

Views and Joins

20 September 2022 09:30

Objectives

- ① views }
- ② Joins }

empno	ename	dept	sal	to_date
1	X	10	500	
2	Y	20	500	
3	Z	30	500	
4	A	40	500	
1	X	50	500	
2	Y	30	500	
3	Z	40	500	
4	A	50	500	

SQL → Views ✓

Reports → Handwritten ↗

1	×	10	5-10-21
1	×	50	6-11-22
2	Y	20	4-10-21
2	Y	30	5-11-22

Task 1



Task 2



Empno	Ename	Sal	Dept	FD	TD
1	X	500	10		
2	Y	500	20		
3	Z	500	30		
4	A	500	40		



Empno	Ename	Sal	Dept	FD	TD
1	X	500	10		
2	Y	500	20		
3	Z	500	30		
4	A	500	40		

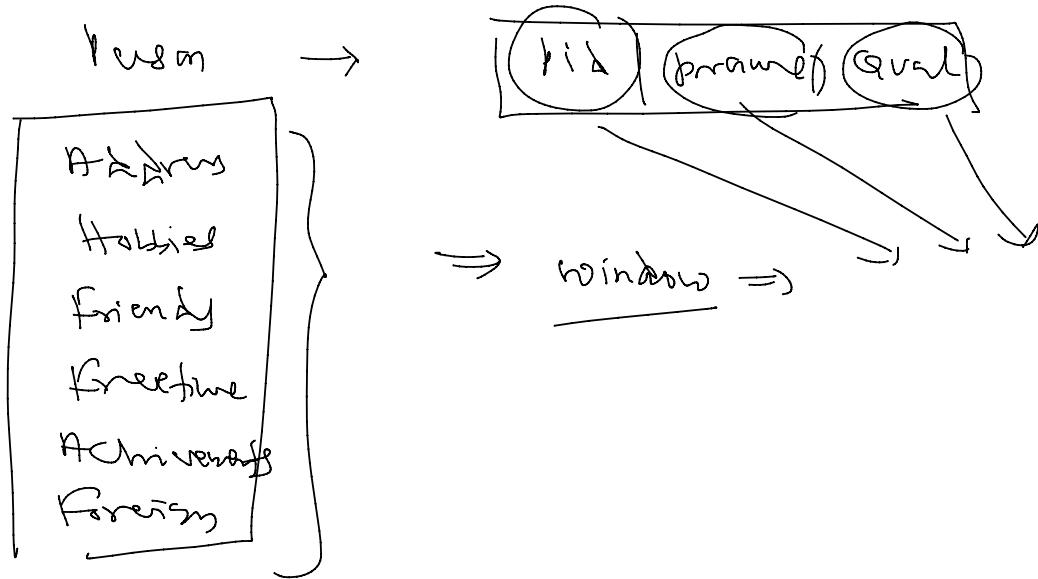
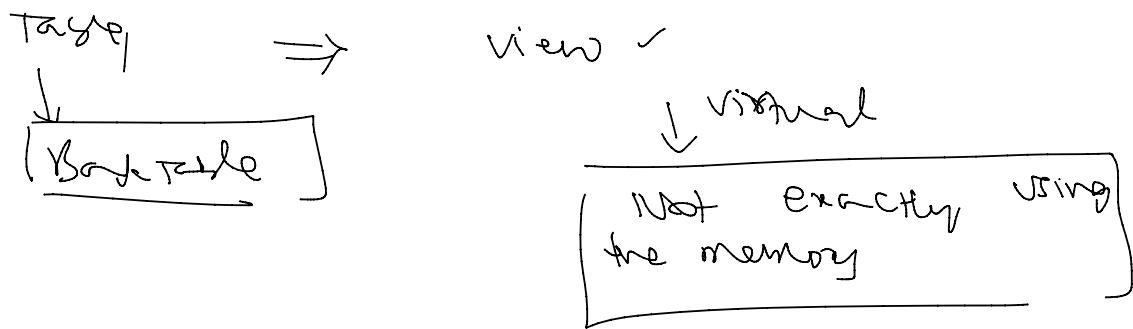
process

Views

- ① virtual tables ✓

- ②

Task 1 ⇒ View ✓



① view not requires any memory

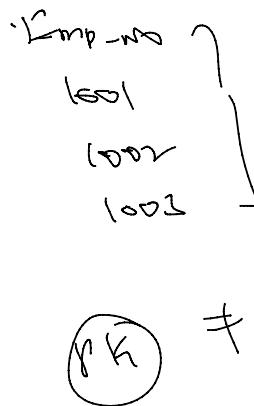
② whenever a view is referred

by the developer it reaches to
the base table.

