2022

# PERSONAL MEDICAL DATABASE SYSTEM

**PREPARED BY: -**

**SHRINATH KORAJKAR**
**AND**
**PRATHAMESH CHOUGULE**

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY

JNANA SANGAMA, BELAGAVI – 590014

*A V$^{th}$ Semester Mini-Project Report on*

# "PERSONAL MEDICAL DATABASE SYSTEM"

*Submitted in partial fulfillment of the requirements for the award of degree of*

**BACHELOR OF ENGINEERING**
**IN**
**COMPUTER SCIENCE AND ENGINEERING**

Submitted by:


**Shrinath Korajkar** **2AG19CS073**

**Prathamesh Chougule** **2AG19CS047**


Under the Guidance of


**Prof. Gautam Dematti**
**Assistant Professor, Dept. of CSE,**
**AITM, Belagavi.**



## ANGADI INSTITUTE OF TECHNOLOGY & MANAGEMENT
## BELAGAVI-590009
## 2021-2022

**ANGADI INSTITUTE OF TECHNOLOGY & MANAGEMENT**
**BELAGAVI -590009**
**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**


# Certificate

This is to certify that Project entitled **"Personal Medical Database System"** is work carried out by Shrinath Korajkar (2AG19CS073) and Prathamesh Chougule (2AG19CS047) in partial fulfillment of the requirements for the award of the degree of **Bachelor of Computer Science & Engineering under Visvesvaraya Technological University, Belagavi** during the year 2021-2022. It is certified that all the correction/suggestion indicated for internal assessment have been incorporated in the report. The Database Management System 5th Semester Mini-Project report has been approved as it satisfies the academic requirements in respect of mini-project work prescribed for the Bachelor of Engineering degree.

| | | |
|---|---|---|
| Signature of the Guide | Signature of the HOD | Signature of the Principal |
| Prof. Gautam Dematti | Prof. Sagar Birje | Dr. Anand Deshpande |
| Assistant Professor, | Assistant Professor and head | Principal and Director, |
| Dept. of CSE, AITM | Dept. of CSE, AITM | AITM, Belagavi |

**Name of the Examiner:** **Signature with date:**

**1.**_____ _____

**2.**_____ _____

# DECLARATION

We **Shrinath Korajkar (2AG19CS073), Prathamesh Chougule (2AG19CS047),** studying in the 5th semester of Bachelor of Engineering in Computer Science and Engineering at Angadi Institute of Technology and Management, Belagavi, hereby declare that this mini project work entitled **"Personal Medical Database System"** which is being submitted by us in the partial fulfillment for the award of the degree of Bachelor of Engineering in Computer Science and Engineering from Visvesvaraya Technological University, Belagavi is an authentic record of us carried out during the academic year 2021-2022 under the guidance of **Prof. Gautam Dematti,** Department of Computer Science and Engineering, Angadi Institute of Technology and Management, Belagavi.

We further undertake that the matter embodied in the dissertation has not been submitted previously for the award of any degree or diploma by us to any other university or institution.

Place: Belagavi **Shrinath Korajkar**

Date: **Prathamesh Chougule**

# ACKNOWLEDGEMENT

It is our proud privilege and duty to acknowledge the kind of help and guidance received from several people in preparation of this report. It would not have been possible to prepare this report in this form without their valuable help, cooperation and guidance.

First and foremost, we wish to record our sincere gratitude to **Management of Angadi Institute of Technology and Management, Belagavi** and to our beloved Principal **Dr. Anand Deshpande,** Angadi Institute of Technology and Management, Belagavi for his constant support and encouragement in preparation of this report and for making available library and laboratory facilities needed to prepare this report.

Our sincere thanks to our HOD **Prof. Sagar Birje,** Department of Computer Science and Engineering, Angadi Institute of Technology and Management, Belagavi for his valuable suggestions and guidance throughout the period of this report.

We express our sincere gratitude to our guide **Prof. Gautam Dematti,** Department of Computer Science and Engineering, Angadi Institute of Technology and Management, Belagavi for guiding us in investigations for this seminar and in carrying out experimental work. Our numerous discussions with him were extremely helpful. I hold him in esteem for guidance, encouragement and inspiration received from him.

The mini-project on **"Personal Medical Database System"** was very helpful to us in giving the necessary background information and inspiration in choosing this topic for the project.

Last but not the least, we wish to thank our **parents** for financing our studies in this college as well as for constantly encouraging us to learn engineering. Their personal sacrifice in providing this opportunity to learn engineering is gratefully acknowledged.

**Shrinath Korajkar**

**Prathamesh Chougule**

# ABSTRACT

*The purpose of the project entitled as "PERSONAL MEDICAL DATABASE SYSTEM" is to develop a software which stores medical history of an individual identified by a global unique id. It is user friendly simple, fast, and cost – effective. It deals with the collection of patient's information, medical history, personal and medical details, diagnosis details, etc. Traditionally, it was done manually. The main function of the system is register and store patient details and doctor details and retrieve these details as and when required, and also to manipulate these details meaningfully. System input contains patient details, diagnosis details, while system output is to get these details on to the screen. The Personal Medical Database System can be entered for doctor using a doctor id and password and for patients using their Aadhaar number. It is accessible either by patient or doctor but only the doctor is having permission to add data into the database. The data can be retrieved easily by anyone with the help of Aadhaar number. The data are well protected for personal use and makes the data processing very fast. It can be accessed from any part of world by the user and in any clinic, hospital, medical Institutes by any doctor.*

# TABLE OF CONTENTS

# Chapter 1

# INTRODUCTION

The project "Personal Medical Database System" includes registration of patients, storing their details into the system. The software has the facility to give a unique id for every patient and stores the details of every patient automatically. It includes a search facility to know the current status of each room. User can search availability of a doctor and the details of a patient using the id. Personal Medical Database System is powerful, flexible, and easy to use and is designed and developed to deliver real conceivable benefits to patients.

It is an integrated end-to-end Personal Medical Database System that provides relevant information across the hospital to support effective decision making for patient care. The application is actually a suite of applications developed using PHP. It is simple to understand and can be used by anyone who is not even familiar with simple employee's system. It is user friendly and just asks the user to follow step by step operations by giving him few options. It is fast and can perform many operations of a company or organization. This software project has been developed using the powerful coding tools of HTML, CSS and PHP at Front End and MySQL Server at Back End. The software is very user friendly. The project contains modules like user and doctor. This version of the software has multi-user approach. For further enhancement or development of the package, user's feedback will be considered.

