WINDOW FUNCTIONS

GROUP BY → Summarising Data

Q. Get the price of the most expensive item per vendor. ✓

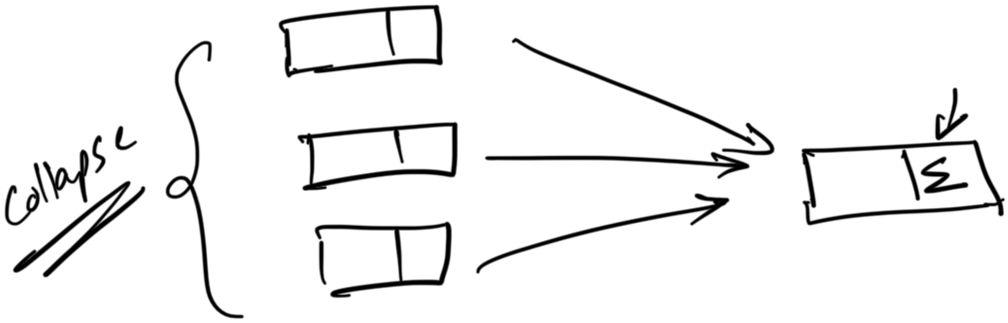
```
SELECT
    vendor_id,
    MAX (original_price) ←
FROM vendor_inventory
GROUP BY vendor_id.
```

New Q.

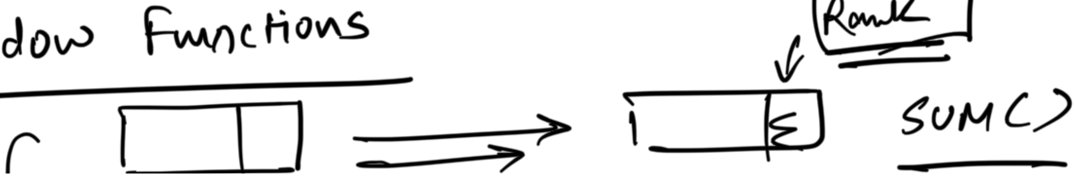
Q. Rank the products in each vendor's inventory. Expensive products should get lower rank. ✓

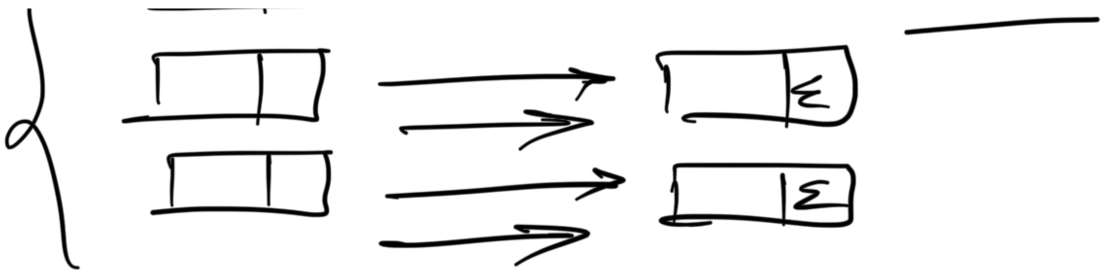
Number the rows

GROUP BY



Window Functions





Vendor- Based Analysis

① ↳ Avg. price per product per vendor.

② → How may products of each vendor is greater than the avg. price of products in the market

PARTI

R_Numbr	product_id	v_id	original_price	Avg.	Rank
1	1	1	5	5.6	
2	2	1	6	5.6	
3	3	1	4	5.6	
1	1	2	6		
2	2	2	8	5.6	
3	3	2	5	5.6	

WINDOW Fn. → Partitions

Syntax:

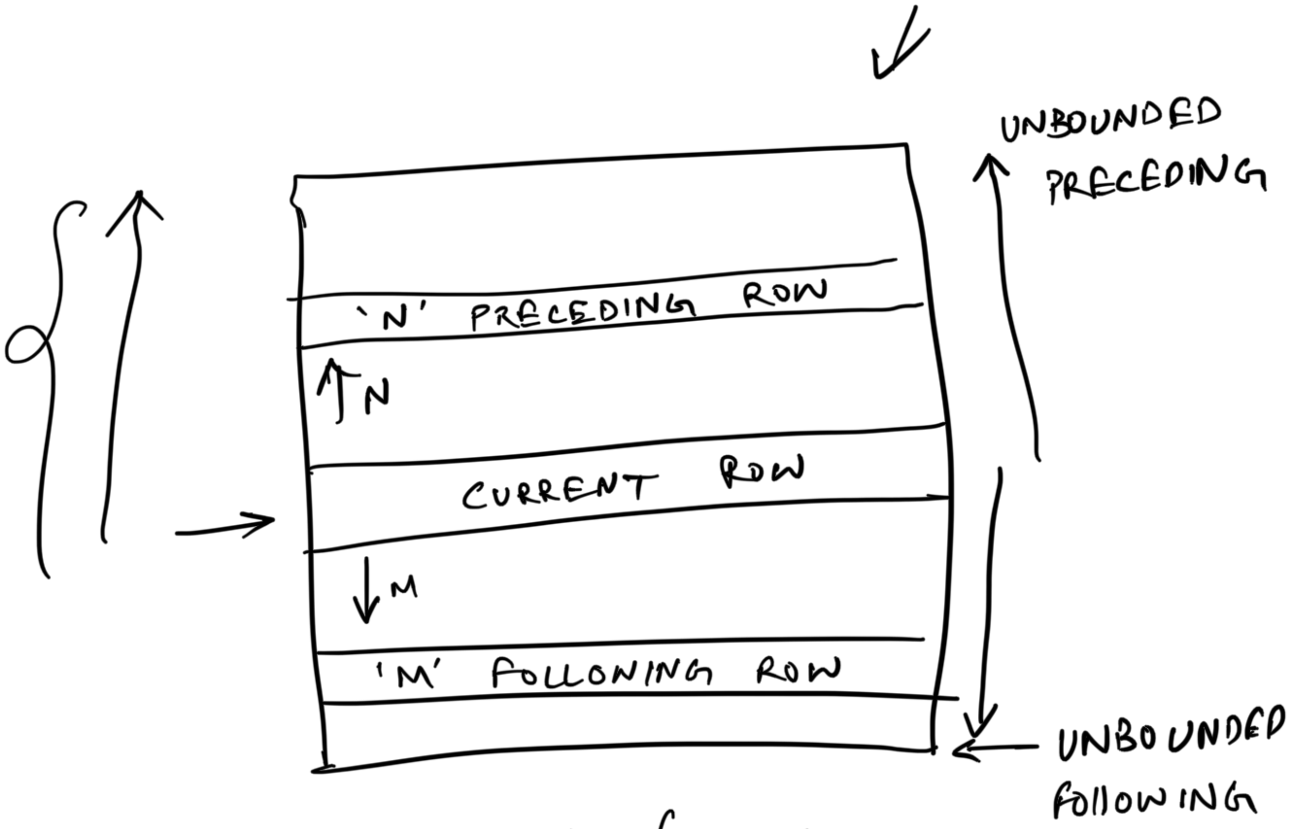
```
SELECT
        ______
        ______
    ROW_NUMBER() OVER (PARTITION
                        BY vendor_id
                   ORDER BY original_price)
                    AS ______

FROM ______
WHER
  :
  ______ .
```

Q As a farmer, you want to figure out which of your products were above the avg. price of products on each market date.

date	v_id	p_id	price	Avg.
21	1	1	3	3
21	1	2	4	3
21	1	3	3	3
21	2	10	2	3

Q. Count how many different products each vendor brought to the market on each date and display the count on each row.

✓ COUNT (DISTINCT product_id) OVER (PARTITION BY market_date , vendor_id)



RANGE → Logical frames

↳ Peers (same sorted value)

