

# Practical 2

## Question 1

```
13
14      --1. INNER JOIN: Orders with Customer and Product Names
15      --Question: List all orders along with the customer name and product name.
16      --Expected Output Columns: OrderID, OrderDate, CustomerName, ProductName, Quantity
17      SELECT A.orderid,
18              A.orderdate,
19              B.customername,
20              C.productname,
21              A.quantity
22      FROM practical2.purchases.orders AS A
23      INNER JOIN practical2.purchases.customers AS B
24      ON A.customerid = B.customerid
25      INNER JOIN practical2.purchases.products AS C
26      ON C.productid = A.productid;
27
```

Results (4 minutes ago)

#	# 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

## Question 2

```
27
28      --2. INNER JOIN: Customers Who Placed Orders
29      --Question:
30      --Which customers have placed at least one order?
31      --Expected Output Columns:
32      -- CustomerID, CustomerName, Country, OrderID, OrderDate
33      SELECT orderid,
34              A.orderdate,
35              B.customername,
36              C.productname,
37              A.quantity
38      FROM practical2.purchases.orders AS A
39      INNER JOIN practical2.purchases.customers AS B
40      ON A.customerid = B.customerid
41      INNER JOIN practical2.purchases.products AS C
42      ON C.productid = A.productid
43      WHERE quantity >0;
44
```

Results (6 minutes ago)

#	# 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

### Question 3

```
44
45      --3. LEFT JOIN: All Customers and Their Orders
46      --Question:
47      --List all customers and any orders they might have placed. Include customers who have not placed any orders.
48      --Expected Output Columns:
49      -- CustomerID, CustomerName, Country, OrderID, OrderDate, ProductID, Quantity
50  SELECT A.customerid,
51        A.customername,
52        A.country,
53        B.orderid,
54        B.orderdate,
55        B.productid,
56        B.quantity
57  FROM practical2.purchases.customers AS A
58  LEFT JOIN practical2.purchases.orders AS B
59  ON A.customerid = B.customerid;
```

Results (just now)

Table Chart

#	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	4044	Customer_4044	Canada	4	2022-09-17	2007	1

### Question 4

```
61      --4. LEFT JOIN: Product Order Count
62      --Question:
63      --List all products and how many times each was ordered (if any).
64      --Expected Output Columns:
65      --ProductID, ProductName, TotalOrders
66      --(TotalOrders is the count of how many times the product appears in orders)
67  SELECT A.productid,
68        B.productname,
69        COUNT(A.productid) AS TotalOrders
70  FROM practical2.purchases.orders AS A
71  LEFT JOIN practical2.purchases.products AS B
72  ON A.productid = B.productid
73  GROUP BY A.productid,B.productname;
```

Results (just now)

Table Chart

#	PRODUCTID	PRODUCTNAME	TOTALORDERS
1	2001	Product_2001	0.5%
2	2002	Product_2002	0.5%
3	2105	Product_2105	14
4	2063	Product_2063	24
5	2059	Product_2059	17
6	2200	+98 more	34



## Question 5

```
74
75    --5. RIGHT JOIN: Orders with Product Info (Include Products Not Ordered)
76    --Question:
77    --Find all orders along with product details, including any products that might not have been ordered.
78    --Expected Output Columns:
79    -- OrderID, OrderDate, ProductID, ProductName, Price, Quantity
80    SELECT A.orderid,
81        A.orderdate,
82        B.productid,
83        B.productname,
84        B.price,
85        A.quantity
86    FROM practical2.purchases.orders AS A
87    RIGHT JOIN practical2.purchases.products AS B
88    ON A.productid = B.productid;
89
```

Results (just now)

Table Chart

#	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
5	5	2024-11-06	2061	Product 2061	1595	2

## Question 6

```
91
92    --6. RIGHT JOIN: Customer Info with Orders (Include All Customers)
93    --Question:
94    --Which customers have made orders, and include customers even if they have never placed an order.
95    --Expected Output Columns:
96    -- CustomerID, CustomerName, Country, OrderID, OrderDate, ProductID, Quantity
97    SELECT B.customerid,
98        B.customername,
99        B.country,
100       A.orderid,
101       A.orderdate,
102       A.productid,
103       A.quantity,
104   FROM practical2.purchases.orders AS A
105   RIGHT JOIN practical2.purchases.customers AS B
106  ON A.customerid = B.customerid;
```

Results (just now)

Table Chart

#	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

## Question 7

```
107    --7. FULL OUTER JOIN: All Customers and All Orders
108    --Question:
109    --List all customers and orders, showing NULLs where customers have not ordered or where orders have no customer info.
110    --Expected Output Columns:
111    -- CustomerID, CustomerName, Country, OrderID, OrderDate, ProductID, Quantity
112    SELECT B.customerid,
113        B.customername,
114        B.country,
115        A.orderid,
116        A.orderdate,
117        A.productid,
118        A.quantity,
119    FROM practical2.purchases.orders AS A
120    FULL OUTER JOIN practical2.purchases.customers AS B
121    ON A.customerid = B.customerid;
122
```

Results (just now)

	# 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

## Question 8

```
123    --8. FULL OUTER JOIN: All Products and Orders
124    --Question:
125    --List all products and orders, showing NULLs where products were never ordered or orders are missing product info.
126    --Expected Output Columns:
127    -- ProductID, ProductName, Price, OrderID, OrderDate, CustomerID, Quantity
128    SELECT B.productid,
129        B.productname,
130        B.price,
131        A.orderid,
132        A.orderdate,
133        A.customerid,
134        A.quantity,
135    FROM practical2.purchases.orders AS A
136    FULL OUTER JOIN practical2.purchases.products AS B
137    ON A.productid = B.productid;
138
```

Results (just now)

	# 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