1. **Introduction :** Most Used in DBMS. JOIN is → Merging two tables, Must have common fields on merging tables.

2. **Doing JOIN TASK Without JOIN :** Alternative Method Without JOIN :

   SELECT student.roll , student.name, result.grade
   FROM student, result
   WHERE student.roll = result.roll

   Alternative Method is Time Consuming. But JOIN is more efficient and faster.

3. **Joining tables:** without join syntax, by WHERE *Conditions*
   #Question : Join employees + departments :

   By Alternative Method Without JOIN :

   SELECT employees.employee_id, employees.first_name, departments.department_name
   FROM employees, departments
   WHERE employees.department_id = departments.department_id

4. **Doing using JOIN :** JOIN Statement. Join keywords are ON, USING
   #Question : Join employees + departments :

   By JOIN Method Syntax (USING):

   SELECT col1, col2, col3……
   FROM *Table1* JOIN *Table2* USING (Common *field/column_name*)
   WHERE _____
   GROUP BY _____
   HAVING _____
   ORDER BY _____

By JOIN Method Syntax (ON):

SELECT col1, col2, col3……
FROM *Table1* JOIN *Table2* ON (*table1*.common_field = *table2.common_field*)
WHERE _____
GROUP BY _____
HAVING _____
ORDER BY _____

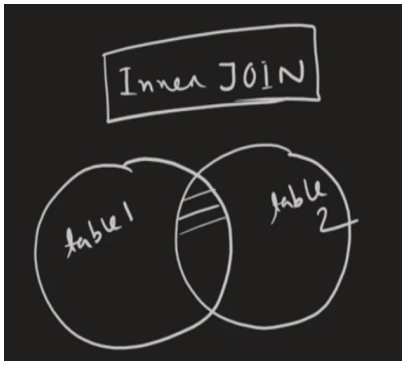
5. **Self Join :** JOIN with own table. **USING** won't work. **ON** will make the connection, which is USING won't.

   #Question : name of a employee and his/her manager name
   Example : follow sql script

   USING → two different table
   ON → two different / Own table.

6. **Inner, Left, Right, Full Join :**

   i) INNER JOIN : Common in Both Table.



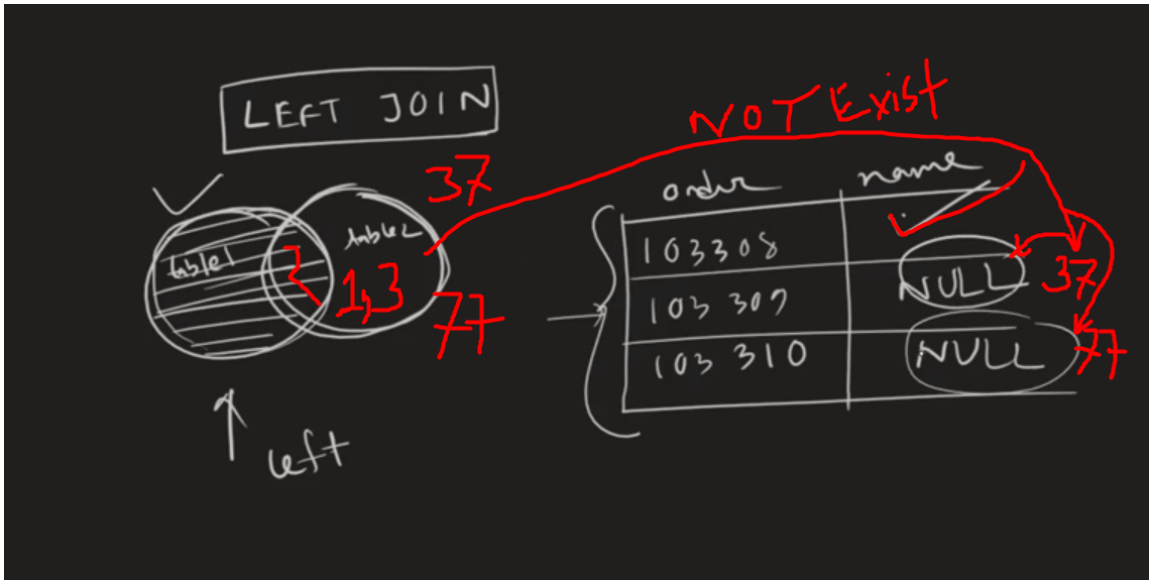
Order

OrderID	CustomerID	EmployeeID	OrderDate	ShipperID
10308	2	7	1996-09-18	3
10309	37	3	1996-09-19	1
10310	77	8	1996-09-20	2

