Here are the commands and their usage with syntax and examples in MySQL Data Definition Language (DDL):

**1St create database:**

CREATE DATABASE database\_name:

CREATE DATABASE student\_db;

Then go to use database

**USE DATABASE\_NAME;**

Use student\_db:

Then create table and define columns with data type and add constraints like (primary key, unique, defaults, null etc. Discuss it in details in upcoming class)

1. **CREATE TABLE**:
   * **Usage**: To create a new table.
   * **Syntax**:

CREATE TABLE table\_name (  
  column1 datatype [optional\_constraints],  
  column2 datatype [optional\_constraints],  
  ...  
);

* + **Example**:

CREATE TABLE students1 (  
  studentid INT PRIMARY KEY,  
  student\_name CHAR(50),  
  student\_email VARCHAR(100),  
  joining\_date DATE,  
  short\_desc TEXT,  
  marks DECIMAL(3,2)  
);

1. **ALTER TABLE**:
   * **Usage**: To modify the structure of an existing table.
   * **Syntax (for adding a new column)**:

ALTER TABLE table\_name  
ADD column\_name datatype [optional\_constraints];

* + **Syntax (for modifying an existing column)**:

ALTER TABLE table\_name  
MODIFY column\_name datatype [optional\_constraints];

* + **Syntax (for dropping a column)**:

ALTER TABLE table\_name  
DROP COLUMN column\_name;

* + **Example** (Adding a column):

ALTER TABLE students1 ADD weight FLOAT;



* + **Example** (Modifying a column): if you want change datatype (Here change Float to int)



ALTER TABLE students1 MODIFY weight INT;



* + **Example** (Dropping a column): means Delete column

ALTER TABLE students1 DROP COLUMN short\_desc;

1. **DROP TABLE**:
   * **Usage**: To delete a table and all its data.(delete table structure with all data)
   * **Syntax**:

DROP TABLE table\_name;

* + **Example**:

DROP TABLE students1;

1. **CREATE DATABASE**:
   * **Usage**: To create a new database.
   * **Syntax**:

CREATE DATABASE database\_name;

* + **Example**:

CREATE DATABASE demodb;

1. **DROP DATABASE**:
   * **Usage**: To delete a database and all its data.
   * **Syntax**:

DROP DATABASE database\_name;

* + **Example**:

DROP DATABASE demodb;

1. **USE DATABASE**:
   * **Usage**: To select a database to use.
   * **Syntax**:

USE database\_name;

* + **Example**:

USE demodb;

1. **RENAME TABLE**:
   * **Usage**: To rename a table.
   * **Syntax**:

RENAME TABLE old\_table TO new\_table;

* + **Example**:

RENAME TABLE students1 TO students2;

1. **TRUNCATE TABLE**:
   * **Usage**: To delete all rows from a table without deleting the table itself.
   * **Syntax**:

TRUNCATE TABLE table\_name;

* + **Example**:

TRUNCATE TABLE students1;

**Examples of DDL Commands in Use**

1. Creating and using a database:

CREATE DATABASE demodb;  
USE demodb;

1. Creating a table:

CREATE TABLE students1 (  
  studentid INT,  
  student\_name CHAR(50),  
  student\_email VARCHAR(100),  
  joining\_date DATE,  
  short\_desc TEXT,  
  marks DECIMAL(3,2)  
);

1. Describing a table: **show the table structure with datatype and constraints.**

DESCRIBE students1;

1. Altering a table:
   * Adding a column:

ALTER TABLE students1 ADD weight FLOAT;

* + Modifying a column:

ALTER TABLE students1 MODIFY weight INT;

* + Dropping a column:/delete column

ALTER TABLE students1 DROP COLUMN short\_desc;

1. Renaming a column:

ALTER TABLE students1 RENAME COLUMN weight TO mass;

1. Dropping a table:

DROP TABLE students1;

1. Dropping a database:

DROP DATABASE demodb;

1. Inserting data:

INSERT INTO students1 (studentid, student\_name, student\_email, joining\_date, marks, weight)  
VALUES (1, "Deepak Suneja", "deepak123@gmail.com", "2023-11-11", 8.4, 67);

**OR**

INSERT INTO students1VALUES (2,"Suneja", "Suneja123@gmail.com", "2023-11-11", 8.4, 80);

Select \* from students1; -- **to show the data in table form.**

1. Truncating a table:

TRUNCATE TABLE students1; -- **only delete the all row data**

Data Types

For define columns have which type of data store.

1. **Numeric Data Types**:
   * INT, TINYINT, SMALLINT, MEDIUMINT, BIGINT
   * DECIMAL, NUMERIC
   * FLOAT, DOUBLE, REAL
2. **Date and Time Data Types**:
   * DATE, TIME, DATETIME, TIMESTAMP, YEAR
3. **String Data Types**:
   * CHAR, VARCHAR, TINYTEXT, TEXT, MEDIUMTEXT, LONGTEXT
   * ENUM, SET
4. **Binary Data Types**:
   * BINARY, VARBINARY, TINYBLOB, BLOB, MEDIUMBLOB, LONGBLOB

By using these commands, you can effectively manage your database structure and data.

**OPTIONAL PART**

select @@autocommit