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Car Accessories Management System Using PHP

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ABSTRACT--The retail business vision is to maximize profit from customer satisfaction and loyalty towards the store by providing more personalized service for the customer. However, retail business also easy to lose its possible customer if they do not have sufficient stocks in the store. Thus, in this paper, the developer had identified problem related with inventory that exists in a one of oldest retail store in Car Accessories Store. The major problem of the store is they do not have proper accessories control system in guiding and managing their sale and accessories level of the store. By proposing Car Accessories Management System to the store as the replacement of old manual ways, the project aims in providing system with enhanced and more flexible functions to the store. The objective of the system is to provide functions in managing goods in the store more efficiently. In order to achieve the objectives derived, the scope of the project will focus on the aspects such as database, report generating, quality control (QA) and point of sale of the store. Besides, the development of system will be based on offline system or window based. In developing the system, phase development prototype is chosen. This methodology will perform the development stage in according to modules underlines in the scope of the project. Thus, version by version of the system will be developed before the whole complete system is ready to use. The expected result of the system is that the user interface to be developed will be user-friendly so that it can be handle easily by people with no IT background. Besides, the system is also expected to serve its functions and helps Car Accessories Store in reducing time and paperwork in managing their inventory.

I. INTRODUCTION

The car accessories industry is one of the industries that is growing in fast pace where the number of retail business keep on increasing from time to time in order to meet the demand from consumers of specified areas. Thus, the nature of retail business required a good management of inventory level in order to meet the demand of the customers. The traditional way retailer keeps their sales and inventory details in spreadsheets which are not effective anymore when the size of the shop gets bigger. This is because more items will be made available in a larger quantity, thus tracking the sales made with inventory level in the shop would be complicated and time consuming for the retailer. Besides, the situation gets worst when the retailer does not have proper method to determine items purchased by their customers. The traditional way retailer keeps their sales and inventory details in spreadsheets which are not effective anymore when the size of the shop gets bigger. This is because more items will be made available in a larger quantity, thus tracking the sales made with inventory level in the shop would be complicated and time consuming for the retailer. Besides, the situation gets worst when the retailer does not have proper method to determine items purchased by their customers.

Thus, this project will provide solution for retailers that are still using traditional way in keeping their accessories data by creating Car Accessories Management System. Car Accessories Management System is a computer-based system that provides the shop structure for maintaining and controlling goods to be stocked. The approach of Car Accessories Management System is commonly used to avoid product overstock or outrages by integrating daily 'Point of Sales' with store's inventory level. Inventory is one of the important departments that must be well managed in order to ensure daily business activities run smoothly. However, Car Accessories Store still does not realize the importance of Car Accessories Management System as they are not equipped with computerized system in running their business. As a result, the security level of all data, documents and anything that related to daily transaction and inventory is very low. A lot of documents have been kept for each goods and for each supplier which consume a lot of time and not effective for future references. In addition, due to poor sales and Car Accessories Management System, Car

Accessories Store also face problem in identifying the quantity sold for each items per day and available spare part level of the

II. PROBLEM IDENTIFICATION

Car Accessories Management is one of the important departments that must be well managed in order to ensure daily business activities run smoothly. However, Car Accessories Store still does not realize the important of accessories management as they are not equipped with computerized system in running their business. As a result, the security level of all data, documents and anything that related to daily transaction and inventory is very low. A lot of documents have been keep for each goods and for each supplier which consume a lot of time and not effective for future references. In addition, due to poor sales and accessories management, Car Accessories Store also face problem in identifying the quantity sold for each items per day and available inventory level of the items. As current system used just acts as to calculate the total amount of each customer purchases and does not have any database link with it, the system does not have the capability of generating report on point of sales at the end of the day. Thus, there is no proper guideline in making reports in the store's log book which result in different kind of reports being prepared each time. The simple report which is about the total sales of the day is determined based on amount of money in the cashier deck does not provide any input for the owner to make the right decision regarding the business operation. In case of there is short of cash in the cashier desk or any stolen cases, the owner cannot detect it as the current system does not have database to store the total sales of the day. Another identified problem is that the customers who made their purchases at the store usually do not receive proper receipt as references. Instead only receipt contains prices being generated by the system. Thus, customer face problem when they wanted to change the items bought due to damage, expired or wrongly purchase as the receipt does not indicate the name of items which makes it hard for the customers to prove that they bought it within 3 days in Car Accessories Store.

