Introduction of CRM In Pharmacy Administration

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Abstract—Customer Support and Inventory management is the most basic problem of a company. It is however a vital part of any retail business, whether it's a type of traditional brick-and-mortar shop or an online website. It provides us with critical information about the condition of our products such as whether you are low on stock and your inventory needs to be replenished and customer relationship. It gives us insight into which products are selling well and which products are not. This information allows you to make better business decisions on how to market your products and whether or not to carry them. Approximately 85.0% of annual Pharmacy budget is spent on buying materials and supplies which including medicines. We can bring a large improvement in the pharmacy inventory and expenditures by the CRM and inventory control techniques. A transaction history file is maintained automatically of entire as well as individual customer so that detailed view of any receipts and its shipment of product is available through the system. Our software is complete medical store administrative software designed so as to ease the work load of medical store professionals and improve business taking into consideration customer support. The main feature includes benefits for the customer by facilities like Membership, automatic SMS reminders etc and invoicing, inventory and stock control, accounting, client and vendor management. This software helps you to track all the customer details and their health records along with profits, loss, profitable clients and products of medical shop. Moreover it's a medical shop accounting software that uses the combination of CRM and conventional inventory control techniques. It is flexible and adaptive software suited to medical shops or stores or pharmacies of any size.

Keywords-Pharmacy, Management, Wallet, CRM, Medicine.

I. INTRODUCTION

Pharmacy management usually has to keep paper record in filing cabinets. Managing a very large pharmacy with records on papers will be tedious and extremely difficult to keep track of all inventories with regards to the drugs in the store, expiry date, quantity of medicines available based on the categories and their functions. The pharmacist has to order drugs to replenish the already decreasing stock. In addition, ordering of drugs is being carried out manually. Significant amount of time is allocated for writing the order as the pharmacist needs to go through the stock balance and make estimate about the amount to order based on Figures. Medicine are not supposed to be used after they have expired[1]. This project will prompt the pharmacist about medicines that are close to expiry, preventing those drugs from being sold and also providing complete solution to the earlier stated problems.

1.1. Description

The software provides feature of CRM to a pharmacy management system which not only helps the person who is handling the software but also the customer. Usually pharmacy management systems focus on ERP which helps the seller, but this software takes the system a step forward by introducing features which provide benefit to the consumer. Membership feature is introduced to provide more advantage to the consumer.

The Feature of the software include:

1. Order Medicines
2. Keep record of daily customers
3. Create, View, Modify, and Delete Customer Details

This feature is used to create an account that basically stores all about the user.In the place only data of the user is stored like the previous prescription of the user. The medicine that are used by the user the most. Also how many transactions are done by the customer.

- It also shows the membership details about the customer
- All the details can be easily viewed by the user on one click.
- Also the details of the customer can be modified. If the address of the customer is changed or the phone number is changed.
- And last if the user wants to delete the existing account.

➢ To be able to generate report within a particular period of time

- If the account is created for the customer, it is created instantly. And the result can be seen the very next second.
- If any changes or modification are made the the existing account of the user than the changes that are made are seen instantly.

➢ Membership

- This is the only system that provides a membership facility. In this system it contains account that the user is using, in it contains various information related to the user.
- In this option the user has credit points which are provided to the user on the basis of various transaction that have taken place from the users account.

➢ Frequently used medicines by the user will be shown in health records

- The user will have its own record which will be stored in the account of the user as the health record section.
- The user can check his own previous transaction that has taken place in the past.
- It will also show the various lists of medicines that were purchased.

➢ SMS and Email Features

- The software is capable of providing SMS and Email alert to the regular customer their daily usable drug is about to get over and if the customer wants the pharmacy would make the stock available for the customer in advance.
- This feature can be availed manually if the customer confirms it through phone call or email.

1.2.Problem Formulation

Pharmacy management has kept paper record in filing cabinets[2]. Managing a very large pharmacy with records on papers will be tedious and extremely difficult to keep track of inventories with regards to the drugs in the store, expiry date, quantity of medicines available based on the categories and their functions. The pharmacist has to order medicines to replenish the already diminishing stock. In addition, ordering of drugs is being carried out manually[3]. Significant amount of time is allocated for writing the order as the pharmacist needs to go through the stock balance and make estimate of the amount to order based on Figures.

1.3.Proposed Solution

Here a software is designed which keeps the records of the data of the medicines. It is fed with the information whenever a medicines is brought and it is provided with the row and rack location of the medicine. When we enter the name of a medicine it gives the details of that medicine. It gives the price of the medicine and also warns when the medicine has is reaching its expiry date. We can also see the row and rack location of the medicine[4].

1.4.Scope of the project

It also provides feature of CRM to a pharmacy management system which not only helps the person who is handling the software but also the customer. Usually pharmacy management systems focus on ERP which helps the seller, but this software takes the system a step forward by introducing features which provide benefit to the consumer. Membership feature is introduced to provide more

advantage to the consumer. This project work will prompt the pharmacist about drugs that are close to expiry, preventing those drugs from being sold and also providing solution to the earlier stated problems.

