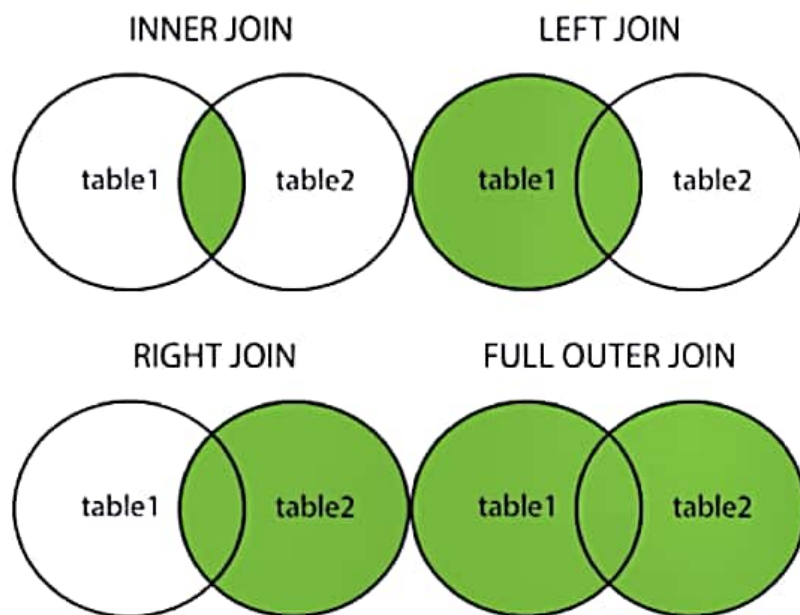# SQL JOIN

A JOIN clause is used to combine rows from two or more tables, based on a related column between them.

Different Types of SQL JOINs

Here are the different types of the JOINs in SQL:

- **(INNER) JOIN**: Returns records that have matching values in both tables
- **LEFT JOIN**: Return all records from the left table, and the matched records from the right table
- **RIGHT JOIN**: Return all records from the right table, and the matched records from the left table
- **FULL JOIN**: Return all records when there is a match in either left or right table

INNER JOIN   LEFT JOIN

table1   table2   table1   table2

RIGHT JOIN   FULL OUTER JOIN

table1   table2   table1   table2

References:www.w3schools.com

Example of SQL join:

If you have these two tables, show the different between each type of join

Employee

EmpID	Emp|Name	Salary	DeptID
1	Ahmed	400$	1
2	Mohammed	350$	2
3	Sami	450$	5
4	Omer	270$	7

Department

DeptID	DeptName
1	Administrating
2	Accounting
3	Sales

INNER JOIN Syntax
SELECT EmpName,DeptName
FROM EmployeeINNER JOIN Department
ON Employee.DeptID = Department .DeptID

Employee

EmpID	Emp|Name	Salary	DeptID
1	Ahmed	400$	1
2	Mohammed	350$	2
3	Sami	450$	5
4	Omer	270$	7

Department

DeptID	DeptName
1	Administrating
2	Accounting
3	Sales

Result:

Emp|Name	DeptName
Ahmed	Administrating
Mohammed	Accounting

References:www.w3schools.com

Database concept

left JOIN Syntax
SELECT *EmpName,DeptName*
FROM Employee left JOIN Department
ON Employee.*DeptID* = Department .*DeptID*

Employee

EmpID	Emp|Name	Salary	DeptID
1	Ahmed	400$	1
2	Mohammed	350$	2
3	Sami	450$	5
4	Omer	270$	7

Department

DeptID	DeptName
1	Administrating
2	Accounting
3	Sales

Result:

Emp|Name	DeptName
Ahmed	Administrating
Mohammed	Accounting
Sami	NULL
Omer	NULL

References:www.w3schools.com

Database concept

SELECT *EmpName,DeptName*
FROM Employee **right JOIN** Department
ON Employee.*DeptID* = Department .*DeptID*

Employee

EmpID	Emp|Name	Salary	DeptID
1	Ahmed	400$	1
2	Mohammed	350$	2
3	Sami	450$	5
4	Omer	270$	7

Department

DeptID	DeptName
1	Administrating
2	Accounting
3	Sales

Result:

Emp|Name	DeptName
Ahmed	Administrating
Mohammed	Accounting
NULL	Sales

References:www.w3schools.com

Database concept

full JOIN Syntax
SELECT *EmpName,DeptName*
FROM Employee full JOIN Department
ON Employee.*DeptID* = Department .*DeptID*

Employee

EmpID	Emp|Name	Salary	DeptID
1	Ahmed	400$	1
2	Mohammed	350$	2
3	Sami	450$	5
4	Omer	270$	7

Department

DeptID	DeptName
1	Administrating
2	Accounting
3	Sales

Result:

Emp|Name	DeptName
Ahmed	Administrating
Mohammed	Accounting
Sami	NULL
Omer	NULL
NULL	Sales

References:www.w3schools.com

The SQL WHERE Clause

The WHERE clause is used to filter records.

WHERE Syntax
SELECT *column1, column2, ...*
FROM *table_name*
WHERE *condition*

Example :

show the EmpName and Salary From employee table if their salary larger than 400$

SELECT *EmpName, Salary*
FROM *Employee*
WHERE *Salary > 400*

Result:

EmpName	Salary
Sami	450$

Note : you can use a lot of operators in Where condition such as: > ,< ,= ,>= ,<=