Primary key

Composite key

Primary key



Composite key

Composite primary key

Emp-N_N | Dept-10

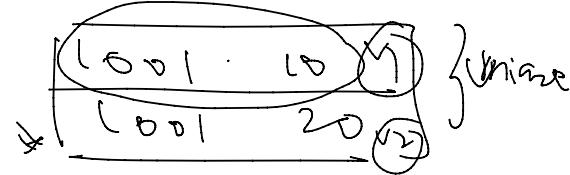
1001 | 10

1002 | 20

1001 | 20

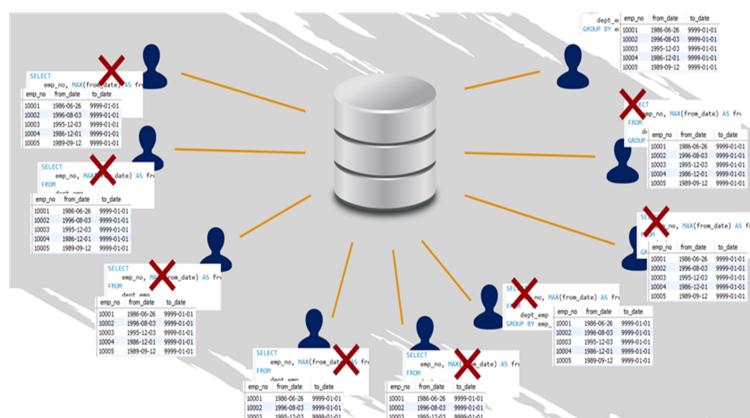
1002 | 10

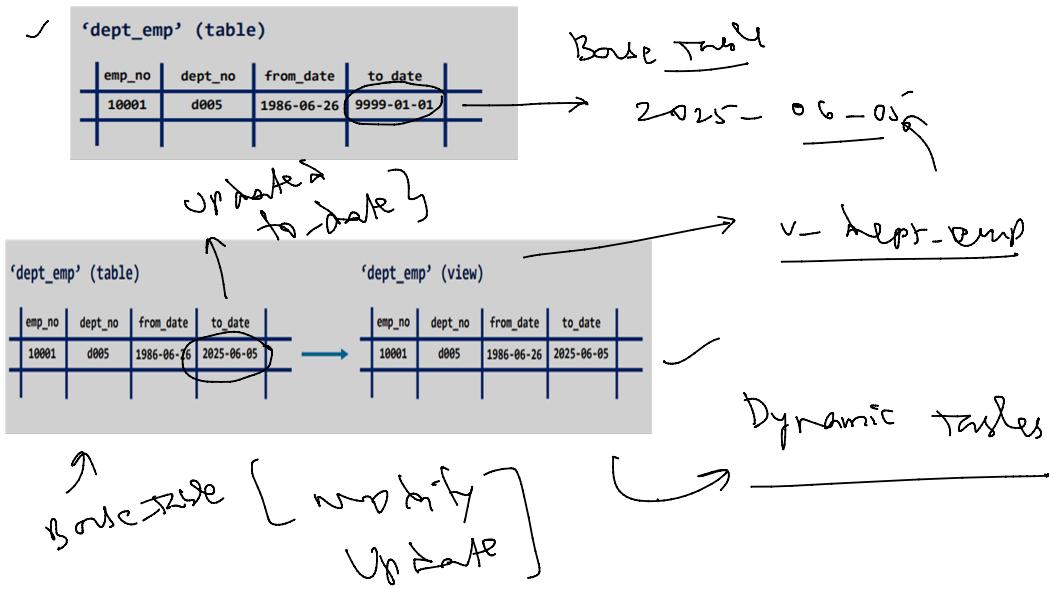
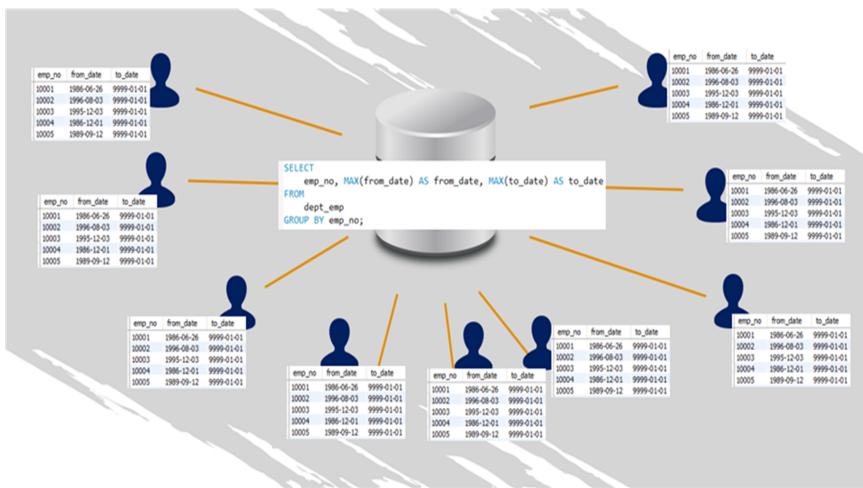
Pk