II. REQUIREMENTS

The requirements of the project are divided into two broad categories, namely, the functional and the non-functional requirements. These requirements have been given below. These requirements specify what the project is expected to achieve.

2.1 External Interface Requirements
2.1.1 User Interfaces
UI-1: The Pharmacy Management System screen displays a normal Visual Studio application which can be used by the pharmacy for administration of the inventory and customer relationship.

UI-2: The software shall permit complete navigation and medicine item selection using the keyboard alone, in addition to using mouse and keyboard combinations.

2.1.2 Software Interfaces
SI-1: As the pharmacist browses in the system it searches for the desired medicine in the inventory with the help of UI.

SI-2: The pharmacist then enters the medicine that is required about which he gets the information about the cost.

SI-3: The user can also check various transaction that are taken place in the past.

2.1.3 Communications Interfaces
CI-1: The pharmacist Ordering System shall send an e-mail message to the Patron to confirm accept an order, price, and delivery instructions.

CI-2: The pharmacist Ordering System shall send an e-mail message to the Patron to report any problems with the order or delivery after the order is accepted.

2.2 Other Nonfunctional Requirement
2.2.1 Performance Requirements
PE-1: The amount of performance it provides compared to the consumption of power it requires to perform task is very good.

PE-2: Responses to queries shall take no longer than few seconds to load onto the screen after the user submits the query.

PE-3: The system shall display confirmation messages to users in very few seconds after user submits information to the system.

2.2.2 Security Requirements
SE-1: The network transactions that are involve financial information or personally identifiable information shall be secured.

SE-2: Chemist or the user shall be required to log in to the Pharmacy System for all operations except viewing the related data.

SE-3: The system shall show the data of the people that are registered.

SE-4: Only users who have been authorized can access to the corporate may use the system.

SE-5: The system shall permit user to view only their own previously placed order of medicines and not orders placed by other users.

2.2.3 Software Quality Attributes
Availability-1: The Pharmacy Management system can be accessed any time when needed to check a particular detail. No restrictions are present on the usage of the system or on the timing of the system.

Easy-2:   This software is extremely easy to use. It can be used by anyone who has the least technical knowledge.

Interface-3:   Software has an very simply and user-friendly interface.

III. IMPLEMENTATION

The system executes multiple tasks which it is designed to perform. The system implements various tasks like accepting data from user, keeping a log of various transactions, etc. It has two main components with handle his activity and they are UI and database.

3.1.1. Desktop Application

As the project focuses on data of medicines and keep the personal records of all the consumers transaction on the computer, the Web Application is to give an UI to this transaction. Web application will help the consumer to maintain his transition. He will also have his wallet which will contain his amount. It will basically be the money that the consumer will make from the threshold amount. It can be 10000,20000 or 30000.

3.1.2. UI Activity

The pharmacist will interact with the User Interface. It is a very simple and an easy design. It can be used by a person who has less technical knowledge. UI is created on Visual Studio using language Csharp(C#). UI is created in such a way that the user can easily switch between environment and the application.

3.1.3. Database Activity

The database used is MsSQL. The database contains all the information the customer. All the data is stored on this database and it can be accessed easily. It contains all the transaction details of the customer. All the previous transaction of the customer. This all the information that the user inserts during the registration process. It contains details like his name, address, medicine information like expiry date, etc. It also contains quantity of the medicine ie the amount of medicine the customer purchased.

3.1.4. Connection Activity

The frontend which is created with C# is connected with database that is created with MsSQL database. With the help of this, various data that is entered on the frontend will be saved in MsSQL. That will be analyzed and the information can be easily managed and displayed on frontend.

IV. CONCLUSIONS

It provides us with critical information about the condition of our products such as whether you are low on stock and the inventory needs to be replenished and customer relationship. It gives us insight into which products are selling well and which products are not being sold. This information allows you to make better business decisions on how to market your products and even whether or not to carry them forward. This software helps you to track all the customer details and their health records along with profits, loss, profitable clients and products of medical shop.

V. FUTUTURE SCOPE

Our existing project is currently design to manage only one Pharmacy firm at a time. This can be further extended by deploying out software on cloud. This would help the Pharmacy chain to manage overall stats of the company at different locations.

This on a global scale will help to also determine which particular area is using a particular type of medicine. This will also help a organization to analysis what the people of this area are infected by this disease. There exist many operating systems like Windows, iOS, Linux etc. Also, there exist different operating systems for various smart phones devices like Android, iOS, Symbain, and many more. Currently, our project only focuses on Windows operating. The future scope of this project will be developing it beyond the boundaries of the operating system. Thus, as a future plan,

we intend to develop the software for other operating systems in smart phones and computer domains.

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