PROJECT SYNOPSIS REPORT

ON

DocEase

SUBMITTED

TO

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

FOR

Back End Engineering(22CS026)

Submitted By:
Name(s): Bhuvesh Mittal, Daanushi Sharma
University Roll No(s).: 2210991450, 2210991469
Semester: 5
Session: 2024-2025

CHITKARA UNIVERSITY

Index

Sr. no	Topic	Page No
1	Problem Statement	3
2	Title of project	3
3	Objective & Key Learning's	3
4	Options available to execute the project	4
5	Advantages/ Disadvantages	4
6	References	4

Problem Statement

Patients often face difficulties in scheduling medical appointments, resulting in delays and miscommunication, while healthcare providers struggle to manage bookings efficiently. This project aims to create a full-stack doctor appointment booking system using the MERN stack to streamline the scheduling process, allowing patients to book, view, and track appointments easily and enabling doctors to manage their availability and schedules effectively. The system seeks to improve patient satisfaction, reduce wait times, and enhance communication between patients and healthcare providers.

Title of project:

DocEase

Objective & Key Learnings:

The primary objective of this project is to develop a unified web-based platform that integrates essential functionalities for patients, doctors, and administrators in a healthcare setting. This platform aims to enhance user engagement by providing tools for appointment booking, secure payment processing, doctor schedule management, and real-time updates. By streamlining healthcare processes, the application improves efficiency for doctors and administrators while offering a seamless and user-friendly experience for patients.

Through this project, we will gain valuable experience in full-stack development, utilizing technologies such as React.js for the frontend, Node.js and Express.js for the backend, and MongoDB for database management. We will also learn to implement secure payment integration using Razorpay, as well as secure authentication and role-based access control with tools like JWT. Additionally, the project will enhance our skills in UI/UX design, enabling us to create intuitive and responsive interfaces using frameworks like Tailwind CSS.

We will also develop expertise in designing efficient database schemas, managing relationships between user roles, and ensuring seamless data storage and retrieval. Integration and testing are key components, allowing us to gain experience in combining frontend and backend components, testing functionalities, and resolving potential issues.

This project not only reflects our technical proficiency but also demonstrates our ability to deliver a practical, real-world solution for healthcare management, showcasing our project management, teamwork, and problem-solving skills.

Options available to execute the project:

1. Frontend Development
    a. React.js
2. Backend Development
    a. Node.js with Express.js
    b. Database
3. Authentication & Authorization
    a. JWT
4. Prototyping a. Figma
5. Coding
    a. IDE/Text Editor

Advantages & Disadvantages:

1. Advantages
    a. Centralized Platform
    b. Enhanced User Engagement
    c. Streamlined Healthcare Management
    d. Scalable Architecture
    e. Customizable Features
    f. Secure & Reliable
2. Disadvantages
    a. Complex Development
    b. Integration Challenges
    c. Maintenance & Updates

References:

1. GeeksForGeeks
2. W3Schools
3. TutorialsPoint