Department of Computer Engineering

A. P. SHAH INSTITUTE OF TECHNOLOGY, THANE

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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 EC2 instances.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 EC2 instances provides several advantages, including scalability, reliability, and security. The system can easily scale by adding additional resources to the EC2 instance as needed. 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 EC2 instances. 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 EC2 instances 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 EC2 instances 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 EC2 instances, providing scalability, reliability, and security features that ensure the system remains operational and secure.

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.

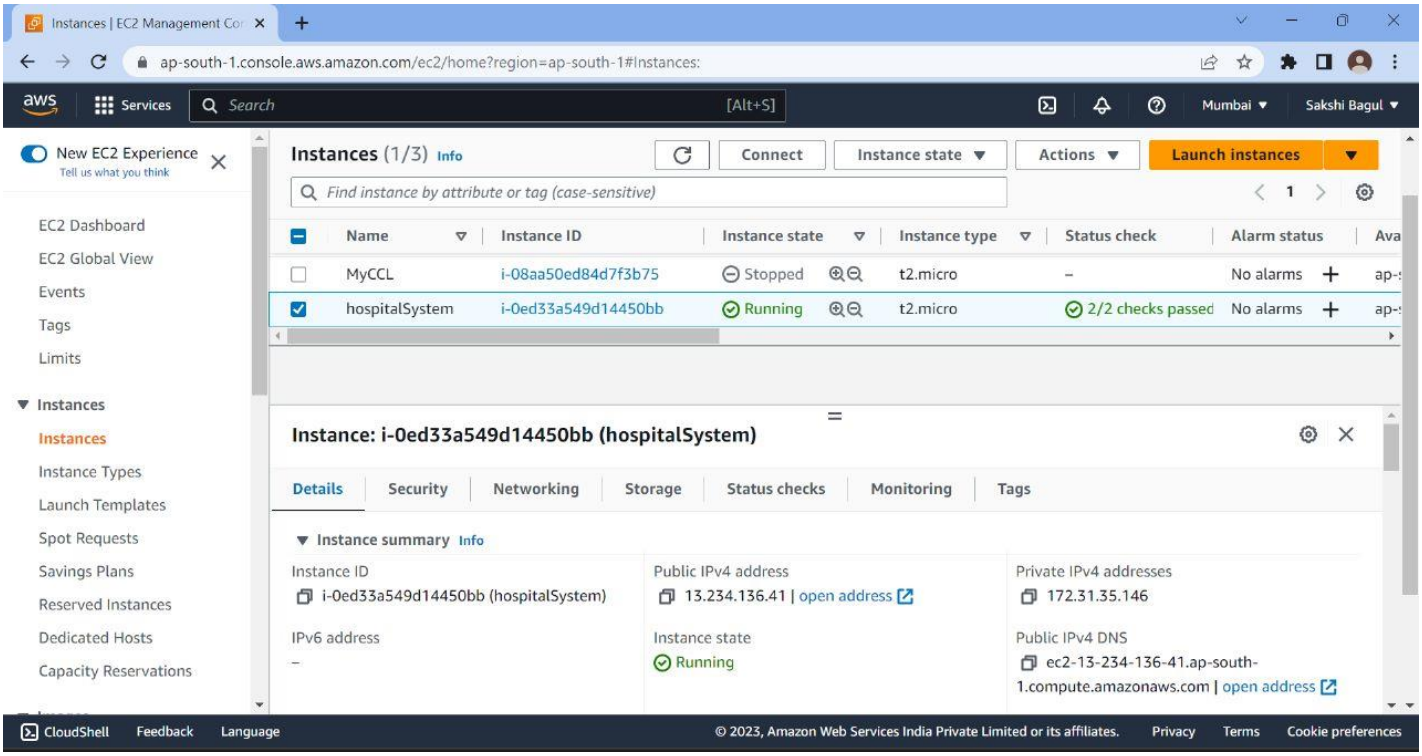
EC2 Instance:

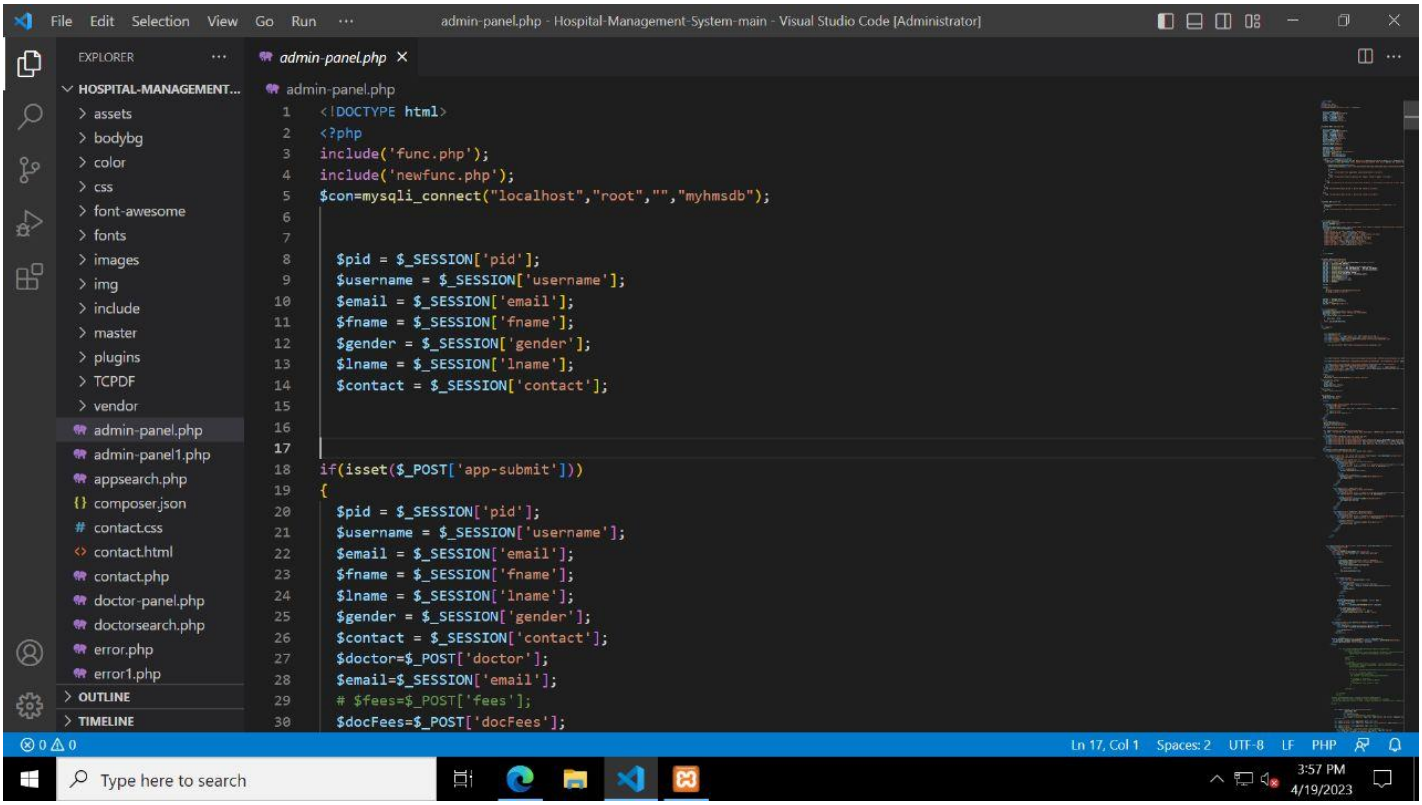
The project is hosted on an EC2 (Elastic Compute Cloud) instance, which is a virtual machine that provides computing resources for the project. The EC2 instance runs the Apache web server, which is used to serve the web pages for the application. The instance is configured with a security group that allows traffic only from specified IP addresses, ensuring that the project is secure from unauthorized access.

