**MySQL**

**Database:** It is an application which stores the collection of data. Each database has one or more distinct API’s (Application programming interface) for creating, managing, searching, and replicating the data.

**File:** We cannot change, update, or organize the data in the files.

**Excel:**

* It has a row limit (1,000,00 rows in modern versions), which can restrict its ability to handle large datasets.
* Performance slows down significantly with large datasets or complex calculations.
* Password protection and encryption in Excel are not so good as in database systems.
* Shared files can easily be copied or accessed by unauthorized users.

**DBMS:** Database Management System stores the data in the form of tables but creating a relation between tables is not possible. We have 2 types of DBMS they are RDBMS and Non-RDBMS.

**RDBMS:** Relational Data base Management System can store data in the form of tables and it can also map them locations. It will retrieve the data very Fastly and operations will be effective.

**Non-RDMS:** Non-Relational Data Base Management System can store the data in the form of key-values (Json format)

🡪We have 2 types of Database Components they are client and server

🡪MySQL uses two types of commands they are DDL and DML

**DDL commands**:

1. Create: To create a database or table.
2. Alter: To add a row or column to an existing table.
3. Drop: To delete the records from database.
4. Truncate: Removes the records from the table.
5. Rename: To rename the table or records in the existing database.

**DML commands:**

1. Insert: To insert data into the table.
2. Update: To update the existing data within a table.
3. Delete: Deletes the records from the database of a table.
4. Call: Used in java programming.

**Data Types:**

1. CHAR (size): a fixed length of string characters is allowed.
2. VARCHAR (size): a variable string length.
3. Binary (size): It is equal to char with a default value of 1.
4. Text (size): holds a string with a maximum length of 65,535 bytes.

🡪Syntax to create database:

create database database\_name;

🡪Syntax to see all the existing database names:

show databases;

🡪Syntax to change or use an existing database:

use database\_name;

🡪Syntax to create table:

Create table table\_name(column\_name1 datatype,column\_name2 datatype,….)

🡪Syntax to see the existing tables:

show tables;

🡪Syntax to insert values to the table:

Insert into table\_name values (val1, val2,...)

🡪Syntax to Retrieve the data:

Select \* from table\_name