



@is The Best :
Accounting Information Systems and
Information Technology Business Enterprise
Volume 8, Issue 2 (2023) Pages 136-150
ISSN: 2252-9853 (Print) | ISSN: 2656-808X (Online)
<https://ojs.unikom.ac.id/index.php/aisthebest/index>

Accredited Ranking 4th, SK Number: 105/E/KPT/2022

DOI: <https://doi.org/10.34010/aisthebest.v8i2.11034>

Design of Merchandise Inventory Accounting Information System Using Web-Based SAK ETAP Standard at Frozen Food Distribution Store

Tyas Sylva Fitriana Natansya¹, Apriani Puti Purfini²

^{1,2} Computerized Accounting, Universitas Komputer Indonesia, Dipati Ukur Street No.112-116, Lebakgede,
Coblong, Bandung City, West Java Province, 40132, Indonesia

Email: tyasnatansya16@gmail.com

ABSTRACT

Inventory of trade goods is important in the process of buying and selling activities in a trading company, in this case it can be concluded that inventory is important for every company to supervise and manage the inventory owned. This research was conducted at the Frozen Food Distribution Store located at Rajawali Timur Street No. 68, Ciroyom, Andir, Bandung City, West Java 40182. Frozen Food Distribution Store is a trading company, selling products in the form of Frozen Food types. The method to be used in the implementation of research is the descriptive method is the process of solving problems that will be researched by describing situations that are objects or subjects. There are three data collections, namely, observation, interview and literature review. The author made the design of this application based on the website, the purpose of making this information system is expected that this system will help in carrying out daily activities in trading at the Frozen Food Distribution Store. The use of this information system is to manage inventory well with inventory cards. The results of the author's research on frozen food distribution stores do not yet have a merchandise inventory information system in which financial statements are made, the information system is made to have inventory card features to financial reporting and receive income statements every month to see profits, according to applicable accounting standards. Merchandise inventory information systems can help with weaknesses in the running system.

Keywords: Merchandise Inventory, Accounting Information System, Frozen Food

Introduction

Along with the times, technology is very influential and has a very important role in every company that runs. This system can help companies in data management, and can be an information that can be accepted as decision making. Companies need a system that can be useful to ensure that there are no errors that occur during the running of a company activity [1]. Current rapid development Technology really helps and makes all areas of life easier, especially in managing accounting Information Systems. Increasing business needs affect much business competition [2]. A system is characterized as an assemblage of subsystems, parts, or constituents that collaborate to generate a pre-established result. Existing data is what constitutes information [3].

Processed for a person, organization or anyone who needs it. Companies use technology to manage company finances. A trading company is defined as a company whose activity is to purchase goods merchandise and resell it without changing the form to obtain profit [4]. Information technology (IT) refers to the associated systems, software, and hardware components that a business uses to create computer-based information systems. It is utilized to accelerate reaction times, make it easier for businesses, volunteers, government agencies, and relief organizations to work together, among other coordination tasks [5].

Accounting information systems play a very important role in companies. To help make financial reports easier. The development of time and technology continues to progress. Companies must follow current developments by developing a running accounting information system. Some companies still maintain making financial reports using manual bookkeeping, where

manual bookkeeping can cause errors in writing, such as wrong numbers, the wrong number of zeros recorded [6].

Good inventory will determine whether every production process of a company will be carried out smoothly. Inventory is a resource that will be used in the future. In order to ensure that there will not be more or no shortage of stock, the company must continue to review the presence or absence of stock of the product. The amount of a cost in the warehouse that a business will incur can be affected by more and less inventory. Every company must have the best inventory control capabilities so that production can run smoothly. With inventory control, businesses can achieve business goals by responding quickly to customer requests and minimizing inventory costs [7].

Inventory is an investment made for the purpose of obtaining a return proceeds through sales to customers. Many companies tend to maintaining inventory at a certain level, if inventory is insufficient, sales will decrease at a low level of achievement and vice versa. If the business has too much inventory, it will have to deal with issues related to funding, insurance, taxes, storage, and financial as well as physical harm. Because keeping inventory entails internal risks and it takes longer to turn over inventory into cash. Most people agree that inventory is the most illiquid current asset when compared to accounts receivable [8].

In the absence of inventory, a company will be exposed to threats, namely unable to meet customer needs. Therefore, in a supply, it must be faced with an investment that is not small but not too high. Some experts have expressed opinions about the inventory. Some of these experts have expressed their opinions about inventory, that is, the wealth that a company already has, is also available for sale in various interests in business, namely goods that will be used to produce production, goods to be sold. From this conclusion, inventory is a major complementary asset in every company because inventory is the main asset in creating profits in the company [9].

Financial Accounting Standards for Entities Without Public Accountability is one of the financial standards set to make it easier for entities without public accountability to prepare and present more informative financial reports with the aim of making it easier for information users and managers to make decisions [10].

Within a corporation, the presence of inventory significantly impacts the portrayal of financial statements. This is crucial because the resultant financial statements accurately reflect the genuine financial status of the company, whether it is experiencing profits or losses. Inventory holds great importance in financial statements, as both the income statement and balance sheet cannot be formulated without determining the value of inventory [11]. However, currently many businesses in the implementation of their business have not run an Accounting Information System, especially on Merchandise Inventory, to achieve effective control of the supply of goods so that good information is obtained. Researchers conducted research on Frozen Food Distribution Stores located on Rajawali Timur Street No. 68, Ciroyom, Andir, Bandung City, West Java, 40182. Frozen Food Distribution Store is a trading company that sells various kinds of Frozen Food. This research was conducted in the Warehouse and Accounting section.

The definition of a system is a network of stages that are interrelated, collected to carry out an activity in other words to clean up a certain target [12]. The definition of information is even broader, that the data that has been studied will be shaped and useful for recipients of information that is useful for delivering current and future decisions [13]. The Financial Accounting Standards for Entities Without Public Accountability (SAK ETAP) are designed for usage by entities that lack substantial public accountability and issue financial reports for general purposes [14].

