Group by & Aggregations

Till now :-

1. Basic keywords
2. filtering (IN, Between)
3. Inline Calculations
4. functions
5. String functions
6. Sub queries
7. Case & when

★ Aggregations

Amazon

Electronics | Home Appliances | finance | furniture | Decor

MIN( )

MAX( )

COUNT( )

SUM( )

AVG( )

least-price	highest-price
___	___
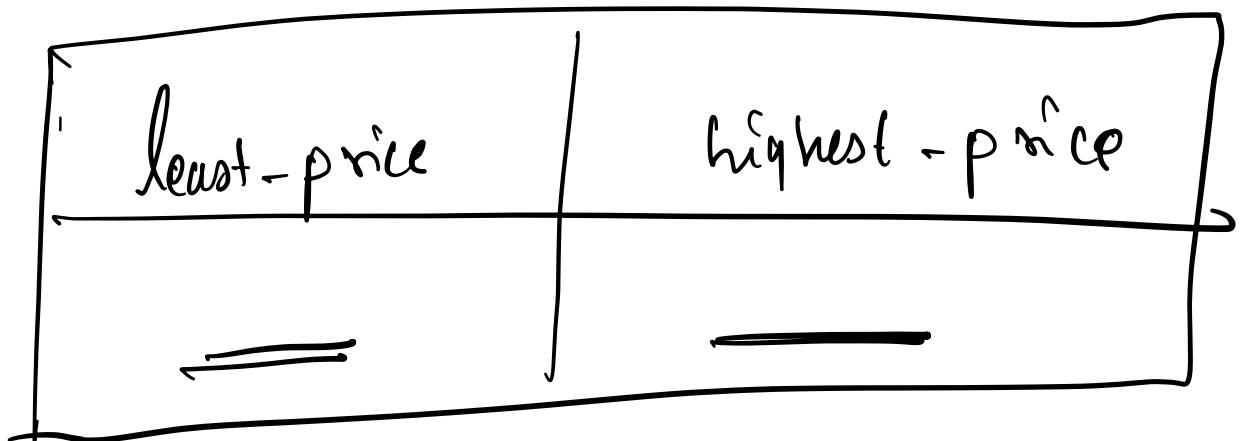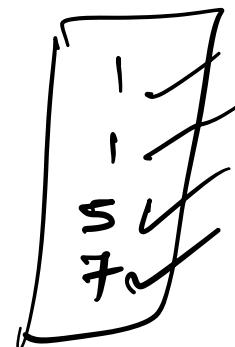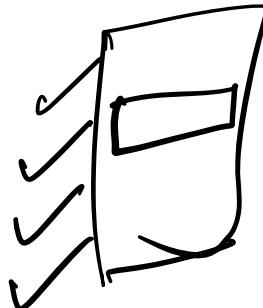
Select

   MIN(original-price) as least-price,
   MAX(original-price) as ''

from ___

$$Sum (qty * C-p-ov)$$

Count (*)	Count (1)	Count (col-n)	Count (DISTINCT col-n)
→ counts **all rows** including **nulls**	→ exactly same as count (*)	→ counts **duplicates** & **ignores** null values	→ neither duplicates nor NULLS
→ commonly used	→ avoid using prefer count (*)		
→ less confusing			
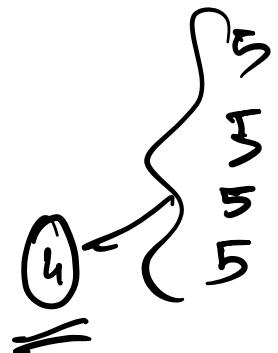
count (1)

Sales	
500	
700	
200	
400	

1
1
1
1

4

count (5)

