

# Web Based Information System of Sales and Purchases on Cafe

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## **Abstract**

*At this time, the need for the use of computers in almost all aspects is needed, including in business and economics. Therefore, it takes a computerized system that can change the workings of a business process that was previously conducted manually in order to run better than ever. This information system will be implemented using object-oriented approach method and prototype development method, that is by listening to what client wants, then designing the program and revising when there is still less. This program uses a PHP programming language that makes the whole system computerized. The design of the system using UML (Unified Modeling Language) obtained after the observation and interview in the company. With the creation of a computerized system, is expected to help the company in improving the effectiveness and efficiency during the company's operational activities and provide good performance from all employees of cafe.*

**Keywords:** *Information system, web based, object oriented, sales and purchases*

## **1. Introduction**

In the age of globalization, where information is the major thing, information processing between either agencies or organization institutions became something that could be considered important. Connectivity from a computer enables the tasks operation quickly and accurately for and agency or an organization that has used a computerized information system. The system itself is a collection of procedures connecting to each other, which later worked together to undertake and complete a certain goal [1]. Information is a collection of data that has been processed to be used in the decision making process for the future [2]. If combined, it will become an information system that is a combination of components interconnecting or bounding to each other and will form a unit to process in distributing information [3]. The efficiency in managing data and information is an important thing that is required for agencies or organizations; one of them is in the business entity or company. The definition of data is facts that can be used as material to form information after going through the processing [4]. Along with the rapid developments in technology, information is now increasingly required, especially when the information provided have the right and accurate data and values [5]. Thus, people who access the information can solve various problems that have occurred quickly. A website is one of them, which the pages of information are connected to the entire world using the internet network [6]. In the world of economy and business, there are companies engaged in the culinary, one example of the information systems application in business and economic fields is a data processing system in conducting business transactions that have been performed in a computerized manner. This research focuses on operational activities at a cafe that designed product sales system to consumers, raw materials purchases to the supplier and product returns from the sale transaction. The result is a system that is currently running are not computerized that causes some issues, namely the cashier

difficulties in recording the sales transaction in rush hour [7-10]. Afterwards, the recording sales and purchase reports also performed manually thus giving a risk to the sales and purchase report archive data that is easily lost or damaged [11]. Therefore, an information system is created, which is expected to make the sales and purchasing process more effective and efficient.

## 2. Literature Review

The first research conducted by Fariz Rizki Ramadhan, entitled "Selected Food and Beverage Sale and Purchase Information System"[18], is an information system design that has been computerized. Especially in the operational section by developing information systems for buying and selling food and beverages in order to facilitate the processing of data ranging from the purchase of raw materials to the extent the sale of food and beverages itself. Therefore, the stage of making reports on purchasing raw material data and sales reports on the restaurant.

The similarity between this research and the research conducted by Fariz Rizki Ramadhan is to analyze and to design the recording of sales transaction data to consumers and raw materials purchase to suppliers in a computerized manner.

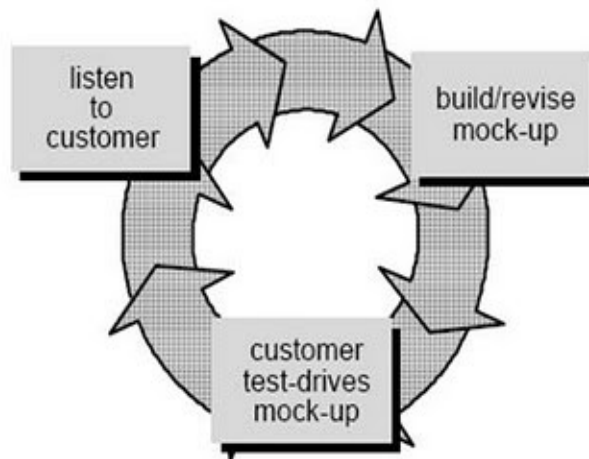
The difference of this research with previously described research is that this research is to design a system. Where the cashier can discover the amount of stock available from the menu item correctly based on the amount of raw material available and the consumers can choose how the food or the beverages will be served because the kitchen section is given a computer to discover the order details that will be served.

