

# Web-Based Accounting Information System for a Building Materials Trading Company

## Case Study on CV. Cahaya Terang Metalindo

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**Abstract**— Global competition drives businesses to innovate and leverage technology. This research focuses on CV. Cahaya Terang Metalindo, which still uses a manual system in its operations. The accounting information system developed using the RAD method aims to record sales transactions, purchases, cash disbursements, and generate financial reports. This web-based system is developed with the PHP programming language and the Laravel framework, and applies the FIFO inventory valuation method. After using this system, the owner acknowledges an increase in business effectiveness and efficiency, as well as the accuracy of financial reports.

**Keywords**— accounting information system, FIFO, laravel, PHP, RAD

### I. INTRODUCTION

The intense global competition drives businesses to continuously innovate and leverage technology to face challenges[1]. Information technology is often utilized to process, organize, and store data in order to produce high-quality and timely information[2]. Companies need a good and efficient accounting information system to support management in decision-making [3]. An accounting information system is a system that processes data and transactions to generate information useful for planning, controlling, and operating business activities[4].

In this research, CV. Cahaya Terang Metalindo still operates its trading business

using a manual system. A trading company is a business entity that acquires goods from other suppliers to resell to customers[5]. The purpose of creating this system is to help address the issues experienced by the owner. The system developed includes recording sales transactions, purchases, and generating proper financial reports. Sales are transactions between a seller and a buyer where goods or services are exchanged for profit according to an agreement[6]. Purchases are activities of acquiring goods needed by the company to resell[7]. Financial reports include balance sheets, income statements, statements of changes in equity, cash flow statements, as well as notes and other reports[8]. For calculating and managing merchandise inventory, the system applies the FIFO inventory valuation method. Merchandise inventory is goods acquired by a trading company to be resold in its normal course of business[9]. The First In First Out (FIFO) method assumes that the cost of goods sold is based on the cost of the earliest purchased goods[10].

The system is web-based to facilitate its use by human resources[11]. A website is a collection of pages within a domain that contains various information accessible to internet users through search engines[12]. The language used in the system is PHP. PHP is a server-side scripting language designed for web development[13]. This system is built using Laravel, a PHP (Hypertext Preprocessor) framework that has a systematic framework using the MVC (Model View Controller) concept[14].

## II. METHOD

This research uses the RAD method in the design and development of the "SIA CTM" system. The Rapid Application Development (RAD) method is a software development model that requires a shorter time frame. The system created will be based on requests and needs for a reasonably long period[15]. This method has stages that can be seen in figure 1.

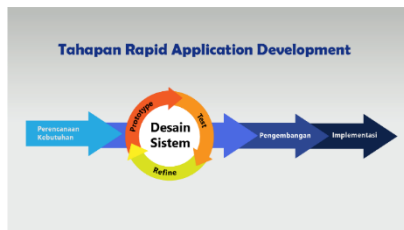


Figure 1. RAD Method

In the requirements planning phase, problems are identified and data is collected through interviews with users. The design phase is tailored to user needs as illustrated in use case diagrams, ERD diagrams, and flowcharts. The development phase involves implementing the design that has been created. The implementation phase includes training users on how to use the system, testing the system's functionality, and obtaining user approval.

## III. RESULTS AND DISCUSSION

The result of developing the accounting information system for CV. Cahaya Terang Metalindo is the ability to record every transaction related to purchases, sales, and cash disbursements. Additionally, the system includes reports for each transaction, such as purchase reports, sales reports, inventory reports, financial position reports, and income statements.

### Implementation of an accounting information system at CV. Cahaya Terang Metalindo

#### a. Login Page

The login page is the initial page where users access the system. Users must enter

a username and password that have been registered in the "SIA CTM" system, as shown in figure 2.

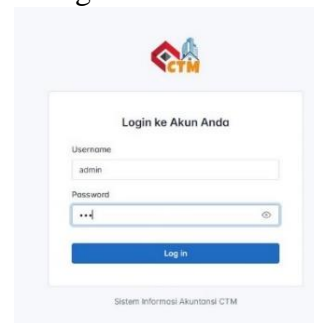


Figure 2. Login Page

#### b. Sidebar

A sidebar is a column that displays several menus that can be accessed by the user, as shown in figure 3.

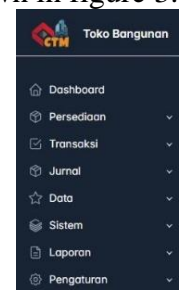


Figure 3. Sidebar

#### c. Dashboard

The dashboard page shown in figure 4 displays information about sales, purchases, accounts receivable, accounts payable, and the company's profit and loss.

