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Practical 2 : JOINS

Query 1: List all orders along with the customer name and product name.

```
--Query 1: List all orders along with the customer name and product name.
SELECT c.customername,o.orderid,o.orderdate,o.quantity,p.productname
FROM customers AS c
INNER JOIN orders AS o
ON c.customerid=o.customerid
INNER JOIN products AS p
ON o.productid=p.productid;
```

Results | Chart

	CUSTOMERNAME	ORDERID	ORDERDATE	QUANTITY	PRODUCTNAME
1	Customer_1251	1	2023-06-10	10	Product_2014
2	Customer_1236	2	2023-12-07	5	Product_2004
3	Customer_1170	3	2024-10-26	9	Product_2171
4	Customer_1344	4	2023-02-17	2	Product_2007
5	Customer_1319	5	2024-11-06	2	Product_2061
6	Customer_1185	6	2024-11-23	3	Product_2190

Query 2: list of customers who ordered at least one order.

```
--Query 2: list of customers who ordered more at least one order
SELECT*FROM customers
INNER JOIN orders
ON customers.customerid=orders.customerid
WHERE quantity>=1;
```

Results | Chart

	CUSTOMERID	CUSTOMERNAME	COUNTRY	ORDERID	CUSTOMERID	PRODUCTID	QUANTITY	ORDERDATE
1	1251	Customer_1251	Germany	1	1251	2014	10	2023-06-10
2	1236	Customer_1236	Australia	2	1236	2004	5	2023-12-07
3	1170	Customer_1170	Germany	3	1170	2171	9	2024-10-26
4	1344	Customer_1344	Canada	4	1344	2007	2	2023-02-17

Query 3: List all customers and any orders they might have placed. Include customers who have not placed any orders.

```
--Query 3: List all customers and any orders they might have placed. Include customers who have not placed any orders.
SELECT *FROM customers
LEFT JOIN orders
ON customers.customerid=orders.customerid;
```

Results | Chart

	CUSTOMERID	CUSTOMERNAME	COUNTRY	ORDERID	CUSTOMERID	PRODUCTID	QUANTITY	ORDERDATE
1	1251	Customer_1251	Germany	1	1251	2014	10	2023-06-10
2	1236	Customer_1236	Australia	2	1236	2004	5	2023-12-07
3	1170	Customer_1170	Germany	3	1170	2171	9	2024-10-26
4	1344	Customer_1344	Canada	4	1344	2007	2	2023-02-17

Query 4: list all products and how many times each one was ordered:

```
--Query 4: list all products and how many times each one was ordered:
SELECT ORDERS.PRODUCTID,productname,count(orderid) AS total_orders
FROM orders
LEFT JOIN  products
ON orders.PRODUCTID=products.productid
GROUP BY ORDERS.PRODUCTID,PRODUCTNAME
ORDER BY total_orders DESC;
```

esults | Chart

PRODUCTID	PRODUCTNAME	TOTAL_ORDERS
2041	Product_2041	34
2076	Product_2076	34
2135	Product_2135	32

Query 5: Find all orders along with product details, including any products that might not have been ordered:

```
--Query 5: Find all orders along with product details, including any products that might not have been ordered.
SELECT PRODUCTS.PRODUCTID, ORDERID, ORDERDATE, PRODUCTNAME,PRICE,QUANTITY
FROM ORDERS
RIGHT JOIN PRODUCTS
ON  ORDERS.PRODUCTID=PRODUCTS.PRODUCTID
ORDER BY QUANTITY ASC;
```

esults | Chart

PRODUCTID	ORDERID	ORDERDATE	PRODUCTNAME	PRICE	QUANTITY
2091	785	2024-09-25	Product_2091	563	1
2200	2972	2023-05-28	Product_2200	330	1
2178	3597	2024-06-05	Product_2178	1426	1

Query 6: to find which customers have made orders, and include customers even if they have never placed an order:

```
36  --Query 6: to find which customers have made orders, and include customers even if they have never placed an order.
37  SELECT customers.customerid,customername, country, orderid,orders.customerid,productid,quantity,orderdate
38  FROM customers
39  RIGHT JOIN orders
40  ON customers.customerid=orders.customerid
41  ORDER BY QUANTITY ASC;
42
```

Results | Chart

	CUSTOMERID	CUSTOMERNAME	COUNTRY	ORDERID	CUSTOMERID	PRODUCTID	QUANTITY	ORDERDATE
1	1025	Customer_1025	Canada	785	1025	2091	1	2024-09-25
2	1282	Customer_1282	Canada	2972	1282	2200	1	2023-05-28
3	1051	Customer_1051	India	3597	1051	2178	1	2024-06-05

Query 7: to list all customers and orders, showing NULLs where customers have not ordered or where orders have no customer info:

```
--Query 7: to list all customers and orders, showing NULLs where customers have not ordered or where orders have no customer info.
SELECT customers.customerid,customername, country, orderid,orders.customerid,productid,quantity,orderdate
FROM customers
FULL OUTER JOIN orders
ON customers.customerid=orders.customerid
WHERE customers.customerid AND orders.customerid AND orderid IS NOT NULL;
```

sults | Chart

CUSTOMERID	CUSTOMERNAME	COUNTRY	ORDERID	CUSTOMERID	PRODUCTID	QUANTITY	ORDERDATE
1251	Customer_1251	Germany	1	1251	2014	10	2023-06-10
1236	Customer_1236	Australia	2	1236	2004	5	2023-12-07
1170	Customer_1170	Germany	3	1170	2171	9	2024-10-26

Query 8: List all products and orders, showing NULLs where products were never ordered or orders are missing product info:

```
--Query 8: List all products and orders, showing NULLs where products were never ordered or orders are missing product info
SELECT products.productid,productname,price,orderid,customerid,orders.productid,quantity,orderdate
FROM products
FULL OUTER JOIN orders
ON products.productid=orders.productid
WHERE orders.productid AND orderid IS NOT NULL;
```

sults | Chart

PRODUCTID	PRODUCTNAME	PRICE	ORDERID	CUSTOMERID	PRODUCTID	QUANTITY	ORDERDATE
2014	Product_2014	522	1	1251	2014	10	2023-06-10
2004	Product_2004	1996	2	1236	2004	5	2023-12-07
2171	Product_2171	76	3	1170	2171	9	2024-10-26