5
5
5
5

4
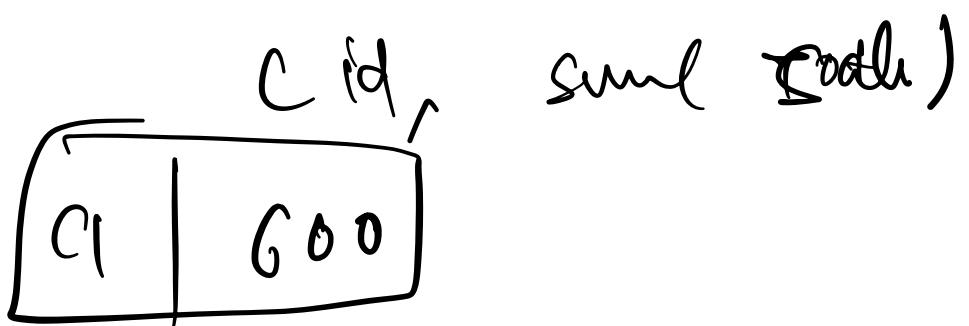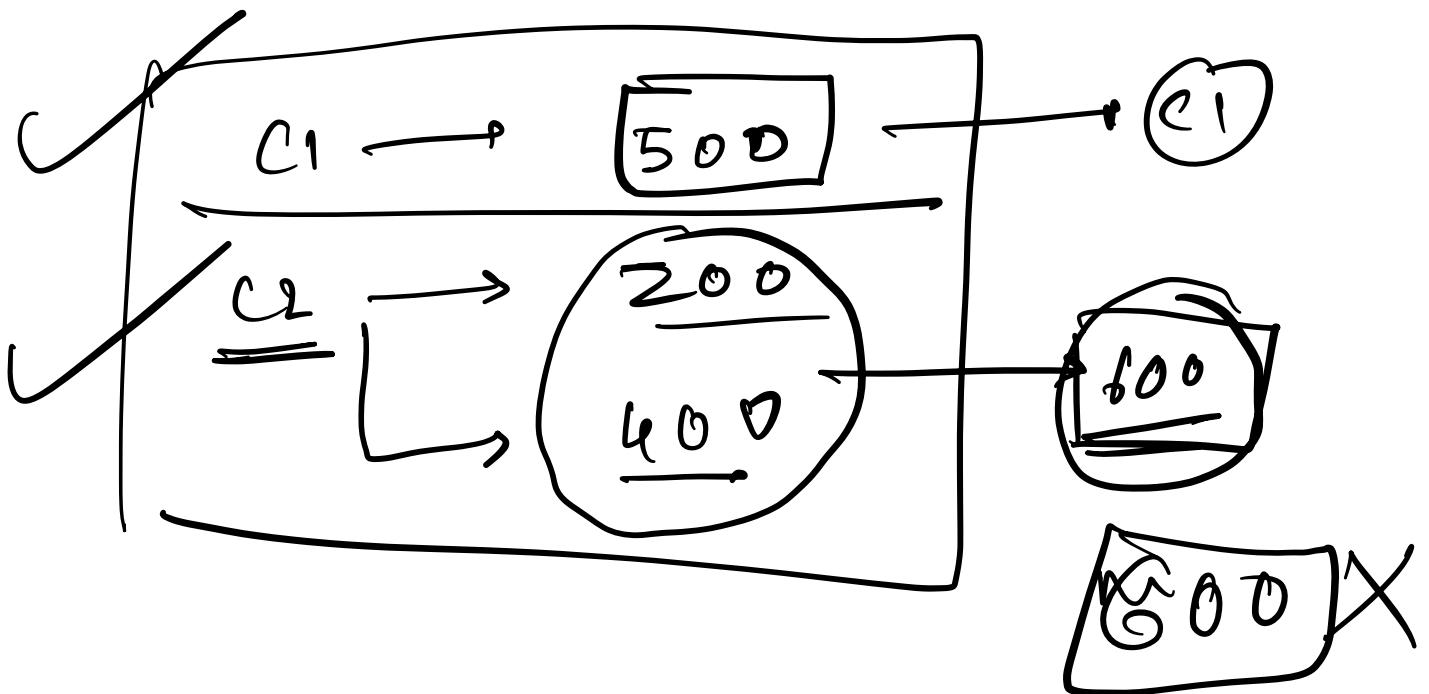
(Q) no- of unique customers who
made a purchase in
2nd quarter of 2019.

Count (*)

Date	Cust-id	— ^
24/04	1	
24/04	2	
24/04	1	
25/04	1	
26/04	3	
28/04	2	

Count (1, 2, 3) ⟶ 6

Count (DISTINCT cust-id) ⟶ 3

C1 → 500 → C1

C2 → 200 / 400 → 600

600 ✗

Cid, sum (both)