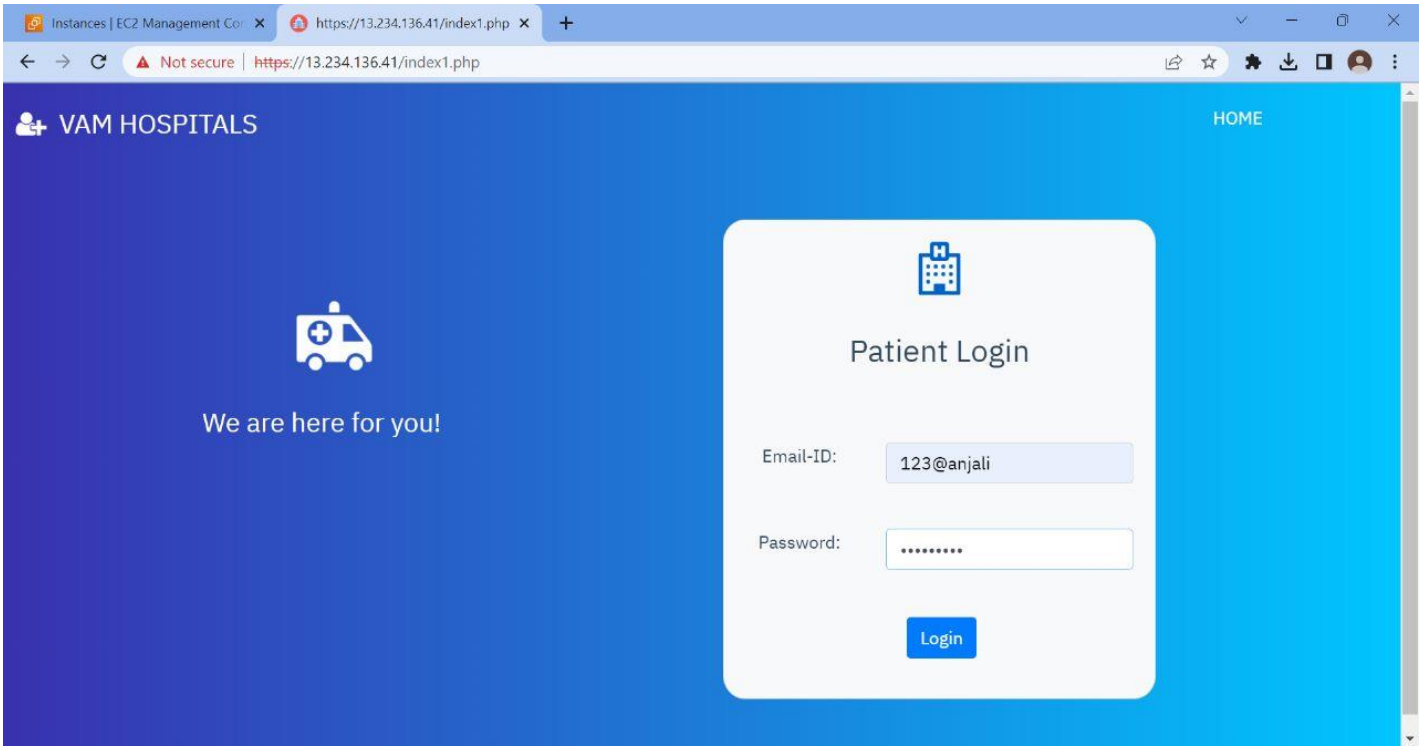
By using EC2 instances, the hospital management system can take advantage of AWS's scalability, reliability, and security features. EC2 instances can be easily scaled up or down depending on the demand for the application, allowing healthcare providers to access patient information and manage their operations without interruption.EC2 instances also provide features such as load balancing, which helps to distribute traffic to multiple instances, improving the performance and availability of the hospital management system .Furthermore, EC2 instances can be configured with security features such as firewalls, encryption, and access control, ensuring that patient information is protected from unauthorized access or data breaches.

