
Book Sales Application System at the Book Center at the GMAHK Papua Mission Office

Jennet Juliana Busdan¹, Jessy Dimarcus L. Warongan²

Professional Accounting Study Program, Faculty of Economics and Business, Sam Ratulangi University, Bahu Village, Malalayang District, Manado City, North Sulawesi, 95115

jennetbusdan@gmail.com

ABSTRACT

At the Book Hall of the Seventh-day Adventist Church Office in the Papua Mission, it is necessary to record sales, print receipts, and report more effectively and efficiently. So, a system is needed that can support book sales in the book hall section. The purpose of this research is to simplify the whole process of selling books by using an information system in the form of an application. This research was conducted using the modified waterfall method developed by Winston Royce, which consists of five stages, namely: study and literature deepening, system requirements analysis, system design, interface design and system development, and system testing. The software used is Visual Basic 6.0 and Microsoft Access as data storage media. The system designed is a book-selling application system.

Keywords: Book Hall, Sales, Application System

JEL Classification: M40, M41, M49

Article info:

Received 22 September 2022

Revised 08 October 2022

Accepted 20 October 2022

Available online 21 October 2022

1. INTRODUCTION

Advances in information technology demand that all human work that is still manual and less efficient can be done with advanced technology as well. In the field of accounting, accounting information systems are also needed that utilize information technology. Problems that often arise in accounting information systems are caused because the existing information system does not match the needs, for example, the existing information system is too sophisticated for small companies so companies can experience losses because the costs incurred are very large, on the contrary, large companies use information systems. so that it cannot meet the needs of the company's information system.

The sales accounting information system is one of the accounting information subsystems that explains how the procedures should be in carrying out activities and cash receipts from sales so that manipulation of sales and cash receipts can be avoided. Sales are a source of cash receipts, therefore sales activity is a very important activity to support success in marketing a product. Cash is an important component in the smooth running of operational activities. Due to the liquid nature of cash, cash is easily embezzled, so it is necessary to supervise cash by separating the functions of storage, execution, and recording.

The Seventh-day Adventist Church (GMAHK) Papua Mission is the headquarters for the spiritual ministry of the Seventh-day Adventist Church in Papua. Located in Jayapura, this office serves all Adventist churches throughout Papua. The organization's services include Churches, Schools, Colleges, and Literature. The office provides books for maintaining faith and spirituality as well as health for church members as well as for others. These books are



sold not only for income but also for evangelism for everyone.

The sales system that is carried out is still using the manual method where at the time of making a sale the cashier will record the sale manually, namely by writing on the receipt. After that, the cashier will make a sales recap based on the receipt data by typing it in Microsoft Excel one by one, so that the process carried out results in less than optimal results and allows manipulation and embezzlement. The complexity of the book in terms of title, price, number of requests, and distribution makes it difficult for workers to deal with calculations, requests, profits, receipts, and so on. Requires a long time and accuracy because it must be checked and calculated manually.

One way that can be done to overcome delays and accuracy or accuracy is to use an application system. The application system allows maximum service for all parties, consumers, sellers, managers, and treasurers at the Book Center at the GMAHK Papua Mission office.

2. LITERATURE REVIEWS

2.1 Sale

According to Francis Tantri and Thamrin (2017:3) "sales is part of promotion and promotion is one part of the whole marketing system". Sales are not only about the activity of selling goods and services but further than that, sales concerns how the activities before and after the activity run. According to Francis Tantri and Thamrin (2017:23) "sales is also a complementary activity or a supplement to purchases to allow transactions to occur. So the buying and selling activities are an integral part of the transfer of rights and transactions. According to Dimiyati (2018:119), "sales is the main function in maximizing profit, sales are the main source of company revenue."

Thus, it can be concluded that sales are activities and activities carried out by humans that are mutually beneficial to each other, where the seller offers the product he has to the consumer so that he can attract the consumer's tendency to be willing to spend money to buy a product that has been offered by the seller.

2.2 Accounting Information System

An accounting information system is a system designed to enable accounting as a business language to perform its functions. An accounting information system is a tool so that accounting can carry out its function in identifying data, collecting data, storing, developing, and measuring information or data related to economic transactions that occur within the company. An accounting information system can also be interpreted as a unified structure that uses physical resources consisting of components that transform economic data into accounting data to be used by internal and external users.

