**JOIN**

**INNER JOIN** : Returns only matching rows from both tables.

**LEFT JOIN :** Returns all rows from the left table, and matched rows from the right table

**RIGHT JOIN :** Returns all rows from the right table, and matched rows from the left table

**FULL JOIN :** Returns all rows when there is a match in either table (not supported in MySQL).

**CROSS JOIN** : Returns the Cartesian product of both tables (all possible combinations).

1. **INNER JOIN :** returns only the rows where there is a **match** in both tables.

**SELECT** emp\_name, dept\_name

**FROM** Employees e

**INNER** **JOIN** Departments d

**ON** e.dept\_id **=** d.dept\_id;

**2. LEFT JOIN (LEFT OUTER JOIN):** LEFT JOIN returns all rows from the left table (Employees), and the matching rows from the right table (Departments). If there is no match, NULL is returned for the right table’s columns.

**SELECT** emp\_name, dept\_name

**FROM** Employees e

**LEFT** **JOIN** Departments d

**ON** e.dept\_id **=** d.dept\_id;

### 3. ****RIGHT JOIN (RIGHT OUTER JOIN) :**** RIGHT JOIN returns all rows from the right table (Departments), and the matching rows from the left table (Employees). If there is no match, NULL is returned for the left table’s columns.

**SELECT** emp\_name, dept\_name

**FROM** Employees e

**RIGHT** **JOIN** Departments d

**ON** e.dept\_id = d.dept\_id;

4. **FULL JOIN (FULL OUTER JOIN)** (Not supported in MySQL directly) FULL JOIN returns rows when there is a match in either table, combining the results of both LEFT JOIN and RIGHT JOIN. MySQL doesn’t support FULL JOIN, but you can simulate it using a UNION.

**SELECT** emp\_name, dept\_name

**FROM** Employees e

**LEFT** **JOIN** Departments d

**ON** e.dept\_id **=** d.dept\_id

**UNION**

**SELECT** emp\_name, dept\_name

**FROM** Employees e

**RIGHT JOIN** Departments d

**ON** e.dept\_id = d.dept\_id;

### 5. ****CROSS JOIN :**** returns the ****Cartesian product**** of both tables. Each row from the first table is combined with each row from the second table.

**SELECT** emp\_name, dept\_name

**FROM** Employees

**CROSS** **JOIN** Departments;