

COVID-19 MANAGEMENT SYSTEM

Submitted in partial fulfillment of the requirements for the award of
Bachelor of Science Degree in Computer Science

By

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(DEEMED TO BE UNIVERSITY)

Accredited with Grade "A" by NAAC

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BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **KRISHNAKANTH (Reg. No. 39290052)** and **HARISH.R (Reg. No. 39290029)** who carried out the project entitled "**COVID – 19 MANAGEMENT SYSTEM**" under my supervision from to .

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DECLARATION

I, **HARISH.R (Reg. No. 39290029)** hereby declare that the Project Report entitled "**COVID - 19 MANAGEMENT SYSTEM**" done by me under the guidance of **Dr.JANCY** is submitted in partial fulfillment of the requirements for the award of Bachelor of Science degree in Computer Science.

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ABSTRACT

Corona virus (COVID-19) is creating panic all over the world with fast growing cases. There are various datasets available which provides information of world-wide effected information. Covid has affected all counties with large number of cases with variation of numbers under death, survived, effected. The aim of the project 'Covid-19 Management System' is to create a web-based application to allow users to book their vaccination in advanced. This system wakes to provide service facility to medical facilities and users. The services which are provided are vaccine booking, reservation of the vaccine by the customer through the system online, vaccine home delivery information and report.

The main goal of this project is to make the users to book the vaccine from anywhere and get vaccinated to their home.

- To develop the online ordering and reservation system for vaccines.
- To develop use interface for online vaccine booking system to provide online menu information for user to order.

At the end of the project, there shall be a live web-based application with an easy-to-use and rich navigational front end designed with HTML, CSS, JavaScript and PHP and a back end with My SQL. Both platforms are open-free and thus making applications cost-effective.

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CHAPTER 1

INTRODUCTION

1.1 OVERVIEW OF PROJECT

As the COVID-19 crisis endures and the virus continues to spread globally, the need for collecting epidemiological data and patient information also grows exponentially. The race against the clock to find a cure and a vaccine to the disease means researchers require storage of increasingly large and diverse types of information.

The Covid-19 Management System can be entered using mobile number for registered users. The user should register in advance to use the web application for booking the vaccines. It is also accessible by an admin and phlebotomist. Admin is a super user who can access every data in the web application, while phlebotomist can only access the assigned task. The data are well-protected for personal use and makes the data processing quicker. Covid-19 Management System is flexible and easy to use.

The project **Covid-19 Management System** includes registration of users, storing user data into the system using the database. The software has the ability to give users unique Order-ID and stores details of every users and staffs manually. Admin can view availability of phlebotomist and details of every user using name, mobile number and order-ID.

Covid-19 Management System is designed for vaccine booking and vaccination at home. User can choose their desired vaccine, dosage number, desired location, date and timing for their vaccination. After verification of the user details, admin will allocate a phlebotomist for the user. The phlebotomist will vaccinate the user at location and timing of user' choice, then update the status of vaccination back to the admin. Admin will generate a report and certificates based on the update received. The certificate can be downloaded by users.

CHAPTER 2

LITERATURE SURVEY

1. Some Trends in Web Application Development

Author: Mehdi Jazayeri, 2007 Future of Software Engineering

A Web application is an application that is invoked with a Web browser over the Internet. Ever since 1994 when the Internet became available to the public and especially in 1995 when the World Wide Web put a usable face on the Internet, the Internet has become a platform of choice for a large number of ever-more sophisticated and innovative Web applications. In just one decade, the Web has evolved from being a repository of pages used primarily for accessing static, mostly scientific, information to a powerful platform for application development and deployment. New Web technologies, languages, and methodologies make it possible to create dynamic applications that represent a new model of cooperation and collaboration among large numbers of users.

2. Design and Implementation of the Website Based on PHP & MYSQL

Author: Xiasheng Yu, Cai Yi, 2010 International Conference on E-Product E-Service and E-Entertainment

With the development of Web technology, it is inevitable choice for all kind of corporate growth to combine traditional marketing with network marketing. The effective method of network marketing is to establish the website which is suitable for their company. At present the website development's mainstream platform includes: LAMP (Linux operating system, Apache network server, MySQL database, PHP programming language), J2EE and. Net commercial software. Because PHP and MYSQL is free, open source and so on, they are noted for IT professionals. From the perspective of website traffic, more than 70% of website traffic is provided with LAMP, which is most popular platform for developing the website.

3. Design and Implementation of Student Information Management System

Author: Zhibing Liu, Huixia Wang, Hui Zan, 2010 International Symposium on Intelligence Information Processing and Trusted Computing

Student Information Management System realization including establishment and maintenance of the database and front-end application development. This paper describes the system functional and architecture design, and emphasizes the system's functionality, database design and functional modules, etc. Fully functional, flexible and convenient application and friendly interface provide a good guarantee for student information management.

4. Web design — Past, present and future

Author: Haidi Božiković, Maja Štula, 2018 41st International Convention on Information and Communication Technology, Electronics and Microelectronics (MIPRO)

Nowadays there is a wide prevalence of various devices that can be connected online for different kind of activities, and among others, for browsing web pages. Web design is constantly changing and adjusting due to the appearance of different sizes and types of devices. Web design from the 1990s is greatly different from current web pages. The main goal of the design, is not the design itself, but to enable web content transfer on more readable and comprehensible way, no matter which device is used to present web content, desktop or hybrid computer, various mobile or wearable device. This paper shows development of web design from its beginning to nowadays modern design, and what we can expect in future. Today's average day of any person involves browsing web pages searching for various information and news, connecting to other users through many social networks and doing various business tasks. According to the user survey conducted in the United Kingdom in 2016, even 71% users have accessed the internet using smartphone, 62% using laptop, while only 40% using desktop, which implies how smartphones have taken up most of the market and internet access .

