

-----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.