Chapter 4

Results



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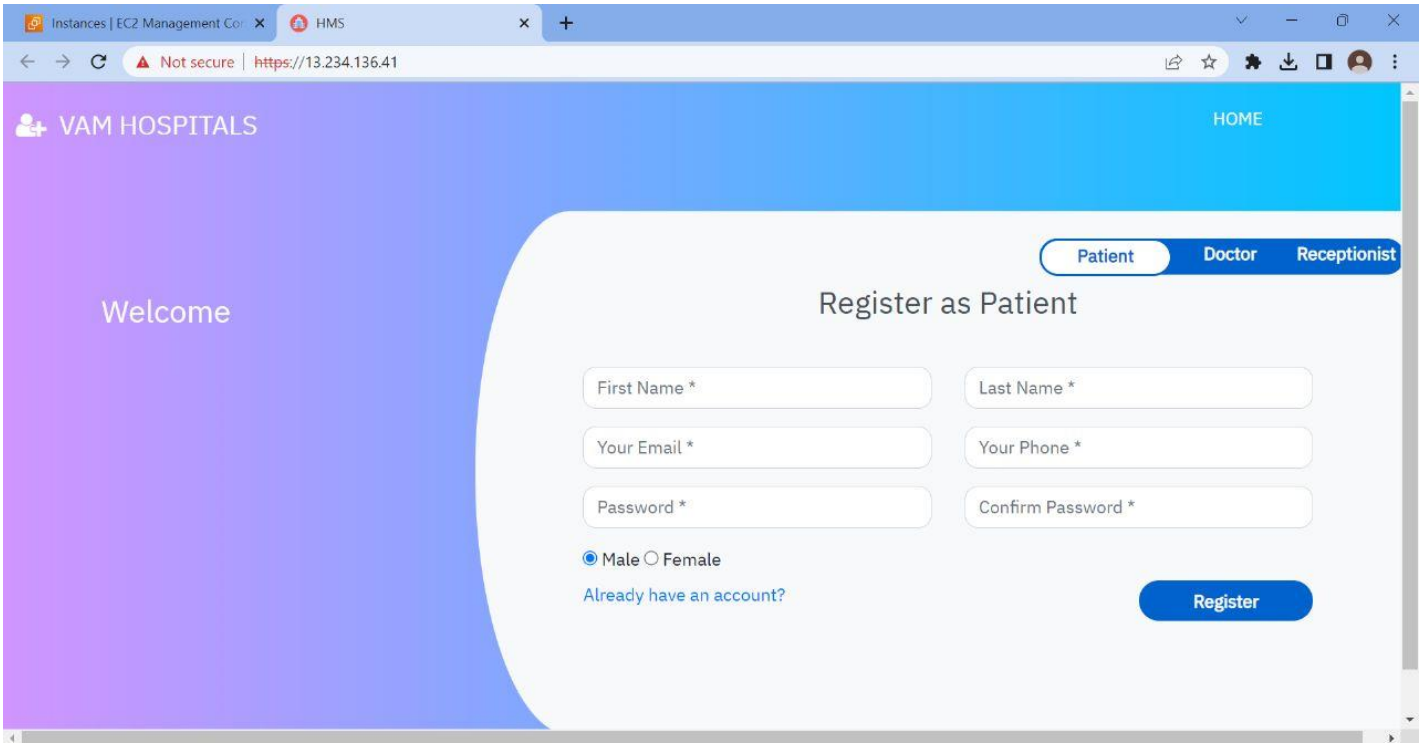
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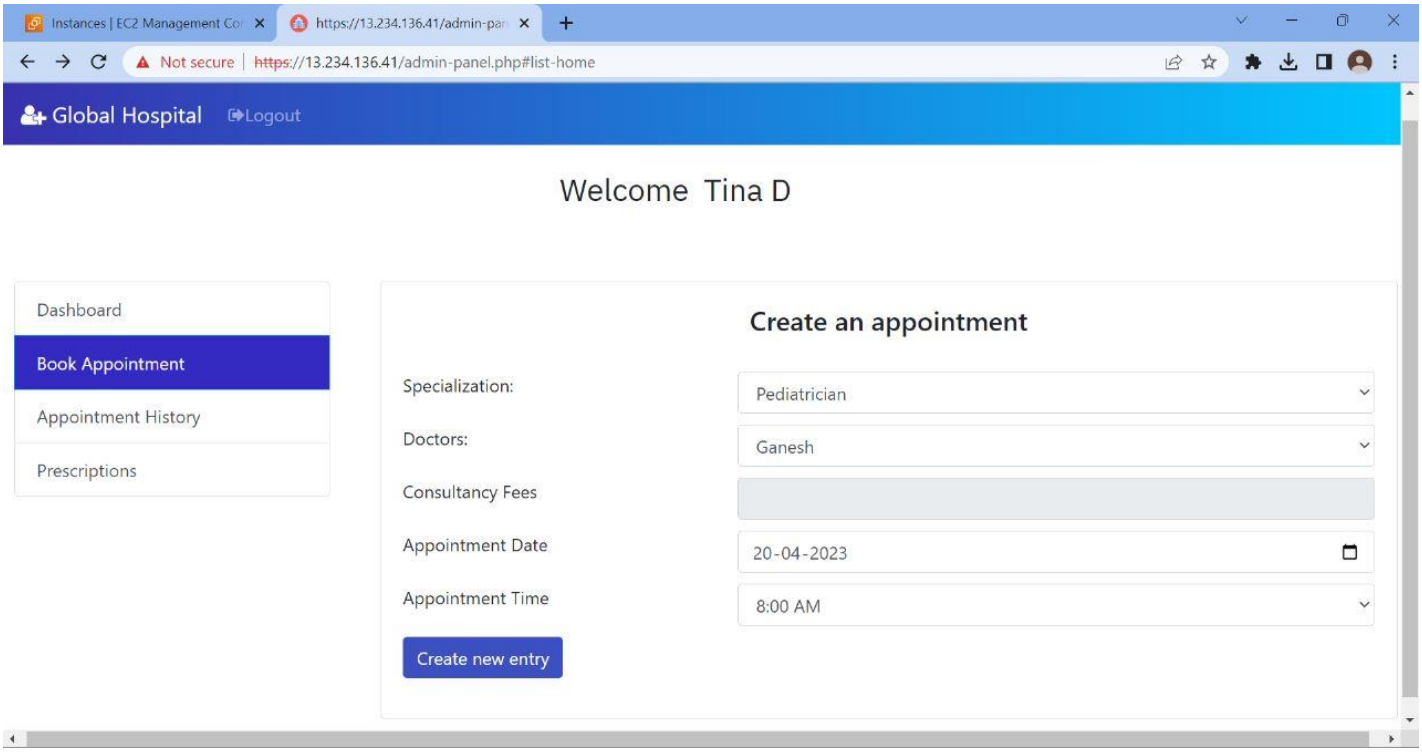
