Hospital Administration System (MySQL)

Dataset Information (Excel File)

Excel dataset containing the following sheets:

1. **Departments**
2. **Doctor**
3. **Patients**
4. **Appointments**
5. **Billing**

1 : Database Creation

- **Create a database named** `hospital_db`

2 : Table Design

Create the following tables with proper primary keys and foreign keys:

1 . Departments

- **department_id (Primary Key)**
- **department_name**

2 . Doctors

- **doctor_id (Primary Key)**
- **doctor_name**
- **specialization**
- **department_id (Foreign Key)**
- **phone**

3 . Patients

- **patient_id (Primary Key**
- **patient_name**
- **age**
- **gender**
- **phone**

4 . Appointments

- **appointment_id (Primary Key)**

- **patient_id (Foreign Key)**
- **doctor_id (Foreign Key)**
- **appointment_date**
- **appointment_time**
- **status (Completed / Pending / Cancelled)**

5 . Billing

- **bill_id (Primary Key)**
- **patient_id (Foreign Key)**
- **amount**
- **bill_date**
- **payment_status (Paid / Unpaid)**

3 : Data Import

- **Insert data from the Excel sheets into the corresponding MySQL tables**
- **Verify data using `SELECT` queries**

4 : Business Requirement Queries

Write SQL queries for the following real-time requirements:

1. **Display all patients along with their doctor's name and specialization**
2. **Show all appointments scheduled for today**
3. **List doctors working in a specific department**
4. **Find the total revenue collected from paid bills**
5. **Display patients who have unpaid bills**
6. **Count total appointments handled by each doctor**
7. **Show department-wise doctor count**

5 : Update & Delete Operations

1. **Update appointment status from Pending to Completed**
2. **Delete appointments that are cancelled**
3. **Update billing status once payment is done**

6 : Advanced SQL

1. **Use a subquery to find patients whose bill amount is above average**
2. **Use GROUP BY & HAVING to find doctors who handled more than one appointment**

3. **Display the highest bill amount paid**