

Database
Management
Mini Project

VaccoBook

Access to medicines 24X7 is a basic right of all citizens as a medical emergency can never be predetermined

Message to our users

STAY HOME

STAY SAFE

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Database Management Mini Project

Introduction:-

In this pandemic, where citizens of India are not able to find proper facilities of Oxygen, transportation and Vaccination. We are here with our website named VaccoBook which provides you details of transportation, hospital, oxygen and beds availability and one can also register oneself for COVID-19 vaccination at the nearest vaccination centers.

Tools :-

For website Designing (Frontend Tools):

We used

- HTML
- CSS

Introduction for HTML

The HyperText 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. Tags such as `` and `<input />` directly introduce content into the page. Other tags such as `<p>` surround and provide information about document text and may include other tags as sub-elements. Browsers do not display the HTML tags, but use them to interpret the content of the page.

HTML can embed programs written in a scripting language such as JavaScript, which affects the behavior and content of web pages. Inclusion of CSS defines the look and layout of content. The World Wide Web Consortium (W3C), former maintainer of the HTML and current maintainer of the CSS standards, has encouraged the use of CSS over explicit presentational HTML since 1997.

Introduction for CSS

CSS is used to control the style of a web document in a simple and easy way.

CSS is the acronym for "Cascading Style Sheet". This tutorial covers both the versions CSS1,CSS2 and CSS3, and gives a complete understanding of CSS, starting from its basics to advanced concepts.

Cascading Style Sheets, fondly referred to as CSS, is a simple design language intended to simplify the process of making web pages presentable.

- Create Stunning Website - CSS handles the look and feel part of a web page. Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colors are used, layout designs, variations in display for different devices and screen sizes as well as a variety of other effects.
- Become a web designer - If you want to start a career as a professional web designer, HTML and CSS designing is a must skill.
- Control web - CSS is easy to learn and understand but it provides powerful control over the presentation of an HTML document. Most commonly, CSS is combined with the markup languages HTML or XHTML.
- Learn other languages - Once you understand the basics of HTML and CSS then other related technologies like javascript, php, or angular are easier to understand.

For Database (Backend Tools):

- PHP Language
- Xampp Server
- MySQL in the Database
- Apache Module

Introduction for PHP Language

PHP started out as a small open source project that evolved as more and more people found out how useful it was. Rasmus Lerdorf unleashed the first version of PHP way back in 1994.

- PHP is a recursive acronym for "PHP: Hypertext Preprocessor".
- PHP is a server side scripting language that is embedded in HTML. It is used to manage dynamic content, databases, session tracking, even build entire e-commerce sites.
- It is integrated with a number of popular databases, including MySQL, PostgreSQL, Oracle, Sybase, Informix, and Microsoft SQL Server.
- PHP is pleasingly zippy in its execution, especially when compiled as an Apache module on the Unix side. The MySQL server, once started, executes even very complex queries with huge result sets in record-setting time.
- PHP supports a large number of major protocols such as POP3, IMAP, and LDAP. PHP4 added support for Java and distributed object architectures (COM and CORBA), making n-tier development a possibility for the first time.
- PHP is forgiving: PHP language tries to be as forgiving as possible.

- PHP Syntax is C-Like.

Introduction for XAMPP Server

XAMPP is a free and open-source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of the Apache HTTP Server, MariaDB database, and interpreters for scripts written in the PHP and Perl programming languages. Since most actual web server deployments use the same components as XAMPP, it makes transitioning from a local test server to a live server possible.