The second research conducted by Andi Septiana Suardi entitled "Information Systems for Purchasing and Selling Food and Beverage at Gossip Cafe And Resto"[19], is a computerized information system design, especially in the administration section by developing information systems for buying and selling food and beverages in order to facilitate processing data. The system is built from the purchase of raw materials to the stage of selling food and beverages. and the stage of making raw material data purchase reports and food and beverage sales reports. The equation of this study with research conducted by Andi Septiana Suardi is to analyze and design a food ordering system, the recording of sales purchase data and computerized raw material data.

The difference from this research with the studies that have been described previously, this study designed a system that is useful for cashiers to find out the exact amount of stock available from menu items based on the amount of raw material available. In addition, consumers can choose how the food or drink will be served. to connect it, the kitchen is given a computer to find out the details of the order that will be presented.

## 3. Method

The approach method used to conduct the analysis is the object oriented approach method. The method is an approach method that organizes and compiles software as a set of objects consisting of data and operations that have been applied to the software. Adi Nugroho explained in his book that the object-oriented approaches are a new way of thinking in dealing with problems that can be overcome with the help of computers[12]. The method of this developing system used is the prototype method, a development method consists of the collection of any requirement that should be implemented on this information system, how to design the right application to represent all aspects of the software, and evaluations provided by clients to clarify software requirements [13]. The system development of prototype method. (Figure 1).

