

DDL Commands in SQL

Overview

DDL (Data Definition Language) is used to define, modify, and delete database structures without dealing with data manipulation.

Commands Covered

Command	Description
CREATE	Used to create databases and tables
ALTER	Modifies an existing table structure
DROP	Deletes a table or database completely
TRUNCATE	Removes all records from a table but keeps the structure

SQL File: ddl_commands.sql

1. Create a Database

```
CREATE DATABASE CompanyDB;
USE CompanyDB;
```

Creates a database named CompanyDB and selects it for use.

2. Create a Table

```
CREATE TABLE Employees (
    EmpID INT PRIMARY KEY,
    Name VARCHAR(50),
    Age INT,
    Department VARCHAR(50),
    Salary DECIMAL(10,2)
);
```

Creates an Employees table with columns for ID, Name, Age, Department, and Salary.

3. Insert Mock Data

```
INSERT INTO Employees (EmpID, Name, Age, Department, Salary) VALUES
(1, 'Alice', 30, 'HR', 60000),
(2, 'Bob', 28, 'IT', 70000),
(3, 'Charlie', 35, 'Finance', 75000);
```

Inserts three sample employees into the table.

4. View Table Contents

```
SELECT * FROM Employees;
```

Output:

EmpID	Name	Age	Department	Salary
1	Alice	30	HR	60000
2	Bob	28	IT	70000
3	Charlie	35	Finance	75000

5. Alter Table (Add a Column)

```
ALTER TABLE Employees ADD COLUMN Experience INT DEFAULT 0;
```

Adds a new column `Experience` with a default value of `0`.

6. Modify Data in New Column

```
UPDATE Employees SET Experience = 5 WHERE EmpID = 1;
UPDATE Employees SET Experience = 3 WHERE EmpID = 2;
UPDATE Employees SET Experience = 7 WHERE EmpID = 3;
```

Updated Table:

EmpID	Name	Age	Department	Salary	Experience
1	Alice	30	HR	60000	5
2	Bob	28	IT	70000	3
3	Charlie	35	Finance	75000	7

7. Truncate Table

```
TRUNCATE TABLE Employees;
```

Removes all data from the table but keeps the structure intact.

8. Drop Table

```
DROP TABLE Employees;
```

Deletes the `Employees` table permanently.

9. Drop Database

```
DROP DATABASE CompanyDB ;
```

Deletes the entire `CompanyDB` along with all its tables.

Summary

- DDL commands help manage the structure of databases.
 - `CREATE` sets up databases and tables.
 - `ALTER` modifies tables by adding or changing columns.
 - `DROP` completely removes databases or tables.
 - `TRUNCATE` clears all records without dropping the table structure.
-

Next Step

Run the SQL file in MySQL, PostgreSQL, or SQLite and observe the changes.