100 SQL Coding Questions for Data Science Interviews

1. Retrieve all records from a table.

2. Select specific columns from a table.

3. Filter records based on a condition using the WHERE clause.

4. Sort records in ascending or descending order using the ORDER BY clause.

5. Retrieve unique records using the DISTINCT keyword.

6. Count the number of records in a table.

7. Calculate the average value of a numeric column.

8. Find the minimum and maximum values in a column.

9. Sum the values in a numeric column.

10. Group records based on a column using the GROUP BY clause.

11. Filter groups using the HAVING clause.

12. Perform INNER JOIN between two tables.

13. Perform LEFT JOIN between two tables.

14. Perform RIGHT JOIN between two tables.

15. Perform FULL OUTER JOIN between two tables.

16. Combine two result sets using UNION.

17. Find common records using INTERSECT.

18. Find records in one table not in another using EXCEPT.

19. Insert a new record into a table.

20. Update existing records in a table.

21. Delete records from a table.

22. Create a new table.

23. Add a new column to an existing table.

24. Drop a column from a table.

25. Rename a column in a table.

26. Add a primary key to a table.

27. Add a foreign key to a table.

28. Create an index on a table column.

29. Drop an index from a table.

30. Select records where column value is NULL.

31. Replace NULLs using COALESCE.

32. Pattern matching using LIKE operator.

33. Use BETWEEN to filter ranges.

34. Use IN operator to match values from a list.

35. Use subquery in SELECT statement.

36. Use subquery in FROM clause.

37. Use subquery in WHERE clause.

38. Retrieve top N records from a table.

39. Find the Nth highest value.

40. Detect duplicate records.

41. Delete duplicate records.

42. Case-insensitive search.

43. Find records starting with a prefix.

44. Find records ending with a suffix.

45. Find records containing a substring.

46. Select records where column NOT IN a list.

47. Select records where column value is greater than a number.

48. Select records where column value is less than a number.

49. Select records with column values between two numbers.

50. Select records where column is not equal to a value.

51. Get records by date range.

52. Find records before a given date.

53. Find records after a given date.

54. Select records from last 7 days.

55. Select records from current month.

56. Select records from current year.

57. Use aggregate functions with GROUP BY.

58. Find records where column value appears more than once.

59. Select records ordered by multiple columns.

60. Select records with conditional logic using CASE.

61. Round numeric column values.

62. Truncate numeric values.

63. Calculate percentage from columns.

64. Concatenate two columns.

65. Extract year/month/day from date column.

66. Add days to a date.

67. Subtract dates to find difference.

68. Convert string to date.

69. Convert date to string.

70. Use window functions (ROW_NUMBER).

71. Use RANK function.

72. Use DENSE_RANK function.

73. Use NTILE function.

74. Find cumulative sum using window functions.

75. Calculate running average.

76. Find first and last record using window functions.

77. Pivot data using CASE.

78. Unpivot data using UNION ALL.

79. Create temporary tables.

80. Create views.

81. Use recursive CTEs.

82. Find second highest salary in a table.

83. Count distinct values in a column.

84. Use EXISTS to filter records.

85. Use NOT EXISTS to filter records.

86. Find median of a column.

87. Use CROSS JOIN.

88. Calculate row difference between consecutive rows.

89. Calculate percent change between rows.

90. Join tables on multiple columns.

91. Use self joins.

92. Find records with missing foreign keys.

93. Get count of records by category.

94. List all table names in database.

95. List all column names in a table.

96. Check index usage on a column.

97. Find orphan records in child table.

98. Drop a view.

99. Check constraints on a table.

100. Add default value to an existing column.