A

Project Report

On

ONLINE HOSPITAL MANAGEMENT SYSTEM

Submitted to

RAJIV GANDHI UNIVERSITY OF KNOWLEDGE AND TECHNOLOGIES
RK VALLEY

in partial fulfilment of the requirement for the award of the Degree of

BACHELOR OF TECHNOLOGY

In

COMPUTER SCIENCE & ENGINEERING

Submitted by

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Under the Guidance of

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

RAJIV GANDHI UNIVERSITY OF KNOWLEDGE AND TECHNOLOGIES

(catering the Educational Needs of Gifted Rural Youth of AP)

R.K Valley, Vempalli(M), Kadapa(Dist) – 516330

Rajiv Gandhi University of Knowledge Technologies

RK Valley, Kadapa (Dist), Andhra Pradesh, 516330

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

2023-2024

CERTIFICATE OF PROJECT COMPLETION

This is to certify that the project report entitled "***ONLINE HOSPITAL MANAGEMENT SYSTEM***" being submitted by **K. JAYASREE [R180885], M. SINDHU [R180114], G. REDDY LATHA [R180004]** under my guidance and supervision and is submitted to **DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING** in partial fulfilment of requirements for the award of Bachelor of Technology in Computer Science and Engineering during the academic year 2023-2024 and it has been found worthy of Acceptance According to the requirements of the University.

Signature of Internal Guide
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M.Tech, (Ph.D.),
Assistant Professor
Dept. Of CSE

Signature of HOD
Dr. P. RAVI KUMAR
M.E. (IISC, Bangalore),
Ph.D. (University of AIZU, Japan),
Head of the Department **,**
RGUKT RK Valley.

Signature of External Examiner

DECLARATION

We hereby declare that the project report entitled **"ONLINE HOSPITAL MANAGEMENT SYSTSEM" submitted** to the **Department** of **COMPUTER SCIENCE AND ENGINEERING** in partial fulfilment of requirements for the award of the degree of **BACHELOR OF TECHNOLOGY**. This project is the result of our own effort and that it has not been submitted to any other University or Institution for the award of any degree or diploma other than specified above.

WITH SINCERE REGARDS

K.JAYASREE	**R180885**
G.REDDY LATHA	**R180004**
M.SINDHU	**R180114**

ACKNOWLEDGEMENT

We have great pleasure in expressing our hearty thanks to our beloved Director **Prof. A V S S KUMARA SWAMI GUPTHA** for spending his valuable time with us to complete this project.

We would like to express our gratefulness and sincere thanks to **Dr. P. RAVI KUMAR** Head of the Department of COMPUTER SCIENCE AND ENGINEERING, for his kind help and encouragement during the course of our study and in the successful completion of the project work.

We thankful to our project guide **Mr. K. VINOD KUMAR** for his valuable guidance and encouragement. His helping attitude and suggestions have helped us in the successful completion of the project work.

Successful completion of any project cannot be done without proper support and encouragement. We sincerely thanks to the Management for providing all the necessary facilities during the course of study.

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ABSTRACT

Our project Hospital Management system includes registration of patients, storing their details into the system, and also computerized billing in the pharmacy, and labs. Our software has the facility to give a unique id for every patient and stores the details of every patient and the staff automatically. User can search availability of a doctor and the details of a patient using the id.

The Hospital Management System can be entered using username and password. It is accessible either by an administrator or receptionist. Only they can add data into the database. The data can be retrieved easily. The interface is very user-friendly. The data are well protected for personal use and makes the data processing very fast. By leveraging advanced technologies, the HMS will streamline administrative processes, improve resource utilization, enhance patient care, and facilitate data-driven decision-making. This project seeks to contribute to the efficiency and effectiveness of hospital operations while prioritizing patient-centric services and organizational sustainability.

INTRODUCTION

In today's digital age, the healthcare sector faces a multitude of challenges ranging from administrative bottlenecks to ensuring seamless patient care. This project sets out to develop an innovative Online Hospital Management System (OHMS) that revolutionizes how hospitals operate and deliver services. By harnessing the capabilities of web-based technologies, the OHMS will provide a comprehensive solution for managing patient data, appointments, medical records, inventory, billing, and analytics. This initiative aims to empower healthcare professionals with a user-friendly and efficient platform, paving the way for improved operational workflows, better resource utilization, enhanced patient experiences, and informed decision-making. Ultimately, the OHMS endeavors to usher in a new era of efficiency, accessibility, and quality in hospital management practices.

Problem Statement:

The problem statement for an Online Hospital Management System (OHMS) revolves around the existing challenges and inefficiencies encountered in traditional hospital management practices. These challenges include manual record-keeping leading to data inaccuracies and delays, inefficient appointment scheduling causing long wait times and patient dissatisfaction, lack of real-time inventory tracking leading to supply shortages or wastage, complex billing processes resulting in billing errors and delays in revenue realization, and the absence of comprehensive analytics hindering data-driven decision-making. Addressing these issues is critical for hospitals to enhance operational efficiency, improve patient care quality, optimize resource utilization, and achieve sustainable growth in today's dynamic healthcare landscape.

Objectives:

An online hospital management system serves multiple objectives, aiming to streamline operations, enhance patient care, and improve overall efficiency within a healthcare facility. Here are some common objectives:

1. Billing and Financial Management: Automate billing processes, manage insurance claims, and streamline financial transactions to improve revenue cycle management and financial transparency.

2. Enhanced Communication: Facilitate communication among healthcare staff, patients, and administrators through secure messaging systems, telemedicine platforms, and patient portals.

