

DSW Tutorial -2 (week-2)

A.1. Data \rightarrow facts

Data persistence \rightarrow Data that can't be changed ex: ROM

Information \rightarrow Data ^{after} processed.

Database \rightarrow collection of processed data

DBMS \rightarrow software to store that database.

A.2. It is more important to use DBMS for a company having larger dataset, which is a harder to manage manually.

A.3. yes, its important to have userfriendly interface. Everyone is not a CS professional and we make database for some end user who may not know to write queries.

A.4. files allow to access a single table at a time. files have no inter-relation b/w tables. file system is not redundant. DBMS support data concurrency.

A.5. Administrator sets up hardware and deploys the operating system for server. It also maintain the data. It can give different permissions to end users.

A.6. on-line Transaction processing system Transaction data is used to stored in DBMS but retrieve it using OLTP.

A.7. \rightarrow Security facility is necessary. XYZ does not plan to share his list with anyone else.

\rightarrow Concurrency Control is not needed.

\rightarrow Crash recovery is necessary because XYZ does not want to loose his data.

~~A.B. (a)~~ → A view mechanism is needed because ~~it~~ it makes more easy & convenient to understand.

→ A query language is necessary because it will define views.

A.B. (i) 3 levels of data abstraction —

- (a) Physical : It tells how the data actually stored in memory.
- (b) Logical : This level comprises the information that is actually stored in the database in the form of tables.
- (c) View : This level exist to ease the accessibility of the database by an individual user.

(ii) Schema vs instances —

→ Schema refers to the overall description of any given database.
like here table including attribute like name, address etc

→ Instance basically refer to a collection of data & information that the database stores at any particular moment.
for ex: Name of particular person, address of student etc