**Doctor Patient Appointment :-**

**1. Total Number of Appointments per Doctor**

SELECT d.first\_name, d.last\_name, COUNT(a.appointment\_id) AS total\_appointments

FROM Doctors d

JOIN Appointments a ON d.doctor\_id = a.doctor\_id

GROUP BY d.doctor\_id, d.first\_name, d.last\_name;

**2. All Patients of a Specific Doctor (e.g., Dr. John Smith)**

SELECT p.first\_name, p.last\_name

FROM Appointments a

JOIN Patients p ON a.patient\_id = p.patient\_id

JOIN Doctors d ON a.doctor\_id = d.doctor\_id

WHERE d.first\_name = 'John' AND d.last\_name = 'Smith';

**3. Appointments in a Specific Department (e.g., Cardiology)**

SELECT COUNT(\*) AS total\_appointments

FROM Appointments a

JOIN Doctors d ON a.doctor\_id = d.doctor\_id

JOIN Departments dept ON d.department\_id = dept.department\_id

WHERE dept.department\_name = 'Cardiology';

**4. Most Popular Specialty (by number of appointments)**

SELECT s.specialty\_name, COUNT(\*) AS appointment\_count

FROM Appointments a

JOIN Doctors d ON a.doctor\_id = d.doctor\_id

JOIN Specialties s ON d.specialty\_id = s.specialty\_id

GROUP BY s.specialty\_name

ORDER BY appointment\_count DESC

LIMIT 1;

**5. Total Payment Amount for Completed Appointments**

SELECT SUM(p.payment\_amount) AS total\_payment

FROM Payments p

JOIN Appointments a ON p.appointment\_id = a.appointment\_id

WHERE a.status = 'Completed';

**6. Number of Patients Seen by Each Doctor**

SELECT d.first\_name, d.last\_name, COUNT(DISTINCT a.patient\_id) AS total\_patients

FROM Doctors d

JOIN Appointments a ON d.doctor\_id = a.doctor\_id

GROUP BY d.doctor\_id, d.first\_name, d.last\_name;

**7. Patients Who Missed Appointments (Status = 'Cancelled')**

SELECT DISTINCT p.first\_name, p.last\_name

FROM Appointments a

JOIN Patients p ON a.patient\_id = p.patient\_id

WHERE a.status = 'Cancelled';

**8. Total Number of Appointments by Status**

SELECT status, COUNT(\*) AS total

FROM Appointments

GROUP BY status;

**9. Average Payment for Completed Appointments**

SELECT AVG(p.payment\_amount) AS average\_payment

FROM Payments p

JOIN Appointments a ON p.appointment\_id = a.appointment\_id

WHERE a.status = 'Completed';

**10. Doctor with the Highest Number of Appointments**

SELECT d.first\_name, d.last\_name, COUNT(\*) AS total\_appointments

FROM Appointments a

JOIN Doctors d ON a.doctor\_id = d.doctor\_id

GROUP BY d.doctor\_id, d.first\_name, d.last\_name

ORDER BY total\_appointments DESC

LIMIT 1;