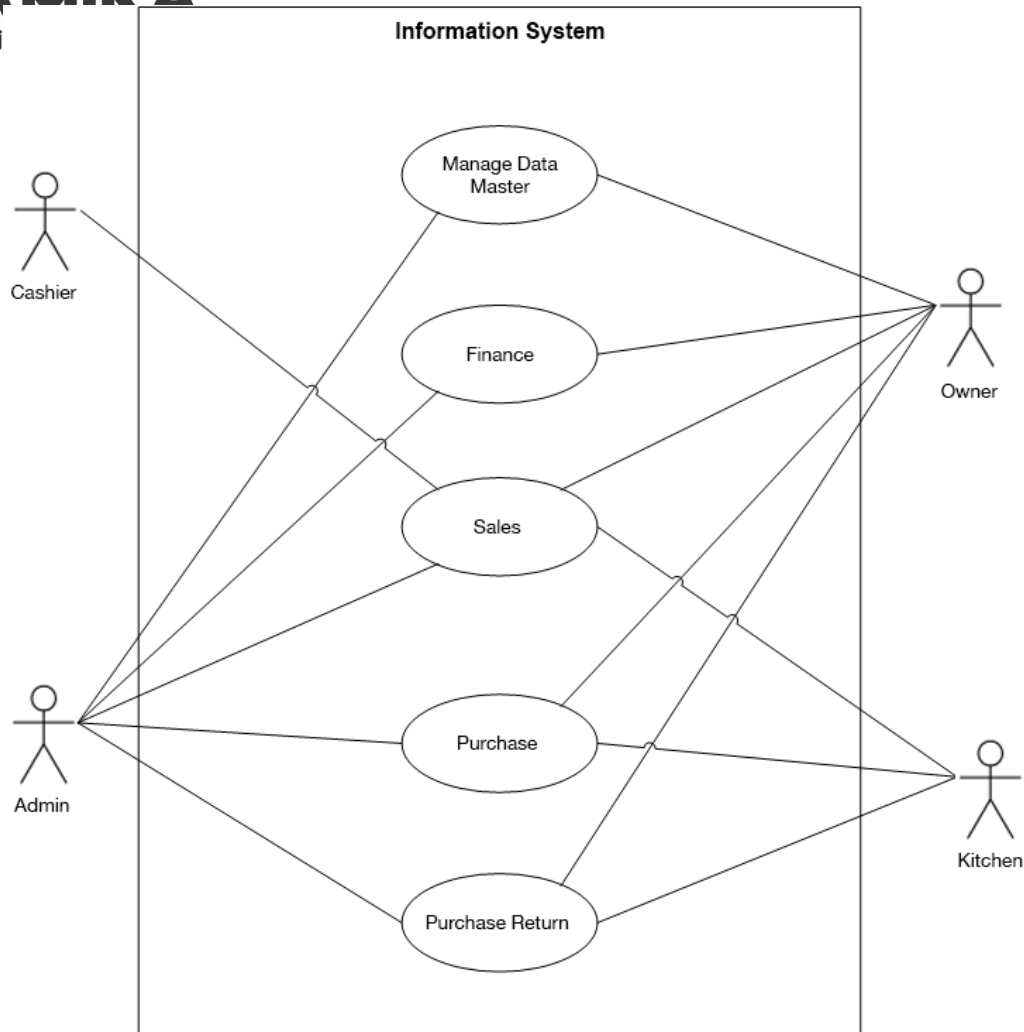


**Figure 1.** Prototype method.

Figure 1. Showing the stages in website development, starting from listening to customer's needs, followed by the implementation of the interview results on the website, and the final stage is testing the website to the customer

#### **4. Results And Discussion**

Use case diagrams and activity diagrams is used in general description of the proposed system in order to facilitate the reading program procedures. Based on the results of the analysis that has been conducted, the following is the proposed use case diagram and activity diagram on sales and purchase information systems. Figure 2 shows the use case process and activity diagram, figure 3 shows sales process, figure 4 shows purchases process, and figure 5 shows sales report in this system. (Figure 2).



**Figure 2.** Use case diagram.

Figure 2. explains the use case diagram of the Information System of Sales and Purchases on The Café. The picture above explains some of the actors involved in it and the access rights obtained by each actor.

The definition of an actor in the current use case is as follows:

1. Owner  
The owner is a person who has full authority on the cafe.
2. Admin  
Admin is the person who is responsible for food and beverage sales transactions at the cafe.
3. Kitchen  
Kitchen is responsible for checking, making, and preparing orders that have been ordered by cafe consumers and making purchases of raw materials.
4. Customer  
Costumer is a person who orders a menu and enjoys orders that have been served by the café.

Definition of Use Case and its Descriptions

1. Manage Data Master

Manage master data is the entire data processing that is accessed by the admin and owner.

2. Finance

Finance is the process of processing cafe financial data managed by the owner and admin.

3. Sales

Promotional activities carried out by all cafe parties to consumers.