3. Efficient Appointment Scheduling: Allow patients to book appointments online, reducing wait times, minimizing no-shows, and optimizing the utilization of healthcare provider schedules.

4. Streamlined Patient Management: Enable efficient management of patient records, including registration, appointment scheduling, medical history, treatment plans, and discharge summaries.

5. Inventory and Supply Chain Management: Streamline inventory management processes for medical supplies, equipment, and pharmaceuticals, ensuring adequate stock levels, reducing waste, and preventing stock outs.

6. Emergency Preparedness and Responses: Engage patients in their healthcare journey by providing access to educational resources, appointment reminders, health monitoring tools, and personalized health information.

Existing System:

The current Hospital Management System mostly relies on manual or semi-automatic methods for tasks like patient registration, appointment scheduling, billing, and inventory management. This can lead to mistakes, inefficiencies, and delays in patient care. The new Hospital Management System plans to upgrade and improve hospital operations by using digital technology. It will automate tasks like patient registration, appointment scheduling, billing, and inventory management, making things quicker and more accurate. With features like online appointment booking and electronic records, the new system aims to provide better healthcare services to patients.

Proposed System:

The proposed Online Hospital Management System (OHMS) aims to revolutionize traditional hospital administration by introducing a robust and integrated digital platform. This system will facilitate seamless management of patient information, streamline appointment scheduling processes, automate inventory control, simplify billing procedures, and provide advanced analytics capabilities. By leveraging the power of web-based technologies, the OHMS will empower healthcare professionals with real-time access to critical data, enabling them to

make informed decisions promptly. The proposed system's user-friendly interface and comprehensive features are designed to enhance operational efficiency, optimize resource utilization, improve patient care outcomes, and ultimately elevate the overall quality of healthcare services provided by the hospital.

Motivation:

Hospital Management System (HMS) is essential to the delivery of modern healthcare. It can boost patient outcomes, lower medical errors, and improve the overall quality of care. It enables hospitals with a centralized platform to manage their operations, automate mundane processes, and enhance communication. Elevate healthcare efficiency and enhance the overall experience for staff and patients. HMS aims to simplify the workflow for clinicians, reduce administrative costs, diminish errors, and provide a better patient experience.

Tools and Technologies Used:

JAVA:

Java is a widely-used programming language known for its versatility and platform independence. Its object-oriented approach simplifies code organization and promotes reusability. Java programs run on the Java Virtual Machine (JVM), making them compatible across different operating systems. The language's extensive standard library provides ready-made tools for various tasks like networking, database connectivity, and graphical user interface (GUI) development. Java's automatic memory management and strong security features contribute to its reliability, making it suitable for developing a wide range of applications, from web and mobile apps to enterprise-level systems.

HTML:

It is a markup language for formatting and displaying web documents and web pages. It gives basic structure to the webpage without any stylling.HTML elements tell the browser how to display the content. It can be assisted by technologies such as Cascading Style Sheets and scripting languages such as Javascript for styling and functionality.

CSS:

It gives styling for the web pages created by HTML. It gives look and feel to the website.

JAVASCRIPT:

JavaScript is a scripting language used to create and control dynamic website content, i. e. anything that moves, refreshes, or otherwise changes on your screen without requiring you to manually reload a web page. Features like: animated graphics. Photo slideshows. Bootstrap: Bootstrap is a free, open source front-end development framework for the creation of websites and web apps. Designed to enable responsive development of mobile-first websites, Bootstrap provides a collection of syntax for template designs.

SQL:

Structured query language (SQL) is a programming language for storing and processing information in a relational database. A relational database stores information in tabular form, with rows and columns representing different data attributes and the various relationships between the data values.

PHP:

PHP (Hypertext Processor) is a general-purpose scripting language and interpreter that is freely available and widely used for web development. The language is used primarily for server side scripting, although it can also be used for command-line scripting and, to a limited degree, desktop applications.

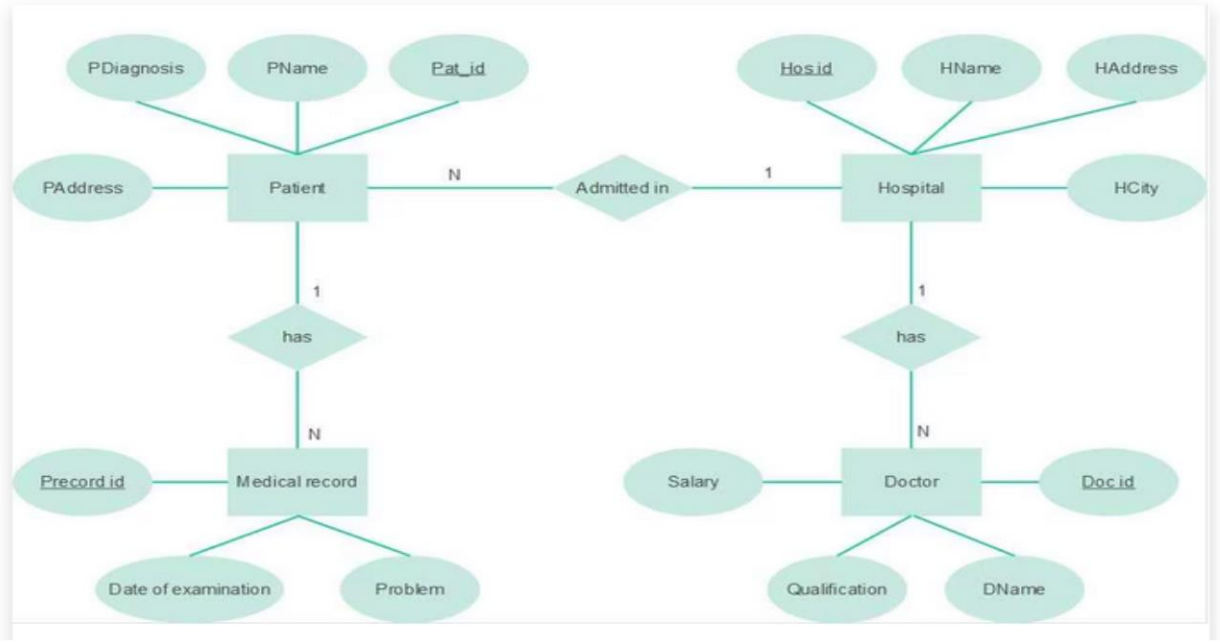
JQuery:

