

SQL JOIN Practice Questions

1. INNER JOIN: Orders with Customer and Product Names

Question:

List all orders along with the customer name and product name.

Expected Output Columns:

- OrderID, OrderDate, CustomerName, ProductName, Quantity

The screenshot shows a SQL query editor with the following query:

```
SELECT
  OrderID,
  OrderDate,
  CustomerName,
  ProductName,
  Quantity
FROM ORDERS AS O
INNER JOIN CUSTOMERS AS C
INNER JOIN PRODUCT AS P
ON O.ORDERID = C.CUSTOMERID = P.PRODUCTID
```

The results table displays the following data:

#	ORDERID	ORDERDATE	CUSTOMERNAME	PRODUCTNAME	QUANTITY
1	1001	2024-02-21	Customer_1001	Product_2001	5
2	1001	2024-02-21	Customer_1001	Product_2009	5
3	1001	2024-02-21	Customer_1001	Product_2017	5
4	1001	2024-02-21	Customer_1001	Product_2025	5
5	1001	2024-02-21	Customer_1001	Product_2033	5
6	1001	2024-02-21	Customer_1001	Product_2041	5
7	1001	2024-02-21	Customer_1001	Product_2049	5
8	1001	2024-02-21	Customer_1001	Product_2057	5
9	1001	2024-02-21	Customer_1001	Product_2065	5

Query Details: Query duration 5.2s, Rows 80K, Query ID 01bbe475-0001-53ef-0...

2. INNER JOIN: Customers Who Placed Orders

Question:

Which customers have placed at least one order?

Expected Output Columns:

- CustomerID, CustomerName, Country, OrderID, OrderDate

The screenshot shows a SQL query editor with the following query:

```
SELECT
  C.CUSTOMERID,
  CustomerName,
  Country,
  OrderID,
  OrderDate
FROM
  Customers AS C
INNER JOIN
  Orders AS O
ON C.CUSTOMERID = O.CustomerID;
```

The results table displays the following data:

#	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
7	1011	Customer_1011	Germany	7	2023-07-29

Query Details: Query duration 333ms, Rows 4K, Query ID 01bbe4a6-0001-53ea-0...

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

The screenshot shows a SQL query editor with the following query:

```
58 SELECT C.CUSTOMERID,  
59 CustomerName,  
60 Country,  
61 OrderID,  
62 OrderDate,  
63 ProductID,  
64 Quantity,  
65  
66 FROM CUSTOMERS AS C  
67 LEFT JOIN ORDERS AS O  
68 ON C.CUSTOMERID = O.CUSTOMERID;
```

The results table displays the following data:

#	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		
9	1224	Customer_1224	Australia	9	2025-01-25	2043	7		

The right sidebar shows query details: Query duration 270ms, Rows 4K, Query ID 01bbe4ad-0001-53ea-0...

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)

The screenshot shows a SQL query editor with the following query:

```
70 SELECT  
71 P.PRODUCTID,  
72 P.PRODUCTNAME,  
73 COUNT(ORDERID) AS TotalOrders  
74 FROM PRODUCT AS P  
75 LEFT JOIN ORDERS AS O  
76 ON P.PRODUCTID = O.PRODUCTID  
77 GROUP BY  
78 P.PRODUCTID,  
79 P.PRODUCTNAME;
```

The results table displays the following data:

#	PRODUCTID	PRODUCTNAME	#	TOTAL_ORDERS
1	2001	Product_2001	1	
2	2002	Product_2002	1	
3	2003	Product_2003	1	
4	2004	Product_2004	1	
5	2005	Product_2005	1	
6	2006	Product_2006	1	
7	2007	Product_2007	1	
8	2008	Product_2008	1	
9	2009	Product_2009	1	

The right sidebar shows query details: Query duration 651ms, Rows 200, Query ID 01bbe4bc-0001-53ea-0...

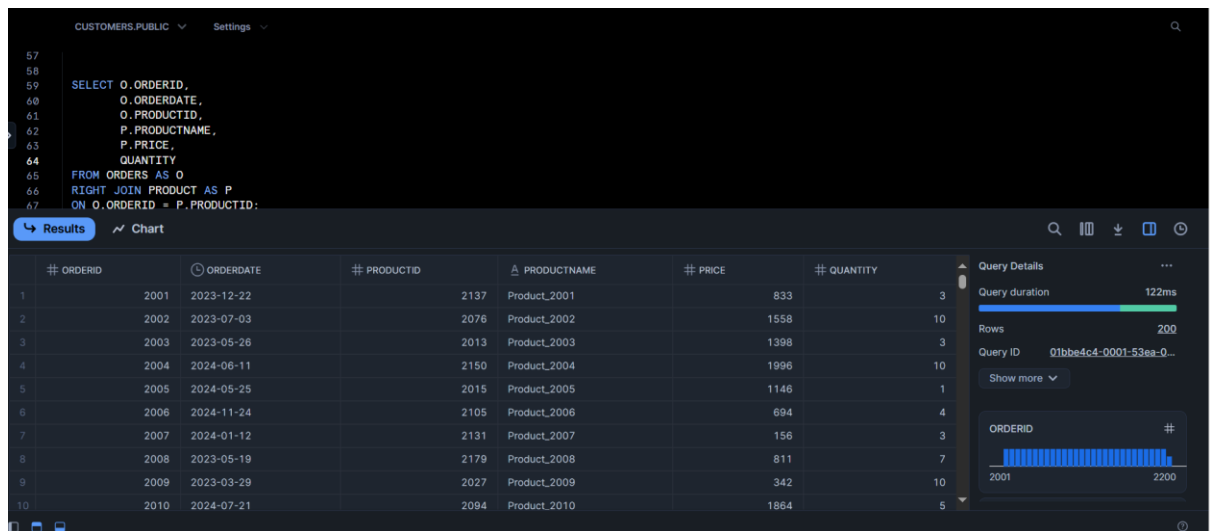
5. RIGHT JOIN: Orders with Product Info (Include Products Not Ordered)

