## RDBMS Task 6

## Doctor-Patient-Appointment-system

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

SELECT d.doctor\_id, CONCAT(d.first\_name, ' ', d.last\_name), COUNT(a.appointment\_id) as A\_Count FROM Doctors d JOIN Appointments a ON d.doctor\_id=a.doctor\_id GROUP BY d.doctor\_id

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

SELECT p.first\_name, p.last\_name, p.email, p.phone, a.appointment\_date 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 = Arun’ AND d.last\_name = ‘Malhotra’

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

SELECT dep.department\_name, COUNT(a.appointment\_id) AS total\_appointments FROM Appointments a JOIN Doctors d ON a.doctor\_id = d.doctor\_id JOIN Departments dep ON d.department\_id = dep.department\_id WHERE dep.department\_name = 'Cardiology' GROUP BY dep.department\_id

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

SELECT sp.specialty\_name, COUNT(a.appointment\_id) AS total\_appointments FROM Appointments a JOIN Doctors d ON a.doctor\_id = d.doctor\_id JOIN Specialties sp ON d.specialty\_id = sp.specialty\_id GROUP BY sp.specialty\_id ORDER BY total\_appointments DESC LIMIT 1

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

SELECT d.first\_name, d.last\_name, COUNT(DISTINCT a.patient\_id) AS total\_patients FROM Doctors d LEFT JOIN Appointments a ON d.doctor\_id = a.doctor\_id GROUP BY d.doctor\_id

1. **Find the 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 LEFT JOIN Appointments a ON d.doctor\_id = a.doctor\_id GROUP BY d.doctor\_id

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

SELECT p.first\_name, p.last\_name, p.email, p.phone, a.appointment\_date FROM Appointments a JOIN Patients p ON a.patient\_id = p.patient\_id WHERE a.status = 'Cancelled'

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

SELECT a.status, COUNT(a.appointment\_id) AS total\_appointments FROM Appointments a GROUP BY a.status

1. **Get the Average Payment Amount 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'

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

SELECT d.first\_name, d.last\_name, COUNT(a.appointment\_id) AS total\_appointments FROM Doctors d LEFT JOIN Appointments a ON d.doctor\_id = a.doctor\_id GROUP BY d.doctor\_id ORDER BY total\_appointments DESC LIMIT 1;