

topic: Database Management

subtopic: Joins

difficulty: Medium

1. What is the primary purpose of using SQL JOIN statements?

- A) To delete records from a database
- B) To retrieve data from multiple tables
- C) To update records in a table
- D) To create new tables

Answer: B

2. Which SQL JOIN clause returns all records from the left table and matched records from the right table?

- A) INNER JOIN
- B) FULL OUTER JOIN
- C) LEFT JOIN
- D) CROSS JOIN

Answer: C

3. What type of SQL JOIN is used to combine rows from two tables that have matching values in a specified column?

- A) LEFT JOIN
- B) INNER JOIN
- C) RIGHT JOIN
- D) FULL OUTER JOIN

Answer: B

4. Which of the following SQL JOINS will return all records when there is a match in either left (table1) or right (table2) table records?

- A) LEFT JOIN
- B) INNER JOIN

- C) RIGHT JOIN
- D) FULL OUTER JOIN

Answer: D

5. What does the SQL statement "SELECT * FROM table1 CROSS JOIN table2" do?
- A) Matches rows with similar keys
 - B) Returns only the rows with matching values
 - C) Returns the Cartesian product of table1 and table2
 - D) Updates table1 with values from table2

Answer: C

6. Which clause is used to combine rows from two or more tables, based on a related column between them?
- A) UNION
 - B) JOIN
 - C) SELECT
 - D) INSERT

Answer: B

7. What type of JOIN would you use if you want to select records that have matching values in both tables?
- A) FULL OUTER JOIN
 - B) LEFT JOIN
 - C) INNER JOIN
 - D) RIGHT JOIN

Answer: C

8. Which of the following JOINS will return unmatched rows from the right table?
- A) INNER JOIN
 - B) RIGHT JOIN
 - C) LEFT JOIN

D) CROSS JOIN

Answer: B

9. In a SQL JOIN, what is the role of the ON clause?

A) It specifies the columns to display in the result

B) It defines the condition to match rows from different tables

C) It determines the order of the output

D) It lists the tables to be joined

Answer: B

10. What is the result of a FULL OUTER JOIN?

A) All rows from the left table only

B) All rows from the right table only

C) All rows from both tables, matched and unmatched

D) Only matched rows from both tables

Answer: C

11. If you use a LEFT JOIN, what will happen if there are no matching values in the right table?

A) The row from the left table will be excluded

B) The row from the left table will be included with NULLs for right table columns

C) The query will return an error

D) The row from the right table will be included with NULLs for left table columns

Answer: B

12. Which of the following JOIN types is generally the fastest?

A) FULL OUTER JOIN

B) LEFT JOIN

C) INNER JOIN

D) RIGHT JOIN

Answer: C

13. When using a RIGHT JOIN, what data is retained in the result set?
- A) All rows from the left table
 - B) Matched rows from both tables and all rows from the right table
 - C) All rows from the right table only
 - D) Only unmatched rows from the left table

Answer: B

14. What is an equi join?
- A) A join that matches rows based on a condition other than equality
 - B) A join that matches rows based on equality between specified columns
 - C) A join that combines all rows from both tables
 - D) A join that returns only unmatched rows

Answer: B

15. What happens if you omit the ON clause in a JOIN?
- A) SQL will automatically use the primary keys to join tables
 - B) It results in a syntax error
 - C) A CROSS JOIN is performed
 - D) The query will not execute

Answer: C

16. In which scenario would you use a CROSS JOIN?
- A) When you want to update values in a table
 - B) When you need the Cartesian product of two tables
 - C) When you want to delete records from a table
 - D) When you want to sort data from two tables

Answer: B

17. Which of the following statements is true about INNER JOIN?
- A) It returns all rows from the left table
 - B) It returns unmatched rows from both tables
 - C) It returns only matched rows from both tables
 - D) It returns all rows from the right table

Answer: C

18. What is the result of using an INNER JOIN without a WHERE clause?

- A) No rows will be returned
- B) A syntax error will occur
- C) Only rows with NULL values will be returned
- D) Only matched rows from both tables will be returned

Answer: D

19. How does a NATURAL JOIN differ from an INNER JOIN?

- A) NATURAL JOIN automatically joins using columns with the same name and datatype
- B) NATURAL JOIN requires a WHERE clause to function
- C) NATURAL JOIN is faster than INNER JOIN
- D) NATURAL JOIN always returns more rows than INNER JOIN

Answer: A

20. What keyword is used to specify conditions for joining tables in SQL?

- A) WHERE
- B) ON
- C) HAVING
- D) ORDER BY

Answer: B

21. What is the output of a RIGHT JOIN if there are no matching rows in the left table?

- A) Only matched rows from the right table
- B) All rows from the right table with NULLs for left table columns
- C) An empty result set
- D) A syntax error

Answer: B

22. Which JOIN type will always return the largest result set?

- A) INNER JOIN
- B) LEFT JOIN
- C) FULL OUTER JOIN

D) CROSS JOIN

Answer: D

23. Which JOIN is used when you need to ensure that all rows from the left table are returned, even if there are no matches in the right table?