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



The screenshot shows a SQL query editor with a query window and a results window. The query is a RIGHT JOIN between the ORDERS and PRODUCT tables. The results window displays a table with 10 rows and 6 columns: ORDERID, ORDERDATE, PRODUCTID, PRODUCTNAME, PRICE, and QUANTITY. The results show that all products from the PRODUCT table are included, even those that have not been ordered (e.g., Product_2001, Product_2002, Product_2003, Product_2004, Product_2005, Product_2006, Product_2007, Product_2008, Product_2009, Product_2010).

```
57
58
59 SELECT O.ORDERID,
60        O.ORDERDATE,
61        O.PRODUCTID,
62        P.PRODUCTNAME,
63        P.PRICE,
64        QUANTITY
65 FROM ORDERS AS O
66 RIGHT JOIN PRODUCT AS P
67 ON O.ORDERID = P.PRODUCTID;
```

#	ORDERID	ORDERDATE	PRODUCTID	PRODUCTNAME	PRICE	QUANTITY
1	2001	2023-12-22	2137	Product_2001	833	3
2	2002	2023-07-03	2076	Product_2002	1558	10
3	2003	2023-05-26	2013	Product_2003	1398	3
4	2004	2024-06-11	2150	Product_2004	1996	10
5	2005	2024-05-25	2015	Product_2005	1146	1
6	2006	2024-11-24	2105	Product_2006	694	4
7	2007	2024-01-12	2131	Product_2007	156	3
8	2008	2023-05-19	2179	Product_2008	811	7
9	2009	2023-03-29	2027	Product_2009	342	10
10	2010	2024-07-21	2094	Product_2010	1884	5

Query Details: Query duration 122ms, Rows 200, Query ID 01bbe4c4-0001-53ea-0...

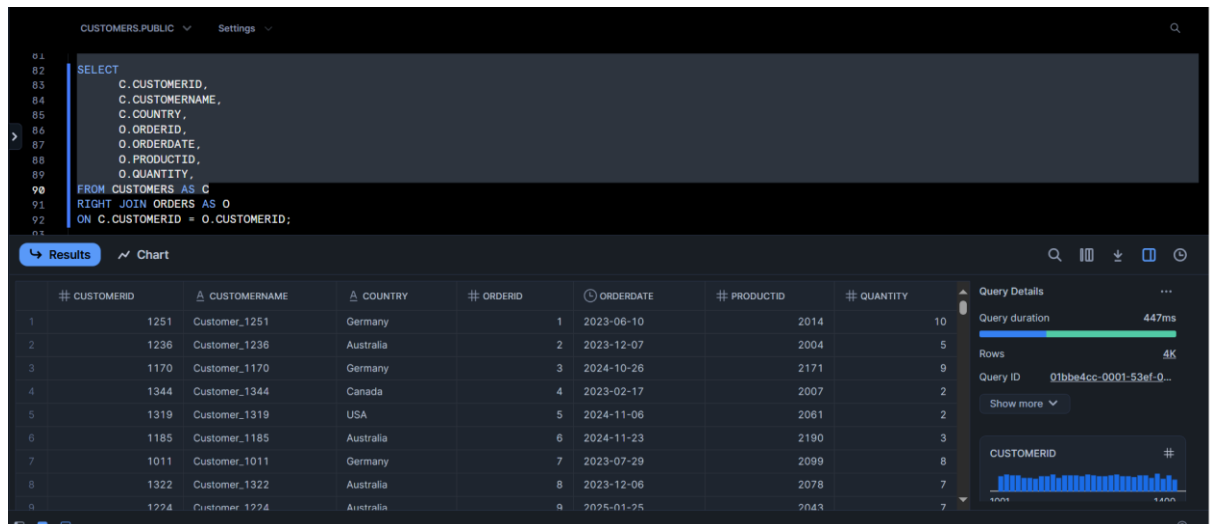
6. RIGHT JOIN: Customer Info with Orders (Include All Customers)

