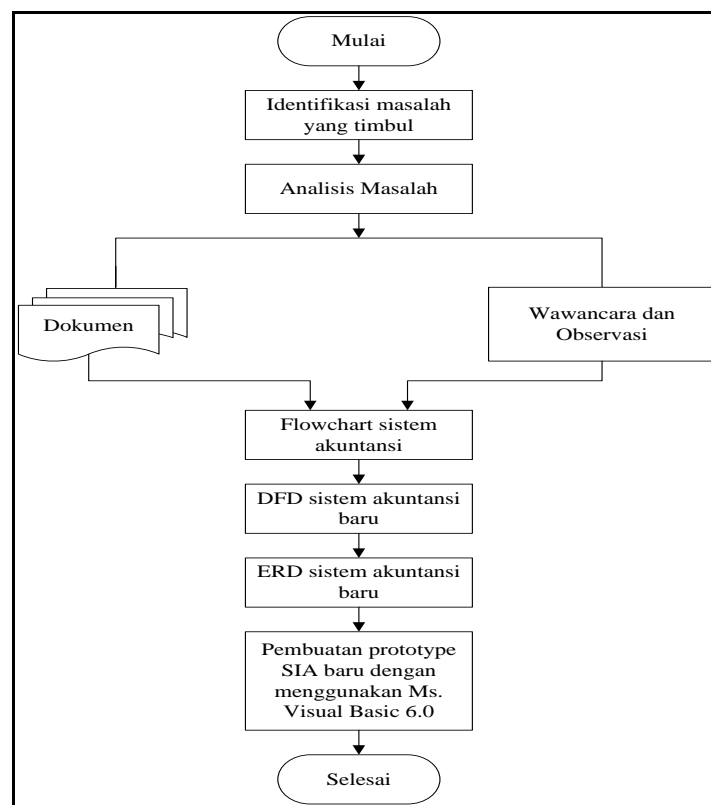
Figure 1. Flow chart

RESULTS AND DISCUSSION

DFD is used to identify who is directly involved in a system. In addition, DFD can also determine the input and output of the system to be designed Table. Environmental Cost Component.
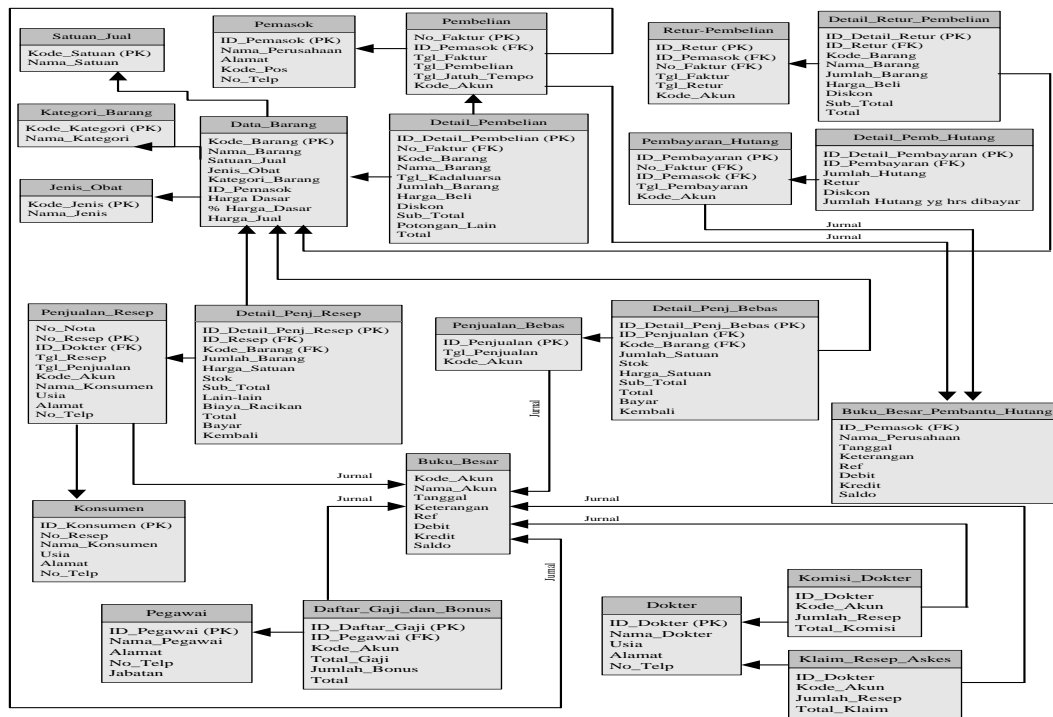
Figure 2. Entity relationship diagram

The following is a prototype of a computer-based accounting information system that will be used by Apotek Puri Cipta Sentosa in daily operational activities.