Introduction for MySQL

MySQL is a fast, easy-to-use RDBMS being used for many small and big businesses. MySQL is developed, marketed and supported by MySQL AB, which is a Swedish company. MySQL is becoming so popular because of many good reasons –

- MySQL is released under an open-source license. So you have nothing to pay to use it.
- MySQL is a very powerful program in its own right. It handles a large subset of the functionality of the most expensive and powerful database packages.
- MySQL uses a standard form of the well-known SQL data language.
- MySQL works on many operating systems and with many languages including PHP, PERL, C, C++, JAVA, etc.
- MySQL works very quickly and works well even with large data sets.
- MySQL is very friendly to PHP, the most appreciated language for web development.
- MySQL supports large databases, up to 50 million rows or more in a table. The default file size limit for a table is 4GB, but you can increase this (if your operating system can handle it) to a theoretical limit of 8 million terabytes (TB).
- MySQL is customizable. The open-source GPL license allows programmers to modify the MySQL software to fit their own specific environments.

Overview:-

- The website has User And Admin Login methods.
- For this when people enter their credentials, the details will be compared with the ones in the xampp server.
- New Users can sign-up and are then redirected to the Login Page
- Users can view a collection of hospitals and book hospitals according to vaccine availability.
- After booking the user booking details will be stored in the server, which the admins can access to view.
- Admins can login to add, remove, or view the data.

The aim of our website ‘VaccoBook’ is to give details about hospitals which provide proper oxygen supply and beds, ventilators, transportation that fulfill their needs and even all citizens

above 18 are able to register themselves for COVID-19 vaccination at the nearest vaccination centers.

These 2 things are related to our database management. Admin can update these details as per situation and information provided by hospitals.

PHP-MySQL Connection in Backend:-

Both MySQLi and PDO have their advantages:

PDO will work on 12 different database systems, whereas MySQLi will only work with MySQL databases.

So, if you have to switch your project to use another database, PDO makes the process easy. You only have to change the connection string and a few queries. With MySQLi, you will need to rewrite the entire code - queries included.

Both are object-oriented, but MySQLi also offers a procedural API.

Both support Prepared Statements. Prepared Statements protect from SQL injection, and are very important for web application security.

Three ways of working with PHP and MySQL:

- MySQLi (object-oriented)
- MySQLi (procedural)
- PDO

Open a Connection to MySQL:-Before we can access data in the MySQL database, we need to be able to connect to the server:

```
// Check connection
if (mysqli_connect_error()) {
    die("Database connection failed: " . mysqli_connect_error());
}
```

Close the Connection:-The connection will be closed automatically when the script ends. To close the connection before, use the following:

```
$conn->close();
```

Creating a Database

To create and delete a database you should have admin privilege. It's very easy to create a new MySQL database. PHP uses mysql_query function to create a MySQL database. This function takes two parameters and returns TRUE on success or FALSE on failure.

1	SQL	Required - SQL query to create a database
2	Connection	Optional - if not specified then last opened connection by mysql_connect will be used.

Selecting a Database

Once you establish a connection with a database server then it is required to select a particular database where all the tables are associated.

This is required because there may be multiple databases residing on a single server and you can do work with a single database at a time.

PHP provides a function mysql_select_db to select a database. It returns TRUE on success or FALSE on failure.

1	db_name	Required - Database name to be selected
2	Connection	Optional - if not specified then last opened connection by mysql_connect will be used.

Creating Database Tables

To create tables in the new database you need to do the same thing as creating the database. First create the SQL query to create the tables then execute the query using mysql_query() function.

Working with Output:-

Login Page

- Users and admin are able to login through this page after filling required details.

