

E - Health Centre Maintenance System using PHP with MySQL and XAMPP Web Server

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Abstract: *The Health Care Maintenance System is designed for any Hospital to replace their existing manual paper-based system. The new system is to operate the following information; patient information, employees information, accounts, inventory, medical reports, laboratory and employee payrolls. These services are to be provided in an efficient, cost-effective manner, with the goal of reducing the time and resources currently required for such tasks. It aims at standardizing data, consolidating data, ensuring data integrity and reducing inconsistencies. Evidently, this project contains an admin panel with an employee/doctor panel. In an overview of this web application, a doctor can simply log into the system using his/her doctor id and password. He/she can manage patients, pharmacy, and laboratory records. Additionally, the employee/doctor can view and manage inventories too. This project uses PHP as the front-end software which is object-oriented programming and has connectivity with MySQL. Additionally, XAMPP is a free cross platform web server which help developers to create and test their programs on a local web server.*

Keywords: Health Care Maintenance System, patient, admin panel, doctor panel, PHP, MySQL.

I. INTRODUCTION

This Health Care Maintenance System Project in PHP focuses mainly on managing medical-related records within the hospital. To be more precise, the system helps to keep track of medical reports. Also, the system displays all the available employees and patients. In addition, the system allows adding up inventories, and pharmacy records too (codeastro.com). Evidently, this project contains an admin panel with an employee/doctor panel. In an overview of this web application, a doctor can simply log into the system using his/her doctor id and password. He/she can manage patients, pharmacy, and laboratory records. Additionally, the employee/doctor can view and manage inventories too. With it, the system also allows the user to view detailed information and reports of each patient.

II. PROPOSED SYSTEM

A fully functional project based on Online Health Care Maintenance System Project which uses PHP Language with MySQL Database. It has a number of features that will allow users to manage all medical records and reports. This web application's concept is all clear. It is the same as real-life scenarios and well-implemented on it.

2.1 Available Features

- Admin Panel
- Employee Panel
- Patient Management
- Transfer, Discharge Patient
- Employee Management
- Assign Departments
- Transfer Employees
- Medicine Management
- Prescriptions
- Accounting – Payable and Receivable

- Inventory Management
- Assets Management
- In and Out Patient Records
- Medical Records
- Patient Lab Test and Results
- Manage Patient's Vitals
- Lab Reports
- Surgery Records
- Surgery Equipment Records *Patient Medical Profile *Payroll Management
- Print Payroll Receipt
- Manage Vendor

III. TECHNOLOGIES USED

The entire development process has been subdivided into two: the frontend development and backend development. Where the frontend comprises of the actual visible part such as the home page, admin/doctor panel, Dashboard, Other related data. The backend contains the database and its interaction with frontend.

3.1 HTML

HTML stands for Hypertext Markup Language. It is used to design web pages using a markup language. HTML is the combination of Hypertext and Markup language. Hypertext defines the link between web pages. A markup language is used to define the text document within the tag which defines the structure of web pages.

A. Features of HTML:

It is easy to learn and easy to use. It is platform-independent. Images, videos, and audio can be added to a web page. Hypertext can be added to the text. It is a markup language.

3.2 CSS

CSS (Cascading Style Sheets) is used to apply styles to web pages. Cascading Style Sheets are fondly referred to as CSS. It is used to make web pages presentable. The reason for using this is to simplify the process of making web pages presentable. It allows you to apply styles on web pages. More importantly, it enables you to do this independently of the HTML that makes up each web page.

Styling is an essential property for any website. It increases the standards and overall look of the website that makes it easier for the user to interact with it. A website can be made without CSS, as styling is MUST since no user would want to interact with a dull and shabby website. So for knowing Web Development, learning CSS is mandatory

3.3 JAVASCRIPT

JavaScript (JS) is the world's most popular lightweight, interpreted compiled programming language. It is also known as a scripting language for web pages. It can be used for Client-side as well as Server-side developments.

