# Automated Cashier System for Restaurant

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**ABSTRACT:** The article discusses the issue of the restaurant using the manual system. The proponents have recognized the common problems encountered by the company in manual way. By using VB.NET as front end and Microsoft Access as a back end for the database. Developing a new system for the company to make the calculations consistent and the transactions faster. Offering costs are connected to the item code of a thing while including stock, so the clerk just needs to examine this code to process a deal, the interview with the owner of the restaurant had the intention to gather information about his experiences as the owner of the said restaurant. The observations and checklists were used to present researchers to collect information about the condition of the restaurant and how the cashier system will help, you can see if certain inventory sells at certain times of the year, or even during certain times of the day. You can even set your system to reorder a certain popular inventory item so it's never out of stock for your customer. Functionality is rated as acceptable because the system functions very well for the end-users for them to become easy to use and for the faster transactions. The solution to these problems is to make automated or computerized sales and inventory system. Making this system can minimize their time period and can help them process their inventory easily.

**GENERAL TERMS:** System, Database, Transactions, Cashier

## I.INTRODUCTION

Every business owner wants to know which product sells the most, Entrepreneurs nowadays are looking for a way to make their business system better which customer buys frequently, how much inventory is on hand, what method is preferred by customers when paying and how much did they actually sell on a particular day. The restaurant used the manual system by writing in a sheet of paper using the ball pen to retrieve orders by customers. Sometimes inevitable mistakes are cause by this method. For the calculation of how much the customer order reaches they have just used the calculator. Sometimes mistakes are not expected because of confusion. They also find it difficult to record how much they earn in a day and it is inevitable to suspect if the staff will be loyal to the inventory. Some staff can steal because there is no proof of the record of how much they earned for that day. Changing the system, the owner will be more secure in the business. The Cashier System will replace their manual way. It will speed up transactions in the customers. It is also the point at which a customer makes a payment to the merchant in exchange for goods or after provision of a service. After receiving payment, the merchant may issue a receipt for the transaction, which is usually printed Thereby this will encourage the customer to enjoy eating at this reliable place.

## II. REVIEW OF RELATED LITERATURE

Database Management System is an accumulation of projects that permits to store, record and alter any record from a database. Access stores information in its own organization dependent on the entrance system being used. It can import or connect specifically to information and put away in other application and database. The database that executes framework is the primary stage used to build up the framework.
[1] It is all around perceived and valued that there is a lack of faculty important to give a full supplement of retail administration representatives. This deficiency shows up over the retail range and is maybe best exemplified by the faculty lack in the inexpensive food industry. In light of the pay levels commonly set up, bosses (and people in general) are progressively compelled to depend on a diminishing work pool with the powerlessness to get the number and

dimension of faculty which would some way or another be favored. **[2]** Electronic Computer is led over a PC organize, for example, the Internet, which interfaces a vendor with numerous potential clients, and associates every potential client with a few shippers. So as to execute exchanges electronically, both the trader and the client need to play out their particular capacities utilizing different programming segments that will enable them to electronically mirror their regular jobs in the exchange procedure. **[3]** A self-administration dissemination framework for use with articles bearing individual media that contain distinguishing proof information recorded in machine coherent structure, and, all the more especially, to programmed registration hardware for use in markets or something like that. **[4]** From the client's outlook, there is blockage emerging from the utilization of shopping baskets in thin passageways, remaining in line to achieve a registration terminal and to pay for the chose things, and the bother of emptying the chose things onto the transport just to pivot and load them again into the truck after the things are stowed. From the retailer's viewpoint, there are work costs related with giving clerks at a majority of registration terminals, work costs related with restocking the racks of items, security expenses and shoplifting misfortunes, and a restricted measure of rack space accessible for showing the retail things. **[5]** The incorporation and handling of buys whereby a check is utilized as the essential wellspring of ID of the individual and of the person's bank and whereby the financial balance is charged.

### III. METHODOLOGY

Cashiering system is software that is the most important tool for a fast-food restaurant. And also base on fast food management software with a combination of useful functions. The system can see menu items, customer bills and sales reports, which can see what items were sold as well as earnings over the past month.

