

SQL Practice Questions - Beginner to Advanced

Beginner Level

Beginner Level (1-10)

1. List all patients' names and birth dates.
_Hint: Use `SELECT` from `patients`. _
2. List only male patients.
_Hint: Use `WHERE gender = 'Male'`. _
3. Show doctors specialized in "Cardiology".
_Hint: Use `WHERE specialty = 'Cardiology'`. _
4. Show doctors who started working in 2023.
_Hint: Filter with `hire_date > '2022-12-31'`. _
5. List patients born after 1980.
_Hint: Use `birth_date > '1980-01-01'`. _
6. Display each doctor's name and their specialty.
_Hint: Use `SELECT name, specialty`. _
7. Count how many patients are registered.
_Hint: Use `COUNT(*)`. _
8. Display each appointment's patient and doctor ID.
_Hint: Query the `appointments` table. _
9. List treatments longer than 30 days.
_Hint: Use `treatment_duration > 30` (assuming treatment_duration exists). _
10. Show all unique doctor specialties.
_Hint: Use `DISTINCT specialty`. _

Intermediate Level

Intermediate Level (11-20)

11. Count how many different patients each doctor has seen.
_Hint: Use `GROUP BY doctor_id`. _
12. Show the longest treatment duration.
_Hint: Use `MAX(treatment_duration)`. _
13. Show the first appointment date for each patient.
_Hint: Use `MIN(appointment_date)` with `GROUP BY patient_id`. _
14. Count appointments in the year 2022.

SQL Practice Questions - Beginner to Advanced

_Hint: Use `YEAR(appointment_date) = 2022`._

15. Find appointments where treatment duration is exactly 10 days.

_Hint: Use `treatment_duration = 10`._

16. Find doctors who have appointments with female patients.

Hint: Join `appointments` and `patients`.

17. Who is the doctor with the most patients?

_Hint: Use `COUNT(DISTINCT patient_id)` and `ORDER BY DESC`._

18. Count how many appointments each patient has.

_Hint: Use `GROUP BY patient_id` in `appointments`._

19. Count number of doctors per specialty.

Hint: Use `GROUP BY specialty`.

20. Find patients who had more than 1 appointment on the same day.

_Hint: Use `GROUP BY patient_id, appointment_date` + `HAVING COUNT(*) > 1`._

Advanced Level

Advanced Level (21-30)

21. List doctors whose average treatment duration exceeds 20 days.

Hint: Join `treatments`, group by doctor.

22. Find appointments that had no treatments.

Hint: Use `LEFT JOIN` and `IS NULL`.

23. Show earliest appointment date per doctor.

_Hint: Use `MIN(appointment_date)` with `GROUP BY doctor_id`._

24. Find the patient who received the longest treatment.

_Hint: Use `ORDER BY treatment_duration DESC` and `TOP 1`._

25. Show top 5 patients with the most appointments.

Hint: Use `ORDER BY COUNT(*) DESC` and `TOP 5`.

26. Show average treatment duration grouped by doctor specialty.

Hint: Join `treatments`, `appointments`, `doctors` and `GROUP BY specialty`.

27. List patients who had overlapping treatments.

Hint: Compare treatments with different IDs for the same patient.

28. List patients with appointments from at least 3 different doctors.

_Hint: `GROUP BY patient_id` and `COUNT(DISTINCT doctor_id)`._

29. Show patients who had no appointments in the last 6 months.

SQL Practice Questions - Beginner to Advanced

_Hint: Use `NOT IN` with `appointment_date < DATEADD(MONTH, -6, GETDATE())`._

30. Show patients who had appointments in both 2022 and 2023.

_Hint: Use `GROUP BY patient_id`, `HAVING COUNT(DISTINCT YEAR(appointment_date)) = 2`._