

ANDILE DUBE

Practical 2: SQL Joins Practice

Question 1 :

The screenshot shows the Snowflake web interface. On the left, the 'Work with data' sidebar includes 'Projects', 'Ingestion', 'Transformation', 'AI & ML', and 'Monitoring'. A credit balance of \$391 is shown. The main workspace displays a file explorer with 'Untitled 3.sql' selected. The SQL editor contains the following query:

```
1  ---1. INNER JOIN: Orders with Customer and Product Names
2  ---Question:
3  ---List all orders along with the customer name and product name.
4  ---Expected Output Columns:
5  --- OrderID, OrderDate, CustomerName, ProductName, Quantity
6
7  SELECT
8      o.OrderID,
9      o.OrderDate,
10     c.CustomerName,
11     p.ProductName,
12     o.Quantity
13 FROM
14     Orders o
15 INNER JOIN
16     Customers c ON o.CustomerID = c.CustomerID
17 INNER JOIN
18     Products p ON o.ProductID = p.ProductID;
```

The 'Results' pane shows 'Results (just now)' with 4,000 rows and a 269ms execution time.

The screenshot shows the same Snowflake interface, but the 'Results' pane now displays the query output as a table. The table has 4,000 rows and took 269ms to execute. The results are as follows:

	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

Question 2:

app.snowflake.com/af-south-1.aws/be46832/#/workspaces/ws/USER%24/PUBLIC/DEFAULT%24/Untitled%203.sql

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Database Explorer

Objects Data Products

Search

Results 2025-10-20 6:14pm **Untitled 3.sql**

My Workspace > Untitled 3.sql

```
17 Products p ON o.CustomerID = p.ProductID;
18 ---2. INNER JOIN: Customers Who Placed Orders
19 ---Question:
20 ---Which customers have placed at least one order?
21 ---Expected Output Columns:
22 --- CustomerID, CustomerName, Country, OrderID, OrderDate
23
24 SELECT
25     c.CustomerID,
26     c.CustomerName,
27     c.Country,
28     o.OrderID,
29     o.OrderDate
30 FROM
31     Orders o
32 INNER JOIN
33     Customers c ON o.CustomerID = c.CustomerID;
34
35 Ctrl+I to generate
```

Results (1 minute ago)

Query History

Feedback

app.snowflake.com/af-south-1.aws/be46832/#/workspaces/ws/USER%24/PUBLIC/DEFAULT%24/Untitled%203.sql

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Objects Data Products

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Results 2025-10-20 6:14pm **Untitled 3.sql**

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```
17 Products p ON o.CustomerID = p.ProductID;
18 ---2. INNER JOIN: Customers Who Placed Orders
19 ---Question:
20 ---Which customers have placed at least one order?
21 ---Expected Output Columns:
22 --- CustomerID, CustomerName, Country, OrderID, OrderDate
23
24 SELECT
25     c.CustomerID,
26     c.CustomerName,
27     c.Country,
28     o.OrderID,
29     o.OrderDate
30 FROM
31     Orders o
32 INNER JOIN
33     Customers c ON o.CustomerID = c.CustomerID;
34
35 Ctrl+I to generate
```

Results (just now)

Table Chart

4,000 rows 67ms

	#	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

Query History

Feedback

Question 3:

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Database Explorer

Objects Data Products

Search

Results 2025-10-20 6:14pm **Untitled 3.sql**

My Workspace > Untitled 3.sql

```
34 ---Question:
35 ---List all customers and any orders they might have placed. Include customers
36 ---who have
37 ---not placed any orders.
38 ---Expected Output Columns:
39 --- CustomerID, CustomerName, Country, OrderID, OrderDate, ProductID,Quantity
40 SELECT
41   c.CustomerID,
42   c.CustomerName,
43   c.Country,
44   o.OrderID,
45   o.OrderDate,
46   o.ProductID,
47   o.Quantity
48 FROM
49   Customers c
50 LEFT JOIN
51   Orders o ON c.CustomerID = o.CustomerID;
```

Results (just now)

Query History

Feedback

app.snowflake.com/af-south-1.aws/be46832/#/workspaces/ws/USER%24/PUBLIC/DEFAULT%24/Untitled%203.sql

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Database Explorer

Objects Data Products

Search

Results 2025-10-20 6:14pm **Untitled 3.sql**

My Workspace > Untitled 3.sql

