Department of Computer Engineering

A. P. SHAH INSTITUTE OF TECHNOLOGY, THANE

(2022-2023)

CSL605 SKILL BASED LAB COURSE:CLOUD COMPUTING

Mini Project Report

- **Title of Project:** Hospital Management System
- **Year and Semester:** TE Sem VI
- **Group Members:** Mahek Chougule (20102073)
  Anjali Divekar (20102105)
  Vaishnavi Dhumal (20102146)

Abstract

A hospital management system is a vital software application that enables healthcare providers to manage their operations efficiently. In this project, we propose building a web-based hospital management system using PHP, HTML, and CSS with a SQL database, hosted on the AWS cloud platform using Elastic Beanstalk and RDS. The proposed system includes several essential features such as patient registration, appointment scheduling, billing, and inventory management. The system's database design is based on the SQL schema that includes tables and relationships between them. We use PHP as a server-side programming language to build the application's backend logic. The application's frontend design is created using HTML and CSS to provide an intuitive and user-friendly interface.

Hosting the hospital management system on the AWS cloud platform using Elastic beanstalk and RDS provides several advantages, including scalability, reliability, and security. The system can easily scale by adding Elastic beanstalk which processes and perform operations connected with the deployment of web apps into the cloud environment and RDS is use for database connectivity.

AWS provides a reliable infrastructure that ensures the system remains operational even in the event of hardware failures or network disruptions.

Keywords: Hospital Management System, AWS, EC2,PHP, HTML, CSS

Chapter 1

Introduction

In today's world, the healthcare industry is a vital part of our society. The healthcare industry's operations involve the management of patient information, scheduling appointments, managing medical records, and many other tasks. The traditional paper-based methods of managing these tasks are inefficient and time-consuming, leading to errors and delays in patient care. A hospital management system is a critical software application that helps healthcare providers manage their operations efficiently.

This project proposes building a web-based hospital management system using PHP, HTML, and CSS with a SQL database, hosted on the AWS cloud platform using Elastic beanstalk and RDS. This system will provide healthcare providers with a reliable and efficient way to manage their operations, making it easier to deliver high-quality patient care.

A hospital management system built using PHP, HTML, and CSS with a SQL database hosted on the AWS cloud platform using Elastic beanstalk and RDS provides healthcare providers with a reliable and efficient way to manage their operations. The system's web-based interface provides easy access to patient information, appointment scheduling, and billing information. The system's database design ensures secure access and data protection, while the PHP programming language creates dynamic web pages that respond to user inputs and execute database queries. Hosting the hospital management system on the AWS cloud platform using Elastic beanstalk and RDS provides scalability, reliability, and security features that ensure the system remains operational and secure. The proposed hospital management system can help healthcare providers manage their operations more efficiently, leading to improved patient care and outcomes.

Chapter 2

Problem Statement, Objective & Scope

Problem Statement: -

The healthcare industry is one of the most critical industries globally, and efficient management of healthcare operations is crucial to ensure high-quality patient care. The traditional paper-based methods of managing healthcare operations can be time-consuming, error-prone, and inefficient, leading to delays in patient care and increased costs. Hospital management systems can help healthcare providers manage their operations more efficiently and improve patient care.

Another problem is designing a user-friendly and intuitive interface that can be easily used by healthcare providers with minimal training. The interface must provide easy access to patient information, appointment scheduling, and billing information.

Objective: -

- To design an efficient database schema that can handle complex relationships between entities such as patients, doctors, and medical procedures while ensuring data protection and security.
- To develop a user-friendly and intuitive interface that can be easily used by healthcare providers with minimal training.
- To provide healthcare providers with an efficient and reliable way to manage their operations and improve patient care.
- To host the system on AWS, providing scalability, reliability, and security features that ensure the system remains operational and secure.
- To improve the efficiency of healthcare operations by providing healthcare providers with a platform to manage patient information, appointment scheduling, and billing information efficiently.

Scope: -

- The system will be a web-based application that can be accessed from any device with an internet connection.
- The system will be designed to manage hospital operations such as patient information management, appointment scheduling, and billing information management.
- The system will be designed to be user-friendly and intuitive, allowing healthcare providers to manage their operations efficiently with minimal training.
- The system will be designed to be scalable, reliable, and secure, ensuring that healthcare providers can access patient information and manage their operations from anywhere at any time.
- The system will be hosted on the AWS cloud platform using Elastic beanstalk and RDS ,which automates the deployment by putting forward the required capacity, balancing the load, autoscaling and the monitoring of software efficiency and performance.

Chapter 3

Cloud Platform

The Hospital management system is hosted on the AWS cloud platform. AWS is a popular cloud computing platform that provides a wide range of services, including hosting, storage, and computing resources. The use of AWS allows the project to be accessed from anywhere with an internet connection, making it accessible to a wide range of users.The AWS platform provides a scalable and reliable hosting solution for the project. This means that the project can handle large numbers of users and traffic without experiencing performance issues or downtime. AWS also provides security features to protect the project from cyber threats and data breaches.

The Hospital management system is hosted on the AWS cloud platform, which provides a scalable and reliable hosting solution for the project. The platform uses a range of AWS services to ensure that the project is secure, performant, and available to users.

Elastic Beanstalk:

AWS Elastic Beanstalk encompasses processes and operations connected with the deployment of web apps into the cloud environment, as well as their scaling.

Elastic Beanstalk automates the deployment by putting forward the required capacity, balancing the load, autoscaling and the monitoring of software efficiency and performance. All that is left for a developer to do is to apply the code. In these conditions, the application owner has overall control over the capacity that AWS provides for the software and can access it at any time. It manages a number of AWS services, such as S3, EC2, Elastic Load Balancers, autoscaling, etc., by providing a special abstraction layer over the server and the operating system.