## Introduction to DBMS:

A database management system (DBMS) refers to the technology for creating and managing databases. DBMS is a software tool to organize (create, retrieve, update and manage) data in a database.

Databases (or DBs) have played a very important part in the recent evolution of computers. The first computer programs were developed in the early 1950s, and focused almost completely on coding languages and algorithms. At the time, computers were basically giant calculators and data (names, phone numbers) was considered the leftovers of processing information. Computers were just starting to become commercially available, and when business people started using them for real-world purposes, this leftover data suddenly became important. IBM had invested heavily in the IMS model, and wasn't terribly interested in Codd's ideas. Fortunately, some people who didn't work for IBM "were" interested. In 1973, Michael Stonebreaker and Eugene Wong (both then at UC Berkeley) made the decision to research relational database systems.

The project was called INGRES (*Interactive Graphics and Retrieval System*), and successfully demonstrated a relational model could be efficient and practical. INGRES worked with a query language known as QUEL, in turn, pressuring IBM to develop SQL in 1974, which was more advanced (SQL became ANSI and OSI standards in 1986 1nd 1987). SQL quickly replaced QUEL as the more functional query language.

A Document Store (often called a document-oriented database), manages, stores, and retrieves semi-structured data (also known as document-oriented information). Documents can be described as independent units that improve performance and make it easier to spread data across a number of servers. Document Stores typically come with a powerful query engine and indexing controls that make queries fast and easy. Examples of Document Stores are: Mongo DB, and Amazon Dynamo DB.

Document-oriented databases store all information for a given “object” within the database, and each object in storage can be quite different from the others. This makes it easier for mapping objects to the database and makes document storage for web programming applications very attractive. (An “object” is a set of relationships. An article object could be related to a tag [an object], a category [another object], or a comment [another object]).

Formally, a "database" refers to a set of related data and the way it is organized. Access to this data is usually provided by a "database management system" (DBMS) consisting of an integrated set of computer software that allows users to interact with one or more databases and provides access to all of the data contained in the database (although restrictions may exist that limit access to particular data).

The DBMS provides various functions that allow entry, storage and retrieval of large quantities of information and provides ways to manage how that information is organized. Because of the close relationship between them, the term "database" is often used casually to refer to both a database and the DBMS used to manipulate it outside the world of professional information technology, the term *database* is often used to refer to any collection of related data (such as a spreadsheet or a card index) as however size and usage requirements typically necessitate use of a database management system.

## 1.1 SQL:

Structure Query Language (SQL) is a database query language used for storing and managing data in Relational DBMS. SQL was the first commercial language introduced for E.F Codd's **Relational** model of database. Today almost all RDBMS (MySQL, Oracle, Informix, Sybase, MS Access) use **SQL** as the standard database query language. SQL is used to perform all types of data operations in RDBMS.

## 1.2 SQL Commands:

SQL defines following ways to manipulate data stored in an RDBMS.

## DDL: Data Definition Language

This includes changes to the structure of the table like creation of table, altering table, deleting a table etc.

All DDL commands are auto-committed. That means it saves all the changes permanently in the database.

| Command | Description |
|---|---|
| Create | to create new table or database |
| Alter | for alteration |
| Truncate | delete data from table |
| Drop | to drop a table |
| Rename | to rename a table |

## DML: Data Manipulation Language:

DML commands are used for manipulating the data stored in the table and not the table itself.

DML commands are not auto-committed. It means changes are not permanent to database, they can be rolled back.

| Command | Description |
|---|---|
| Insert | to insert a new row |
| Update | to update existing row |
| Delete | to delete a row |
| Merge | merging two rows or two tables |

## TCL: Transaction Control Language:

These commands are to keep a check on other commands and their effect on the database. These commands can annul changes made by other commands by rolling the data back to its original state. It can also make any temporary change permanent.

| Command | Description |
|---|---|
| Commit | to permanently save |
| Rollback | to undo change |
| Save point | to save temporarily |

## Data Control Language:

Data control language are the commands to grant and take back authority from any database user.

| Command | Description |
|---|---|
| Grant | grant permission of right |
| Revoke | take back permission. |

## DQL: Data Query Language:

Data query language is used to fetch data from tables based on conditions that we can easily apply.

| Command | Description |
|---|---|
| Select | retrieve records from one or more table |

# Chapter 2

# METHODOLOGY

## 2.1 About PHP

**PHP:** Hypertext Pre-processor is a widely used, general-purpose scripting language that was originally designed for web development to produce dynamic web pages. For this purpose, PHP code is embedded into the HTML source document and interpreted by a web server with a PHP processor module, which generates the web page document.

As a general-purpose programming language, PHP code is processed by an interpreter application in command-line mode performing desired operating system operations and producing program output on its standard output channel. It may also function as a graphical application. PHP is available as a processor for most modern web servers and as standalone interpreter on most operating systems and computing platforms.

PHP was originally created by Rasmus Lerdorf in 1995 and has been in continuous development ever since. The main implementation of PHP is now produced by the PHP Group and serves as the de facto standard for PHP as there is no formal specification. PHP is free software released under the PHP License.

PHP is a general-purpose scripting language that is especially suited to server-side web development where PHP generally runs on a web server. Any PHP code in a requested file is executed by the PHP runtime, usually to create dynamic web page content. It can also be used for command-line scripting and client-side GUI applications. PHP can be deployed on most web servers, many operating systems and platforms, and can be used with many relational database management systems. It is available free of charge, and the PHP Group provides the complete source code for users to build, customize and extend for their own use.

Originally designed to create dynamic web pages, PHP now focuses mainly on server-side scripting, and it is similar to other server-side scripting languages that provide dynamic content from a web server to a client, such as Microsoft's Active Server Pages, Sun Microsystems' Java Server Pages, and mod_perl. PHP has also attracted the development of many frameworks that provide building blocks and a design structure to promote rapid application development (RAD). Some of these include CakePHP, Symfony, Code Igniter and Zend Framework, offering features similar to other web application frameworks.