5. A Web-based Examination System Based on PHP + MySQL

Author: Ji Wen, Yang Zhang, Yong Yan, Shunren Xia, 2005 IEEE Engineering in Medicine and Biology 27th Annual Conference

The design and implementation of Web-based examination system constructed by PHP and MySQL is presented in this paper. Three primary parts, including students', teachers' and administrators', are introduced and analyzed in detail. Initial application has demonstrated the system's feasibility and reasonability. Examination, as a traditional method to check the effect of students' learning, however, is still the best and most powerful way. So in the future, examination will still be kept for long as an essential part of education. Nowadays, it occupies more time and more resources in preparing an examination paper, printing the paper, organizing the examination, and carrying out the check and stat., which makes it harder and harder to adapt some large-scale or urgent examination in the traditional mode.

6. A Web based Employee Medical History Management and Monitoring System

Author: M. Paandian, M.B. Malarvili, 2012 IEEE-EMBS Conference on Biomedical Engineering and Sciences

Almost all organizations have their own medical benefit program for their employees to ensure a healthy work environment. However, current function of this medical benefit program is to manage the payment of medical treatment when their employees received the treatment from health care provider. The existing system fails to store the medical record of employee and monitor the health of employee. Therefore, there is a need for a new system to fulfill this need. The aims of this study are to create an online database of employees' medical history for management of employer, develop platform for information exchange between employer, employee and health care provider using web service. The World Wide Web (WEB) technology has been applied to implement the system. The Hypertext Preprocessor (PHP) language and Hyper Text Markup Language (HTML) were used to design the interface of this system by addressing the friendliness, flexibility and communication.

CHAPTER 3

AIM AND SCOPE OF THE PRESENT INVESTIGATION

3.1 AIM OF THE PROJECT

Vaccination is a necessary step to fight against covid-19 virus. Vaccination can be also done at anyone's home. Vaccines can be booked online using a web application dedicated to the task. This website can be run by admin and vaccinations can be done with the help of phlebotomists. The data is stored in MySQL databases, managed using PHP and certificates are printed using HTML, CSS and JavaScript.

3.2 SCOPE AND OBJECTIVE

- Web Application dedicated to Vaccine Booking and Home Delivery can be valuable to solve some major problems like maintaining social distancing, reducing the spread of virus by not standing in a visiting a public hospital in order to get vaccinated.
 - Web Application is useful to people like physically challenged users, elderly people, etc., due to its ease of access and user friendly UI.
-
1. Developing a web application that allows to users to get vaccinated with their choice of vaccine and location in which they would like to get vaccinated.
 2. Another objective is creating admin and phlebotomists modules in order to maintain the data, generate vaccination certificates and make vaccinations at home possible.
 3. Creating a live update module in which current covid infected cases of nearby districts and a graph of daily covid infected cases of Tamilnadu state is provided to anyone from the homepage.

3.3 SYSTEM REQUIREMENTS

Hardware Requirements:

Processor: Intel i3 (*minimum*), i5 (*recommended*).

RAM: 2 GB

Hard Disk Space: 2 GB

Software Requirements:

Operating System: Windows 7, 8, 8.1, 10

Front end: PHP, HTML, CSS, Bootstrap, JavaScript

Back end: My SQL

Server: Apache Web Server (XAMPP)

Browser: Google Chrome, Brave, Opera, Mozilla Firefox

3.4 SOFTWARE USED

HTML:

The Hyper Text Markup Language or HTML is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets (CSS) and scripting languages such as JavaScript. Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document. HTML elements are the building blocks of HTML pages. With HTML constructs, images and other objects such as interactive forms may be embedded into the rendered page. HTML provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. HTML elements are delineated by tags, written using angle brackets.

HTML Characteristics:

- It is easy to understand and modify as it doesn't require any programming language.
- It is platform-independent language.
- It provides more flexible way to design web pages using text.
- Links can be added to the web pages so as to help the reader to visit other web pages of their interest.
- Graphics, videos, sounds, etc. can also be added to the web pages which gives an extra attractive look to the document.
- HTML document can be displayed on any platform such as Windows, Mac, Linux etc.,.
- It offers compatibility with all web browsers.
- It requires just a text editor for coding such as Notepad or Gedit.
- It can be integrated with other languages like CSS, JavaScript, Bootstrap etc.,

Applications of HTML:

Web pages development:

HTML is heavily used for creating pages that are displayed on the world wide web. Every page contains a set of HTML tags, including hyperlinks which are used for connecting to other pages. Every page that we witness on the world wide web is written using a version of HTML code.

Cutting edge feature:

HTML5, with its set of standards and API, is being used to introduce some of the latest trends in the website creation business. Like polyfill libraries, which are supported by old browsers equally well. Browser like Google Chrome is the perfect choice when it comes to implementing an HTML5 latest set of standards and APIs. A JavaScript library is available called Modernizr, which can detect features that let the developer dynamically load polyfill libraries as required.

Internet navigation:

This is one of the most important uses of HTML, which is revolutionary. This navigation is possible by utilizing the concept of Hypertext. It is basically a text which refers to other web pages or text, and when the user clicks on it, would navigate to referenced text or page. HTML is heavily used to embed the hyperlink within the web pages. A user can easily navigate the web pages and between websites as well, located on different servers.