Below are some of its configuration specifics:

- Supports Apache, Passenger, Internet Information Services (IIS) and Nginx servers and Java, PHP, .NET, Python, Go and Ruby programming languages
- Configures an SQL server via Amazon RDS
- CloudWatch-based server monitoring

RDS:

Amazon Relational Database Service (RDS) is a managed SQL database service provided by Amazon Web Services (AWS). Amazon RDS supports an array of database engines to store and organize data. It also helps in relational database management tasks like data migration, backup, recovery and patching.

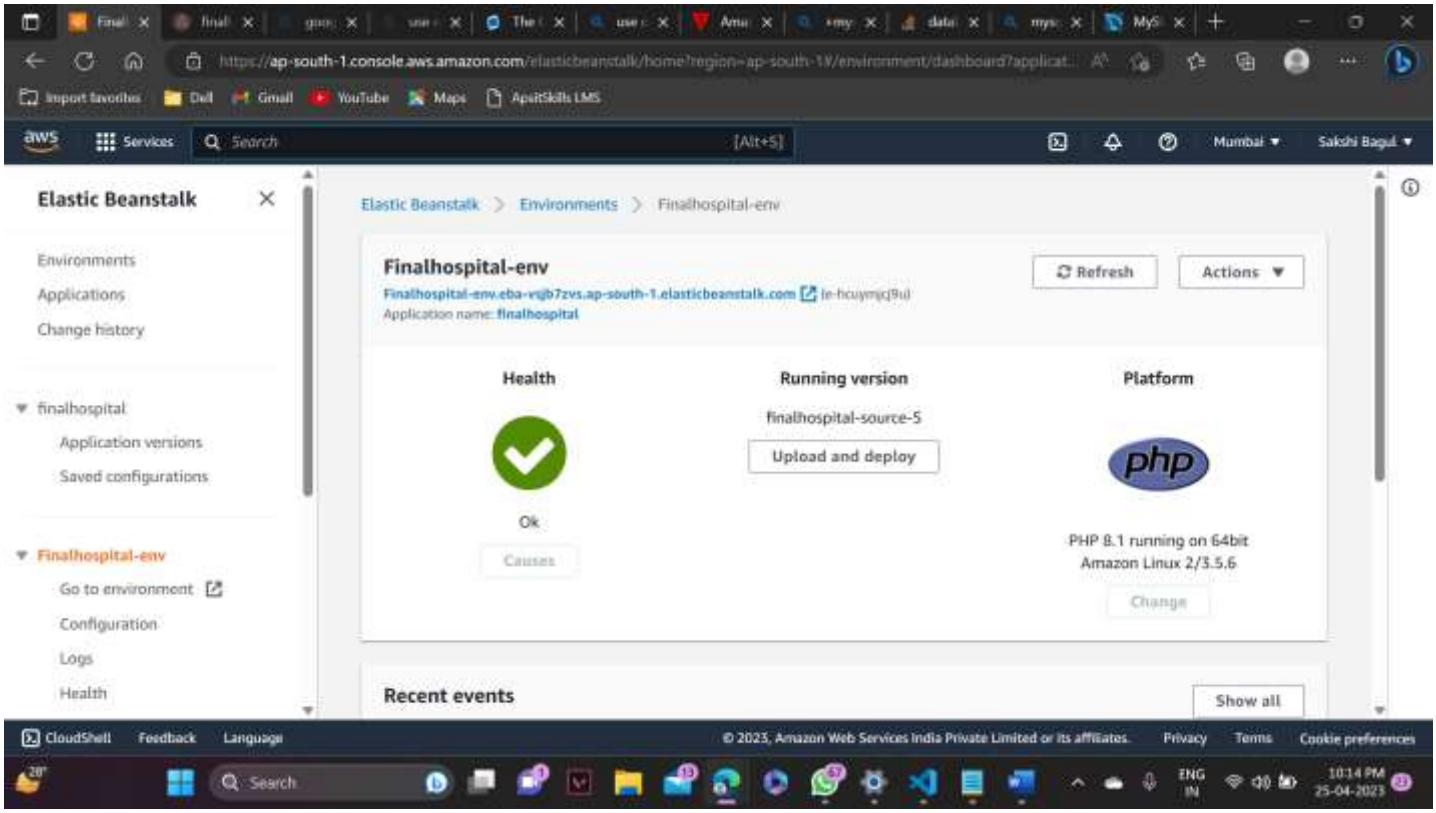
Amazon RDS facilitates the deployment and maintenance of relational databases in the cloud. Cloud administrators use Amazon RDS to set up, operate, manage, and scale relational instances of cloud databases. Amazon RDS itself is not a database; It is a service used to manage relational databases.

