# SQL Learning Notes

**Database:** Database is a structured collection of data that is stored, managed, and accessed electronically. It is designed to efficiently store, retrieve, update, and manage data in a way that ensures integrity, consistency, and security**.**

Database management system

Your APP

(Amazon)

Database

**Database Management System:** A **Database Management System (DBMS)** is **software that interacts with databases** to perform tasks such as **storing, retrieving, updating, and managing data** efficiently while ensuring **data integrity, security, and concurrency control**.

**MySQL, PostgreSQL, SQLite, etc., are not databases themselves, but rather Database Management Systems (DBMS)** that provide the tools and functionalities to interact with, manage, and manipulate data stored in databases.

## Creating Databases and Tables

* show databases;
* It will show the databases which is available in the system.
* CREATE DATABASE yethishwar\_rao;
* It will create a database.
* DROP database yethishwar\_rao;
* It will delete the database permanently.

NOTE: using snake\_case is a good practice naming databases, tables, column\_names etc…

* USE database\_name;
* Switches the active database to the specified one.
* Just use the above query to switch to the working database and work on it.
* SELECT DATABASE();
* Displays the currently selected database.

Inside a Database there will be Tables this is the area where we actually focus on and manipulate the things. A table consists of rows and columns, almost all SQL flavoured languages deals with tables, other than MangoDB and some more.

### Data Types

We have many numerical, character and date time data types, among all some are frequently used like VARCHAR(n), CHAR(n), INT, FLOAT, BIGINT etc…