

Here is your **WEEKEND SQL ASSIGNMENT (50 QUESTIONS)**

Based **ONLY** on the topics you have completed so far.

Perfect for **Data Engineering + Data Science interviews**.

NO subqueries, NO window functions, NO joins — exactly what you learned.

❑ **WEEKEND SQL ASSIGNMENT — 50 QUESTIONS**

Basic (10) + Intermediate (25) + Hard (15)

Table name: employeetable1

Columns:

(emp_id, full_name, age, city, department, salary, joining_date)

● **PART A — BASIC LEVEL (10 QUESTIONS)**

(*Very simple, direct SELECT / WHERE / ORDER BY / COUNT / YEAR*)

1. Show full list of employees.
 2. Show only employee names and cities.
 3. Show employees who live in “Delhi”.
 4. Show employees whose age is greater than 30.
 5. Show employees whose salary is between 30,000 and 50,000.
 6. Show distinct cities in the table.
 7. Show all employees ordered by salary descending.
 8. Count total number of employees.
 9. Show the names of employees who joined in 2023.
 10. Show the year of joining for every employee.
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❑ **PART B — INTERMEDIATE LEVEL (25 QUESTIONS)**

(*GROUP BY, HAVING, YEAR/MONTH, CONCAT, aggregates, OFFSET/FETCH*)

YEAR / MONTH / CONCAT (8 Questions)

11. Count how many employees joined in each year.
12. Count how many employees joined in each month across all years.
13. Show employee count for each (Year + Month) combination.
14. Show total salary paid in each year.
15. Show average salary for each year and month.
16. Show year and month of joining using CONCAT(YYYY-MM).
17. Show employees who joined in January (Month = 1).
18. Show the year in which the highest number of employees joined (use TOP 1).

GROUP BY Department / City (8 Questions)

19. Count employees department-wise.

20. Count employees city-wise.
21. Show total salary department-wise.
22. Show average age city-wise.
23. Show department-wise average salary.
24. Show city-wise maximum salary.
25. Show city-wise count of employees ordered by count descending.
26. Show departments sorted by highest total salary.

HAVING Clause (5 Questions)

27. Show years where more than 5 employees joined.
28. Show departments where total salary > 3,00,000.
29. Show cities where avg salary > 50,000.
30. Show departments with at least 3 employees.
31. Show cities where average age > 35.

OFFSET / FETCH (4 Questions)

32. Show all employees except the first 2 rows (OFFSET).
33. Show only the 3rd to 5th employees (OFFSET + FETCH).
34. Show top 5 highest-paid employees using FETCH NEXT 5.
35. Skip the first 10 employees sorted by emp_id.

● PART C — HARD LEVEL (15 QUESTIONS)

(Combination of the topics: GROUP BY + YEAR + MONTH + HAVING + CONCAT + ORDER BY + OFFSET/FETCH)

36. Show employee count for each department in each joining year.
37. Show total salary for each city in each joining year.
38. Show highest salary in each department for each joining year.
39. Show the month with the highest total joining count (use TOP 1).
40. Show Year/Month combinations where more than 3 employees joined.
41. Show departments where average salary is higher than the overall company average (✓ allowed using HAVING).
42. Show years where total salary paid is above 5,00,000.
43. Show cities that have more than 2 employees joining every year.
44. Show department-wise joining count sorted by year and count descending.
45. Show the earliest (minimum) joining year for each city.
46. Show year-wise average age of employees ordered by avg age descending.
47. Show the 2nd highest joining year (use ORDER BY + OFFSET).
48. Show the 3rd most populated department by employee count (OFFSET + FETCH).
49. Show city-wise joining count for each month (GROUP BY city + MONTH).
50. Show department + year + month combination with their total salary.

☐ How to Use This Assignment

- ✓ Complete all questions and write SQL queries
- ✓ Create your own fake data if needed

- ✓ These questions are of **real Data Engineer interview difficulty**
- ✓ Covers everything you have learned till today
- ✓ Perfect for confidence-building

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