Assignment → 1 [DBMS]

Q. What traditional file System approach? How it is different from the database approach?

Ans The term 'File based System approach' refers to the situation where data is stored in one or more separate computer files. Computer programs access the stored files to perform the various task required by the business. Each program, or some times a related set of programs, is called a computer approach.

Limitation of Traditional file approach

- Data duplication

- Data Inconsistency

- Difficult to implement data security.

Traditional file System approach is different from the database approach as :-

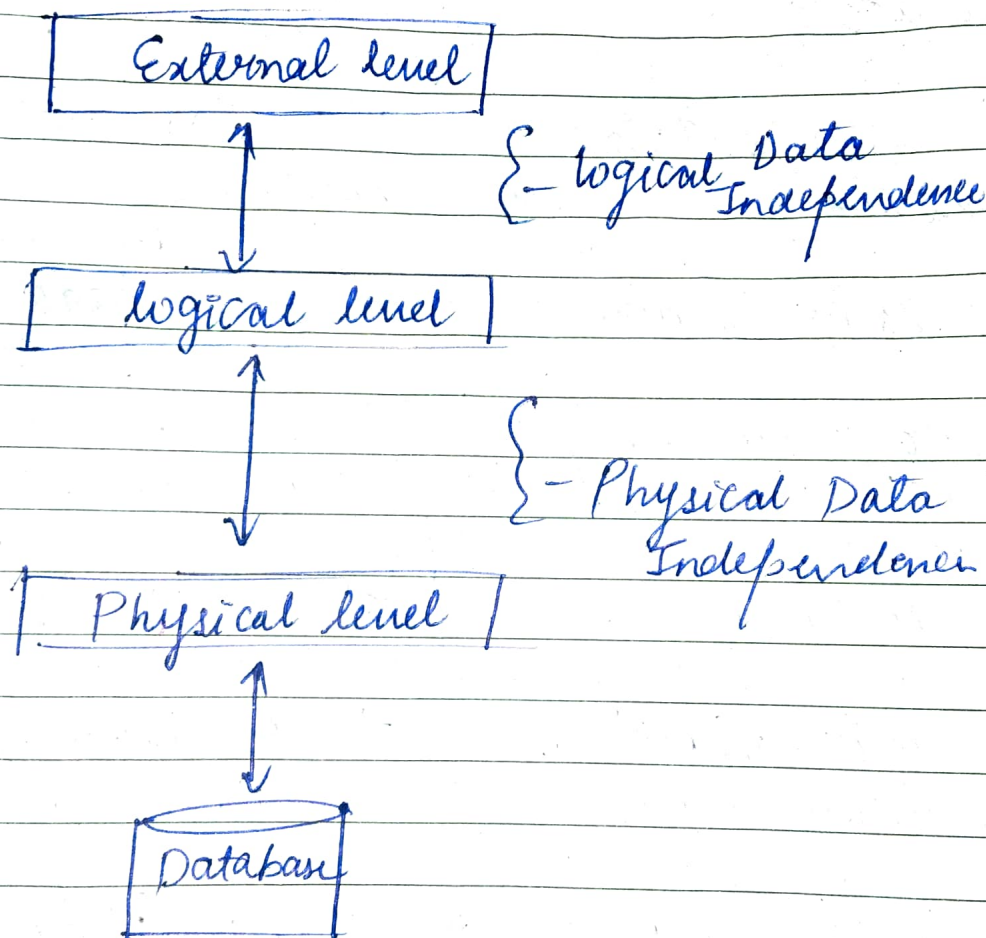| Traditional File System	Database Approach
1) It manages & controls the data files in Computer system	1) Provides a systematic way to access update & delete data
2) It Doesn't support multi user access.	2) It support multi user access.
3) It has low data consistency	3) It has high data consistency
4) It is not secured	4) It is highly secured
5) Data redundancy is high	5) Data redundancy is low.
6) It is cheap	8) It is highly costly.
7) It takes more searching time	7) It takes less searching time.

2. What is Data Independence? Discuss logical and physical data Independency by Giving their examples?

Data Independence refers Characteristics of being able to modify the Schema at one level of the database System without requiring to change the schema at the next higher level.

It helps you to keep data separated from all programs that make use of it.

Data Independence can be explained using 3 Schema Architecutre.

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          ┌─────────────────┐
          │  External level │
          └────────┬────────┘
                   ↕           }- logical Data
                   │              Independence
          ┌────────┴────────┐
          │  logical level  │
          └────────┬────────┘
                   ↕
                   │           }- Physical Data
                   │              Independence
          ┌────────┴────────┐
          │ Physical level  │
          └────────┬────────┘
                   ↕
              ┌─────────┐
              │ Database│
              └─────────┘
```

Types of Data Independence

1) Logical Data Independence
2) Physical Data Independence.

★ Logical Data Independence

It refers to the characterstics of being able to change the conceptual Schema without having the change of External Schema.

- Logical data Independence is use to separate external level from the conceputal view.

Ex→ Merging the two Record into One.

★ Physical Data Independence

- It can be defined as the capacity to change the Internal Schema without having to change the Conceptual Schema.

- Physical Data Independence is used to separate conceputal level from the Internal level.

Ex→ Using a new storage device like Hard disk or Magnetic Tapes.

Q₃ Differentiate Schema and Instance.

Schema	Instance
1) It is the Overall description of the database	1) It is the collection of information stored in database at

Schema	Instance
	a particular moment
2) Schema is same for whole database	2) Data in instance can be changed using addition, deletion, updation.
3) It doesn't change Frequently.	3) It Changes Frequently.
4) It defines the basic Structure of the database i.e how the data will be stored in the database	4) It is the set of information stored at a particular time.

Q4 Role of application programmer and DBA.

Ans4 Application programmer find out the requirement of end users, after that they develop all the requirements for canned transcation through which they can mean all the requirement of the user.

- They implement this analysis as a prog-

ram they are software engineers.

DBA

- It is responsible for creating, modifying & maintaining the Database

- DBA specify the external view of the users & application.

- Maintains the Integrity of the Database

- It is Also responsible for defining procedure to recover the database from failure due to human error, natural or hardware causes with minimal loss of data.