JQuery is a lightweight, "write less, do more", JavaScript library. The purpose of jQuery is to make it much easier to use Javascript on your website. JQuery takes a lot of common tasks that require many lines of JavaScript code to accomplish, and wraps them into methods that you can call with a single line of code.

UML DIAGRAMS

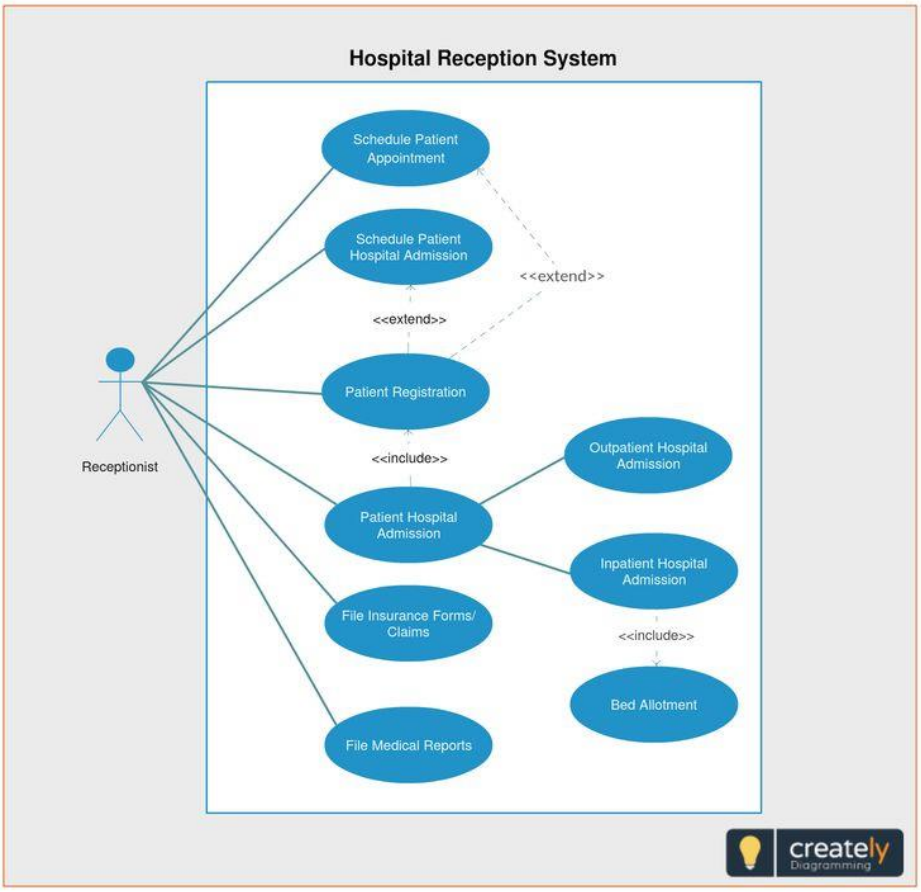
Entity diagram:

An Entity-Relationship (ER) diagram is a graphical representation of the entities (objects or concepts) within a system or domain and the relationships between them. It is a visual tool used in database design to model the structure of a database, showing how different entities are related to each other. ER diagrams are commonly used to design relational databases and provide a clear and concise way to communicate the database schema.



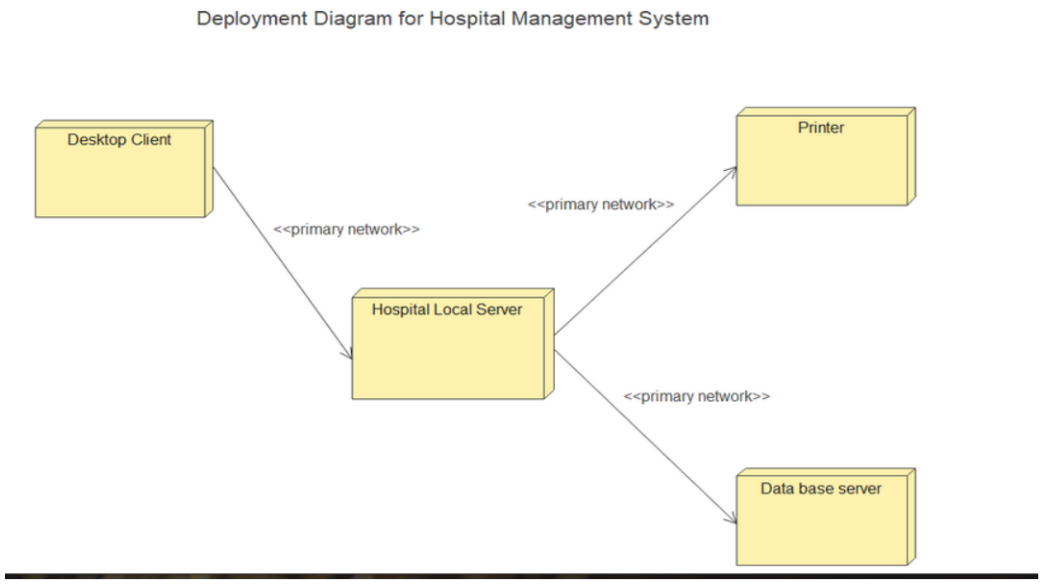
Usecase Diagram:

A use case diagram is a visual representation in the Unified Modelling Language (UML) that illustrates the interactions between various actors (users or external systems) and the functionalities (use cases) of a system. Use case diagrams provide a high-level view of how a system's functionalities are used by different actors, helping to capture the system's behaviour from the perspective of its users.



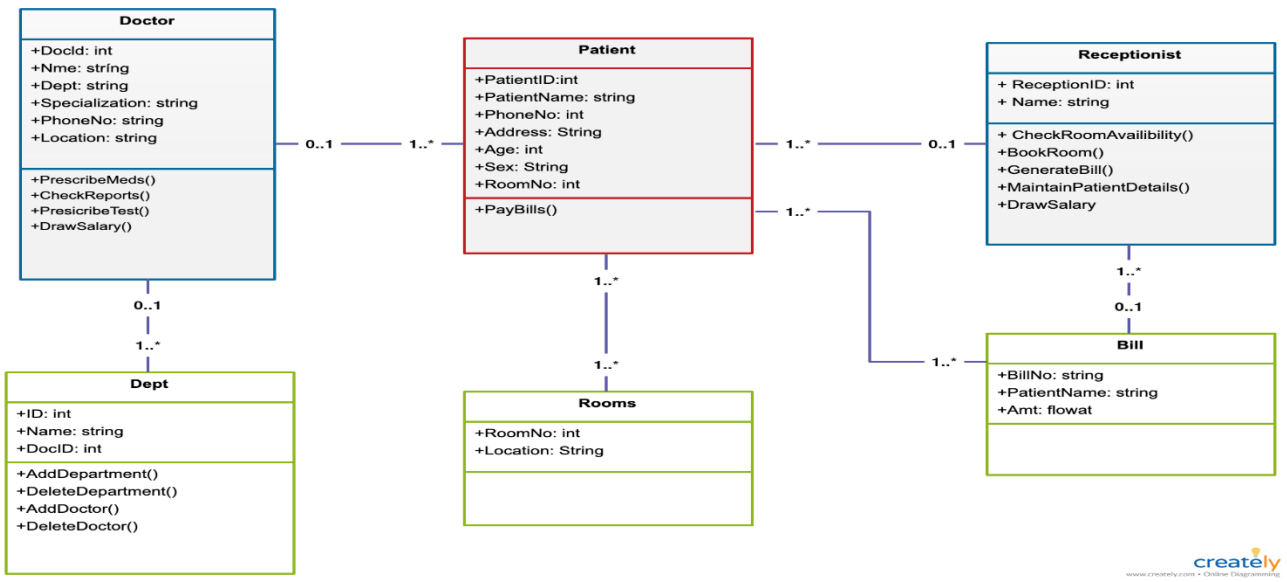
Deployment Diagram:

A deployment diagram is a type of Unified Modelling Language (UML) diagram that illustrates the physical deployment of software components and hardware nodes in a system or application. It provides a high-level view of how software components are distributed across different hardware or software environments and how they interact with each other. Deployment diagrams are commonly used to depict the deployment architecture of a system and its runtime configurations.



Class Diagram:

Class diagrams are static structures used to show class relationships in object-oriented programming. They are a good way to show the class structure of a system. For organizations, class diagrams help illustrate class relationships in a business application. A class diagram is especially useful for communicating class hierarchies and class collaborations with stakeholders or a team.