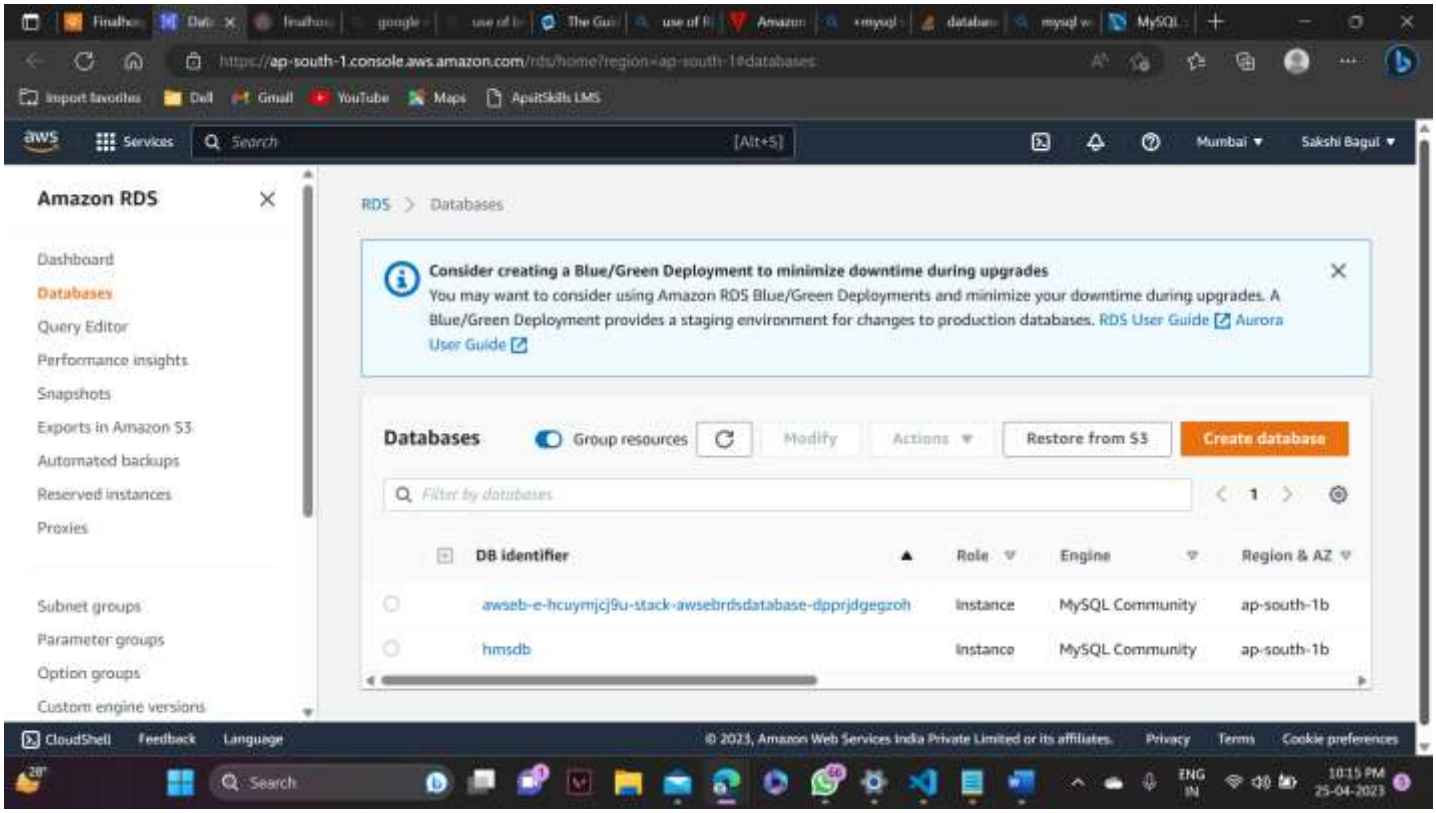
MYSQL workbeanch:

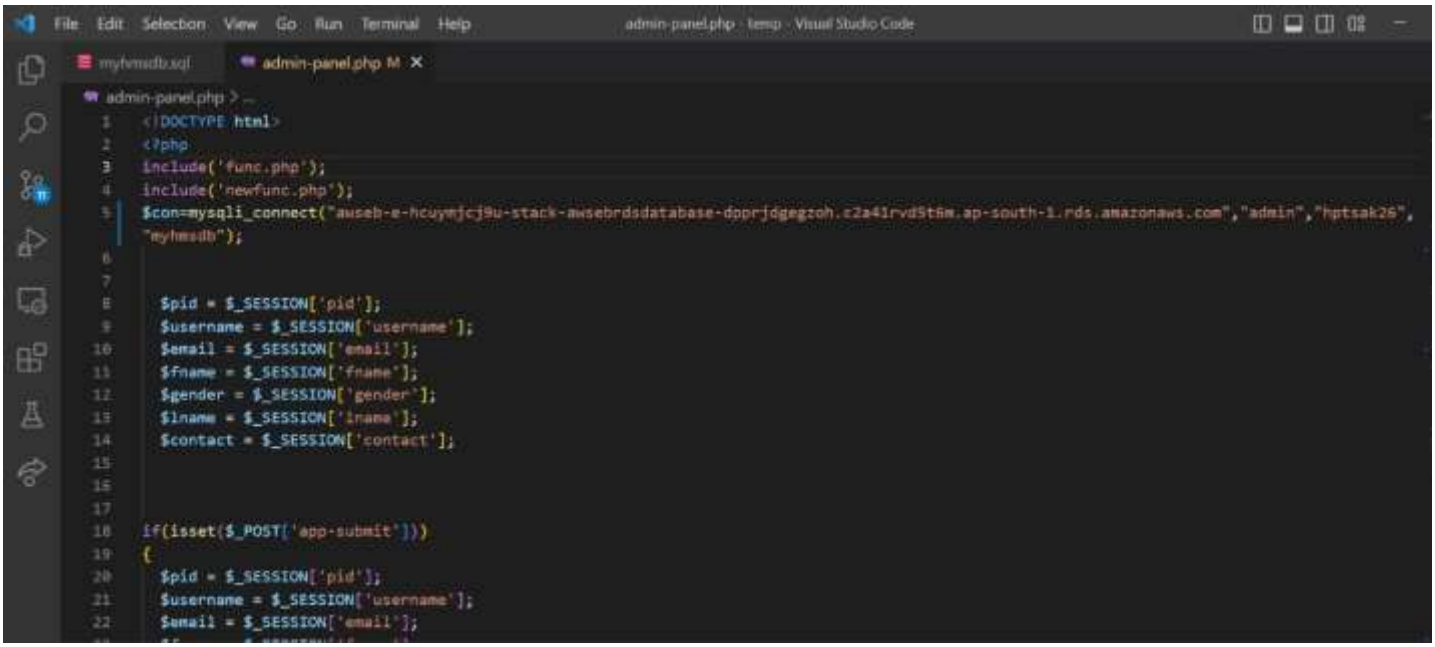
MySQL Workbench provides a visual console to easily administer MySQL environments and gain better visibility into databases. Developers and DBAs can use the visual tools for configuring servers, administering users, performing backup and recovery, inspecting audit data, and viewing database health. Here we connected mysql workbeanch with RDS.

