Frame

DBMS

Lecture 1:-

DBMS -

Data Base Management System

1) Data- Data is collection of raw bytes

Like image is collection of bytes

integer = collection of bytes

-> Data has no meaning to itself, means it is useless until the data was processed

i) Example let a data set-

12	45
34	67
78	90

It is useless because, we don't know about what item the numbers are

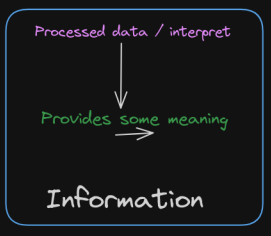
ii) and but we have same data set but processed

Example-

age	weight
12	45
34	67
78	90

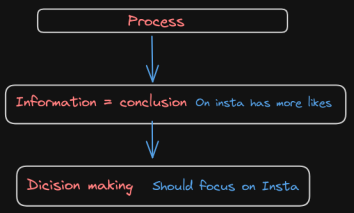
it is usefull becuase, we know that the no. providing information of about age and weight

2) Information - The processed data is called information.



Let an example, we made same post on various platforms (apps)

So, here through the likes data we got to know that our post is more relevant for instagram community



-> Means processed data helps in dicision making

Example -> Amazon -> feedback (data) -> conlusion (information)

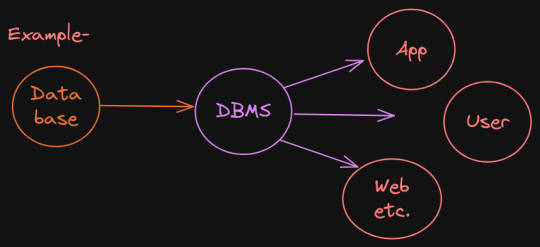
Data	Information
Data is collection of raw facts	Puts those facts into context
Data is raw and unorganized	Information is processed and unorganized
Cannot able to make decision	Used to make decision

Data Base -> It is an electronic place where data is stored in such a way that it can be easily accessed, managed and updated.

DBMS ->

It is a way of creation of database to store data and it is a set of program to perform various operations on the data like accessing, storing, inserting, deleting , modifiying etc.

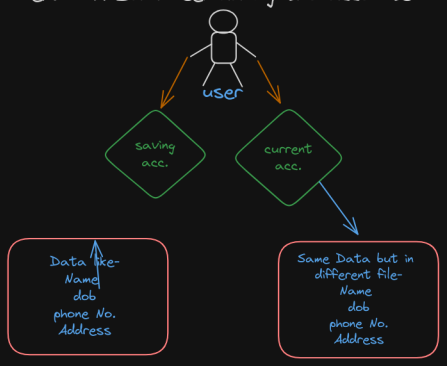
Example-



DBMS vs File System

i) Data redundancy and incosistency:-

ex. -> A Bank user having two accounts



-> Here we have data reduncancy means same data stored twice for two different task

-> And if any data was updated in one acc. and not in second acc. then creates inconsistency of data

ii) Difficult in accessing data

iii) Focuses on given tasks only

iv) Data isolation (different extension of data files like .dat, .txt etc.)

v) Atomicity problems (dicuss on later)

vi) Need of writting programs for each different tasks

vii) Concurrent access anomalies

viii) Security problems

-> We can solve all the above problems through file system but we need to write programs for each, while in DBMS we has predefined functionality.

And all the above disadvantage of filesytem are advantages of DBMS
