

RIBA MAUBANE

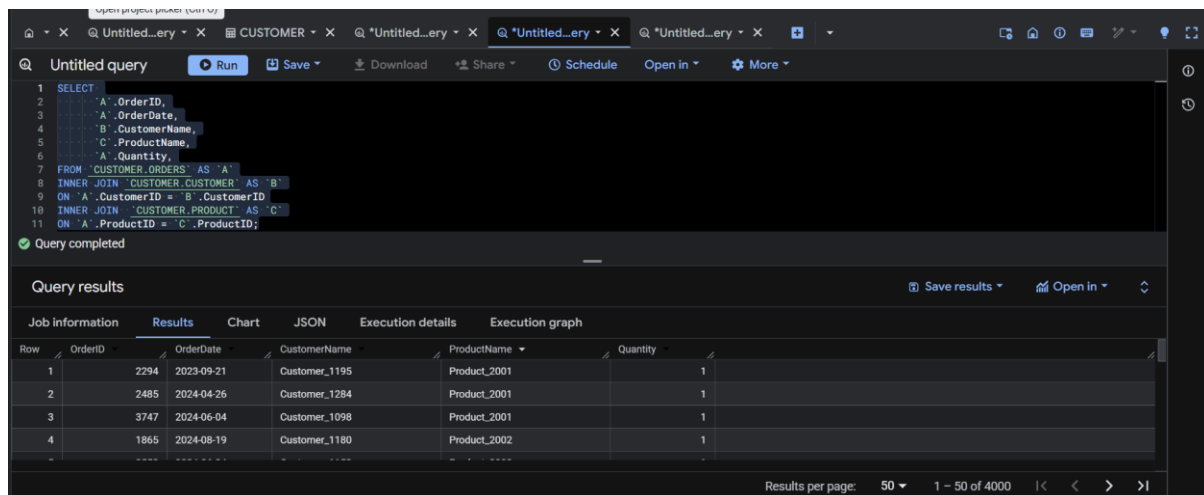
PRACTICAL 2 (BigQUERY)

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 the Google BigQuery interface. The query editor at the top contains the following SQL code:

```
1 SELECT
2   'A'.OrderID,
3   'A'.OrderDate,
4   'B'.CustomerName,
5   'C'.ProductName,
6   'A'.Quantity,
7 FROM `CUSTOMER_ORDERS` AS 'A'
8 INNER JOIN `CUSTOMER_CUSTOMER` AS 'B'
9 ON 'A'.CustomerID = 'B'.CustomerID
10 INNER JOIN `CUSTOMER_PRODUCT` AS 'C'
11 ON 'A'.ProductID = 'C'.ProductID;
```

Below the query editor, the 'Query results' section is displayed. It includes a table with the following data:

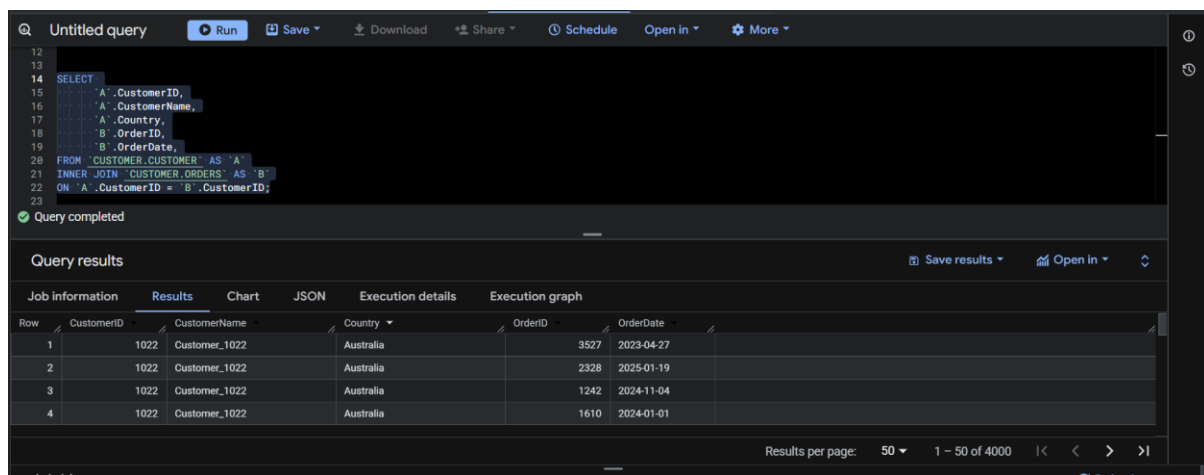
Row	OrderID	OrderDate	CustomerName	ProductName	Quantity
1	2294	2023-09-21	Customer_1195	Product_2001	1
2	2485	2024-04-26	Customer_1284	Product_2001	1
3	3747	2024-06-04	Customer_1098	Product_2001	1
4	1865	2024-08-19	Customer_1180	Product_2002	1