SOURCE CODE

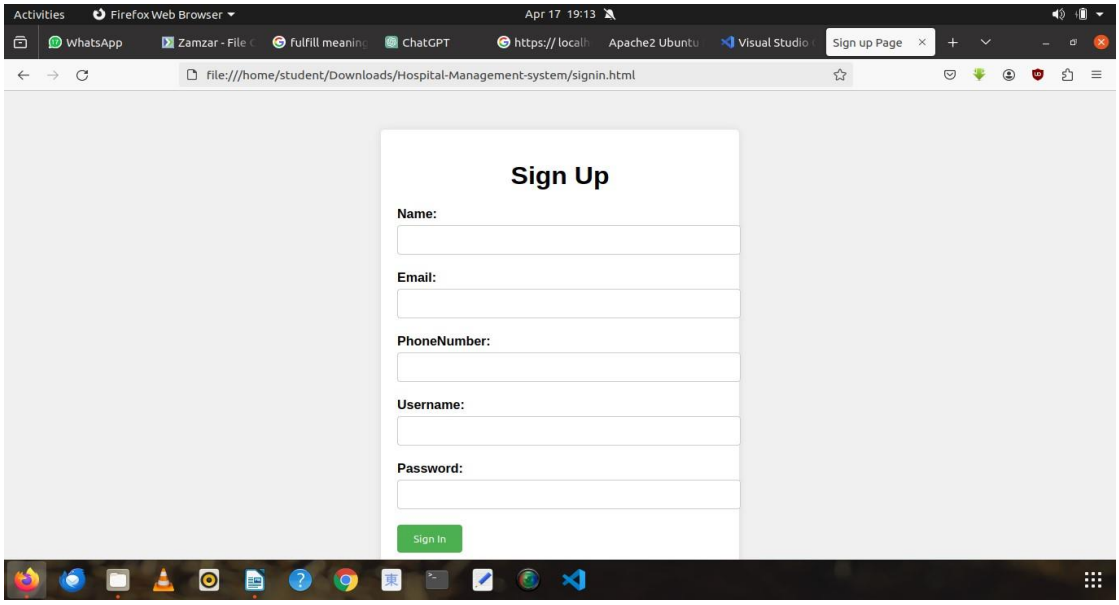
SIGNUP.HTML

```
<!DOCTYPE html>
<html>
<head>
<title>Sign up Page</title>
<style>
body {
font-family: Arial, sans-serif;
background-color: #f0f0f0;
margin: 0;
padding: 0;
background-image:url("books.jpg");
background-size: cover;
height:10vh;
}
.container {
max-width: 400px;
margin: 50px auto;
background-color: #fff;
```

```
padding: 20px;
border-radius: 5px;
box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
}
h1 {
text-align: center;
}
label {
display: block;
margin-bottom: 5px;
font-weight: bold;
}
input[type="text"],
input[type="email"],
input[type="tel"],
input[type="password"],
textarea {
width: 100%;
padding: 10px;
margin-bottom: 20px;
border: 1px solid #ccc;
```

```
border-radius: 4px;
}
input[type="submit"] {
background-color: #4CAF50;
color: white;
padding: 10px 20px;
border: none;
border-radius: 4px;
cursor: pointer;
}
input[type="submit"]:hover {
background-color: #45a049;
}
</style>
</head>
<body>
<div class="container">
<h1>Sign Up</h1>
<form method="post" action="signin.php" enctype="multipart/form-data">
<label for="name">Name:</label>
<input type="text" id="name" name="name" required>
```

```
<label for="email">Email:</label>

<input type="email" id="email" name="email" required>

<label for="phone">PhoneNumber:</label>

<input type="tel" id="phone" name="phone" required>

<label for="username">Username:</label>

<input type="text" id="username" name="username" required>

<label for="password">Password:</label>

<input type="password" id="password" name="password" required>

<input type="submit" value="Sign In">

</form>

</div>

</body>

</html>
```



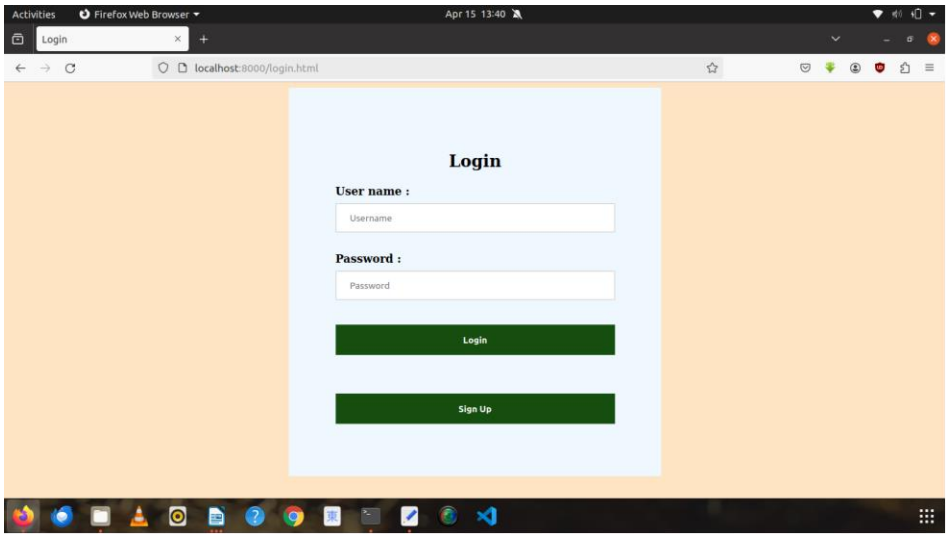
LOGIN PAGE:

```
<!DOCTYPE html>
<html>
<head>
<title> Login </title>
<style>
body{
background-color: bisque;
text-align:center;
display: flex;
justify-content: center;
font-size: medium;
}
.page{
padding:5% 5%;
text-align: justify;
background-color:aliceblue;
font-weight: bold;
height:50%;
width:30%;
}
```

```
a{
text-decoration: none;
color: black;
}
input[type=text], input[type=password] {
width: 100%;
padding: 12px 20px;
margin: 8px 0;
display: inline-block;
border: 1px solid #ccc;
box-sizing: border-box;
}
input[type=text]:focus, input[type=password]:focus{
outline: none;
}
input[type=button] {
background-color: #164e10;
color: white;
padding: 14px 20px;
margin: 8px 0;
border: none;
```

```
cursor: pointer;

width: 100%;

font-weight: bold;

}

input[type=button]:hover {

opacity: 0.8;

}

.canbtt {

width: auto;

padding: 10px 18px;

background-color: #f44336;

}

.imgcontainer {

text-align: center;

margin: 24px 0 12px 0;

}

.for{

padding:0;

text-align: right;

}

</style>
```

```
</head>

<body >

<div class="page">

<form>

<div class="imgcontainer">

<h2>Login</h2>

</div>

<label for="uname">User name :</label><br>

<input class="btt" placeholder="Username" type="text" name="uname" id="uname"><br><br>

<label for="pass">Password :</label><br>

<input class="btt" placeholder="Password" type="password" name="pass" id="pass"><br><br>

<a href="remove.html">

<input class="btt" type="button" value="Login"></a><br><br><br>

<a href="signin.html"><input class="btt" type="button" value="Sign Up"></a>

</form>

</div>

</body>

</html>
```



