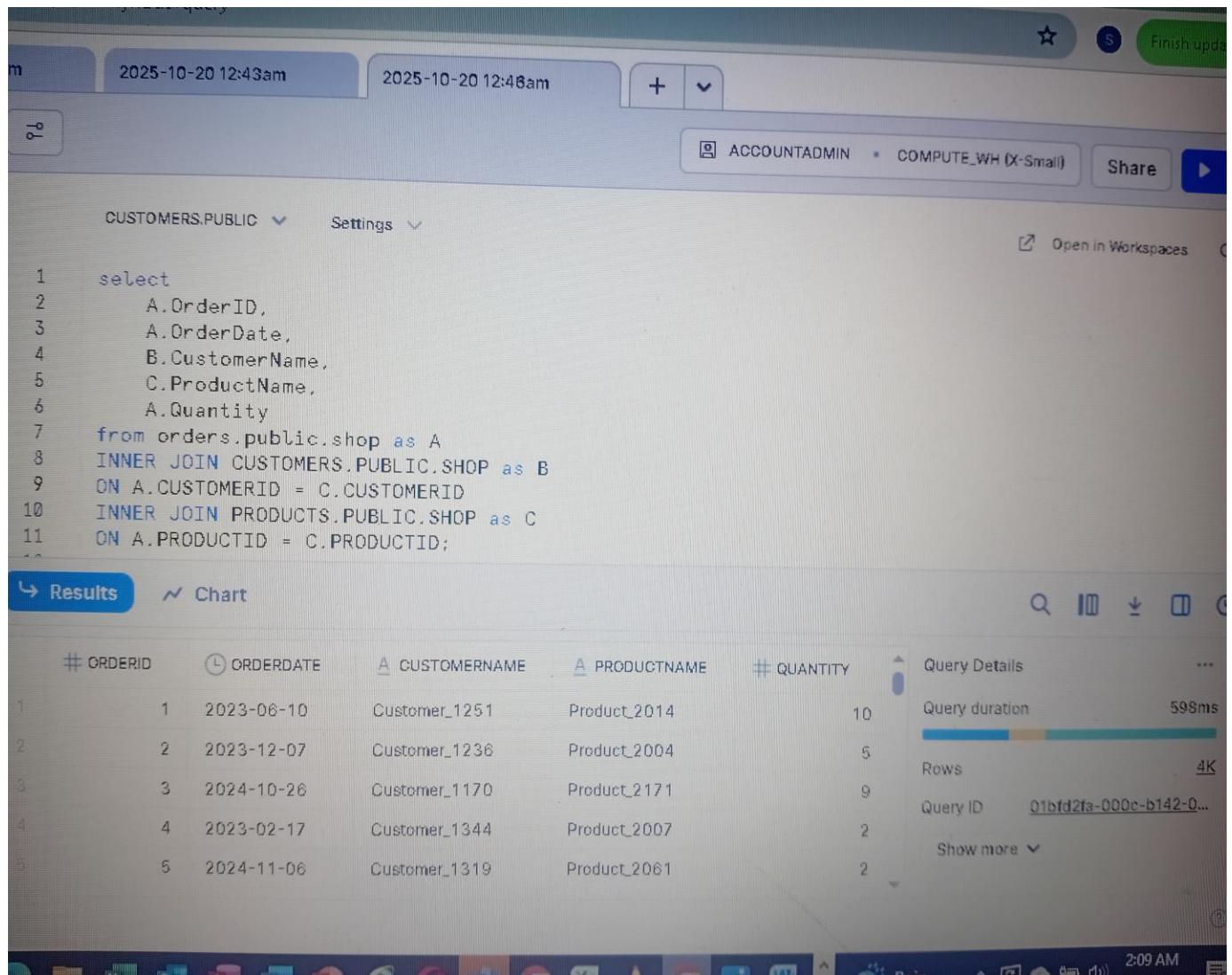


PRACTICAL 1 SQL JOINS

Question: Which customers have placed at least one order

EXPECTED OUTPUT COLUMNS

ORDERID,ORDERDATE, CUSTOMERNAME, COUNTRY,ORDERID,ORDERDATE



The screenshot shows a SQL query editor interface. The query is as follows:

```
1 select
2     A.OrderID,
3     A.OrderDate,
4     B.CustomerName,
5     C.ProductName,
6     A.Quantity
7 from orders.public.shop as A
8 INNER JOIN CUSTOMERS.PUBLIC.SHOP as B
9 ON A.CUSTOMERID = C.CUSTOMERID
10 INNER JOIN PRODUCTS.PUBLIC.SHOP as C
11 ON A.PRODUCTID = C.PRODUCTID;
```

Below the query, the 'Results' tab is active, displaying a table with 5 rows of data:

#	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

On the right side, the 'Query Details' panel shows the following information:

- Query duration: 598ms
- Rows: 4K
- Query ID: 01bfd2fa-000c-b142-0...
- Show more

2 INNER JOIN: Customers who place orders

Question:

