

Centralized Database Management System for Medicals

Kalpesh Shinde, Sandeep Kadu, Rohit Avhad, Prof. Mr. Jitendra Patil

Abstract— The issue of current medical system is that each medical shops have separate and scattered database system. So we intend to implement a centralized database management system for medical stores. This system will be available for the medical store owners as well as customers. We will provide a platform for all medical store owners to manage their database. The store owner can add, delete, and modify records in the file. It will provide a user friendly interface to perform all the basic operations required for a medical store thus helps in maintaining the records with ease. It will also provide access to customers who can search particular medicine which he needs and the system will provide the details of medical store in their locality which currently have the medicine in stock.

Index Terms—Common Gateway Interface, Normalization, B-tree search, Command-Line Interface, Ecommerce.

1 INTRODUCTION

THE medical stores have started utilizing modern methods for managing their stores. The traditional practices used to include manually entering and maintaining the records of the medicines and of payments. As there used to be manual work done in order to maintain the records and manage the overall store, human efforts in terms of physical actions were used to be on large scale along with the probability of errors due to manual human work are also at peak and also it is/was risky in terms of security as any unauthorized person can directly gain access to the records register book and can make inappropriate/ false entries thereby directly making a harm on the medicines sales and business. Such unauthorized actions could be lethal to store it. Hence, in order to remove the above mentioned risks, various medical owners have upgraded their shop from traditional shop to the modern one. The modern medical shops are well equipped of the electronics equipments which not only eliminates the unintentional errors while operating them as such in human work but also saves a lot of time thereby increasing the efficiency of the medical shops. Considering the customers who have been prescribed by their doctor with particular medicines. The probability of those medicines availability at all shops is very low. The customer needs to spend a lot of efforts in order to find the medicines with prescribed quantity. So in order to find the medicines the person has to visit each shop individually to find the required medicines along with required quantity by spending his time and fuel to find the medicines. The system can prove useful and effective in saving time, fuel and efforts made by the person to purchase the required medi-

cines.)

1.1 Overview

System will provide platform for all the admins of medical stores to maintain their database on cloud using web based application. All data of the medical stores will be stored in a common database in separate unique tables. Each store will be provided with unique "ID" and "PASSWORD" which will be used to access particular medical database. Admin can do operations like making product entries, updating products according to real time products, deleting products if expired and management of their customers.

On the other side, a web application will be available for the customers. Customers will have their unique account. He/She can search for medicines and products through the search box provided and can check whether the medicine or product is available at particular store. Also will get the detailed information about the medicines such as quantity available, price of medicine inclusive of taxes, expiry date, brand name, etc. Customers can also buy medicines online from any place and collect them from the selected store.

2 GENERAL SYSTEM DESCRIPTION

The system is comprised of Minimum hardware requirements computer system or a mobile device and a fairly speed internet connection. The basic hardware requirements in order to make an optimum use of the system we need a decent CPU having at least Pentium IV or higher, 1GB RAM, 80GB HDD space, Keyboard & Mouse or any mobile device having at least any Web browser support along with working internet connection. The software requirements of the project are Microsoft Windows 7 or higher, any decent web browser, working internet connection, Netbeans, Xampp.

- Kalpesh Ashok Shinde is currently pursuing Bachelor's degree program in Information Technology engineering in Mumbai University, India.
E-mail: kalpeshthebepproject@gmail.com
- Sandeep Arjun Kadu is currently pursuing Bachelor's degree program in Information Technology engineering in Mumbai University, India.
E-mail: sandeepkadu96@gmail.com
- Rohit Sunil Avhad is currently pursuing Bachelor's degree program in Information Technology engineering in Mumbai University, India.
E-mail: rohitavhad98@gmail.com
- Prof. Jitendra Patil is Assistant Professor in college in Mumbai University, India.
E-mail: jeetoo.patil@gmail.com

The system is divided into several modules which are as Admin login, Customer signup & login, Management of products, searching for medicines and Report & bill generation. The system is the result of the integration of these modules.