U3 | 1002 | 20

U4 | 1002 | 10





Trains

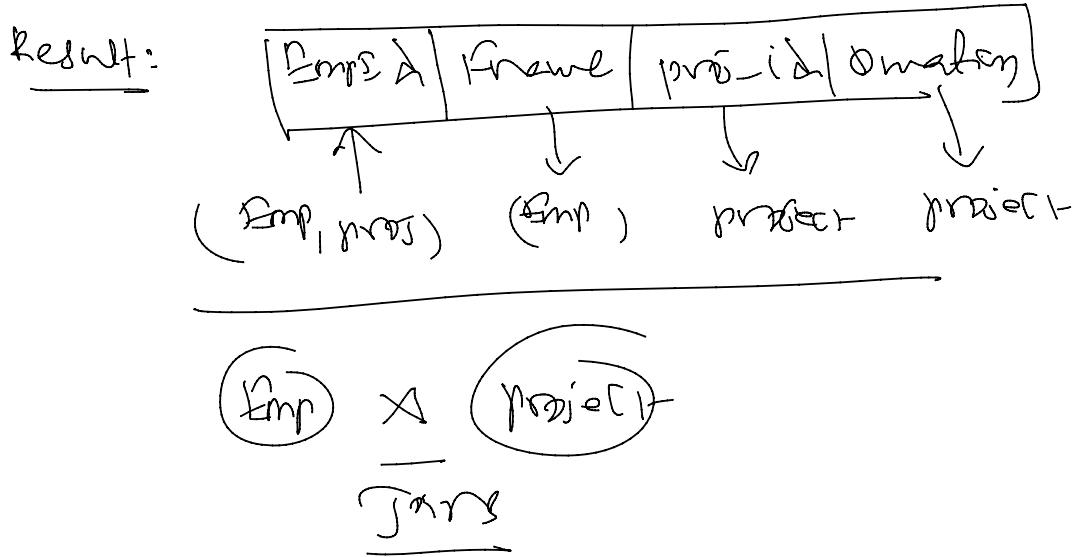
table

Emp

EmpID	Fname	Idate	Tdate
10001	John	2025-06-05	2025-06-05

Project-

Proj-ID	Name (EmpID) (Dmkey)
10001	Project A



Join allows the developer to get the data from multiple tables.

To Join the tables there should be a common column so as to match and fetch the records.