Understanding Information systems is a system that has an association that relates payment processing needs and is supported by an operation in the form of a manager. Information systems today are the main thing for companies, besides that the development of information systems is an advantage in a company. Similarly, this Frozen Food Distribution Store has had an information system that has been running for a long time, but along with the development, the information

system used still has problems in recording incoming and outgoing goods in the warehouse. Likewise, the financial reporting is not in accordance with accounting standards.

Problems with the Frozen Food Distribution Store Information System, the author by updating the system that has been running in the company and is still not in accordance with Accounting Standards and also Systems that often experience errors in the stock of goods in the warehouse. In making the information system uses various types of programming languages including using PHP. PHP is the program language used by the website to be in the form server-side scripting PHP dynamic shaped.

Based on some of the above, researchers designed a web-based inventory accounting information system using PHP and PostgreSQL with inventory methods, the information system that has been made has the advantage of having inventory cards to income statements which aims to make it easier for companies to see finances according to accounting standards with the aim of managing data to be more effective and efficient, with that the researcher titled "Design of Merchandise Inventory Accounting Information System Using Web-Based SAK ETAP Standard in Frozen Food Distribution Stores."

Method

The unit of analysis is the subject of research. Design Merchandise inventory analysis unit in the Frozen Food Distribution Store in the Warehouse section and other related sections. Population is the overall object in a study. The population the researchers examined was the Frozen Food Distribution Store Merchandise Inventory for the 2023 period. The object of research is something that is targeted in research. The research target used is the design of Merchandise Inventory in Frozen Food Distribution Stores. Research design is a framework for making research. The method to be used in the implementation of research is the descriptive method is the process of solving problems that will be researched by describing situations that are objects or subjects. There are three data collections, namely, observation, interview and literature review. Research is the design of a sales accounting information system in Frozen Food Distribution Stores. The methods used by researchers are descriptive research methods and surveys. Research methods and surveys are descriptive because the author needs an overview of the running system. Development can be done and designed in this application, namely with waterfalls. The explanation is as follows: Waterfall is a type of SDLC used to develop an information system. The waterfall uses a structured approach[15]. Figure 1 is an illustration of the waterfall model.

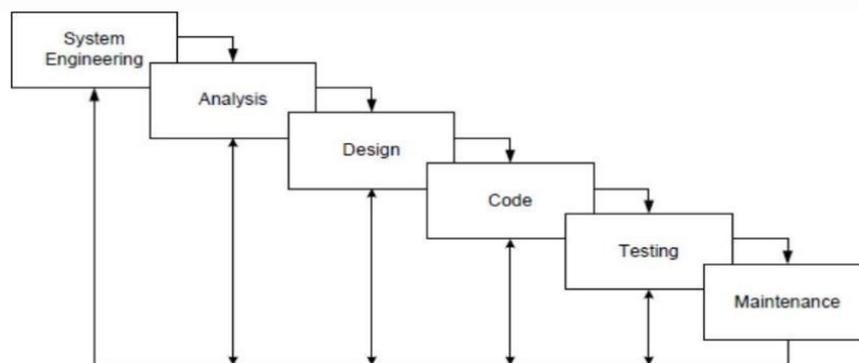


Figure 1. Waterfall Method [15]

Based on figure 1. The author uses the waterfall model as a development model in designing an information system for the availability of merchandise at Frozen Food Distribution stores.

Results and Discussion

Frozen Food Distribution Store is a trading company that sells various kinds of Frozen Food. This research was conducted in the Warehouse and Accounting section. The Frozen Food Distribution Store has had an information system that has been running for a long time, but along with the development, the information system used still has problems in recording goods in and out of the warehouse. Likewise, financial reporting is not in accordance with accounting standards. The author makes a merchandise inventory information system in accordance with mere accounting standards, in the information system made has advantages in financial reporting and also has an inventory card that makes it easier for users to see inventory of goods.

Problems in the Accounting Information System of the Frozen Food Distribution Store by updating the system that has been running in the company and is still not in accordance with Accounting Standards and also Systems that often experience errors in the stock of goods in the warehouse. That way the author conducted a study to fix the problems that occurred, the author designed a Web-based SIA using PHP and PostgeSQL.

