**1. Find the Total Number of Appointments for Each Doctor**

INPUT-

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

FROM Doctors d

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

GROUP BY d.doctor\_id;

**2. List All Patients Who Have an Appointment with a Specific Doctor (e.g., Dr. John Smith)**

INPUT-

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

FROM Patients p

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

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

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

**3. Find the Number of Appointments Scheduled in a Specific Department**

INPUT-

SELECT dep.department\_name, COUNT(a.appointment\_id) AS TotalAppointments

FROM Appointments a

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

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

GROUP BY dep.department\_id

HAVING dep.department\_name = 'Specific Department Name'; -- Replace with actual department name

**4. Find the Most Popular Specialty Based on Number of Appointments**

INPUT-

SELECT s.specialty\_name, COUNT(a.appointment\_id) AS TotalAppointments

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\_id

ORDER BY TotalAppointments DESC

LIMIT 1;

**5. Get the Total Payment Amount for All Completed Appointments**

INPUT-

SELECT SUM(p.payment\_amount) AS TotalPayments

FROM Payments p

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

WHERE a.status = 'Completed';

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

INPUT-

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

FROM Doctors d

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

GROUP BY d.doctor\_id;

**7. List All Patients Who Have Missed Their Appointments (Status 'Cancelled')**

INPUT-

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

FROM Patients p

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

WHERE a.status = 'Cancelled';

**8. Find the Total Number of Appointments for Each Status (Scheduled, Completed, Cancelled)**

INPUT-

SELECT a.status, COUNT(a.appointment\_id) AS TotalAppointments

FROM Appointments a

GROUP BY a.status;

**9. Get the Average Payment Amount for Completed Appointments**

INPUT-

SELECT AVG(p.payment\_amount) AS AveragePayment

FROM Payments p

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

WHERE a.status = 'Completed';

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

INPUT-

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

FROM Doctors d

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

GROUP BY d.doctor\_id

ORDER BY TotalAppointments DESC

LIMIT 1;