Which customers have placed at least one order

EXPECTED OUTPUT COLUMNS

CustomerID, CustomerName, Country, OrderID, OrderDate

The screenshot shows a Snowflake query editor interface. The query is an INNER JOIN between the CUSTOMERS.PUBLIC.SHOP table (aliased as A) and the ORDERS.PUBLIC.SHOP table (aliased as B) on the condition A.CUSTOMERID = B.CUSTOMERID. The query selects columns A.CustomerID, A.CustomerName, A.Country, B.OrderID, and B.OrderDate. The results are displayed in a table with 6 rows. The right sidebar shows query details: duration 523ms, 4K rows, and query ID 01bfd333-000c-b142-...

```
select
  A.CustomerID,
  A.CustomerName,
  A.Country,
  B.OrderID,
  B.OrderDate
from CUSTOMERS.PUBLIC.SHOP as A
INNER JOIN ORDERS.PUBLIC.SHOP AS B
ON A.CUSTOMERID = B.CUSTOMERID;
```

#	CUSTOMERID	CUSTOMERNAME	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

Query Details

- Query duration: 523ms
- Rows: 4K
- Query ID: 01bfd333-000c-b142-...
- Show more

3 LEFT JOIN : ALL CUSTOMERS AND THEIRS ORDERS

Question : list all customers and any order they must have placed. Include customers who have not placed any orders

Expected Output Column

CustomerID, CustomerName, Country, OrderDate, OrderID, ProductID, Quantity

The screenshot shows a SQL query editor with a query window and a results pane. The query is a LEFT JOIN between CUSTOMERS.PUBLIC.SHOP and ORDERS.PUBLIC.SHOP on the condition A.CUSTOMERID = B.CUSTOMERID. The results pane displays a table with 5 rows of data.

```
SELECT
  A.CustomerID,
  A.CustomerName,
  A.Country,
  B.OrderID,
  B.OrderDate,
  B.ProductID,
  B.QUANTITY
from CUSTOMERS.PUBLIC.SHOP as A
left join ORDERS.PUBLIC.SHOP as B
on A.CUSTOMERID = B.CUSTOMERID;
```

#	CUSTOMERID	CUSTOMERNAME	COUNTRY	#	ORDERID	ORDERDATE	#	PRODUC
1	1251	Customer_1251	Germany	1	2023-06-10	20		
2	1236	Customer_1236	Australia	2	2023-12-07	20		
3	1170	Customer_1170	Germany	3	2024-10-26	21		
4	1344	Customer_1344	Canada	4	2023-02-17	20		
5	1319	Customer_1319	USA	5	2024-11-06	20		

Query Details

- Query duration: 562ms
- Rows: 4K
- Query ID: 01bfd340-000c-b142-...
- Show more

4 LEFT JOIN: Product Order Count

Question: List all products and how many times each was ordered

EXPECTED OUTPUT COLUMNS

ProductID, ProductName, TotalOrders

The screenshot shows a SQL query editor with a query window and a results pane. The query is as follows:

```
35  
36 select  
37     A.ProductID,  
38     A.ProductName,  
39     Count(B.OrderID) as Total_Orders  
40 from PRODUCTS.PUBLIC.SHOP as A  
41 LEFT JOIN ORDERS.PUBLIC.SHOP as B  
42 GROUP BY ALL;  
43  
44  
45  
46
```

The results pane shows the following data:

#	PRODUCTID	PRODUCTNAME	# TOTAL_ORDERS
1	2014	Product_2014	4000
2	2179	Product_2179	4000
3	2016	Product_2016	4000
4	2042	Product_2042	4000
5	2098	Product_2098	4000

On the right side of the results pane, there is a 'Query Details' section with the following information:

- Query duration: [Progress bar]
- Rows: [Progress bar]
- Query ID: 01bfd34b
- Show more [Dropdown arrow]

5 RIGHT JOIN : OREDERS WITH PRODUCT INFO

QUESTION : Find all orders along with product details, including any products that might not have been ordered.

EXPECTED OUTPUT COLUMNS

OrderID, OrderedDate, ProductID, ProductName, Price, Quantity

The screenshot displays the SQL Server Enterprise Manager interface. At the top, the user is logged in as ACCOUNTADMIN on the COMPUTE_WH (X-Small) server. The database context is set to CUSTOMERS.PUBLIC. The query editor shows a SQL query performing a RIGHT JOIN between the ORDERS.PUBLIC.SHOP table (aliased as A) and the PRODUCTS.PUBLIC.SHOP table (aliased as B). The query selects OrderID, OrderDate, ProductID, ProductName, Price, and Quantity. The results pane below the query editor shows the output of the query, which includes 5 rows of data. The results are displayed in a table with columns: #, ORDERID, ORDERDATE, #, PRODUCTID, A PRODUCTNAME, #, PRICE, #, QUANTITY. The right-hand pane shows the Query Details, including the Query duration, Rows, and Query ID (01bfd354).

```
43 SELECT
44     A.OrderID,
45     A.OrderDate,
46     B.ProductID,
47     B.ProductName,
48     B.Price,
49     A.Quantity
50 from ORDERS.PUBLIC.SHOP as A
51 RIGHT JOIN PRODUCTS.PUBLIC.SHOP as B
52 ON A.PRODUCTID = B.PRODUCTID;
53
```

#	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

Query Details

- Query duration
- Rows
- Query ID: 01bfd354
- Show more

6 RIGHT JOIN: Customer info with Orders

Question: Which customer have made orders, and include customers even if they have never placed an order.