## 2.2 PHP Syntax:

HTML and PHP code is written on the same page, and to distinguish PHP code from HTML, the PHP code is enclosed within <?php , ?> Tags.

For example:

```
<html>

<head><title>php basics</title></head>

<body>

<h2>HELLO</h1><?php echo "hello";

?>

</body>

</html>
```

In the above example PHP code is embedded within HTML. In this way PHP and HTML coding is combined on the same page.

Since PHP is a server-side scripting language, the PHP coding cannot be seen by the end user through view source option, due to this feature PHP is very secure.

PHP is a parsed language; therefore, PHP environment is necessary at the server for running PHP scripts.

## 2.3 Working Of PHP:

When a client requests web page containing PHP code from the server, then the requested PHP pages are parsed under PHP environment and interaction with database is made if required.

After server-side processing, the resulting HTML pages are passed to client and displayed on the browser. In this way the working of php is complete.

## 2.4 Connecting PHP Application to MySQL Database

1. Make a connection variable to the database:

   $con = mysqli_connect ("localhost", "servername", "password");

   Here $con is a connection variable to database.

2. Select database over that connection variable

   $db = mysqli_select_db("databasename", $con) ;

3. Prepare a sql query to execute:

   $qry = Select * from abc ;

4. Run the sql query:

   $result = mysqli_query($con, $qry) ;

5. Iterate over the result:

   while ($row = mysqli_fetch_assoc($result))

   {

   //some logic

   }

## 2.5 Introduction to APACHE SERVER:

In this project Apache server is used to parse and execute PHP pages, before deploying websites on the server, the website should be tested at the developer side to get a feel of how the website will work on actual server. Therefore, Apache server is like a local server on the developer side, Apache server should be informed about the environment on which it should work. In our project Apache server is configured to work with PHP, in this way all the PHP pages are parsed and executed by the server. When Apache is installed on the system, then its services is controlled by Apache service monito.

# Chapter 3

# SYSTEM REQUIREMENTS

## 3.1 Hardware Requirements:

- Speed - 1.1 GHz
- RAM - 2 GB
- Hard Disk - 20 GB
- Key Board - Standard Keyboard
- Mouse - PS/2 Mouse
- Monitor - Plug and play monitor

## 3.2 Software Requirements:

- OPERATING SYSTEM : Windows 10/11.
- WEB SERVER : Wamp2.2e, Apache, XAMPP Control Panel.
- FRONT END : Html, CSS ,Visual Studio Code ,Bootstrap, java script.
- SERVER SIDE SCRIPT : Php.
- DATABASE : MySQL.

# Chapter 4

# DIAGRAMS

## 4.1 E-R Diagram

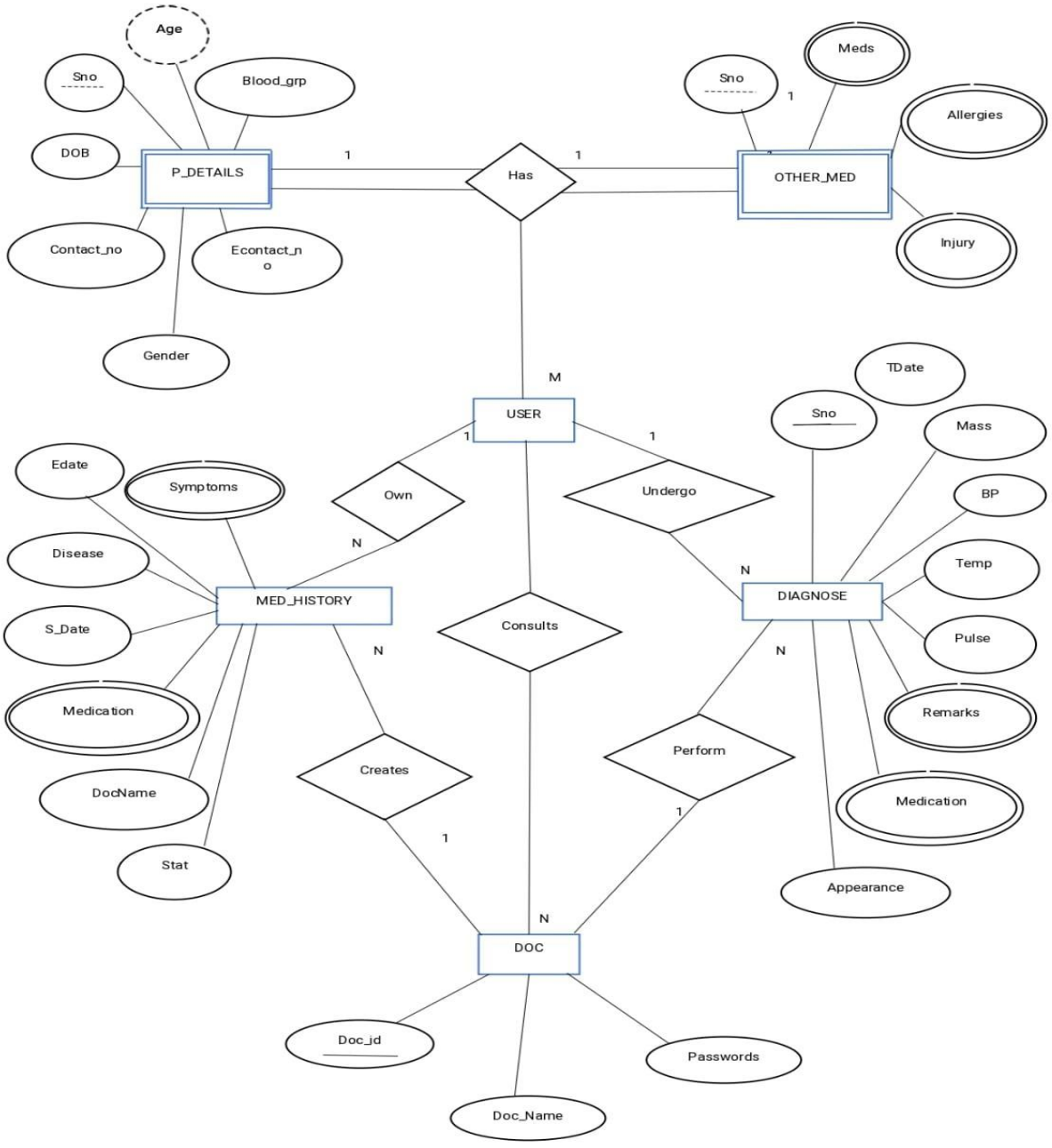



Figure 4.1.1: ER Diagram of Personal Medical Database System

ER-Diagram is a pictorial representation of data that describes how data is communicated and related to each other.

