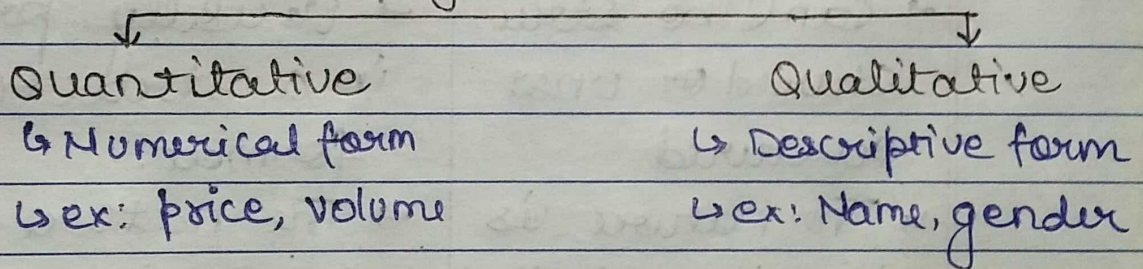


Introduction

Data: Data is a collection of raw, unorganized facts and details like texts, observations, figures, symbols and description of things etc.
Data is measured in bits & bytes.

Data is meaningless unless it is processed.

Types



Information: It is processed, organized and structured form of data.

It is extracted from the data by analyzing and interpreting pieces of data.

ex: You have data of all the clothes in a supermarket, when this data is analyzed and processed then

information can be extracted like

- There are 100 yellow coloured shirts
- There are 25 brands available.

Data	Information
→ Collection of facts	→ It puts facts into use
→ Present in raw form.	→ Present in organized form.
→ Meaningless	→ Meaningful
→ Requires processing.	→ Ready for decision making and action
→ Can be structured or unstructured	→ Usually present in a structured format.
⇒ The nature is objective & factual	→ The nature is subjective and interpretative
→ ex:- sensor readings, survey responses.	→ ex:- performance reports, market analysis.

Database:

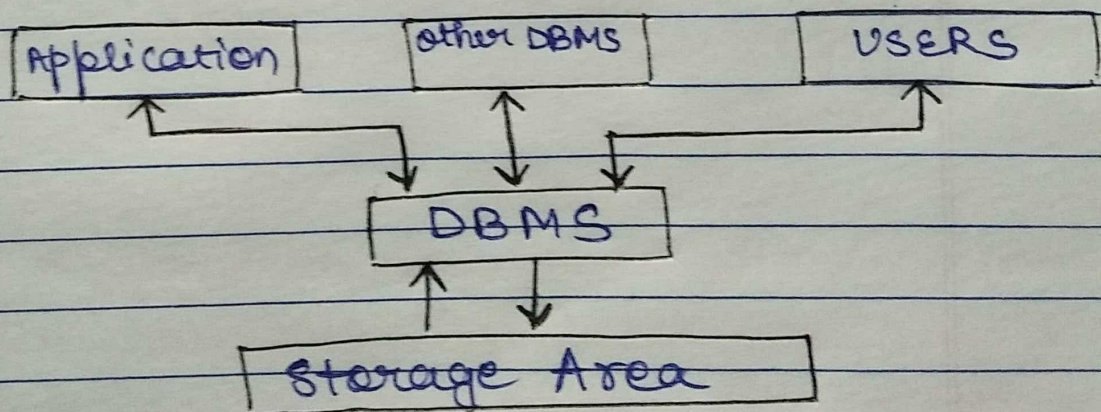
Database is a structured collection of data that is organized and stored in a way that allows for efficient retrieval, management and updating of information.

DBMS (Database Management System)

→ A database - management system (DBMS) is a collection of interrelated data and a set of programs to access these data.

→ The primary goal of a DBMS is to provide a way to store & retrieve database information.

→ It is used to perform different operations like addition, access, updating and deletion of the data.



DBMS

- Manages large form of data
- Organizes data into tables with relationships.
- Enforces data integrity
- Provides access control and security features.
- Supports transaction management & ACID properties

File System

- Manages individual files and unstructured data.
- Organizes data into files and folders.
- Limited support for data integrity
- Limited security features
- Does not support transaction management.