| C1 | 600 |
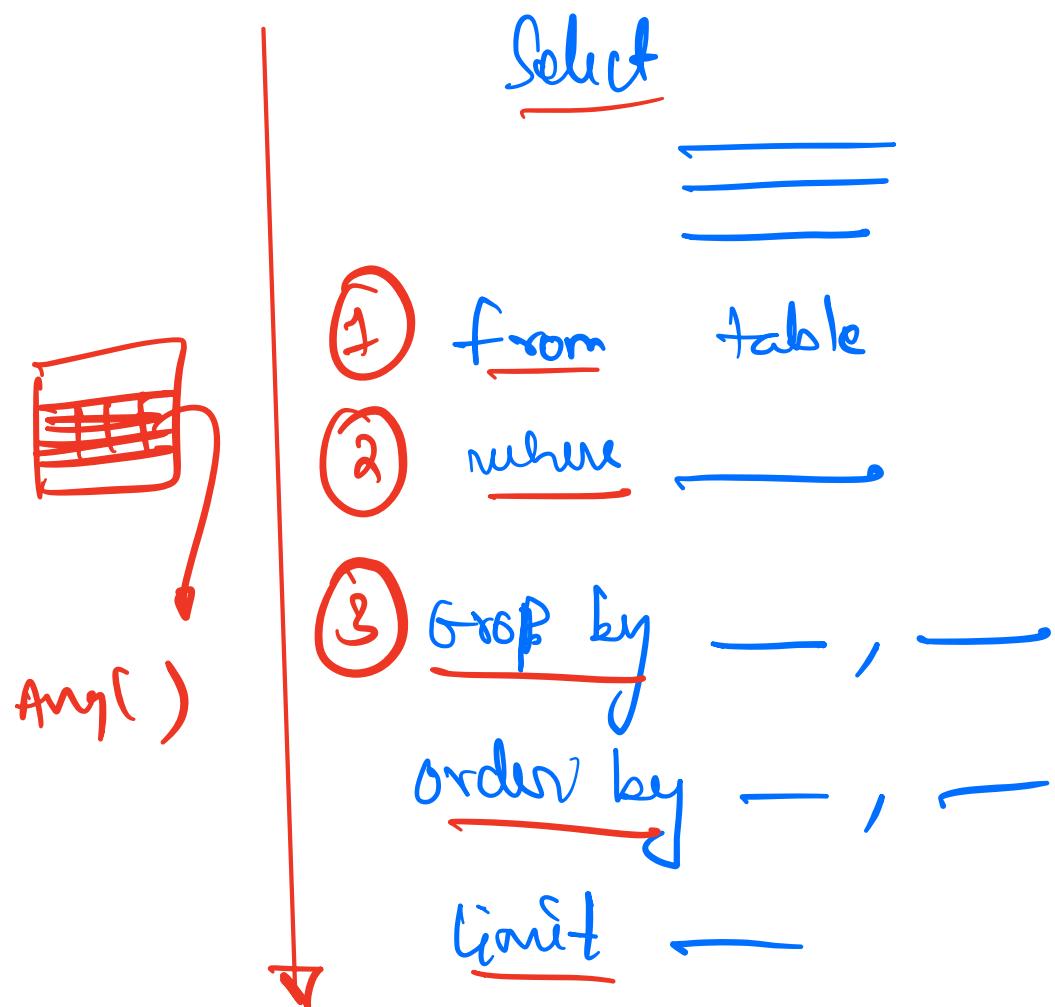
Group by.

Syntax :- (Query writing)

Select
=====

① from   table

② where   ___

③ Grop by ___ , ___

order by ___ , ___

limit ___

Avg( )
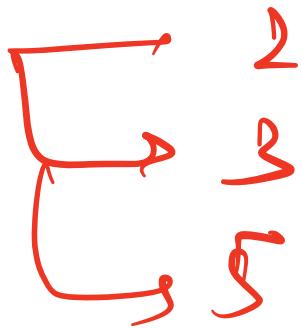
Exeution order is diff ⟶ Document
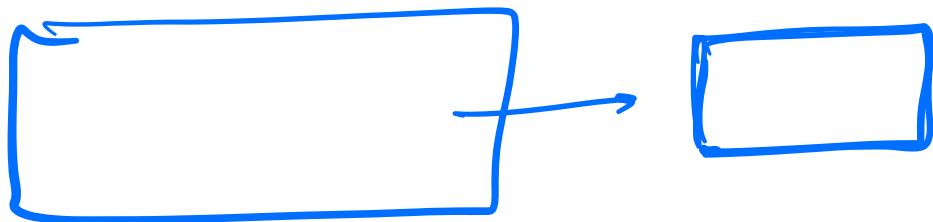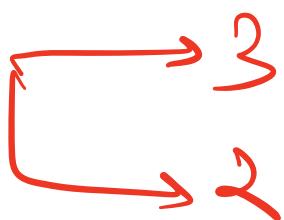
→ for each date, give customers who made purchase

date	c-id	
24/1 →	2	
24/1 →	2	
24/1 →	2	(2)
24/1	3	(1)
24/1	5	(1)
25/1	3	(1)
25/1	2	(2)
25/1	2	

24/1

$$\begin{cases} \quad \rightarrow 2 \\ \rightarrow 3 \\ \quad \rightarrow 5 \end{cases}$$

25/1

$$\begin{cases} \rightarrow 3 \\ \rightarrow 2 \end{cases}$$

date	C-id	P-id
24/1	2	1
24/1	2	5
24/1	2	1

②

24/1	2 → ②