2.3 Application System

Application is an information system that is formed through a fixed group of operating activities, namely: collecting data, classifying data, calculating, analyzing, and presenting reports. Application is a subclass of computer software that utilizes computer capabilities directly to perform a task that the user wants (Indah. PS, 2021:8). Applications can also be said to be interpreters of commands run by computer users to be forwarded to or processed by the hardware.

2.4 Past Research

In line with previous researchers (Selamat Subagio, 2017) with the title "Design and Development of Book Sales Applications at Ampu Bookstores Using Microsoft Visual Basic.Net". This study discusses the application of selling books at the Ampu Bookstore where the process of doing it uses the SDLC (System Development Life Cycle) principle. The application aims to facilitate the management of book information available at the Ampu Bookstore for its functions such as book inventory, transaction handling, and the printing of reports needed for decision-making and application maintenance. The application was

developed using Microsoft Visual Basic.Net 2005 software as database creation, MySql as database storage media, and run on Windows XP Professional. In the application, there is a supplier database, employee form, two transaction forms namely sales form and supply form, and five reports namely buyer report, supplier report, book report, purchase report, and sales report.

Some things have been added from previous research to the current research, namely the transaction form in the form of printed receipts that are directly received by customers more accurately and directly stored in the database so that reporting is more efficient. This research is also more focused on sales accounting even though the media used and the applications made are closely related to technology.

3. RESEARCH METHODS

This research was conducted using the modified waterfall method developed by Winston Royce, which consists of five stages, namely: study and literature deepening, system requirements analysis, system design, interface design and system development, and system testing.

The stages of the research carried out are:

a. Study and Literature Deepening

At this stage, various references related to the book sales management system were studied at the Book Center at the GMAHK Papua Mission office, including information systems, application systems, Visual Basic programming languages, and Microsoft Access.

b. System Requirements Analysis

At this stage of analysis, what is done is analyze the system functionally and non-functionally. An analysis was carried out on the needs of the system to be developed, which focused on processing data on sales of books and equipment used at the Book Center at the GMAHK Papua Mission office.

b. System Design

At this system design stage, the application system design is carried out which includes context diagrams, database design, and report design.

c. Interface Design and System Development

At this stage, the system interface design, system architecture to be developed, system creation, and system development are carried out in the form of desktop-based applications with the help of several systems development technologies such as Visual Basic and Microsoft Access.

d. System Testing

At this stage, testing the results of making the system is carried out directly on several features that have been developed.

4. RESULTS AND DISCUSSIONS

4.1 System Design

The book sales application system at the Book Center at the GMAHK Papua Mission was developed using the Visual Basic 6.0 programming language as the interface and Microsoft Access as the database storage. Book Sales Application System can run on the Windows operating system.

4.1.1 Context Diagram

In this sales system, there are three external entities, namely consumers, admins, and leaders. In the outer unit, the data that enters the system is data about consumers. While in the admin unit the data that can be entered include book data and sales data. While the leadership gets reports from the system in the form of sales data. The context diagram design looks like Figure 1:



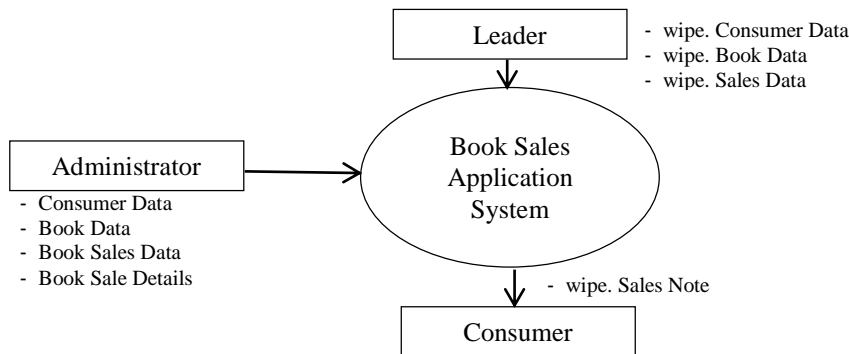


Figure 1. Context Diagram of Sales Application System

4.1.2 Flow Chart

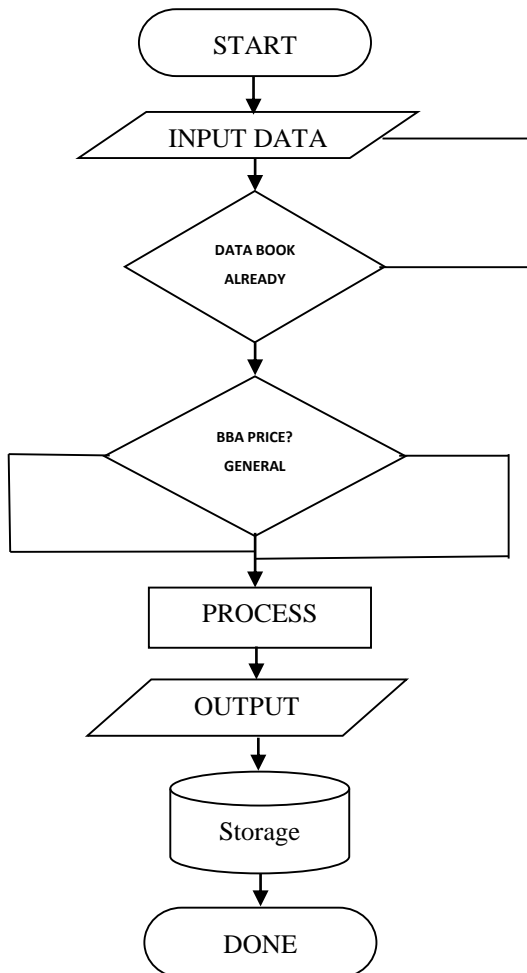


Figure 2. Flow Chart

The flowchart shows the flow of the running program process starting with inputting the data for the books to be sold, namely the code of the book, the number of books, and the name. Other data will appear automatically, namely the title of the book, the type of book, the cost of goods sold, the selling price/price of the book, the title, and the selling point of the book. If the book does not exist, then return to inputting the book price list. Then proceed with

the process in which the transaction occurs. After the process is carried out, the output issued is in the form of receipts and reports in the form of daily, weekly, monthly, yearly or certain period reports, per customer name or per book name. The report contains the cost of goods sold, selling price, tithe, and points of sale for the book where all the data is already stored in the database.

4.1.3 Ongoing System Flow

The book sales system that is currently running at the Book Center at the GMAHK Papua Mission office is still using the manual system. The customer comes to make a book purchase transaction and receives a written receipt then the cashier will input the sales results data into the computer based on the receipt issued at the end of the transaction closing and will submit it to the finance department, in this case, the accountant in the form of a recap of sales data containing the cost of goods sold, price sell, tithe, selling points. As in Picture flow 3:

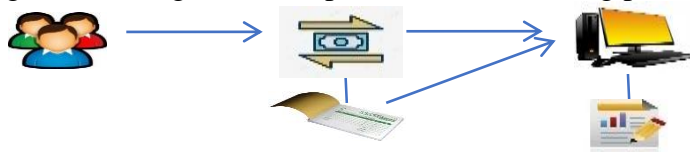


Figure 3. Current System Flow

4.1.4 Proposed System

Making this application system requires several devices, namely:

1. Hardware Requirements (Hardware)

The hardware requirement for making the system is a computer with standard specifications, namely: Intel Core 2 Duo and DDR 1 Gb.

2. Software Requirements (Software)

The software required for making this book sales system is a computer with standard specifications, namely: Windows 7 Operating System, Microsoft Visual Basic 6.0, and Microsoft Access 2007 DBMS.

With this new system, it does not take a long time to input, edit, delete and store data and present it, because everything is already contained in a system. Only by logging in or entering the system and entering data and information can the system be used.

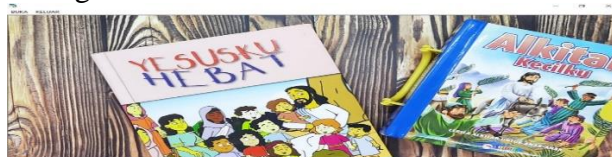
The flow of the system in the book sales application at the Book Centre at the GMAHK Papua Mission office is as shown in the context diagram of its design in its implementation, the system that will be used starts from the Customer meeting the Admin / Cashier who processes the data, the Cashier / Admin provides the necessary information in connection with the list of books and the price then make the transaction. The output issued directly in the form of printout receipts following the input data is done. Automatically the data has been recorded in the computer system through the sales application so that reports are immediately available without having to re-enter the transaction receipt file as was done when it was still a manual system.