CONNECTION.PHP

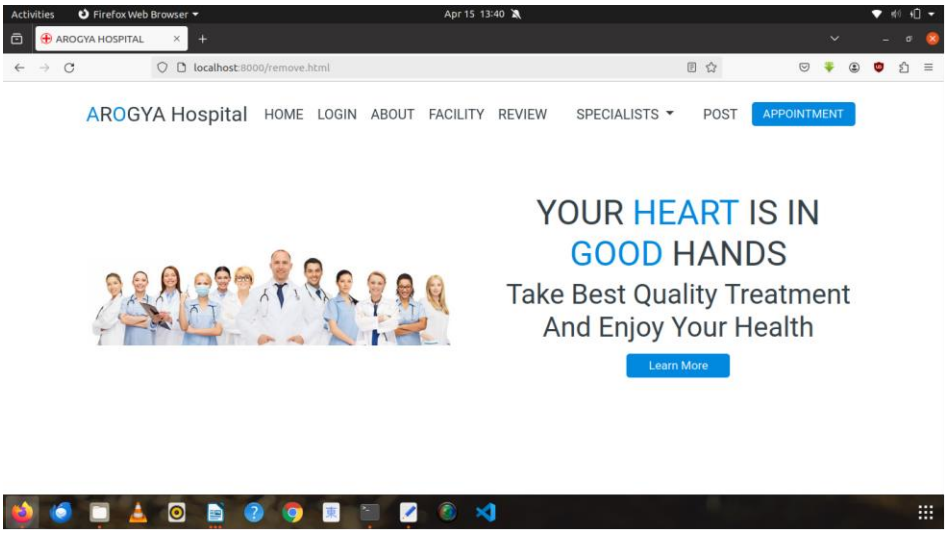
```
<?php $connection=mysqli_connect("localhost","root","Reddy@123","data");

?>
```

REMOVE.HTML

```
<div class="container"><a href="#" class="logo" ><span>A</span>R<span>O</span>GYA Hospital</a>

<nav class="nav">

<ul>

<li><a href="#home">HOME</a></li>

<li><a href="login.html">LOGIN</a></li>

<li><a href="#about">ABOUT</a></li>

<li><a href="#facility">FACILITY</a></li>

<li><a href="#review">REVIEW</a></li>
```

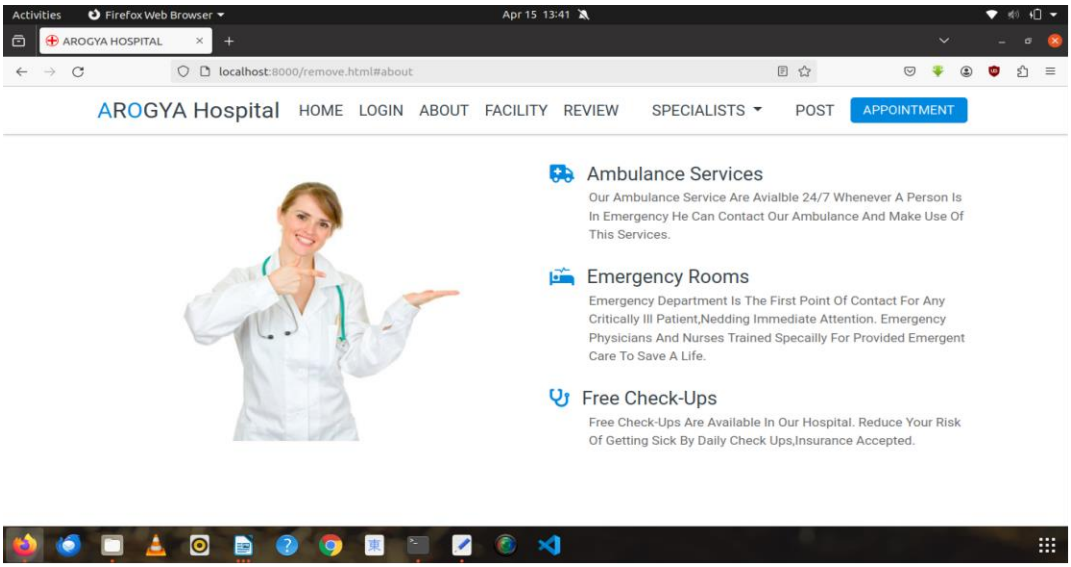
```
<div class='headernav'>

<nav class="navbar navbar-expand-lg navbar-primary sticky-top">

<div class="container">

<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#list" >

<span class="navbar-toggler-icon"></span>

</button>

<div class="collapse navbar-collapse" id="list">

<ul class="navbar-nav mr-auto">

<li class="nav-item dropdown">

<a href="#" class="nav-link dropdown-toggle" data-bs-toggle="dropdown">SPECIALISTS
</a>

<div class="dropdown-menu bg-light">

<a href="cardiologist2.html" class="dropdown-item">CARDIOLOGIST</a>

<a href="dentist2.html" class="dropdown-item">DENTIST</a>

<a href="dermotologist2.html" class="dropdown-item">DERMITOLOGIST</a>

<a href="neuro2.html" class="dropdown-item">NEUROLOGIST</a>

</div>

</li>

</ul>

</div>

</div>
```

```
</nav>

</div>

<li><a href="#post">POST</a></li>

<li><a href="newfrom.html"><button class="button">APPOINTMENT</button></a></li>

</ul>

</nav>

<div class="fas fa-bars"></div>

</div>
```