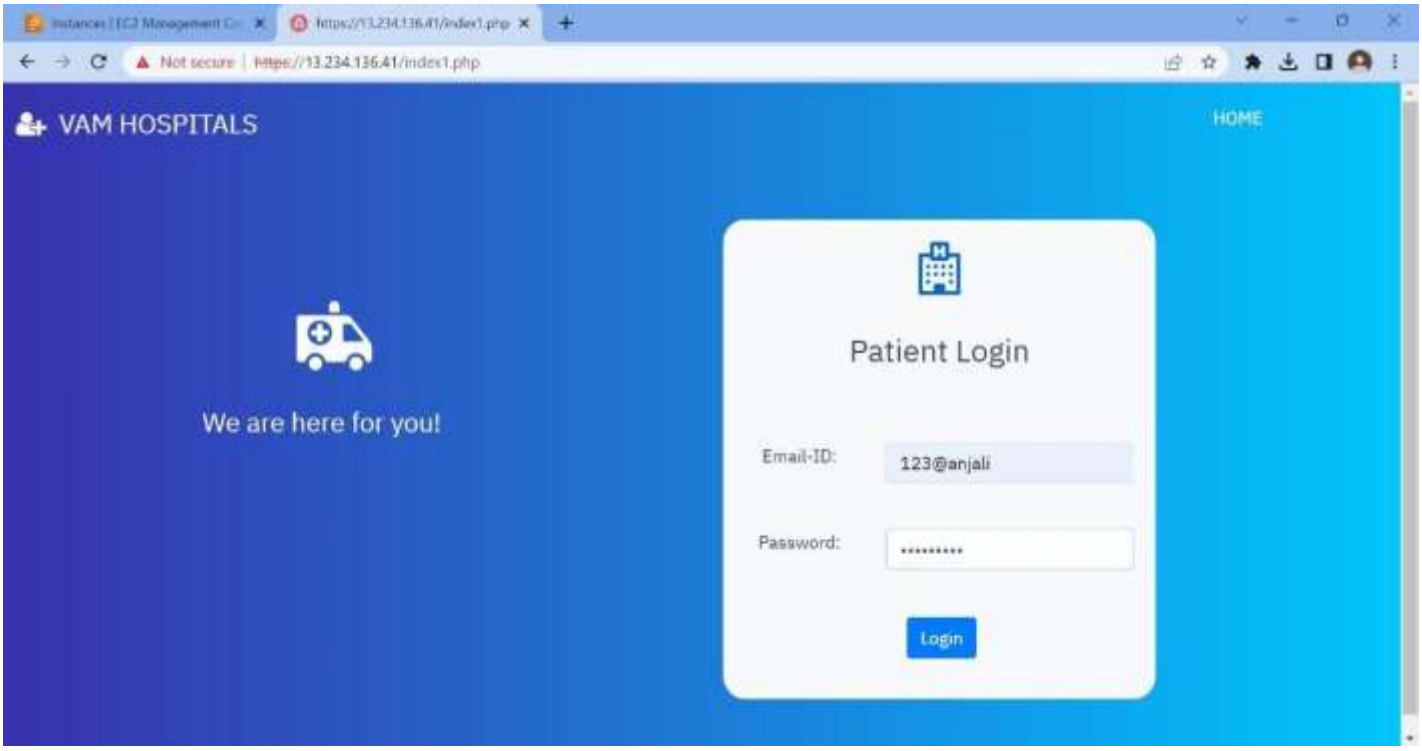
Chapter 4

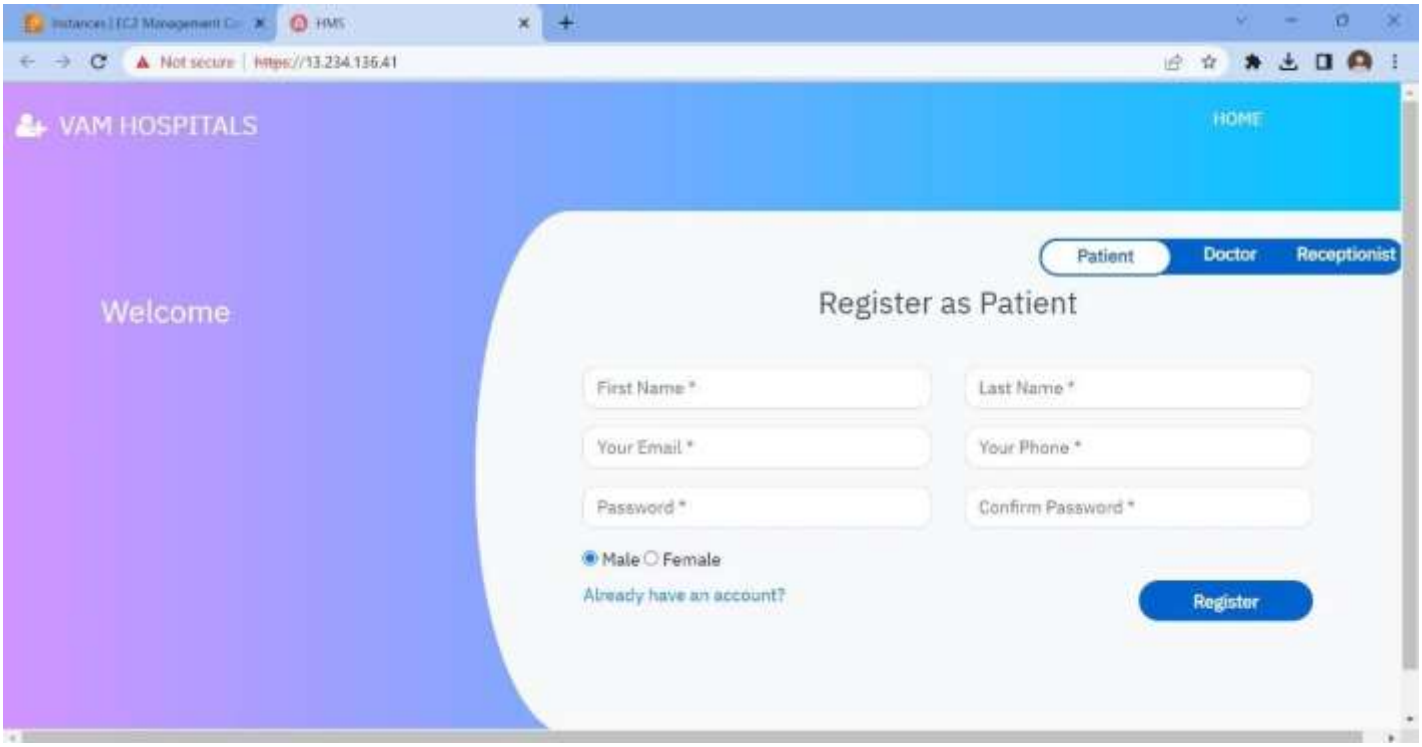
Results

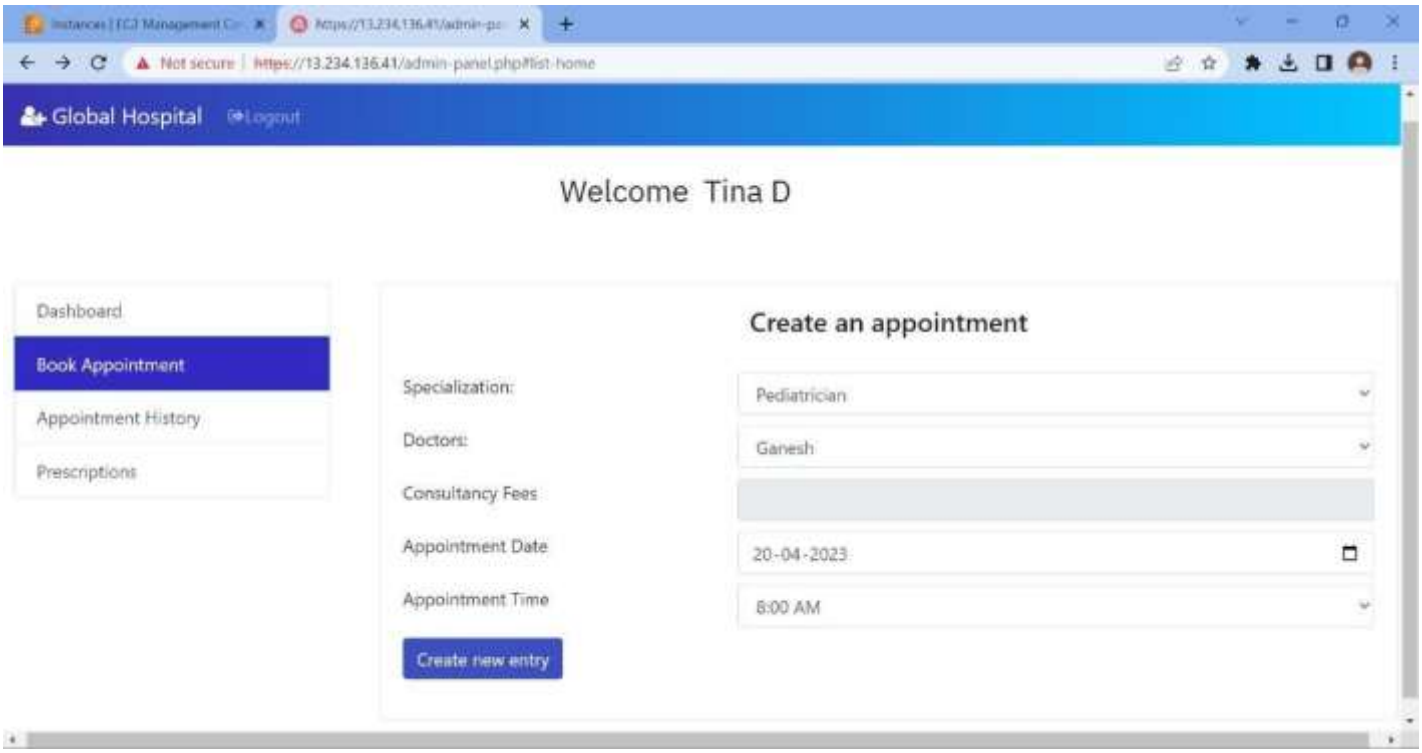


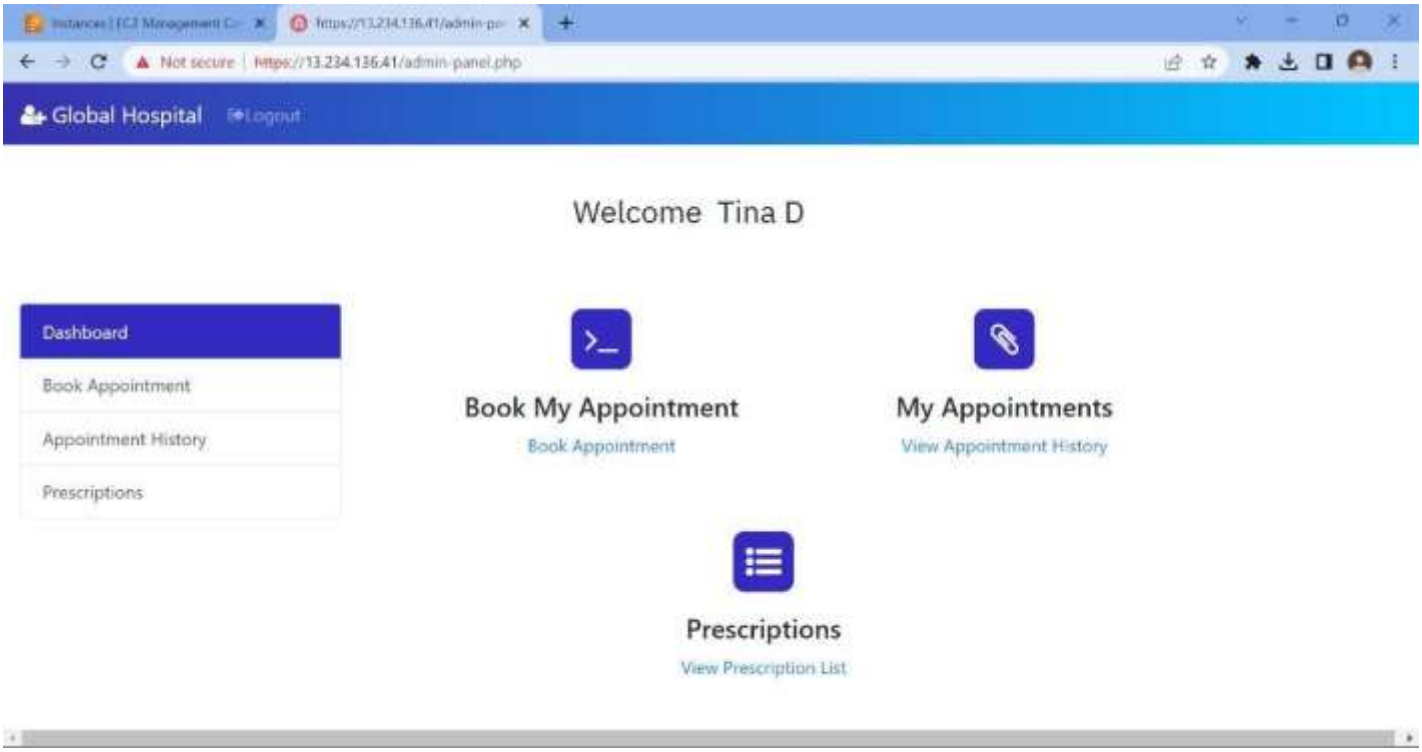


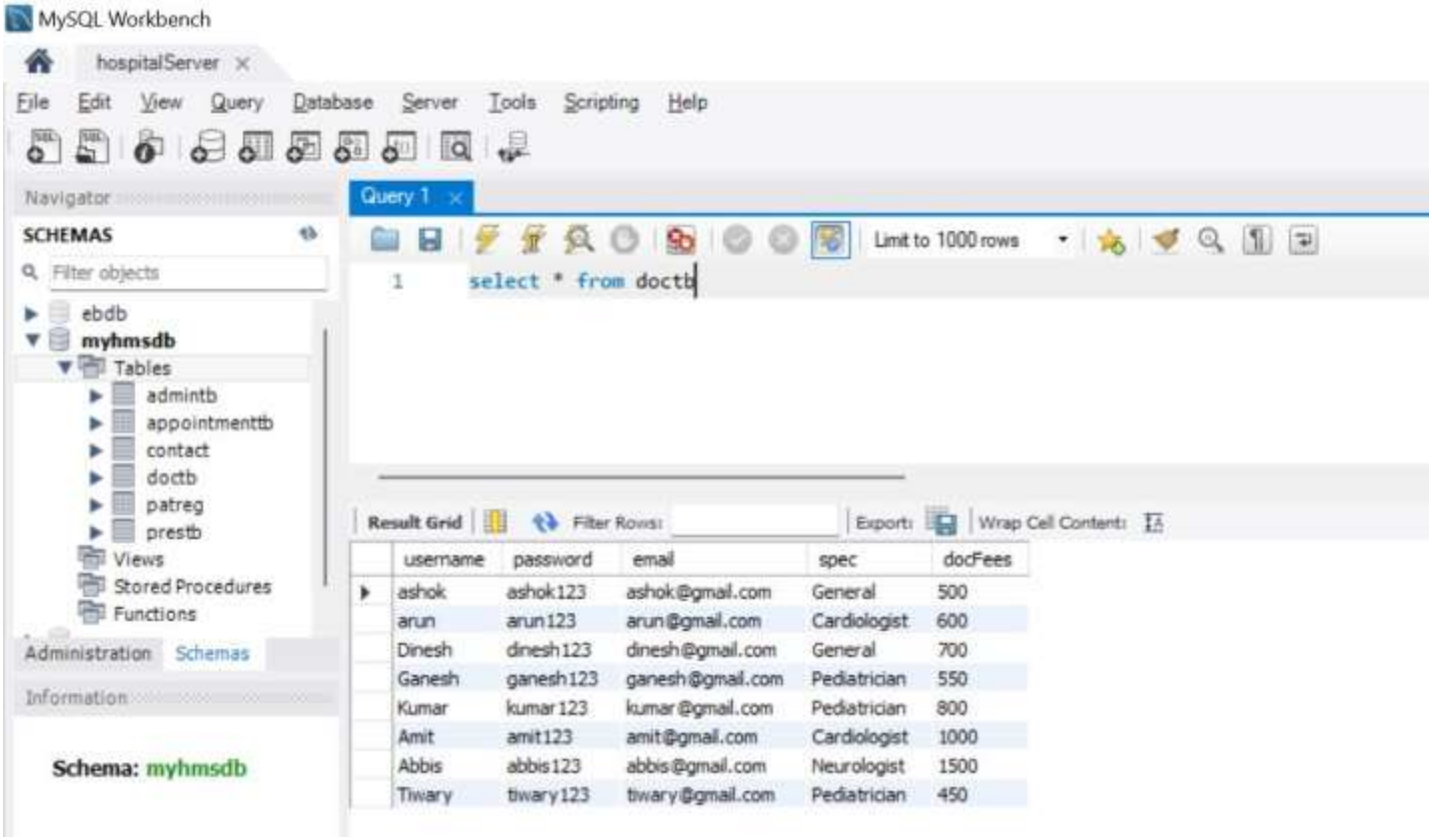

File Edit Selection View Go Run Terminal Help
