

-----LECTURE- 2-----

1 Multiline Comments

Used to write notes inside SQL code.

Syntax:

```
/*
```

This is a multiline comment

You can write multiple lines

```
*/
```

Why used?

- to explain your code
- to temporarily disable code
- to keep notes inside a query

2 DDL (Data Definition Language)

DDL is used to define and manage the structure of databases and tables.

DDL affects how data is stored, not the data itself.

DDL Commands:

- CREATE → create database/table
- DROP → delete database/table
- ALTER → change structure (add/modify/remove columns)

These commands change the shape of your database.

3 How to Create a Database

Syntax:

```
CREATE DATABASE school;
```

Explanation:

This creates a new empty database named school.

✓ **Notes:**

- Don't use spaces in database names.
 - SQL keywords are not case-sensitive.
-

4 SQL is NOT Case-Sensitive

These all mean the same:

- create database test;
- CREATE DATABASE test;
- CrEaTe DaTaBaSe test;

But database names ARE case-sensitive on some systems (like Linux MySQL).

5 Execute Command — Ctrl + Enter

In tools like:

- MySQL Workbench
- Oracle SQL Developer
- SQL Server SSMS

Ctrl + Enter executes the highlighted SQL query.

6 How to Drop a Database

 Drop deletes the entire database permanently.

Syntax:

DROP DATABASE school;

Safer version (prevents error if DB doesn't exist):

DROP DATABASE IF EXISTS school;

7 How to Select a Database

Before creating tables, you must use a database.

Syntax:

USE school;

This tells SQL:

👉 “Whatever I create now should go inside the school database.”

8 How to Create a Table

Syntax:

```
CREATE TABLE students (  
    id INT,  
    name VARCHAR(50),  
    age INT  
);
```

Explanation:

- Table name → students
 - Columns → id, name, age
 - Data types → INT, VARCHAR
-

9 Data Types (Simple Explanation)

INT

- used for whole numbers
- cannot store decimal/points

Example:

marks INT;

Other basic data types:

- VARCHAR(n) → text
 - DATE → yyyy-mm-dd
 - BOOLEAN → true/false
 - DECIMAL(10,2) → numbers with decimals
-

10 Describe Table

Shows the structure of a table.

Syntax:

DESCRIBE students;

You will see:

- column names
 - data types
 - null allowed or not
 - keys
 - defaults
-

1 1 Drop Table

Deletes only the table, not the database.

Syntax:

DROP TABLE students;

Safer version:

DROP TABLE IF EXISTS students;

1 2 ALTER TABLE — Add a Column

Syntax:

ALTER TABLE students

ADD address VARCHAR(100);

Adds a new column at the end of the table.

1 3 Change Data Type of a Column

In MySQL:

ALTER TABLE students

MODIFY age VARCHAR(10);

If using CHANGE:

ALTER TABLE students

CHANGE age age VARCHAR(10);

(First age = old name, second age = new name.)

1 4 Change Position of a Column (ONLY in MySQL)

MySQL allows you to move columns in any order.

Syntax:

ALTER TABLE students

MODIFY age INT AFTER name;

OR to make it the first column:

ALTER TABLE students

MODIFY age INT FIRST;

✗ NOT supported in:

- SQL Server
- Oracle
- PostgreSQL

They do not allow changing column order. Only MySQL supports it.