→ Join

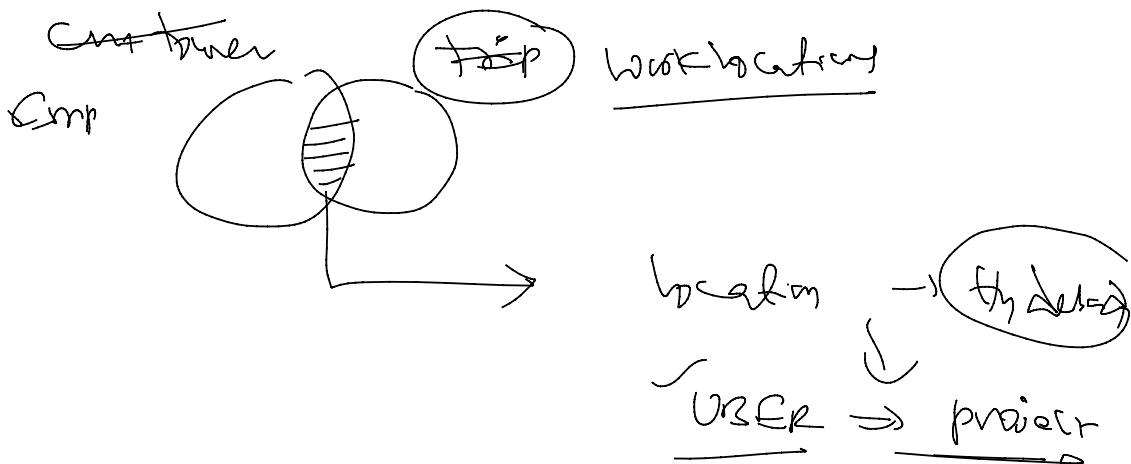
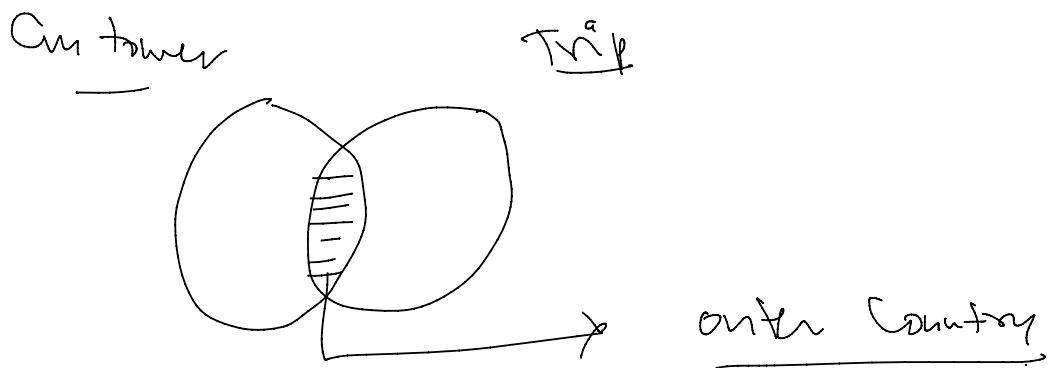
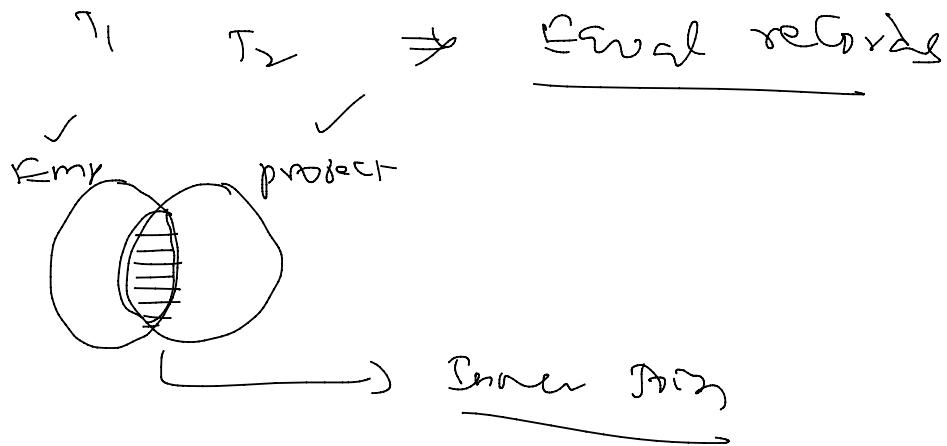
- ① Inner Join ↗
- ② LEFT JOIN / LEFT OUTER JOIN
- ③ RIGHT JOIN / RIGHT OUTER JOIN
- ④ ...

