SQL Data Definition Language (DDL) Guide

Data Definition Language (DDL) commands are used to define and manage database structures.

1. CREATE

The **CREATE** command is used to create a new database, table, index, or view.

Example: Creating a Database

```
CREATE DATABASE my_database;
```

Example: Creating a Table

```
CREATE TABLE employees (
    employee_id INT PRIMARY KEY,
    first_name VARCHAR(50),
    last_name VARCHAR(50),
    birth_date DATE,
    hire_date DATE,
    salary DECIMAL(10, 2)
);
```

Example: Creating an Index

```
CREATE INDEX idx_last_name
ON employees (last_name);
```

Example: Creating a View

```
CREATE VIEW employee_salaries AS
SELECT first_name, last_name, salary
FROM employees;
```

2. ALTER

The **ALTER** command is used to modify an existing database object, such as a table.

Example: Adding a Column to a Table

```
ALTER TABLE employees
ADD email VARCHAR(100);
```

Example: Modifying a Column in a Table

```
ALTER TABLE employees
MODIFY COLUMN salary DECIMAL(15, 2);
```

Example: Dropping a Column from a Table

```
ALTER TABLE employees
DROP COLUMN birth_date;
```

3. DROP

The **DROP** command is used to delete an existing database, table, index, or view.

Example: Dropping a Database

```
DROP DATABASE my_database;
```

Example: Dropping a Table

```
DROP TABLE employees;
```

Example: Dropping an Index

```
DROP INDEX idx_last_name ON employees;
```

Example: Dropping a View

```
DROP VIEW employee_salaries;
```

4. TRUNCATE

The **TRUNCATE** command is used to remove all records from a table, but the table structure remains.

Example: Truncating a Table

```
TRUNCATE TABLE employees;
```