2.1 ENTITY-RELATIONSHIP DIAGRAM

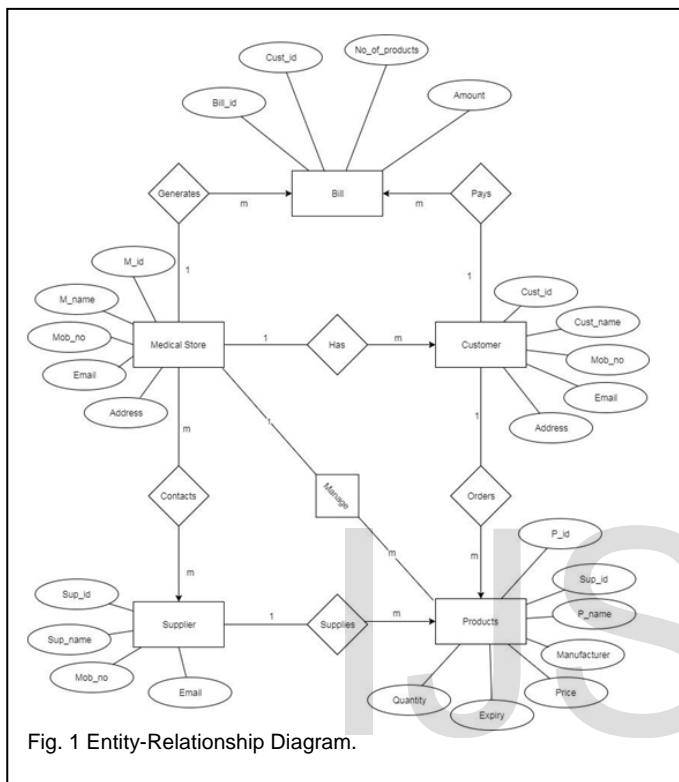


Fig. 1 Entity-Relationship Diagram.

3 DATA COLLECTION AND METHODOLOGY

For this system, the data will be made available in the form of database files. The data present in this system will be inserted and maintained by the medical staff in the form of product description. The fields of input being entered by the medical staff are as "product_id" which is ID number of each product (medicine), "product_name" which is name of product (medicine), "cat_id" which is category ID number assigned to each disease alphabetically, "p_desc" is product description which will describe the ingredients of its composition, "manu" is the name of manufacturer, "price" which denotes the price of the product, "thumb" which is smaller image of the product, "quantity" denotes the quantity available.

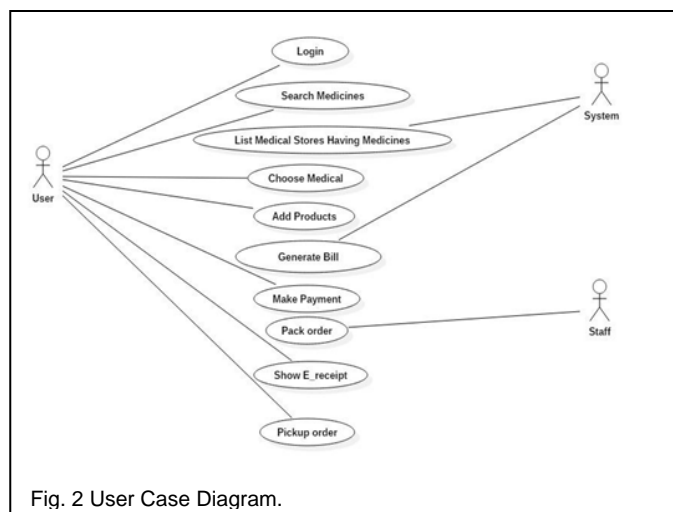


Fig. 2 User Case Diagram.

4 TECHNOLOGIES USED

The technologies required for the project are "HTML5", "CSS", "PHP", "MySQL"

4.1 PHP:

PHP is a server scripting language, and a powerful tool for making dynamic and interactive Web pages. PHP code may be embedded into HTML or HTML5 markup, or it can be used in combination with various web template systems, web content management systems and web frameworks. PHP code is usually processed by a PHP interpreter implemented as a module in the web server or as a Common Gateway Interface (CGI) executable. The web server software combines the results of the interpreted and executed PHP code, which may be any type of data, including images, with the generated web page. PHP code may also be executed with a command-line interface (CLI) and can be used to implement standalone graphical applications.

4.2 MYSQL:

MySQL is a database system used on the web. It is a database system that runs on a server and is ideal for both small and large applications. MySQL is very fast, reliable, and easy to use. PHP combined with MySQL are cross-platform. MySQL is the standard database system for web sites with HUGE volumes of both data and end-users. With the help of MySQL we can query a database for specific information and have a recordset returned. MySQL is a central component of the AMP open-source web application software stack. AMP is an acronym for "Apache, MySQL, PHP". MySQL can be stored data into database by connecting the database with the user input data.

4.3 HTML5:

HTML5 is a markup language used for structuring and presenting content on the World Wide Web. It is the fifth and current major version of the HTML standard. It includes detailed processing models to encourage more in-

teroperable implementations. It extends, improves and rationalizes the markup available for documents, and introduces markup and application programming interfaces (APIs) for complex web applications. For the same reasons, HTML5 is also a candidate for cross-platform applications, because it includes features designed with low-powered devices in mind. We will be using HTML5 for designing the user interface of the system. HTML5 has introduced new features like form elements and input types, offline Web Applications, new outlining algorithm, new semantic elements, Inline content editing and many new APIs.

