



SQL Query

Interview Questions



iNeuron Intelligence Pvt Ltd

1. Imagine you want to identify employees who are eligible for promotions based on their years of experience and current salary. Write an Oracle SQL query to retrieve the employee ID, name, department, and salary of employees who have more than 5 years of experience and earn more than \$95,000 per year.

```
SELECT employee_id, employee_name, department, salary
```

```
FROM employees
```

```
WHERE years_of_experience > 5 AND salary > 95000;
```

2. Consider a scenario where the company plans to give a salary raise to employees with a performance rating of 4 or 5. Write an Oracle SQL query to update eligible employees' salaries by 8%.

```
UPDATE employees
```

```
SET salary = salary * 1.08
```

```
WHERE rating IN (4, 5);
```

3. You want to create a list of managers and the number of employees reporting to them. Write an Oracle SQL query to retrieve managers' names and the count of employees reporting to each manager.

```
SELECT m.employee_name AS manager_name,  
COUNT(e.employee_id) AS num_employees
```

```
FROM employees e
```

```
JOIN employees m ON e.manager_id = m.employee_id
```

GROUP BY m.employee_name;

4. What is SQL injection?

SQL injection is a code injection technique that implies the usage of malicious code to access sensitive data that should not be displayed.

5. What is a trigger in SQL?

A trigger is a certain type of procedure running automatically when some event takes place in the database server. For example, a DML trigger runs when a user tries to edit certain data through a Data Manipulation Language event.

6. Can we disable a trigger?

Yes, it's possible to disable a trigger. For this purpose, use "DISABLE TRIGGER triggerName ON<>". If you need to disable all the triggers, use DISABLE TRIGGER ALL ON ALL SERVER.

7. How to use LIKE in SQL?

We use LIKE operator in WHERE clause if we need to look for a particular pattern in a column. For example:

```
SELECT * FROM employees WHERE first_name like 'Steven'
```

8. How is a non-clustered index different from a clustered index?

A clustered index determines the order in which the data are stored in a table. A non-clustered index, in turn, does not sort the data inside the table. Actually, non-clustered index and table data are stored in two separate places.

9. What is ISAM?

ISAM, also known as the Indexed Sequential Access Method, was invented by IBM for storing and extracting data from secondary storage systems.

10. What is Database Black Box Testing?

BlackBox testing implies testing interfaces and database integration. It consists of data mapping, the verification of the incoming data, and the verification of outgoing data from query functions.

11. What is the COMMIT in SQL?

The COMMIT statement is used when we need to finish the current transaction and make all changes in it permanent. A transaction, in turn, is the sequence of SQL statements seen as a single unit by the Oracle Database.

12. What is the difference between TRUNCATE and DROP statements?

TRUNCATE statement removes all rows from the table while the DROP command deletes a table from a database. In both cases, the operation cannot be rolled back.

13. What is a collation?

The term collation refers to a set of rules that specify how the database engine should sort and compare the character data.

14. What is ALIAS in SQL?

We use the ALIAS command to give a column in a table or a table itself a temporary name with the purpose of making a column header easier to read.

15. What are the SQL constraints?

SQL constraints determine rules for the data in a table. To be more specific, they can limit the type of data for a table to ensure its reliability and accuracy.

16. What are Group Functions?

Group functions show results based on sets or groups of rows. For instance, users can get sums/totals, averages, minimums, and maximums by utilizing group functions.

17. How can we execute dynamic SQL?

Dynamic SQL can be executed in three different ways. First, we can write a query with parameters. Second, we can use the EXEC command. Finally, we can use sp_executesql.

18. What is the First Normal Form and what are their main rules?

The first normal form is a property with two primary rules for an organized database. The first one is to remove the identical columns for the same table. The second rule implies creating a separate table for each set of related data. The third rule says we should identify each table with a unique primary key column.

19. What are the main case manipulation functions in SQL?

The primary case manipulation functions are as follows:

LOWER/LCASE – converts the specific argument into lower case

UPPER/UCASE – converts the particular argument into lower case

INITCAP – converts the first letter of a word into uppercase while other letters are converted into lowercase

20. What ACID properties ensure that the database transactions are processed?

The ACID acronym defines the set of properties of database transactions that ensures the validity of the data regardless of power failures, errors, or other issues. These properties are atomicity, consistency, isolation, and durability.