## 4.2 Schema Diagram

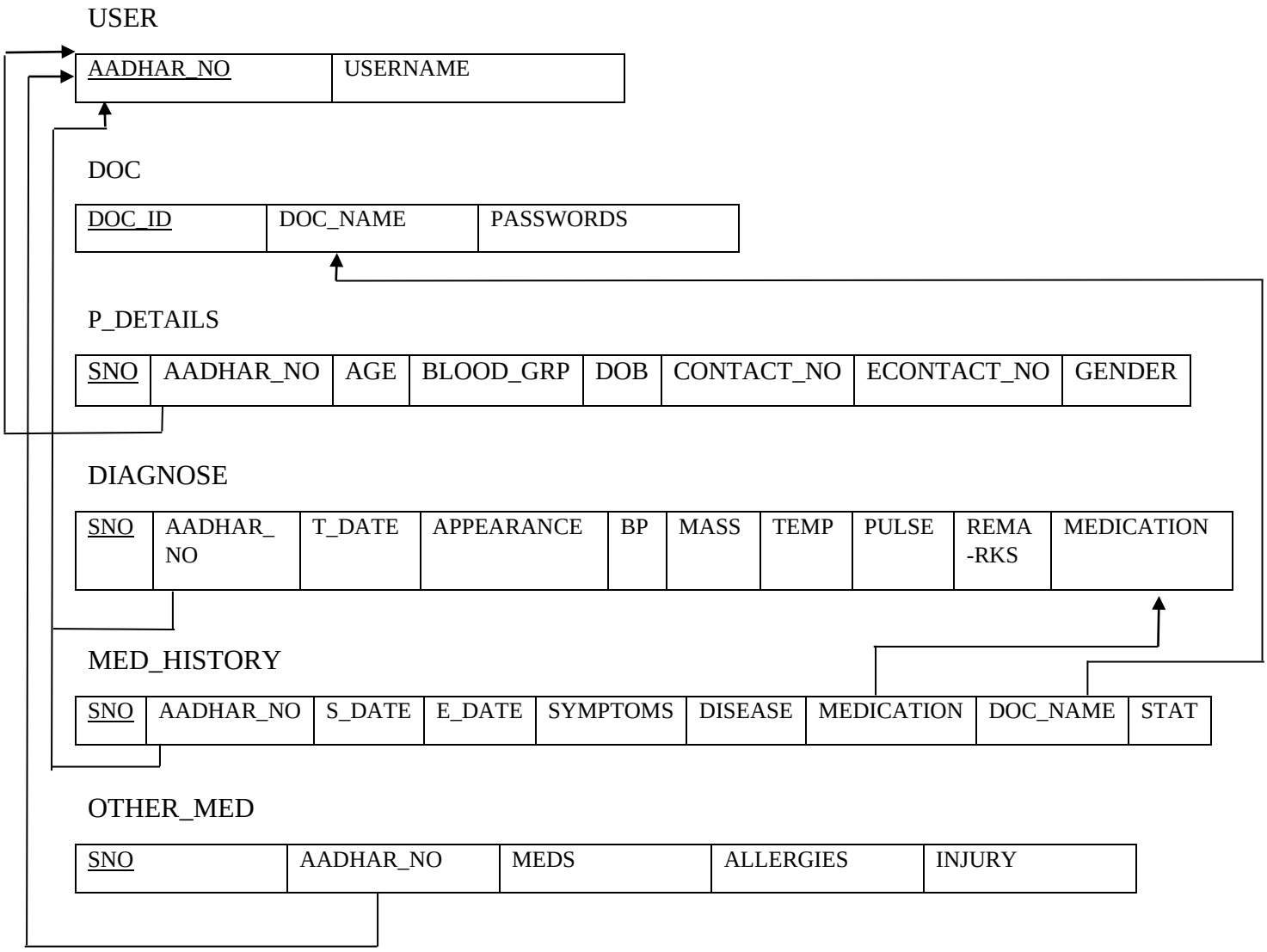



Figure 4.2.1: Schema Diagram of Personal Medical Database System

A schema is an outline, diagram, or model. In computing, schemas are often used to describe the structure of different types of data.

# Chapter 5

# IMPLEMENTATION

**Project Name** : PERSONAL MEDICAL DATABASE SYSTEM

**Language Used** : PHP

**Database** : MySQL

**User Interface Design** : BOOTSTRAP, JQUERY, JAVASCRIPT

**Web Browser** : Mozilla, Google Chrome, OPERA, Microsoft edge

**Software** : XAMPP / Wamp / Mamp/ Lamp (anyone)

## How to run the Personal Medical Database System

1. Extract the file and copy xampp in htdocs folder

2.Paste inside root directory (for xampp xampp/htdocs, for wamp wamp/www, for lamp var/www/html)