Agile software development is the method that we used to increase its system efficiency and it can easily adapt to changes. As we begin in developing our system we plan on how the system will be effective and efficient then we evaluate our clients need then we start to design the system and develop in a way of being efficient and reliable to the client. In order to continue to grow business it must continue to be profitable and responsible for the use of the cashiering at a fast food restaurant. The Fast Food Cashier highlights activities such as customer greetings, procurement and delivery of orders, helping with food preparation, solving customer complaints and handling currency transactions. Training your cashiers to say "What's your order?" is a great place to start, but there are many other strategies you can use to promote the hint of selling and security software so that it will not rob and deceive the data saved by anyone. It should also take positive attitude, strong work ethics, and good communication are not always considered the most important. This is because most people working in a fast-food need to be trained as soon as possible. However, in a fast-food restaurant, interaction with a staff member can make or break their experience.
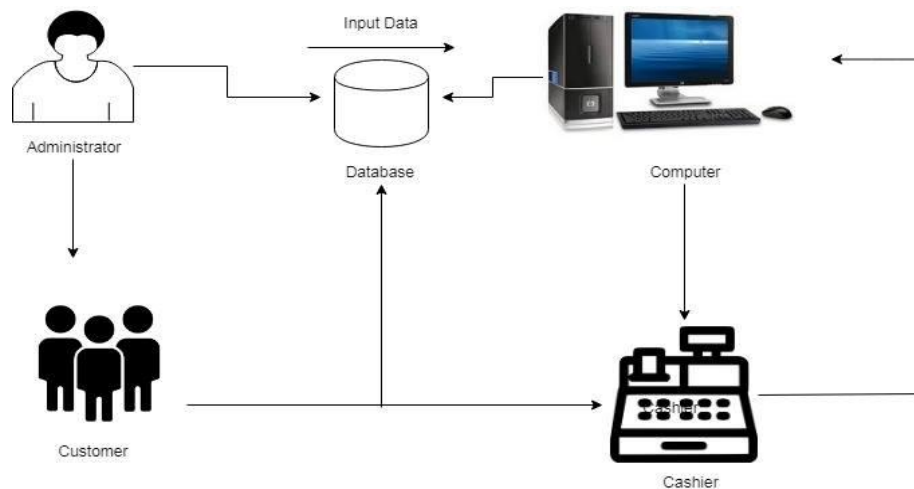
**SYSTEM ARCHITECTURE**



Figure 1.0 System Architecture

The administrator's computer, typically a personal computer that is connected and has the access on the database. The owner has the capability to access and view the sales report of the whole system. Which can help him/her to see if there is something wrong and easily troubleshoot it? The cashier can easily determine the customer's order and can identify what is their best seller. It also help him/her to easily transact faster than in manual ordering system.
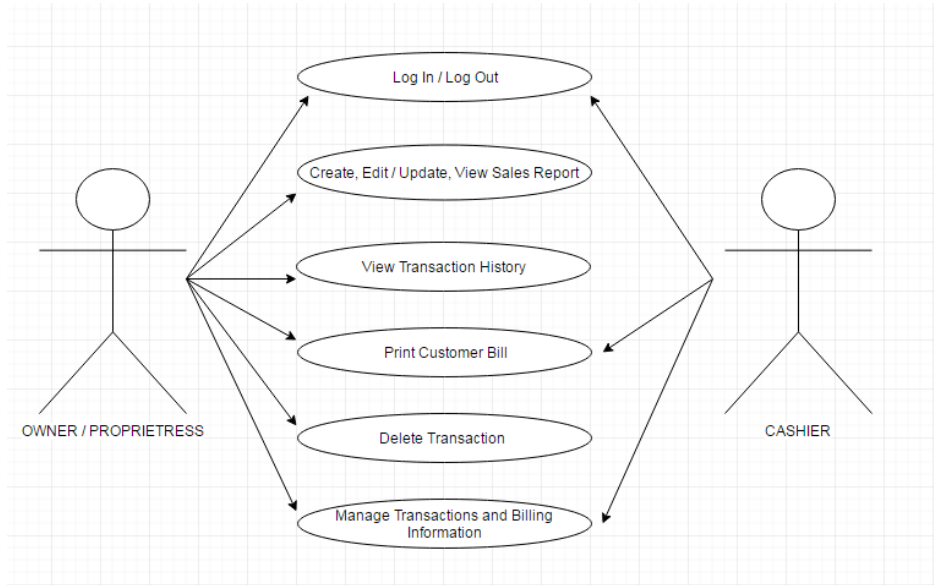


Figure 2.0 Use Case Diagram

The developers would like to recommend for further enhancement. In the given diagram above, it shows that the owner has the full access of the system. In addition, it can help the owner to understand the flow of his business. As you can see, the owner/proprietress can create, edit/update, view sales report, view transaction history, print customer bill, can delete and manage transactions and billing information while the cashier can only manage the transaction and billing information.

