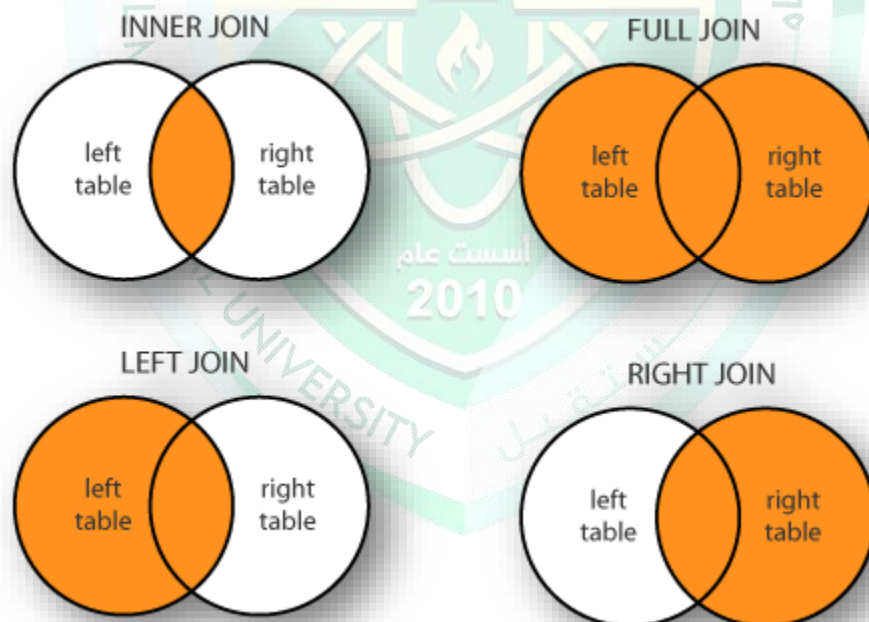


## Table Joins

### Introduction:

- In SQL, a table join is a mechanism for combining rows from two or more tables based on a related column between them.
- Table joins are crucial for querying data across multiple tables in relational databases.

### Types of Table Joins:



- **Inner Join:**

An inner join returns only the rows that have matching values in both tables.

```
1 SELECT columns
2 FROM table1
3 INNER JOIN table2 ON table1.column = table2.column;
```

- **Left Join (or Left Outer Join):**

A left join returns all rows from the left table (table 1) and the matched rows from the right table (table 2). If no match is found, **NULL** values are returned for the columns from the right table (table 2).

```
1 SELECT columns
2 FROM table1
3 LEFT JOIN table2 ON table1.column = table2.column;
4
```

- **Right Join (or Right Outer Join):**

A right join returns all rows from the right table (table 2) and the matched rows from the left table (table 1). If no match is found, **NULL** values are returned for the columns from the left table (table 1).



```
1 SELECT columns
2 FROM table1
3 RIGHT JOIN table2 ON table1.column = table2.column;
```

- **Full Join (or Full Outer Join):**

A full join returns all rows when there is a match in either left or right table. If there is no match, **NULL** values are returned for missing columns.



```
1 SELECT columns
2 FROM table1
3 FULL JOIN table2 ON table1.column = table2.column;
```

## Conclusion:

Understanding table joins in SQL is essential for effectively querying relational databases and retrieving relevant data from multiple tables. By mastering different types of joins and their applications, you can perform complex data manipulations and extract valuable insights from your database systems. Practice using table joins with various scenarios to deepen your understanding and proficiency in SQL.

