

Hospital Management System – Project Scope

DBMS Course Project – Task 1

Group Members

Rohit Sharma – 2024481

Sameer – 2024501

Harsh – 2024235

1 Project Overview

A multi-specialty hospital plans to develop a centralized database system to manage medical, operational, and administrative data. The hospital handles large volumes of information such as patient records, doctor details, appointments, medicine inventory, vendor supplies, and billing. Managing this data through manual or disconnected systems leads to inefficiencies and poor monitoring.

The objective of this project is to design a **Hospital Management System (HMS)** that integrates core hospital activities into a single database-driven platform with emphasis on data integrity, consistency, and efficient data retrieval.

2 Scope of the Project

The project scope includes backend database design and management of the following business requirements:

- **Patient Management:** Patient details, visit history, diagnosis, prescribed medicines, and billing records.
- **Doctor and Department Management:** Doctor information, specialization, departments, consultation fees, and availability.
- **Appointment Scheduling:** Appointment booking based on doctor availability, queues, and status tracking.
- **Medicine Inventory Management:** Medicine records, stock levels, and inventory updates during issuance and supply.
- **Vendor / Supplier Management:** Vendor details and medicine procurement records.
- **Billing and Reporting:** Patient billing and administrative reports on visits, inventory, vendors, and revenue.

3 Out of Scope

The following functionalities are excluded from the project scope:

- Insurance claim processing
- Online payment gateway integration
- Automated diagnosis or AI-based treatment
- Real-time emergency handling systems

4 Why a DBMS is Required

The system consists of multiple interrelated entities such as patients, doctors, medicines, vendors, appointments, and billing records. A DBMS is required to maintain data integrity, enforce constraints, support concurrent access, and enable efficient querying and reporting.

5 Team Member Contributions

Rohit Sharma (2024481): Project scope definition, requirement analysis, documentation, and coordination.

Sameer (2024501): Doctor, department, and appointment-related business requirement analysis.

Harsh (2024235): Medicine inventory, vendor management, and billing requirement analysis.

All team members contributed equally to discussions and finalization of the project scope.

6 Conclusion

The Hospital Management System focuses on designing a robust database-backed system that models real-world hospital operations. This project scope forms the foundation for future tasks involving conceptual modeling, schema design, SQL queries, triggers, transactions, and application development.