

Design of Sales Information System for Goods at Alpar Wholesale Store in Jambi City Based on Web

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Abstract

Alpar Wholesale Store is a store that sells various kinds of products for household needs. In the data processing process using handwriting, so there are still many obstacles in data processing, such as the difficulty of: To record sales data, planning previously planned activities because the data search process is considered slow, data does not appear automatically so it must be written repeatedly, and data cannot be integrated with each other because there is no database. The purpose of this study is to analyze the current system, to overcome the problems faced at the Alpar Wholesale Store, by designing a Web-Based Sales Information System Design at the Alpar Wholesale Store in Jambi City. The Research Framework that will be carried out in solving the problems discussed is, identifying, searching for information based on theoretical foundations, collecting data using observation and interview methods, analyzing to find solutions to the problems faced by the Alpar Wholesale Store. The system development method uses a waterfall model, the implementation of this study uses the PHP Programming Language and DBMS MySQL, to produce data processing applications that are expected to facilitate data processing and report creation.

Keywords: Design; Information Systems; Sales of Goods

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SDGs: Decent Work and Economic Growth (8); Industry, Innovation, and Infrastructure (9); Responsible Consumption and Production (12); Partnerships for the Goals (17)

1.0 INTRODUCTION

Very rapid progress in the field of technology (Junaedi, Panjaitan, et al., 2024), especially technology information encourages the emergence of new innovations (Mukhsin et al., 2025) in presenting information to meet the need for accurate information (Renaldo, Hafni, et al., 2022). As a tool, computers also have advantages, including speed, accuracy, and efficiency in data processing when compared to manual data processing. Computers have also penetrated the world of trade and creating competition for the best service between traders in making sales.

Sales is the science and art of influencing people, carried out by a seller to persuade other people to be willing to buy the goods or services he offers. (Fachrurrazi, 2015). Explains that sales are interactions between individuals meeting face to face aimed at creating, improving, controlling, or maintaining exchange relationships that are beneficial to the other party (Borroek et al., 2019; Musa, 2013). Sales are the transfer or assignment of ownership rights to goods or services from one party to another accompanied by the transfer of compensation from the recipient of the goods or services in return for the transfer (Wadoyo, 2016).

Based on the initial survey conducted by the author, Alpar Wholesale Store is a store that sells various kinds of products (Renaldo, Suhardjo, et al., 2022). In the current system, Alpar Wholesale Store still carries out product buying and selling transaction activities by recording where this activity is considered to have several obstacles including the store conducting promotions by informing customers who come to visit only so that many other customers do not know the information about the products available in the store. Alpar Wholesale Store records purchase transactions only on paper so that this activity is troublesome for the Store when it has to recap data to see the results of all previous transactions, because some data is damaged or lost. In processing inventory data, Alpar Wholesale Store records what products to buy, in the form of item names, quantities, prices, and totals because the data recorded is very large, often the same data is recorded again.

Based on the explanation above. Therefore, the author is interested in conducting research and presenting it in the form of a final assignment report entitled " Designing a web-based sales information system for goods at the Alpar wholesale store in Jambi City".

2.0 LITERATURE REVIEW

Previous research is used as a consideration that is related to the current research. There are several previous studies that are used as references, including similar research conducted by Dian Meilantika (Meilantika, 2020), which states that having a sales information system can help businesses so that they can easily provide sales services to consumers. With a sales information system (Renaldo et al., 2024), errors can be minimized, and it is easier to process sales transaction data, it is easier to search for goods, delete, and change data on types of goods (Fachruddin & Pratama, 2017; Ikhsan, 2018). The sales information system makes it easier to record, calculate, create documents and sales information for the purposes of managing and summarizing sales reports (Aditya Tri Herdiansyah et al., 2021). In addition, by using a web-based sales system (Renaldo et al., 2021), buyers can shop more easily at home without having to bother coming to the store (Putri, 2018). It can help shop owners run the sales process better (Anthony et al., 2019; Supriana & Pratama, 2017).

3.0 METHODOLOGY

Research Stages

To assist this research, a clear framework of stages is needed (Chen & Gustientiedina, 2024). This framework is the steps that will be taken in solving the problems discussed (Effendy & Gusrianty, 2024). The framework used is as follows:



Figure 1. Research Stages

Based on the research framework described above, the discussion of each stage in the research can be described as follows (Susanto et al., 2024):

a. Identification of problems

In this stage, the author reviews the location directly to conduct research to find obstacles and find ideas and appropriate solutions (Andra & Hajjah, 2020). This stage is an important stage because the author must know whether the Alpar wholesale store in Jambi City has used an information system or not. The author must know whether there has been any previous discussion of the same research as the researcher did. At this stage, the author found a problem with the current system, where the cashier still records purchase transactions only on paper so that this activity is troublesome for the Store when they must recap data to see the results of all previous transactions, because some data is damaged or lost. After the problem identification is complete, the author designs and builds a web-based sales information system for goods at the Alpar wholesale store in Jambi City.

