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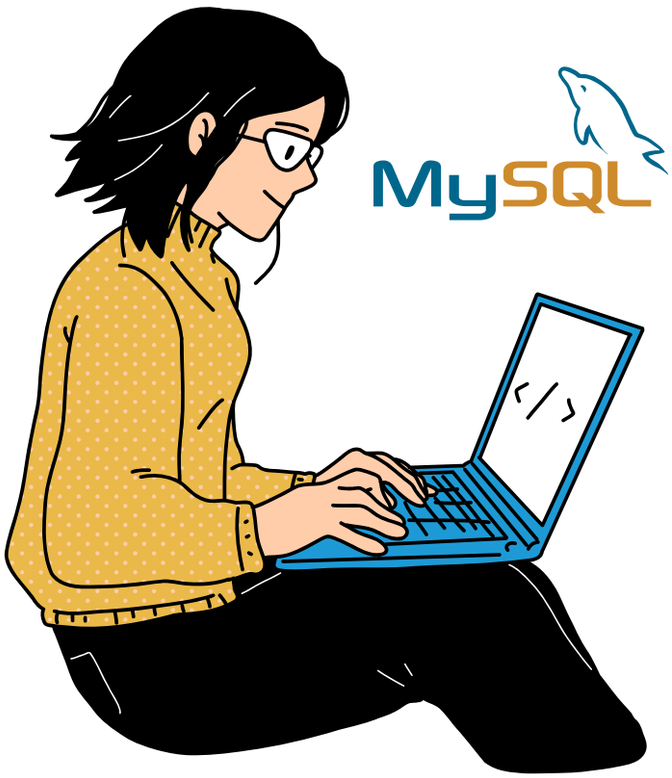
100 SQL INTERVIEW QUESTIONS



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1. What is SQL?
2. What are the different SQL data types?
3. Explain the difference between SQL and NoSQL.
4. How do you filter records using a WHERE clause?
5. Write a query to retrieve all records from a table.
6. What is the purpose of the GROUP BY clause?
7. Define a JOIN in SQL.
8. Differentiate between INNER JOIN and OUTER JOIN.
9. What is the PRIMARY KEY?
10. How can you avoid duplicate records in a query result?
11. What are aggregate functions in SQL? Name a few examples.
12. Write a query to find the second highest salary from a table.
13. How can you fetch alternate records from a table?
14. How do you add a column to an existing table?
15. What is the purpose of the ORDER BY clause?
16. Explain the concept of Indexing in SQL.
17. How do you retrieve unique values from a column using SQL?
18. What is the difference between UNION and UNION ALL?
19. How can you calculate the total number of records in a table?
20. Write a SQL query to find the nth maximum value in a column.
21. Explain the concept of Normalization in SQL.
22. What is Denormalization?

23. Explain the different types of normalization forms.
24. What are subqueries, and how are they different from JOINS?
25. Write a query to find all employees whose salary is above the average salary.
26. How can you update records in SQL?
27. How can you delete records in SQL?
28. Explain the purpose of the HAVING clause.
29. What is the difference between a Temporary Table and a Table Variable?
30. Write a SQL query to fetch intersecting records of two tables.
31. How do you implement transactions in SQL?
32. Explain the ACID properties in SQL.
33. How can you create an index in SQL?
34. What is a Self Join, and how can it be performed?
35. Write a query to find all employees who have the same role.
36. How can you find the duplicate records in a table?
37. Explain the difference between CHAR and VARCHAR data types.
38. How can you perform pattern matching in SQL?
39. How can you optimize a SQL query?
40. What are Views in SQL? How do you create one?
41. How does database indexing work?
42. Explain the different types of database indexes.
43. What is a stored procedure in SQL?

44. What is a trigger in SQL?
45. Explain the concept of Cursors in SQL.
46. How do you handle NULL values in SQL?
47. Write a SQL query to rank employees based on their salary
48. Explain Partitioning in SQL and its types.
49. Explain different types of SQL constraints.
50. How can you copy data from one table to another?
51. What is the difference between a Clustered and a Non-Clustered Index?
52. How can you handle errors in SQL stored procedures?
53. Write a query to perform a full outer join on two tables.
54. How can you fetch common records from two tables?
55. Explain the process of database normalization with examples.
56. Write a query to get the department-wise count of employees.
57. How can you optimize subqueries?
58. How do you manage transactions in a stored procedure?
59. What is Data Warehousing? How is it different from a Database?
60. What is a Composite Key?
61. How do you perform database tuning?
62. How do you resolve a deadlock?
63. Explain how indexing improves query performance.

64. How do you manage and optimize large databases?
65. What is the Query Execution Plan?
66. Explain database sharding and its benefits.
67. How do you design a scalable database?
68. What is database replication? How is it implemented?
69. How do you implement high availability in databases?
70. What are the considerations for database migration?
71. How do you secure a database?
72. What is a Database Management System (DBMS), and how does it differ from a Relational Database Management System (RDBMS)?
73. How do you maintain database integrity?
74. Explain the steps involved in designing a database.
75. How do you manage database concurrency?
76. Explain the concept of Distributed Databases.
77. How do you recover data in SQL?
78. Explain the concept of Two-phase commit in SQL.
79. How can you convert a string to a number in SQL?
80. How can you prevent SQL injection?
81. Discuss the optimization techniques for OLAP systems.
82. How can you optimize the storage of a database?
83. Explain the process of query compilation.
84. How does the query optimizer decide the best way to run a query?

85. How do you choose between indexing and partitioning a table?
86. How do you optimize a database schema?
87. Explain the process of denormalization with examples.
88. Discuss different ways to optimize a stored procedure.
89. Explain the role of database caching.
90. How do you manage database dependencies?
91. Discuss the steps to optimize a recursive SQL query.
92. How do you optimize a SQL query in a real-time environment?
93. Discuss how to manage relationships in a database schema.
94. How can you optimize database transactions?
95. Explain how to design a database for a large-scale application.
96. How do you optimize the speed of data retrieval in a database?
97. Explain different SQL database architectures and their use cases.
98. How do you manage the scalability of a database?
99. Discuss how to handle complex relationships in databases.
100. How do you optimize the overall performance of a database system?