PHP:

PHP is a general-purpose scripting language geared towards web development. It was originally created by Danish-Canadian programmer Rasmus Lerdorf in 1994. The PHP reference implementation is now produced by The PHP Group. PHP originally stood for Personal Home Page, but it now stands for the recursive initialism PHP: Hypertext Preprocessor. PHP code is usually processed on a web server by a PHP interpreter implemented as a module, a daemon or as a Common Gateway Interface (CGI) executable. On a web server, the result of the interpreted and executed PHP code – which may be any type of data, such as generated HTML or binary image data – would form the whole or part of an HTTP response.

PHP Characteristics:

- It is very simple and easy to use, compare to other scripting language it is very simple and easy, this is widely used all over the world. PHP will be more secured with the addition of frameworks.
- It is an interpreted language, i.e. there is no need for compilation. PHP can integrate flexibly with other languages.

- Open source means you no need to pay for use php, you can free download and use.
- PHP code will be run on every platform, Linux, Unix, Mac OS X, Windows.
- PHP is case sensitive scripting language at time of variable declaration. In PHP, all keywords (e.g. if, else, while, echo, etc.), classes, functions, and user-defined functions are NOT case-sensitive.
- PHP have some predefined error reporting constants to generate a warning or error notice.
- PHP provides access logging by creating the summary of recent accesses for the user.
- PHP supports variable usage without declaring its data type. It will be taken at the time of the execution based on the type of data it has on its value.

Applications of PHP:

Web Pages and Web-Based Applications:

Any web page or web application developed in the current ecosystem needs to offer a high degree of customization, provide a highly interactive user interface, be capable of performing online transactions and integrate with database systems. Through its three-tiered architecture which works on browser, server, and database systems in a linear manner, PHP offers a reliable solution to achieve these features. As a consequence, PHP is used by over 82% of websites for server-side programming; over 244 million websites are built using PHP. Further, web-based enterprise applications and a multitude of Facebook apps are also scripted in PHP.

Web Content Management Systems:

PHP offers support to numerous databases including MySQL, Oracle, and MS Access and is capable of interacting with other services using protocols such as IMAP, LDAP, POP3, NNTP, SNMP, HTTP, and COM. As a result, PHP has been used for creating popular web Content Management Systems (CMS), including

WordPress and its plugins, user-facing portion of Facebook, Joomla, Drupal, Moodle, Silverstripe, MediaWiki, Digg, and others.

Data Representation:

Through the use of tools like Image_Graph, PHP can be used to create a variety of graphs, charts, scatter-dot plots, and other means of graphical representations. This feature finds applications across client-side desktop applications, eCommerce websites, and other applications where data needs to be presented in a concise and graphical manner.

MySQL:

MySQL is an open-source relational database management system (RDBMS). Its name is a combination of "My", the name of co-founders Michael Widenius's daughter, and "SQL", the abbreviation for Structured Query Language. A relational database organizes data into one or more data tables in which data types may be related to each other; these relations help structure the data. SQL is a language programmers use to create, modify and extract data from the relational database, as well as control user access to the database. In addition to relational databases and SQL, an RDBMS like MySQL works with an operating system to implement a relational database in a computer's storage system, manages users, allows for network access and facilitates testing database integrity and creation of backups.

MySQL Characteristics:

- MySQL is open-source, which means this software can be downloaded, used and modified by anyone.
- MySQL stores data efficiently in the memory ensuring that data is consistent, and not redundant. Hence, data access and manipulation using MySQL is quick.

- Scalability refers to the ability of systems to work easily with small amounts of data, large amounts of data, clusters of machines, and so on. MySQL server was developed to work with large databases.
- It supports different character sets, and this includes latin1 (cp1252 character encoding), German, Ujis, other Unicode character sets and so on.
- It provides a secure interface since it has a password system which is flexible, and ensures that it is verified based on the host before accessing the database.
- It comes with support for large databases, which could contain about 40 to 50 million records, 150,000 to 200,000 tables and up to 5,000,000,000 rows.
- MySQL server also comes with many client and utility programs.

Applications of MySQL:

Scalability and Flexibility:

The MySQL database server provides the ultimate in scalability, sporting the capacity to handle deeply embedded applications with a footprint of only 1MB to running massive data warehouses holding terabytes of information. Platform flexibility is a stalwart feature of MySQL with all flavors of Linux, UNIX, and Windows being supported. And, of course, the open source nature of MySQL allows complete customization for those wanting to add unique requirements to the database server.

High Performance:

A unique storage-engine architecture allows database professionals to configure the MySQL database server specifically for particular applications, with the end result being amazing performance results. Whether the intended application is a high-speed transactional processing system or a high-volume web site that services a billion queries a day, MySQL can meet the most demanding performance expectations of any system. With high-speed load utilities, distinctive

memory caches, full text indexes, and other performance-enhancing mechanisms, MySQL offers all the right ammunition for today's critical business systems.

High Availability:

Rock-solid reliability and constant availability are hallmarks of MySQL, with customers relying on MySQL to guarantee around-the-clock uptime. MySQL offers a variety of high-availability options from high-speed master/slave replication configurations, to specialized Cluster servers offering instant failover, to third party vendors offering unique high-availability solutions for the MySQL database server.

CHAPTER 4

MATERIAL METHODS AND ALGORITHM USED

4.1. DESIGN METHODOLOGY

Existing System:

In the existing system, Vaccines are provided in public places. This leads to overcrowding. Due to overcrowding, public may not follow the SOPs such as social distancing; wearing mask etc., there is also a time delay process to wait for each and every one all over the places.