4.2 Interface Design and System Development

The following is the interface design and application created:

1. Main View

In the initial or main interface design, which is often called home, there are OPEN and EXIT tools. On the Open Menu in a pop-up shows the Book List, LE Name, and Receipt. In the Book List there are book data and price lists, in the LE Name there is customer name data and on the Receipt, there is sales data while the Exit Menu functions to exit the application as shown in Figure 4:



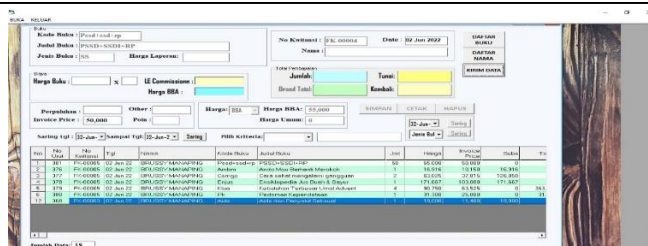


Figure 8. Transaction Results

In this section, transaction summary data will be obtained per day, per week, per month, per year, or a certain period, or per book or per customer, depending on the need. For accounting records, invoice price data will be obtained which will become cost of goods sold (HPP) data, selling price data, and tithe data, which will later be input into the journal. This summary data will be reported by the cashier to the finance department in the form of a Cash Receipt Report or Sales Report.

The Finance Section makes a journal based on the Cash Receipt Report or Sales Report from the cashier, asks for approval from the treasurer or deputy treasurer then inputs the data into the accounting information system in the financial section in the form of the X Journal Application System and stores journal documents that have been posted as archives. The Journal X application will automatically continue the accounting process into a general ledger, then a trial balance, and finally a complete financial report.

6. Printout the Payment Receipt

On the printout of the payment receipt, the name and date are listed with the receipt number. In the table, there are book transactions and their details. As in Figure 9:

BALAI BUKU ADVENT KANTOR PERWAKILAN JAYAPURA DAN TIMIKA											
Nama: BBLADY MANUPANG											
Date: 02 Jan 2022											
No Kuitansi: FK-00005											
Kode Buku	Jml	Harga	Suba	Trade	SS	AL	Total	10%	Diter	Grd Total	Poin
Pand-wp-vp-SB	55	300	0	0	2.750,000	0	2.750,000	0	0	2.750,000	84,50
Ambon	1	85,96	85,96	0	0	0	85,96	1,62	0	84,80	1,69
Chungu	2	83,85	167,70	0	0	0	167,70	3,35	0	164,35	3,38
Enjar	1	71,56	71,56	0	0	0	71,56	1,43	0	69,93	1,43
Kluas	4	80,75	323,00	0	0	0	323,00	6,46	0	316,54	6,47
Pa	1	31,30	31,30	0	0	0	31,30	0	0	31,30	1,69
Total: 59 428,658 394,853 394,800 2.750,000 0 3.450,923 39,463 0 3.490,386 99,90											

Terbilang: Tiga Juta Empat Ratus Sembilan Puluh Ribu Tiga Ratus Sembilan Puluh Enam Rupiah

Tanda Tangan Petugas BBA:

Figure 9. Print Out of Payment Receipts

4.3 System Test

According to Rizky (2011:264), "Blackbox testing is a type of testing that treats software whose internal performance is unknown" so the testers view software as a "black box" that is not important to see its contents, but it is enough to be subjected to a testing process at the front. outside.

This type of testing only looks at the software in terms of specifications and requirements that have been defined at the beginning of the design. For example: if there is software that is a sales information system. So in this type of black box testing, the software will be executed and then try to test whether it has met the user needs defining at the beginning without having to disassemble the program listing.

Tests are carried out on all interfaces starting from the Main Menu Display Form, the Book and Price List Display Form, the Customer Name Display Form, and the Transaction Display Form. Analysis of the results of the test/testing is stated in the table of each display with indicators, namely: No, Testing Scenario, Test Case, Expected results, Test results, and Conclusions.