4.4 CSS:

CSS stands for Cascading Style Sheets. It describes how HTML elements are to be displayed on screen, paper, or in other media, also saves lot of work. It can control the layout of multiple web pages all at once. CSS is designed primarily to enable the separation of presentation and content, including aspects such as the layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple HTML pages to share formatting by specifying the relevant CSS in a separate .css file, and reduce complexity and repetition in the structural content. CSS will improve design of the webpages which can attract more customers to use website.

5 FLOW OF WORKING

The system will function in the following manner:

The admin will make entries in the system according to the inventory present in their shop. The user will have to register him through the registration form and will eventually log in into the system. The homepage consists of search box and profile tab, medicines (prescribed & non-prescribed), stores, about us, cart and logout tabs. The user will make enter the name of medicines in the searchbox. The output of the action will be in the form of tabular form interms of product name, name of medical, address of shop, opening time, contact number, quantity available, expiry date of product, ingredients of composition, MRP and discounted price (if any). After this the user can make payment online through a secured payment portal. Bill will generated and along with transaction id for that transaction session. The medicines products will be packed as soon as the payment is done successfully. The user can then visit the shop and collect the packed products.

5.1 Dataflow Diagram

6 IMPLEMENTATION

Multiple modules are integrated into one system. Admin login form will be used to verify and validate the entered email and password. New customers can register through the registration form by entering proper details in the form. Also already registered customers can login to the system through the login form which will verify and validate the authenticity of the customer. Admin can manage their products through various options provided like 'Add Products', 'Delete Product', 'Edit Product', 'Add Categories', 'Delete Categories', 'Edit Categories'. New orders can be viewed from the orders page and admin can change the status of the orders. Customers can be viewed from the customers page.

Customers can search for the medicine from the search box provided. The search box will have auto-suggestion feature. The input from the search box will be used in query to search from the multiple product tables of different medical store which will display the details of products and the medical store which currently have the searched medicine available in the store. Customer will have my account page which consists of cart, orders, user details and contact info. Customers can also search manually by browsing different categories and different stores through the products module include in the system. Also can view all the medical stores and their details linked with the system through stores page.

7 RESULT

The major outcome of this project is it will help in really Emergency situations, saving fuel and the overall efforts put down to get a particular medicine with minimum requirements like quantity, expiry date, etc. which will really prove useful in high times Also people could come to know about various offers / discounts offered by different Medical Shops. The output of the project will be details of medical stores in terms of name of medical shop, address, contact number, opening time, quantity available, expire date, MRP, discounted price (if any) of medicines searched.

8 CONCLUSION

We have concluded that current system is not much efficient for analysis of medicine information. Each pharmaceutical store has their separate system and is application based due to which management of software and software updates require manual work. As the I.T. Sector is always in the phase of development, it is now time to develop a common platform for the entire pharmaceutical store where management of data will be processed. All databases will

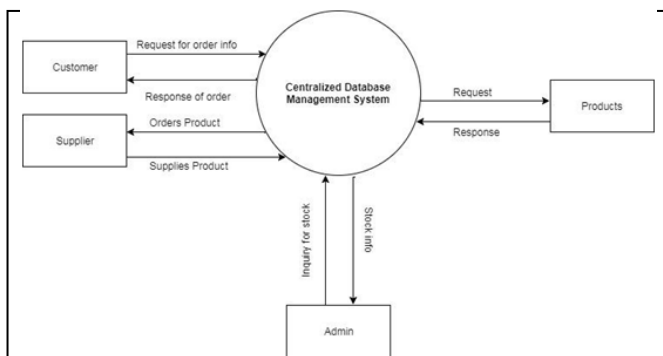


Fig. 3 DataFlow Diagram.

be at one place forming the system. As all the databases are held under system, it will prove beneficiary to the customers purchasing the medicines by saving their time and money according to the discount offers being provided by different shops and to the medical shop owners too, as it can help them boosting their sales by offering favourable discounts and also managing their inventories according to customer's needs.

REFERENCES

- [1] B. Reilly Barry, Mark A. Chodoronek, Eric DeRose, Mark N. Gonzales, Angela R. James, Lynne Levy, Michael Tusa, *"Integrated customer interface for web based data management"* US patent, Sep 2, 2003.
- [2] Mike Philpotts, *"An introduction to the concepts, benefits and terminology of product data management"*, Industrial Management and Data Systems, Vol. 96 Issue: 4, pp.11-17, Sep 12 1996.
- [3] [3] D.Tony LiuX.William Xu, *"A review of web-based product data management systems"* Computer in industry, December 17 2001.
- [4] Gordon Buhle, Richard R. Wessman, *"Authentication and authorization in a multitier relational database management system"* US patent, Sep 4 2001 .
- [5] Judy J. Johnson, James R. McElroy, Jr., *"Computer based records management system method,"* US patent, Sep 22, 1998 .

IJSER