

DDL Commands

- DDL Commands
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Data Definition Language (DDL) commands are used to define and manage database objects, such as tables, indexes, and constraints

1. Add Table to Database

To add a table to a database, you use the CREATE TABLE statement. Here is an example:

```
CREATE TABLE employees (  
    employee_id INT AUTO_INCREMENT PRIMARY KEY,  
    first_name VARCHAR(50) NOT NULL,  
    last_name VARCHAR(50) NOT NULL,  
    email VARCHAR(100) UNIQUE,  
    hire_date DATE,  
    job_title VARCHAR(50),  
    salary DECIMAL(10, 2)  
);
```

2. Describe Table

The DESCRIBE statement is used to get information about the columns in a table. This command provides details about each column, including the data type, whether it can be NULL, and other attributes.

```
DESCRIBE employees;
```

Alternatively, you can use SHOW COLUMNS:

```
SHOW COLUMNS FROM employees;
```

3. Alter Table

The ALTER TABLE statement is used to modify the structure of an existing table. This can include adding, modifying, or dropping columns, as well as adding or dropping constraints.

Add a column:

```
ALTER TABLE employees ADD COLUMN department_id INT;
```

Modify a column:

```
ALTER TABLE employees MODIFY COLUMN job_title VARCHAR(100);
```

Drop a column:

```
ALTER TABLE employees DROP COLUMN department_id;
```

4. Modify and Drop Clause

As seen above, the ALTER TABLE statement can be used to modify columns. Here are additional examples:

Rename a column:

```
ALTER TABLE employees CHANGE COLUMN first_name given_name  
VARCHAR(50);
```

Rename the table:

```
ALTER TABLE employees RENAME TO staff;
```

Add a constraint:

```
ALTER TABLE employees ADD CONSTRAINT chk_salary CHECK  
(salary > 0);
```

Drop a constraint:

(Note: The actual syntax can vary based on the type of constraint and the version of MySQL.)

```
ALTER TABLE employees DROP CONSTRAINT chk_salary;
```

Drop a table:

DROP TABLE employees;

5. Data Manipulation

Data Manipulation Language (DML) commands are used for managing data within schema objects. Some key DML commands include INSERT, UPDATE, DELETE, and SELECT.

Insert data into a table:

**INSERT INTO employees (first_name, last_name, email, hire_date, job_title, salary)
VALUES (Vijay, R, 'vijayj@gmail.com', '2023-07-09', 'Software Engineer', 60000.00);**

Update data in a table:

**UPDATE employees
SET salary = 65000.00
WHERE employee_id = 1;**

Delete data from a table:

**DELETE FROM employees
WHERE employee_id = 1;**

Select data from a table:

**SELECT first_name, last_name, email
FROM employees
WHERE salary > 50000;**

These commands cover a broad range of operations that you can perform on tables in a MySQL database, from defining and altering the structure of tables to manipulating the data they contain.
