

# Contents

---

➤ Introduction.....	2
➤ Software Needed.....	2
➤ Relational Model.....	3
➤ Applications.....	4
➤ Constraints.....	5
➤ Triggers.....	5
➤ Conclusion: Limitations and Discussion.....	6
➤ References.....	7

## Introduction

---

In most developing countries such as ours, wholesale businesses are still managed using a pen and paper methodology even with the advent of the age of technology and internet. This can sometimes leads to inefficient handling of day-to-day business matters and can also lead to security threats to the business due to the presence of physical records.

This project aims to develop sales management web application for a wholesale business to improve the efficiency and security of the business. The lightweight nature of the web application makes it ideal for small businesses which cannot afford the expensive alternates present in the market.

The Wholesale Management System (WMS) has an administrator login for the wholesaler with built-in features to keep a check on the sales and the inventory so as to efficiently run the sales division. The customers and suppliers of the wholesale business can also be registered so as to ensure the smooth functioning of sales. There is also a customer login option which helps the customer in monitoring his purchases from the wholesaler. By having the above features, the WMS greatly simplifies the daily functioning of the business.

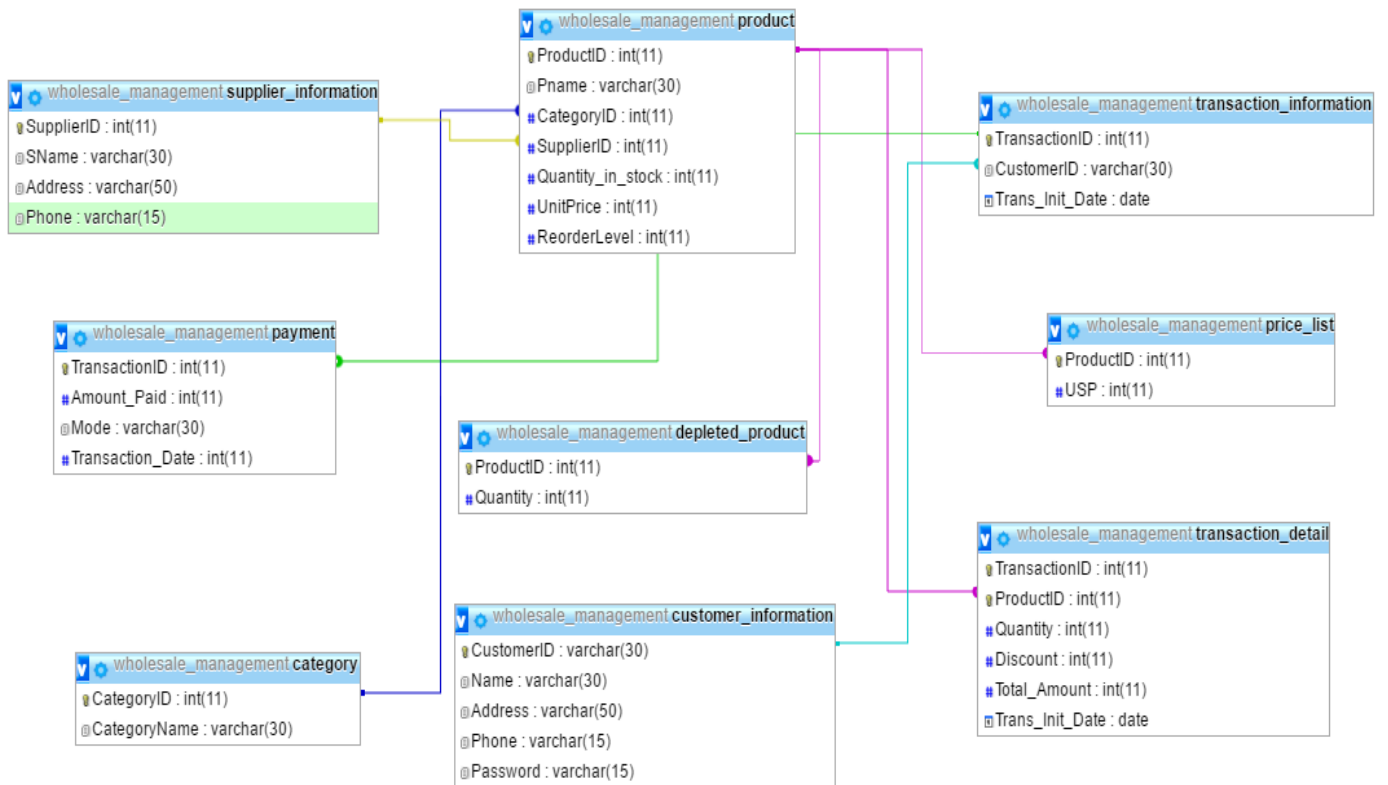
Since, many developed countries already use such software to speed up daily business activities; a lot of information is available in the public domain regarding the desirable structure of such software. We have used this information to design and model our project.