4.3.1 Comparison of New System and Old System

After observing and conducting research on the book sales application system at the Papua Mission GMAHK Office Book Center, several differences were found that became the comparison of the system. A comparison of the old system with the new system can be seen in

the following table:

Table 1. Comparison of the New System and the Old System

Old System	New System
<ol style="list-style-type: none"> 1. Data loss often occurs due to the storage of several separate files. 2. Data entry and data processing errors often occur because of repeated input. 3. There are often errors in data storage and processing because transactions consist of many files and it is difficult to find old data. 4. Sales data must be re-entered through receipts at the end of the transaction closing, which will require accuracy and a long time. 5. Report generation takes a long time. 	<ol style="list-style-type: none"> 1. Data storage is in the form of a database, thereby reducing the risk of data loss. 2. Repetition and data input errors can be avoided because it uses a coding system. 3. Can overcome errors in data storage and processing, and easily find out all past data quickly and precisely. 4. Data is automatically saved at the time of inputting and printing receipts, so there is no need to re-enter at the end of the transaction closing. 5. Reports can be presented quickly, precisely, and accurately.

4.3.2 Productivity Analysis

Productivity analysis aims to examine the extent to which the current system can accommodate administrative needs, as well as its ability to overcome problems that arise before using the system, as well as find out what problems arise during this system run. By using the new application system, the productivity of book sales activities at the Book Center at the GMAHK Papua Mission office is increasing, this is because the data processing and data presentation system use an application with Visual Basic 6.0 programming that is attractive and easy to use.

Analysis from several aspects:

a. Efficiency

1. In terms of system efficiency, it is no longer found that some reports files are not archived in piles and busy searching for data in presenting data that is needed by all parties at any time. This will result in real gains in time and cost savings.
2. It does not require re-entering the receipt file because it is automatically recorded when issuing it to the customer.
3. The solution in terms of efficiency is by using this new system, it can be seen that the administration only uses one application with Visual Basic 6.0 programming using a Microsoft Access database so that the administration does not have to bother looking for sheets or data files one by one.

b. Effectiveness

1. Seeing the effectiveness of the system in overcoming the problems encountered. The data processing process can be done quickly and on time so that the input part of the sales receipt at the end of the sale is no longer necessary because it is automatically recorded in the database thus processing data and presenting reports will be faster and more accurate. so that this new system can reduce errors and administrative workload.
2. The solution in terms of effectiveness with the use of this new system can be seen in that the section only uses one application with Visual Basic 6.0 programming using a Microsoft Access 2007 database which in processing data and customer data reports that are needed well-structured and up to date. for the needs of the latest data info.

5.1 Conclusion

Based on the results of the analysis and implementation of the book sales application system at the Book Center at the office of the Seventh-day Adventist Church (GMAHK) Papua Mission, there are several conclusions as follows:

1. The procedure for selling books has become computerized so that it can speed up the work

process of the admin/cashier.

2. The book sales application system that has been created can provide convenience in the processing of customer data, book sales, and transaction data processing by the admin/cashier.
3. Printing receipts through the system is more accurate, automatic, and faster and the input and output data are appropriate.
4. Can save the cost of ordering receipts, which previously was a manual 2-ply receipt book for Rp. 50,000.00 for 50 sheets to Rp. 300,000.00 for 1,000 sheets for the purchase of 2-ply continuous form paper.
5. Data storage media that was previously still in the form of archives are now computerized and stored in databases, making it easier to search for data.

5.2 Suggestion

Based on the results of the implementation of the book sales application system at the Book Center at the office of the Seventh-day Adventist Church (GMAHK) Papua Mission, there are several suggestions as follows:

1. In the process of designing a book-selling application system at the Book Center at the GMAHK Papua Mission Office, there are still shortcomings which later are expected to be further developed in further research so that a better book-selling system is obtained quickly, precisely, and accurately.
2. This application system can then be developed by creating a more interactive book sales information system, for example using a web-based system, or an Android-based system.
3. This application system can be continued with the creation of an online sales system so that it can be accessed by more users.
4. This application system can be continued with the creation of a sales system that is directly integrated with the financial reporting system.

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