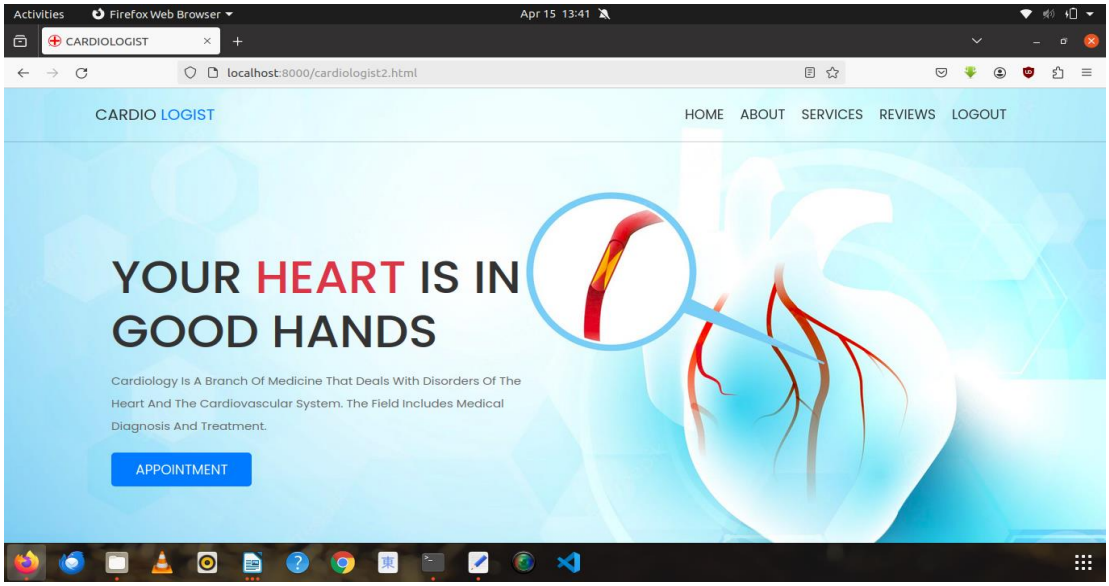
Execution Screenshots:

Availability of Facilities:

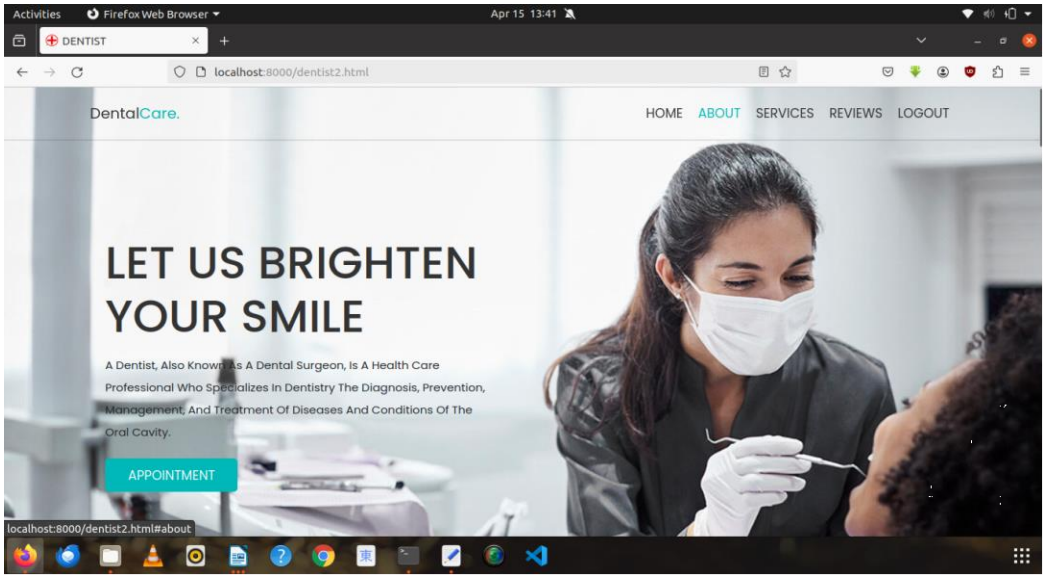


SPECIALISTS:

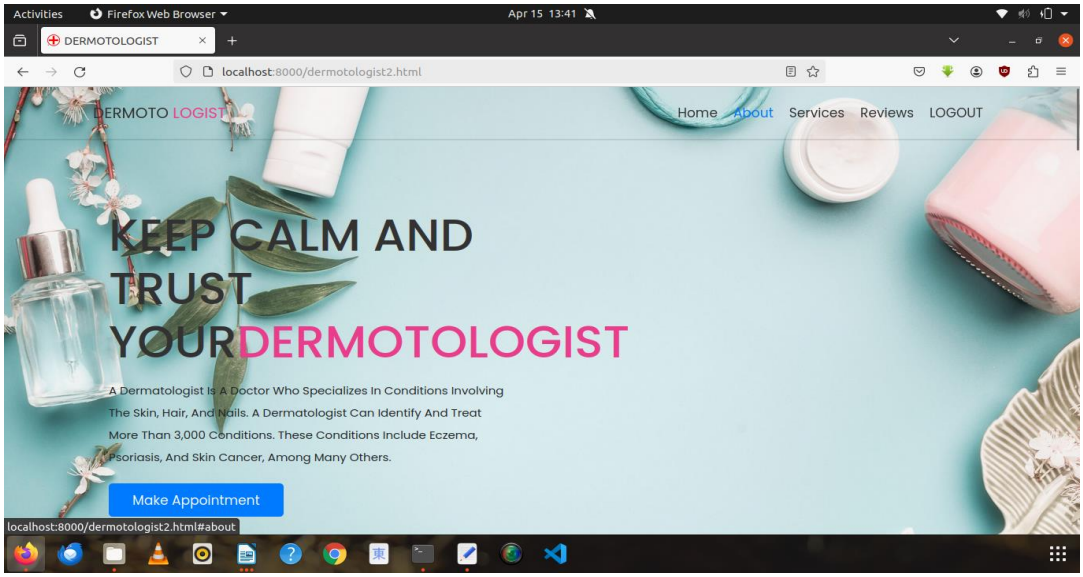
Cardiologist:



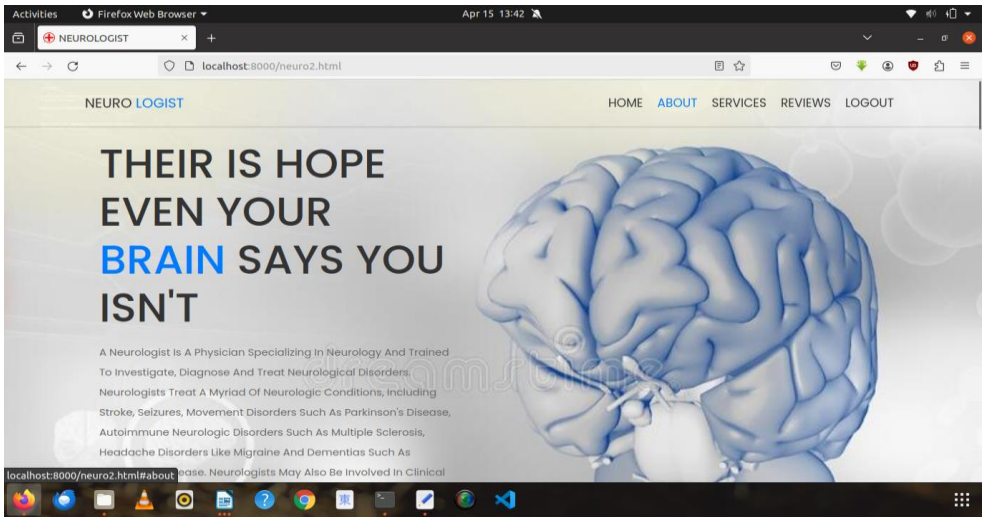
Dentist:



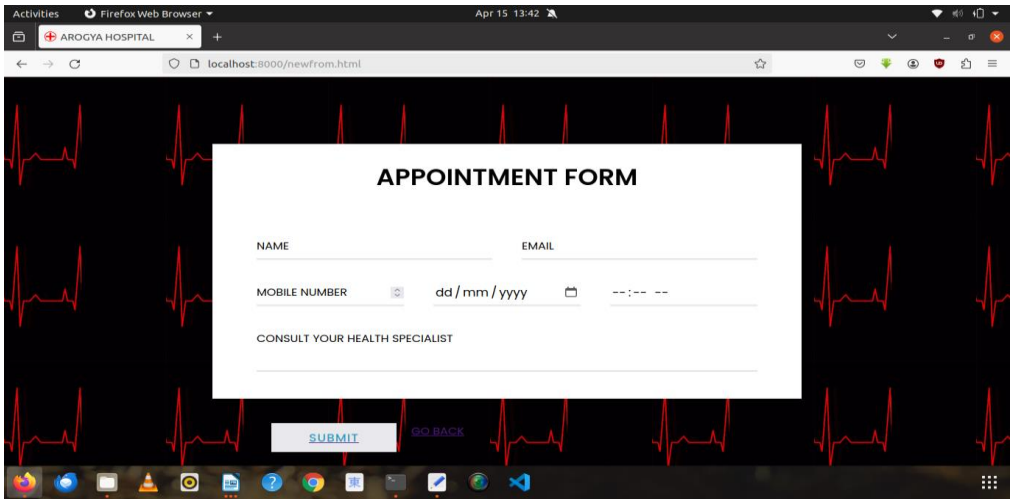
Dermatologist:



Neurologist:



Appointment Form:



FUTURE ENHANCEMENT:

Bringing the HMS project to life in the real world means including telemedicine, AI, IOT, easy to use mobile apps, better data analysis, Block Chain, remote monitoring, happier patients, genomic medicine and continuous staff training for success in health case settings.

CONCLUSION

In summary, the online hospital management system revolutionizes the way healthcare institutions operate, enhancing efficiency and patient care. By automating administrative tasks such as appointment scheduling, record-keeping, and billing, it frees up valuable time for medical professionals to focus on delivering high-quality care. The system's integration of advanced technologies facilitates better communication among healthcare teams and improves access to medical records, leading to more informed decision-making and coordinated treatment plans. Furthermore, its scalability and flexibility ensure that hospitals can adapt to evolving needs and technological advancements seamlessly. Overall, the online hospital management system represents a pivotal step towards a more streamlined, patient-centered healthcare environment, benefiting both healthcare providers and patients alike.

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