

What is a subquery in SQL?

A Subquery is a query nested inside another query, Often used to perform more complex data retrievals operations. It is executed first, and its result is used by the outer query.

What are the different types of subqueries?

Different types of Subqueries in SQL are

- 1)Single-row subquery: It returns one row.
- 2)Multi row Subquery: Returns multiple rows used with IN, ANY, ALL
- 3) Correlated subquery: Uses the outer query's column inside the subquery.

What is a correlated subquery?

A correlated subquery depends on the outer query for its values and executes once per row. Whereas A non-correlated subquery runs independently and executes only once.

What is a pseudocolumn in Oracle SQL?

A pseudocolumn is a column-like entity not stored in a table but available for querying.

Common pseudocolumns:

ROWNUM – Assigns a row number.

ROWID – Stores the physical location of a row.

SYSDATE – Returns the system date.

LEVEL – Used for hierarchical queries.

What is a View in SQL?

A view in SQL is a virtual table that is created based on the result set of an SQL query. Unlike a physical table, a view does not store data itself but dynamically displays data from one or more underlying tables whenever it is queried.

What are Views used for?

A view refers to a logical snapshot based on a table or another view. It is used for the following reasons:

Restricting access to data.

Making complex queries simple.

Ensuring data independence.

Providing different views of the same data.

Different types of views in SQL?

Simple View: It is a view based on a single table and does not have a GROUP BY clause or other sql features.

Complex View: It is a view built from several tables and includes a GROUP BY clause as well as functions.

Inline View: It is a view built on a subquery in the FROM clause, which provides a temporary table and simplifies a complicated query.

Materialized View: It is a view that saves both the definition and the details. It builds data replicas by physically preserving them

What is the difference between ANY and ALL in SQL?

ANY: Compares a value with any value from a subquery returns true if at least one match is found.

ALL: Compares a value with all values in a subquery returns true only if the condition holds for all.

What is WITH CHECK OPTION in Views?

The with CHECKOPTION ensures that dml(insert/update) Operations in a view do not modify data that violates the view's filter condition

Can we still use a view if the original table is deleted?

No. Any views based on that table will become invalid after deleting the base table. If we try to use such a view anyway, we'll receive an error message.

What is the difference between renaming a column and giving an alias to it?

Renaming a column means permanently changing its actual name in the original table. Giving an alias to a column means giving it a temporary name while executing an SQL query, with the purpose to make the code more readable and compact.

How to create table with same structure in sql?

```
>CREATE TABLE EMP_NEW AS  
SELECT * FROM EMP WHERE 1=0;
```

Here it only copies the structure of the table without any data

To add data we can modify this as

```
>CREATE TABLE EMP_NEW1 AS  
SELECT * FROM EMP WHERE 1=1;
```

It makes sure whole table and its data is copied.

What are the properties of a transaction?

Generally, these properties are referred to as ACID properties.

They are:

- Atomicity
- Consistency
- Isolation
- Durability.