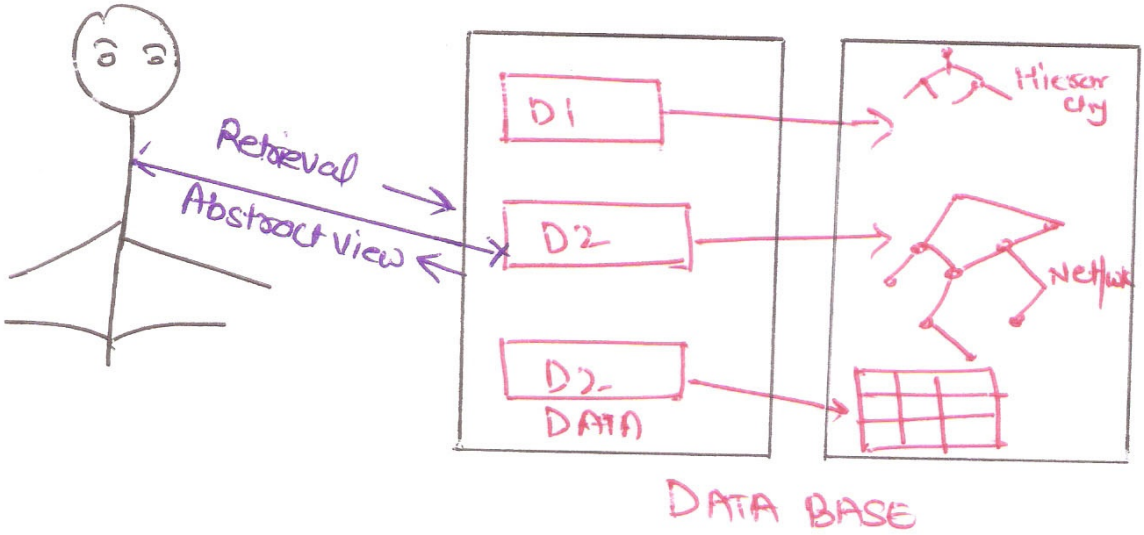
VIEW OF DATA

It regress that how Data is actually stored in database, what data and structure of data used by database for Data. So describe all these database provides user with Views and these are

→ Data Abstraction

→ Instances and schemas

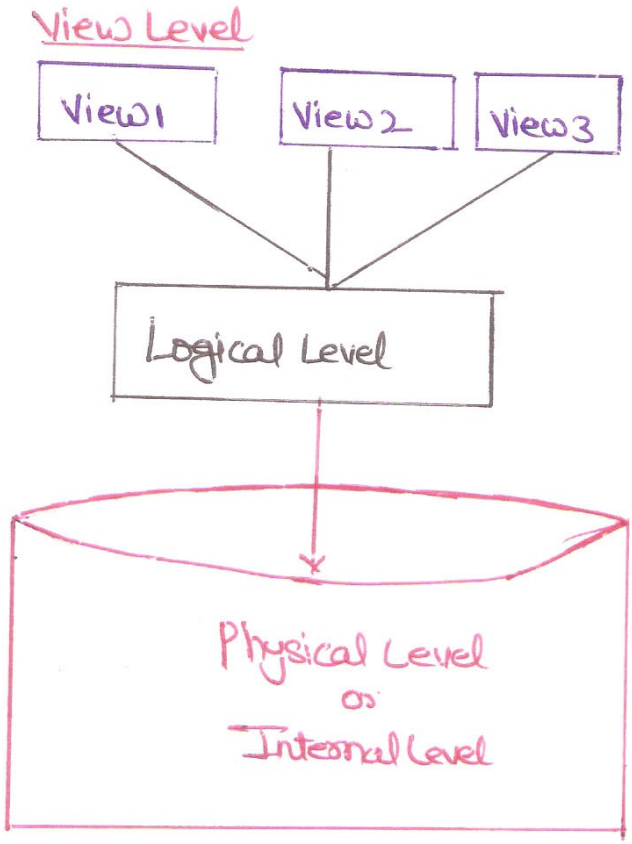
Data Abstraction:- As Data in Database are stored with very Complex Data Structure So when user comes and want to access any Data, he won't be able to access data if he has go through this Datastructure. So to simplify the interaction of user and database, DBMS hides some informations which is not of user interest, this is called Data Abstraction:- So Developer hides Complexity from users and show Abstract View of DATA:-



Data Abstraction has three level of abstraction

- → Physical Level | Internal Level
- → Logical Level / Conceptual Level
- → View Level / External Level

Physical Level → This is the lowest level of data abstraction which describe how data is actually stored in the database. This level basically describe the Data Structure and Access path | Indexing use for accessing file



Account Holder

View1
AC_Name
Amount

Manager

View2
AC_NO
AC_Name
Type

Conceptual	Logical view
AC_NO	numeric(15)
AC-Name	character(20)
Amount	numeric (15)

Internal view	Physical View
Stored-acc	Length=60
Account #	type=bytes(15)
Type	Offset(10)

Logical Level : The next Level of abstraction describes what data are stored in the database and what relationship exist among those data.

View Level :- In this level user only interact with database The complexity remain unview. Users see data Data and there may be many views of one Data like, Chart, Graph.

→ Let suppose we have Customer information so at Physical Level these Records [Customers information] can be describe as block of storage.

→ At the Logical Level these records can be described as Fields and Attributes along with their data-type and relation Ship among each other.