JavaScript can be added to your HTML file in two ways:

- **Internal JavaScript:** We can add JS code directly to our HTML file by writing the code inside the <script> tag. The <script> tag can either be placed inside the <head> or the <body> tag according to the requirement.
- **External JavaScript File:** We can create a file with .js extension and paste the JS code inside it. After creating the file, add this file in <script src="file_name.js"> tag inside <head> tag of the HTML file.

3.4 PHP

The term PHP is an acronym for **Hypertext Preprocessor**. It is a server-side scripting language that is used for web development. It can be easily embedded with HTML files. HTML codes can also be written in a PHP file. The PHP codes are executed on the server-side whereas HTML codes are directly executed on the browser

Example: Simple program to print "Hello world!" message on the screen.



```

<?php Output:
/* echo is a print command */ Hello world!
echo "Hello world!";
?>

```

A. Advantages of PHP

- Many available specialists;
- Better loading speed of websites;
- More options for database connectivity;
- S large collection of open-source addons;
- Inexpensive website hosting;
- Great synergy with html;
- Excellent flexibility and combinability;

3.5 MySQL

MySQL is currently the most popular database management system software used for managing the relational database. It is open-source database software, which is supported by Oracle Company. It is fast, scalable, and easy to use database management system in comparison with Microsoft SQL Server and Oracle Database. It is commonly used in conjunction with PHP scripts for creating powerful and dynamic server-side or web-based enterprise applications. MySQL is a first choice of PHP developers. As an open source Relational Database Management System (RDBMS) that uses SQL language, MySQL database helps to automate data retrieving and provide great support in PHP MySQL web application development.

3.6 XAMPP

XAMPP is an abbreviation where X stands for Cross-Platform, A stands for Apache, M stands for MySQL, and the Ps stand for PHP and Perl, respectively. XAMPP is one of the widely used cross-platform web servers, which helps developers to create and test their programs on a local webserver. It was developed by the Apache Friends, and its native source code can be revised or modified by the audience. It consists of Apache HTTP Server, MariaDB, and interpreter for the different programming languages like PHP and Perl. It is available in 11 languages and supported by different platforms such as the IA-32 package of Windows & x64 package of macOS and Linux.