```
34 ---Question:
35 ---List all customers and any orders they might have placed. Include customers
36 ---who have
37 ---not placed any orders.
38 ---Expected Output Columns:
39 --- CustomerID, CustomerName, Country, OrderID, OrderDate, ProductID,Quantity
40 SELECT
41   c.CustomerID,
42   c.CustomerName,
```

Results (2 minutes ago)

Table Chart

4,000 rows 583ms

	CUSTOMERID	CUSTOMERNAME	COUNTRY	ORDERID	ORDERDATE	PRODUCTID
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	

Query History

Feedback

Question 4:

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Database Explorer

Objects Data Products

Search

Results 2025-10-20 6:14pm **Untitled 3.sql**

My Workspace > Untitled 3.sql

```
47 FROM
48   Customers c
49 LEFT JOIN
50   Orders o ON c.CustomerID = o.CustomerID;
51 ---4. LEFT JOIN: Product Order Count
52 ---Question:
53 ---List all products and how many times each was ordered (if any).
54 ---Expected Output Columns:
55 --- ProductID, ProductName, TotalOrders
56 --- (TotalOrders is the count of how many times the product appears in orders)
57 SELECT
58   p.ProductID,
59   p.ProductName,
60   COUNT(o.OrderID) AS TotalOrders
61 FROM
62   Products p
63 LEFT JOIN
64   Orders o ON p.ProductID = o.ProductID
65 GROUP BY
66   p.ProductID, p.ProductName;
```

Results (just now)

Query History

Feedback

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Objects Data Products

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Results 2025-10-20 6:14pm **Untitled 3.sql**

My Workspace > Untitled 3.sql

```
47 FROM
48   Customers c
49 LEFT JOIN
50   Orders o ON c.CustomerID = o.CustomerID;
51 ---4. LEFT JOIN: Product Order Count
52 ---Question:
53 ---List all products and how many times each was ordered (if any).
54 ---Expected Output Columns:
55 --- ProductID, ProductName, TotalOrders
```

Results (1 minute ago)

Table Chart

200 rows 180ms

#	PRODUCTID	PRODUCTNAME	TOTALORDERS
1	2171	Product_2171	15
2	2177	Product_2177	20
3	2073	Product_2073	19
4	2089	Product_2089	20

Query History

Feedback

Question 5:

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Database Explorer

Objects Data Products

Search

Results 2025-10-20 6:14pm **Untitled 3.sql**

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```
65 GROUP BY
66   p.ProductID, p.ProductName;
67 --- 5. RIGHT JOIN: Orders with Product Info (Include Products Not Ordered)
68 ---Question:
69 ---Find all orders along with product details, including any products that
70 ---might not have
71 ---been ordered.
72 ---Expected Output Columns:
73 --- OrderID, OrderDate, ProductID, ProductName, Price, Quantity
74 SELECT
75   o.OrderID,
76   o.OrderDate,
77   p.ProductID,
78   p.ProductName,
79   p.Price,
80   o.Quantity
81 FROM
82   Orders o
83 RIGHT JOIN
84   Products p ON o.ProductID = p.ProductID;
```

Results (just now)

Query History

Feedback

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Results 2025-10-20 6:14pm **Untitled 3.sql**

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```
65 GROUP BY
66   p.ProductID, p.ProductName;
67 --- 5. RIGHT JOIN: Orders with Product Info (Include Products Not Ordered)
68 ---Question:
69 ---Find all orders along with product details, including any products that
70 ---might not have
71 ---been ordered.
72 ---Expected Output Columns:
73 --- OrderID, OrderDate, ProductID, ProductName, Price, Quantity
74 SELECT
75   o.OrderID,
76   o.OrderDate,
77   p.ProductID,
78   p.ProductName,
79   p.Price,
80   o.Quantity
81 FROM
82   Orders o
83 RIGHT JOIN
84   Products p ON o.ProductID = p.ProductID;
```

Results (1 minute ago)

Table Chart

4,000 rows 196ms

	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

Query History

Feedback

Question 6:

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Search

Results 2025-10-20 6:14pm Untitled 3.sql

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84 ---6. RIGHT JOIN: Customer Info with Orders (Include ALL Customers)

85 ---Question:

86 ---Which customers have made orders, and include customers even if they have never

87 ---placed an order.

88 ---Expected Output Columns:

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

90 SELECT

91 Customers.CustomerID,

92 Customers.CustomerName,

93 Customers.Country,

94 Orders.OrderID,

95 Orders.OrderDate,

96 Orders.ProductID,

97 Orders.Quantity

98 FROM

99 Customers

100 LEFT JOIN

101 Orders ON Customers.CustomerID = Orders.CustomerID;

Results (just now)

Query History

Feedback

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84 ---6. RIGHT JOIN: Customer Info with Orders (Include ALL Customers)

85 ---Question:

86 ---Which customers have made orders, and include customers even if they have never

87 ---placed an order.

88 ---Expected Output Columns:

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

90 SELECT

91 Customers.CustomerID,

92 Customers.CustomerName,

93 Customers.Country,

94 Orders.OrderID,

95 Orders.OrderDate,

96 Orders.ProductID,

97 Orders.Quantity

98 FROM

99 Customers

100 LEFT JOIN

101 Orders ON Customers.CustomerID = Orders.CustomerID;

Results (1 minute ago)

Table Chart

4,000 rows 213ms

	ERID	CUSTOMERNAME	COUNTRY	ORDERID	ORDERDATE	PRODUCTID
1	1251	Customer_1251	Germany	1	2023-06-10	2014
2	1236	Customer_1236	Australia	2	2023-12-07	2004
3	1170	Customer_1170	Germany	3	2024-10-26	2171
4	1344	Customer_1344	Canada	4	2023-02-17	2007

Query History

Feedback

Question 7:

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Database Explorer

Objects Data Products

Search

Results 2025-10-20 6:14pm **Untitled 3.sql**

My Workspace > Untitled 3.sql