Proposed System:

In proposed system, the user can visit the application through URL with efficient in internet connection. User can register in the site, can make slot booking and get the vaccination at the doorstep. This will reduce the time consumption and make the system efficient and user-friendly. User can take vaccinations at home to ensure lower infection rates.

4.2. MODULE DESCRIPTION

Home Page

Homepage is the initial page of the website from which the user/admin can go to User Registration page, Login Page (only admin and phlebotomists) and Live Updates Page. Homepage has the necessary details about the covid pandemic situation and preventive measures against Covid-19 virus. The top bar of the page consists of six sections; in which first three sections are used for navigation within the home page namely *Covid-19 Symptoms*, *About Corona virus* and *Prevention*.

Covid-19 Symptoms section shows the symptoms regarding infection of corona virus. *About Corona virus* section shows information regarding every

version of corona viruses like Delta Variant (B.1.617.2) June 2021, Omicron Variant (B.1.1.529) Jan 2022, etc., *Prevention* section shows necessary actions to be taken in order to avoid infection.

The last three sections of top bar contain *Vaccination*, *Live Updates* and *Login*. The *Vaccination* section is a direct link to the User Registration Page, which is *User Module* of the project. The *Live Updates* section is a link to Live Update page (*Live Update Module*). The *Login* section is a link to a login page where admin can login and check the user data; Phlebotomist should also use this section to login to their respective dashboards.

Sidebar

Sidebar is presented in the left-side of every page except homepage and login page. This project has three different sidebars one for the users, others for admin and phlebotomist respectively. These sidebars are used for navigation between different pages within a single module.

User Module

User module allows users to book their vaccine. Here the user must register in order to book their vaccine of their choice. So, User module is divided into two sections

- New User page
- Registered User Page.

New User page contains a form asking necessary details like IDs, Name, Age, Address, Contact Number, etc, This form can be submitted only when all the requested data is entered. Here most of the data are entered in textbox according to the required format. Some textboxes have specific conditions like Mobile Number textbox does not allow the user to enter a text likewise Name textbox does

not allow the user to enter a number. Few data are received using dropdown box and radio buttons. In this project, Gender is received using radio button with choices as Male, Female and Others. Here the user can choose only one of three choices. Likewise, Government ID dropdown box is used to specify which government ID is the user using to verify themselves. State also has a dropdown box. After entering necessary data and clicking submit button prompts an alert box saying *Registered Successfully* which is done with the help of JavaScript language.

Registered User page can be accessed only by the users who registered using the *New User Page*. The registered users can visit his page by entering their contact number which was used to register in the previous page. This page displays previously mentioned data of the user and another form asking data necessary to arrange the user's vaccination. This form contains two dropdown boxes and a unique textbox for entering date and time slot for the vaccination. The two dropdown boxes are Vaccine Type and Vaccine Dosage respectively. After entering necessary data and clicking submit button prompts an alert box saying *Vaccine Booked Successfully* and Order Number, which is unique for every vaccine booked. The above entered data in both the pages of this module is stored in a MySQL database using PHP.

The User module has its own sidebar like mentioned before. This sidebar for the user module contains

- *New User, Registered User*
- *Vaccine Status*
- *Vaccine Certificate*
- *Live Updates.*

With *New User* and *Registered User* functionalities explained above the user can visit three other pages with the help of their sidebar.

Vaccine Status page can be accessed only by the registered users similar to the *Registered User page*. A table is displayed with Order Number, Vaccine Type, Vaccine Dosage, Timeslot and other user's details. This table can view multiple details about the current user's vaccination details. At end of every row there is a *View Details* button which opens a page showing every detail about that vaccination. In this page, *Report Status* is added in the Vaccine information table which displays the whether the user is vaccinated or not. At the bottom of the page, there is a *Vaccine Tracking History* table which displays remark of the phlebotomist, Status of the phlebotomist, Action taken by phlebotomist with date and time assigned for each of them.

Vaccine Certification page can be accessed only by the registered users similar to the *Registered User* and *Vaccine Status page*. A table is displayed with Order Number, Vaccine Type, Vaccine Dosage, Timeslot and other user's details. This table can view multiple details about the current user's vaccination details. At end of every row there is a *Certificate* button which opens a page showing certificate regarding the vaccination. Upon clicking the *Certificate* button opens a new page showing the vaccination certificate of the user. The Certificate contains *Name, Age, Gender, Booking ID, Vaccine Type, Dosage, Date of dose* and *Report Status*. At the bottom of the certificate page, there are two buttons named *Download* and *Homepage*. The *Download* button prints the certificate page as a PDF which the user can use as vaccination certificate in public and workplaces. This *Download* button is working with help of CSS and JavaScript. The *Homepage* redirects the user straight to the homepage of the project which is mentioned above.

Admin Module

In **Login page**, admin can enter their credentials in order to access the admin dashboard. If the admin forgets his/her password, he/she can use *Forgot Password* feature to recover his/her password. In *Forgot Password*, Admin should enter his

username and phone number for verification which will be notified using the alert box and then admin should enter a *secret code* along with new password and confirmation. The password will be changed only if the *secret code* is correct. After a successful login, the page redirects to *Admin Dashboard page*.

Admin Dashboard page consists of six cards named as

- *Total Booking for Vaccination*
- *Total Vaccination Assigned*
- *On the Way for Vaccination*
- *Report Delivered*
- *Total Registered Patients*
- *Total Registered Phlebotomist*.

