55 SQLite Interview Questions to Assess and Hire Top Developers

Questions

1. What is SQLite, and where is it commonly used?

2. Can you explain the primary differences between SQLite and other database management systems like MySQL or PostgreSQL?

3. What are the benefits of using SQLite for mobile applications?

4. How does SQLite handle concurrency and locking?

5. What are some common limitations of SQLite?

6. Can you describe a use case where SQLite is the best choice?

7. How does SQLite ensure data integrity and security?

8. What is a 'trigger' in SQLite, and how is it used?

9. How does SQLite handle database versioning and migrations?

10. Can you discuss the importance of [indexes](https://www.adaface.com/blog/skills-required-for-database-developer/) in SQLite?

11. What are the main advantages of using SQLite in embedded systems?

12. Can you explain how to create a new SQLite database and a table within it?

13. How do you perform a backup of an SQLite database?

14. What is the role of the SQLite 'VACUUM' command, and when would you use it?

15. How can you insert multiple rows into an SQLite table in a single statement?

16. What are the different data types supported by SQLite?

17. Can you explain how to execute a raw SQL query in SQLite using a programming language of your choice?

18. What is a 'view' in SQLite, and how do you create one?

19. How do you handle errors in SQLite operations?

20. Can you describe how to use foreign keys in SQLite and their importance?

21. How does SQLite handle NULL values compared to other SQL databases?

22. Explain the concept of 'PRAGMA' in SQLite and provide an example of its use.

23. What is the purpose of the 'WITHOUT ROWID' table option in SQLite?

24. How would you optimize a SQLite database for read-heavy operations?

25. Describe the concept of 'page size' in SQLite and its impact on database performance.

26. How would you efficiently retrieve the top N rows from a large SQLite table?

27. Explain the concept of transactions in SQLite and when you'd use them.

28. What's the difference between INNER JOIN and LEFT JOIN in SQLite?

29. How can you implement a many-to-many relationship in SQLite?

30. Describe the process of creating and using an index to improve query performance in SQLite.

31. What's the purpose of the EXPLAIN QUERY PLAN command in SQLite?

32. How would you handle date and time operations in SQLite?

33. Explain the concept of subqueries in SQLite and provide an example.

34. What are some best practices for optimizing SQLite database performance?

35. How can you implement full-text search functionality in SQLite?

36. Describe the process of adding a new column to an existing table in SQLite.

37. What's the difference between DELETE and TRUNCATE operations in SQLite?

38. How would you handle large dataset imports in SQLite efficiently?

39. Explain the concept of UPSERT in SQLite and when it's useful.

40. How can you implement data encryption in SQLite for sensitive information?

41. What are some techniques to optimize queries in SQLite?

42. How would you reduce the size of a SQLite database?

43. What is the significance of indexing in SQLite optimization?

44. How would you optimize SQLite for write-heavy operations?

45. How do you use the EXPLAIN QUERY PLAN command in SQLite for optimization?

46. What are some best practices for optimizing SQLite database performance?

47. How would you handle large dataset imports in SQLite efficiently?

48. Explain the importance of using appropriate data types in SQLite.

49. You're developing a mobile app that needs to store user preferences locally. How would you implement this using SQLite?

50. How would you optimize a SQLite database for a read-heavy application with infrequent writes?

51. Your team is considering using SQLite for a multi-user web application. What concerns would you raise, and what alternatives might you suggest?

52. Describe how you would implement a simple search functionality in a SQLite-based application without using full-text search.

53. How would you handle database schema updates in a SQLite-based mobile app to ensure smooth user experience across different app versions?

54. In a SQLite-based IoT application, you're experiencing data corruption issues. How would you diagnose and address this problem?

55. You need to implement a simple audit trail in a SQLite database. How would you approach this?