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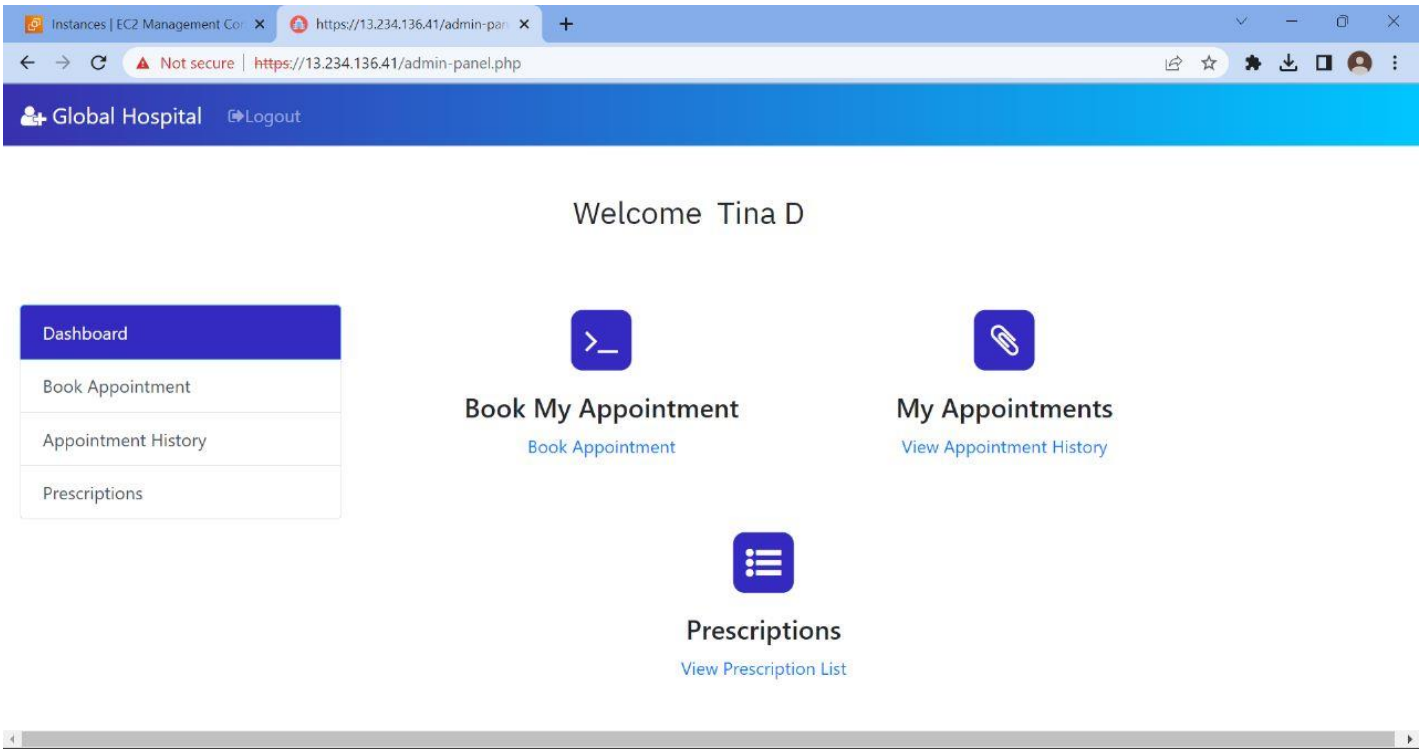
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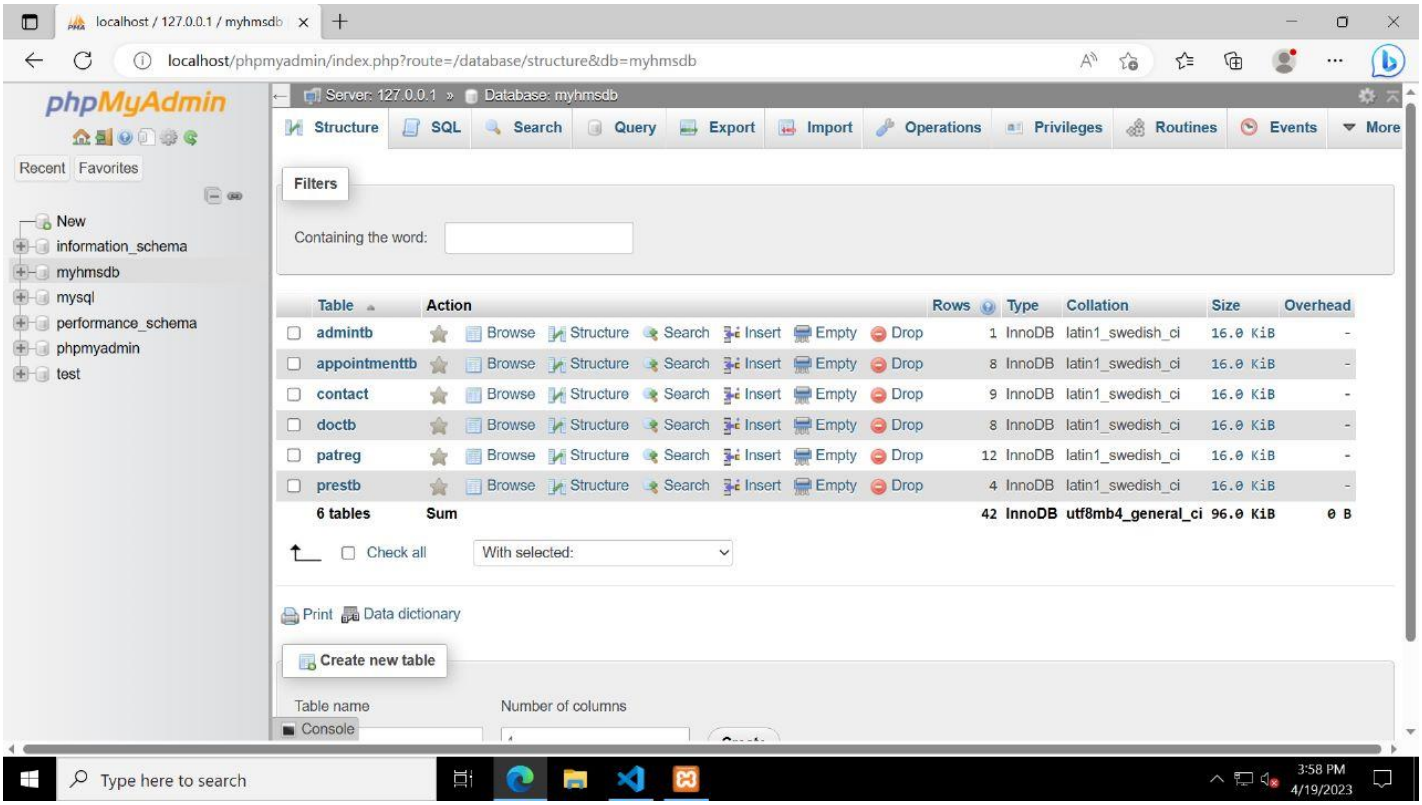
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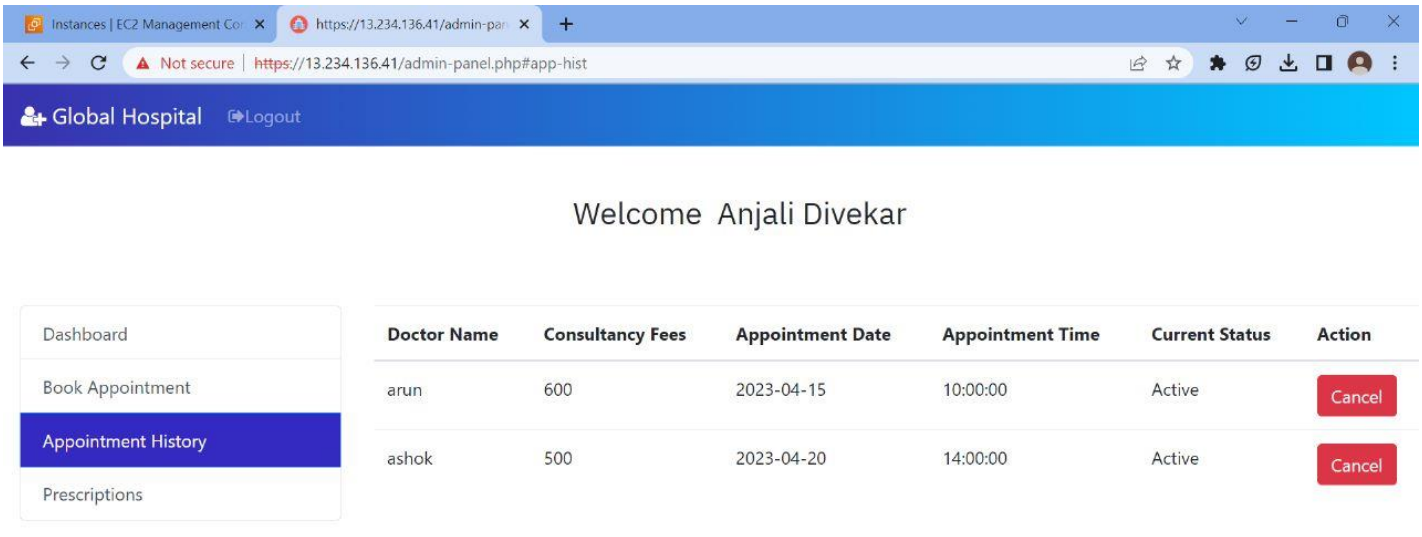
