**STRUCTURED QUERY LANGUAGE**

**INTERMEDIATE SQL QUESTIONS (WEEK 5)**

**Topic: Inner Join, Outer join, left join, right join, full outer join, union and union all**

**Instruction:** You are to use the customers, products, orders and orderdetails table.

**PART A (Resources)**

**Link:** <https://youtu.be/vncBSUNb4NA?si=rgxEKuCAsWbQIyi->

**PART B (Questions)**

**Inner Join:**

1. List the names of customers who made orders, along with the total amount of each order.
2. Show the order ID, product name, and quantity of each item ordered.
3. Display the email addresses of customers along with the products they ordered and the quantities.
4. Find the total amount spent by each customer.

**Outer Join:**

1. List all orders along with the names of the customers who made them. If an order doesn't have a customer, display "Unknown".
2. Show the product names and quantities ordered. Include products without orders.
3. Display all customers and the total amount they spent on orders. If a customer hasn't placed any orders, display "No orders placed".
4. List all orders and their associated products. Include orders without products and products without orders.

**Right Join:**

1. Show all products along with the order details. Include products that haven't been ordered.
2. Display the names of customers and the total amount spent on orders. Include customers who haven't placed any orders.
3. List all orders and their associated products. Include orders without products.
4. Show the product names and quantities ordered. Include products without orders.

**Left Join:**

1. Show all customers along with their orders. Include customers who haven't placed any orders.
2. Display the names of customers and the total amount spent on orders. Include customers who haven't placed any orders, showing "0" as the total amount for them.
3. List all orders and their associated products. Include orders without products.
4. Show the product names and quantities ordered. Include products without orders, displaying "0" as the quantity for them.

**Full Outer Join:**

1. List all orders along with the names of the customers who made them. Include orders without customers and customers without orders.
2. Show all products along with the order details. Include products that haven't been ordered and order details without products.
3. Display the names of customers and the total amount spent on orders. Include customers who haven't placed any orders and the total amount spent for orders without customers.
4. List all orders and their associated products. Include orders without products and products without orders.

**UNION:**

1. Combine the names of all customers from the "Customers" table with the names of all products from the "Products" table.
2. Merge the lists of unique product names from the "Products" table with the order IDs from the "Orders" table.
3. Create a unified list of order dates from the "Orders" table and the customer names from the "Customers" table.
4. Combine the results of two queries: one selecting customer names from the "Customers" table and another selecting product names from the "Products" table.

**UNION ALL:**

1. Concatenate all product names from the "Products" table with all order IDs from the "Orders" table, including duplicates.
2. Merge the lists of all customer names from the "Customers" table with all order dates from the "Orders" table, showing all instances, even duplicates.
3. Create a unified list of all order quantities from the "OrderDetails" table with all product names from the "Products" table, including duplicates.
4. Combine the results of two queries: one selecting customer names from the "Customers" table and another selecting order dates from the "Orders" table, showing all instances, even duplicates.

**PART C (Submission Mode)**

You are expected to submit your assignment a week after it was given, with this, Submission starts from Friday 7am Nigerian time to Saturday 3pm Nigerian time.

This submission will be done either on Twitter or LinkedIn, you can choose either of the two to submit your assignment or you can submit on both platforms. You can take a screenshot of your work Answers; you can add a write-up if you want.

For Twitter Submission, you would tag:

1. The TDI Official page @TDataInitiative
2. Annie @DabereNnamani
3. The project coordinator @The\_Jonathaan
4. Tag @msexcel
5. Use the #TDI

For LinkedIn Submission, you would tag:

1. TDI page @TheData Initiative
2. Annie @ Anne Nnamani