IV. RESULTS (Screenshots)

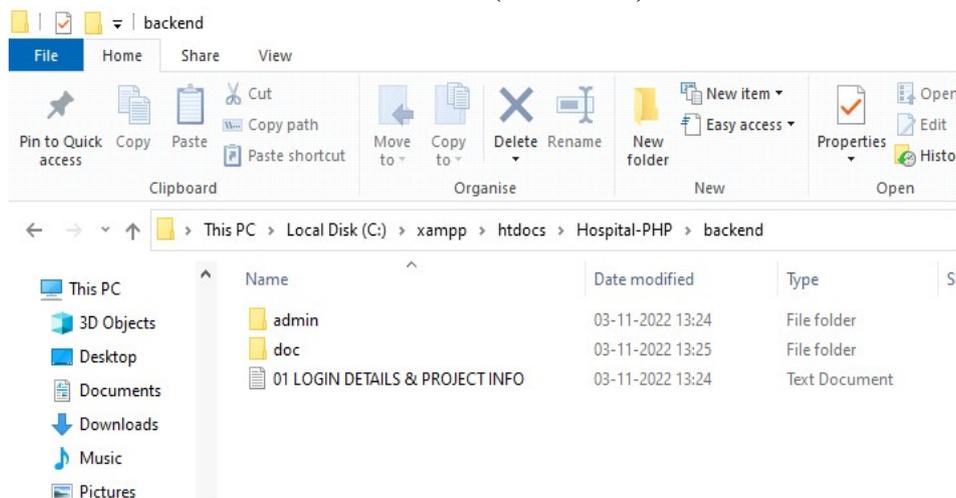


Fig 1: The Folders consisting of Program files of Health Centre Web Application

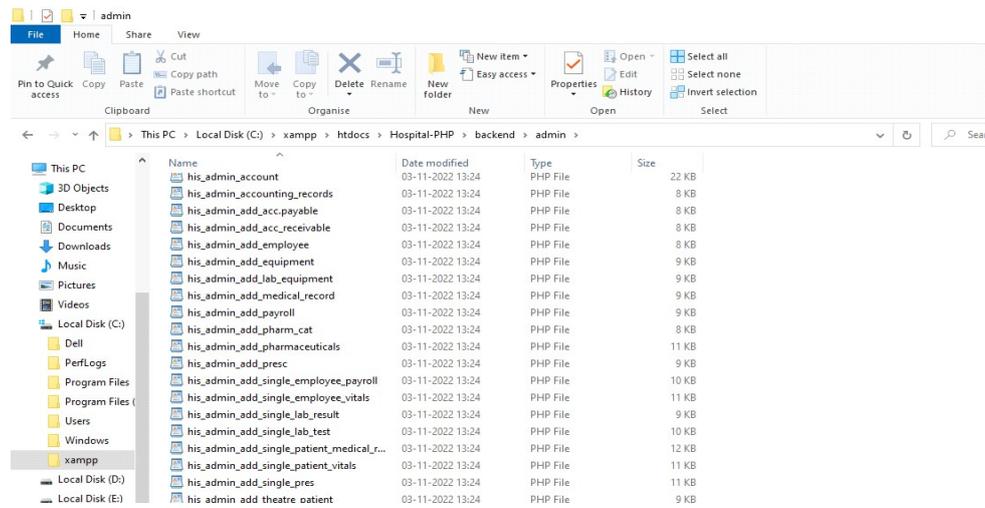


Fig 2: The various PHP code files of Admin Panel of Health Centre Web Application

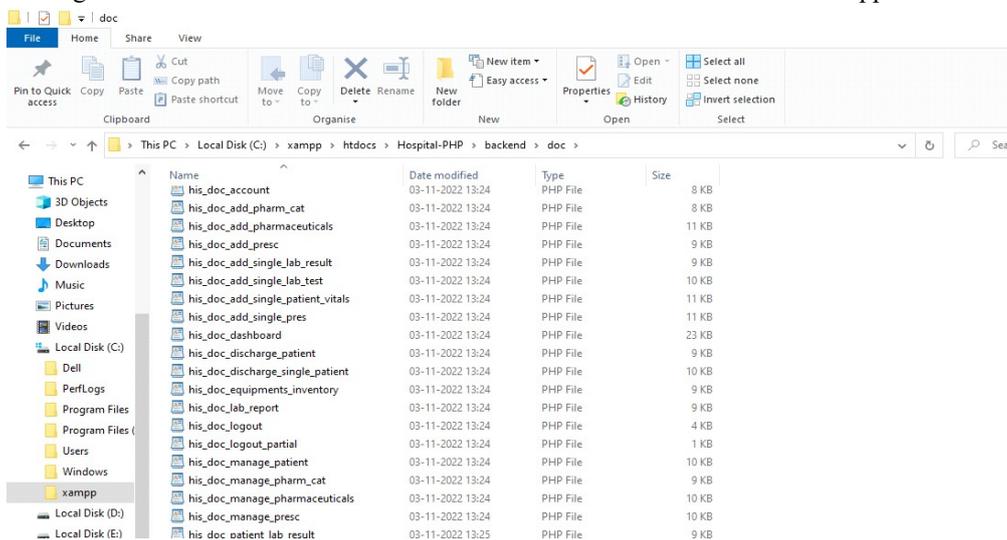


Fig 3: The various PHP code files of Doctor Panel of Health Centre Web Application