b. Literature Study

Literature study is a research approach that is carried out by searching for references on theoretical basis that are relevant to the case or problem found in the information system of goods sales at the Alpar wholesale store in Jambi City (Susanti et al., 2025). The references are searched for in the source book from google book while the source journal is from google scoolar which consists of the definition of design, information system, sales, website, internet (Renaldo, 2024), database, UML, usecase diagram, activity diagram, class diagram,

flowchart document, dreamweaver, xampp, NySQL and PHP and similar research. The output produced from the literature study is the collection of references that are relevant to the formulation of the problem that has been obtained regarding the information system for selling goods in the sale of goods at the Alpar wholesale store in Jambi City web based.

c. Data collection

At this stage, the author collects data to obtain data and information about the system running directly at the Alpar Wholesale Store in Jambi City using the following data collection techniques (Martin & Johan, 2021):

1. Observation

The data collection method is carried out by directly observing an event that is happening. Direct observation was carried out at the Alpar Wholesale Store regarding matters related to the research being carried out, such as observing the work system at that place. Where the results of the observations that have been carried out are able to identify obstacles in sales (Suharti & Shinta, 2021), purchases, and product stock so that the most appropriate system can be planned to be built with the aim of being a solution to these obstacles.

2. Interview

Interview data collection method conducted face-to-face, namely by conducting a question-and-answer session with Mr. Zulkifli as the Owner of the Alpar Wholesale Store to obtain accurate information related to the problem being studied. Interview activities discuss the current system and seek information about the profile of the Alpar wholesale store, types of products managed, product sales to consumers, apart from that, at this stage we also talk about the sales information system and recommend to the Alpar Wholesale Store as a user with the hope of improving sales management at the Alpar wholesale store.

3. Documentation

Documentation is done to provide accurate evidence from Alpar Wholesale Store by recording, photographing the location or object and duplicating the required files. Documentation is an activity to collect documents such as sales data, purchase data, consumer data, product data and proof of transactions. The data collection method used was documentation related to the social situation at the Alpar wholesale store, such as ongoing buying and selling activities (Junaedi, Anggelina, et al., 2024).

d. Data analysis

Data analysis is a method used by the author to process data contained in the Alpar Wholesale Store into information (Nasien et al., 2025). This is done so that the data is easy to understand. Data analysis is also carried out with the aim of obtaining solutions to be able to handle sales activities, handle purchasing activities and handle stock data. The data analyzed are sales data, purchase data, consumer data, product data and proof of transactions.

e. System design

System design is determining the processes and data needed to design a new system for the Alpar wholesale store. System design is a follow-up step from a plan to determine a process or data needed by the sales system at the Alpar Wholesale Store. At this stage, the system is designed using the UML method consisting of Use Case Diagrams, Activity Diagrams and Class Diagrams (Yanto & Putri, 2020). The input, process and output designs that used by considering what is needed by the Alpar Wholesale Store.

f. Preparation of Reports

The preparation of the report is a stage of system evaluation and testing with the white box and black box methods. At this stage the author collects the conclusions obtained and arranged in a final assignment report, where the function of the report includes, informing or explaining the responsibilities of the tasks and research activities carried out, informing or explaining the basis for compiling policies, decisions or problem solving in research conducted on sales at the Alpar Wholesale Store. The purpose of compiling this report includes, among others, to overcome a problem, by making a more effective decision, knowing the progress and development of problems that occur at the Alpar Wholesale Store and compiling it into a final assignment report entitled Design of a web-based sales information system at the Alpar Wholesale Store in Jambi City.

Database

"A database is a collection of data that is logically related and has several interrelated meanings" (Pratama & Rasywir, 2021; Toledo, 2014). "A database is a collection of data that is interrelated so that we can obtain data information quickly" (Abidin et al., 2020; Wicaksono, 2014).

Table 1. Sales Transaction Table Design								
Field Name	Туре	Long	Information					
no_transaction	varchar	15	no_transaction					
Transaction_date	date	-	Transaction_date					
Kd_customer	varchar	15	Kd_customer					
notes	varchar	100	notes					
Transaction_amount	int	11	Transaction_amount					
Total_other	int	11	Total_other					

Field Name	Туре	Long	Information
Total_transactions	int	11	Total_transactions
Total payment	int	11	Total payment
Total_remaining	int	11	Total_remaining
VAT	int	11	VAT
Date and time	date	-	Date and time
Time_paid	datetime	-	Time_paid
Islunas	int	11	Islunas
Kd_user	varchar	15	Kd_user

Table 2. Purchase Table Design **Field Name** Long Information Туре receipt varchar 15 receipt date of receipt date of receipt date date datetime date _ kd_supplier varchar 15 kd_supplier information information varchar 100 sub-Total int 11 sub-Total int 11 discount discount ppn int 11 ppn int 11 gtotal gtotal 15 varchar nope nope 15 kd user varchar kd user invoice_no varchar 100 invoice_no check check int 11

Table 3. Value Table Design						
Field Name Type Long Information						
kd_ user	varchar	30	kd_Customer			
username	varchar	5	kd_makses			
password	int	11	check_access			
status	varchar	10	status			

4.0 RESULTS AND DISCUSSION

"UML is an abbreviation for (Unified Modeling Language) which means standard modeling language" (Oktafianto, 2016). "UML is a collection of diagrams that already have standards for building object-based software" (Umbara, 2015).

