

2.

Renters

id	Pref. dist.	min. bed rooms	budget

List all the possible pairs of renters along with their preferred district to see which all renters can rent the apt. together.

```

SELECT r1.id, r2.id, r1.pref.dist.
FROM renter r1
      r2

```

Join  
ON  $r1.preferred\_distt = r2.preferred\_distt$   
AND  
 $r1.id < r2.id$

id	P.D.	
1	A	
2	A	
3	B	
4	B	
5	C	

⇒

r1.id	r2.id	P.D.
1	2	A
3	4	B

Q. Find all employees who have a salary higher than their dept. avg. salary.

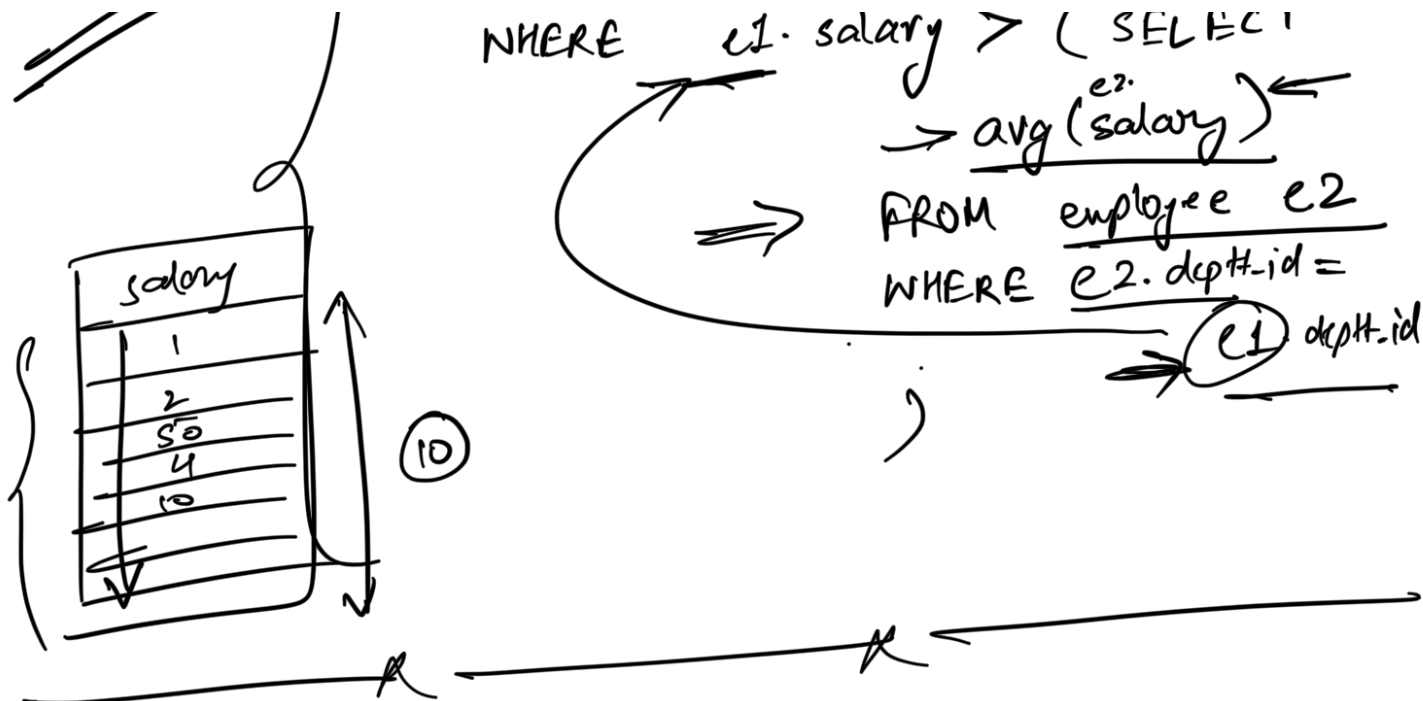
AVG()

e.id	dept_id	salary	

AVG (salary)

Correlated  
subquery

SELECT e.id  
FROM employee e1



GROUP BY

C-ID	Date	Count	Amt	SUM(Amt)
1	21	3	7	22
1	21		5	
1	21		10	
2	22	2		
2	22	1		
1	22	1		
3	24			

1 - 21  $\rightarrow$  3 Aggregated

2 - 22  $\rightarrow$  2

1 - 22  $\rightarrow$  1

Syntax:

SELECT  
FROM [table]  
WHERE  
GROUP BY  
HAVING  
ORDER BY  
LIMIT

COUNT() ← AS  
SUM() ← AS

Q. Get a list of <sup>unique</sup> customers who made purchase on each market date.

Q. Number of purchases each customer has made on each market date.

COUNT (\*) ←

Q. Total quantity purchased by each customer on each market date.

SUM (quantity)

Q. How many different kinds of products each customer purchased on each mkt date?

COUNT (*)	COUNT (1)	COUNT (col-name)	COUNT (DISTINCT col-name)
Total no. of records	Same as <u>COUNT (*)</u>  BUT Prefer to use <u>COUNT (*)</u> to avoid confusion	Counts duplicate entries but ignores <u>NULL</u>	Neither duplicates Nor <u>NULLs</u>

Q. Calculate the total price paid by customer\_id 3 per market\_date.  
COUNT (prod\_id)

Date	productid	Amount
21	1	
21	1	
21	1	

SELECT

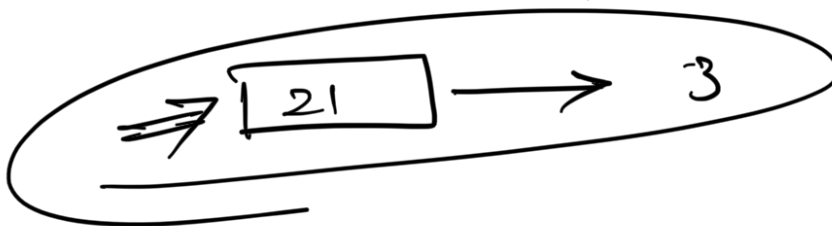


GROUP BY

productid



Q.



Q.

How much each customer has spent at each vendor? Regardless of date.

Q.

Find the most & least expensive product per prod. category.

COUNT()

SUM()

MIN()

MAX()

AVG()

Q.

Any original price of a product

across vendor :

GROUPING Prod-id		
V-ID	I-ID	
1	1	AVG ( ) AVG (original - price)
1	2	
1	3	
2	1	
2	2	
		GROUP BY product_id

Q Find the average amount spent on each market day :

COUNT ( )

1- Where no of purchases were more than 3.

WHERE 2. Transaction amount was greater than 5 (WHERE)

HAVING (qty × cost) > 5

Q: Get all the employees who are earning the third - highest salary.

SELECT \*  
 FROM employees  
 WHERE salary  $\neq$   $\downarrow$  DISTINCT  $\leftarrow$   
 ( SELECT salary  
 FROM employee  
 ORDER BY salary DESC  
 LIMIT 1  
 OFFSET 2 )  $\leftarrow$  Third Highest  
 Always?

WHERE salary =

SELECT max(salary) FROM emp

3rd Hi 1

WHERE salary <

$\downarrow$   
SELECT max(salary) FROM emp  $\leftarrow$

$\rightarrow$  WHERE salary <

$\downarrow$   
( SELECT MAX(salary) FROM emp )

2nd  
Highest