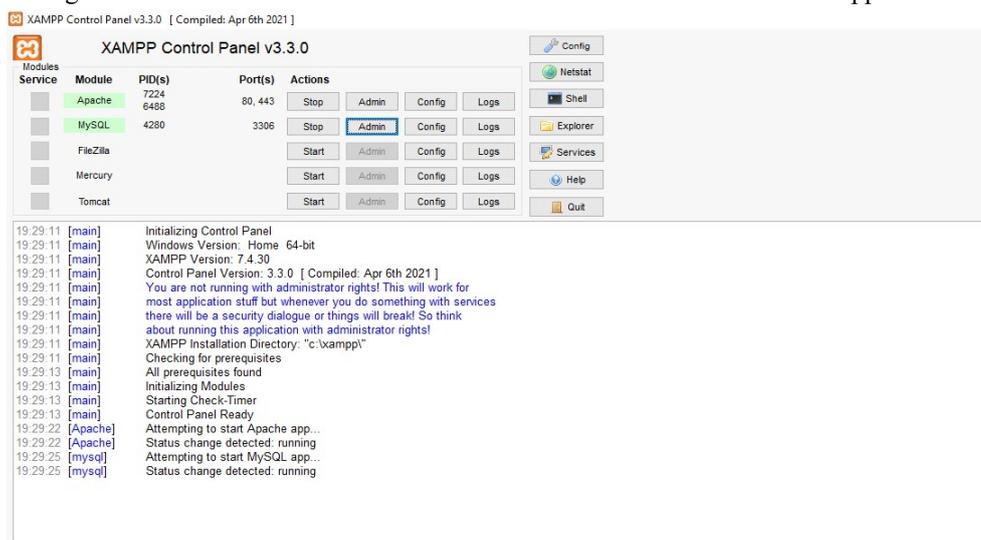


Fig 4: The XAMPP web server supporting Apache, MySQL, FireZilla, Mercury, Tomcat

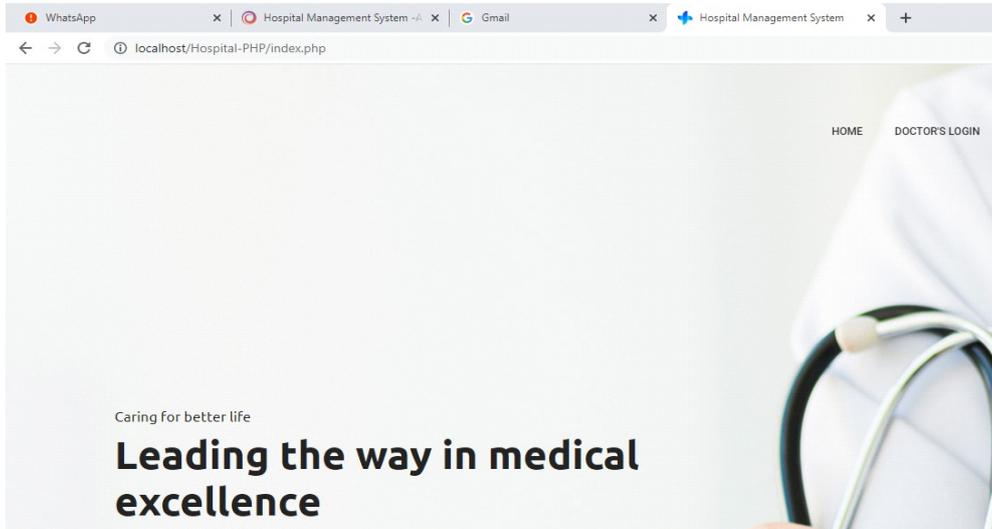


Fig 5: The Home Page of Web Application representing two options named Administrator and Doctor Panels