1. Flowchart

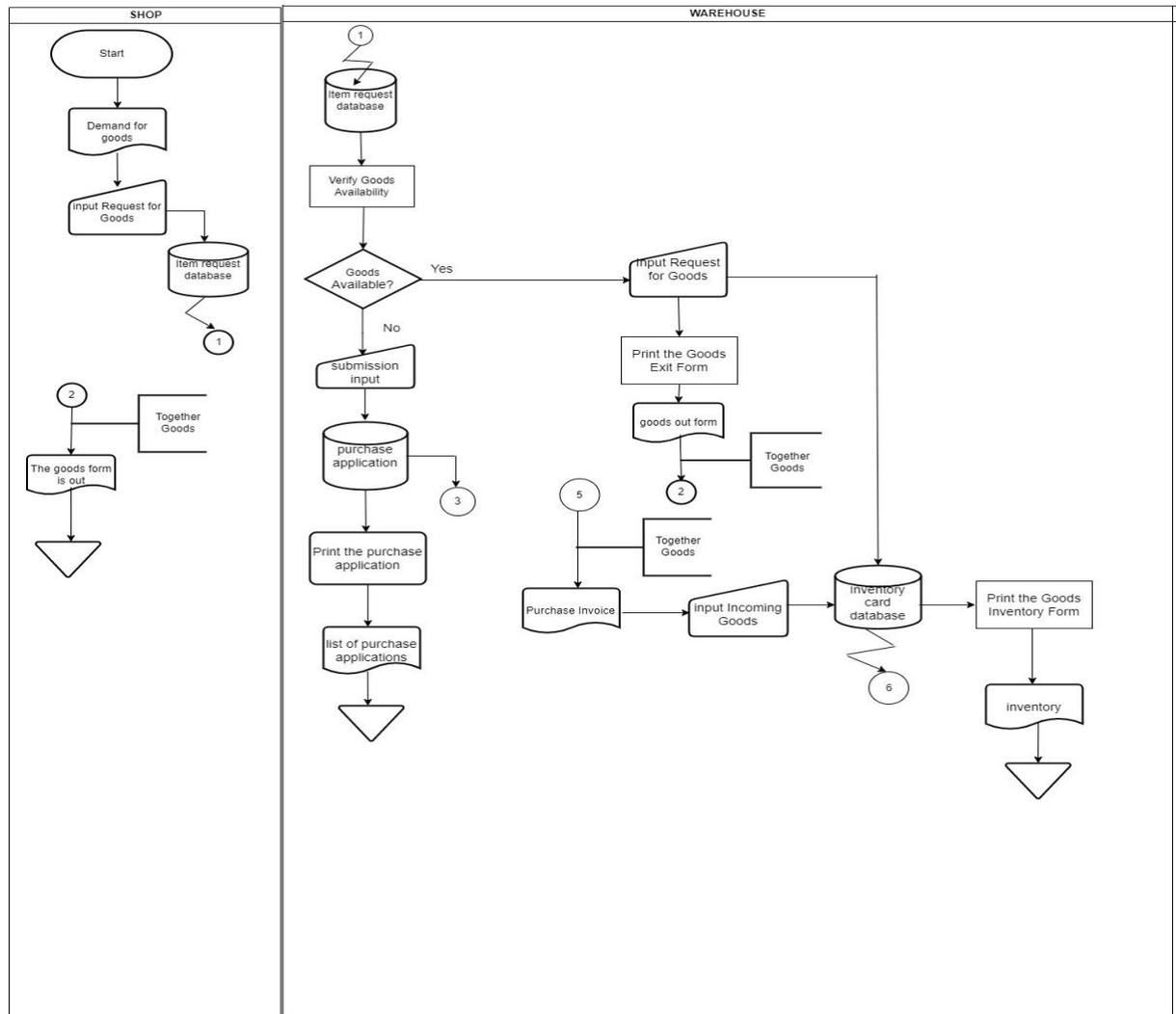


Figure 2. Store and Warehouse Section Flowchart

In Figure 2. The flowchart of the Store entity will request goods and will be sent to the warehouse entity, then the warehouse will check the inventory of goods available in the warehouse

when the goods are available, they are immediately sent back to the Store according to the demand for the goods needed. However, if the goods are not available in the warehouse, they will be processed and submit the goods to the Manager.

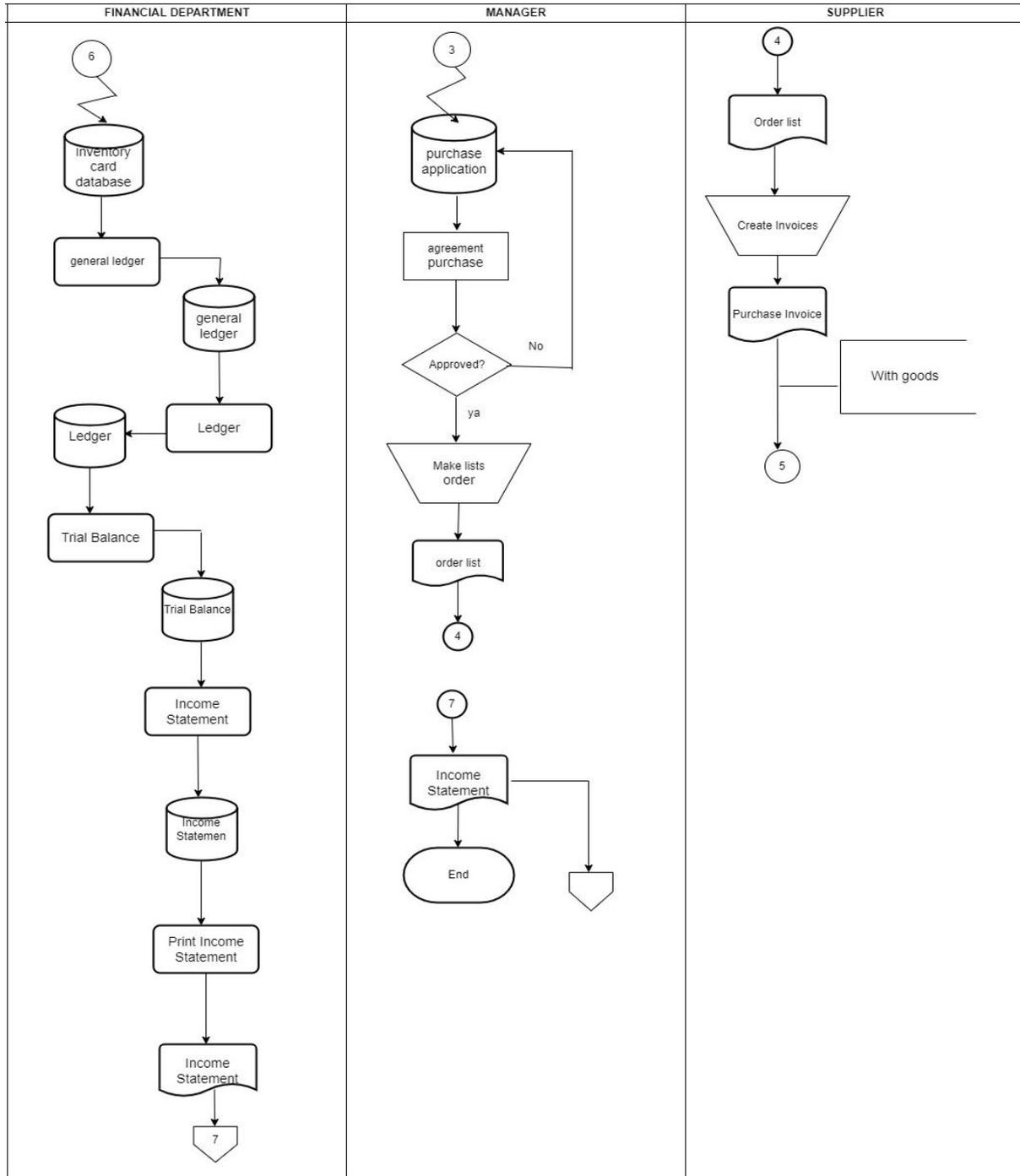


Figure 3. Flowchart Finance, Manager, and Supplier

In Figure 3. Flowchart Manager Entity will receive the submission of goods for approval then an order will be placed with the supplier then later in the finance department will be inputted and made Inventory Card, General Journal, General Ledger, Balance Sheet to Income statement.

