**JOINS**

A JOIN is a means for combining fields from two tables by using values common to each.

Joins in SQL are commands which are used to combine rows from two or more tables, based on related column between these tables.

They are predominantly used when a user is trying to extract data from tables which have one to many or many to many relationships.

Joined between tables based on primary key or foreign key.

**Types**

INNER JOIN: returns those records which have matching values in both tables.

LEFT JOIN or LEFT OUTER JOIN: returns all the records from the left table and also those records which satisfy a condition from the right table.

Here the records having no matching values in the right table, the output or the result set will contain the **NULL** values.

RIGHT JOIN or RIGHT OUTER JOIN: returns all the records from the right table and also those records which satisfy a condition from the left table.

Here the records having no matching values in the left table, the output or the result set will contain the **NULL** values.

FULL JOIN or FULL OUTER JOIN: returns all records matching from both the tables.

It can detect records having no match in joined table. It returns **NULL** values for records of joined table if no match found.

SELF JOIN: A self join is a regular join, but the table is joined with itself.

CROSS JOIN: It is also known as CARTESIAN JOIN, which returns the cartesian product of two or more joined tables. The CROSS JOIN produces a table that merges each row from first table with each second table row.

UPDATE JOIN: The UPDATE JOIN is a MYSQL statement used to perform cross-table updates that means we can update on table using another table with the JOIN clause condition.

EQUI JOIN: An equijoin is an operation that combines multiple tables based on equality or matching columns values in the associated tables.

NATURAL JOIN: A natural join is a type of join operation that creates an implicit join by combining two tables based on columns with same name and data type.