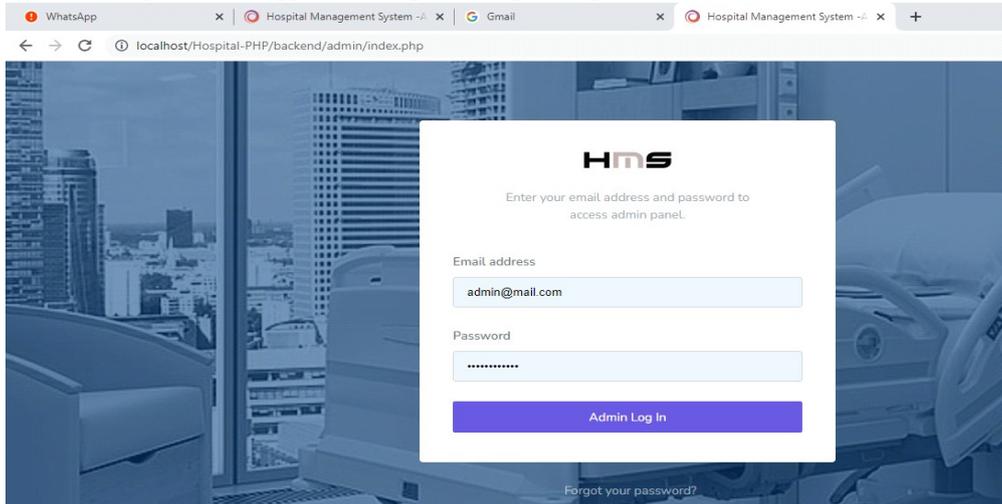


Fig 6: Web Page Asking Log-in Credentials to operate Admin Panel

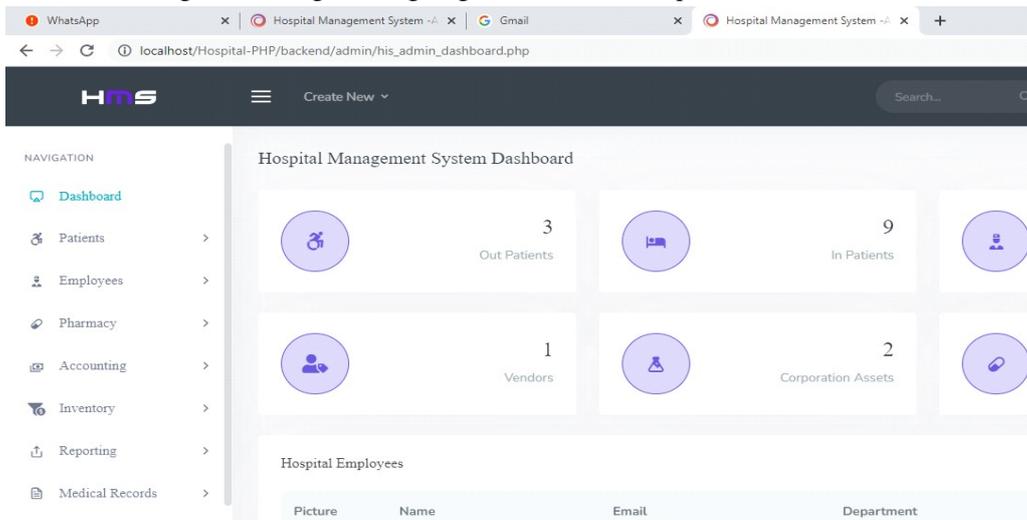


Fig 7: Dashboard and other Operating options in Admin Panel after logging-in the Panel