2. Context Diagram

A running context diagram is one that illustrates the alignment of a running system. The following is an overview of the running context diagram at a Frozen Food Distribution Store:

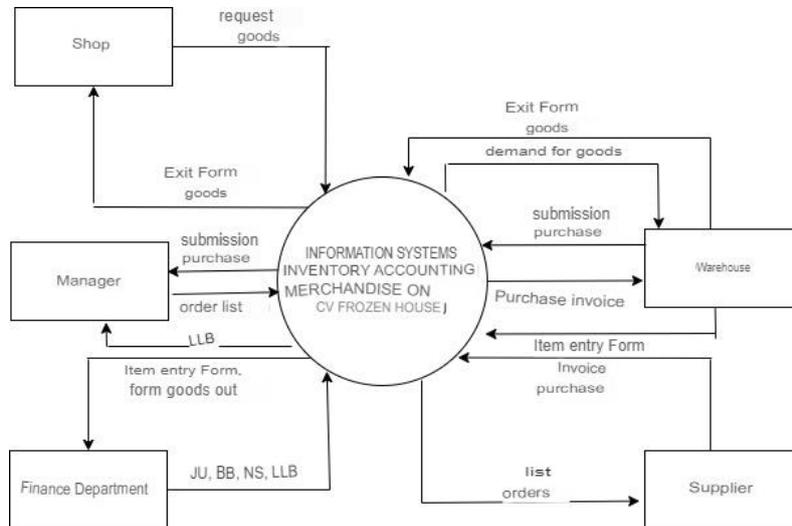


Figure 4. Context Diagram

In Figure 4. The author describes the overall flow in the merchandise inventory information system at frozen food distribution stores.

3. Data Flow Diagram

Definition Data Flow Diagram (DFD) is a chart that will illustrate a data flow within the company, which can be depicted by various symbols in order to illustrate the turnover of data that occurs in business process. Here is the Data Flow Diagram (DFD) that the author made:

LV 0 diagram

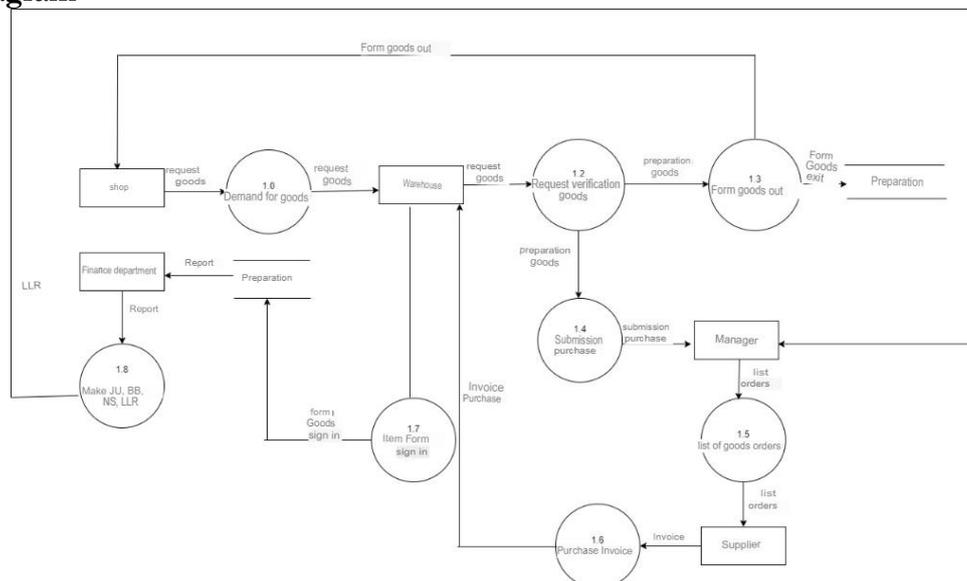


Figure 5. DFD Level 0

In Figure 5. The author describes the overall data flow in the merchandise inventory information system of frozen food distribution stores.

4. Entity Relationship Diagram (ERD)

ERD that is a diagram in the form of notation that is in the process of creating a database that will connect between one data and another data.

Proposed ERD:

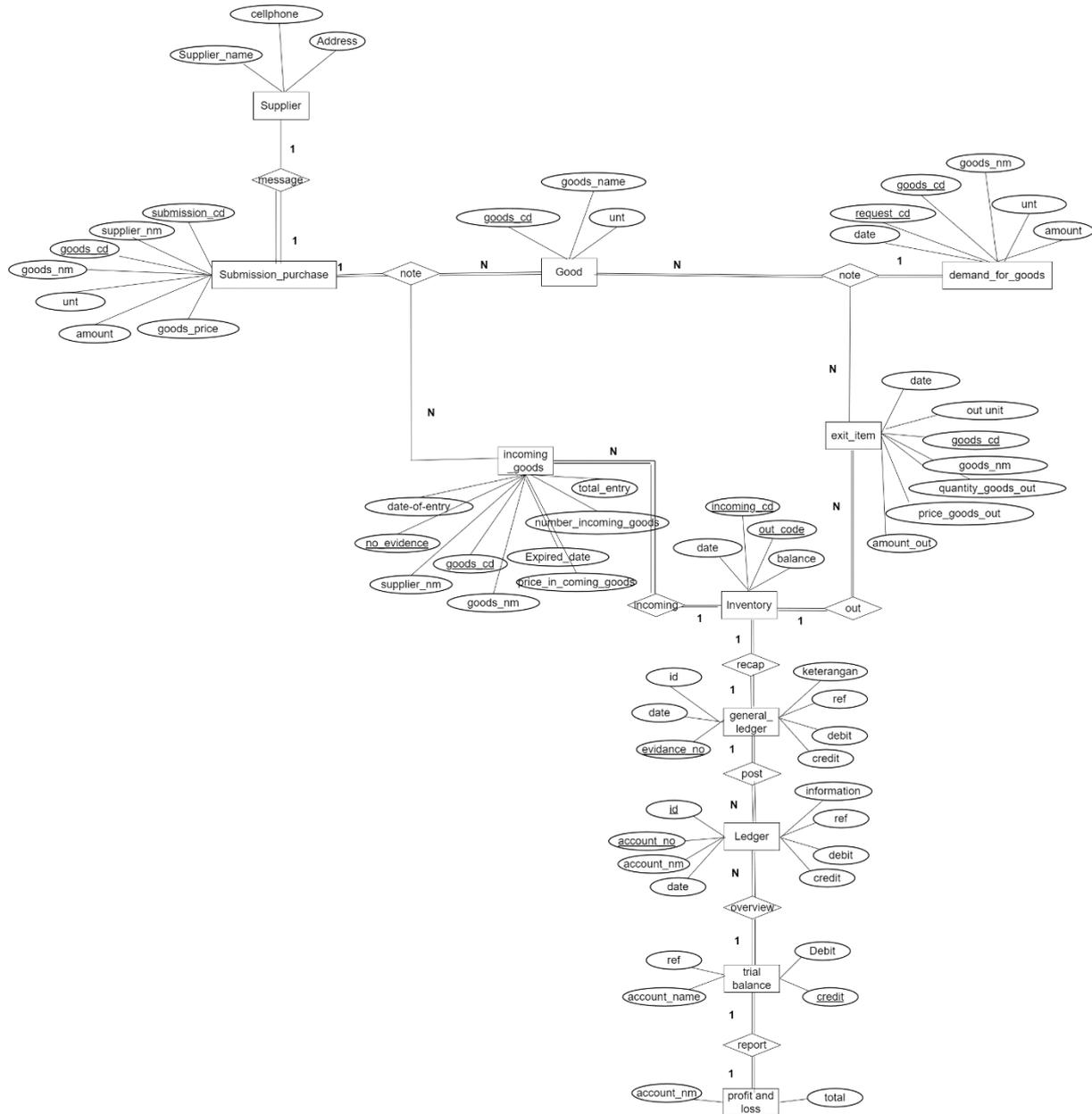


Figure 6. Entity Relationship Diagram

Figure 6. The author designed ERD as a database creation process that will link between data from the merchandise inventory information system at frozen food distribution stores.

5. Menu Structure

Menu Structure The program to be created is divided into 4 parts, namely there is a structure of Shops, Warehouses, Finance, Managers.

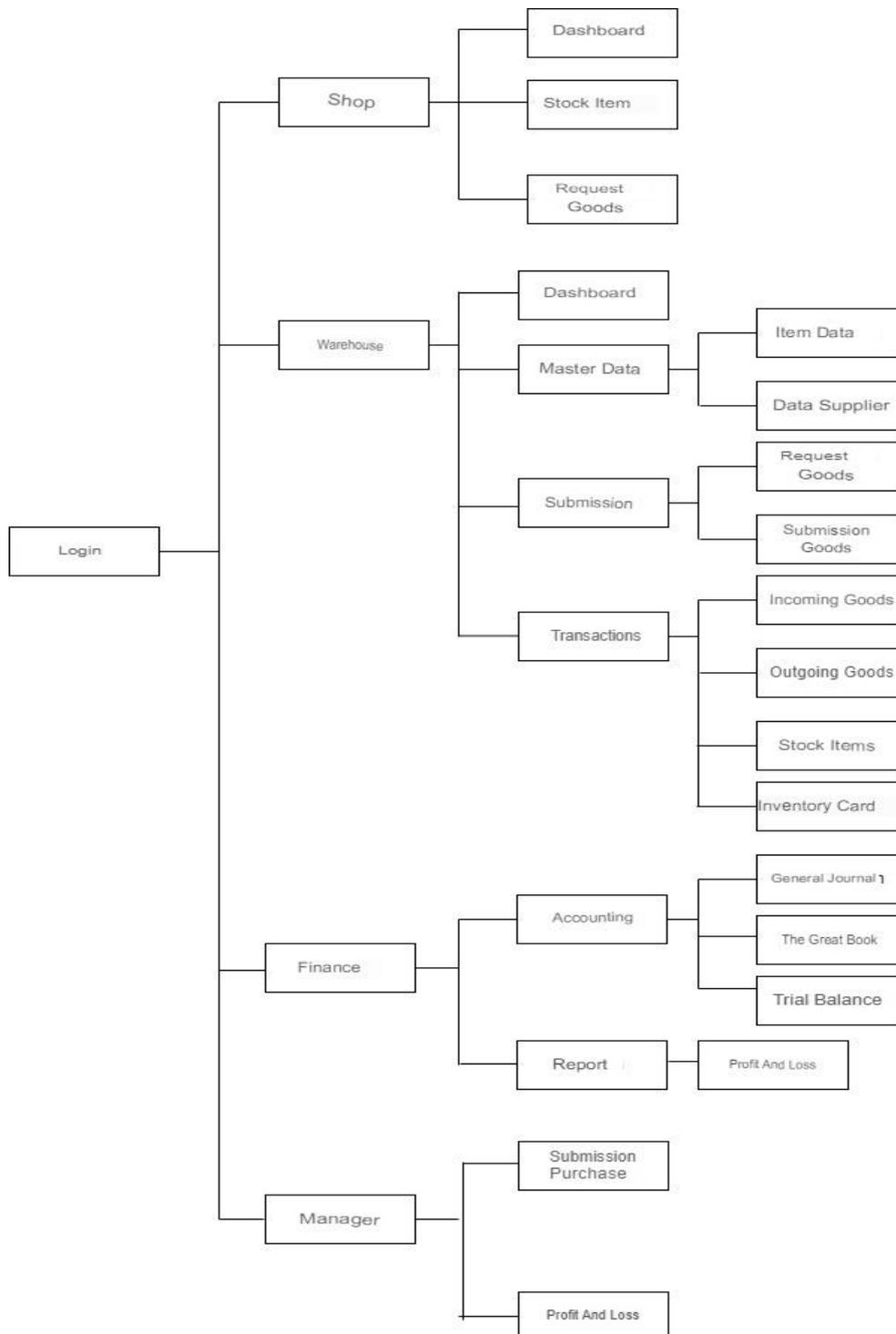


Figure 7. Menu Structure

In figure 7. The author makes a menu structure of what is contained in the merchandise

inventory information system at frozen food distribution stores.