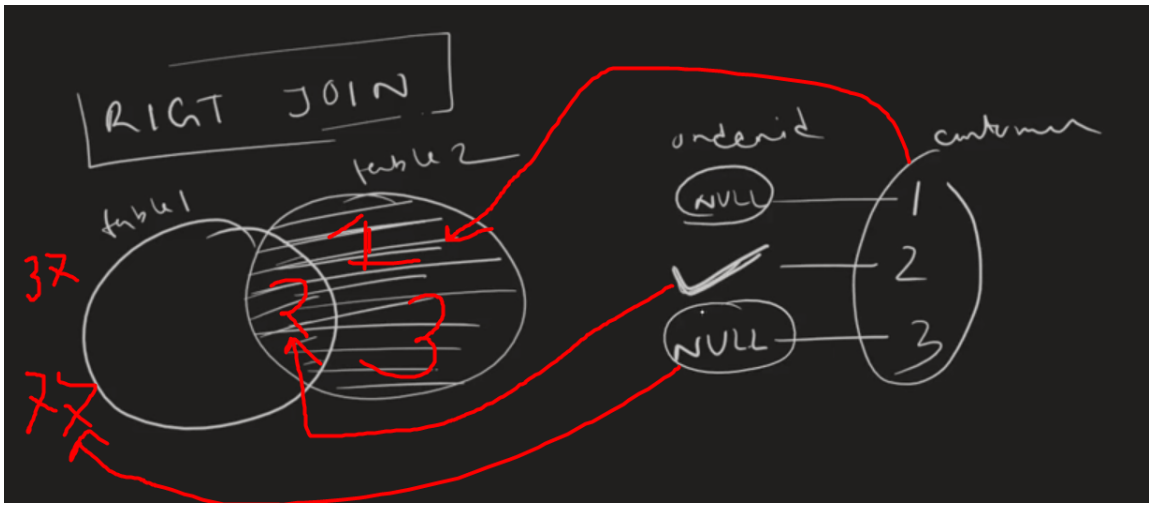
Customer

CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country
1	Alfreds Futterkiste	Maria Anders	Obere Str. 57	Berlin	12209	Germany
2	Ana Trujillo Emparedados y helados	Ana Trujillo	Avda. de la Constitución 2222	México D.F.	05021	Mexico
3	Antonio Moreno Taquería	Antonio Moreno	Mataderos 2312	México D.F.	05023	Mexico

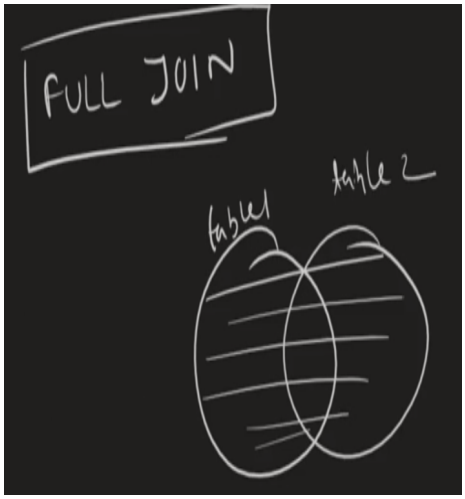
ii) LEFT JOIN : All elements from Left table, if not exist in **RIGHT** table = **NULL**

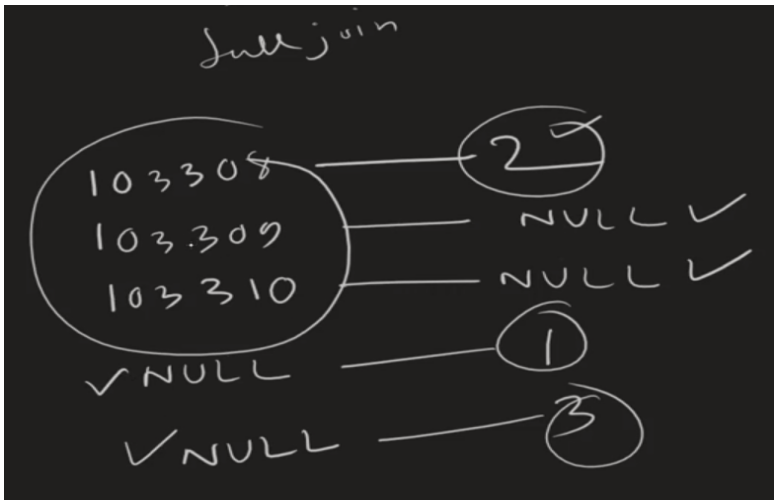


iii) RIGHT JOIN : All elements from Left table, if not exist in **LEFT** table = **NULL**



iv) FULL JOIN : All elements will join.





OUTER :

Syntax :

SELECT _____
FROM *table1* **INNER/LEFT/RIGHT/FULL** JOIN *table2*
ON/USING (*conditions)*;

7. Summary