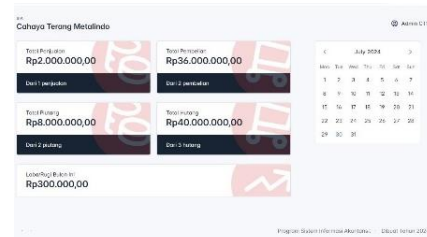


Image 4. Dashboard

#### d. User Page

The user page displays a list of system users, as well as options to add, edit, and delete data, as shown in figure 5.

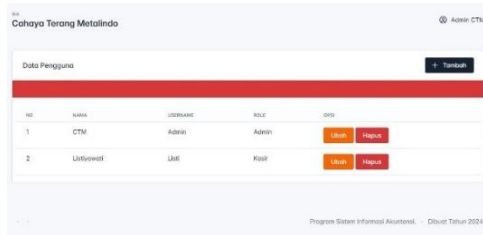


Figure 5. User Page

e. Account Code Page

The account code page displays a list of account names, along with options to add, edit, and delete data, as shown in Figure 6.

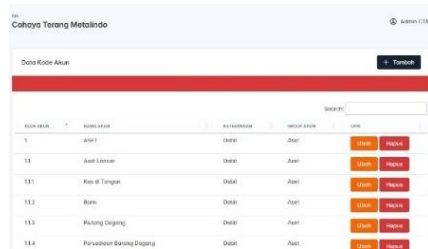


Figure 6. Account Code Page

f. Customer Page

The customer page displays a list of customer names needed in sales transactions, along with options to add, edit, and delete data, as shown in Figure 7. The form for adding can be seen in Figure 8.

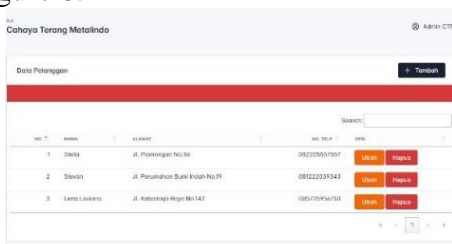


Figure 7. Customer Page



Figure 8. Add Customer Form

g. Supplier Page

The supplier page displays a list of supplier names needed in purchase transactions, along with options to add, edit, and delete data, as shown in Figure 9. The form for adding a supplier can be seen in Figure 10.

edit, and delete data, as shown in Figure 9. The form for adding a supplier can be seen in Figure 10.



Figure 9. Supplier Page

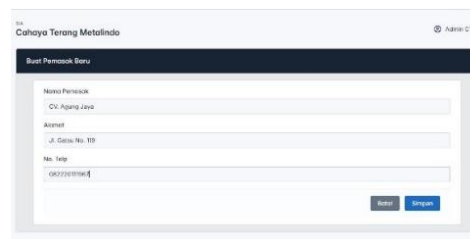


Figure 10. Add Supplier Form

h. Item Category Page

The item category page displays a list of categories to group items, along with options to add, edit, and delete data, as shown in Figure 11. The form for adding can be seen in Figure 12.

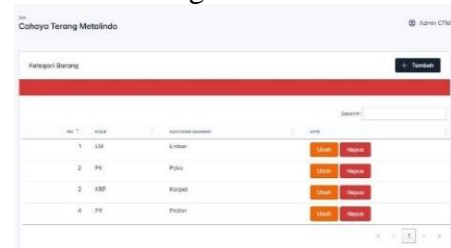


Figure 11. Item Category Page



Figure 12. Item Category Form

i. Item List Page

The item list page displays a list of items, along with options to add, edit, and delete data, as shown in Figure 13. The form for adding an item to the list can be seen in Figure 14.

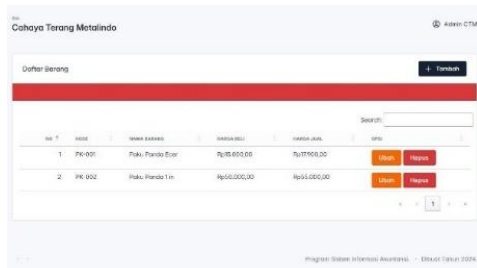


Figure 13. Item List Page

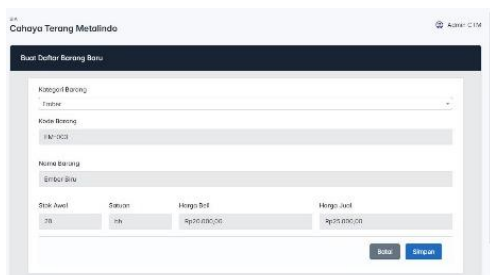


Figure 14. Item List Form

- j. Initial Balance Sheet Page  
The initial balance sheet page is used to enter the initial balances of each account, as shown in Figure 15. A print button is also provided, which can export the data in PDF format. The form for adding an initial balance can be seen in Figure 16.