6. Inventory Information System Display

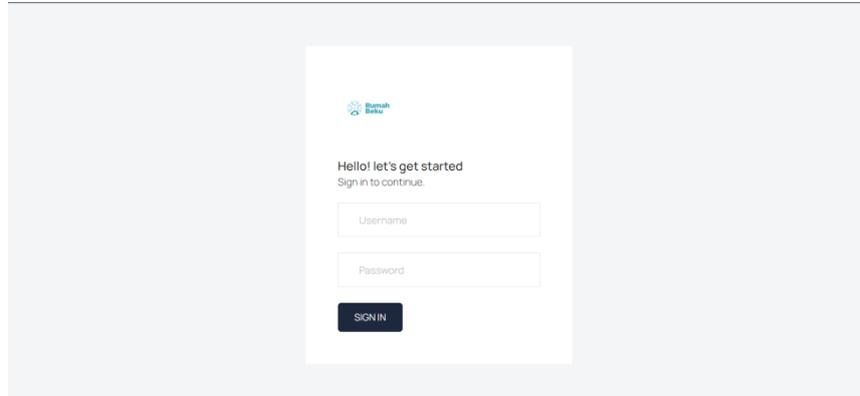


Figure 8. Log in View of Warehouse, Store, Finance, and Manager

In figure 8. Login display on Warehouse, Store, Finance, and Manager users. All users can access the section still in accordance with the menu structure that has been created.

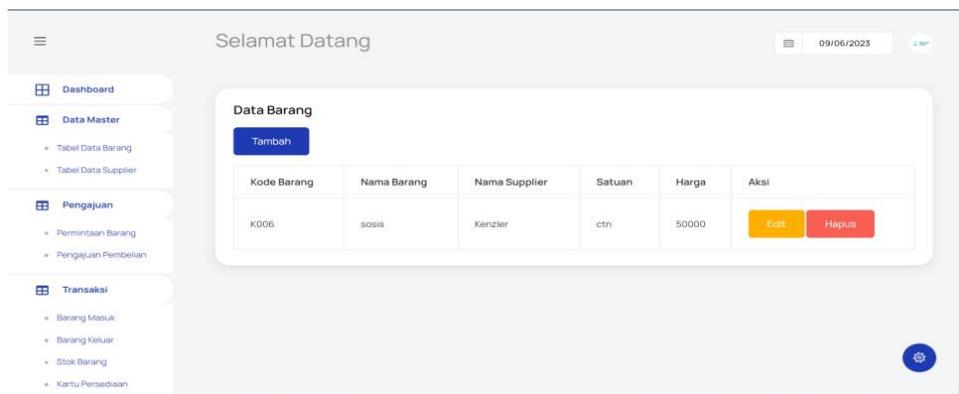


Figure 9. Data Item

In figure 9. display of goods data on the warehouse user. The warehouse can input any item contained in the frozen food distribution store.

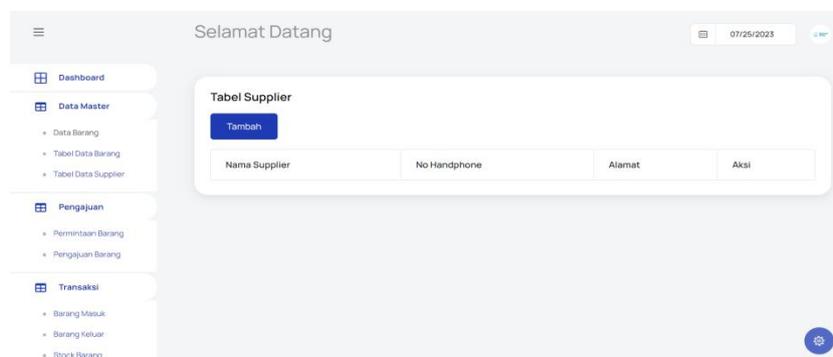


Figure 10. Data Supplier

In Figure 10. Supplier data on the Warehouse user. The warehouse can input any supplier in

the frozen food distribution store.

Tanggal	Kode Permintaan	Kode Barang	Nama Barang	Satuan	Jumlah	Status	Aksi
2023-08-29	KP01	K001	Chicken wings	ctn	100	setuju	Setuju
2023-08-30	KP01	K001	Chicken wings	ctn	100	setuju	Setuju

Figure 11. Goods Request

In Figure 11. Request goods to the Warehouse user. Where the warehouse can approve if there is a demand for goods in the store if the goods are available.

Kode Barang	Nama Barang	Nama Supplier	Satuan	Jumlah	Harga	Status	Aksi
K006	sosis	Kenzler	ctn	100	50000	selesai	Edit Hapus
K006	sosis	Kenzler	ctn	100	50000	selesai	Edit Hapus
K006	sosis	Kenzler	ctn	200	50000	selesai	Edit Hapus

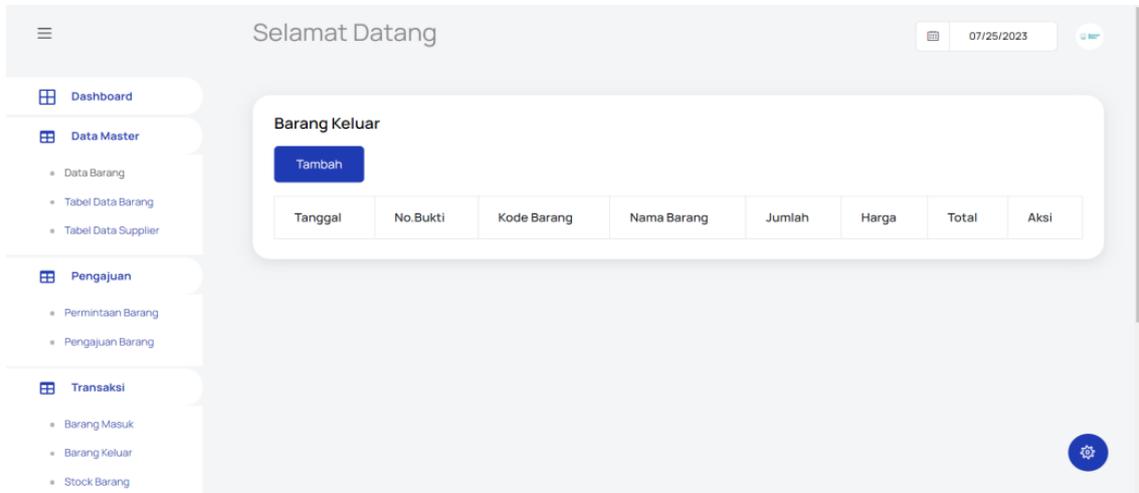
Figure 12. Purchase Application Data Table

In Figure 12. Display of purchase submission data on Warehouse users. Where the warehouse process purchases to be approved by the manager on the user manager before being submitted to the purchasing department.

