

SQL Joins Explained

SQL Joins are used to retrieve data from multiple tables based on a related column. There are five main types of SQL joins:

Join Type	Includes Matching Rows?	Includes Non-Matching Rows?
INNER JOIN	Yes	No
LEFT JOIN	Yes	Yes (From Left Table)
RIGHT JOIN	Yes	Yes (From Right Table)
FULL JOIN	Yes	Yes (From Both Tables)
CROSS JOIN	Yes (All Combinations)	No

SQL Join Examples:

1. INNER JOIN

```
SELECT Employees.Name, Departments.DepartmentName
FROM Employees
INNER JOIN Departments ON Employees.DepartmentID = Departments.DepartmentID;
```

2. LEFT JOIN

```
SELECT Employees.Name, Departments.DepartmentName
FROM Employees
LEFT JOIN Departments ON Employees.DepartmentID = Departments.DepartmentID;
```

3. RIGHT JOIN

```
SELECT Employees.Name, Departments.DepartmentName
FROM Employees
RIGHT JOIN Departments ON Employees.DepartmentID = Departments.DepartmentID;
```

4. FULL JOIN

```
SELECT Employees.Name, Departments.DepartmentName
FROM Employees
FULL JOIN Departments ON Employees.DepartmentID = Departments.DepartmentID;
```

5. CROSS JOIN

```
SELECT Employees.Name, Departments.DepartmentName
FROM Employees
CROSS JOIN Departments;
```