### A. DATA GATHERING PROCEDURE

We used to make some observations checklists and questionnaires. The interview with the owner of the restaurant had the intention to gather information about his experiences as the owner of the said restaurant. The observations and checklists were used to present researchers to collect information about the condition of the restaurant and how the cashier system will help his business to become better and more efficient.

### B. COLLECTION AND ANALYSIS

Cashiering system is very important to focus on everyday activities because they are well managed after you are able to take care of other important aspects that will lead to continuous improvement. You can even set your system to reorder a certain popular inventory item so it is never out of stock for your customers. With a quality inventory management system you have detailed records of every asset in your business.

### IV. RESULTS AND DISCUSSION

The results shows that the system is efficient and easy to manage by the owner. The following discussion will focus on the application, appropriateness and usefulness of the system.
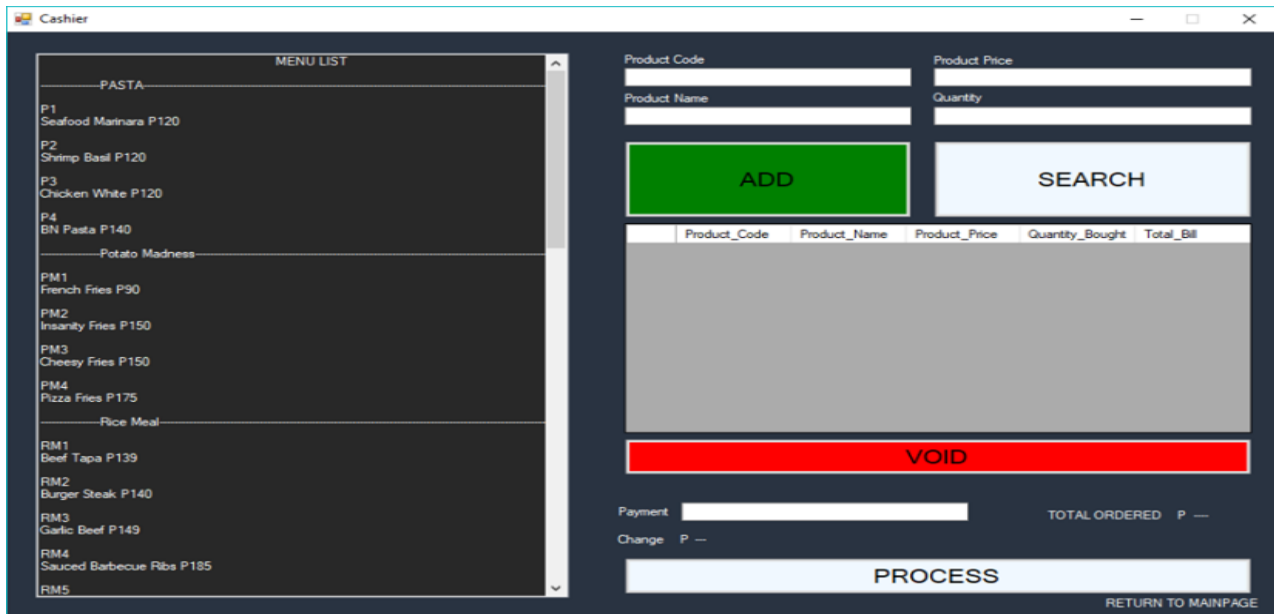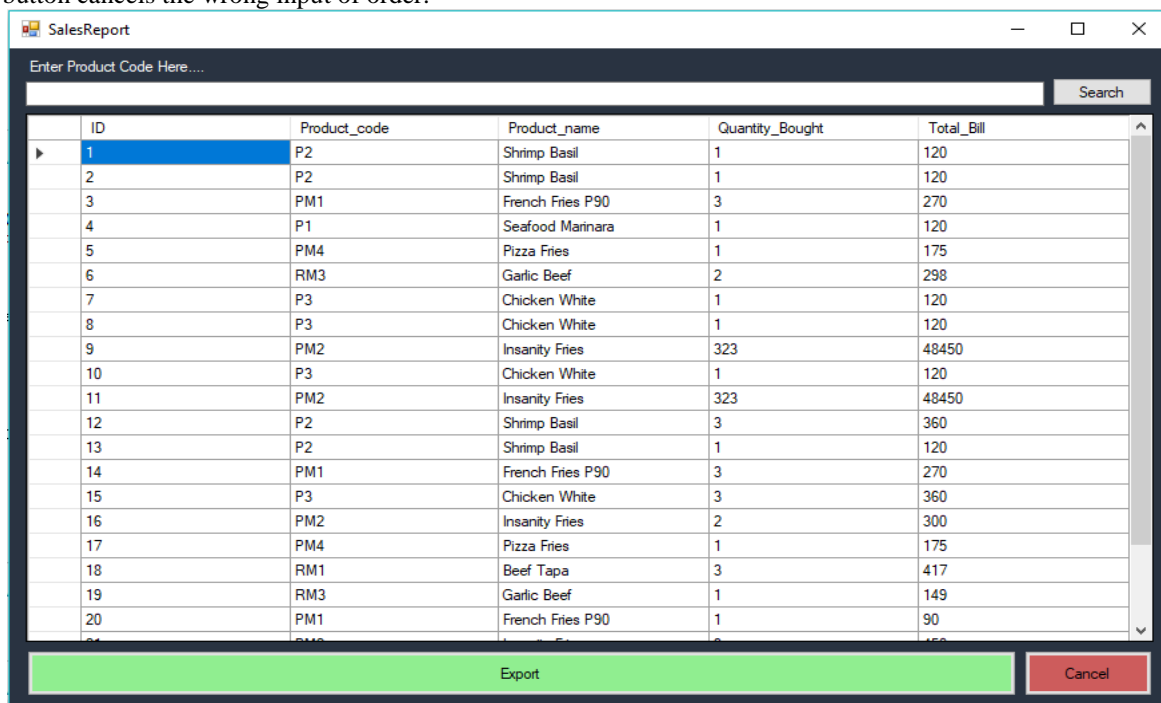
Figure 3.0 Menu List

