DML concept (\*\*SELECT\*\*, \*\*INSERT\*\*, \*\*UPDATE\*\*, \*\*DELETE\*\*, \*\*MERGE\*\*, \*\*TRUNCATE\*\*, \*\*WHERE\*\*, \*\*AND\*\*, \*\*OR\*\*, \*\*NOT\*\*, \*\*IN\*\*) step by step.

---

😎 Step 1: Create the Database

```sql

CREATE DATABASE company;

USE company;

```

---

😎 Step 2: Create the Tables

😎# Table 1: `departments`

```sql

CREATE TABLE departments (

department\_id INT PRIMARY KEY,

department\_name VARCHAR(50) NOT NULL

);

```

😎# Table 2: `employees`

```sql

CREATE TABLE employees (

employee\_id INT PRIMARY KEY,

first\_name VARCHAR(50) NOT NULL,

last\_name VARCHAR(50) NOT NULL,

department\_id INT,

salary DECIMAL(10, 2),

hire\_date DATE,

FOREIGN KEY (department\_id) REFERENCES departments(department\_id)

);

```

---

😎 Step 3: Insert Sample Data

😎# Insert into `departments`:

```sql

INSERT INTO departments (department\_id, department\_name)

VALUES

(1, 'HR'),

(2, 'Finance'),

(3, 'Sales'),

(4, 'IT');

```

😎# Insert into `employees`:

```sql

INSERT INTO employees (employee\_id, first\_name, last\_name, department\_id, salary, hire\_date)

VALUES

(101, 'John', 'Doe', 1, 50000, '2020-01-15'),

(102, 'Jane', 'Smith', 2, 60000, '2019-05-20'),

(103, 'Alice', 'Johnson', 3, 55000, '2021-03-10'),

(104, 'Bob', 'Brown', 1, 52000, '2020-07-01'),

(105, 'Charlie', 'Davis', 4, 70000, '2018-11-30'),

(106, 'Eva', 'White', 2, 65000, '2022-02-25');

```

---

😎 Step 4: Verify the Data

😎# Check `departments` table:

```sql

SELECT \* FROM departments;

```

😎# Check `employees` table:

```sql

SELECT \* FROM employees;

```

---

😎 Sample Data Overview

😎# `departments` Table:

| department\_id | department\_name |

|---------------|-----------------|

| 1 | HR |

| 2 | Finance |

| 3 | Sales |

| 4 | IT |

😎# `employees` Table:

| employee\_id | first\_name | last\_name | department\_id | salary | hire\_date |

|-------------|------------|-----------|---------------|---------|------------|

| 101 | John | Doe | 1 | 50000 | 2020-01-15 |

| 102 | Jane | Smith | 2 | 60000 | 2019-05-20 |

| 103 | Alice | Johnson | 3 | 55000 | 2021-03-10 |

| 104 | Bob | Brown | 1 | 52000 | 2020-07-01 |

| 105 | Charlie | Davis | 4 | 70000 | 2018-11-30 |

| 106 | Eva | White | 2 | 65000 | 2022-02-25 |

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😎 Step 5: Teach DML Concepts Using the Tables

😎# 1. \*\*SELECT\*\*

```sql

SELECT first\_name, last\_name FROM employees;

```

😎# 2. \*\*WHERE\*\*

```sql

SELECT \* FROM employees WHERE department\_id = 1;

```

😎# 3. \*\*AND\*\*

```sql

SELECT \* FROM employees WHERE department\_id = 1 AND salary > 50000;

```

😎# 4. \*\*OR\*\*

```sql

SELECT \* FROM employees WHERE department\_id = 1 OR department\_id = 2;

```

😎# 5. \*\*NOT\*\*

```sql

SELECT \* FROM employees WHERE NOT department\_id = 1;

```

😎# 6. \*\*IN\*\*

```sql

SELECT \* FROM employees WHERE department\_id IN (1, 2);

```

😎# 7. \*\*INSERT\*\*

```sql

INSERT INTO employees (employee\_id, first\_name, last\_name, department\_id, salary, hire\_date)

VALUES (107, 'David', 'Green', 3, 58000, '2023-01-10');

```

😎# 8. \*\*UPDATE\*\*

```sql

UPDATE employees

SET salary = 62000

WHERE employee\_id = 101;

```

😎# 9. \*\*DELETE\*\*

```sql

DELETE FROM employees

WHERE employee\_id = 106;

```