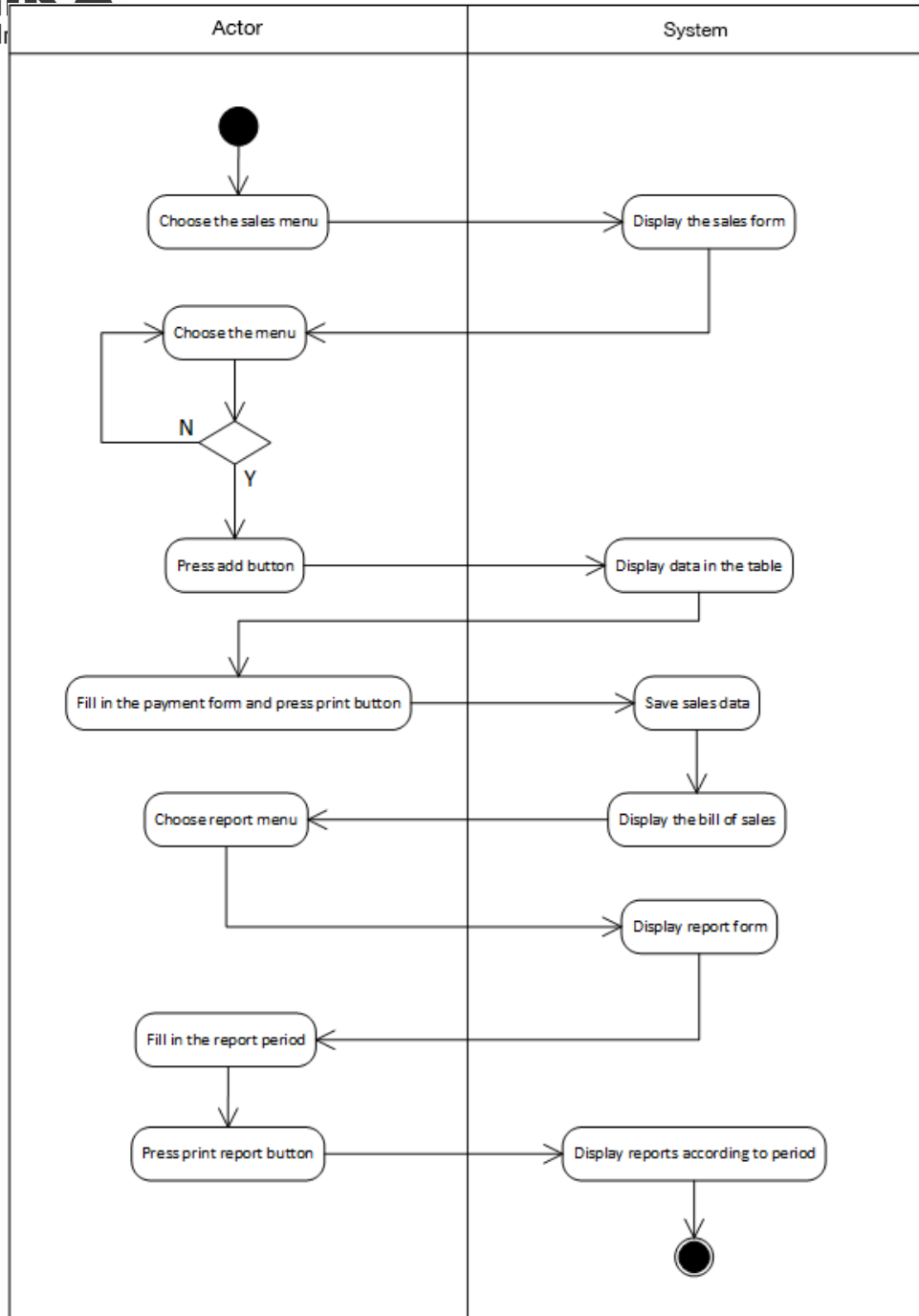
4. Purchase

Cafe order payment activities carried out by the customer to the admin.

5. Purchase Return

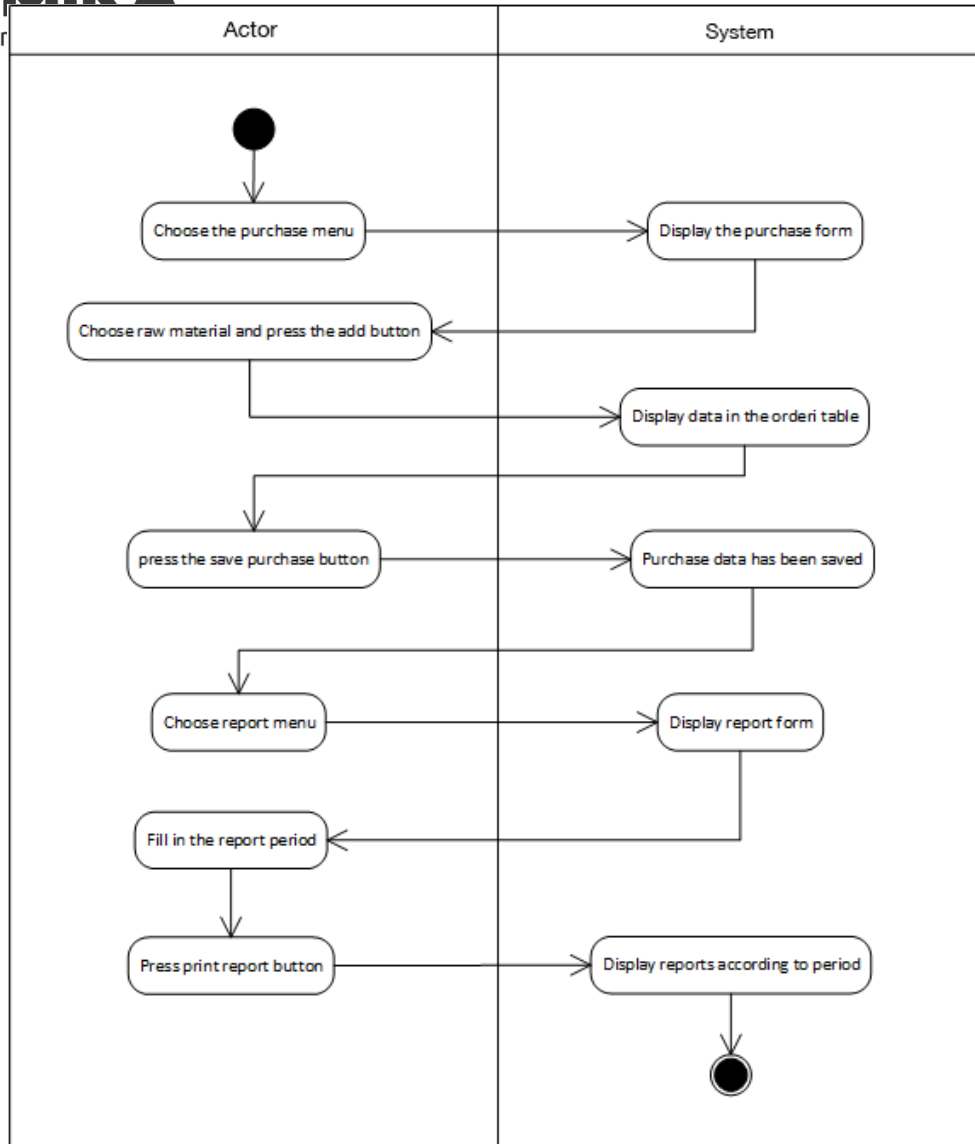
Payment refund activity by the admin to the customer