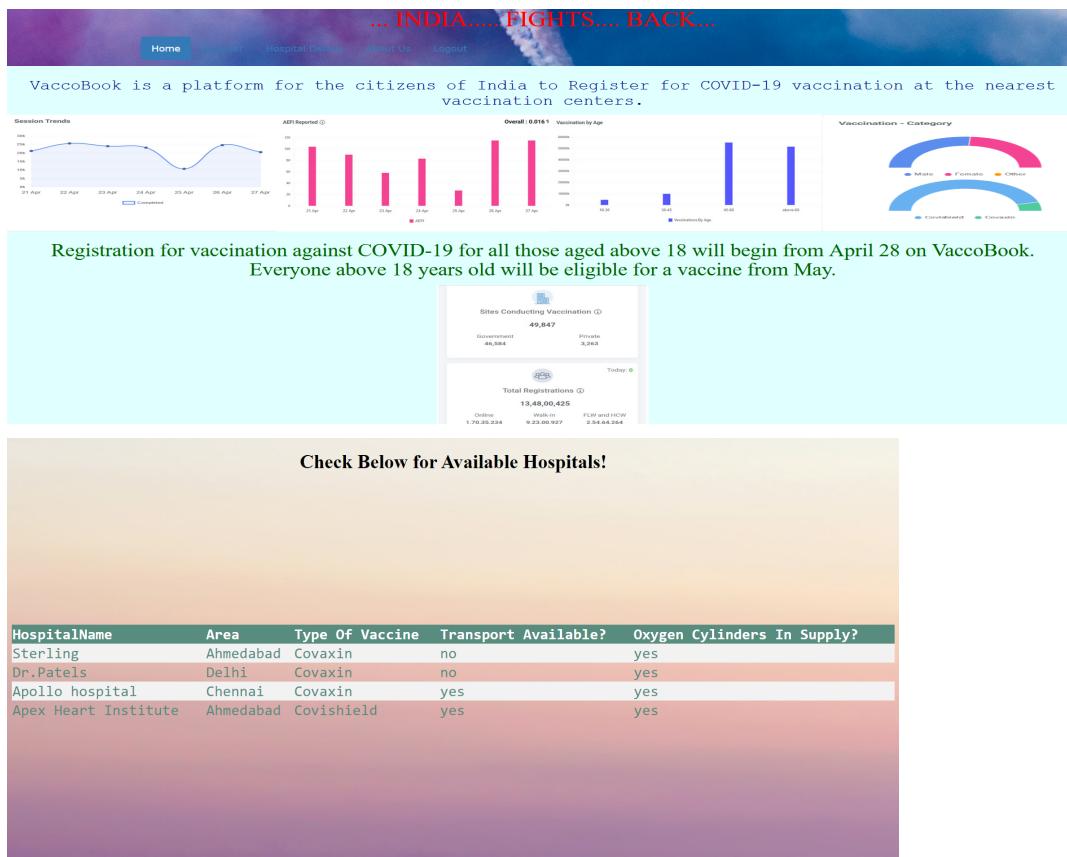


Main Page

- After filling the required details, users will be allowed to see our main page which provides them hospital, vaccination details and also register themselves for COVID vaccination and admins are allowed to update further details according to the information provided by higher authorities.

For Users

The home Page - Hospital Booking Page - Available Hospital Details- Confirmation Page



The screenshot shows the "Hospital Booking" form with a blue header. The form fields include:

- User Name:
- Hospital Name:
- Area:
- Vaccine Name:
- Transportation Needed or not:
-

Booking Done successfully. Confirmation Of Your Hospital
Hospital: Sahil
Area Chosen: Apollo
Vaccination: Delhi
Transport: Covishield
Oxygen and Beds: yes

For Admins

Admin Main Page - Add New Hospital Details to the DataBase, Remove - View User Bookings



