Practical Exercise 1 (JOINS) – Lecia Mochueneng

1.

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26
27      -- SQL JOIN Practice Questions
28      -- 1. INNER JOIN: Orders with Customer and Product Names
29      -- Question: List all orders along with the customer name and product name.
30      -- Expected Output Columns:
31      -- OrderID, OrderDate, CustomerName, ProductName, Quantity
32
33      SELECT A.ORDERID, A.ORDERDATE, B.CUSTOMERNAME, C.PRODUCTNAME, A.QUANTITY
34      FROM
35      SALESDB.SALES.ORDERS AS A
36      INNER JOIN SALESDB.SALES.CUSTOMERS AS B ON A.CUSTOMERID = B.CUSTOMERID
37      INNER JOIN SALESDB.SALES.PRODUCTS AS C ON A.PRODUCTID = C.PRODUCTID
38      LIMIT 10;
39
```

Results (1 minute ago)

Table | Chart — 10 rows — 89ms

	ORDERID	ORDERDATE	CUSTOMERNAME	PRODUCTNAME	QUANTITY
1	1	2023-06-10	Customer_1251	Product_2014	10
2	2	2023-12-07	Customer_1236	Product_2004	5
3	3	2024-10-26	Customer_1170	Product_2171	9
4	4	2023-02-17	Customer_1344	Product_2007	2
5	5	2024-11-06	Customer_1319	Product_2061	2
6	6	2024-11-23	Customer_1185	Product_2190	3
7	7	2023-07-29	Customer_1011	Product_2099	8
8	8	2023-12-06	Customer_1322	Product_2078	7

2.

```
SELECT A.CUSTOMERID, A.CUSTOMERNAME, A.COUNTRY, B.ORDERID, B.ORDERDATE
FROM
SALESDB.SALES.CUSTOMERS AS A
INNER JOIN SALESDB.SALES.ORDERS AS B ON A.CUSTOMERID = B.CUSTOMERID;
```

its (1 minute ago)

ble | Chart — 4,000 rows — 170ms

CUSTOMERID	CUSTOMERNAME	COUNTRY	ORDERID	ORDERDATE
1251	Customer_1251	Germany	1	2023-06-10
1236	Customer_1236	Australia	2	2023-12-07
1170	Customer_1170	Germany	3	2024-10-26
1344	Customer_1344	Canada	4	2023-02-17
1319	Customer_1319	USA	5	2024-11-06
1185	Customer_1185	Australia	6	2024-11-23
1011	Customer_1011	Germany	7	2023-07-29
1322	Customer_1322	Australia	8	2023-12-06

3.

```
-- 3. LEFT JOIN: All Customers and Their Orders
-- Question: List all customers and any orders they might have placed. Include customers who have not placed any orders.
-- Expected Output Columns:
-- CustomerID, CustomerName, Country, OrderID, OrderDate, ProductID, Quantity

SELECT A.CUSTOMERID, A.CUSTOMERNAME, A.COUNTRY, B.ORDERID, B.ORDERDATE,B.PRODUCTID, B.QUANTITY
FROM SALESDB.SALES.CUSTOMERS AS A
LEFT JOIN SALESDB.SALES.ORDERS AS B
    ON A.CUSTOMERID = B.CUSTOMERID;
```

Results (1 minute ago)

Table | Chart — 4,000 rows — 881ms

	CUSTOMERID	CUSTOMERNAME	COUNTRY	ORDERID	ORDERDATE	PRODUCTID	QUANTITY
1	1251	Customer_1251	Germany	1	2023-06-10	2014	10
2	1236	Customer_1236	Australia	2	2023-12-07	2004	5
3	1170	Customer_1170	Germany	3	2024-10-26	2171	9
4	1344	Customer_1344	Canada	4	2023-02-17	2007	2
5	1319	Customer_1319	USA	5	2024-11-06	2061	2
6	1185	Customer_1185	Australia	6	2024-11-23	2190	3
7	1011	Customer_1011	Germany	7	2023-07-29	2099	8
8	1322	Customer_1322	Australia	8	2023-12-06	2078	7

Feedback

4.

```
-- 4. LEFT JOIN: Product Order Count
-- Question: List all products and how many times each was ordered (if any).
-- Expected Output Columns:
-- ProductID, ProductName, TotalOrders (TotalOrders is the count of how many times the product appears in orders)

SELECT P.PRODUCTID, P.PRODUCTNAME, COUNT(O.OrderID) AS TotalOrders
FROM SALESDB.SALES.PRODUCTS AS P
LEFT JOIN SALESDB.SALES.ORDERS AS O ON P.PRODUCTID = O.PRODUCTID
GROUP BY
    P.PRODUCTID,
    P.PRODUCTNAME;
```

Results (just now)

Table | Chart — 200 rows — 104ms

	PRODUCTID	PRODUCTNAME	TOTALORDERS
1	2007	Product_2007	12
2	2190	Product_2190	20
3	2078	Product_2078	18
4	2047	Product_2047	20
5	2167	Product_2167	27
6	2089	Product_2089	20
7	2059	Product_2059	17
8	2153	Product_2153	20

Feedback

5.