Activity diagram has a series of activities or processes that occur in a system that has a starting and finish point (Figure 3).



**Figure 3.** Activity in sales process.

Figure 3 shows the activity in purchases process. The activity diagram above explains the stages that the actor do and the responses made by the system (Figure 4).



**Figure 4.** Activity in purchases process.

Figure 4 displays the stages of the payment process contained in the Information system of Sales and Purchases. The results are the depictions in the system application for the sales report from application (Figure 5).

<b>LAPORAN PENJUALAN</b>			
Date Period : 10 / 07 / 2018 up to 11 / 07 / 2018			
<b>Code / Date</b>		: INV11072018005 / 2018 - 07 - 11	
<b>Consumer / Table</b>		: desi / 6	
<b>Sales Details</b>		:	
No	Menu Name	Quantity	Subtotal
1	Hot Drippucino	1	25.000
2	V60 Toraja	2	40.000
<b>TOTAL</b>			<b>65.000</b>
<b>Code / Date</b>		: INV11072018005 / 2018 - 07 - 11	
<b>Consumer / Table</b>		: apoy / 6	
<b>Sales Details</b>		:	
No	Menu Name	Quantity	Subtotal
1	Tubruk Coffee (Kopi Tubruk)	2	24.000
<b>TOTAL</b>			<b>24.000</b>
<b>Code / Date</b>		: INV11072018005 / 2018 - 07 - 11	
<b>Consumer / Table</b>		: hehe / 6	
<b>Sales Details</b>		:	
No	Menu Name	Quantity	Subtotal
1	Hot Milk Choco	1	26.000
<b>TOTAL</b>			<b>26.000</b>
Report Print Date 16 / 09 / 2018			

**Figure 5.** Sales report.

Figure 5. display reports of purchases that occurred at the cafe. To make bookkeeping easier if used manually. This sales report is displayed based on several periods according to their needs, can be based on date, week, month and year.



This research describes hospitality work, including in cafes, such as low wages and low skills that involve routine work with little training or development of career opportunities – McJobs[14]. A small amount of evidence shows that some significant developments have created more positive characteristics and work results [15].

Information Systems is designed to provide ease in processing data and information. The purpose of designing this system is to simplify and shorten the time as well as facilitate the cashier and kitchen in recording computerized sales, purchase and raw material data so that the business process runs effectively and efficiently. A general description of the proposed system uses the Use case diagram, Scenario, and Activity Diagram in order to facilitate the reading program procedures.

## 5. Conclusion

The conclusion of this research is proposed to provide a solution from inaccurate recording reports, and facilitate the company in printing reports based on the desired time in a computerized manner. Subsequently, the number of stock items available at the cashier's menu item based on the amount of raw material available in the kitchen with a computerized and accurate data.

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