SQL Joins

Imagine we have 2 tables A and B, and we want to combine them. The options we have to combine are by rows and columns. If we choose columns, then we are joining the table and SQL will say table A as left and table B as right.

Now if we want to combine the tables by rows, we have SET operators.

Types of Joins –

Inner Join

Full Join

Left Join

Right Join

Types of SET Operator –

Union

Union All

Except

Intersect

To join the table, we need a key column, for SET operator we need same number of columns.

When to use JOINS?

Recombine the data

Data Enrichment “Getting Extra Data”

Check for Existence

Types of JOINS

When we have two tables A and B, the tables when combined will have 3 possibilities. Matching Data, All Data, Unmatching Data. These possibilities will lead to use JOINS in SQL.

Inner JOIN –

Returns only the matching rows from the table.

Syntax –

*‘SELECT \* FROM A INNER JOIN B ON A. Key=B.Key’*

The order of the table doesn’t matter in INNER JOIN

Example –

*‘SELECT Data1.State, Data1.District, Data1.Growth, Data2.Population*

*FROM Data1*

*INNER JOIN Data2*

*ON Data1.District = Data2.District’*

INNER JOIN is used when we want to recombine the data and check existence of the data.

LEFT JOIN –

Returns all the rows from the left table and matching rows from the right table.

Syntax –

*‘SELECT \* FROM A LEFT JOIN B ON A. Key=B.Key’*

The order of the table is important here.

Example –

*‘SELECT Data1.State, Data1.District, Data1.Growth, Data2.Population, Data2.Area\_km2,*

*Data1.Literacy, Data1.Sex\_Ratio*

*FROM Data1*

*LEFT JOIN Data2*

*ON Data1.District = Data2.District’*

If there is no match of data, SQL doesn’t ignore it as done in INNER JOIN. It gets the data and displays NULL.

LEFT JOIN is used to recombine the data, data enrichment and checking existence with WHERE condition.

RIGHT JOIN –

Returns all the rows from the right table and matching from the left table. Here the right table is the primary source of the data.

Syntax –

*‘SELECT \* FROM B RIGHT JOIN A ON A. Key=B.Key’*

Example –

*‘SELECT Data1.State, Data1.District, Data1.Growth, Data2.Population*

*FROM Data2*

*RIGHT JOIN Data1*

*ON Data1.District = Data2.District’*

FULL JOIN –

Return all the rows from both tables.

Syntax –

*‘SELECT \* FROM A FULL JOIN B ON A. Key=B.Key’*

The order of the table doesn’t matter.

Example –

*‘SELECT Data1.State, Data1.District, Data1.Growth, Data2.Population*

*FROM Data2*

*FULL JOIN Data1*

*ON Data1.District = Data2.District’*

FULL JOIN is used in recombine data and existence check with WHERE clause.