Joins - 9

3 tables :-

vendor

product

vendor — inventory
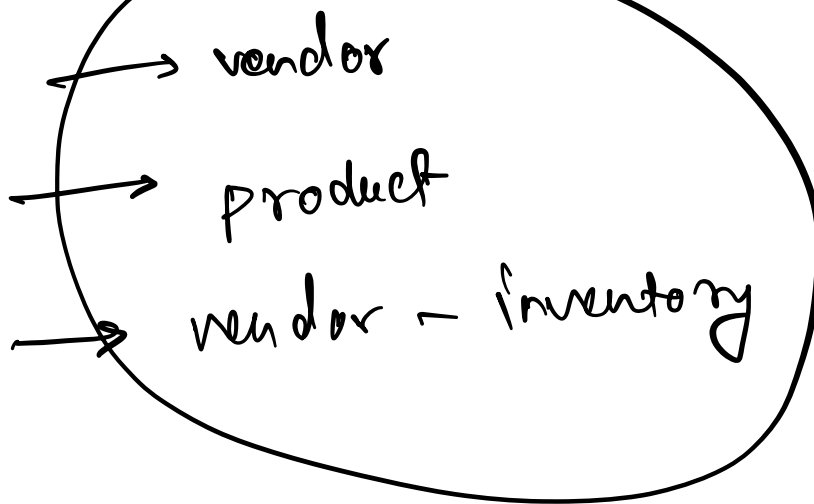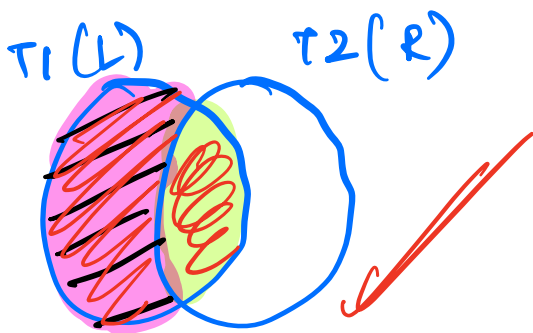
(9) list all the products along with their product category name.

→ Product & product-category.

Concept : Types of Joins
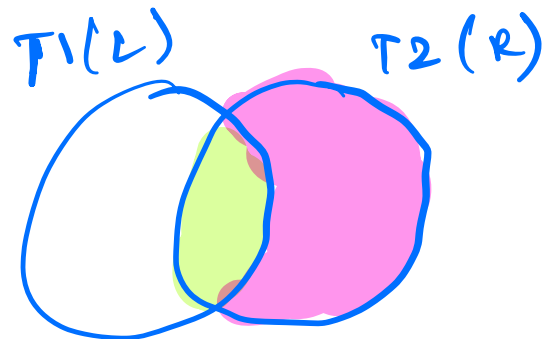
① Left Join

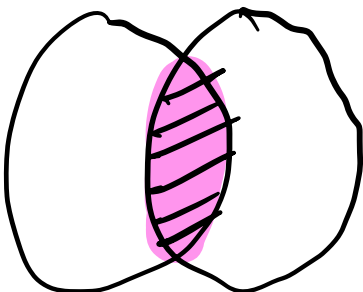T1(L)   T2(R)
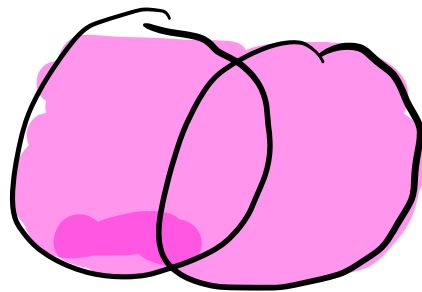
② Right Join

T1(L)   T2(R)

③ Inner Join

④ full Join

eg

Product

P_id	P_name	P_cat_id
1	A	3
2	B	2
3	C	1
4	D	4
5	E	3
6	F	8

8 → ?

product - category

P_cat_id	P_cat_name
1	X
2	Y
3	Z
4	M
5	N

Left Join

P_id	P_name	P_cat_id	P_cat_id	P_cat_name
1	A	3	3	Z
2	B	2	2	Y
3	C	1	1	X
4	D	4	4	M
5	E	3	3	Z
6	F	8	NULL	NULL

