Find Out the Number of New and Existing Customers in each Order date

Input

Order ID	Customer ID	Order Date	Order Amount
1	100	01-01-2022	2000
2	200	01-01-2022	2500
3	300	01-01-2022	2100
4	100	02-01-2022	2000
5	400	02-01-2022	2200
6	500	02-01-2022	2700
7	100	03-01-2022	3000
8	400	03-01-2022	1000
9	600	03-01-2022	3000

Output

Order Date	Number of New Customers	Number of Existing Customers
01-01-2022	3	0
02-01-2022	2	1
03-01-2022	1	2

Solution:

Method 1 → Aggregation (MIN) + case when order_date = first_date then new else orderdate > first_order_date then existing

```
With first_purchase AS(
Select
Customer_Id,
Min(order_date) as first_order_date
From orders
Group by customer_id
)
Select
```

```
O.order_date,
sum(case when o.order_date = f.first_order_date then 1 else 0 end) as new_customers,
sum(case when o.order_date > f.first_order_date then 1 else 0 end) as existing_customers

From orders o
Join first_purchase f on.customer_id = f.customer_id
Group by o.order_date
```

Method 2 → Cumulative count/Running Count/Cumulative frequency + Order count = 1 → new else > 1 then existing

```
WITH customer_orders AS (
    SELECT
        customer_id,
        order_date,
        COUNT(*) OVER (PARTITION BY customer_id ORDER BY order_date ROWS BETWEEN
UNBOUNDED PRECEDING AND CURRENT ROW) AS order_count
    FROM orders
)
SELECT
    order_date,
    COUNT(DISTINCT CASE WHEN order_count = 1 THEN customer_id END) AS
new_customers,
    COUNT(DISTINCT CASE WHEN order_count > 1 THEN customer_id END) AS
existing_customers
FROM customer_orders
GROUP BY order_date
ORDER BY order_date;
```