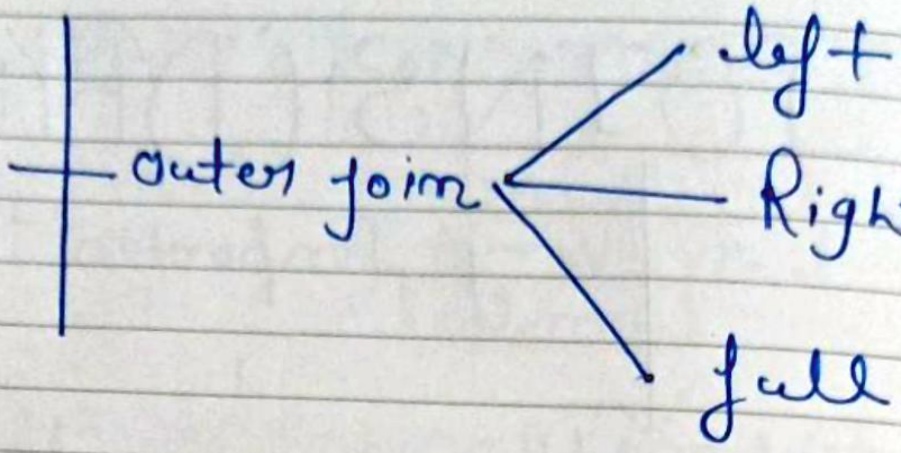
JOINS (DBMS)

Very Important

like the name, it sound to join two or more than two tables in a database to find a result that we can't get from one table.

Types of join:

- Cross Join
- Natural Join
- Conditional
- Equi
- Self Join



Now I explain by taking an example —

E_No	E_name	Add
1	Ram	Delhi
2	Varun	Chd
3	Ravi	Chd
4	Amrit	Delhi
5	Nitin	Noida

Primary key

Employee

DepNo	Name	E No
D1	HR	1
D2	IT	2
D3	MRKT	4
D4	finance	5

Foreign Key

Department

from this get only employee detail.

Remarks

Notes

find Employee name of employee who is working in HR department.

from this we can see that E_name is in employee table and HR in department table

So we get answers using both table with the help of joins !!!

Key Point : In both table atleast one attribute is common.

Join = Cross product + Select (statement)

Remarks

Natural Join {Imp}

Start from example —

take two table — ① Employee

② Department

E.No	E_name	Add
1	Ram	Delhi
2	Varun	chd
3	Raui	chd
4	Amrit	Delhi

Dep No	Name	Eno
D1	HR	1
D2	IT	2
D3	MRKT	4

Notice : first see or find

↓

Our answer/output belong to which table

↓

Emp/Dept

↓

Start write with query

Remarks .....

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Query: Select Employee name who belong to delhi.

How to write query ??

first employee belong to Employee table.

→ It is clear our ans get from employee table.

⇒ Select E-name from Emp where Add = 'Delhi';

Que: find the Emp Names who is working in a department.

by read the Que

clear there is two table

Emp & Department

→ So get used join here

Remarks

Date__/__/_____ No

Output:

Process of Natural Join

First write what you show in output —

Select E name from Emp, dept

Cross product

where Emp.Eno = Dept.Eno ;

Output : Ram
Varun
Amrit

Direct Query using Natural join

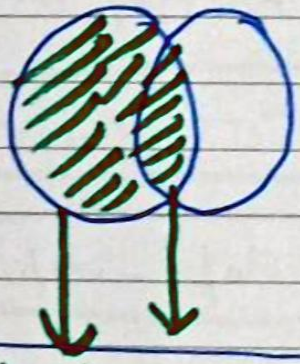
Select E-name from Emp Natural join Dept.

Remarks

Left Outer join

⇒ It gives the matching row and the rows which are in left table but not in right table.

Using Venn diagram ——



left + common part data of table

Date__/__/_____ No

eg:

Emp_no	E_name	Dept_No
E1	Varun	D1
E2	Amrit	D2
E3	Rani	D1
E4	Nitin	—

Dept_No	D_name	Loc
D1	IT	Delhi
D2	HR	Hyd
D3	Finance	Pune

Que: Query is given find output.

Select emp_no, e_name, d_name, loc

from Emp left outer join

dept On (Emp.dept_no = dept_dept_no)

Output

Emp_no	E_name	d_name	Loc
E1	Varun	IT	Delhi
E2	Amrit	HR	Hyd
E3	Rani	IT	Delhi
E4	Nitin	—	—

Remarks

left table

↓ Employee

So all attribute of employee that we print come and common in both that also print from left and right table.

Right Outer Join (weightage to right)

⇒ It gives matching rows and the rows which are in right table but not in left table.

Que: Query is given — find output

Select emp-no, e-name, d-name, loc, room emp Right outer join dept ON (emp.dept-no = dept.dept-no)

Natural join query.

Date__/__/------ No

Emp-No	E-name	Dept-No
E1	Varun	D1
E2	Amrit	D2
E3	Rani	D3

⇒ Employee

Dept-No	D-name	Loc
D1	IT	Delhi
D2	HR	Hyd
D3	Finance	Pune
D4	Testing	Noida

⇒ Department

Remarks

otes

Date__/__/_____

Output :

Common + Extra in right

Emp-No	E-name	Dname	Loc
E1	Varun	IT	Delhi
E2	Amrit	HR	Hyd
E3	Ravi	Finance	Pune
–	–	Testing	Noida

Remarks