Total Booking for Vaccination shows the admin every vaccine bookings occurred in the website. *Total Vaccination Assigned* shows the admin every vaccination assigned to the phlebotomist by the admin; admin can assign the phlebotomist from *Total Booking for Vaccination* page. *On the Way for Vaccination* shows the admin list of vaccination details if their phlebotomist's current status is *On the Way*. *Report Delivered* shows the reports of vaccinations done and the certificate can be generated at this page. *Total Registered Patients* shows every registered user's data including their vaccination details. *Total Registered Phlebotomist* shows every phlebotomist's data including their passwords; therefore if the phlebotomist forgot their password, they can refer admin and admin can also add / manage phlebotomist's data.

Admin's **Top bar** contains a notification box where the admin is notified for every booking done by the user so admin can assign them to a phlebotomist available. Top bar also contains a button which opens a dropdown list containing *Profile*, *Change password* and *Logout*. *Profile* menu shows the admin details such as username, email-id and contact number. *Change password* is used to update password of the admin login which is different from *Forgot Password* feature in login page. Here

current password should be known in order to update the password. *Logout* button is used to logout from the admin dashboard. Top bar of admin remains visible on every page of the admin module

Admin's **Side bar** consists of *Dashboard*, *Phlebotomist*, *Vaccination* and *Report* menus. *Dashboard* menu redirects the admin to dashboard from any page with the admin module. *Phlebotomist* menu contains *Add* and *Manage* submenus. *Add* submenu is used to add new phlebotomist profiles. *Manage* submenu is used to update, manage and remove phlebotomist profiles. *Vaccination* contains *New*, *Assigned*, *On the Way*, *Report Delivered* and *All Vaccinations* submenus. *New* submenu views the new bookings which are yet to be assigned to phlebotomist. *Assigned* submenu shows the bookings that are assigned to phlebotomists. *On the Way* shows the phlebotomists who are on the way for the user's vaccination. *Report Delivered* shows the reports of the vaccination which are done and certificate can be generated. *All Vaccinations* shows every registered user's data including their vaccination details. *Report* menu consists of *B/w Dates Report* and *Search Report* submenus. *B/w Dates Report* submenu is used to sort the record within the specified dates. *Search Report* is used to search reports by using patient's name, order number and contact number.

In every list of data presented in admin module has a *search* textbox, *show entry* filter and pagination is included. *Search* textbox is used to search the records, *show entry* filter limits the amount of entries shown at a page and *pagination* provides extra pages and navigation between these pages if the amount of entries exceeds the entry filter's count.

Phlebotomist Module

In *Login Page*, phlebotomist can enter their credentials in order to access the phlebotomist dashboard. If the phlebotomist forgets his/her password, he/she should

refer admin to recover his/her password. After a successful login, the page redirects to *Phlebotomist Dashboard* page.

Phlebotomist Dashboard page consists of two cards named as *Total Vaccination Assigned* and *Total Vaccination Status*. *Total Vaccination Assigned* shows the bookings which are verified and assigned by the admin which can be taken by any phlebotomist regardless of who it was assigned to. *Total Vaccination Status* shows the status of the vaccination which was taken by the phlebotomist but not completed yet.

Phlebotomist's *Top bar* contains a notification box where the phlebotomist is notified for every booking assigned by the admin so phlebotomist can take action regarding them. Top bar also contains a button which opens a dropdown list containing *Profile*, *Change password* and *Logout*. *Profile* menu shows the phlebotomist details such as phlebotomist name and contact number. *Change password* is used to update password of the phlebotomist login, here current password should be known in order to update the password. *Logout* button is used to logout from the phlebotomist's profile. Top bar of phlebotomist remains visible on every page of the phlebotomist module.

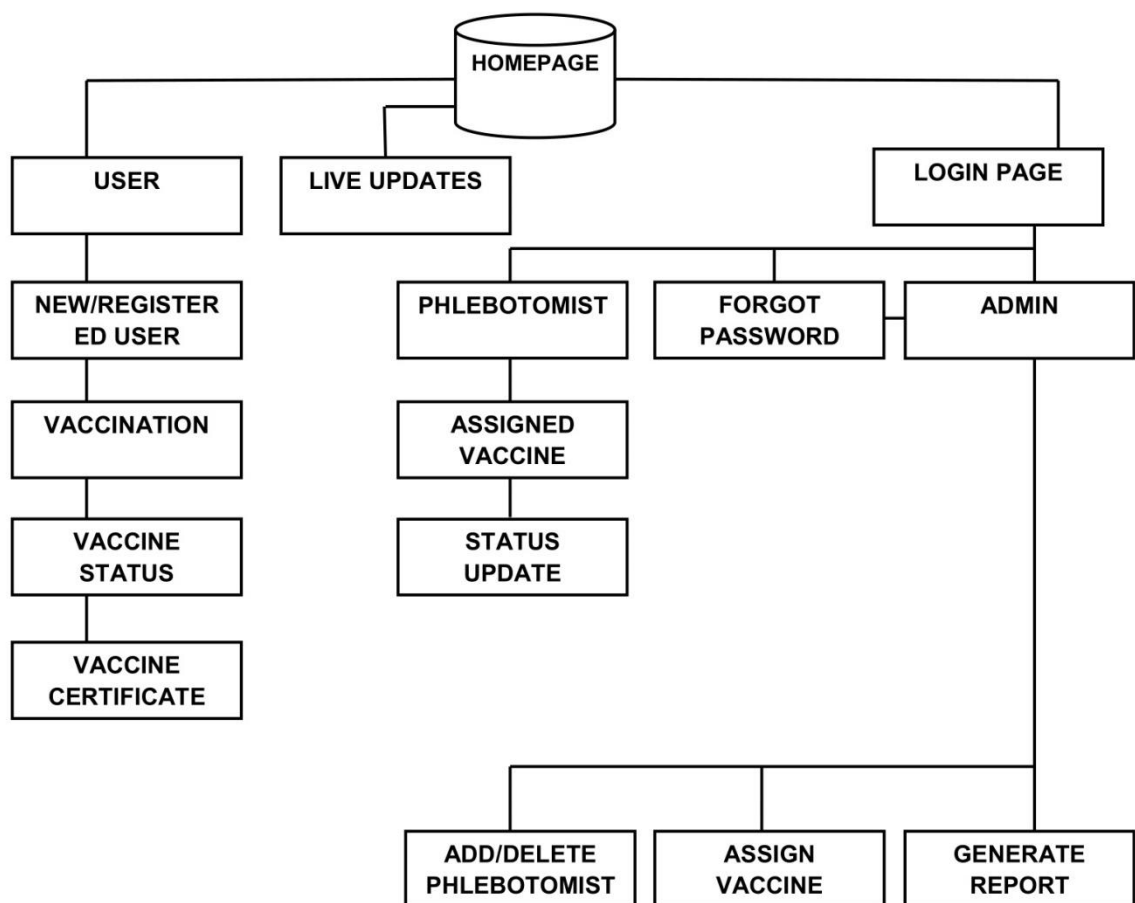
Phlebotomist's *Side bar* consists of *Dashboard*, *Assigned* and *Vaccine Status*. *Dashboard* menu redirects the phlebotomist to their dashboard from any page with the profile. *Assigned* menu shows the bookings that are assigned to any phlebotomists regardless of their profile. *Vaccine Status* redirects the phlebotomist to the *Total Vaccination Status* from anywhere within their profile.

