

STOCK MANAGEMENT SYSTEM

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Abstract - The issue of data storage is a paramount in an organization especially in a commercial business institute. Therefore we intend to aid in organizing and managing the data in accordance to compliance by creating an stock management system which involves the administrator or the user to input the data that is to be stored and maintained. The input values are classified on the basis of client and dealer module.

Key Words: Client, dealer, inventory, data clustering, product, LDA , FA.

1.INTRODUCTION

Stock management system is a application that is designed to digitize the data management of a business firm. The stock management system as a whole incorporates the records regarding the customer information, dealer information and transaction details. Reports can be generated as per the requirements of the application user. The whole application facilitates data management which includes accessing, sorting, searching and retrieving data.

2.LITERATURE SURVEY

The reference and the base for the project was driven from the basic credit rating system at shopping marts .The additional features of the project is the incorporation of the dealer module with individual prioritization. The system also involves an additional major functionality of stock maintenance and management.

3.METHODOLOGY

There are three basic modules under which the other common modules can be classified. The customer module, the dealer module and product module holds divergent data regarding sales.

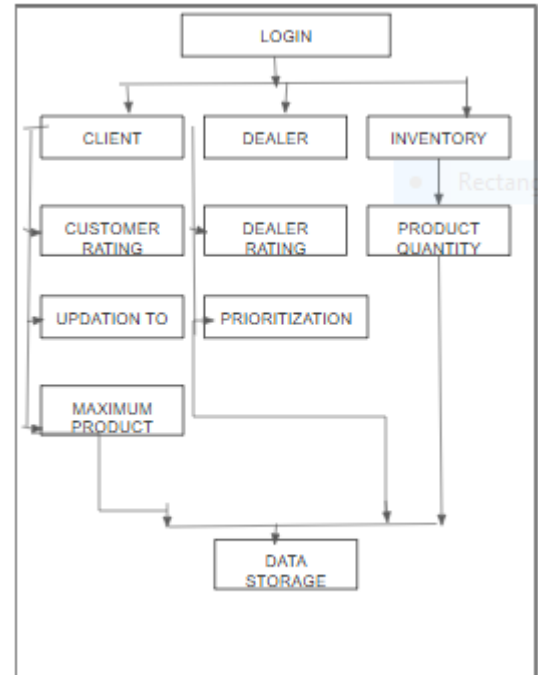


Fig.1 Block diagram

The application provides a secure interface by giving access only to the authenticated users via an initial login page. The credential to login are username and password. Once the credential are validated and if they match, the access to the application is enabled. The application has three basic modules which are client, dealer and inventory. Using the search criteria user can select which module is to be worked upon.

3.1.MODULES

There are three major modules in this mobile application.

3.1.1 CLIENT MODULE

The client module contains the relative data store repository for client from which customer rating and maximum quantity of product brought can be derived. The data store can be periodically updated. The table can be client data set contains the following attributes Product, Date of sale, Amount, Quantity.

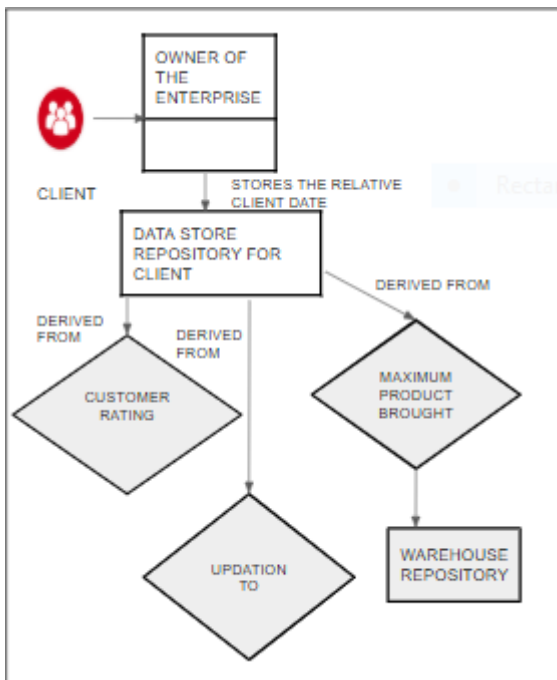


Fig.2.1 Client module

The client module holds the credentials that are relative to the buyers.