3. Open PHPMyAdmin (http://localhost/phpmyadmin)

4. Create a database with name medlifedb

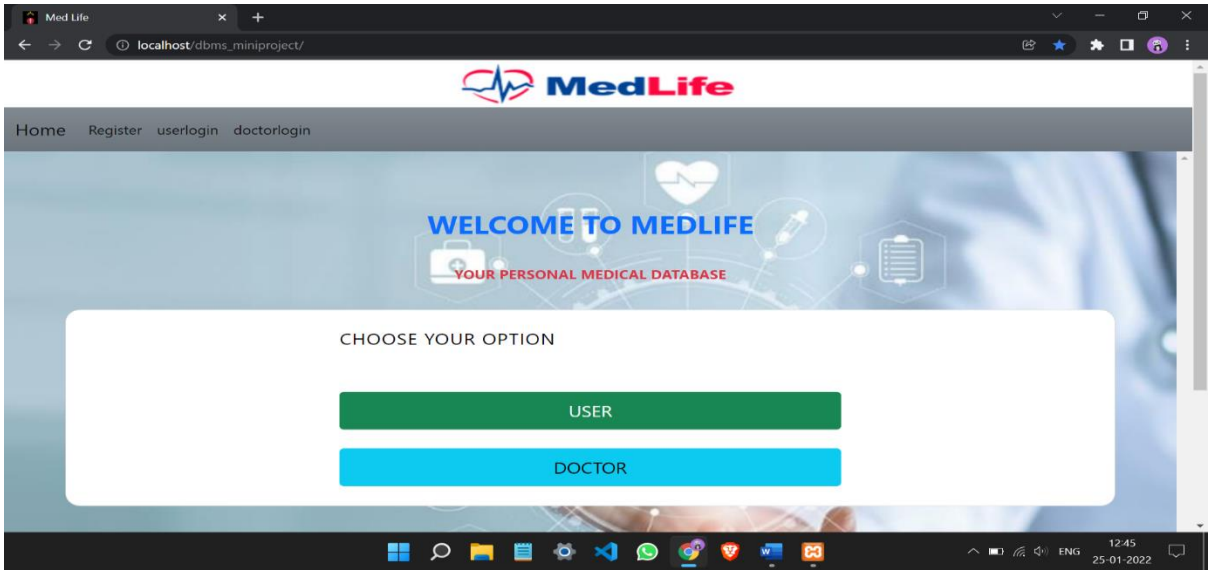
5. Import querries.sql file (given inside the zip package in assets folder)

6.Run the script http://localhost/medlife/

# Chapter 6

# SNAPSHOTS

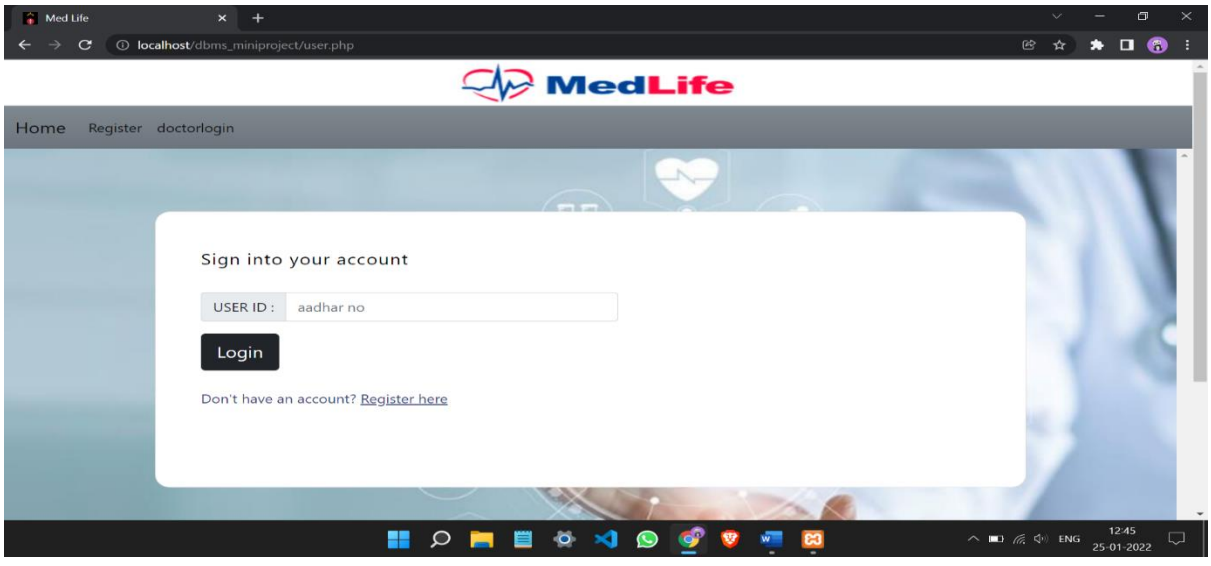
## 6.1 Home page:




Snapshot 6.1.1: Home Page

This is the home page of MedLife web application. It is first page visible to user.

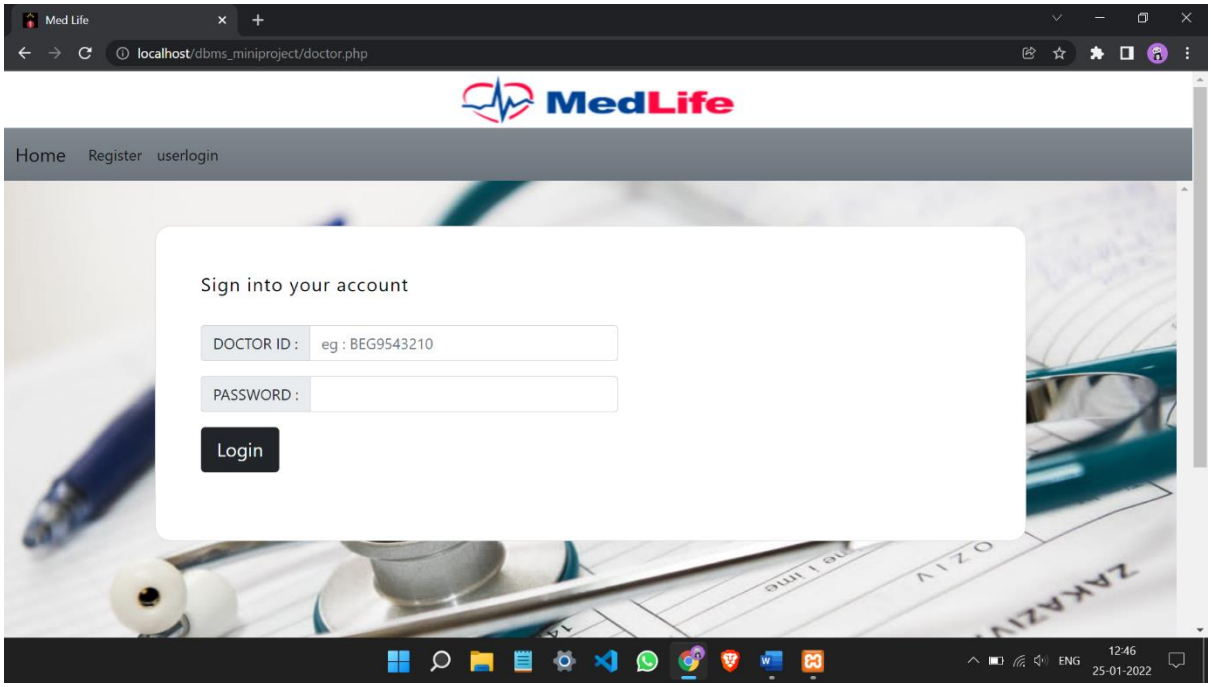
## 6.2 User Login:




Snapshot 6.2.1: User Login

Snapshot 6.2.1 shows the user login page, where user id is Aadhaar no of user/patient.