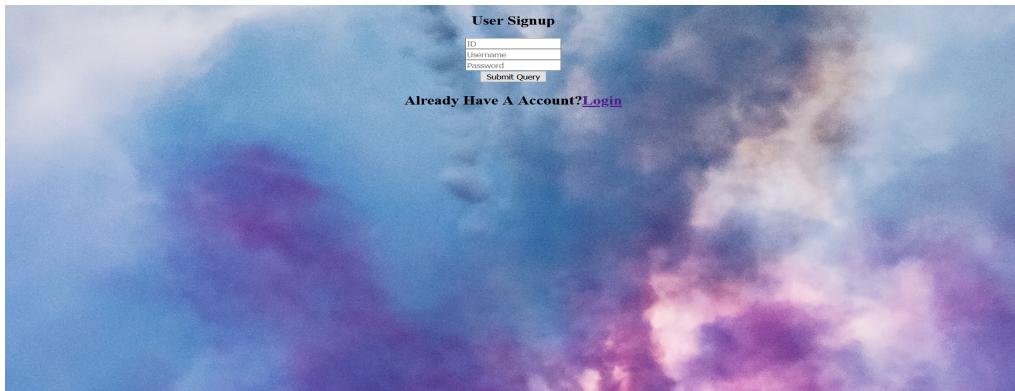
The image shows a screenshot of a form titled "Add Hospital Records in Database". The form contains five input fields with placeholder text: "Hospital Name:", "Area:", "Vaccine Available:", "Transportation Available?", and "Oxygen Available?". Below the input fields is a single "Submit" button. The background of the form is a blurred image of a colorful, abstract cloud or smoke pattern.

Add Hospital Records in Database	
Hospital Name:	<input type="text"/>
Area:	<input type="text"/>
Vaccine Available:	<input type="text"/>
Transportation Available?	<input type="text"/>
Oxygen Available?	<input type="text"/>
<input type="button" value="Submit"/>	

Only Admins can view this - All User Data

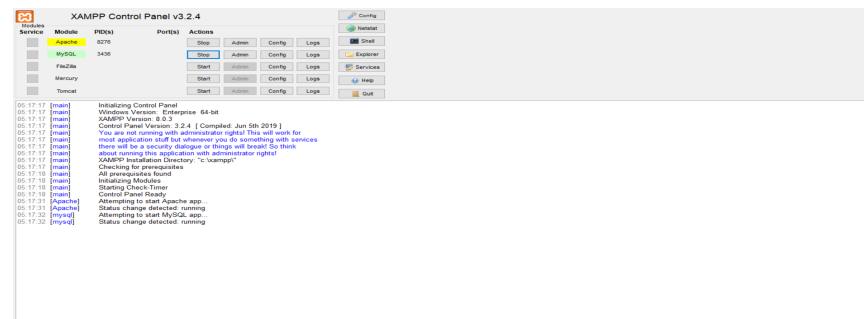
Username	Hospital Name	Area	Vaccination	Transportation
Chaman	Zydus	Ahmedabad	Covishield	No

