Management system for Esteban’s Enterprises

**Dominic Francisco**

Computer Engineering Student, Bulacan State University – Bustos Campus

Sabang Baliuag Bulacan  
+639613031912

dominic.m.francisco@gmail.com

**Allen Javier Gaudario**

Computer Engineering Student, Bulacan State University – Bustos Campus  
Liciada, Bustos, Bulacan  
+639067698220

allengaudario@gmail.com

**Ryan Cruz**

Computer Engineering Student, Bulacan State University – Bustos Campus  
Gabihan, San Ildefonso, Bulacan  
+639655509307

rmirandacruz19@gmail.com

**ABSTRACT**

Inventory and Sales system is a great instrument that can be used to have complete control of one’s business, making every transaction fast and accurate. This Management system dedicated for Esteban’s Enterprises at Liciada, Bustos, Bulacan aims to help the said shop to end relying in manual listing and instead replace it with a faster and reliable system.

Only few local hardware has available digital system of their inventories, hence one of the goal for this system is to make it more user-friendly so anyone can use it with ease. This system also comes with automatic IDs for employees as well as for items on stock that gives a better over-all monitoring of the business.

With an Admin account you can monitor the overall business; viewing sales, adding or removing employees and checking your inventory. While in Employee account, there’s a better and quicker way of customer transactions was provided.

“A manual inventory system relies heavily on the actions of people, which increases the possibility of human error. People might forget to record a transaction or simply miscount the number of goods. (Joseph, 2019)”. One of our priorities here is to help eliminate human mistakes in every process. Every calculation will now be done in the computer; thus every operation could be done faster than their original sales system.

This system will be still open for further updates depending on new features and operations that will soon to be offered by the shop.

# INTRODUCTION

An automated sales and inventory system is used to keep an eye on business transactions and inventory. It can keep records of necessary business information such as their employees, orders, product pricing and inventory levels.

Utilizing this type of system offers a noteworthy increase in alleviating manual labor for managing the business specially in stocking and product management. It also simplifies the communication between the business and its customers as transactions are now processed more easily, this speeds up the transaction while accurately updating the information about orders and product inventory.

The biggest benefit of this system is time savings and accuracy. When a business manages data manually, its manager must inspect every piece of their product while also taking into account how much they have sold, checking individual receipts for confirmation add to this the important part of doing it mathematically correct. Depending on the size of the business and how many type of products they have, this task can take up a whole day. An automated sales and inventory system can negate this problem as it would automatically update the inventory every time a transaction takes place and it is also accurate for the system itself does the needed calculations for the transaction, narrowing the margin of error for its user.

Esteban’s Enterprises is a hardware store located at Liciada, Bustos, Bulacan. They sell a vast array of construction equipment and materials like wood, re-bars, paint and cement. This business is checking their inventory manually and their transactions are manually written on blue log books, having a number of employees doing this work, it may cause confusion among the business there is also the risk of work redundancy, duplication of records and errors such as unrecorded transaction or wrong calculations. That is why the researchers view an automated sales and inventory system as a solution to this type of problem as it causes less errors and provides a better workflow for the business.

# OBJECTIVES

The objective of the researchers is to answer the current needs of the business by developing an automated sales and inventory system specifically for Esteban’s Enterprises to enhance business workflow and operations.

**Specific Objectives**

* To design a system that will handle the security of the automated system.
* To design a system module that will keep record of employees of Esteban’s Enterprises.
* To design a system module that will process sales and transactions for Esteban’s Enterprises.
* To design a system module that will handle the inventory of products in accordance to transactions made within Esteban’s Enterprises.
* To design a system module that will keep records of important business reports.

# SIGNIFICANCE OF THE STUDY

The significance of this study to Esteban’s Enterprises is it would provide them much more reliable workflow as it gives a more accurate records of sales, transactions and inventory of their products.

* **Owner/Manager** – They can benefit from this system for it will allow them to keep track of records, inventory and transactions of their business.
* **Employees** – The can have the benefit of easily locating products within the inventory and lessening manual transaction with the customers.
* **Customer -** They can have the benefit of faster transaction with the business, lessening the waiting time used to check if the store has the stock of what they are ordering.
* **Other Businesses –** They would have the idea of how automated systems specifically tailored for their business can help alleviate their business operations.