admin-panel.php - temp - Visual Studio Code
myhmsdb.sql
admin-panel.php M
admin-panel.php > ...
<!DOCTYPE html>
<?php
include('func.php');
include('newfunc.php');
$con=mysqli_connect("awseb-e-hcuymjcj9u-stack-awsebrdsdatabase-dpprjdgegzoh.c2a41rvd9t6m.ap-south-1.rds.amazonaws.com","admin","hptsak26",
"myhmsdb");
$pid = $_SESSION['pid'];
$username = $_SESSION['username'];
$email = $_SESSION['email'];
$fname = $_SESSION['fname'];
$gender = $_SESSION['gender'];
$lname = $_SESSION['lname'];
$contact = $_SESSION['contact'];
if(isset($_POST['app-submit']))
{
$pid = $_SESSION['pid'];
$username = $_SESSION['username'];
$email = $_SESSION['email'];

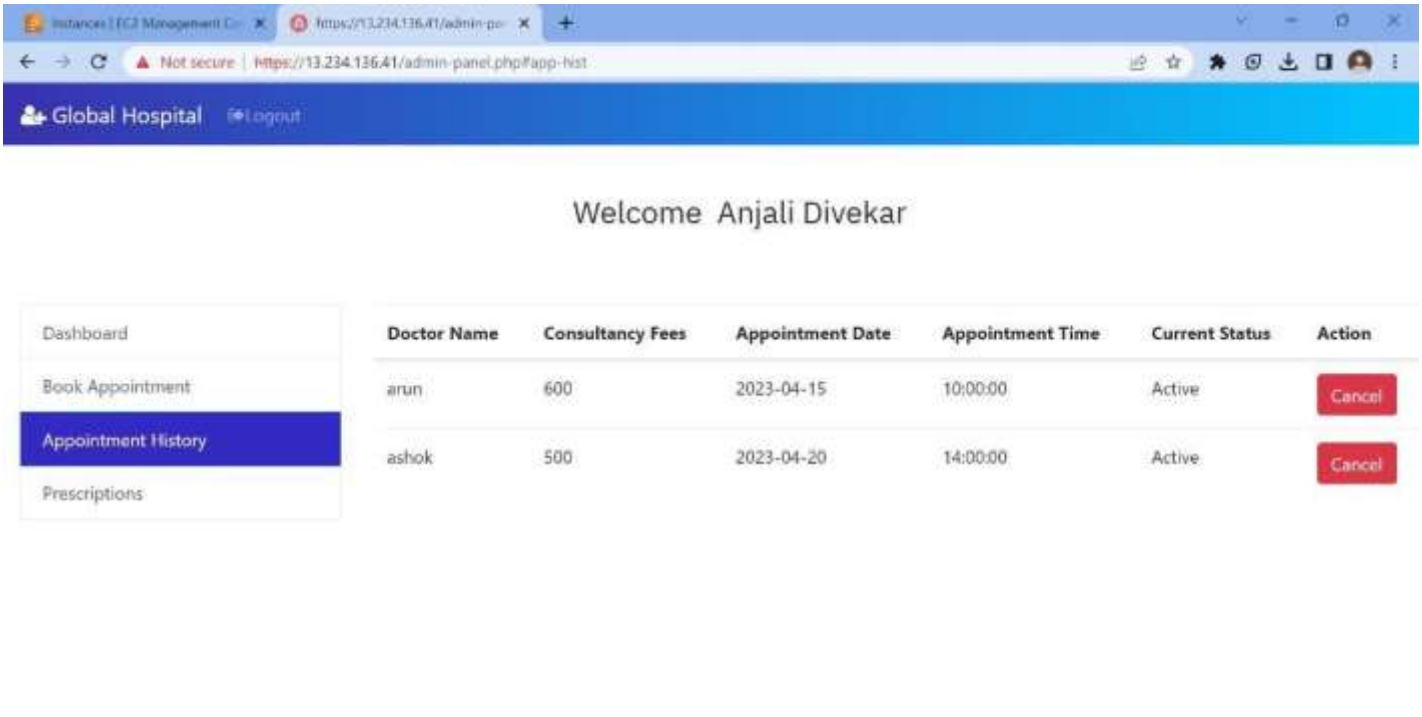

Not secure | https://13.234.136.41/index1.php
VAM HOSPITALS
HOME
We are here for you!
Patient Login
Email-ID:
123@anjali
Password:
Login

