

Schemas

A database schema is like a blueprint or an architecture of exactly how our data will look. The schema doesn't hold the data itself, but instead it describes the data and how it may be related to other tables or models.

Schemas structures the unstructured data into structured data. Schemas are helpful in designing database management systems.

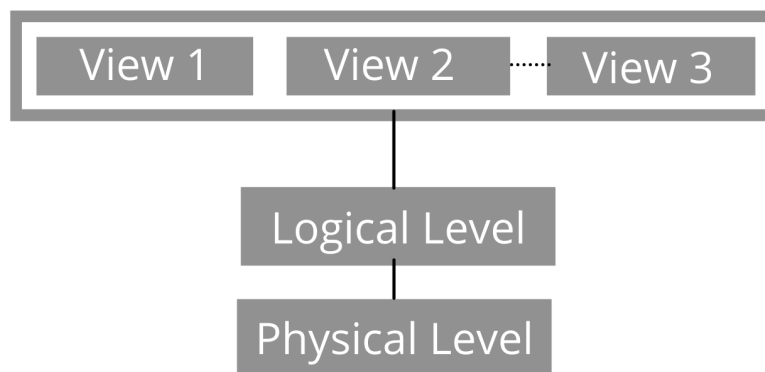


Figure: Schemas

DATABASE SCHEMA TYPES:

There are three main database schema types namely view, logical, physical database schema which define different parts of the schema:

Physical Schema- The physical database schema represents how the actual data is stored on disk storage. That is the actual code that will be used to create the structure of your database.

Logical schema- A logical database schema represents how the data is organized in tables. It explains how attributes from tables are linked to each other. For creating a logical schema, we use ER Model technique.

View Schema - the view schema describes the database design at view level which describes how the user interacts with the database

Advantages of Database Schemas:

1. A database schema can be easily transferred to another user.
2. It enables the transfer of database objects between schemas.

3. Data can be managed independent of physical storage.

Difference between Database and Database Schema:

DATABASE	DATABASE SCHEMA
The database contains interrelated data	Database schema is a structural view of data
Contains the data	Does not contain any data of its own
Data Changes	Schema does not change

Instances:

Instance of a database is defined as the data or collection of information stored in a database at a particular moment of time.

- Data changes frequently in the case of an instance.
- Whenever a new record or data is added in the database, data will be updated.
- It contains a snapshot of the database.

DataModels define the variable declaration in a table that belongs to a particular database. The value of variables which are defined at a particular moment of time are called instances.