**1. List all patients from a specific city.**

Select patient\_id, name, city

from healthcare\_dataset

where city ="San Diego";

**2. Count the number of male and female patients.**

select gender, count(patient\_id) as no\_of\_patients

from healthcare\_dataset

group by gender;

**3. Find all appointments scheduled after '2024-06-01'.**

select appointment\_id, patient\_id, doctor\_id, appointment\_date

from appoinment

where appointment\_date > '2024-06-01' and status ="Scheduled"

order by appointment\_id;

**4. Retrieve the names of doctors with more than 10 years of experience.**

select doctor\_id, name, specialization, department, experience

from doctors

where experience >10;

**5. Show the total number of appointments for each patient**

select patient\_id, count(patient\_id) as no\_of\_appoinment

from appoinment

group by patient\_id

order by patient\_id

**6. Show the number of completed vs cancelled appointments.**

select status, count(patient\_id) as no\_of\_appoinment

from appoinment

where status="Cancelled" or status="Completed"

group by status

;

**7. Find the total billing amount per patient.**

select hd.patient\_id, hd.name, coalesce(sum(b.amount),0) as total\_amount

from healthcare\_dataset as hd

left join billing as b

on hd.patient\_id = b.patient\_id

group by patient\_id;

**8. List doctors and how many patients they have treated.**

select d. doctor\_id, d.namen as doctor\_name, coalesce(sum(a.doctor\_id),0) as total\_treated

from doctors as d

left join appoinment as a

on d.doctor\_id = a.doctor\_id

where a.status ="Completed"

group by doctor\_id;

**9. Get a list of medicines prescribed by each doctor.**

SELECT

d.doctor\_id,

d.name AS doctor\_name,

GROUP\_CONCAT(DISTINCT p.medicine ORDER BY p.medicine SEPARATOR ', ') AS medicines\_prescribed

-- Combine all unique medicine names prescribed by this doctor, sort them alphabetically, and separate them using a comma and space.

FROM

doctors d

LEFT JOIN

prescription p ON d.doctor\_id = p.doctor\_id

GROUP BY

d.doctor\_id, d.name;

**10. List patients who have never had an appointment.**

select hd.patient\_id,hd.name as patient\_name

from healthcare\_dataset hd

left join appoinment a

on hd.patient\_id = a.patient\_id

where a.appointment\_id is null;

**11. Find the top 3 doctors who have issued the most prescriptions.**

select p.doctor\_id,d.name as doctor\_name,count(p.doctor\_id) as most\_presciption

from doctors d

left join prescription p

on d.doctor\_id= p.doctor\_id

group by name , doctor\_id

order by most\_presciption desc

limit 3;

**12. Show the average billing amount for patients by city.**

select p.city,round(avg(b.amount),2) as Average\_Amount

from healthcare\_dataset p

left join billing b

on p.patient\_id = b.patient\_id

group by city

order by Average\_Amount desc;

**13. Retrieve patients who have had appointments but no billing records.**

select h.patient\_id,h.name as patient\_name

from appoinment a

join healthcare\_dataset as h on a.patient\_id = h.patient\_id

left join billing b

on a.patient\_id = b.patient\_id

where b.amount is null ;

**14. Create a report showing the number of appointments, prescriptions, and total billing per patient.**

SELECT

p.patient\_id,

p.name,

COUNT(DISTINCT a.appointment\_id) AS total\_appointments,

COUNT(DISTINCT pr.prescription\_id) AS total\_prescriptions,

COALESCE(SUM(b.amount), 0) AS total\_billing

FROM

healthcare\_dataset p

LEFT JOIN

appoinment a ON p.patient\_id = a.patient\_id

LEFT JOIN

prescription pr ON p.patient\_id = pr.patient\_id

LEFT JOIN

billing b ON p.patient\_id = b.patient\_id

GROUP BY

p.patient\_id, p.name

ORDER BY

total\_billing DESC;

**15. Find the month with the highest number of appointments and calculate the revenue for that month.**

select

month(a.appointment\_date) as appoinment\_month\_number,

monthname(a.appointment\_date) as appoinment\_month,

year(a.appointment\_date) as appoinment\_year,

count( distinct a.patient\_id) as total\_appoinments,

coalesce(sum(b.amount),0) as total\_revenue

from appoinment as a

left join billing as b on a.patient\_id = b.patient\_id

group by appoinment\_month\_number , appoinment\_month,appoinment\_year

order by total\_appoinments desc

;

SELECT

MONTHNAME(a.appointment\_date) AS appointment\_month, YEAR(a.appointment\_date) AS appointment\_year, COUNT(DISTINCT a.appointment\_id) AS total\_appointments, COALESCE(SUM(b.amount), 0) AS total\_revenue

# FROM

Appointments a LEFT JOIN

Billings b ON a.patient\_id = b.patient\_id GROUP BY

YEAR(a.appointment\_date), MONTH(a.appointment\_date) ORDER BY

total\_appointments DESC LIMIT 1;

**8. Complete Report per Patient (Appointments, Prescriptions, Billing)**

# SELECT

p.patient\_id, p.name,

COUNT(DISTINCT a.appointment\_id) AS total\_appointments, COUNT(DISTINCT pr.prescription\_id) AS total\_prescriptions, COALESCE(SUM(b.amount), 0) AS total\_billing

# FROM

healthcare\_dataset p LEFT JOIN

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

Prescriptions pr ON p.patient\_id = pr.patient\_id LEFT JOIN

Billings b ON p.patient\_id = b.patient\_id GROUP BY

p.patient\_id, p.name ORDER BY

total\_billing DESC;