**Database vs Database Management System**

**1. Database**

* **Definition**: A **database** is an organized collection of data stored electronically.
* **Purpose**: Stores data in a structured format (e.g., tables, rows, columns).
* **Example**: A file that stores customer records, such as students.db.
* **Functionality**: Just holds data; doesn’t offer tools to manipulate or manage it on its own.

**2. Database Management System (DBMS)**

* **Definition**: A **DBMS** is a **software system** that allows users to **create, manage, and interact** with databases.
* **Purpose**: Provides tools to add, update, delete, retrieve, and secure data.
* **Examples**: MySQL, PostgreSQL, Oracle, Microsoft SQL Server, SQLite.
* **Functionality**:
  + Manages access control and concurrency
  + Supports backup and recovery
  + Enforces data integrity
  + Allows querying using SQL

**Comparison Table**

| **Feature** | **Database** | **Database Management System (DBMS)** |
| --- | --- | --- |
| What it is | Collection of organized data | Software to manage databases |
| Role | Stores data | Controls and manipulates stored data |
| Users interact with | Indirectly through DBMS | Directly through interfaces or applications |
| Examples | A .db file, flat files | MySQL, PostgreSQL, Oracle, SQL Server |
| Operations supported | Limited (store and retrieve) | CRUD, indexing, backup, access control, etc. |

**In Simple Terms:**

* **Database** = *What holds the data.*
* **DBMS** = *The system that lets you work with the data.*