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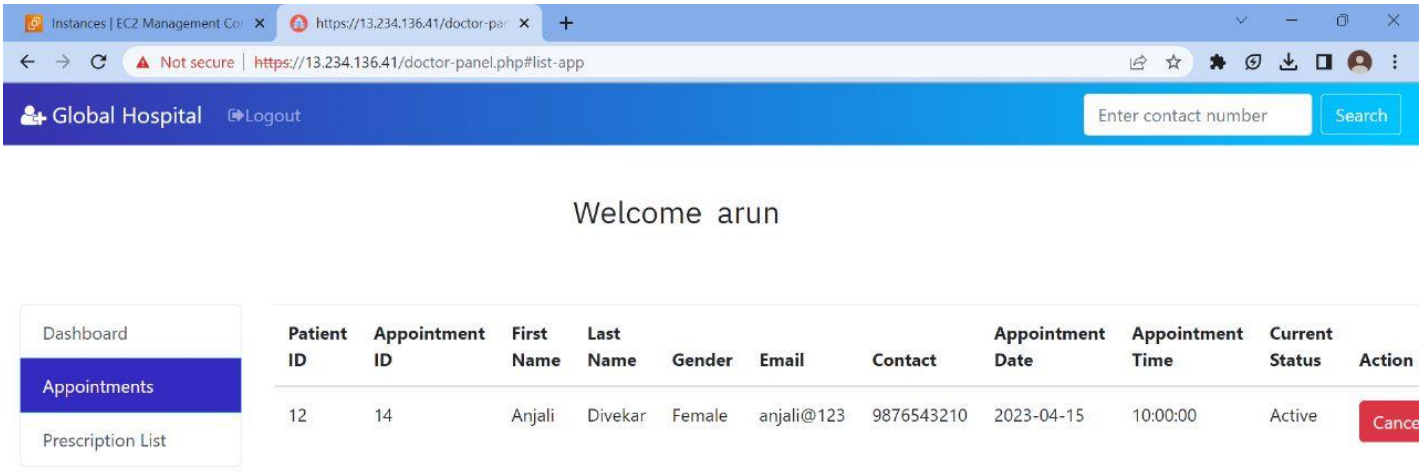
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Chapter 5

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 EC2 instances, 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 user-friendly interface, and providing scalability and security, ensure that the system is functional, reliable, and secure. The use of EC2 instances in the project provides a scalable and secure platform for hosting the web-based application and SQL database, ensuring that patient information is protected from unauthorized access or data breaches.

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