A) FULL OUTER JOIN

B) LEFT JOIN

C) INNER JOIN

D) RIGHT JOIN

Answer: B

24. What will be the result of a FULL OUTER JOIN if there are matching rows in both tables?

A) Both matched and unmatched rows from both tables

B) Only matched rows from both tables

C) Only unmatched rows from both tables

D) No rows will be returned

Answer: A

25. Which of the following is a feature of a CROSS JOIN?

A) It only joins tables based on specified columns

B) It returns the Cartesian product of the joined tables

C) It requires a WHERE clause

D) It only returns matched rows

Answer: B

26. How does a LEFT JOIN behave when there are no matching rows in the right table?

A) It returns only unmatched rows from the left table

B) It returns unmatched rows from the right table

C) It returns rows from the left table with NULLs for right table columns

D) It does not return any rows

Answer: C

27. What condition is applied when using a FULL OUTER JOIN?
- A) It only returns rows with NULL values
 - B) It matches all rows without conditions
 - C) It combines matched and unmatched rows from both tables
 - D) It only returns unmatched rows

Answer: C

28. What is a key consideration when using JOINS on large tables?
- A) The number of columns in the tables
 - B) The size of the tables and performance impact
 - C) The datatype of the columns
 - D) The order of the columns in the SELECT statement

Answer: B

29. Which JOIN is most appropriate when you want to include all rows from the right table?
- A) LEFT JOIN
 - B) FULL OUTER JOIN
 - C) CROSS JOIN
 - D) RIGHT JOIN

Answer: D

30. What is the primary advantage of using JOINS in SQL?
- A) To increase database storage
 - B) To perform calculations
 - C) To retrieve related data from multiple tables efficiently
 - D) To improve data security

Answer: C

31. When might you use an INNER JOIN in a query?
- A) When you want to include unmatched rows
 - B) When you need to combine data that has matching values in both tables
 - C) When you want to exclude all NULL values

D) When you need the Cartesian product of two tables

Answer: B

32. Which SQL keyword is used to join tables based on a condition?

A) AND

B) OR

C) JOIN

D) UNION

Answer: C

33. How does SQL handle NULL values in JOIN conditions?

A) It includes them as matched values

B) It treats them as unequal and does not match them

C) It converts them to zero

D) It automatically excludes the rows with NULL values

Answer: B

34. What is the default type of JOIN if no specific type is mentioned?

A) CROSS JOIN

B) INNER JOIN

C) LEFT JOIN

D) RIGHT JOIN

Answer: B

35. In an SQL query, which clause is used to specify the conditions for matching rows?

A) GROUP BY

B) ORDER BY

C) WHERE

D) ON

Answer: D

36. How can you improve the performance of JOIN operations on large datasets?

A) By increasing the number of columns selected

- B) By creating indexes on the key columns
- C) By using more complex JOIN conditions
- D) By increasing the number of tables in the query

Answer: B

37. What SQL JOIN type can be used to find records in one table that do not have corresponding records in another table?

- A) FULL OUTER JOIN
- B) INNER JOIN
- C) LEFT JOIN
- D) RIGHT JOIN

Answer: C

38. Which of the following will return a Cartesian product of two tables?

- A) INNER JOIN
- B) LEFT JOIN
- C) RIGHT JOIN
- D) CROSS JOIN

Answer: D

39. Which JOIN type would you use to ensure all records from two tables are included, even if they do not match?

- A) INNER JOIN
- B) LEFT JOIN
- C) FULL OUTER JOIN
- D) RIGHT JOIN

Answer: C

40. When using a LEFT JOIN, what happens to the non-matching rows in the right table?

- A) They are included with NULL values for left table columns
- B) They are excluded from the result
- C) They cause an error in the query

D) They are included with zero values for left table columns

Answer: B

41. What is the primary difference between an INNER JOIN and a CROSS JOIN?

A) INNER JOIN returns matched rows, CROSS JOIN returns all possible combinations

B) INNER JOIN returns all rows, CROSS JOIN returns matched rows

C) INNER JOIN requires a WHERE clause, CROSS JOIN does not

D) INNER JOIN is faster than CROSS JOIN

Answer: A

42. How does a RIGHT JOIN differ from a LEFT JOIN?

A) RIGHT JOIN returns unmatched rows from the left table

B) RIGHT JOIN returns all rows from the right table, LEFT JOIN returns all from the left

C) RIGHT JOIN requires an ON clause, LEFT JOIN does not

D) RIGHT JOIN is used only for text columns

Answer: B

43. What is the result of a query with multiple JOINS?

A) Only the first JOIN is executed

B) The result combines data from all JOINed tables based on the conditions

C) It results in an error unless a WHERE clause is used

D) Only unmatched rows from the final table are returned

Answer: B

44. What happens if a JOIN condition is not properly specified in a query?

A) The query will run faster

B) The query will return incorrect or unexpected results

C) The query will not execute and return an error

D) The query will only return NULL values

Answer: B

45. Which JOIN can be used to retrieve rows with no match in another table?

- A) INNER JOIN
- B) LEFT JOIN
- C) FULL OUTER JOIN
- D) RIGHT JOIN

Answer: B

46. How does SQL determine which rows to join in a CROSS JOIN?

- A) Based on matching values in a specified column
- B) Automatically based on primary keys
- C) By combining every row in the first table with every row in the second table
- D) Based on conditions in the WHERE clause

Answer: C

47. Which type of JOIN is most suitable for finding common entries in two tables?

- A) LEFT JOIN
- B) INNER JOIN
- C) FULL OUTER JOIN
- D) RIGHT JOIN

Answer: B

48. How can you prevent a CROSS JOIN from returning a Cartesian product?

- A) By using a WHERE clause
- B) By using an ON clause
- C) By using a HAVING clause
- D) By using a SELECT DISTINCT clause

Answer: B

49. What is the effect of an INNER JOIN on tables with no matching rows?

- A) It returns all rows from both tables
- B) It returns an empty result set
- C) It returns only the unmatched rows

D) It results in an error

Answer: B

50. Why might a FULL OUTER JOIN be less performant on large datasets?

A) It requires more complex SQL syntax

B) It combines both matched and unmatched rows, increasing the result size

C) It only returns unmatched rows

D) It does not support indexing

Answer: B