→ At View Level user just interact with System with the help of GUI and enters the detail at the screen.

** L→ User Not aware of what and how data is stored

• INSTANCE and Schema in DBMS :-

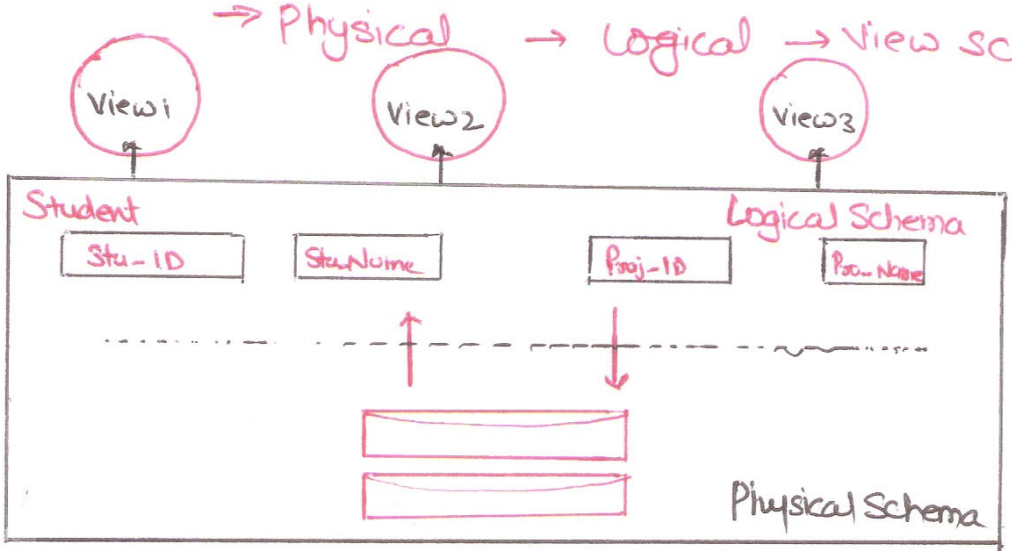
What is Schema ☞ Design of database is called the Schema.

It is a basically skeleton structure that represents the logical view of the entire database.

It defines how data is organized and how the relationship among them are associated. It formulates all the Constraints that are to be applied on the data.

Database System has various schema

→ Physical → Logical → View Schema



→ **Physical Database Schema →**

→ It describes how data will be stored in hard disk | s/c storage

→ It describe the database design at physical level.

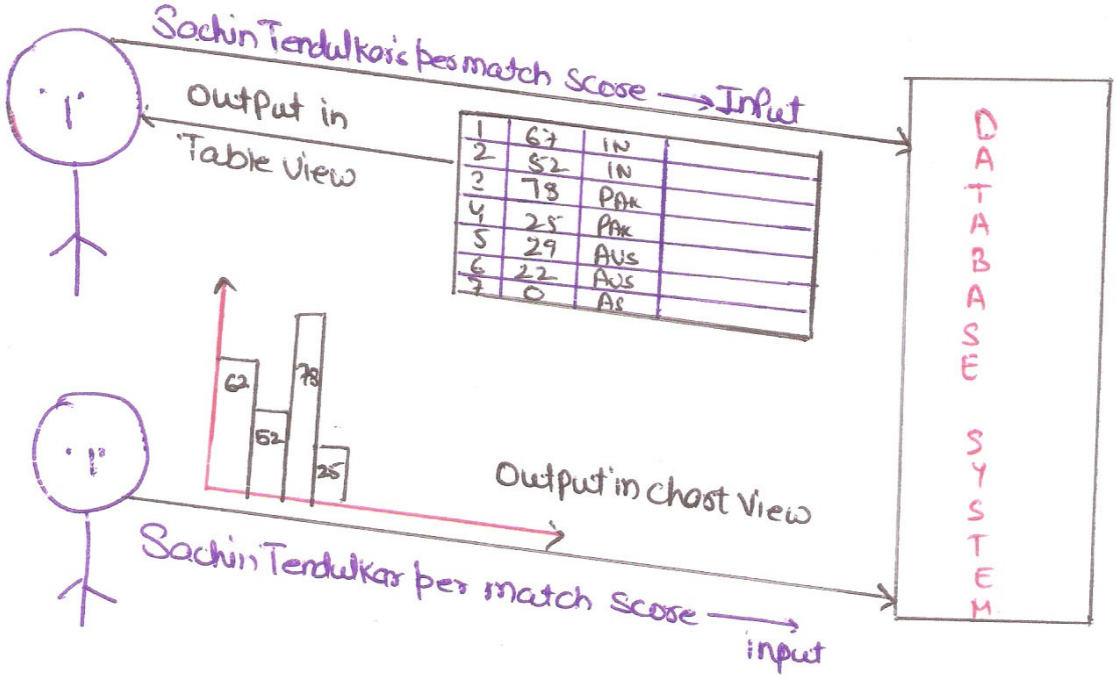
→ This Schema related to the actual storage of data and its form of storage like files, indices.

→ **Logical Database Schema →** This schema defines all the logical constraints that need to be applied on the data stored.

→ It defines Tables, Views, and integrity Constraint.

→ Defines Relation b/w Tables and Keys applied.

→ **View Schema:-** It describe different views of database and some time also called Sub Schema



INSTANCE :- The collection of information stored in the database at a particular moment is called an Instance

Table Student	St_Name	St-ID	St_Gender
Instance →	Deepak	819	M