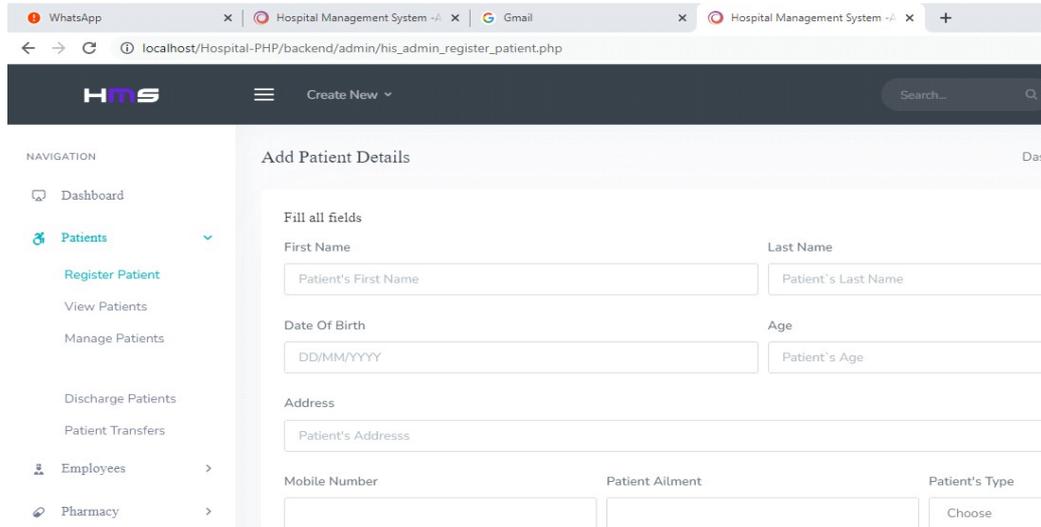


Fig 8: Web Application Admin Panel showing Register patient, view and manage patient options

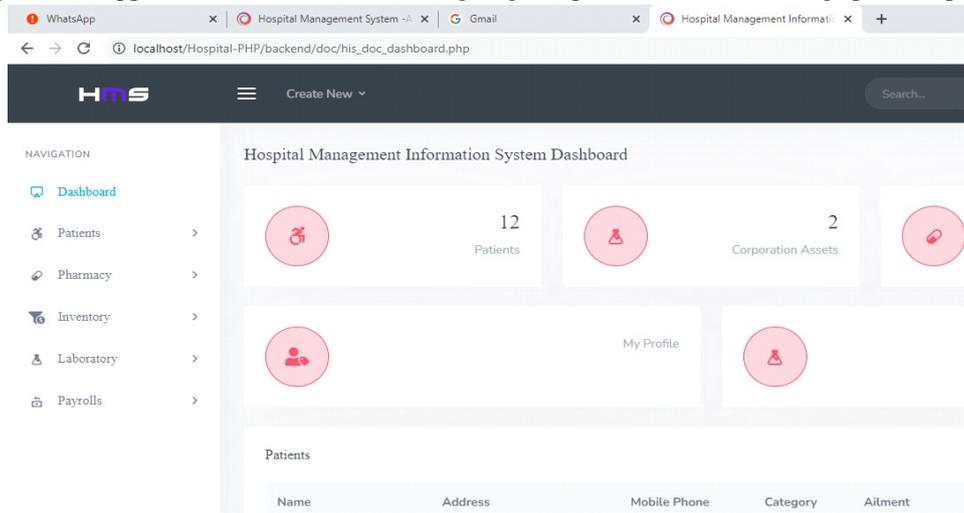


Fig 9: Dashboard and other Operating options in Doctor Panel after logging-in the Panel

V. SCOPE OF FUTURE USE

The Web Application can be developed further to include advanced styles and formats that can be like Pop Ups that appear when an error occurs, higher authentication done for logging-in to the web application and can also process the website towards making it as a mobile app. Developing a website does not have an end to a idea, so one can implement an advancement in the Web Application. Even the Technologies like HTML, CSS, JavaScript, PHP, MySQL etc have been upgraded to latest versions introducing new tags, methodologies and many more.

VI. CONCLUSION

Therefore, we have developed a web application that provides a person to operate various details about the Health Centre, by which he/she could manage a Health Centre with utmost feasibility. This project uses PHP as the front-end software which is object-oriented programming and has connectivity with MySQL. Additionally, XAMPP is a free cross platform web server which help developers to create and test their programs on a local web server. It also has future enhancements like we discussed above. This Project covers only the basic features required for managing a Health Centre online. This Project is all about computerizing the Data/Information and reducing the Paper work done at the Health Centre.

VII. ACKNOWLEDGEMENT

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