The system is running:

- a. Buyer purchases product, then makes payment.
- b. Admin receives payment, records transactions and hands over the products sold to buyers.
- c. Admin records the invoice and submits it to the buyer.
- d. Admin summarizes the report.

Usecase

" A use case diagram is a diagram that contains use cases, actors and the relationships between them" (Indrajani, 2015). "A use case diagram is a diagram that must be created first when object-oriented software modeling is carried out" (Umbara, 2015).





Activity Diagram

"Activity diagram is a workflow diagram that performs each activity, and the sequential flow of these activities" (Triandini, 2012). "Activity diagram is the starting point for the design stage which will be carried out immediately after the analysis stage is completed" (Nugroho, 2011).







"A class diagram is a diagram in UML that describes the structure of an object-oriented application in terms of defining the classes that will be created to build the application" (Shalahuddin, 2016). "A class diagram is a diagram used to represent classes, class components and the relationships between each class" (Mulyani, 2017).

Figure 4. Class Diagram

Implementation

Program implementation is the result of a previously created design or the process of translating a design into a display result that can be used using a programming language. The implementation of the program can be described as follows:

a. Sales Transaction Menu Display

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	2	TR2307070001	07 Jul 2023	02:53:45	TUNAI	Rp. 173.000	Lunas	sauti	
	i.	TR2307130001	13 Jul 2023	16)44:10	TUNAT	Rp. 649.000	Linas	admin	

The Transaction menu input form display is used to integrate all the functions needed to process or display Transaction data.

Figure 5. Sales Transaction Menu

b. Purchase Transaction Form View

The appearance of the Purchase Menu is the result of a plan or basic framework that the author has previously designed. At this stage, the menu has been given a programming language so that it can function, with the aim that the initial design plan is in accordance with the program that has been created.

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3	105/230714007	14 Jul 2023	PT.Sehut Selamanya	430.000	5737374	admm	In Links
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Figure 6. Purchase Transaction Menu

c. Sales Report View

This Sales data report is used as information so that the admin can print the overall Sales data report. The Sales report can be seen in the following image.

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ser		admin	6				
*	Kode		Nama		Jumlah	Harga	Sub Total
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2	MBF3A8E 1 Renteng Rad		acik Ayam Goreng	1 - Renteng	Rp. 24.000	Rp. 24.000	

Figure 7. Report View

d. Application Testing

Page testing involves testing performed to ensure that no changes made during the development process have introduced new bugs (Jahrizal et al., 2024). It is also used to ensure that no old bugs have emerged from adding new software modules over time.

Table 4. Application Testing								
Test Conditions	Testing Procedure	Input	Output	The Results Obtained	Conclusion			
Add Order SUCCEED	 Click the add button. Show Add Page Data <i>input</i> Click Save 	Add COMPLETE Order data	Message appears: "Data Added Successfully"	Data in <i>gridview</i> increases	Good			
Add Order FAIL	 Click the add button. Show Add Page Data <i>input</i> Click Save 	Add INCOMPLETE Order data	Message appears: "Please fill in this field"	Data in <i>gridview</i> is not increase	Good			
Edit Order SUCCEED	 Select the data to be edited. Click the edit button. Show Edit Page Data modification Click update 	Edit COMPLETE Order data	Message appears: "Data Successfully Edited"	Data in <i>gridview</i> is edited	Good			
Edit Order FAIL	 Select the data to be edited. Click the add button. Show Add Page Data modification Click Save 	Edit INCOMPLETE Order data	Message appears: "Please fill in this field"	Data in <i>gridview</i> is not edited	Good			
Delete Order SUCCEED	 Select the data you want to delete. Click the delete button. Display the delete message option (no /yes) 	Click YES	Message appears: "Data Successful." Deleted"	Data in <i>gridview</i> is deleted	Good			
Delete Order CANCELLED	 Select the data you want to delete. Click the delete button. Display the delete message option (no /yes) 	Click <i>NO</i>	Stay on the Order page	Data in <i>gridview</i> is not deleted	Good			

5.0 CONCLUSION

Conclusion

Based on the results of the analysis of the system design to the implementation of the program that has been made in this Research Report, it can be concluded that the sales system running at the Alpar Wholesale Store is still conventional, where the owner uses recording in a book besides that in the process of checking the inventory of merchandise in the warehouse, the sales department has to wait a long time. After knowing the condition of

the inventory, the sales department can then provide a response to the customer. This process is ineffective. Designing a sales information system at the Alpar Wholesale Store is designed with the PHP programming language and MySQL DBMS which can help the owner in recording sales transactions better because the designed information system has a create, update, and delete function which helps print reports faster.

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