

## REPORT

The Hospital Portal Database is intended to handle data about physicians, patients, appointments, and the specifics of each within a medical facility. It consists of tables for patients, doctors, and appointments as well as a view that combines patient data with doctor appointments.

### Structure and Interactions of Entities

The following tables make up the database:

The Doctors Table includes information about doctors, including their name, specialization, phone number, email address, and doctor\_id.

Information about patients, such as patient ID, patient name, age, admission date, and discharge date, are stored in the Patients Table.

Appointments Table: Contains the appointment\_id, patient\_id, doctor\_id, appointment\_date, and appointment\_time information for managing patient and doctor appointments.

Doctor Visits Patients' Perspective: a combined view that makes it simple to access pertinent data by combining information about the patient, doctor, and appointments.

### Connections:

A many-to-many relationship is formed between the appointments table and the patient and doctor tables via the patient\_id and doctor\_id fields, respectively.

The appointments table connects patients and physicians for prearranged times and dates by acting as a junction table.

### Methods and Opinions

AppointmentBuilder Procedure: Inserts records with the supplied patient\_id, doctor\_id, appointment\_date, and appointment\_time parameters into the appointments table to create a new appointment.

DischargePatient Procedure: Updates a patient's discharge\_date, signifying the conclusion of their hospital stay, based on the patient\_id that has been provided.

Physician Appointments: Provides a thorough overview of physician appointments along with related patient information for efficient tracking and administration.

### Data Management and Integrity

International Key Restraints: Create connections between the tables for patients, doctors, and appointments to guarantee data integrity.

Primary Keys and Auto-increment: To guarantee data uniqueness, auto-generated unique identifiers (doctor\_id, patient\_id, appointment\_id) are generated for each table's primary key.

Data Cleaning: To eliminate inaccurate patient information from the patients table, particularly entries with patient\_id larger than 3, the code includes a deletion query.

### Suggestions and Potential Improvements

Data validation: Incorporate checks into processes to verify input data and avoid storing inaccurate or inconsistent data.

Expand the doctor table to add more details about the doctor, like their credentials, experience, and availability.

Improved Appointment Scheduling: Include a function to control conflicting appointments and streamline the booking process.

### In summary

An organized system for effectively managing physicians, patients, appointments, and their associations is provided by the Hospital Portal Database. It creates connections, upholds data integrity, and offers necessary protocols and views for streamlined operations within a hospital environment.