Mahura Kegomoditswe: Practical 2 - SQL Fundamentals (SQL JOINS)

1. INNER JOIN: Orders with Customer and Product Names

2. INNER JOIN: Customers Who Placed Orders

ACCOUNTADMIN • COMPUTE_WH (X-Small)   Choose database   ...

```sql
1   SELECT
2       c.CustomerID,
3       c.CustomerName,
4       c.Country,
5       o.OrderID,
6       o.OrderDate
7   FROM business.customers.customers_Large c
8   INNER JOIN business.customers.orders_large o ON c.CustomerID = o.CustomerID;
```

Results (just now)

Table | Chart   🔍   4,000 rows ⓘ   2.7s

	# CUSTOMERID	A CUSTOMERNAME	A COUNTRY	# ORDERID	▦ ORDERDATE
1	1251	Customer_1251	Germany	1	2023-06-10
2	1236	Customer_1236	Australia	2	2023-12-07
3	1170	Customer_1170	Germany	3	2024-10-26
4	1344	Customer_1344	Canada	4	2023-02-17
5	1319	Customer_1319	USA	5	2024-11-06
6	1185	Customer_1185	Australia	6	2024-11-23
7	1011	Customer_1011	Germany	7	2023-07-29
8	1322	Customer_1322	Australia	8	2023-12-06
9	1224	Customer_1224	Australia	9	2025-01-25
10	1010	Customer_1010	UK	10	2023-07-19
11	1324	Customer_1324	India	11	2024-11-21
12	1248	Customer_1248	Germany	12	2023-06-19
13	1315	Customer_1315	Canada	13	2023-04-04
14	1348	Customer_1348	USA	14	2024-11-26

3. LEFT JOIN: All Customers and Their Orders

ACCOUNTADMIN • COMPUTE_WH (X-Small)   Choose database   ...

```sql
1    SELECT
2        c.CustomerID,
3        c.CustomerName,
4        c.Country,
5        o.OrderID,
6        o.OrderDate,
7        o.ProductID,
8        o.Quantity
9    FROM business.customers.customers_Large c
10   LEFT JOIN business.customers.orders_Large o ON c.CustomerID = o.CustomerID;
```
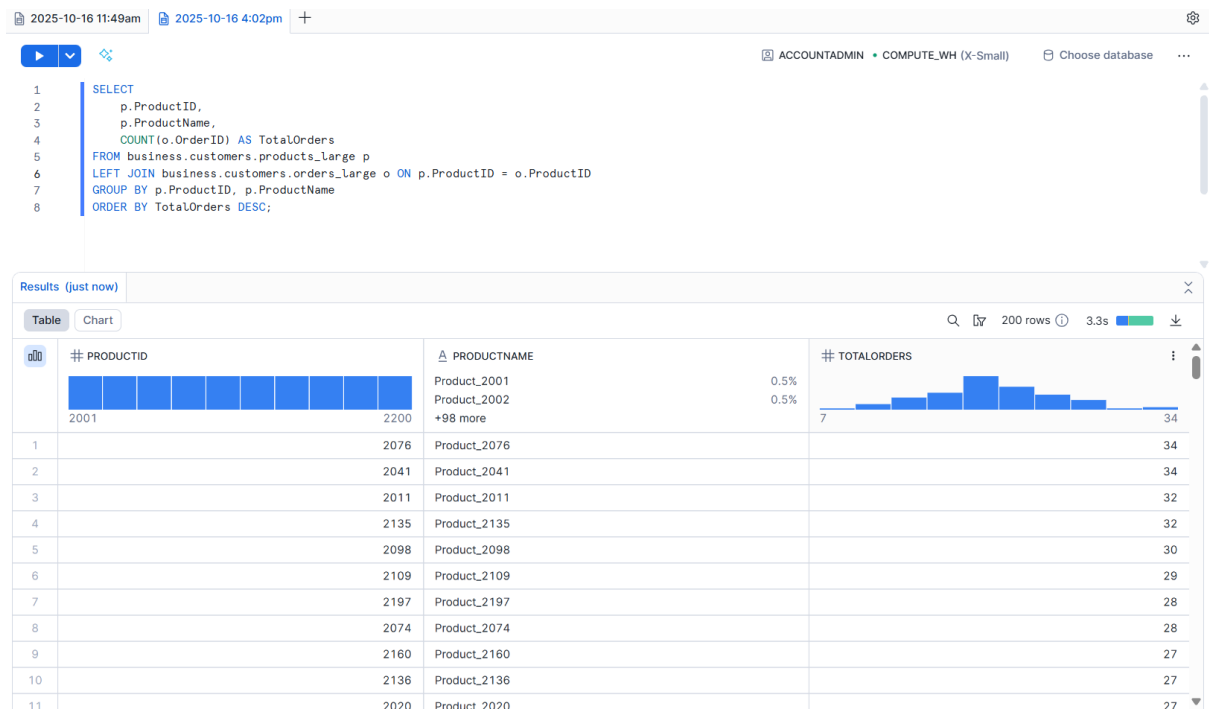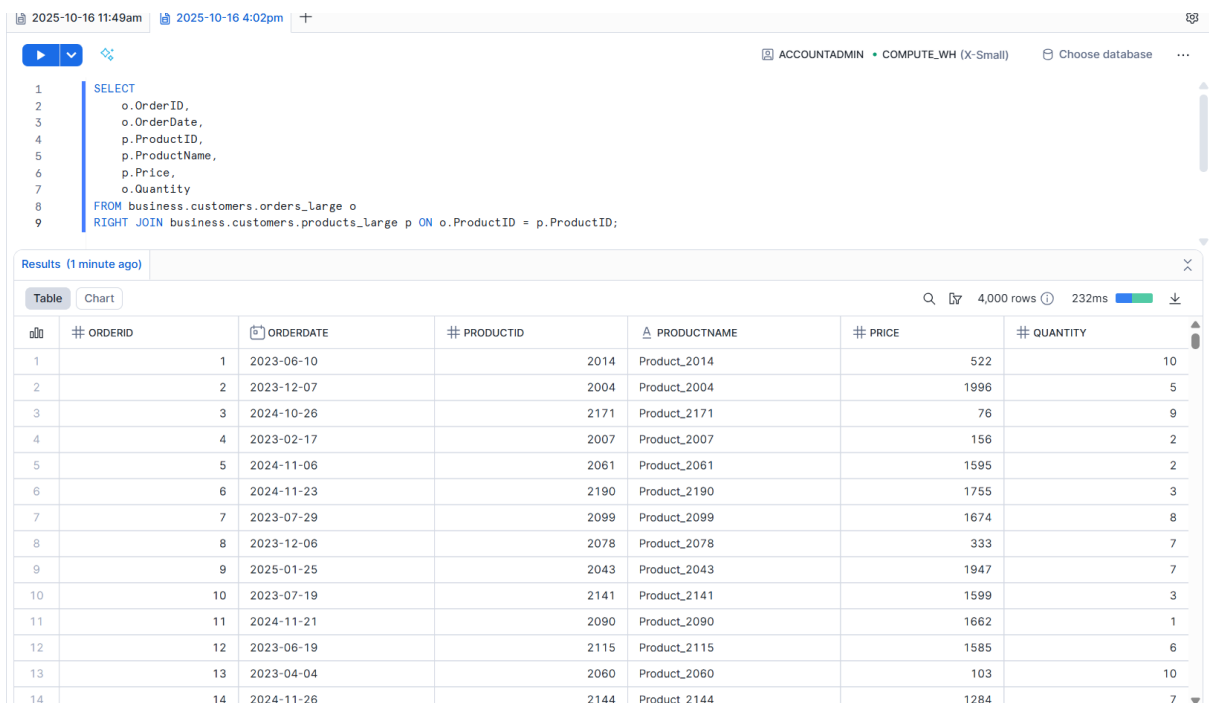
Results (9 minutes ago)