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 the Google BigQuery interface. The query editor at the top contains the following SQL code:

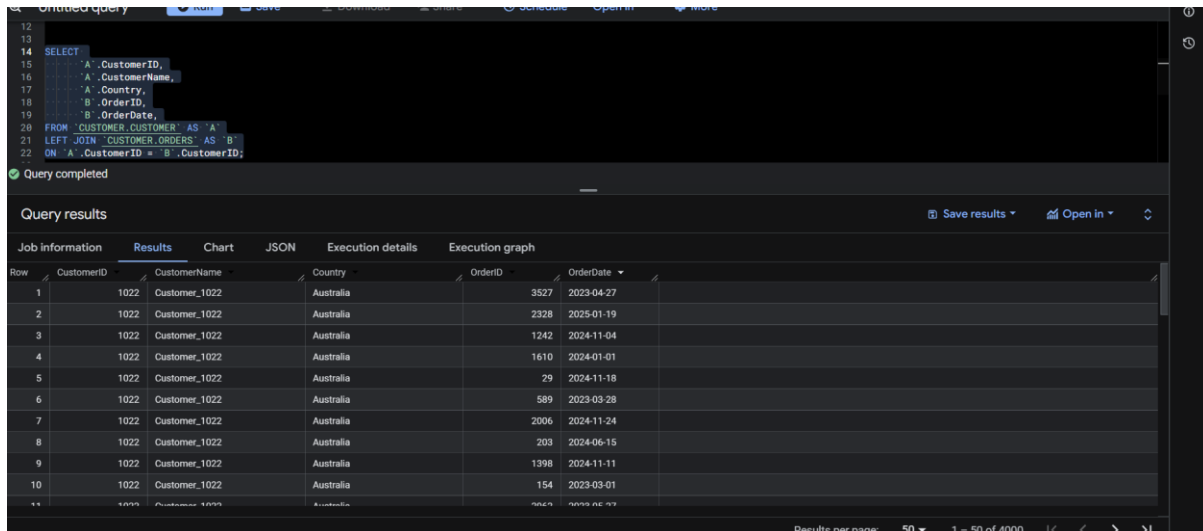
```
12 SELECT
13   'A'.CustomerID,
14   'A'.CustomerName,
15   'A'.Country,
16   'B'.OrderID,
17   'B'.OrderDate,
18 FROM `CUSTOMER_CUSTOMER` AS 'A'
19 INNER JOIN `CUSTOMER_ORDERS` AS 'B'
20 ON 'A'.CustomerID = 'B'.CustomerID;
```

Below the query editor, the 'Query results' section is displayed. It includes a table with the following data:

Row	CustomerID	CustomerName	Country	OrderID	OrderDate
1	1022	Customer_1022	Australia	3527	2023-04-27
2	1022	Customer_1022	Australia	2328	2025-01-19
3	1022	Customer_1022	Australia	1242	2024-11-04
4	1022	Customer_1022	Australia	1610	2024-01-01