```sql
-- 5. RIGHT JOIN: Orders with Product Info (Include Products Not Ordered)
-- Question: Find all orders along with product details, including any products that might not have been ordered.
-- Expected Output Columns:
-- OrderID, OrderDate, ProductID, ProductName, Price, Quantity

SELECT O.ORDERID, O.ORDERDATE, P.PRODUCTID, P.PRODUCTNAME, P.PRICE, O.QUANTITY
FROM SALESDB.SALES.ORDERS AS O
RIGHT JOIN SALESDB.SALES.PRODUCTS AS P
    ON O.PRODUCTID = P.PRODUCTID;
```

Results (just now)

Table | Chart — 4,000 rows — 192ms

	ORDERID	ORDERDATE	PRODUCTID	PRODUCTNAME	PRICE	QUANTITY
1	1	2023-06-10	2014	Product_2014	522	10
2	2	2023-12-07	2004	Product_2004	1996	5
3	3	2024-10-26	2171	Product_2171	76	9
4	4	2023-02-17	2007	Product_2007	156	2
5	5	2024-11-06	2061	Product_2061	1595	2
6	6	2024-11-23	2190	Product_2190	1755	3
7	7	2023-07-29	2099	Product_2099	1674	8
8	8	2023-12-06	2078	Product_2078	333	7

6.

```sql
-- 6. RIGHT JOIN: Customer Info with Orders (Include All Customers)
-- Question: Which customers have made orders, and include customers even if they have never placed an order.
-- Expected Output Columns:
-- CustomerID, CustomerName, Country, OrderID, OrderDate, ProductID, Quantity

SELECT C.CUSTOMERID, C.CUSTOMERNAME, C.COUNTRY, O.ORDERID, O.ORDERDATE, O.PRODUCTID, O.QUANTITY
FROM SALESDB.SALES.ORDERS AS O
RIGHT JOIN SALESDB.SALES.CUSTOMERS AS C
    ON O.CUSTOMERID = C.CUSTOMERID;
```

Results (just now)

Table | Chart — 4,000 rows — 54ms

	CUSTOMERID	CUSTOMERNAME	COUNTRY	ORDERID	ORDERDATE	PRODUCTID	QUANTITY
1	1251	Customer_1251	Germany	1	2023-06-10	2014	10
2	1236	Customer_1236	Australia	2	2023-12-07	2004	5
3	1170	Customer_1170	Germany	3	2024-10-26	2171	9
4	1344	Customer_1344	Canada	4	2023-02-17	2007	2
5	1319	Customer_1319	USA	5	2024-11-06	2061	2
6	1185	Customer_1185	Australia	6	2024-11-23	2190	3
7	1011	Customer_1011	Germany	7	2023-07-29	2099	8
8	1322	Customer_1322	Australia	8	2023-12-06	2078	7

7.

```sql
-- 7. FULL OUTER JOIN: All Customers and All Orders
-- Question: List all customers and orders, showing NULLs where customers have not ordered or where orders have no customer info.
-- Expected Output Columns:
-- CustomerID, CustomerName, Country, OrderID, OrderDate, ProductID, Quantity

SELECT C.CUSTOMERID, C.CUSTOMERNAME, C.COUNTRY, O.ORDERID, O.ORDERDATE, O.PRODUCTID, O.QUANTITY
FROM SALESDB.SALES.CUSTOMERS AS C
FULL OUTER JOIN SALESDB.SALES.ORDERS AS O
    ON C.CUSTOMERID = O.CUSTOMERID;
```

Results (just now)

Table | Chart — 4,000 rows — 184ms

	CUSTOMERID	CUSTOMERNAME	COUNTRY	ORDERID	ORDERDATE	PRODUCTID	QUANTITY
1	1251	Customer_1251	Germany	1	2023-06-10	2014	10
2	1236	Customer_1236	Australia	2	2023-12-07	2004	5
3	1170	Customer_1170	Germany	3	2024-10-26	2171	9
4	1344	Customer_1344	Canada	4	2023-02-17	2007	2
5	1319	Customer_1319	USA	5	2024-11-06	2061	2
6	1185	Customer_1185	Australia	6	2024-11-23	2190	3
7	1011	Customer_1011	Germany	7	2023-07-29	2099	8
8	1322	Customer_1322	Australia	8	2023-12-06	2078	7

8.

```sql
-- 8. FULL OUTER JOIN: All Products and Orders
-- Question: List all products and orders, showing NULLs where products were never ordered or orders are missing product info.
-- Expected Output Columns:
-- ProductID, ProductName, Price, OrderID, OrderDate, CustomerID, Quantity

SELECT P.PRODUCTID, P.PRODUCTNAME, P.PRICE, O.ORDERID, O.ORDERDATE, O.CUSTOMERID, O.QUANTITY
FROM SALESDB.SALES.PRODUCTS AS P
FULL OUTER JOIN SALESDB.SALES.ORDERS AS O
    ON P.PRODUCTID = O.PRODUCTID;
```

Results (just now)

Table | Chart — 4,000 rows — 621ms

	PRODUCTID	PRODUCTNAME	PRICE	ORDERID	ORDERDATE	CUSTOMERID	QUANTITY
1	2014	Product_2014	522	1	2023-06-10	1251	10
2	2004	Product_2004	1996	2	2023-12-07	1236	5
3	2171	Product_2171	76	3	2024-10-26	1170	9
4	2007	Product_2007	156	4	2023-02-17	1344	2
5	2061	Product_2061	1595	5	2024-11-06	1319	2
6	2190	Product_2190	1755	6	2024-11-23	1185	3
7	2099	Product_2099	1674	7	2023-07-29	1011	8
8	2078	Product_2078	333	8	2023-12-06	1322	7