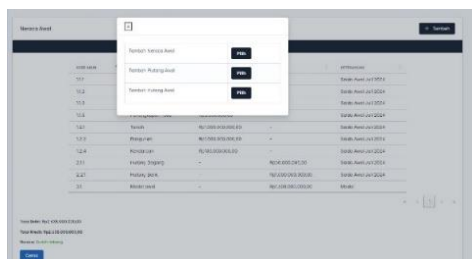


Figure 15. Initial Balance Sheet Page



Figure 16. Initial Balance Sheet Form

- k. Purchase Page  
The purchase page displays purchase data, along with options to add, view details, and print invoice, as shown in Figure 17. The transaction creation can

be seen in Figure 18, and the resulting invoice is shown in Figure 19.



Figure 17. Purchases Page

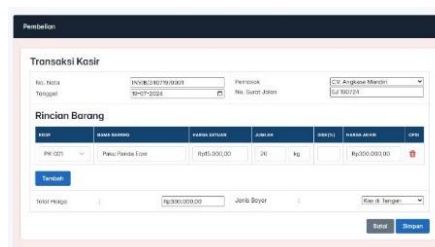


Figure 18. Purchases Transaction Page



Figure 19. Purchases Invoice

- l. Sale Page  
The sales page displays sales data, along with options to add, view details, and print invoice, as shown in Figure 20. The transaction creation can be seen in Figure 21, and the resulting invoice is shown in Figure 22.

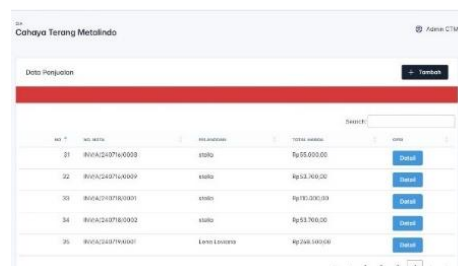


Figure 20. Sales Page



Figure 21. Sales Transaction Page

No	Nama Barang	Harga Satuan	Jumlah	Disk (%)	Harga Akhir
1	Plaku Panda Ekor	Rp17.900,00	4 kg	0	Rp695.500,00
2	Plaku Panda Ekor	Rp17.900,00	11 kg	0	Rp195.500,00
Sub Total:					Rp266.800,00
Ongkir:					Rp0,00
Total Harga:					Rp266.800,00

Figure 22. Sales Invoice

m. Payable Page

The payable page in Figure 23 displays a list of purchases made on credit, along with options to make payments. The payment form can be seen in Figure 24

No	TANGGAL NOTA	NO. NOTA	NAMA	JUMLAH	STATUS	TANGGAL PELUNTASAN	OPSI
1	18-07-2024	1612107180001	Raja Hengas	Rp200.000,00	Klik	18-07-2024	Lunas
2	18-07-2024	1612107180001	Surinda	Rp200.000,00			Klik

Figure 23. Payables Page

Figure 24. Payables Payment Page

n. Receivable Page

The receivable page in Figure 25 displays a list of sales made on credit, along with options to receive payments. The payment form can be seen in Figure 26.

No	TANGGAL NOTA	NO. NOTA	NAMA	JUMLAH	STATUS	TANGGAL PELUNTASAN	OPSI
1	18-07-2024	1612107180001	Surinda	Rp13.000,00	Klik	18-07-2024	Lunas
2	18-07-2024	1612107180001	Jahra	Rp13.000,00	Klik	18-07-2024	Lunas
3	17-07-2024	1612107180001	Karniawati	Rp10.000,00			Klik

Figure 25. Receivables Page

Figure 26. Receivables Payment Page

o. Cash Out Page

The cash out page is used to make payment transactions using the store's cash, which can be seen in Figure 27.

Figure 27. Cash Out Page

p. General Journal Page

The general journal page is used to create other special transactions that are already equipped with automatic journal entries, as shown in Figure 28.

Figure 28. General Journal Page

q. Balance Sheet Report Page

The balance sheet report page provides information on the company's assets, liabilities, and equity for a certain period, as shown in Figure 29. The financial position report can also be printed in PDF format.

