**DDL (Data Definition Language)** – CREATE, ALTER, DROP, TRUNCATE, RENAME ~for structuring data

**DML (Data Manipulation Language)** – INSERT, UPDATE, DELETE, MERGE ~ for modifying data

**DQL (Data Query Language)** – SELECT ~for retrieving and analysis

**DCL (Data Control Language)** – GRANT, REVOKE ~permissions

**TCL (Transaction Control Language)** – COMMIT, ROLLBACK, SAVEPOINT ~if working w/transactions

**DDL (Data Definition Language)** statement: if involved in data structuring

1. **CREATE** (Create a new table)

CREATE TABLE employees (

id INT PRIMARY KEY,

name VARCHAR(50),

department VARCHAR(50),

salary DECIMAL(10,2));

1. **ALTER** (Modify an existing table)

ALTER TABLE employees ADD COLUMN age INT;

1. **DROP** (Delete a table permanently)

DROP TABLE employees;

1. **TRUNCATE** (Remove all records from a table but keep its structure)

TRUNCATE TABLE employees;

1. **RENAME** (Rename a table)

RENAME TABLE employees TO staff;

**DML (Data Manipulation Language) statements modify data in a database.**

1. **SELECT** (Retrieve data)

SELECT \* FROM employees WHERE department = 'IT';

1. **INSERT** (Add new data)

INSERT INTO employees (id, name, department, salary)

VALUES (101, 'John Doe', 'IT', 70000);

1. **UPDATE** (Modify existing data)

UPDATE employees

SET salary = salary \* 1.1

WHERE department = 'IT';

1. **DELETE** (Remove data)

DELETE FROM employees WHERE department = 'IT';

**DCL (Data Control Language)**

1. **GRANT** (Give privileges to a user)

GRANT SELECT, INSERT ON employees TO user1;

1. **REVOKE** (Remove privileges from a user)

REVOKE INSERT ON employees FROM user1;

**TCL (Transaction Control Language) if working with transactions**

1. **COMMIT** (Save all changes made in a transaction)

BEGIN TRANSACTION;

UPDATE employees SET salary = salary \* 1.10 WHERE department = 'IT';

COMMIT;

1. **ROLLBACK** (Undo changes made in a transaction)

BEGIN TRANSACTION;

UPDATE employees SET salary = salary \* 1.10 WHERE department = 'IT';

ROLLBACK;

1. **SAVEPOINT** (Set a point in a transaction to which you can later roll back)

BEGIN TRANSACTION;

UPDATE employees SET salary = salary \* 1.10 WHERE department = 'IT';

SAVEPOINT before\_bonus;

UPDATE employees SET salary = salary \* 1.20 WHERE department = 'HR';

ROLLBACK TO before\_bonus; -- Undo only the HR salary update

COMMIT;