III.SCOPE OF THE PROJECT

Within the boundary of this project, the system aims in having the following aspects:

1. Database - has two parts in it, temporary transaction database and master database. The data in a master database will be updated according to the temporary database at the end of each day.
2. Report- generates daily and weekly report to know the number of accessories in the products.
3. Quality control (QA) - is to check the expired date of the products.
4. Point of Sales- facilitate the transaction of each customer

The development of the system will be based on offline system or window based system which does not require any internet connection to operate it. In order to implement the system, the first thing is to collect information about the products and requirements from the owner to see the feasibility of developing the system for Rahmath store. Then the process of identifying the methodologies and tools to be used will takes place in the first half of the project. Together with that, the interface of the system also will be developed. The second half of the project will be mainly on implementing and testing the system until it is completed. It is estimated to take around 8 months to complete this project.

IV.ADVANTAGES OF CAR ACCESSORIES MANAGEMENT SYSTEM

As the advantages of switching to modern accessories control system clearly proven by many businesses, it is the time for Car Accessories Store to start implementing it in their store to see the differences will be brought to the store. In Donald Reimer (2008) in his study with the title of 'Computerization is the key in maintaining proper inventory levels' identified few benefits as follows:

- **Accessories management increases profitability**

Activities such as forecasting, controlling and managing inventory increase sales and productivity of the store resulting in greater profitability. Besides, accuracy improvements on the inventory level will result in reduction of fixing costly mistakes. Spend management also will be improved as the system provide quick access to current and historical pricing, cross-referenceable product codes and tools set for managing purchasing activities (Zipkin, P.H., 2000).

- **Accessories management improves cash flow**

Purchasing the correct accessories in the right amount to meet customer demand and at the same time eliminating slow-moving, obsolete inventory leads to better cash flow and eventually to higher profits.

- **Accessories management improves decision-making**

Real-time business intelligence across all areas of the store is possible with rapid, accurate data collection. Not only that, issues and events integrated with the system enables to proactively identify and solve the issues.

- **Inventory management increases customer satisfaction**

Anticipating in seasonal promotion and changing marketing conditions by having the right products in stock for customers.

V. RESEARCH STATUS OF ACCESSORIES MANAGEMENT

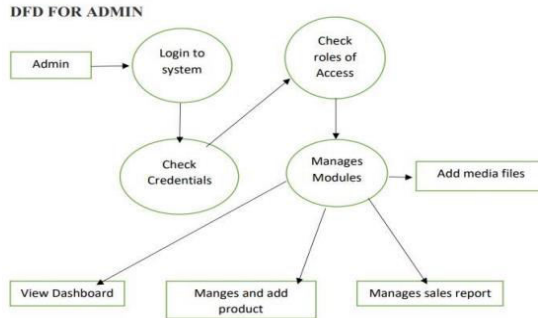
Some certain classification work is needed to get the targeted features of every spare part. As is known to all, the main purpose of the spare parts management should find an appropriate balance among supply, working capital and operating costs. Different spare parts management strategies are suitable for different kinds of spare parts with different characteristics and supply chain processes. As a result, the spare parts classification methods have been widely used in the accessories management so far.

The abroad car accessories management classification approach. The accessories classification method is implemented earlier abroad. In the 1960 s, according to the properties of repairable, Allen and D'esop [9] had divided the spare parts into two categories roughly. Since then, in order to meet the actual needs, much more detailed accessories classification methods have been raised. For example, R.Dekker [10] had divided the accessories into critical and non-critical demand ones, and suggested to keep certain inventory for the critical parts. Considering the constraint of spare parts inventory, outage cost, safety problem, environmental goals, maintenance strategy and logistics, Braglia [11] had divided the spare parts into different categories and Cohen [12] had divided the spare parts according to urgent needs or just common demand.

The domestic car accessories management classification approach. The domestic researches on the spare parts classification are mainly using A/B/C classification methods. For instance, Jin [13] had developed a method to divide the spare parts by the A/B/C classification, combining with another classification according to their price, delivery time, quantity and lifetime. According to the cost proportion of each variety part, Liang and Wang [14] had divided the total parts into three categories (A/B/C) roughly, and then considered the use of fuzzy decision-making method to carry out a comprehensive evaluation of the detailed classification. Guo [15] had divided the spare parts into four categories (A/B/C/D) based on the degree of impact to the production, the regular pattern of failure and supply channels efficiency. Cui and Luo [16] had defined the repair availability, critical degree and economical index as the classification criteria, and classified the spare parts into A/B/C categories with the method of analytic hierarchy process.

VI. DATA FLOW DAIGRAM

Data Flow Diagram:



1.Admin logs in to the system and manage all the functionalities of Auto Spare Parts Management System. 2. Admin can add, edit, delete and view the records of Purchase, Reports, Invoice Report. 3.Admin can manage all the details of Sales, Billing, Order. 4.Admin can also generate reports of Purchase, Sales, Reports, Billing, Invoice, Order. 5. Admin can search the details of Sales, Invoice,Order. 6.Admin can apply different level of filters on reportof Purchase, Billing, Invoice. 7.Admin can tracks the detailed information of Sales, Reports, Billing,, Invoice.

