



SOME SAMPLES OF WINDOW FUNCTION AGGREGATION ON SQL

```
-- Running Totals
SELECT order_date,
       sum(order_amount) OVER (ORDER BY order_date)
       AS running_total
FROM orders;

-- Moving Average
SELECT order_date,
       AVG(order_amount) OVER (ORDER BY order_date
                               ROWS BETWEEN 2 PRECEDING AND CURRENT ROW) AS
       moving_average
FROM orders;

-- Rank
SELECT product_name, product_price, DENSE_RANK()
       OVER (ORDER BY product_price DESC) AS rank
FROM products;

-- Percent Rank
SELECT product_name, product_price, PERCENT_RANK()
       OVER (ORDER BY product_price DESC) AS
       percent_rank
FROM products;
```



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-- Lead and Lag

```
SELECT order_date, order_amount,  
       LAG(order_amount) OVER (ORDER BY order_date)  
       AS prev_amount,  
       LEAD(order_amount) OVER (ORDER BY order_date)  
       AS next_amount  
FROM orders;
```

-- First Value and Last Value

```
SELECT order_date, order_amount,  
       FIRST_VALUE(order_amount) OVER (ORDER BY  
       order_date) AS first_amount,  
       LAST_VALUE(order_amount) OVER (ORDER BY  
       order_date) AS last_amount  
FROM orders;
```

-- Cumulative Distribution

```
SELECT product_name, product_price, CUME_DIST()  
       OVER (ORDER BY product_price) AS  
       cumulative_dist  
FROM products;
```



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SOME SAMPLES OF WINDOW FUNCTION AGGREGATION ON SQL



-- Ntile

```
SELECT product_name, product_price,  
       NTILE(4) OVER (ORDER BY product_price)  
       AS quartile  
FROM products;
```

-- Percentile Cont

```
SELECT product_name, product_price,  
       PERCENTILE_CONT(0.5) WITHIN GROUP  
       (ORDER BY product_price) OVER ()  
       AS median_price  
FROM products;
```

-- Concatenation

```
SELECT department, employee_name,  
       STRING_AGG(phone_number, ', ') WITHIN  
       GROUP (ORDER BY phone_number) AS  
       phone_list  
FROM employees  
GROUP BY department, employee_name;
```



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-- Dense Rank with Ties

```
SELECT employee_name, department,  
       DENSE_RANK() OVER (PARTITION BY  
       department ORDER BY salary DESC)  
       AS dense_rank  
FROM employees;
```

-- Sum with Grouping Sets

```
SELECT department, SUM(salary) AS      total_salary  
FROM employees  
GROUP BY GROUPING SETS ((department), ());
```



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