

## DAY 23: WINDOW FUNCTIONS

Window functions operate across multiple records. But those records don't have to be grouped in the output. Window functions are used to include information from a record alongside the most recent detail record related to an entity. I will start with the ROW NUMBER () function. Which is a window function that allows the ranking of rows by a value. PARTITION BY, is a syntax associated with ROW NUMBER () which is like a GROUP BY without combining the rows, which means it splits rows into groups, without aggregating.

```
/*Write a query to retrieve the list of customers and their orders with the order date
and the cumulative total amount for each order sorted by order date.*/
SELECT CU.customer_id, contact_name, order_date,
       SUM(unit_price * quantity) OVER (PARTITION BY CU.customer_id ORDER BY order_date) AS
cum_total_amount
FROM customers AS CU
LEFT JOIN orders AS ORD
ON CU.customer_id = ORD.customer_id
LEFT JOIN order_details AS OD
ON ORD.order_id = OD.order_id
ORDER BY order_date;

/*Write a query to retrieve the list of customers based on their method of shipping orders, sort them by
date.*/
SELECT CU.customer_id, contact_name, SH.company_name, order_date,
       ROW_NUMBER() OVER (PARTITION BY SH.company_name ORDER BY order_date DESC) AS row_order
FROM shippers AS SH
INNER JOIN orders AS ORD
ON SH.shipper_id = ORD.shipper_id
INNER JOIN customers AS CU
ON ORD.customer_id = CU.customer_id;
```