Login Form

The Login form is the first step to enter the system by confirming the user name and password.

Figure 3. *Login for*

Menu Form

Form Menu is used to be able to access the menus available on the system. For example, the data management menu can access employee data, supplier data, doctor data, consumer data, and goods data. While the transaction menu can access prescription sales transactions and free sales, as well as purchases and purchase returns. System users can access the reports menu if they want to know and view purchase reports, sales reports, stock reports, and financial reports in one period which will later be submitted to owners and pharmacists for the decision-making process.
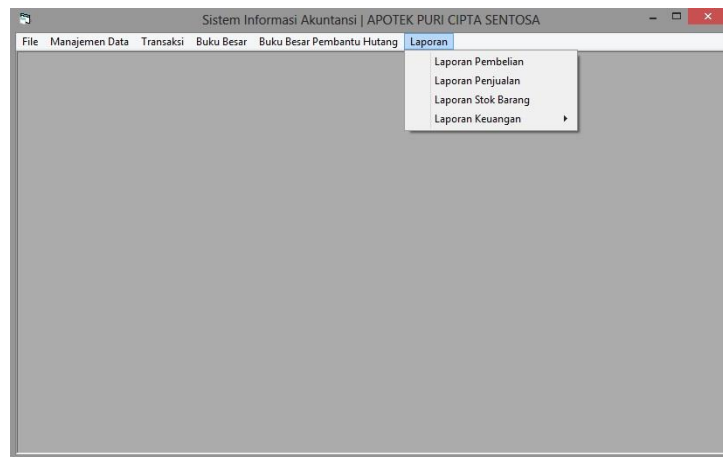
Figure 4. Menu form

Change Password Form

The Change Password form is used to change the password or password that was previously registered in the previous system.
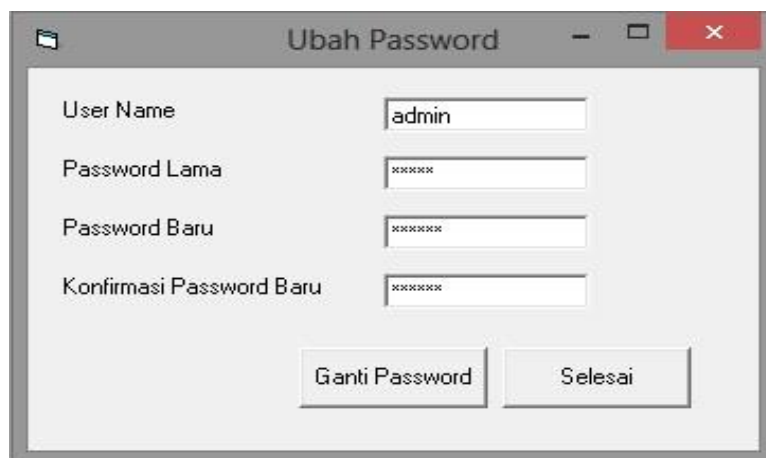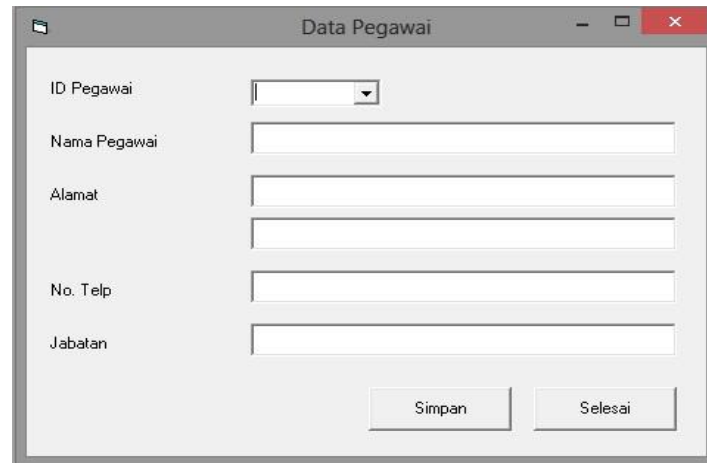
Figure 5. Change Password Form