1. -> INNER JOIN

- ④ Join with where clause
- ⑤ ~~Select~~ Cartesian Join

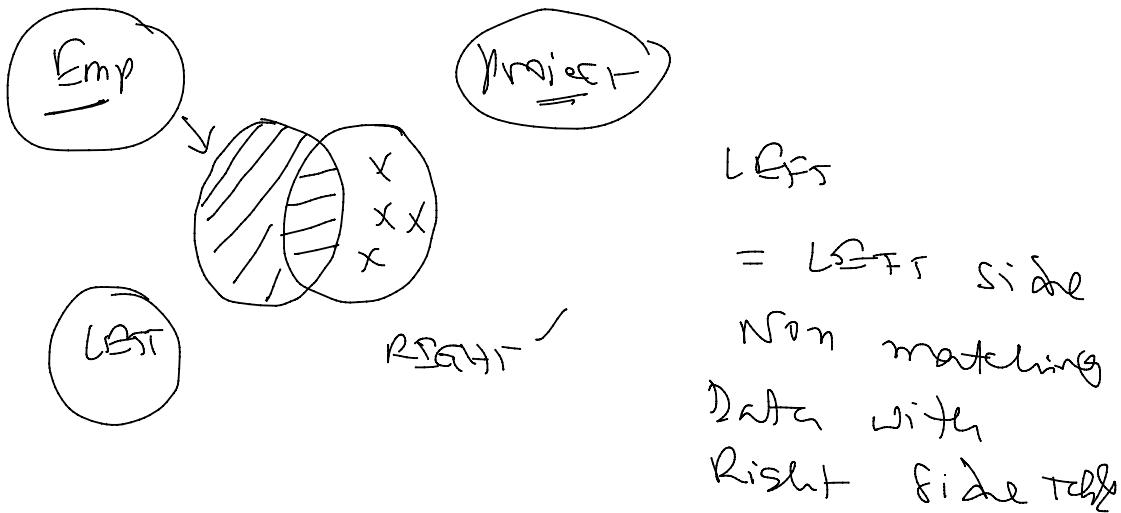
0

Inner Join



(2)

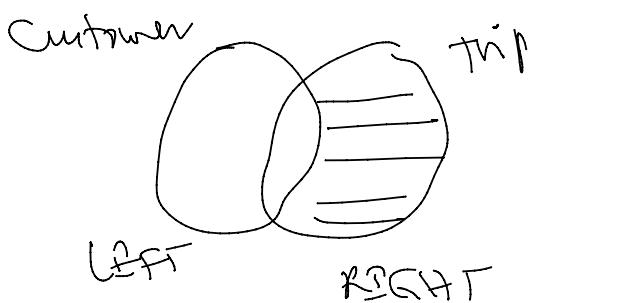
$$\underline{\text{LEFT}} \text{ Join} = \text{LEFT} \xrightarrow{\hspace{1cm}} \text{OUTER} \text{ Join}$$



Want to get all
 Data not matching
 with Project Data

(3)

Right Outer Join

 $\text{Right} =$

Right side data
 without matching
 of Left table

(4)

Cartesian Join

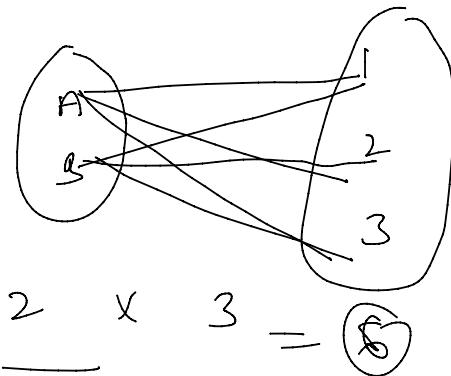
(5)