Tanggal	No. Bukti	Nama Supplier	Kode Barang	Nama Barang	Tanggal Kadaluarsa	Jumlah Baran
2023-07-05	B003	Yola	KB002	Nugget	2023-07-28	2
2023-07-19	B004	Yola	KB002	sosis	2023-07-29	2

Figure 13. Incoming Goods Table

In Figure 13. Table view of incoming goods in the user warehouse. Where the warehouse can input any goods that enter according to the purchase submission data that has been submitted and approved.



Selamat Datang 07/25/2023

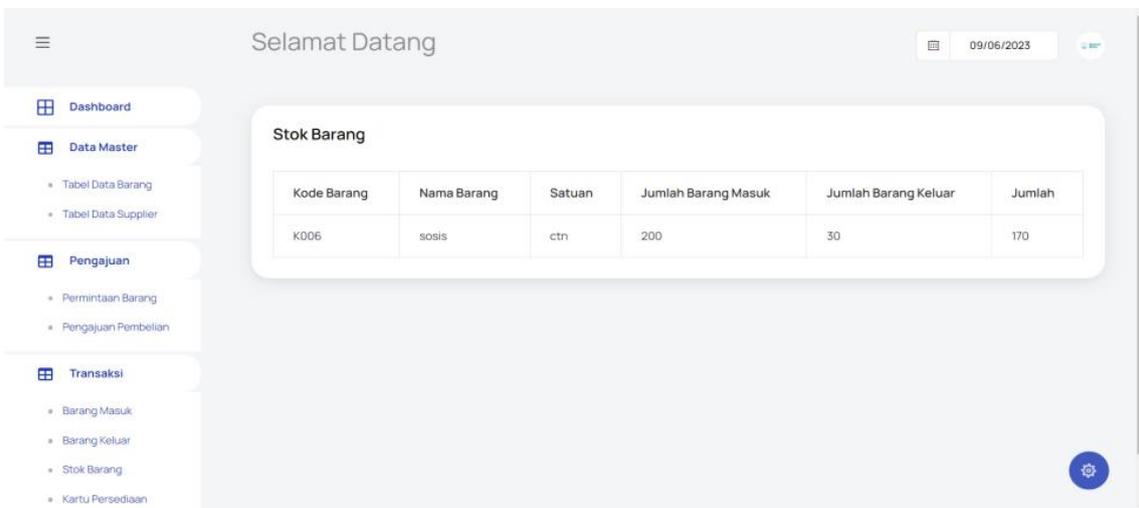
Barang Keluar

Tambah

Tanggal	No.Bukti	Kode Barang	Nama Barang	Jumlah	Harga	Total	Aksi
---------	----------	-------------	-------------	--------	-------	-------	------

Figure 14. Table of Outgoing Goods

In Figure 14. The Item Table view comes out on the user's warehouse. Where the warehouse can input any goods that come out of the warehouse after a request for goods from the store user.



Selamat Datang 09/06/2023

Stok Barang

Kode Barang	Nama Barang	Satuan	Jumlah Barang Masuk	Jumlah Barang Keluar	Jumlah
K006	sosis	ctn	200	30	170

Figure 15. Stock Table

In Figure 15. Display of the stock table of goods on the Warehouse user. Where the warehouse can see how many goods enter and goods go out and stock available in the warehouse.

Kartu Persediaan

K006

Simpan

No Bukti	Tanggal	Kode Barang	Masuk (diterima)			Keluar (dikeluarkan)			Salc
			Unit	Harga	Total	Unit	Harga	Total	
PBM001	2023-09-14	K006	100	50000	5000000				200
PBM002	2023-09-14	K006	100	50000	5000000				200
PBK001	2023-09-22	K006				30	55000	1650000	170

Figure 16. Item Supply Table

In Figure 16. Is the display of the Inventory Card on the Warehouse user. Where the warehouse can see how many goods enter and goods go out and stock available in the warehouse.

Halaman Utama Jurnal Umum

Bulan: Semua Tahun: Contoh: 2023 Filter

Rumah Beku
Jurnal Umum
Periode 2023

Tanggal	No. Bukti	Akun	Ref	Debit	Kredit
2023-09-22	PBK001	Persediaan Barang Dagang	112	Rp1.650.000	Rp 0
		Kas	111	Rp 0	Rp1.650.000
2023-09-14	PBM002	Kas	111	Rp5.000.000	Rp 0
		Pendapatan Tunai	400	Rp 0	Rp5.000.000

Figure 17. Main Table of General Journal

In Figure 17. is the main table view of the general journal of goods on financial users. The finance department can access the general journal.

Buku Besar
Aug.2023

Tanggal	Keterangan	Ref	Debit	Kredit	Saldo	
					D	K
	persediaan barang dagang	112	Rp0	Rp50.000.000	Rp0	Rp50.000.000
	penjualan	400	Rp50.000	Rp0	Rp0	Rp49.950.000

Figure 18. General General Ledger Main Table

In Figure 18. is the display of the Main Table of the General Ledger of goods on financial users. The finance department can access the ledger.

Akun	Ref	Debit	Kredit
111	kas	Rp0	Rp600,200
112	persediaanbarangdagang	Rp600,200	Rp0
TOTAL		Rp600,200	Rp600,200

Figure 19. Main table Balance Sheet

In Figure 19. Is the main table view of the balance sheet in financial users. The finance department can access the balance sheet.

