## **PROMT-give me brief about select statement in PostgreSQL as a beginner with examples**

The **SELECT** statement in PostgreSQL is a fundamental command used to retrieve data from one or more tables. It's the most common way to query a database and is essential for anyone starting with SQL.

**Basic Syntax and Structure**

The basic syntax of a SELECT statement is:

SQL

SELECT column1, column2, ...

FROM table\_name;

* SELECT: This keyword specifies the columns you want to retrieve. You can list one or more column names separated by commas.
* \*: To select all columns from a table, you can use the asterisk symbol (\*) as a shortcut.
* FROM: This keyword specifies the table from which you want to retrieve the data.<br>

**Common Clauses with SELECT**

As a beginner, you'll frequently use these clauses to refine your data retrieval:

**WHERE Clause**

The WHERE clause is used to filter rows based on specific conditions. This allows you to retrieve only the data you need, rather than the entire table.

Example: Retrieving all products that have a price greater than 50.

**SQL**

SELECT product\_name, price

FROM products

WHERE price > 50;

**ORDER BY Clause**

The ORDER BY clause sorts the result set based on one or more columns. It's useful for arranging data in a meaningful way.

* ASC: Sorts in ascending order (default).
* DESC: Sorts in descending order.

Example: Retrieving all products and sorting them by price in descending order.

SQL

SELECT product\_name, price

FROM products

ORDER BY price DESC;

**LIMIT Clause**

The LIMIT clause restricts the number of rows returned by the query. This is particularly useful for handling large datasets by fetching a manageable subset of data.

Example: Retrieving the 5 most expensive products.

**SQL**

SELECT product\_name, price

FROM products

ORDER BY price DESC

LIMIT 5;

<br>

**Putting It All Together**

Here’s an example that combines all the clauses to find the top 3 most expensive items in the 'Electronics' category.

Example:

SQL

SELECT product\_name, price

FROM products

WHERE category = 'Electronics'

ORDER BY price DESC

LIMIT 3;