Employee Data Form

Employee Data Form is used to store employee data into the system which will later be used as a guide in paying salaries and bonuses**.**
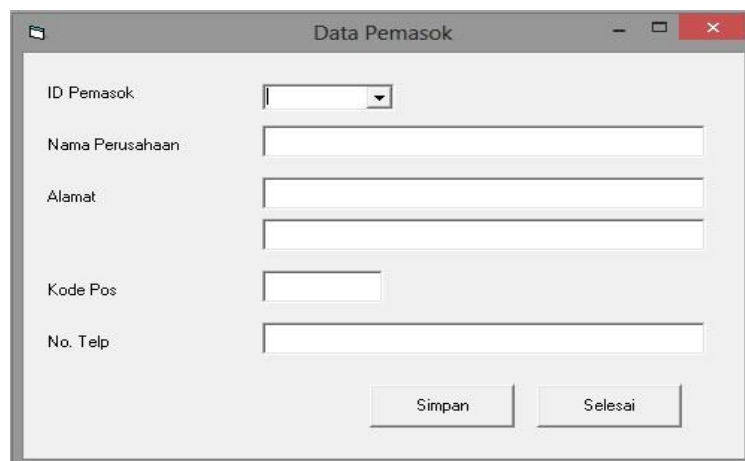
Figure 6. Employee data form

Supplier Data Form

The supplier data form is used to store data on suppliers of merchandise (drugs) which will later be used as a guide in the purchasing process.

Figure 7. Supplier data form

Doctor Data Form

The Doctor Data Form is used to store doctor data in the system which will later be used as a guide for the process of paying doctor commissions and obtaining health insurance prescription claims.

Figure 8. Doctor data form

Consumer Data Form

The consumer data form is used to store consumer data that has previously been stored in prescription/askes sales transactions.

Figure 9. Consumer data form

Sales Unit Form

Foam selling units are used to store merchandise units which will be used as a guide to access goods data.

Figure 10. Sales unit form

Drug Type Form

The drug type form is used to store the type of drug which will be used as a guide for accessing goods data.

Figure 11. Drug Type Form

Item Category Form

The goods category form is used to store the category of merchandise which will later be used as a guide for accessing goods data.

Figure 12. Item Category Form

CONCLUSION

This research was conducted with the aim of analyzing and designing a computer-based accounting information system, it is hoped that this new system will be able to overcome the problems of the manual accounting system currently applied by Apotek Puri Cipta Sentosa. The system development carried out in this study uses the RAD (Rapid Application Development) method which applies speed and timeliness by using a prototype. The conclusions in this study are; (1) this new accounting information system can overcome

recording errors due to human errors that previously occurred in the manual recording system, (2) the new accounting information system can increase the speed, accuracy, and accuracy in data processing so that the owner can immediately carry out the decision-making process, (3) this study designed a system for recording employees, suppliers, doctors, consumers, goods, debt payments, (4) this study designed a system procedure for free sales and or prescriptions, purchases and purchase returns, and (5) this study designs administrative reports, managerial reports and financial reports which will be received by the owner and pharmacist every period for the decision-making process.

RECOMMENDATIONS

The author realizes that there are limitations in this study. The limitation in this research is that it only reaches the prototype design stage, not until the database or software creation stage. Because it is feared that if this research reaches the stage of making a database or software and implemented directly Puri Cipta Sentosa Pharmacy will tend to be the same as research conducted by students majoring in Information Technology. The final result of this research is only a database visualization or prototype which can later be considered by the owner to change the manual recording system to a computer-based information system.

The suggestion that can be given by the author to the Puri Cipta Sentosa Pharmacy is that the owner is expected to immediately replace the manual recording system with a new computer-based information system so that the problems encountered can be resolved immediately so that the owner can find out information that will later be used for the decision-making process. Support from all parties is needed, such as the owner of the pharmacy facility (PSA), the pharmacist managing the pharmacy (APA) and the administration so that the new system can be applied properly. It is also necessary to train system users so that they can operate the new system, before the system designer will tell how to operate the system.

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