Table | Chart   🔍   4,000 rows ⓘ   185ms

	# CUSTOMERID	A CUSTOMERNAME	A 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
9	1224	Customer_1224	Australia	9	2025-01-25	2043	7
10	1010	Customer_1010	UK	10	2023-07-19	2141	3
11	1324	Customer_1324	India	11	2024-11-21	2090	1
12	1248	Customer_1248	Germany	12	2023-06-19	2115	6
13	1315	Customer_1315	Canada	13	2023-04-04	2060	10

4. LEFT JOIN: Product Order Count

```sql
1   SELECT
2       p.ProductID,
3       p.ProductName,
4       COUNT(o.OrderID) AS TotalOrders
5   FROM business.customers.products_large p
6   LEFT JOIN business.customers.orders_large o ON p.ProductID = o.ProductID
7   GROUP BY p.ProductID, p.ProductName
8   ORDER BY TotalOrders DESC;
```

Results (just now)

Table   Chart   200 rows ⓘ   3.3s

	# PRODUCTID	A PRODUCTNAME	# TOTALORDERS
	2001 — 2200	Product_2001 0.5% / Product_2002 0.5% / +98 more	7 — 34
1	2076	Product_2076	34
2	2041	Product_2041	34
3	2011	Product_2011	32
4	2135	Product_2135	32
5	2098	Product_2098	30
6	2109	Product_2109	29
7	2197	Product_2197	28
8	2074	Product_2074	28
9	2160	Product_2160	27
10	2136	Product_2136	27
11	2020	Product_2020	27

5. RIGHT JOIN: Orders with Product Info (Include Products Not Ordered)

```sql
1   SELECT
2       o.OrderID,
3       o.OrderDate,
4       p.ProductID,
5       p.ProductName,
6       p.Price,
7       o.Quantity
8   FROM business.customers.orders_large o
9   RIGHT JOIN business.customers.products_large p ON o.ProductID = p.ProductID;
```

Results (1 minute ago)

Table   Chart   4,000 rows ⓘ   232ms

	# ORDERID	⊙ ORDERDATE	# PRODUCTID	A 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
9	9	2025-01-25	2043	Product_2043	1947	7
10	10	2023-07-19	2141	Product_2141	1599	3
11	11	2024-11-21	2090	Product_2090	1662	1
12	12	2023-06-19	2115	Product_2115	1585	6
13	13	2023-04-04	2060	Product_2060	103	10
14	14	2024-11-26	2144	Product_2144	1284	7

6. RIGHT JOIN: Customer Info with Orders (Include All Customers)

7. FULL OUTER JOIN: All Customers and All Orders

8. FULL OUTER JOIN: All Products and Orders

ACCOUNTADMIN • COMPUTE_WH (X-Small)   Choose database   ...

```sql
1   SELECT
2       p.ProductID,
3       p.ProductName,
4       p.Price,
5       o.OrderID,
6       o.OrderDate,
7       o.CustomerID,
8       o.Quantity
9   FROM business.customers.products_large p
10  FULL OUTER JOIN business.customers.orders_large o ON p.ProductID = o.ProductID;
```

Results (just now)

Table   Chart   4,000 rows   178ms

	# PRODUCTID	A 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
9	2043	Product_2043	1947	9	2025-01-25	1224	7
10	2141	Product_2141	1599	10	2023-07-19	1010	3
11	2090	Product_2090	1662	11	2024-11-21	1324	1
12	2115	Product_2115	1585	12	2023-06-19	1248	6
13	2060	Product_2060	103	13	2023-04-04	1315	10