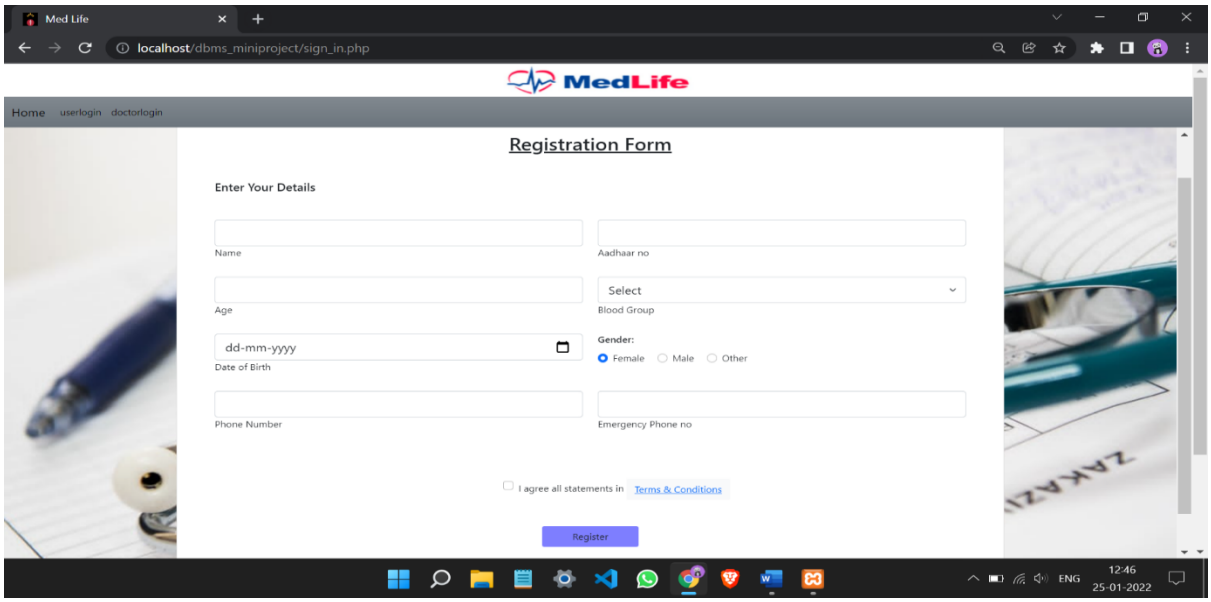
## 6.3 Doctor Login:




Snapshot 6.3.1: Doctor Login

Snapshot 6.3.1 shows doctor login page.

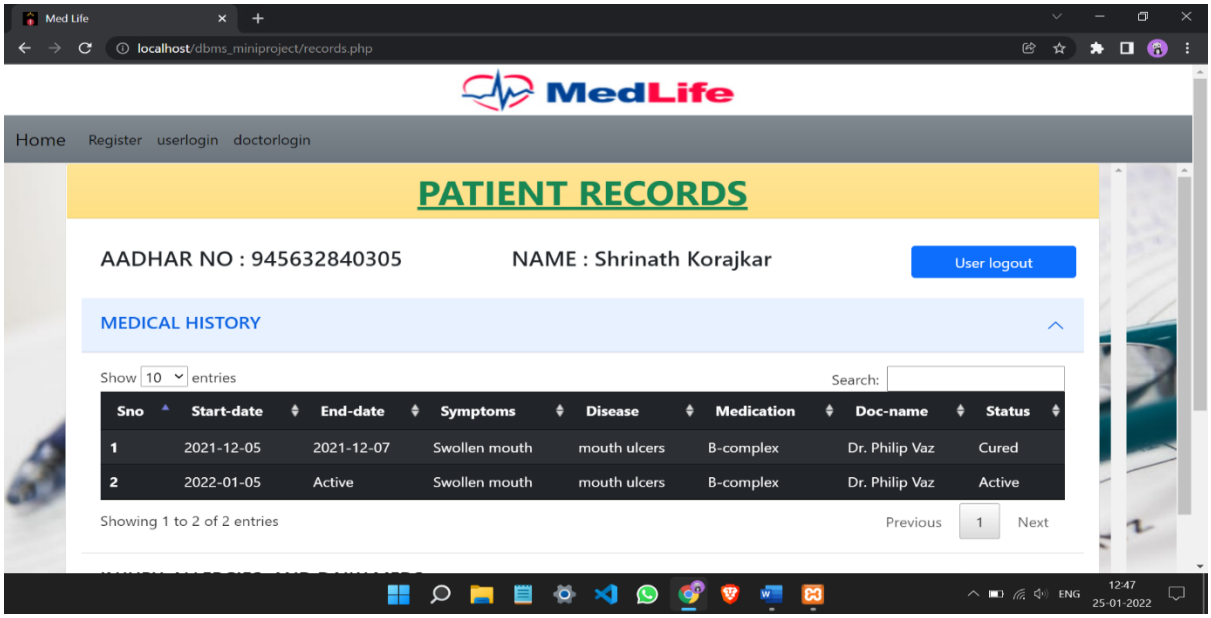
## 6.4 Registration page:




Snapshot 6.4.1: Registration Page

Snapshot 6.4.1 shows registration form for user if he/she is not having any account.

