



# MySQL - RDBMS

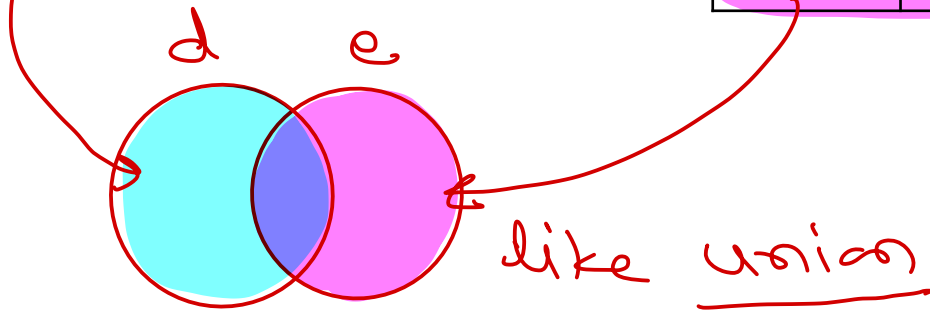
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# Full Outer Join

deptno	dname
10	DEV
20	QA
30	OPS
40	ACC

empno	ename	deptno
1	Amit	10
2	Rahul	10
3	Nilesh	20
4	Nitin	50
5	Sarang	50



- Full join is used to return matching rows from both tables along with additional rows in both tables.
- Corresponding to additional rows in left or right table, opposite table values are taken as NULL.
- Full outer join is not supported in MySQL, but can be simulated using set operators.



# Set operators

ename	dname
Amit	DEV
Rahul	DEV
Nilesh	QA
NULL	OPS
NULL	ACC

ename	dname
Amit	DEV
Rahul	DEV
Nilesh	QA
Nitin	NULL
Sarang	NULL

- UNION operator is used to combine results of two queries. The common data is taken only once. It can be used to simulate full outer join.
- UNION ALL operator is used to combine results of two queries. Common data is repeated.



# Self Join

- When join is done on same table, then it is known as "Self Join". The both columns in condition belong to the same table.
- Self join may be an inner join or outer join.

empno	ename	deptno	mgr
1	Amit	10	4
2	Rahul	10	3
3	Nilesh	20	4
4	Nitin	50	5
5	Sarang	50	NULL

empno	ename	deptno
1	Amit	10
2	Rahul	10
3	Nilesh	20
4	Nitin	50
5	Sarang	50

*emps e*

*emps m*

*Select e.ename, m.ename from emps e  
inner join emps on e.mgr = m.empno;*



# Joins

- Join with USING keyword

- If two tables are joined with same column name in both the tables, USING keyword can be used.
- `SELECT e.*, d.* FROM emp e INNER JOIN dept d USING (deptno);`
- `SELECT e.*, d.* FROM emp e RIGHT JOIN dept d USING (deptno);`

