

Day – 29 :

Joins in SQL - II

To explain joins, we'll create two tables: **Employees3** and **Departments**.

Table 1: Employees

employee_id	first_name	last_name	department_id
1	Rahul	Sharma	101
2	Priya	Mehta	102
3	Ankit	Verma	103
4	Simran	Kaur	NULL
5	Aman	Singh	101

Table 2: Departments

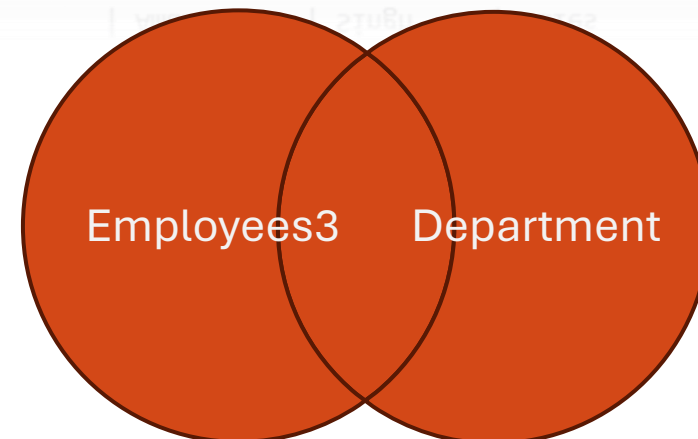
department_id	department_name
101	Sales
102	Marketing
103	IT
104	HR

4. FULL OUTER JOIN - Retrieve all Employees3 and departments, including non-matching records from both tables

```
SELECT
    e.employee_id,
    e.first_name,
    e.last_name,
    d.department_name
FROM
    Employees3 e
FULL OUTER JOIN
    Departments d
ON
    e.department_id = d.department_id;
```

OUTPUT →

employee_id	first_name	last_name	department_name
1	Rahul	Sharma	Sales
2	Priya	Mehta	Marketing
3	Ankit	Verma	IT
4	Simran	Kaur	NULL
5	Aman	Singh	Sales
NULL	NULL	NULL	HR



5. CROSS JOIN- Retrieve all possible combinations of Employees3 and departments.

SELECT

e.first_name,

e.last_name,

d.department_name

FROM

Employees3 e

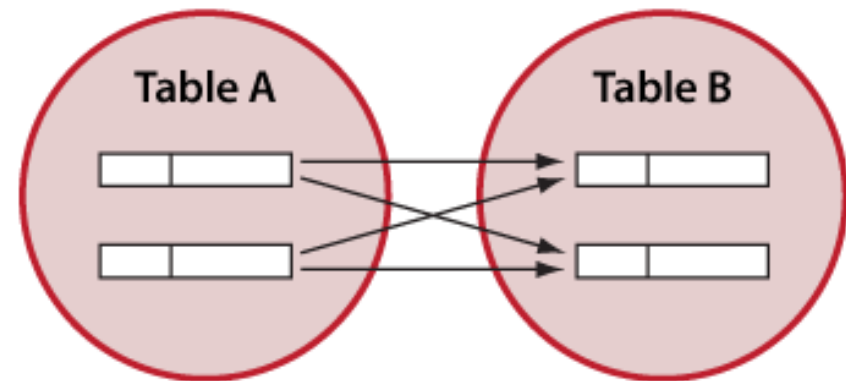
CROSS JOIN

Departments d;

OUTPUT →

first_name	last_name	department_name
Rahul	Sharma	Sales
Rahul	Sharma	Marketing
Rahul	Sharma	IT
Rahul	Sharma	HR
Priya	Mehta	Sales
...		

CROSS JOIN

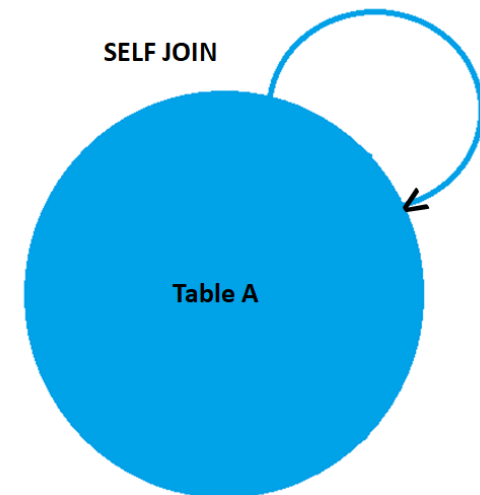


6. SELF JOIN- Find Employees3 who share the same department.

```
SELECT
    e1.first_name AS employee1,
    e2.first_name AS employee2,
    d.department_name
FROM
    Employees3 e1
JOIN
    Employees3 e2
ON
    e1.department_id = e2.department_id AND e1.employee_id != e2.employee_id
JOIN
    Departments d
ON
    e1.department_id = d.department_id;
```

OUTPUT →

employee1	employee2	department_name
Rahul	Aman	Sales
Aman	Rahul	Sales



SELF JOIN - Find Employees who share the same department.

Table 1: Employees

employee_id	first_name	last_name	department_id
1	Rahul	Sharma	101
2	Priya	Mehta	102
3	Ankit	Verma	103
4	Simran	Kaur	NULL
5	Aman	Singh	101

OUTPUT →

employee1	employee2	department_name
-----	/-----	/-----
Rahul	Aman	Sales
Aman	Rahul	Sales

Table 1: Employees

employee_id	first_name	last_name	department_id
1	Rahul	Sharma	101
2	Priya	Mehta	102
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4	Simran	Kaur	NULL
5	Aman	Singh	101