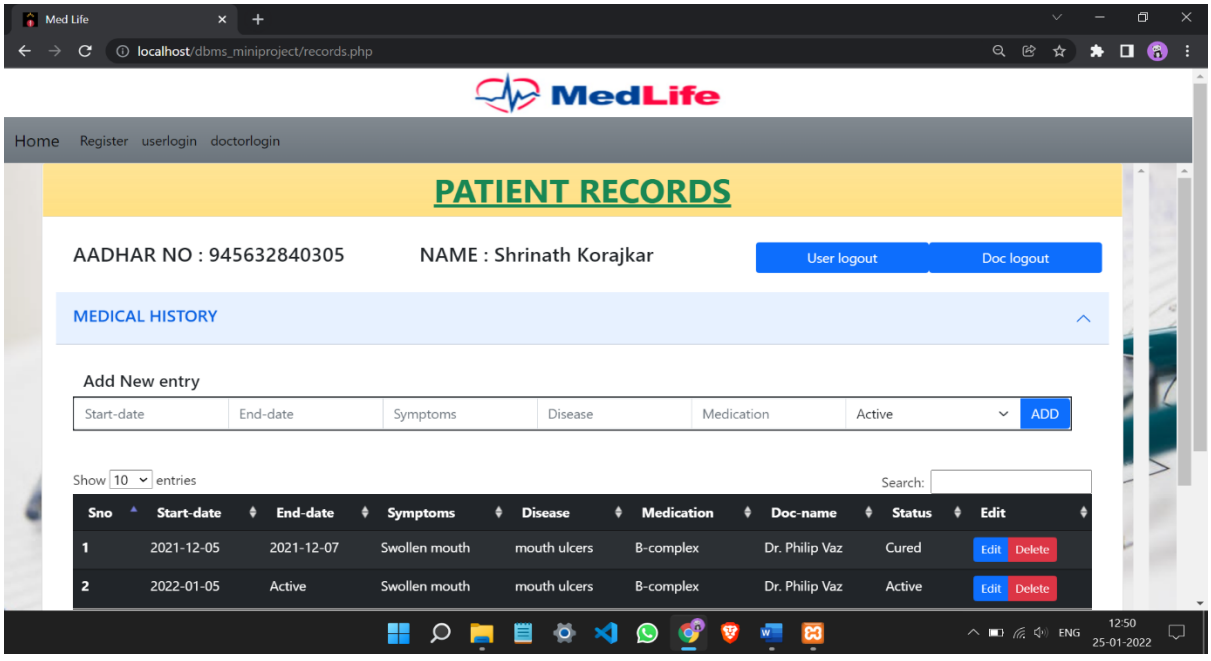
## 6.5 User View:




Snapshot 6.5.1: User View

The above picture is user interface visible to user after login.

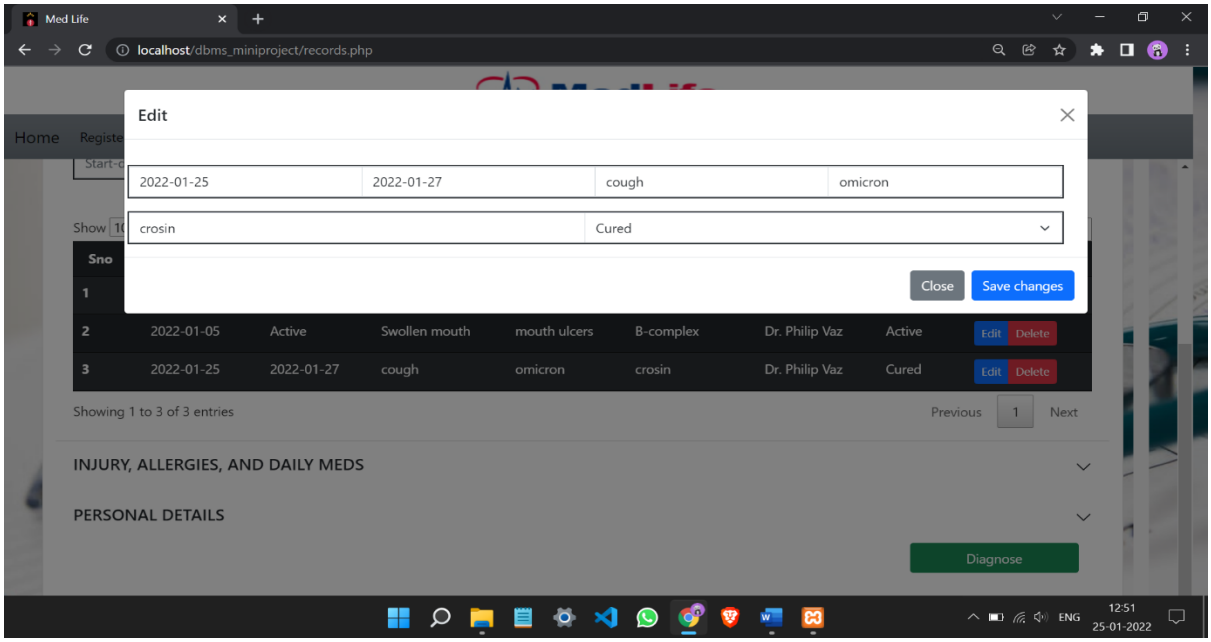
## 6.6 Doctor View of Records Page:




Snapshot 6.6.1: Doctor's view

The above patient records interface visible to doctor after login of particular patient.

