Data Base MaNAgement SYSTEM PROJECT

HEALTHCARE-APPOINTMENT MANAGEMENT SYSTEM

-BY

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**Project Overview Document**

**Background:**

In the health care industry, efficient management of appointments is crucial for both patient satisfaction and the operational effectiveness of medical facilities. The increasing patient volumes and diverse medical service requirements necessitate a robust system to manage appointments effectively. Traditional manual systems are often prone to errors and are not scalable, leading to patient dissatisfaction and inefficiencies.

**Objective:**

The goal is to design a Health Care Appointment Management System (HCAMS) using SQL that streamlines the booking, updating, and cancellation of appointments. The system should support various user roles, including patients, doctors, and administrative staff, and provide real-time availability updates to ensure optimal scheduling.

**Requirements:**

Database Structure:

***Patients***: Store personal details, contact information, and medical history.

***Doctors***: Include information such as name, specialty, contact details, and availability.

***Appointments***: Record details about each appointment including date, time, patient, doctor, and status (booked, completed, cancelled).

***Departments***: Include Information like in which department the doctor is provisioned

***Emergency*** ***Contacts***: Includes information on person in case to contact about a sudden emergency scenario regarding the patient treatment.

***Insurances***: Includes information whether the patient is enrolled to any health insurance policy of a company

***Medical*** ***Histories***: Includes information whether the patient has undergone any medical treatments in the past and whether suffers to any allergies.

***Bills***: Includes information of the total expenditure on patient treatment and other utilities

**Deliverables:**

1. A detailed SQL schema for the database including tables, relationships, and constraints.
2. A set of SQL scripts for common operations such as inserting, updating, and querying data.
3. Documentation describing the system architecture, user roles, and interaction workflows.
4. Performance benchmarks and security audit results.

**Future Scope:**

* Integration with electronic health records (EHR) systems.
* Mobile application interface for easier access and management. (POWERAPPS)
* Implementation of AI-based tools for predicting peak times and managing doctor schedules accordingly.

This Health Care Appointment Management System aims to modernize the scheduling process, reduce administrative burden, and enhance the overall experience for patients and health care providers through a robust SQL-based solution.