In Figure 2.0, the system allows the user to add, search, void and process the order of the customer. Only the cashier or the authorized person is allowed to operate the system. In this portion, they can easily find the order of their customer. And after you fill up the product code, product price, product name and quantity. The add button will input the customer's order for the receipt. And the search button helps the cashier to sight if the product is available. Then the void button cancels the wrong input of order.



Figure 4.0 Sales Report

In Figure 3.0, it shows the reported sales for the whole day so that the cashier will easily know how much is their sales for the day. They can also monitor their product and identify their best seller. The export button creates a excel file type that will show the whole sales report. And the sales report in excel file can help analyze large amounts of data to discover losses and patterns that will help the system to improve.

**Table 1.0 Software Evaluation**

| Criteria | Mean | Interpretation |
|---|---|---|
| Functionality | 4.03 | Acceptable |
| Reliability | 4.12 | Acceptable |
| Usability | 4.24 | Acceptable |
| Maintainability | 4.28 | Acceptable |
| Efficiency | 4.35 | Acceptable |
| Overall Weighted Average | 4.20 | Acceptable |

Table 1.0 presents the overall presentation of the system in which the Functionality got 4.03 which is the lowest and the Efficiency got 4.35 which is the highest weighted mean. The overall weighted average is 4.20 which considered as Very Good.

Based on the results of the system's aim of developing a cashier system along with its specific objectives were met and have been successful. The survey data gathers proves the efficiency of the system and the overall feedback was positive to both developers and the end-users.

### V. CONCLUSION

Functionality is rated as acceptable because the system functions very well for the end-users for them to become easy to use and for the faster transactions. Usability rated as acceptable because it is very useful for the user specifically it lessen the waiting time of the customer for their order because of the faster transactions. Maintainability rated as acceptable because it able the user to maintain the system easily. Efficiency rated as acceptable because the system is working properly and no problem is encountered. Reliability is rated also as acceptable because it produces correct output, exact information and transaction history. While the transaction process consists of inputting data such as the Menu name, Item price and the quantity of the product that have been ordered, also the amount received from the customer. The Cashier System provides a comprehensive sales and inventory system that is capable of providing and easy access sales and inventory conditions to customers. The solution to these problems is to make automated or computerized sales and inventory system. Making this system can minimize their time and can help them process their inventory easily.

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