Live Update Module

Live Update Module shows the user can view the current COVID infected cases for Chennai, Thiruvallur and Kancheepuram districts. A bar graph representing daily COVID infected cases in Tamilnadu. A direct link to the official government

COVID updates website is available. Live Update page can be access by anyone from the homepage and it also available in the user's sidebar in the user module.

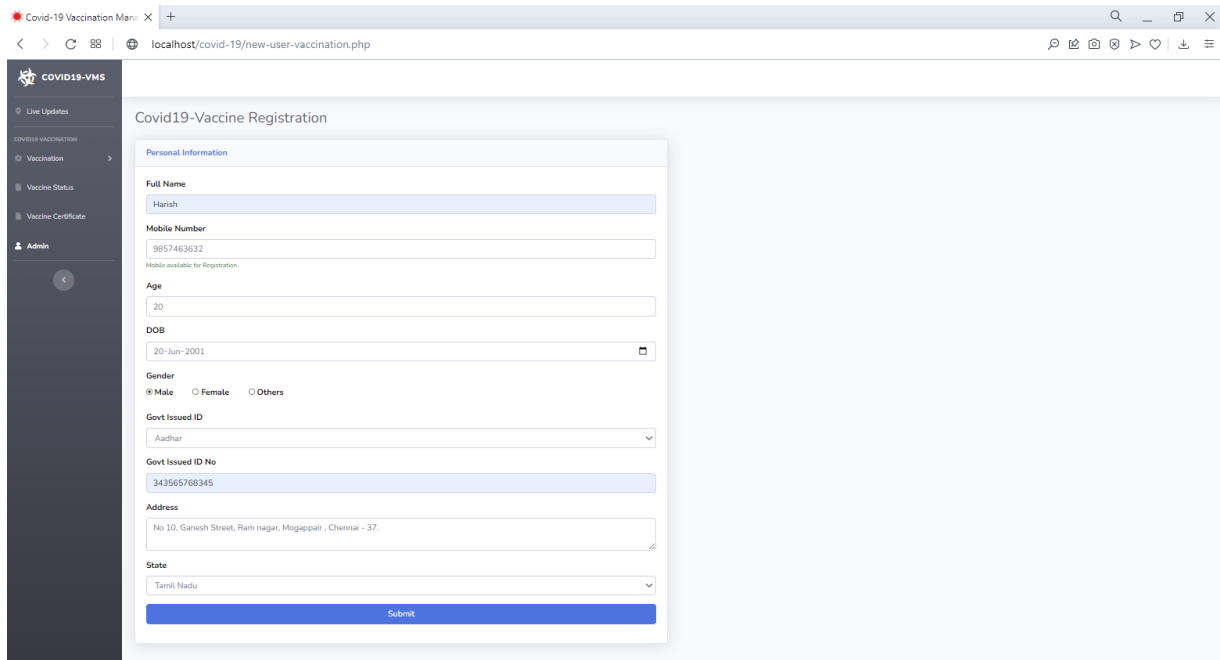
4.3. ARCHITECTURE DIAGRAM



CHAPTER – 5

RESULTS AND DISCUSSION, PERFORMANCE ANALYSIS

User registering his profile:



The screenshot displays a web browser window with the address bar showing 'localhost/covid-19/new-user-vaccination.php'. The page title is 'Covid19-Vaccine Registration'. On the left, there is a dark sidebar with the 'COVID19-VMS' logo and a menu containing 'Live Updates', 'Vaccination' (selected), 'Vaccine Status', 'Vaccine Certificate', and 'Admin'. The main content area features a 'Personal Information' form with the following fields: 'Full Name' (filled with 'Harish'), 'Mobile Number' (filled with '9857463632'), 'Age' (filled with '20'), 'DOB' (filled with '20-Jun-2001'), 'Gender' (radio buttons for 'Male' (selected), 'Female', and 'Others'), 'Govt Issued ID' (dropdown menu with 'Aadhar' selected), 'Govt Issued ID No' (filled with '343565768345'), 'Address' (filled with 'No 10, Ganish Street, Ram nagar, Moggeppai, Chennai - 37.'), and 'State' (dropdown menu with 'Tamil Nadu' selected). A blue 'Submit' button is at the bottom of the form.