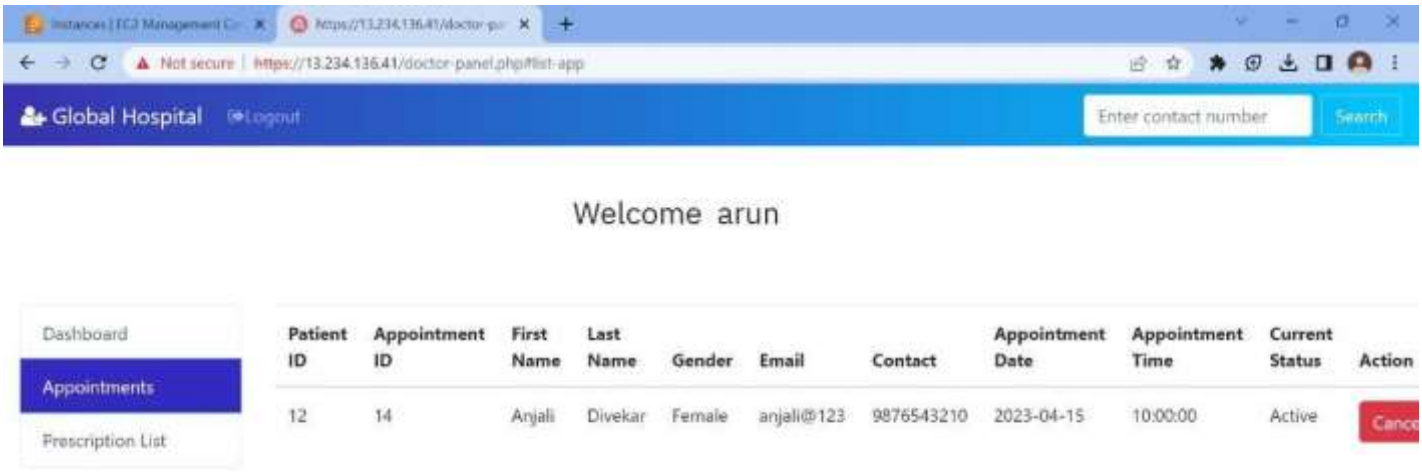

Not secure | https://13.234.136.41
VAM HOSPITALS
HOME
Welcome
Patient
Doctor
Receptionist
Register as Patient
First Name *
Last Name *
Your Email *
Your Phone *
Password *
Confirm Password *
Male
Female
Already have an account?
Register


Not secure | https://13.234.136.41/admin-panel.php#list-home
Global Hospital
Logout
Welcome Tina D
Dashboard
Book Appointment
Appointment History
Prescriptions
Create an appointment
Specialization:
Pediatrician
Doctors:
Ganesh
Consultancy Fees
Appointment Date
20-04-2023
Appointment Time
8:00 AM
Create new entry


Not secure | https://13.234.136.41/admin-panel.php
Global Hospital
Logout
Welcome Tina D
Dashboard
Book Appointment
Appointment History
Prescriptions
Book My Appointment
Book Appointment
My Appointments
View Appointment History
Prescriptions
View Prescription List


MySQL Workbench
hospitalServer
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
ebdb
myhmsdb
Tables
admintb
appointmenttb
contact
doctb
patreg
prestb
Views
Stored Procedures
Functions
Administration Schemas
Information
Schema: myhmsdb
Query 1
Limit to 1000 rows
1 select * from doctb
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
username password email spec docFees
ashok ashok123 ashok@gmail.com General 500
arun arun123 arun@gmail.com Cardiologist 600
Dinesh dinesh123 dinesh@gmail.com General 700
Ganesh ganesh123 ganesh@gmail.com Pediatrician 550
Kumar kumar123 kumar@gmail.com Pediatrician 800
Amit amit123 amit@gmail.com Cardiologist 1000
Abbis abbis123 abbis@gmail.com Neurologist 1500
Tiwary tiwary123 tiwary@gmail.com Pediatrician 450


Not secure | https://13.234.136.41/admin-panel.php#app-hist
Global Hospital
Logout
Welcome Anjali Divekar
Dashboard
Book Appointment
Appointment History
Prescriptions
Doctor Name
Consultancy Fees
Appointment Date
Appointment Time
Current Status
Action
arun
600
2023-04-15
10:00:00
Active
Cancel
ashok
500
2023-04-20
14:00:00
Active
Cancel


Not secure | https://13.234.136.41/doctor-panel.php#list-app
Global Hospital
Logout
Enter contact number
Search
Welcome arun
Dashboard
Appointments
Prescription List
Patient ID
Appointment ID
First Name
Last Name
Gender
Email
Contact
Appointment Date
Appointment Time
Current Status
Action
12
14
Anjali
Divekar
Female
anjali@123
9876543210
2023-04-15
10:00:00
Active

Chapter 5

Conclusion

In conclusion, the hospital management system project is an innovative solution to the challenges faced by healthcare providers in managing hospital operations and improving patient care. The web-based application, which uses PHP, HTML, and CSS with a SQL database hosted on the AWS cloud platform using Elastic beanstalk and RDS, provides healthcare providers with an efficient and reliable way to manage their operations.The system's objectives, including developing an efficient database schema, designing a userfriendly interface, and providing scalability and security, ensure that the system is functional, reliable, and secure.

The project's scope, including managing patient information, appointment scheduling, and billing information management, provides healthcare providers with an efficient way to manage their operations and improve patient care. The project's objectives and scope demonstrate the importance of leveraging technology to improve healthcare operations and the quality of patient care.

Chapter 6

Demonstration and Code Link

https://github.com/anjalid26/Hospital-Management-System