What is DB?

A container which stores data. Though this data is not dumped but is stored in a systematic way.

Why DB?

Imagine a question comes up, “What is total spending?” rather than opening multiple data files and checking the numbers, we can directly ask the DB and answer will be present within seconds.

How do we ask DB?

With the help of SQL, it is Structured Query Language.

What is DBMS & SQL Server?

So, the interaction with the DB can be multiple, users can interact with the help of queries. A frontend website or an app where the user is asking something, or a Power BI/Tableau report with SQL where the DB data is published. Due to multiple interaction at the same time, we have a system called as DBMS. A software which manages all the system for our DB and makes the queries priority.

In big companies, we can’t run DBMS queries in our PC as it needs to be run 24/7. For this we have servers which runs 24/7 and collects data mainly cloud services.

What are DB types?

Relational DB – Tables which are related to each other. 1-1, 1-many, many-1, many-many

Key-Value – This time the DB is organised in a different way which are Keys and Values. Its mainly like dictionary where you have Key (the word) and the definition of the word (Values).

Column Based DB – Instead of grouping the data into rows this does in columns. This is advanced based.

Graph DB – Relationship between objects

Document DB – Non-structured DB where one page data capture is priority.

Key-Value, Column Based, Graph and Document are No SQL DB.

What is DB Structure?

Firstly, we have server which holds multiple DB’s. Next level is schema’s, inside schema we have tables. Tables are where data is stored is column wise. And the records are stored in rows. Each table has primary key which is unique. Each record has a specific data type like numeric, character, etc.

Types of SQL Commands

In a DB where no data is available, we have to create a table to insert data. Here comes the Data Definition Language (DDL) which comprises of ‘CREATE’, ‘ALTER’, ‘DROP’. To insert data inside the table created we have Data Manipulation Language (DML) which are ‘INSERT’, ‘UPDATE’, ‘DELETE’. Once we have our data inside the DB, we will write query to ask questions. This is done by using Data Query Language (DQL) which is ‘SELECT’.

Why SQL?

Talk to the data

High Demand

Industry Standard