Fig 5.1 User Page – New User registration page

This page allows new users to register their profiles and provide their addresses for home delivery. User has to enter every data asked in this page to register their profile. User is required to enter a government ID for verification. Here each textbox has its own condition to be met in order to enter data. The data entered by the user is accessible by the admin of the website and is stored in a database.

Registered users booking Vaccine:

COVID-19 Management System

localhost/covid-19/registered-user-vaccination.php

COVID19-Vaccination | Registered Users

Registered Mobile Number

Please enter your registered mobile number

Search

Result against mobile number "9857463632"

Personal Information

Full Name
Harish

Mobile Number
9857463632

Age
20

DOB (yyyy-mm-dd)
2001-06-20

Gender
Male

Any Govt Issued ID
Aadhar

Govt Issued ID Number
343565768345

Address
No 10, Ganesh Street, Ram nagar, Mogappair, Chennai - 37.

State
Tamil Nadu

Vaccine Information

VaccineType
Covishield

Dosage
1st Dose

Time Slot for Vaccine
23-Mar-2022 03:00 PM

Submit

Fig 5.2 User Page – Registered User Page

Registered Users should enter their mobile number mentioned in their new user page in order to gain access to their profile. Here every data mentioned in new user page is shown. This page allows user to select vaccine of their choices, their vaccine dosage and time slot of their vaccination. Timeslot includes both date and time.

Admin assigning Phlebotomist:

Vaccination Details# 250361886

Personal Information	
Full Name	Harish
Mobile Number	9857463632
Age	20
DOB (Date of Birth)	2001-06-20
Gender	Male
Govt Issued Id	Aadhar
Govt Issued Id No	343565768345
Full Address	No 10, Ganesh Street, Ram nagar, Mogappair , Chennai - 37.
State	Tamil Nadu
Profile Reg Date	2022-03-16 14:58:57

Vaccine Information	
Order Number	250361886
Vaccine	Covishield
Dosage	First Dose
Time Slot	2022-03-23T15:00
Report Status	Not Processed yet

[Assign To](#)

Vaccine Tracking History

No Tracking history found

Assign to

Rajesh-(E20220083)

[Submit](#)

[Close](#)

Fig 5.3, 5.4 Admin Page – New Vaccine Page

Admin checks the user details and assign the vaccination to an available phlebotomist by using *Assign To* button.

Phlebotomist taking action:

COVID-19-VMS

Vaccination Details# 250361886

Personal Information	
Full Name	Harish
Mobile Number	9857463632
Age	20
DOB (Date of Birth)	2001-06-20
Gender	Male
Govt Issued Id	Aadhar
Govt Issued Id No	343565768345
Full Address	No 10, Ganesh Street, Ram nagar, Mogappair , Chennai - 37.
State	Tamil Nadu
Profile Reg Date	2022-03-16 14:58:57

Vaccine Information	
Order Number	250361886
Vaccine	Covishield
Dosage	First Dose
Time Slot	2022-03-23T15:00
Report Status	Assigned
Assign To	Rajesh-(E20220083)
Assigned Date	16-03-2022 03:02:21 PM

Take Action

Vaccine Tracking History

No Tracking history found

COVID-19-VMS

Vaccination Details# 250361886

Personal Information	
Full Name	Harish
Mobile Number	9857463632
Age	20
DOB (Date of Birth)	2001-06-20
Gender	Male
Govt Issued Id	Aadhar
Govt Issued Id No	343565768345
Full Address	No 10, Ganesh Street, Ram nagar, Mogappair , Chennai - 37.
State	Tamil Nadu
Profile Reg Date	2022-03-16 14:58:57

Vaccine Information	
Order Number	250361886
Vaccine	Covishield
Dosage	First Dose
Time Slot	2022-03-23T15:00
Report Status	On the Way
Assign To	Rajesh-(E20220083)
Assigned Date	16-03-2022 03:02:21 PM

Take Action

Vaccine Tracking History

Remark	Status	Remark Date	Action Taken By
we will contact you, when arrived	On the Way	2022-03-16 15:04:34	Rajesh-(E20220083)

Fig 5.5, 5.6 Phlebotomist Page – Total Assigned Vaccine Page

Phlebotomist receives admin's request and can proceed to take action. This page provides every detail about the user and user's vaccination request. Vaccination is carried out at the given address in given date and time. Report and Certificate is generated.

Users downloading their certificate:

COVID-19 VMS | Certificate

localhost/covid-19/patient-search-certificate.php

COVID19-VMS

- Live Updates
- COVID19 VACCINATION
 - Vaccination
 - Vaccine Status
 - Vaccine Certificate
- Admin

Search Certificate

Search By Mobile Number or Order Number

9857463632

Search

Covid19 Management Syst

localhost/covid-19/vaccine-certificate.php

Covid 19 Vaccination Certificate #250361886

Vaccine Certificate

Full Name	Harish
Age	20
Gender	Male
Booking ID	250361886
Vaccine Type	Covishield
Dosage	First Dose
Date of Dose	2022-03-23T15:00
Report Status	Vaccinated

Download Home Page

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Fig 5.7, 5.8 User Page – Certificate Page

User can download their certificate after a vaccination and report update. Users have to enter their mobile number or order number to get their certificate. Download button prints the certificate page as a PDF file.