Product

P_id	P_name	P_cat_id
1	A	3
2	B	2
3	C	1
4	D	4
5	E	3
6	F	8

product - category

P_cat_id	P_cat_name
1	X
2	Y
3	Z
4	M
5	N

Right Join

P_id	P_name	P_cat_id	P_cat_id	P_cat_name
3	C	1	1	X
2	B	2	2	Y
1	A	3	3	Z
5	E	3	3	Z
4	D	4	4	M
NULL	NULL	NULL	5	N

Product

P_id	P_name	P_cat_fd
1	A	3
2	B	2
3	C	1
4	D	4
5	E	3
6	F	8

product - category

P_cat_id	P_cat_name
1	X
2	Y
3	Z
4	M
5	N

Inner Join

P_id	P_nom	P_cat_id	P_cat_fd	P_cat_name

Product

P_id	P_name	P_cat_id
1	A	3
2	B	2
3	C	1
4	D	4
5	E	3
6	F	8

product - category

P_cat_id	P_cat_name
1	X
2	Y
3	Z
4	M
5	N

full Join

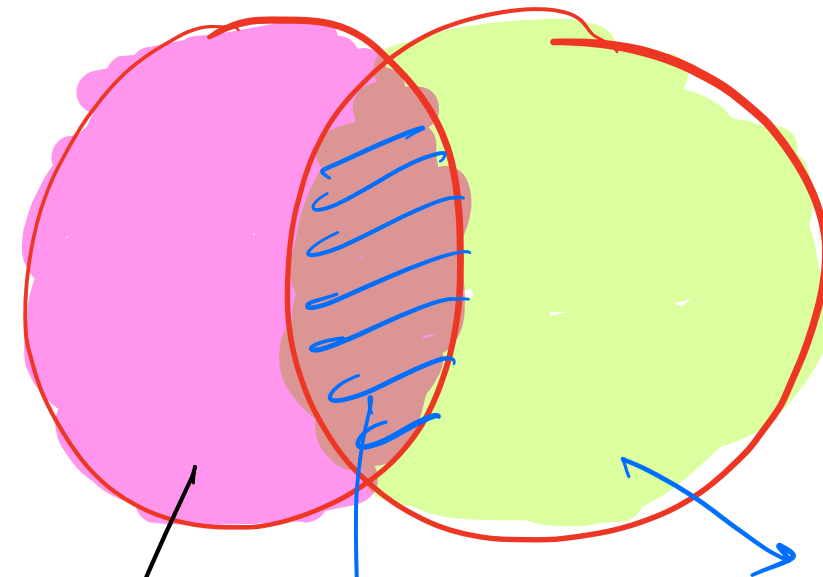| P_id	P_nam	P_cat_id	P_cat_id	P_cat_name
		3	3	
		2	2	
		1	1	
		4	4	
		3	3	
		8	NULL	NULL
NULL	NULL	NULL	5	

Syntax :-

Select
$$\equiv$$

from [left - table]

[Join - type] [Right - table]

ON [left - table] . [field - to - join]

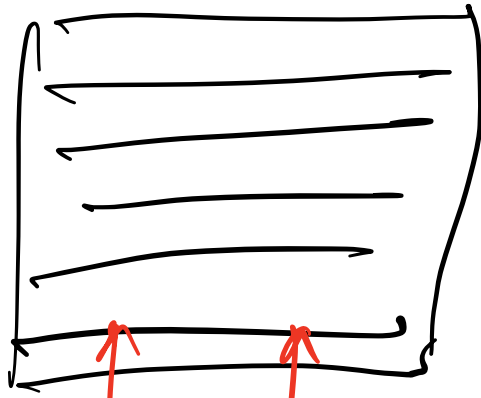= [right - table] . [field - to - join]
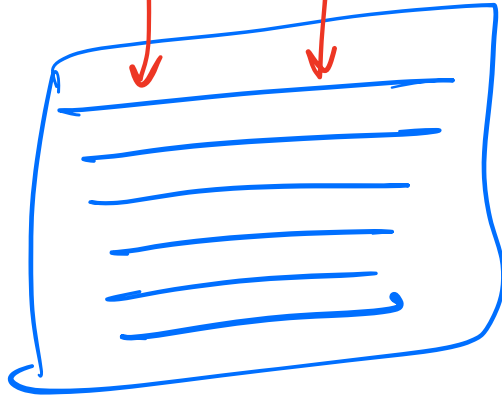
* FULL JOIN (not available in MySQL)

left-join

Right Join

Counted-twice

(duplicates)

left Join

Right join

full Join

Left Join o/p

UNION

(MySQL)
By default
gets rid of duplicates

Right Join o/p

MySQL $\longrightarrow$ union (No duplicates)