Rekening	Saldo
<b>Aset</b>	
Aset Lancar	
Ris di Tanggani	Rp10.000,00
Bank	Rp4.800.000,00
Piutang Dagang	Rp0,000,00
Piutang Takor	Rp0,000,00
<b>Liabilitas &amp; Ekuitas</b>	
Liabilitas	
Ekuitas	

Figure 29. Balance Sheet Report Page

r. Income Statement Page

The income statement page provides information on the company's income and expenses for a certain period, as shown in Figure 30. The report can be printed in PDF format.

Periode		Col.	Print
Periode: July 2024			
Nama Akun: 0420			
<b>Pendapatan</b>			
Penjualan		Rp2.000.000,00	
RPB		Rp1.800.000,00	
Labas Kotor		Rp200.000,00	
<b>Ekspen-Gesam</b>			
Biaya Transportasi		Rp100.000,00	
Jumlah Ekspen		Rp100.000,00	
Labas Rugi		Rp100.000,00	

Figure 30. Income Statement Page

s. Purchase Report Page

The purchase report page displays purchase transactions for a certain period, as shown in Figure 31, and can be printed in PDF format.

No	Tanggal	Referensi	Uraian	Total Jumlah
1	2024-07-11	INV/8/240719/001	sd/Prco	Rp450.000,00
2	2024-07-11	INV/8/240719/002	sd/Prco	Rp750.000,00
3	2024-07-15	INV/8/240715/001	sd/Prco	Rp100.000,00
4	2024-07-14	INV/8/240714/002	Biaya Ringan	Rp100.000,00
5	2024-07-15	INV/8/240715/003	sd/Prco	Rp100.000,00
6	2024-07-15	INV/8/240715/004	Biaya Ringan	Rp25.000,00
7	2024-07-15	INV/8/240715/005	sd/Prco	Rp100.000,00

Figure 31. Purchase Report Page

t. Sales Report Page

The sales report page displays sales transactions for a certain period, as shown in Figure 32, and can be printed in PDF format.

No	Tanggal	Referensi	Uraian	Total Jumlah
1	2024-06-10	INV/2/240610/001	stoko	Rp100.000,00
2	2024-06-10	INV/2/240610/002	stoko	Rp40.498,00
3	2024-06-10	INV/2/240610/003	stokan	Rp107.000,00
4	2024-06-10	INV/2/240610/004	stokan	Rp20.000,00
5	2024-06-10	INV/2/240610/005	stoko	Rp100.000,00
6	2024-06-15	INV/2/240615/006	stoko	Rp75.000,00

Figure 32. Sales Report Page

u. Inventory Report Page

The inventory report page displays inventory data adjusted with the FIFO inventory valuation method, as shown in Figure 33.

No	Tanggal	Referensi	Uraian	Nama Barang	Qty	Unit	Nilai
1	2024-07-24	Persediaan Awal	PR/001	Paku Perseor Ecor per kg	Rp20.000,00	0 kg	Rp0,00
2	2024-07-24	INV/8/240720/001	PR/001	Paku Perseor Ecor per kg	Rp20.000,00	0 kg	Rp0,00
3	2024-07-30	INV/8/240720/001	PR/001	Paku Perseor Ecor per kg	Rp20.000,00	0 kg	Rp0,00
4	2024-07-30	INV/8/240720/002	PR/001	Paku Perseor Ecor per kg	Rp20.000,00	840 kg	Rp1.680.000,00
5	2024-07-30	INV/8/240720/003	PR/001	Paku Perseor Ecor per kg	Rp20.000,00	30 kg	Rp600.000,00
6	2024-07-30	INV/8/240720/004	PR/001	Paku Perseor Ecor per kg	Rp20.000,00	50 kg	Rp1.000.000,00
7	2024-07-30	INV/8/240720/005	PR/001	Paku Perseor Ecor per kg	Rp20.000,00	800 kg	Rp1.600.000,00
8	2024-07-30	INV/8/240720/006	PR/001	Paku Perseor Ecor per kg	Rp20.000,00	1000 kg	Rp20.000.000,00

Figure 33. Inventory Report page

## IV. CONCLUSION

The research results at CV. Cahaya Terang Metalindo show problems with the manual system in running its business. The designed accounting information system has been adjusted to meet the company's needs, including menus for the dashboard, inventory, transactions, journal, data, reports, and user settings. The owner's feedback after using "SIA CTM" is very positive; he believes that business activities have become more effective and efficient and provide accurate financial reports.

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