

Interview Questions

Q 1. How to change a table name in SQL? (Vmware)

This is the command to change a table name in SQL:

```
ALTER TABLE table_name
```

```
RENAME TO new_table_name;
```

Q 2. What is the difference between DELETE and TRUNCATE statements? (Goldman Sachs)

DELETE	TRUNCATE
Delete command is used to delete a row in a table.	Truncate is used to delete all the rows from a table.
You can rollback data after using the delete statement.	You cannot rollback data.
It is a DML command.	It is a DDL command.
It is slower than a truncated statement.	It is faster.

Q 3. What is an Index? (Morgan Stanely)

An index refers to a performance tuning method of allowing faster retrieval of records from the table. An index creates an entry for each value and hence it will be faster to retrieve data.

Q 4. Explain different types of indexes in SQL. (Microsoft)

There are three types of index namely:

Unique Index:

This index does not allow the field to have duplicate values if the column is uniquely indexed. If a primary key is defined, a unique index can be applied automatically.

Clustered Index:

This index reorders the physical order of the table and searches based on the basis of key values. Each table can only have one clustered index.

Non-Clustered Index:

Non-Clustered Index does not alter the physical order of the table and maintains a logical order of the data. Each table can have many nonclustered indexes.

Q 5. Are NULL values the same as that of zero or a blank space? (VERITAS, TCS)

A NULL value is not at all the same as that of zero or a blank space. NULL value represents a value which is unavailable, unknown, assigned or not applicable whereas a zero is a number and blank space is a character

Q 6. What are the different types of a subquery? (D.E.SHAW)

There are two types of subquery namely, Correlated and Non-Correlated.

Correlated subquery: These are queries which select the data from a table referenced in the outer query. It is not considered as an independent query as it refers to another table and refers to the column in a table.

Non-Correlated subquery: This query is an independent query where the output of the subquery is substituted in the main query.

Q 7. Write a SQL query to find the names of employees that begin with 'A'? (ADOBE)

To display name of the employees that begin with 'A', type in the below command:
`SELECT * FROM Table_name WHERE EmpName like 'A%';`

Q 8. What is the need for group functions in SQL? (WIPRO)

Group functions work on the set of rows and return one result per group. Some of the commonly used group functions are: AVG, COUNT, MAX, MIN, SUM, VARIANCE.

Q 9. How can you insert NULL values in a column while inserting the data? (INTUIT)

NULL values in SQL can be inserted in the following ways:

- Implicitly by omitting column from column list.
- Explicitly by specifying NULL keyword in the VALUES clause

Q 10. What is the main difference between 'BETWEEN' and 'IN' condition operators? (GOOGLE)

BETWEEN operator is used to display rows based on a range of values in a row whereas the IN condition operator is used to check for values contained in a specific set of values.

Q 11. What is the difference between 'HAVING' CLAUSE and a 'WHERE' CLAUSE? (HSBC)

HAVING clause can be used only with a SELECT statement. It is usually used in a GROUP BY clause and whenever GROUP BY is not used, HAVING behaves like a WHERE clause. Having Clause is only used with the GROUP BY function in a query whereas WHERE Clause is applied to each row before they are a part of the GROUP BY function in a query.

Q 12. How can you select unique records from a table? (WALMART)

You can select unique records from a table by using the DISTINCT keyword.
Select DISTINCT studentID from Student
Using this command, it will print a unique student id from the table Student.

Q 13. Write a Query to display the number of employees working in each region? (MASTERCARD)

SELECT region, COUNT(gender) FROM employee GROUP BY region;

Q 14. How to use LIKE in SQL? (BITWISE)

The LIKE operator checks if an attribute value matches a given string pattern. Here is an example of LIKE operator
SELECT * FROM employees WHERE first_name like 'Steven';
With this command, we will be able to extract all the records where the first name is like "Steven".