## Software Needed

---

- Backend (Database): MySQL version 5.7
- Frontend (Web Technologies): HTML5 and PHP5
- The web server has been hosted using XAMPP v3.2.2

## Relational Model



## Applications

---

There are two types of accounts: Administrator and Customer.

Features for the Administrator:

- Add/Update Product Details by accessing them category-wise.
- Add/Update Supplier Details
- Add/Update Customer Details
- Stock Maintenance by having a look at the depleted stocks and so forth.
- View all the transactions taken place in a specified time period.
- Add a new transaction to the system as it happens offline and store the payment details accordingly.
- Generate a bill for any past transaction using its unique TransactionID if required.

Features for the customer:

- View all the transaction done by the logged-in customer for a specified time period.
- Search through the available products category-wise.
- Generate bills for any previous transaction done by the customer.

## Constraints

---

- Before starting any transaction, check if the quantity of that ordered product is less than the quantity in stock and also check if the quantity of the ordered product is more than the minimum quantity as defined by the wholesaler. If not, don't continue further.
- A Reorder Level is set for each product and when the quantity in stock of a particular product goes below the reorder level then the product is inserted into the depleted stocks table until filled back.
- The 'mode' attribute of table payment can only have the values: 'cash', 'debit card' or 'credit card'.

## Important Triggers

---

- **'max\_min\_quantity'**: This trigger checks if the quantity ordered of a particular product is less than maximum and more than the minimum allowed. Also decreases the quantity in stock of the product ordered.  
BEFORE INSERT ON 'TRANSACTION\_DETAIL'.
- **'depleted\_check\_update'**: It checks if the 'quantity\_in\_stock' is less than 'ReorderLevel'. If yes, it inserts that particular product in 'depleted\_product' table. Also, removes a product from the 'depleted\_product' table when the quantity of product is increased.  
BEFORE UPDATE OR INSERT ON 'PRODUCT'.
- **'decreased\_quantity'**: In case a transaction fails, the quantity of product has to be restored to its original level before the transaction. This trigger is used to do that.  
BEFORE DELETE ON 'TRANSACTION\_INFORMATION'.

## Conclusion: Limitations and Discussion

---

This is a small prototype of a sales management application for a wholesale business. The limitation of the application is that it lacks enough features to be implemented in a real life situation.

Such an application, if built with professional expertise, can be highly useful cost effective way for small businesses to manage themselves efficiently. A wholesale business works completely on the concept of offline transactions thus making it easy to manage such an application since it doesn't have to manage online transactions, yet at the same time making the business records more secure.

A legal implementation of this application can be if the government decides to provide a WMS application to small business owners so that their sales are on the official record, thus making it difficult for them to evade taxes.

## References

---

- Database Systems, 6<sup>th</sup> Edition, by Ramez Elmasri and Shamkant B. Navathe.
- 'Wholesale Management System' by Lee Yee Phong, National Technical University College of Malaysia, 2004.
- 'DESIGNING A LOGICAL DATA MODEL FOR A SALES AND INVENTORY MANAGEMENT SYSTEM' by Hari Krishna Mahat.
- Public domain information of 'White Clarke North America Wholesale Management Table'.