EXPECTED OUTPUT COLUMNS

CustomerID, CustomerName, Country, OrderID, OrderDate, ProductID, Quality

The screenshot shows a SQL query editor interface. At the top, there are tabs for '2025-10-20 12:43am' and '2025-10-20 12:48am'. Below the tabs, there's a user profile 'ACCOUNTADMIN' and a database 'COMPUTE_WH (X-Small)'. The main area displays a SQL query:

```
55 select
56     A.CustomerID,
57     A.CustomerName,
58     A.Country,
59     B.OrderID,
60     B.OrderDate,
61     B.ProductID,
62     B.Quantity
63 from Orders.PUBLIC.SHOP as B
64 RIGHT JOIN CUSTOMERS.PUBLIC.SHOP as A
65 ON A.CustomerID = B.CUSTOMERID;
```

Below the query, there are tabs for 'Results' and 'Chart'. The 'Results' tab is active, showing a table with 7 columns: #, CUSTOMERID, CUSTOMERNAME, COUNTRY, ORDERID, ORDERDATE, and PRODUCTID. The table contains 5 rows of data:

#	CUSTOMERID	CUSTOMERNAME	COUNTRY	ORDERID	ORDERDATE	PRODUCTID
1	1251	Customer_1251	Germany	1	2023-06-10	20
2	1236	Customer_1236	Australia	2	2023-12-07	20
3	1170	Customer_1170	Germany	3	2024-10-26	21
4	1344	Customer_1344	Canada	4	2023-02-17	20
5	1319	Customer_1319	USA	5	2024-11-06	20

On the right side of the results, there's a 'Query Details' panel showing 'Query duration' with a progress bar, 'Rows' (10), 'Query ID' (01bfd35e-000), and a 'Show more' button.

7 FULL OUTER JOIN: ALL Customer and All Order

QUESTION: List all customers and orders, showing NULLs where customers have not ordered or where orders have no customer info.

EXPECTED OUTPUT COLUMNS

CustomerID,ProductName,Price,OrderID,OrderDate,Quantity

The screenshot shows a SQL query execution interface. The query is a FULL OUTER JOIN between CUSTOMERS and ORDERS. The results table displays 5 rows of data. The columns are: #, CUSTOMERID, CUSTOMERNAME, COUNTRY, #, ORDERID, ORDERDATE, and #, PRODUCT. The query details panel on the right shows a query duration of 599ms and 4K rows.

```
SELECT
  A.CustomerID,
  A.CustomerName,
  A.Country,
  B.OrderID,
  B.OrderDate,
  B.ProductID,
  B.Quantity
from CUSTOMERS.PUBLIC.SHOP as A
FULL OUTER JOIN ORDERS.PUBLIC.SHOP AS B
ON A.CUSTOMERID = B.CUSTOMERID
```

#	CUSTOMERID	A CUSTOMERNAME	A COUNTRY	#	ORDERID	ORDERDATE	#	PRODUCT
1	1251	Customer_1251	Germany	1	2023-06-10	20		
2	1236	Customer_1236	Australia	2	2023-12-07	20		
3	1170	Customer_1170	Germany	3	2024-10-26	21		
4	1344	Customer_1344	Canada	4	2023-02-17	20		
5	1319	Customer_1319	USA	5	2024-11-06	20		

Query Details

- Query duration: 599ms
- Rows: 4K
- Query ID: 01bfd36a-000c-b142-...
- Show more

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

The screenshot shows a SQL query editor interface. The query is as follows:

```
SELECT
  A.ProductID,
  A.ProductName,
  A.Price,
  B.OrderID,
  B.OrderDate,
  B.CustomerID,
  B.Quantity
from PRODUCTS.PUBLIC.SHOP as A
full outer join ORDERS.PUBLIC.SHOP as B
on A.ProductID = B.ProductID
```

The results are displayed in a table with the following columns: #, PRODUCTID, PRODUCTNAME, PRICE, ORDERID, ORDERDATE, and CUSTOMERID. The first five rows of results are shown:

#	PRODUCTID	PRODUCTNAME	PRICE	ORDERID	ORDERDATE	CUSTOMERID
1	2014	Product_2014	522	1	2023-06-10	1251
2	2004	Product_2004	1996	2	2023-12-07	1236
3	2171	Product_2171	76	3	2024-10-26	1170
4	2007	Product_2007	156	4	2023-02-17	1344
5	2061	Product_2061	1595	5	2024-11-06	1319

On the right side, the 'Query Details' panel shows the following information:

- Query duration: 225m
- Rows: 4
- Query ID: 01bfd371-000c-b142-0...
- Show more