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



Query completed

Query results

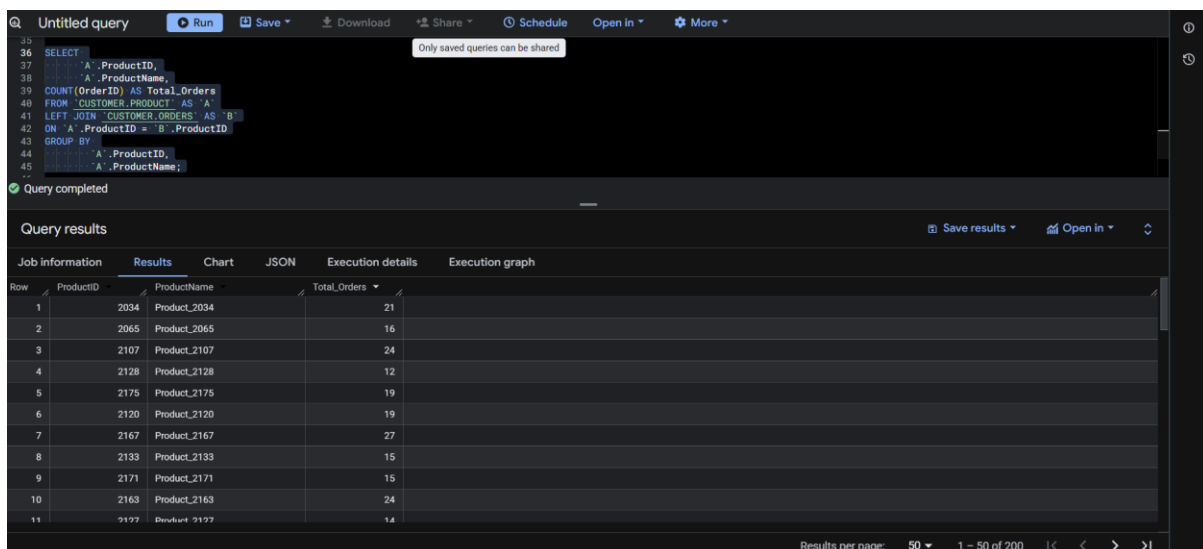
Job information Results Chart JSON Execution details Execution graph

Row	CustomerID	CustomerName	Country	OrderID	OrderDate
1	1022	Customer_1022	Australia	3527	2023-04-27
2	1022	Customer_1022	Australia	2328	2025-01-19
3	1022	Customer_1022	Australia	1242	2024-11-04
4	1022	Customer_1022	Australia	1610	2024-01-01
5	1022	Customer_1022	Australia	29	2024-11-18
6	1022	Customer_1022	Australia	589	2023-03-28
7	1022	Customer_1022	Australia	2006	2024-11-24
8	1022	Customer_1022	Australia	203	2024-06-15
9	1022	Customer_1022	Australia	1398	2024-11-11
10	1022	Customer_1022	Australia	154	2023-03-01
11	1022	Customer_1022	Australia	1029	2023-06-27

Results per page: 50 1 - 50 of 4000

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)



Query completed

Query results

Job information Results Chart JSON Execution details Execution graph

Row	ProductID	ProductName	TotalOrders
1	2034	Product_2034	21
2	2065	Product_2065	16
3	2107	Product_2107	24
4	2128	Product_2128	12
5	2175	Product_2175	19
6	2120	Product_2120	19
7	2167	Product_2167	27
8	2133	Product_2133	15
9	2171	Product_2171	15
10	2163	Product_2163	24
11	2127	Product_2127	14

Results per page: 50 1 - 50 of 200

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

Untitled query

```

47 SELECT
48     A.OrderID,
49     A.OrderDate,
50     A.ProductID,
51     B.ProductName,
52     B.Price,
53     A.Quantity,
54 FROM 'CUSTOMER_ORDERS' AS 'A'
55 RIGHT JOIN 'CUSTOMER_PRODUCT' AS 'B'
56 ON 'A.ProductID' = 'B.ProductID';
57

```

Query completed

Query results

Job information Results Chart JSON Execution details Execution graph

Row	OrderID	OrderDate	ProductID	ProductName	Price	Quantity
1	143	2024-11-29	2034	Product_2034	13	1
2	3448	2025-02-09	2034	Product_2034	13	1
3	882	2023-10-29	2034	Product_2034	13	2
4	1705	2025-02-06	2034	Product_2034	13	2
5	2049	2023-07-02	2034	Product_2034	13	2
6	117	2024-05-24	2034	Product_2034	13	3
7	1137	2024-09-02	2034	Product_2034	13	3
8	1824	2024-01-24	2034	Product_2034	13	3
9	1362	2024-03-19	2034	Product_2034	13	4
10	2725	2024-07-08	2034	Product_2034	13	4

Results per page: 50 1 - 50 of 4000

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.

