### **Lab 22- Nested Query in PostgreSQL**

Here's a lab exercise on nested queries in PostgreSQL, including the necessary CREATE TABLE and INSERT commands:

Assuming we have a simple schema with two tables, orders and customers:

Drop table customers;

Drop table orders;

CREATE TABLE customers (

customer\_id SERIAL PRIMARY KEY,

customer\_name VARCHAR(100)

);

CREATE TABLE orders (

order\_id SERIAL PRIMARY KEY,

customer\_id INTEGER REFERENCES customers(customer\_id),

order\_date DATE

);

Now let's perform the lab exercise step by step:

1. Populate the customers and orders tables with sample data.
2. Write a nested query to retrieve the customer\_name for orders placed on 2023-10-22 order\_date.
3. Write a nested query to retrieve the customer\_name for orders with a specific order\_id.
4. Write a nested query to retrieve the order\_date for a specific customer\_name.
5. Below are the SQL commands for the lab exercise:

**Insert sample data:**

-- **Insert sample data into the customers table**

INSERT INTO customers (customer\_name) VALUES

('John Doe'),

('Jane Smith'),

('Michael Johnson');

-- **Insert sample data into the orders table**

INSERT INTO orders (customer\_id, order\_date) VALUES

(1, '2023-10-20'),

(2, '2023-10-21'),

(3, '2023-10-22');

Nested query to retrieve customer\_name for orders placed on a specific order\_date:

SELECT customer\_name

FROM customers

WHERE customer\_id = (

SELECT customer\_id

FROM orders

WHERE order\_date = '2023-10-21'

);

Nested query to retrieve customer\_name for orders with a specific order\_id:

SELECT customer\_name

FROM customers

WHERE customer\_id = (

SELECT customer\_id

FROM orders

WHERE order\_id = 1

);

Nested query to retrieve order\_date for a specific customer\_name:

SELECT order\_date

FROM orders

WHERE customer\_id = (

SELECT customer\_id

FROM customers

WHERE customer\_name = 'Michael Johnson'

);

Execute these SQL commands in your PostgreSQL environment to test and understand how nested queries work. Adjust the queries as needed based on your specific requirements.