# Task 5: SQL Joins (Inner, Left, Right, Full)

**Objective:** Learn to combine data from multiple tables

**Tools:** DB Browser for SQLite / MySQL Workbench

**Deliverables:** SQL queries using all join types

## Hints/Mini Guide:

1. Create two related tables (e.g., Customers, Orders)
2. Use INNER, LEFT, RIGHT, FULL JOIN

**Outcome:** Mastery of merging data

## Example Tables:

```
CREATE TABLE Customers (
    CustomerID INT PRIMARY KEY,
    CustomerName VARCHAR(100),
    City VARCHAR(50)
);

CREATE TABLE Orders (
    OrderID INT PRIMARY KEY,
    OrderDate DATE,
    CustomerID INT,
    FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID)
);
```

## Example Queries:

```
-- INNER JOIN
SELECT Customers.CustomerName, Orders.OrderID, Orders.OrderDate
FROM Customers
INNER JOIN Orders ON Customers.CustomerID = Orders.CustomerID;

-- LEFT JOIN
SELECT Customers.CustomerName, Orders.OrderID, Orders.OrderDate
FROM Customers
LEFT JOIN Orders ON Customers.CustomerID = Orders.CustomerID;

-- RIGHT JOIN (Not supported in SQLite, works in MySQL)
SELECT Customers.CustomerName, Orders.OrderID, Orders.OrderDate
FROM Customers
RIGHT JOIN Orders ON Customers.CustomerID = Orders.CustomerID;

-- FULL JOIN (Not supported directly in SQLite, emulate using UNION)
SELECT Customers.CustomerName, Orders.OrderID, Orders.OrderDate
FROM Customers
LEFT JOIN Orders ON Customers.CustomerID = Orders.CustomerID
UNION
SELECT Customers.CustomerName, Orders.OrderID, Orders.OrderDate
FROM Customers
RIGHT JOIN Orders ON Customers.CustomerID = Orders.CustomerID;
```