VI. FRAMEWORK OF SYSTEM

The users here include:

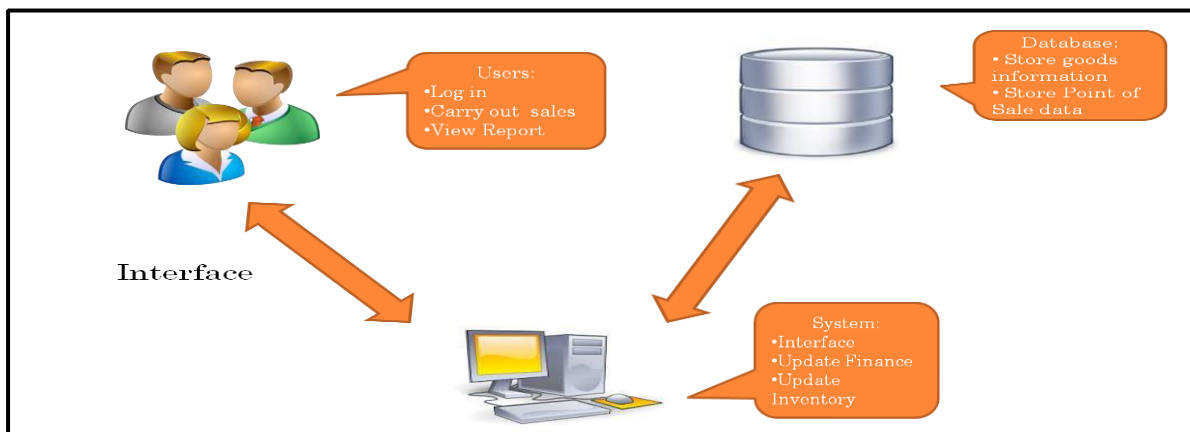
- Administrators of the system who can log in and modify the information of goods
- Staff who are responsible for processing sale

The system will include:

- A user friendly interface
- A database: to store all the information

The users will interact with the system through an interface by giving inputs. The input then will then be processed by the system, giving the information.