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



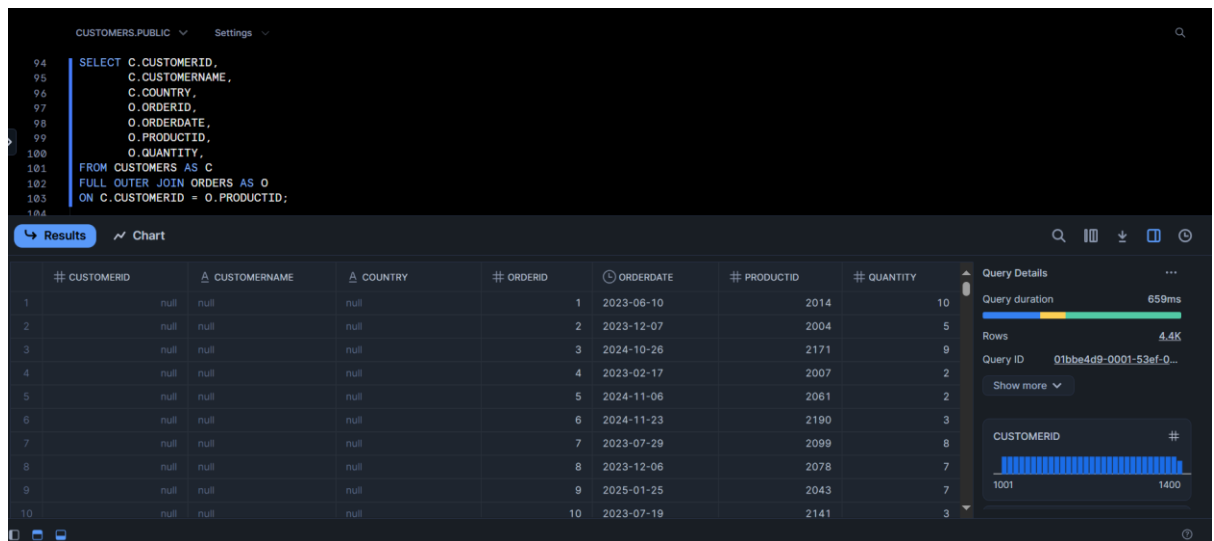
7. FULL OUTER JOIN: All Customers and All Orders

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



The screenshot shows a SQL query editor with a query window and a results window. The query is a full outer join between the CUSTOMERS and ORDERS tables. The results window displays a table with 10 rows and 7 columns: CUSTOMERID, CUSTOMERNAME, COUNTRY, ORDERID, ORDERDATE, PRODUCTID, and QUANTITY. The first 10 rows show data for customers 1 through 10, with some having orders and others not. The right sidebar shows query details: duration 659ms, 4.4K rows, and a query ID. A histogram for CUSTOMERID is also visible.

```
94 SELECT C.CUSTOMERID,
95        C.CUSTOMERNAME,
96        C.COUNTRY,
97        O.ORDERID,
98        O.ORDERDATE,
99        O.PRODUCTID,
100       O.QUANTITY,
101 FROM CUSTOMERS AS C
102 FULL OUTER JOIN ORDERS AS O
103 ON C.CUSTOMERID = O.PRODUCTID;
```

#	CUSTOMERID	CUSTOMERNAME	COUNTRY	ORDERID	ORDERDATE	PRODUCTID	QUANTITY
1	null	null	null	1	2023-08-10	2014	10
2	null	null	null	2	2023-12-07	2004	5
3	null	null	null	3	2024-10-26	2171	9
4	null	null	null	4	2023-02-17	2007	2
5	null	null	null	5	2024-11-06	2061	2
6	null	null	null	6	2024-11-23	2190	3
7	null	null	null	7	2023-07-29	2099	8
8	null	null	null	8	2023-12-06	2078	7
9	null	null	null	9	2025-01-25	2043	7
10	null	null	null	10	2023-07-19	2141	3

Query Details: Query duration 659ms, Rows 4.4K, Query ID 01bbe4d9-0001-53ef-0...

Histogram: CUSTOMERID, #, 1001, 1400

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

The results are displayed in a table with the following columns: #, PRODUCTID, PRODUCTNAME, PRICE, ORDERID, ORDERDATE, CUSTOMERID, and QUANTITY. The table contains 9 rows of data, with some NULL values in the PRODUCTNAME and PRICE columns.

#	PRODUCTID	PRODUCTNAME	PRICE	ORDERID	ORDERDATE	CUSTOMERID	QUANTITY
1	1	1	1	1	2023-06-10	1251	10
2	2	2	2	2	2023-12-07	1236	5
3	3	3	3	3	2024-10-26	1170	9
4	4	4	4	4	2023-02-17	1344	2
5	5	5	5	5	2024-11-06	1319	2
6	6	6	6	6	2024-11-23	1185	3
7	7	7	7	7	2023-07-29	1011	8
8	8	8	8	8	2023-12-06	1322	7
9	9	9	9	9	2025-01-25	1224	7

Query Details:

- Query duration: 517ms
- Rows: 4K
- Query ID: 01bbe4e1-0001-5401-0...
- Show more

PRODUCTID: #