PENDAPATAN			
Persediaan Barang Dagang		Rp1,650,000	
Total Pendapatan			Rp1,650,000
HARGA POKOK PENJUALAN			
Harga Pokok Penjualan		Rp55,000	
Harga Pokok Penjualan			Rp55,000
BEBAN			
Beban Gaji		Rp0	

Figure 20. Profit and Loss Taking

In Figure 20. This is the main table view of profit and loss for financial users. Finance can access the final report.

Conclusion

In this research I created a merchandise inventory accounting information system, After doing this research food distribution stores can see inventory cards that conform to accounting standards and can also view financial statements. With this information system, it can make it easier to see financial statements in this frozen food company and also in the application process to facilitate users and have an impact more efficiently and effectively. Researchers can conclude that Frozen Food Distribution Stores already use information systems but are not the same as accounting standards that are run, and there are no inventory cards and financial statements for merchandise inventory in stores. Researchers try to provide a solution, namely evaluating the merchandise inventory information system to conform to applicable accounting standards based on the web

designed by the PHP programming language and PostgreSQL database. This information system can help companies record inventory and make income statements so that it can be easier to see the profits earned by stores. The suggestion for the next researcher is that the title section can be redeveloped so that the scope is wider and the application created can be added more features regarding Merchandise Inventory Accounting.

Acknowledgment

The researcher would like to thank the Frozen Food Distribution Store for providing support by providing a number of information as the author needs.

References

- [1] N. N. Purnawan, T. H. Apandi, R. Piarna, S. Rahayu, M. Iqbal, dan Y. S. Nugroho, "Pengabdian Kepada Masyarakat : Sistem Informasi," vol. 3, no. September, hal. 23–29, 2020.
- [2] N. Najla, S. Supriyati, dan D. A. Dewi, "Design of Sales Accounting Information System Using EMKM Accounting Standard," *@is The Best : Accounting Information Systems and Information Technology Business Enterprise*, vol. 7, no. 2, hal. 166–180, 2023, doi: 10.34010/aisthebest.v7i2.9125.
- [3] S. Supriyati, S. Mulyani, H. Suharman, dan T. Supriadi, "The Influence of Business Models, Information Technology on the Quality of Accounting Information Systems Digitizing MSMEs Post-COVID-19," *Jurnal Sistem Informasi*, vol. 18, no. 2, hal. 36–49, 2022, doi: 10.21609/jsi.v18i2.1141.
- [4] owusu et al, "Analisis Pengendalian Internal Persediaan Barang Dagang Pada Cv Pp Lumajang," *Prosiding Seminar Nasional & Call For Paper*, no. 2019, hal. 161–167, 2019.
- [5] Supriyati, H. Suharman, dan T. Supriadi, "Business strategy and use of information technology toward ASEAN MSMEs performance in the post-pandemic crisis," *Journal of Eastern European and Central Asian Research (JEECAR)*, vol. 10, no. 5, hal. 886–897, Sep 2023, doi: 10.15549/jeecar.v10i5.1438.
- [6] T. Rahmasari, "Perancangan Sistem Informasi Akuntansi Persediaan Barang Dagang Pada Toserba Selamat Menggunakan Php Dan Mysql," *is The Best Accounting Information Systems and Information Technology Business Enterprise this is link for OJS us*, vol. 4, no. 1, hal. 411–425, 2019, doi: 10.34010/aisthebest.v4i1.1830.
- [7] V. Sitinjak, "Analisis Pengendalian Persediaan Untuk Meminimalkan Biaya Persediaan Pada Perum Bulog Divisi Regional Riau Dan Kepri Di Gudang Pekanbaru," *SENKIM: Seminar Nasional Karya Ilmiah Multidisiplin*, vol. 1, no. 1, hal. 284–298, 2021.
- [8] Yusi Maesaroh dan Elvia Puspa Dewi, "Analisis Akuntansi Persediaan Barang Dagang Berdasarkan PSAK 14 (Studi Kasus Pada PT XYZ-CTP 1)," *Jurnal Buana Akuntansi*, vol. 5, no. 1, hal. 1–14, 2020, doi: 10.36805/akuntansi.v5i1.1016.
- [9] M. A. Swasono dan A. T. Prastowo, "Analisis dan Perancangan Sistem Informasi Pengendalian Barang," *JATIKA (Jurnal Informatika dan Rekayasa Perangkat Lunak)*, vol. 2, no. 1, hal. 134–143, 2021.
- [10] T. Kuncara, F. R. Anggita, dan J. L. Utomo, "Analisis Penilaian Persediaan Barang Dagang Pada Rozan Mini Market & Percetakan Sesuai Sak Etap," *Owner*, vol. 7, no. 2, hal. 965–973, 2023, doi: 10.33395/owner.v7i2.1286.
- [11] S. D. Paraswati et al., "Analisis Metode Pencatatan Dan Penilaian Persediaan Barang Dagang Pada Pt. Hasjrat Abadi Cabang Manado," *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi*, vol. 9, no. 1, hal. 94–101, 2021.
- [12] A. Wicaksana dan T. Rachman, "Perencanaan Jumlah Tenaga Kerja Untuk Memenuhi Permintaan (Studi Kasus Pada UD. Setia Guna)," *Angewandte Chemie International Edition*, vol.

- 3, no. 1, hal. 10–27, 2018.
- [13] D. Prakasita N dan M. A. Nugroho, “Perancangan Sistem Informasi Akuntansi Penjualan Dan Persediaan Di Central Steak and Coffee Boyolali,” *Nominal, Barometer Riset Akuntansi dan Manajemen*, vol. 7, no. 1, hal. 69–81, 2018, doi: 10.21831/nominal.v7i1.19360.
- [14] S. Supriyati dan R. S. Bahri, “Model Perancangan Sistem Informasi Akuntansi Laporan Keuangan Pondok Pesantren Berbasis SAK ETAP,” *is The Best Accounting Information Systems and Information Technology Business Enterprise this is link for OJS us*, vol. 4, no. 2, hal. 151–165, 2020, doi: 10.34010/aisthebest.v4i02.2749.
- [15] A. Wahid Abdul, “Analisis Metode Waterfall Untuk Pengembangan Sistem Informasi,” *Jurnal Ilmu-ilmu Informatika dan Manajemen STMIK*, no. November, hal. 1–5, 2020.