```
102 --- 7. FULL OUTER JOIN: ALL Customers and ALL Orders
103 ---Question:
104 ---List all customers and orders, showing NULLs where customers have not
105 ---ordered or
106 ---where orders have no customer info.
107 ---Expected Output Columns:
108 --- CustomerID, CustomerName, Country, OrderID, OrderDate, ProductID,
109 --- Quantity
110 SELECT
111 COALESCE(Customers.CustomerID, Orders.CustomerID) AS CustomerID,
112 Customers.CustomerName,
113 Customers.Country,
114 Orders.OrderID,
115 Orders.OrderDate,
116 Orders.ProductID,
117 Orders.Quantity
118 FROM
119 Customers
120 FULL OUTER JOIN
121 Orders ON Customers.CustomerID = Orders.CustomerID;
```

Results (just now)

Query History

Feedback

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Objects Data Products

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Results 2025-10-20 6:14pm **Untitled 3.sql**

My Workspace > Untitled 3.sql

```
102 --- 7. FULL OUTER JOIN: ALL Customers and ALL Orders
103 ---Question:
104 ---List all customers and orders, showing NULLs where customers have not
105 ---ordered or
106 ---where orders have no customer info.
107 ---Expected Output Columns:
108 --- CustomerID, CustomerName, Country, OrderID, OrderDate, ProductID,
109 --- Quantity
110 SELECT
111 COALESCE(Customers.CustomerID, Orders.CustomerID) AS CustomerID,
112 Customers.CustomerName,
113 Customers.Country,
114 Orders.OrderID,
115 Orders.OrderDate,
116 Orders.ProductID,
117 Orders.Quantity
118 FROM
119 Customers
120 FULL OUTER JOIN
121 Orders ON Customers.CustomerID = Orders.CustomerID;
```

Results (1 minute ago)

Table Chart

4,000 rows 182ms

	CUSTOMERID	CUSTOMERNAME	COUNTRY	ORDERID	ORDERDATE	PRODUCTID
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	

Query History

Feedback

Question 8:

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Database Explorer

Objects Data Products

Search

Results 2025-10-20 6:14pm Untitled 3.sql

My Workspace > Untitled 3.sql

120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138

```
---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
  COALESCE(Products.ProductID, Orders.ProductID) AS ProductID,
  Products.ProductName,
  Products.Price,
  Orders.OrderID,
  Orders.OrderDate,
  Orders.CustomerID,
  Orders.Quantity
FROM
  Products
FULL OUTER JOIN
  Orders ON Products.ProductID = Orders.ProductID;
```

Results (just now)

Query History

Feedback

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Objects Data Products

Search

Results 2025-10-20 6:14pm Untitled 3.sql

My Workspace > Untitled 3.sql

120
121
122
123
124
125
126
127

```
---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
```

Results (1 minute ago)

Table Chart

4,000 rows 192ms

	TID	PRODUCTNAME	PRICE	ORDERID	ORDERDATE	CUSTOMERID	
1	014	Product_2014	522	1	2023-06-10	1251	
2	004	Product_2004	1996	2	2023-12-07	1236	
3	171	Product_2171	76	3	2024-10-26	1170	
4	007	Product_2007	156	4	2023-02-17	1344	

Query History

Feedback