CHAPTER 6

CONCLUSION AND FUTURE ENHANCEMENT

CONCLUSION:

We would like to conclude by mentioning that our project is working as intended. The website is running every page in every module as planned. The website is receiving and sending data to the user without any drawbacks. The website has a simple and user friendly UI for the users. The live updates page displays a bar graph which provides covid cases information effectively.

FUTURE ENHANCEMENTS:

In the future, we hope to experiment with government ID verification APIs, textboxes with complex conditions and OTP verification for login pages. Additionally, we suspect that we may have opportunities for mobile application counterpart.

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APPENDIX

A. SOURCE CODE

ADMIN LOGIN PAGE:

```
<?php
session_start();
include('includes/config.php');

if(isset($_POST['login']))
{
    $uname=$_POST['username'];
    $Password=md5($_POST['inputpwd']);
    $query=mysqli_query($con,"select ID from tbladmin where
    AdminuserName='$uname' && Password='$Password' ");
    $ret=mysqli_fetch_array($query);
    if($ret>0){
        $_SESSION['aid']=$ret['ID'];
        header('location:dashboard-v.php');
    }
    else{
        echo "<script>alert('Invalid Details.');";
    }
}
?>

<!DOCTYPE html>
<html lang="en">
```

<head>

<meta charset="utf-8">

<meta http-equiv="X-UA-Compatible" content="IE=edge">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>Covid19 VMS Admin Login</title>

<!-- CSS -->

<link rel="stylesheet"

href="http://fonts.googleapis.com/css?family=Roboto:400,100,300,500">

<link rel="stylesheet" href="assets/bootstrap/css/bootstrap.min.css">

<link rel="stylesheet" href="assets/font-awesome/css/font-awesome.min.css">

<link rel="stylesheet" href="assets/css/form-elements.css">

<link rel="stylesheet" href="assets/css/style.css">

<!-- HTML5 Shim and Respond.js IE8 support of HTML5 elements and media queries -->

<!-- WARNING: Respond.js doesn't work if you view the page via file:// -->

<!--[if lt IE 9]>

<script

src="https://oss.maxcdn.com/libs/html5shiv/3.7.0/html5shiv.js"></script>

<script

src="https://oss.maxcdn.com/libs/respond.js/1.4.2/respond.min.js"></script>

<![endif]-->

<!-- Favicon and touch icons -->

<link rel="shortcut icon" href="assets/ico/virus-solid.ico">

<link rel="apple-touch-icon-precomposed" sizes="144x144" href="assets/ico/apple-touch-icon-144-precomposed.png">

```

    <link rel="apple-touch-icon-precomposed" sizes="114x114"
href="assets/ico/apple-touch-icon-114-precomposed.png">
    <link rel="apple-touch-icon-precomposed" sizes="72x72"
href="assets/ico/apple-touch-icon-72-precomposed.png">
    <link rel="apple-touch-icon-precomposed" href="assets/ico/apple-touch-icon-
57-precomposed.png">

```

```

</head>

```

```

<body>

```

```

    <!-- Top content -->

```

```

    <div class="top-content">

```

```

        <div class="inner-bg">

```

```

            <div class="container">

```

```

                <div class="row">

```

```

                    <div class="col-sm-8 col-sm-offset-2 text">

```

```

                        <h1><strong>Covid-19 VMS</strong></h1>

```

```

                        <div class="description">

```

```

                            </div>

```

```

                    </div>

```

```

                </div>

```

```

                <div class="row">

```

```

                    <div class="col-sm-6 col-sm-offset-3 form-box">

```

```

                        <div class="form-top">

```

```

                            <div class="form-top-left">

```

```

                                <h3>Admin Login</h3>

```

```

                                    <p>Enter your username and password to log on:</p>

```

```

                                </div>

```

```

        <div class="form-top-right">
            <i class="fa fa-lock"></i>
        </div>
    </div>

    <div class="form-bottom">
        <form role="form" action="" method="post" class="login-form">
            <div class="form-group">
                <label class="sr-only" for="username">Username</label>
                <input type="text" name="username" placeholder="Username"
class="username" id="username">
            </div>
            <div class="form-group">
                <label class="sr-only" for="inputpwd">Password</label>
                <input type="password" name="inputpwd"
placeholder="Password" class="inputpwd" id="inputpwd">
            </div>

            <button type="submit" name="login" class="btn"
value="login">Log in!</button>
        </form>

    </div>

    </div>

    <div>
        </div>
    </div>
    <div class="row">
        <div class="col-sm-6 col-sm-offset-3 social-login">
            <h3 style="color:black"><strong>...switch login with:</strong></h3>
            <div class="social-login-buttons">
                <a class="btn btn-link-2" href="Phel-login.php">
                    <i class="fa fa-user-md"></i> Phlebotomist

```

```

        </a>
        <a class="btn btn-link-2" href="login.php">
            <i class="fa fa-user"></i> Admin
        </a>
        <a class="btn btn-link-2" href="password-recovery.php">
            <i class="fa fa-unlock-alt"></i> Forgot Password
        </a>
    </div>
</div>
</div>
</div>
</div>

<!-- Javascript -->
<script src="assets/js/jquery-1.11.1.min.js"></script>
<script src="assets/bootstrap/js/bootstrap.min.js"></script>
<script src="assets/js/jquery.backstretch.min.js"></script>
<script src="assets/js/scripts.js"></script>

<!--[if lt IE 10]>
    <script src="assets/js/placeholder.js"></script>
<![endif]-->

</body>

</html>

```