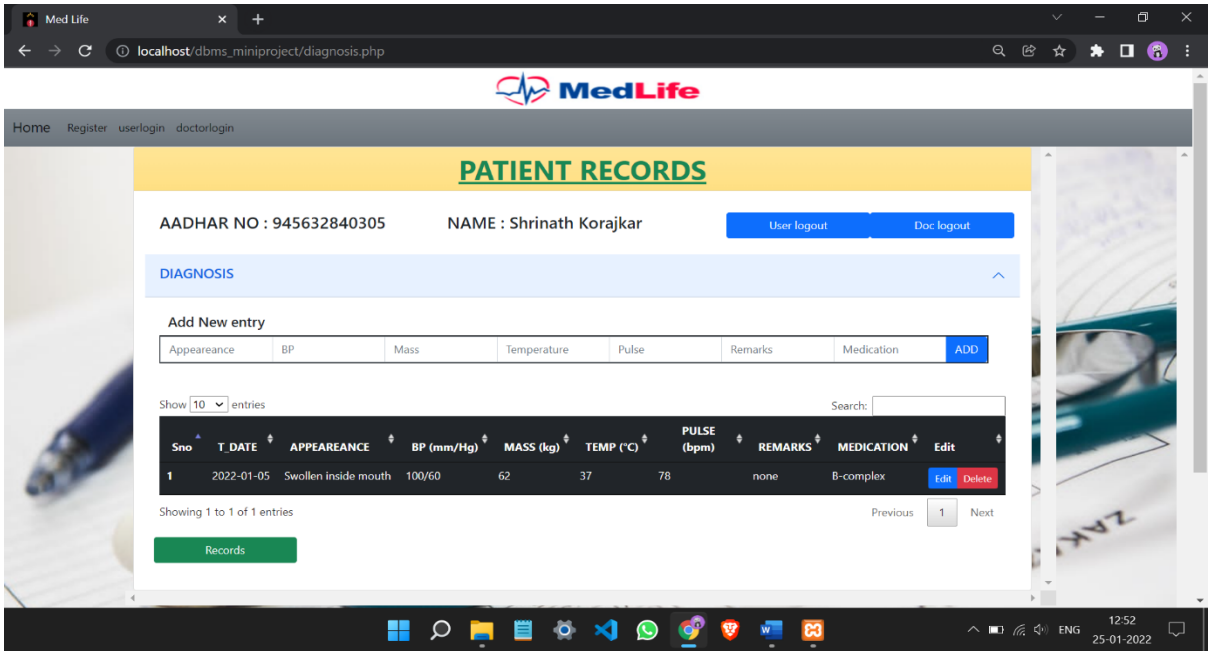
## 6.7 Edit Page:




Snapshot 6.7.1: Edit Page

This is pop up page for adding entry in the patient records after clicking on edit button.

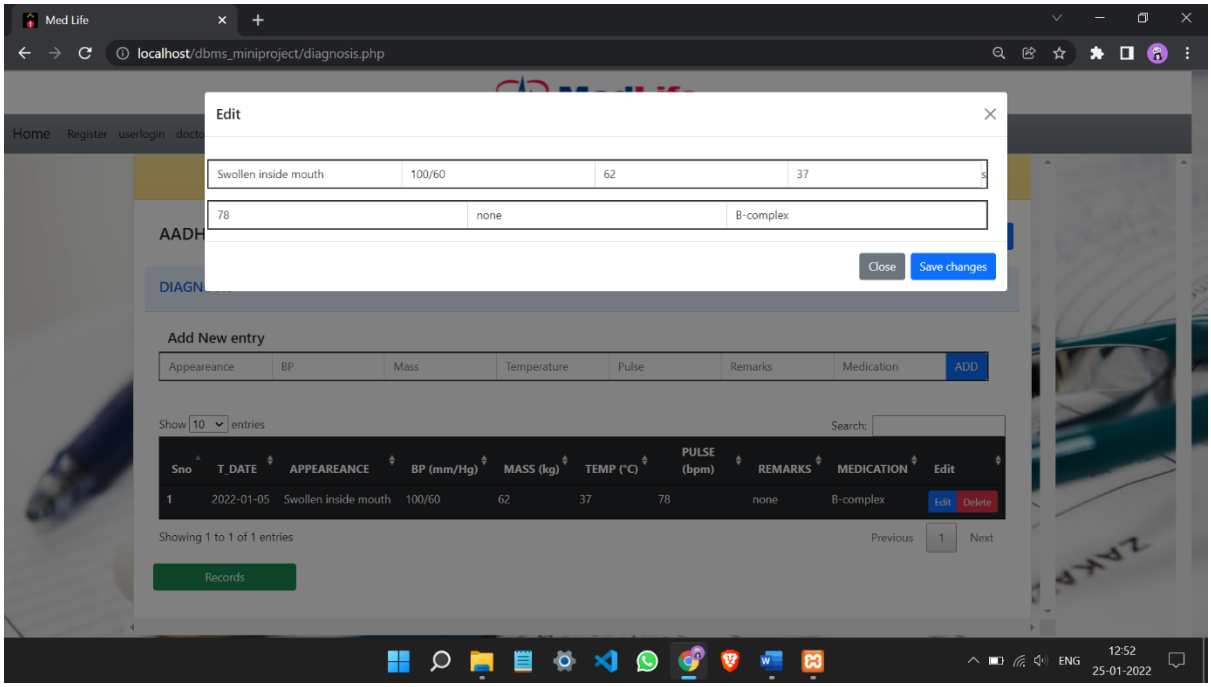
## 6.8 Diagnose Page:




Snapshot 6.8.1: Diagnose Page

Snapshot 6.8.1 shows the Diagnose page of the patient to the doctor.

## 6.9 Diagnose Edit page:




Snapshot 6.9.1: Diagnose Edit Page

The above picture Shows the pop up page for editing the diagnose records of the patient to the doctor after clicking edit button.

Doctor can edit, add, delete the records of patient but user/patient can only view his records and cannot modify them.

# Chapter 7

## CONCLUSION

"Personal Medical Database System" Overall, the system is useful for all the users to maintain information at various levels. It connects doctors and patients and thus easy to maintain medical records of every Individual. Now doctor can easily set the task or any notifications to the respective employees without having a person to send to employees and employees can apply for leave or reply with task allotted to them. It has been a great pleasure for me to work on this exciting and challenging project.

This project proved good for us as it provided practical knowledge of not only programming in PHP, HTML, CSS and Oracle My SQL Server Developer working of web-based application, but also about all handling procedure related with Advance and new technology. It also provides knowledge about the latest technology used in developing web enabled application and client server technology that will be great demand in future. This will provide better opportunities and guidance in future in developing projects independently.

# REFERENCES

1.Fundamentals of Database System, RamezElmasri and Shamkant B. Navathe, 7th Edition, 2017, Pearson.

2.Coronel, Morris, and Rob, Database Principles Fundamentals of Design, Implementation and Management, Cengage Learning 2012.

3. Database Management System, Ramakrishnan, and Gehrke, 3rd Edition, 2014, McGraw Hill.

4. https://www.youtube.com/c/CodeWithHarry/

5. https://www.youtube.com/c/ApnaCollegeOfficial/

6. https://getbootstrap.com/

7. https://stackoverflow.com/