3.1.2.DEALER MODULE

The dealer data set contains the following attributes Name of the dealer, Name of the product, Quantity of the product, Date of sales, Price of the commodity and Search criteria.

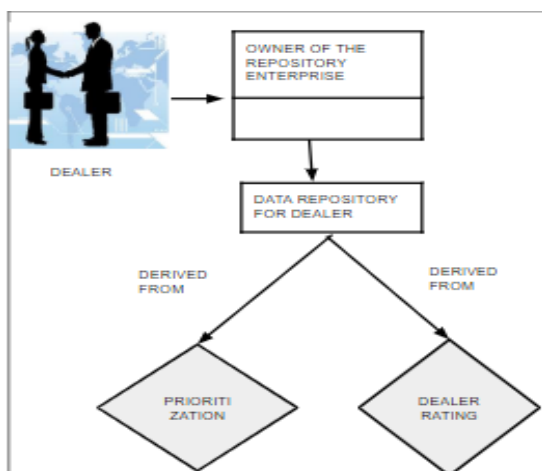


Fig.2.2 Dealer module

Inventory module analyses client and the dealer data set to constantly have an updation of the product quantity.

3.1.3.INVENTORY MODULE

It evaluates the quantity attribute constraint belonging to the dealer and client to project variations in the quantity of items.

4.ALGORITHMS

The algorithms utilised to perform data analysis are Linear Discriminant Analysis[LDA] and Factor analysis[FA].

4.1.LINEAR DISCRIMINANT ANALYSIS

The linear discriminant analysis algorithm is closely related to analysis of variance which tends to express dependent variables of a linear combination of features or measurements. It is also used to explain categorical variables by the continuous independent variable with which we can sort the functionalities of the database.

4.2.FACTOR ANALYSIS

The factor analysis algorithm is mainly used for abbreviation of data set to evaluate number of possibilities and causes to arrive at the most crucial data value which supports in formulating customer ratings.

Proponents of factor analysis believe that it helps to deal with data sets where there are large numbers of observed variables that are thought to reflect a smaller number of underlying/latent variables.

5.IMPLEMENTATION

The android studio is used as the front end for creating the stock management system application. The language used is java in the android studio. For storing and retrieving the data MYSQL is used and the data are stored in an online server which is supported using cloud technology.PHP is used for interfacing purpose in this mobile application. After the login is successful the user can choose the modules. In the client module the user can add the product and view the product.



Fig.3.1 Client module options

The details such as name of the product, quantity, cost and date are entered to add the product in the database. The user can search the required product using the view product.

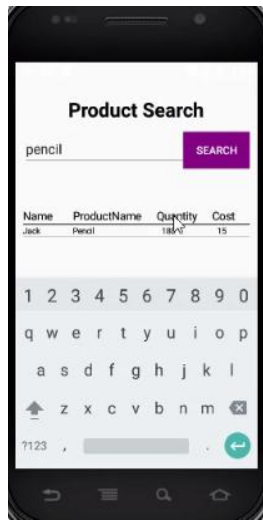


Fig.3.2 Product Search

Similarly in the dealer the user can purchase the product and also view the product.



Fig.3.3 Dealer module options

When the user clicks on the purchase product the following page is displayed.

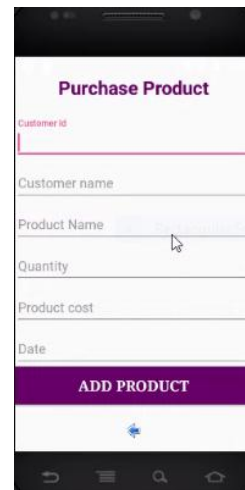


Fig.3.4 Product Purchase

The details are entered and the product is added by selecting the add product button.

In the inventory the user can view the list of products present. The inventory gets updated automatically when a product is brought or sold.

SECURITY

Password protection allows only those with an authorized password to gain access to certain information. The application consists of a login page which consists of username and password.

CONCLUSION

Our project’s objective is to digitize the record handling of the business firm by significantly providing a platform for performing operations. The data repository is split and processed as two different modules namely customer and dealer which provides an unambiguous view of the system. The sets will be segregated on the basis of product id, quantity, price, date of transaction, name of the customer and the dealer. Mobile apps offer an unmatched and seamless experience to the user for providing them better solutions. Additional features can be incorporated in the application as per the changing needs of the use.

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