- Natural Join

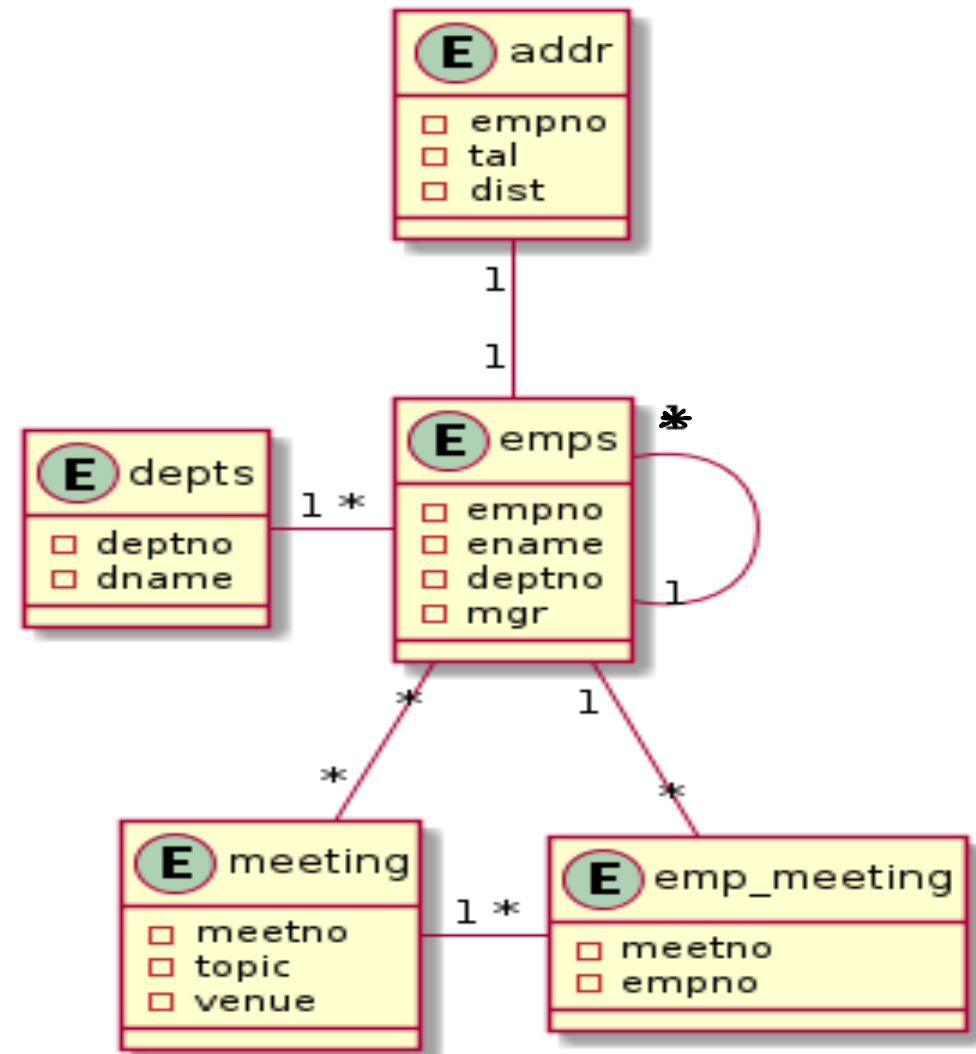
- Two tables are automatically joined on same named columns.
- `SELECT e.*, d.* FROM emp e NATURAL JOIN dept d;`
- `SELECT e.*, d.* FROM emp e NATURAL RIGHT JOIN dept d;`

- Joining tables without JOIN keyword

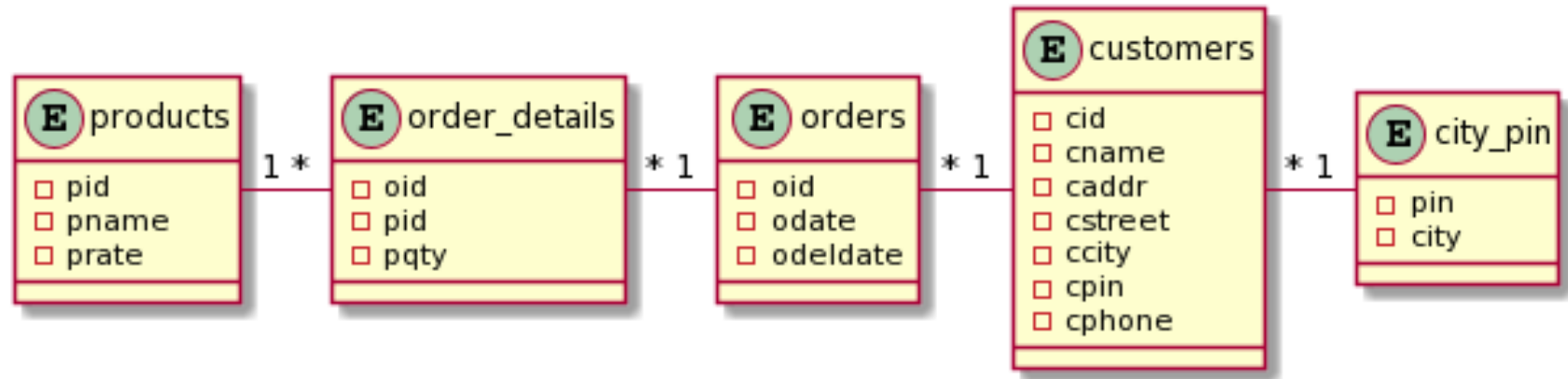
- Use comma separated list of tables in FROM, along with necessary conditions in WHERE clause.
- `SELECT e.*, d.* FROM emp e, dept d WHERE e.deptno = d.deptno;`



# Multi-Table Joins



# Multi-Table Joins





Thank you!

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