Hospital Management System
1. Patients (PatientID, Name, Age, Gender, Contact)
2. Doctors (DoctorID, Name, Specialization, Contact)
3. Appointments (AppointmentID, PatientID, DoctorID, AppointmentDate, Status)
4. Bills (BillID, PatientID, Amount, PaymentStatus)
Write queries for the following questions:
1. Create table – create a medicalrecords table with recordid, patientid (fk), diagnosis,
prescription, and recorddate.
2. Update – update an appointment status to "completed" after a patient's visit.
3. Select with join & operators – retrieve patient name, doctor name, and appointment date for
patients who consulted a specific specialization.
4. Group by & aggregate function – find the total revenue collected per doctor.
5. Joins & aggregate functions – find the top 3 doctors who attended the highest number of
appointments.


```sql
CREATE TABLE Patients (
    PatientID INT PRIMARY KEY AUTO_INCREMENT,
    Name VARCHAR(100),
    Age INT,
    Gender VARCHAR(10),
    Contact VARCHAR(15)
);

CREATE TABLE Doctors (
    DoctorID INT PRIMARY KEY AUTO_INCREMENT,
    Name VARCHAR(100),
    Specialization VARCHAR(100),
    Contact VARCHAR(15)
);

CREATE TABLE Appointments (
    AppointmentID INT PRIMARY KEY AUTO_INCREMENT,
    PatientID INT,
    DoctorID INT,
    AppointmentDate DATE,
    Status VARCHAR(20),
    FOREIGN KEY (PatientID) REFERENCES Patients(PatientID),
    FOREIGN KEY (DoctorID) REFERENCES Doctors(DoctorID)
);

CREATE TABLE Bills (
    BillID INT PRIMARY KEY AUTO_INCREMENT,
    PatientID INT,
    Amount DECIMAL(10,2),
```

```sql
    PaymentStatus VARCHAR(20),
    FOREIGN KEY (PatientID) REFERENCES Patients(PatientID)
);

INSERT INTO Patients (Name, Age, Gender, Contact) VALUES
('Riya Sharma', 28, 'Female', '9876543210'),
('Aman Verma', 45, 'Male', '9876543211'),
('Kavita Desai', 32, 'Female', '9876543212'),
('Rohit Mehta', 51, 'Male', '9876543213');

INSERT INTO Doctors (Name, Specialization, Contact) VALUES
('Dr. Arjun Rao', 'Cardiology', '9123456780'),
('Dr. Meera Iyer', 'Dermatology', '9123456781'),
('Dr. Vivek Shah', 'Orthopedics', '9123456782');

INSERT INTO Appointments (PatientID, DoctorID, AppointmentDate, Status) VALUES
(1, 1, '2024-04-01', 'Scheduled'),
(2, 1, '2024-04-03', 'Completed'),
(3, 2, '2024-04-10', 'Scheduled'),
(4, 3, '2024-04-08', 'Completed'),
(1, 2, '2024-04-15', 'Scheduled');

INSERT INTO Bills (PatientID, Amount, PaymentStatus) VALUES
(1, 1500, 'Paid'),
(2, 2500, 'Paid'),
(3, 1800, 'Unpaid'),
(4, 2000, 'Paid');

-- 1. Create table – create a medicalrecords table with recordid, patientid (fk),
diagnosis, prescription, and recorddate.
CREATE TABLE MedicalRecords (
    RecordID INT PRIMARY KEY AUTO_INCREMENT,
    PatientID INT,
    Diagnosis TEXT,
    Prescription TEXT,
    RecordDate DATE,
    FOREIGN KEY (PatientID) REFERENCES Patients(PatientID)
);

INSERT INTO MedicalRecords (PatientID, Diagnosis, Prescription, RecordDate) VALUES
(2, 'High Blood Pressure', 'Amlodipine 5mg', '2024-04-03'),
(4, 'Knee Pain', 'Paracetamol 650mg', '2024-04-08');

--  2. Update an appointment status to "Completed"
UPDATE Appointments
SET Status = 'Completed'
WHERE AppointmentID = 1;

-- 3. Retrieve Patient Name, Doctor Name, and Appointment Date for patients who
consulted a specific specialization (e.g., 'Dermatology')
```

```sql
SELECT p.Name AS PatientName, d.Name AS DoctorName, a.AppointmentDate
FROM Appointments a
JOIN Patients p ON a.PatientID = p.PatientID
JOIN Doctors d ON a.DoctorID = d.DoctorID
WHERE d.Specialization = 'Dermatology';

-- 4. Find the total revenue collected per doctor
SELECT d.Name AS DoctorName, SUM(b.Amount) AS TotalRevenue
FROM Appointments a
JOIN Bills b ON a.PatientID = b.PatientID
JOIN Doctors d ON a.DoctorID = d.DoctorID
GROUP BY d.DoctorID;

-- 5. Find the top 3 doctors who attended the highest number of appointments
SELECT d.Name AS DoctorName, COUNT(a.AppointmentID) AS AppointmentsCount
FROM Appointments a
JOIN Doctors d ON a.DoctorID = d.DoctorID
GROUP BY d.DoctorID
ORDER BY AppointmentsCount DESC
LIMIT 3;
```