Sign Up page- For new users



For Backend:- Xampp and mysql

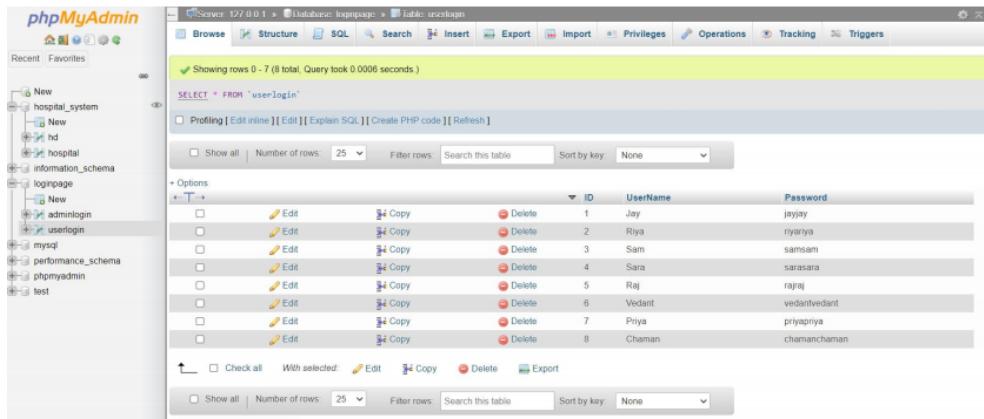
XAMPP Control Panel



XAMPP Server with the Database

LoginPage DataBase

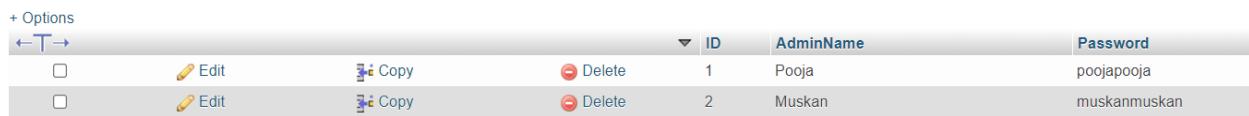
User table



The screenshot shows the phpMyAdmin interface for the 'userlogin' table. The table has columns: ID, UserName, and Password. The data is as follows:

ID	UserName	Password
1	Jay	jayjay
2	Riya	riyariya
3	Sam	samsam
4	Sara	sarasara
5	Raj	rajal
6	Vedant	vedantivedant
7	Priya	priyapriya
8	Chaman	chamanchaman

Admin Table

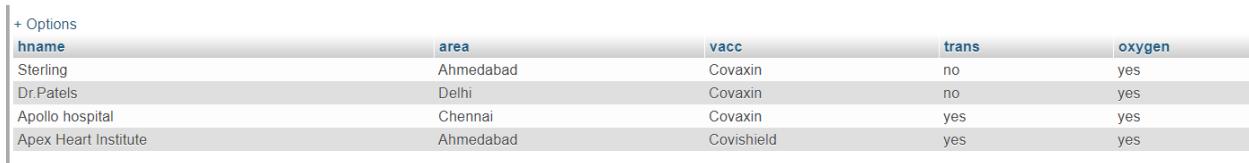


The screenshot shows the phpMyAdmin interface for the 'adminlogin' table. The table has columns: ID, AdminName, and Password. The data is as follows:

ID	AdminName	Password
1	Pooja	poojapooja
2	Muskan	muskanmuskan

Hospital System DataBase

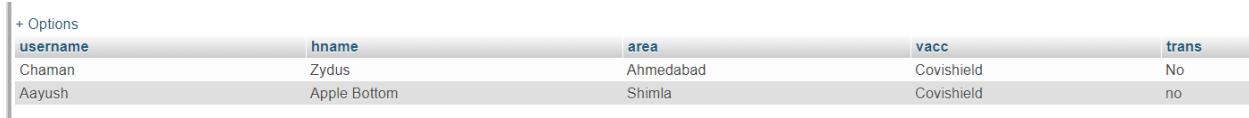
Available Hospital Details - Can be viewed by users, Can be updated by Admins only



The screenshot shows the phpMyAdmin interface for the 'hospital_system' table. The table has columns: hname, area, vacc, trans, and oxygen. The data is as follows:

hname	area	vacc	trans	oxygen
Sterling	Ahmedabad	Covaxin	no	yes
Dr Patels	Delhi	Covaxin	no	yes
Apollo hospital	Chennai	Covaxin	yes	yes
Apex Heart Institute	Ahmedabad	Covishield	yes	yes

User Booking Details - Can only be viewed by Admins for safe-keeping and record-keeping



The screenshot shows the phpMyAdmin interface for the 'booking' table. The table has columns: username, hname, area, vacc, and trans. The data is as follows:

username	hname	area	vacc	trans
Chaman	Zydus	Ahmedabad	Covishield	No
Aayush	Apple Bottom	Shimla	Covishield	no

Future Scope:-

This project as a whole can be used to keep a check on various hospitals, and to book a slot for vaccines depending on the availability.

This project has scope to improve in the future :-

- Filter out Hospitals Area-wise based on the area the user is from.
- Be able to provide live statistics of the situation outside such as how many citizens of India get registered for vaccines, how many get doses and also can be classified according to their age groups.
- We can get in touch with doctors to add a self test page to determine if one is at the risk of getting corona or not, etc

References:-

- W3School
- TutorialPoint
- GeeksForGeeks