



# SNS COLLEGE OF ENGINEERING



Kurumbapalayam (Po), Coimbatore – 641 107

**An Autonomous Institution**

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A' Grade  
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

## **DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE**

**COURSE NAME : 19IT408 - DATABASE  
MANAGEMENT SYSTEMS**

**II YEAR / III SEMESTER**

**Unit 1- Introduction**

**Topic 1 : Views of Data**



# Views of Data

- It refers that how database is actually stored in database, what data and structure of data used by database for data. So describe all this database provides user with views and these are
  - Data abstraction
  - Instances and schemas



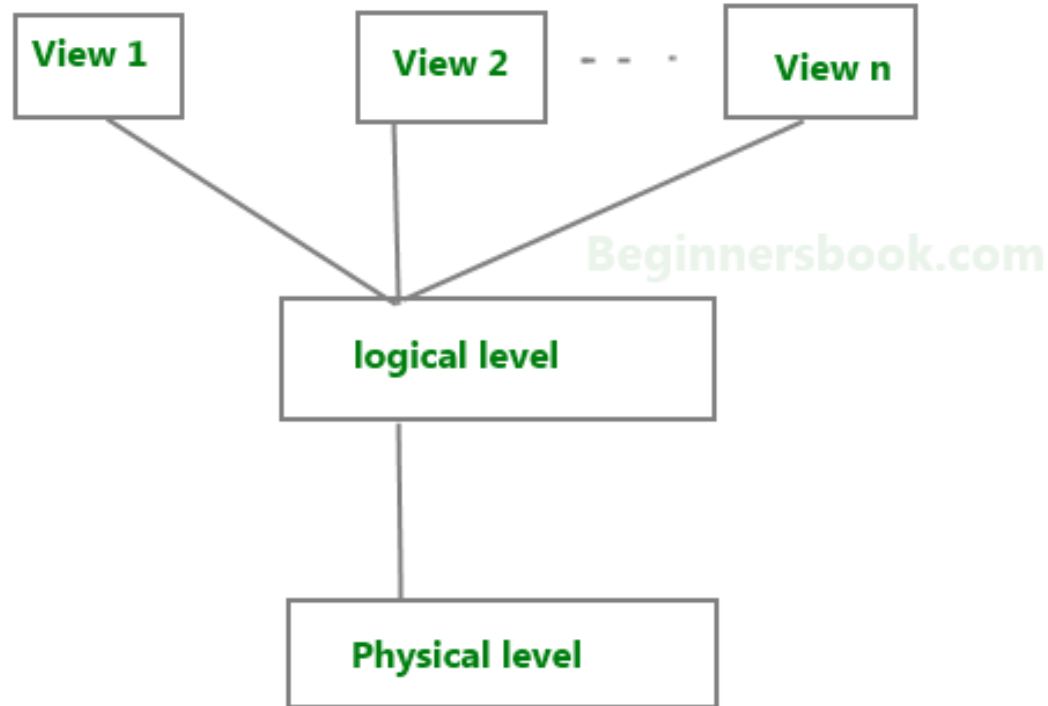
# Data Abstraction

Database systems are made-up of complex data structures. To ease the user interaction with database, the developers hide internal irrelevant details from users. This process of hiding irrelevant details from user is called data abstraction.



## Instances and Schemas

- Design of a database is called the schema. Schema is of three types: Physical schema, logical schema and view schema. The data stored in database at a particular moment of time is called instance of database.
- Database schema defines the variable declarations in tables that belong to a particular database; the value of these variables at a moment of time is called the instance of that database.



### Three Levels of data abstraction

## Views of Data



- User View  
External Level

### User Data

ID	Name
1	Venkat
2	Krishiv

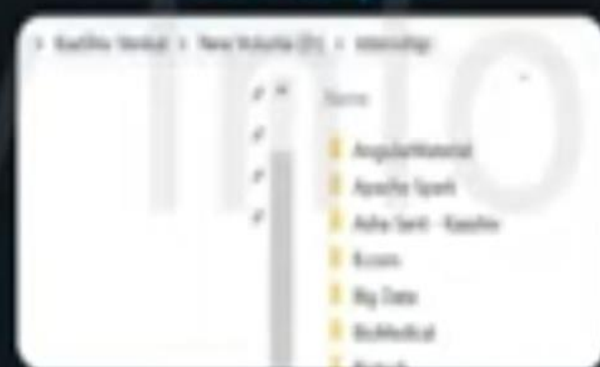
- Logical View  
Conceptual Level

Table 1

Table 2

- Physical View  
Internal Level

### Files in computer





- Physical level:- this is the lowest level of data abstraction which describe How data is actual stored in database. This level basically describe the data structure and access path /indexing use for accessing file.
- Logical level:- The next level of abstraction describe what data are stored in the database and what are the relationship existed among those of data.



- View level:  
the highest level of abstraction describes only part of the entire database. Even though the logical level uses simpler structures, complexity remains because of the variety of information stored in a large database.  
application programs hide details of data types. Views can also hide information (e.g. salary) for security purposes.