-

1

- 1 - 111111 1011

(6)



A - 1

A - 2

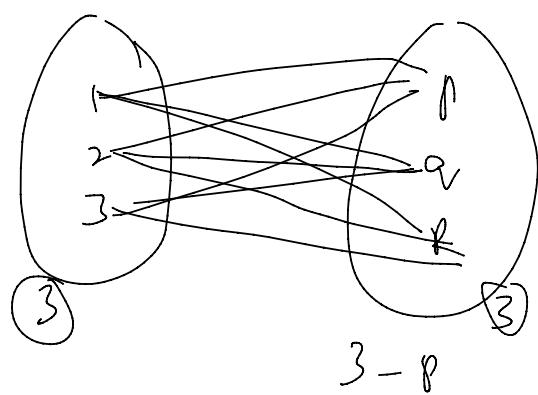
A - 3

B - 1

B - 2

B - 3

A B



1 - p

1 - q

1 - r

2 - p

2 - q

2 - r

(7) ~~so~~ 3 - q
3 - r

(5)

Join with where Clause

(=)

LEFT

RIGHT

Point

where

condition

→ Meaning

records

Emp

Employee	Department
10	IT

proj

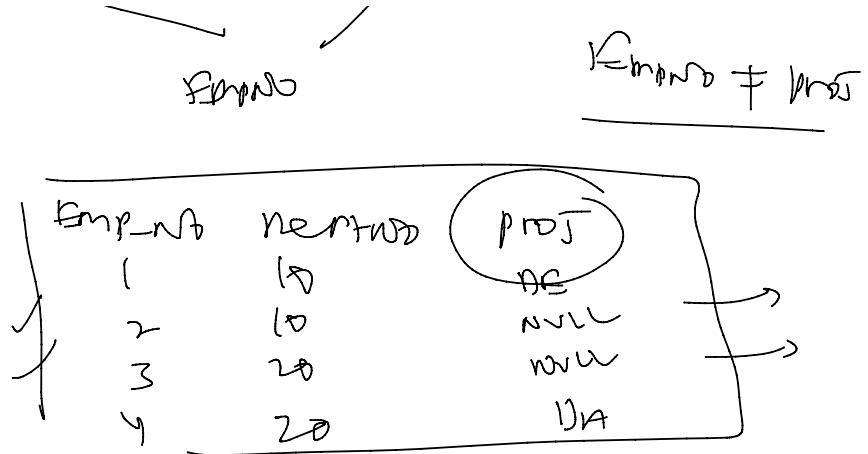
Employee	Department	proj
10	IT	10 IT

50

Records

Employees + proj

10



key trace always

① views

- Dynamic Table
- Virtual Table
- Place a window on top of a base table
- Security
- Consistency & Integrity.

② Joins

- Combine 2 or more Tables
- Inner Joins
- LEFT / LEFT OUTER
- RIGHT / RIGHT OUTER

→ Cartesian Join

→ Join with where
→

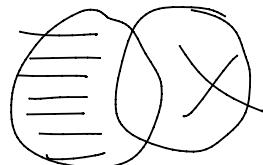
Key take aways

① Views → Dynamic Table, Virtual Table
Security, Consistent

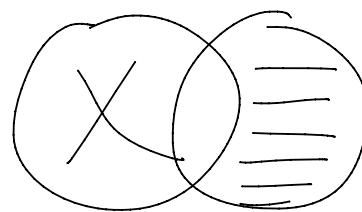
② Joins →

③ a) Inner Join \cong Join
[Matching Condition]

b) LEFT Join \cong LEFT OUTER Join



c) RIGHT Join \cong RIGHT OUTER Join



Few points in joins

a) common column



Tables can be interchanged
in Inner Join

⑨ order of conditions can
be changed.



To handle the duplicates
we can use group by with Trign



(e) In LEFT / RIGHT Trign
order of the tables re matter