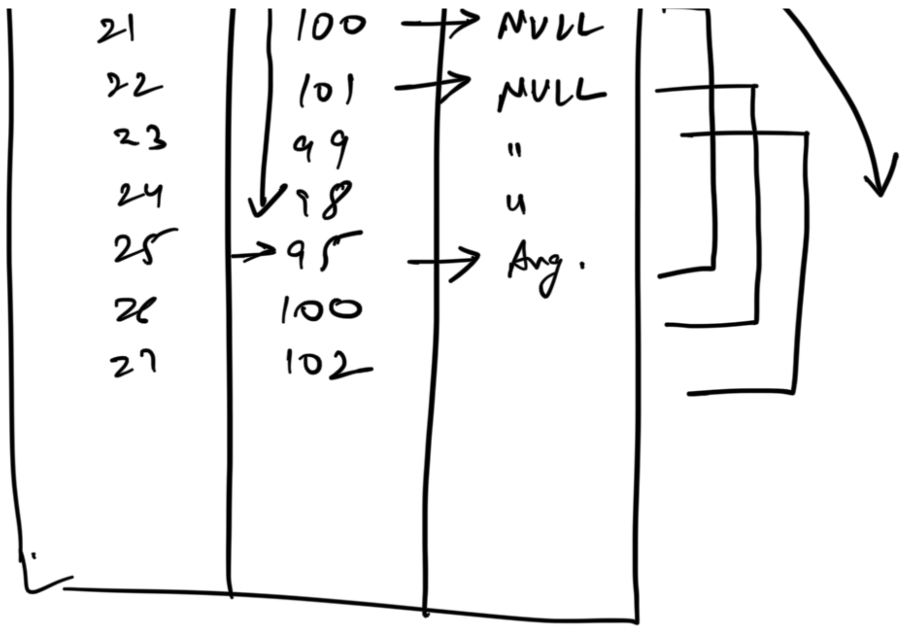
↳

ROW

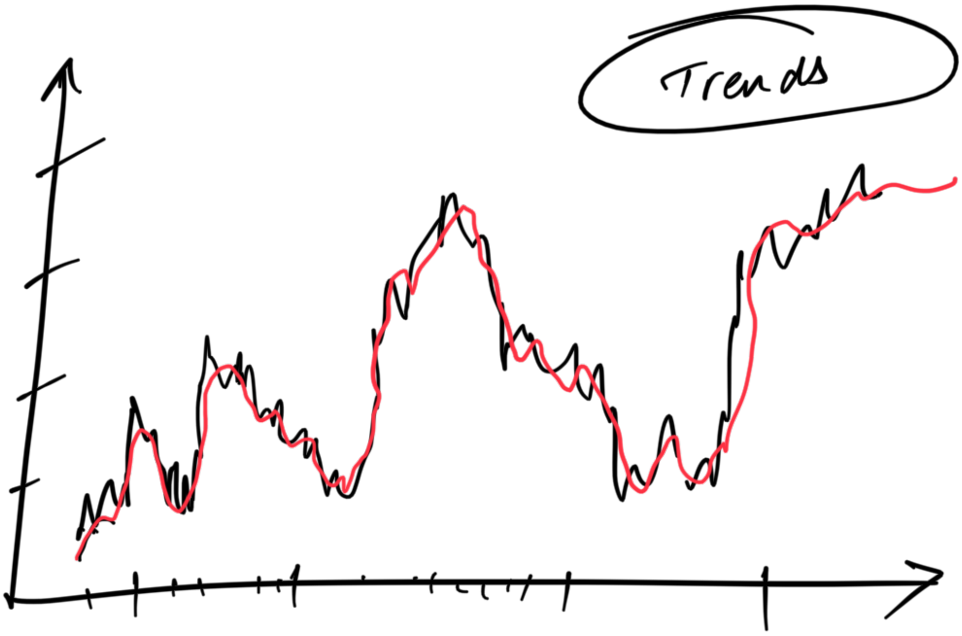
Stock Market

5-DAY Moving Avg

Date	price	



21	100	NULL
22	101	NULL
23	99	"
24	98	"
25	95	Avg.
26	100	
27	102	



Q. Calculate the 5-Day moving average on sales.

LAG()/ LEAD()

Q. In VBA, display each vendor's booth for each market_date alongside their previous booth.

LAG() ↑

v_ID	Date	booth	prev_booth
1	21	1	NULL
1	22	2	1
1	23	2	2
		3	
		4	
		2	NULL

0

↑Next booth ↓

Syntax:

LAG (expr/col , N , Default)

LEAD ( )

NTILE( )

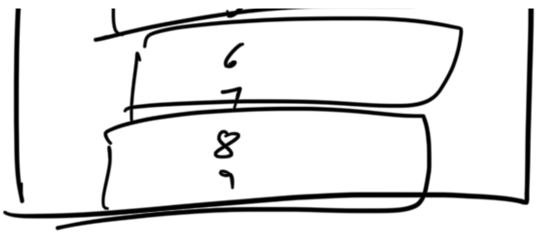
ORDER BY

NTILE (n) → n - buckets

NTILE(4) OVER (ORDER BY val)

val
1
2
3
4
5

→ Quantiles



Col.

→ NTH_VALUE(), FIRST_VALUE(), LAST_VALUE()

NTH_VALUE (expr, N)

Q. Find the employee with 2nd highest salary in each deptt.