Introduction to DBMS

DBMS → Database + Management system

A database is a logically coherent, organised collection of similar data. (Means data based on same context).

"A database Management system is a collection of interrelated data and a set of programs to access those data".

Applications of DBMS:-

Some application areas are as follows:-

1. Banking
2. Railway Reservation
3. Airlines
4. Telecommunication
5. Finance, Sales etc.

The primary goal of DBMS is to provide a way to store and retrieve database information that is both convenient and efficient.

Advantages of DBMS:-

Some major advantages are:-

1. Reduction in data Redundancy.
2. Reduction in inconsistency.
3. Sharing of Data

(4) Enforcement of Standards
(5) Improvement of Data Security
(6) Maintenance of Data Integrity
(7) Better Interaction with Users.
(8) Efficient System

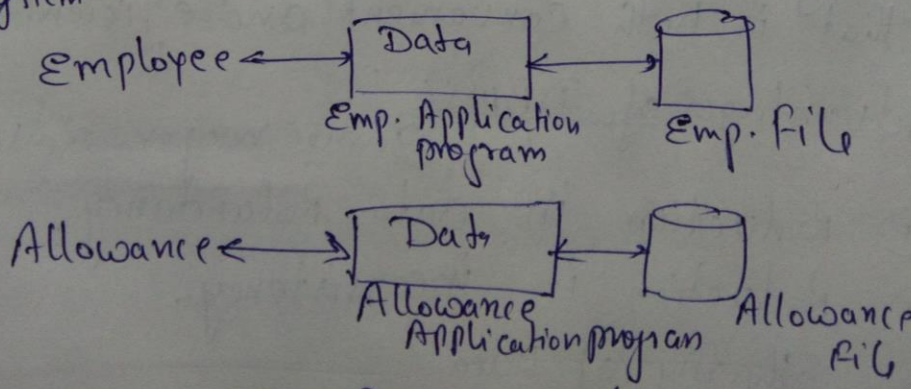
* Database System Vs File System

File System Stores permanent records in various files, and it needs different application programs to extract records from, and add records to appropriate files.

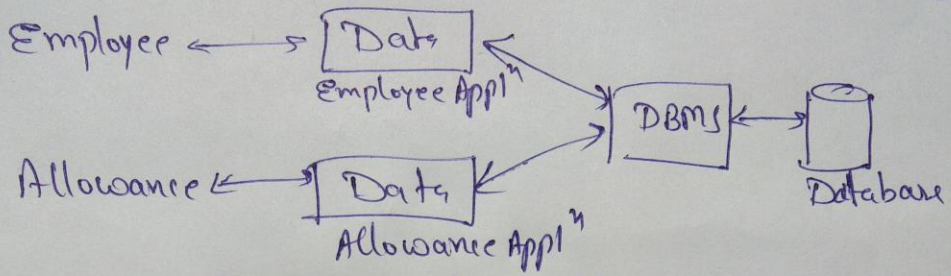
problem associated with file processing system:-

(1) Data Redundancy
(2) Data inconsistency
(3) Problem of data Isolation.
(4) No concurrent Access
(5) Lack of security
(6) Atomicity and integrity problem

Ex File System:-



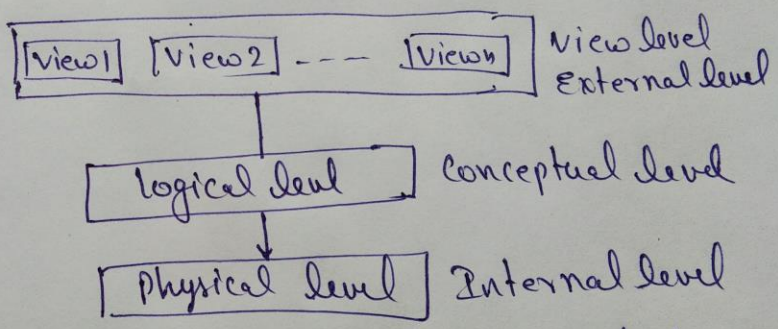
File Processing System



Database Approach

* Database System Concepts and Architecture

Data Abstraction



1. Physical level :- Lowest level of abstraction and it describes how the data are actually stored.
The Physical level describes complex low-level data structures in details.

2. logical level :- It describes what data are stored in the database, and what relationship exist among those data.

3. View level :- This is the highest level of abstraction describes only part of the entire database.
It simplify the interaction with the system. The system may provide many views for the same database.

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