

# Introduction to DBMS

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# What is Data?

- Data is a collection of raw facts and figures.
- Data is the raw material that can be processed by any computing machine.
- It is a collection of facts from which conclusions may be drawn.
- Data can be represented in the form of:
  - numbers and words which can be stored in computer's language.

# What is Information?

- Information is data that has been converted into a more useful information.
- Knowledge acquired through study or experience or instruction .
- Information helps human beings in their decision making.
- Examples: Time table, Account returns etc.

# Need of Information

Information is needed to:

- To gain knowledge about the surroundings, and whatever is happening in the universe.
- To keep the system up to date.
- To know about the rules and regulations etc.
- Based on the above three , to arrive at a particular decision for planning.

# Database

- An organized collection of related information is called database.
- A database is a collection of information that is organized so that it can easily be accessed, managed, and updated.
- E.g.:
  - Dictionary
  - Student Record Register
  - Address Book

# Operations on Database

- **Insert:**
  - To add new information.
- **Update:**
  - To modify the existing information.
- **Delete:**
  - To remove the unwanted information.
- **Retrieve:**
  - To view or retrieve the stored information.
- **Sort:**
  - Arrange the information in ascending or descending order.

# Manual Database

- Manual database is the record keeping system in which human manages the whole database without the support of the computers.
- It becomes very difficult task when no. of records increase.
- It has many problems, like searching, retrieving etc. the records.

# Limitations of Manual Database

- **Redundancy:**
  - Repetition of data in the files.
- **Inconsistency:**
  - Copy of same data in different files may contain different information.
- **Isolation:**
  - As the data is scattered in various files and it is very difficult to access the required data.



# Limitations of Manual Database

- **Security:**
  - Unauthorized person can easily access the data.
- **Time Consuming:**
  - More time was required to search, retrieve and update.
- **Data Recovery:**
  - In case of damage, the data was not recoverable.

Thank You



Have a Nice Day