BigQuery $\longrightarrow$ UNION DISTINCT

UNION ALL

Union

Rules:

Rule 1:
The should have same no- of cols.

Rule 2:
Ordering of Cols should also be same

Rule 3:
Data type of Cols should be same.

Q1:

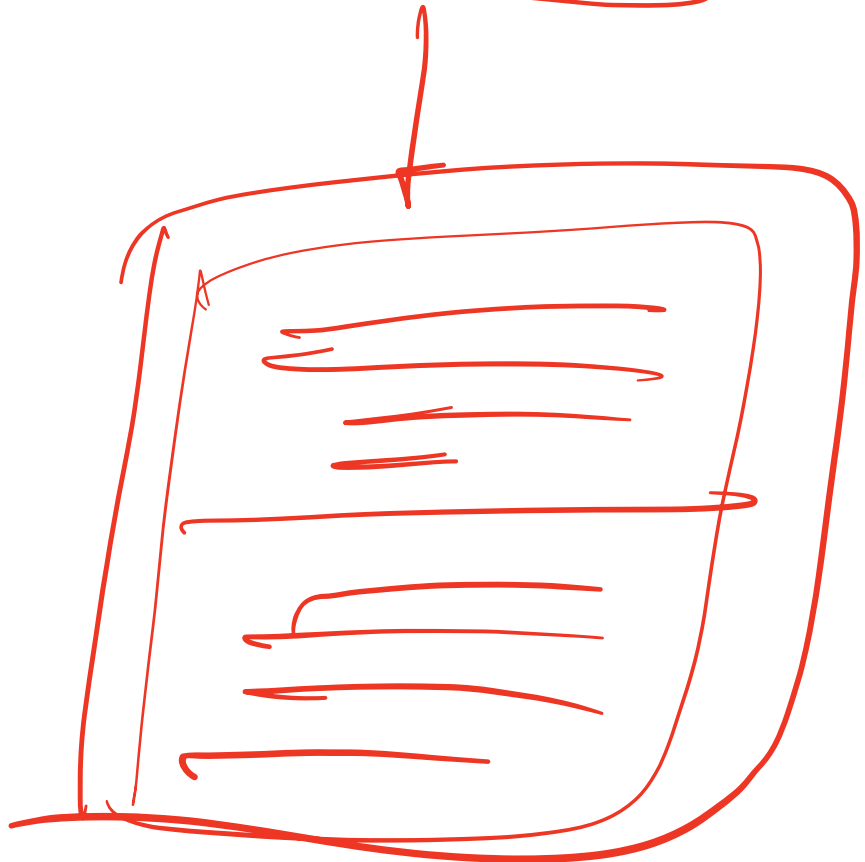| id	val	Date	Joe
1			
2			
3			

Q2:

id	Date	val
A		
B		
C		

Sales 2019

Sales 2020

vegetables

item-id	Name	Price
1	"Tomato"	100
2	"Onion"	20
3	"Potato"	50

Table 2 : **fruits**

item-id	Name	Price
4	"Banana"	200
5	"Apple"	150

(8)

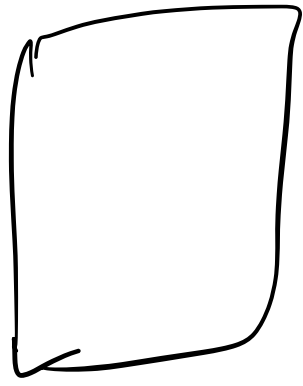① New to the market → C ✓
                        CP ✗

assumptions

② Deleted their acs
    ├──→ C ✗
    └──→ CP ✓

Cust   Cust - P

[ ]   [ ]

          ✓   ✗
New

Deleted   ✗   ✓