Untitled query

```

57 SELECT
58     A.CustomerID,
59     A.CustomerName,
60     A.Country,
61     B.OrderID,
62     B.OrderDate,
63     B.ProductID,
64     B.Quantity,
65 FROM 'CUSTOMER_CUSTOMER' AS 'A'
66 RIGHT JOIN 'CUSTOMER_ORDERS' AS 'B'
67 ON 'A.CustomerID' = 'B.CustomerID';
68

```

This script will process 808.93 KB when run.

Query results

Job information Results Chart JSON Execution details Execution graph

Row	CustomerID	CustomerName	Country	OrderID	OrderDate	ProductID	Quantity
1	1195	Customer_1195	UK	2294	2023-09-21	2001	1
2	1284	Customer_1284	UK	2485	2024-04-26	2001	1
3	1098	Customer_1098	Germany	3747	2024-06-04	2001	1
4	1180	Customer_1180	India	1865	2024-08-19	2002	1
5	1152	Customer_1152	UK	2552	2024-06-24	2002	1
6	1225	Customer_1225	UK	2618	2024-09-19	2002	1
7	1029	Customer_1029	Canada	3490	2024-09-06	2002	1
8	1228	Customer_1228	USA	3554	2024-12-16	2002	1
9	1192	Customer_1192	UK	2980	2023-07-26	2003	1
10	1176	Customer_1176	USA	3000	2023-10-27	2003	1

Results per page: 50 1 - 50 of 4000

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

Untitled query

Run

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```
69 SELECT
70     'A'.CustomerID,
71     'A'.CustomerName,
72     'A'.Country,
73     'B'.OrderID,
74     'B'.OrderDate,
75     'B'.ProductID,
76     'B'.Quantity,
77
78 FROM 'CUSTOMER.CUSTOMER' AS 'A'
79 FULL OUTER JOIN 'CUSTOMER.ORDERS' AS 'B'
80 ON 'A'.CustomerID = 'B'.CustomerID;
81
82
```

This script will process 977.02 KB when run.

Query results

Save results

Open in

Job information	Results	Chart	JSON	Execution details	Execution graph		
Row	CustomerID	CustomerName	Country	OrderID	OrderDate	ProductID	Quantity
1	1363	Customer_1363	Canada	2312	2023-01-02	2180	1
2	1363	Customer_1363	Canada	330	2024-07-22	2138	2
3	1363	Customer_1363	Canada	3386	2024-11-04	2012	3
4	1363	Customer_1363	Canada	2405	2024-08-23	2199	3
5	1363	Customer_1363	Canada	2332	2023-09-27	2053	4
6	1363	Customer_1363	Canada	2281	2023-02-26	2056	4
7	1363	Customer_1363	Canada	632	2024-09-20	2132	4
8	1363	Customer_1363	Canada	3148	2024-12-22	2107	5
9	1363	Customer_1363	Canada	818	2024-12-18	2121	5

Results per page:

50

1 - 50 of 4000

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.

Q

Untitled query

Run

Save

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SELECT

'A'.ProductID,

'A'.ProductName,

'A'.Price,

'B'.OrderID,

'B'.OrderDate,

'B'.CustomerID,

'B'.Quantity,

FROM 'CUSTOMER_PRODUCT' AS 'A'

FULL OUTER JOIN 'CUSTOMER_ORDERS' AS 'B'

ON 'A'.ProductID = 'B'.ProductID;

This script will process 1.11 MB when run.

Query results

Save results

Open in

Job information

Results

Chart

JSON

Execution details

Execution graph

Row	ProductID	ProductName	Price	OrderID	OrderDate	CustomerID	Quantity
1	2167	Product_2167	61	1000	2023-11-30	1140	1
2	2167	Product_2167	61	1255	2023-08-07	1129	1
3	2167	Product_2167	61	2883	2024-06-27	1129	1
4	2167	Product_2167	61	1160	2024-07-04	1127	2
5	2167	Product_2167	61	1931	2024-07-14	1340	2
6	2167	Product_2167	61	2238	2024-05-26	1220	2
7	2167	Product_2167	61	1734	2024-05-20	1200	3
8	2167	Product_2167	61	2177	2023-06-09	1302	3
9	2167	Product_2167	61	61	2023-10-28	1021	4
10	2167	Product_2167	61	1081	2024-11-21	1261	4

Results per page:

50

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