

Lab 8: Write SQL code to display records using CROSS, EQUI & SELF JOIN.

Source code:

```
CREATE DATABASE IF NOT EXISTS CompanyDB;
```

```
USE CompanyDB;
```

```
CREATE TABLE IF NOT EXISTS Employees (
```

```
    emp_id INT PRIMARY KEY,
```

```
    name VARCHAR(50),
```

```
    dept_id INT,
```

```
    manager_id INT
```

```
);
```

```
CREATE TABLE IF NOT EXISTS Departments (
```

```
    dept_id INT PRIMARY KEY,
```

```
    dept_name VARCHAR(50)
```

```
);
```

```
INSERT INTO Departments (dept_id, dept_name) VALUES
```

```
(10, 'HR'),
```

```
(20, 'IT'),
```

```
(30, 'Sales');
```

```
INSERT INTO Employees (emp_id, name, dept_id, manager_id) VALUES
```

```
(1, 'Alice', 10, NULL),
```

```
(2, 'Bob', 20, 1),
```

```
(3, 'Carol', 10, 1),
```

```
(4, 'Dave', 30, 2);
```

```

SELECT e.name AS Employee, d.dept_name AS Department
FROM Employees e
CROSS JOIN Departments d;

```

Employee	Department
Alice	HR
Alice	IT
Alice	Sales
Bob	HR
Bob	IT
Bob	Sales
Carol	HR
Carol	IT
Carol	Sales
Dave	HR
Dave	IT
Dave	Sales

```

SELECT e.name AS Employee, d.dept_name AS Department
FROM Employees e
INNER JOIN Departments d
ON e.dept_id = d.dept_id;

```

Employee	Department
Alice	HR
Bob	IT
Carol	HR
Dave	Sales

```

SELECT e1.name AS Employee, e2.name AS Manager
FROM Employees e1
LEFT JOIN Employees e2
ON e1.manager_id = e2.emp_id;

```

Employee	Manager
Alice	(NULL)
Bob	Alice
Carol	Alice
Dave	Bob