THE FRAMEWORK OF THE SYSTEM



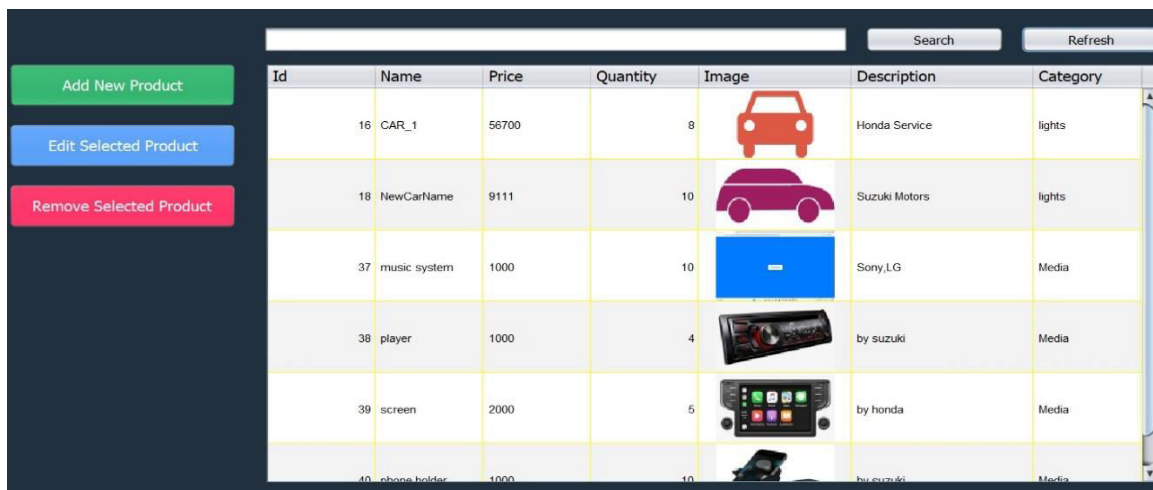
Framework of the system

VII. GUI OF SYSTEM

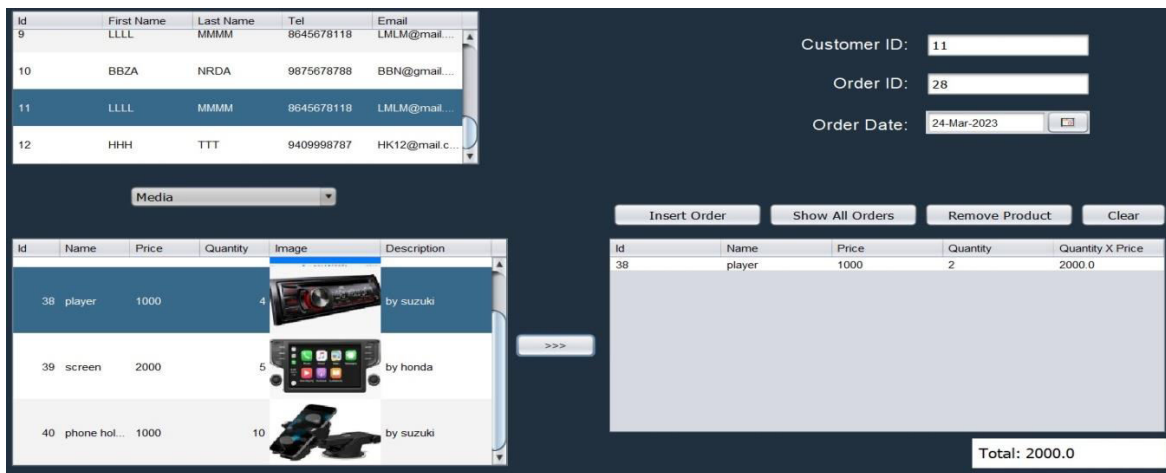
Car Accessories Management System is a windowbased application designed to run on desktop. The application is designed in such a way even non-technical skills people also can use it by simplifying the function in the application. The admin login will differentiate the functions enable in using the application. Once login success, the users are will be directed to content menu interface.



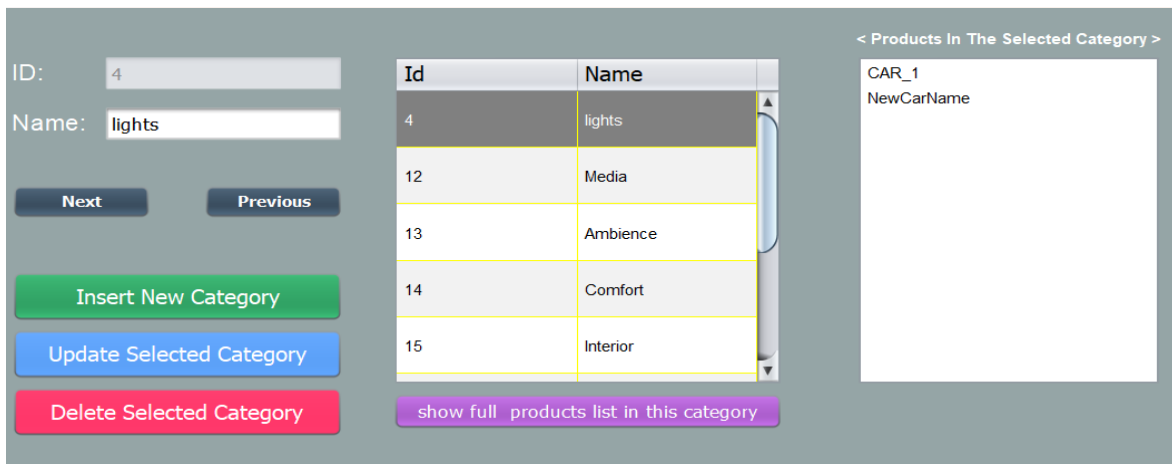
Add User Module



Add Product Module



Place Order Module



Add Category Module

VIII. CONCLUSION

In summary, the project works is relevancy to the objectives set. The project is designed based on preliminary study that had been carried on with Car Accessories Store. Thus activities of developing the system which is planning and analysis is based on the result retrieved from the observation. Not only that, as this would be the first computerized system that will be used by the store, the functions only focused on solving major problem which is Car Accessories Management problem. The interfaces design is also categorized as user friendly due to lack of IT background of the workers which means the system can be handle by people not even from IT background.

Accessories Management has to do with keeping accurate records of goods that are ready for shipment. This often means having enough stock of goods to the accessories total as well as subtracting the most recent shipments of finished goods to buyers. Car Accessories Management is important for keeping costs down, while meeting regulation. Supply and demand is delicate balance, and accessories management hopes to ensure that the balance is undisturbed. Highly trained Car Accessory Management and high quality software will help make spare part management a success. The ROI of Car Accessories Management will be seen in the forms of increased revenue and profits, positive employee atmosphere and on overall increase customer satisfaction.

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