# SCOPE AND LIMITATIONS

This study will focus on developing a system to help Esteban’s Enterprises a small local hardware with their management system. This system will let the admin and staffs easily monitor the whole business regarding with stocks and sales transactions. Moreover, only the system modules needed by the client were present in the system and other future operations that will be offered by the shop is not yet included but will be soon updated.

* To design a system that will handle the security of the automated system.
  + Login form – this contains the module to input and username and password, only authorized users can login and use the system.
  + User level – Admin level such as the owner can access the entire system while Employee level can only access the inventory in the system.
* To design a system module that will keep record of employees of Esteban’s Enterprises.
  + The Admin level accounts can control the adding and deleting of employee accounts.
* To design a system module that will process sales and transactions for Esteban’s Enterprises.
  + Purchased orders – This module will process the purchase made by customers of the business.
  + Sales – This module will process the overall sales made by the business per day.
* To design a system module that will handle the inventory of products in accordance to transactions made within Esteban’s Enterprises.
  + Inventory Stock level – Business inventories would be monitored by this module to ensure sufficient stock levels. It will also update stock levels in line with deliveries accepted by the business thus adding to the inventory or sales made that will be subtracted from the inventory.
* To design a system module that will keep records of important business reports.
  + Product list
  + Transaction reports

**REVIEW OF RELATED LITERATURE**

Today, it is still possible to run your business using the conventional way and without any help of computers, but keep in mind that it may slow the process and make you do things the hard way.

“The benefits of inventory management software are very clear: Achieve efficiency and productivity in operations. Minimize inventory costs and maximize sales & profits. Integrate your entire business. Automation of manual tasks. Maintain customer happiness.” (Cho, 2019)

Technology can help in maintaining the satisfaction of customers. “Losing customers: Why does it happen in your company? You are too slow; Slowness makes “good” become “terrible”. So, hurry up, chop chop!” (Carrasco, 2017). The aim of technology is to make everything less time consuming. Systems could easily cut the time of transactions, keeping the customer from checking different stores.

“Human errors among employees cost businesses in the United States and UK more than $37 billion in lost productivity.” (Marketwire, 2008). Human errors are always present especially in small business with poor system. It may be a constant factor but still can be manage.

“Many a report on business failures cites poor management as the number one reason for failure.” (Schaefer, 2019). The researchers wanted to develop a program that can support the management to monitor the whole system helping in providing a complete sales history and better overview of the whole stocks.

The process of easy adding and removing of stocks as well as automatic deduction of a product from stocks after it sells is a big help to let the clients over-spend on restocking. “If you buy a lot of supplies but don’t enter the transactions into your accounting books right away, your books will show that you have more money than you actually do. As a result, you might spend more, causing a negative cash flow for your small business.” (Kappel, 2017).

As a business owner maximizing in everything to take lead in the competition is a must, thus taking every advantage you could is a good step. Nowadays, since technology continually to be one of the best option. We could integrate it with our businesses and produce positive outcomes. “IT plays an integral role in every industry, helping companies improve business processes, achieve cost efficiencies, drive revenue growth and maintain a competitive advantage in the marketplace.” (Seidel, 2019).

Integration of managing systems for small local shops are somehow non-existing for most of small businesses in local areas. “Businesses that fail to institute a proper accounting system run the risk of underestimating earnings, which can ultimately lead to business failure. Even small businesses must plan their budgets to ensure the operation stays on track.” (McQuerrey, 2019)

“Electronic POS software systems streamline retail operations by automating the transaction process and tracking important sales data. Basic systems include an electronic cash register and software to coordinate data collected from daily purchases.” (Hayes, 2019). Since our technology continues to modernize, more system functionalities can be added to basic POS software. This brings the researcher on thinking what other more options we could provide for the client.

Overall, developing system dedicated for businesses can resolve a lot of issues concerning with total administration. These related literatures help the researchers in developing the management system for Esteban’s Enterprises. With the guiding principles of what our client needs, and additional options to help for the business growth.