Visit: Whatisdbms.com for more Articles

Database Architecture in DBMS with Diagram

Any software should have a design structure of it's functionality i.e. the architecture which defines about it's inside view, likewise there is a **database architecture in DBMS**. The interaction of the database in DBMS with the system and the languages used in the **database architecture** is as shown in the below diagram:

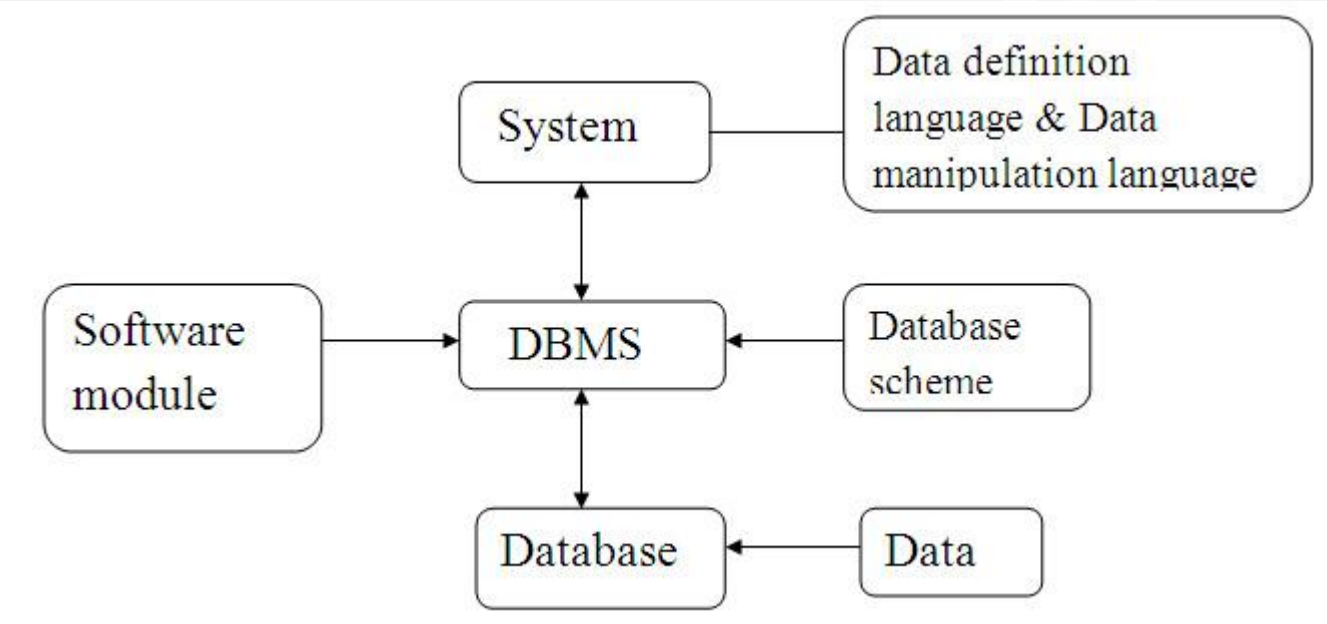

Fig 1: Interaction of Database

The above block diagram broadly explains about the interaction, the database architecture has three levels and they are as follows:

- External level
- Conceptual level
- Internal level

The inter connection of the above levels i.e. architecture of the database in DBMS is as shown in the below block diagram:

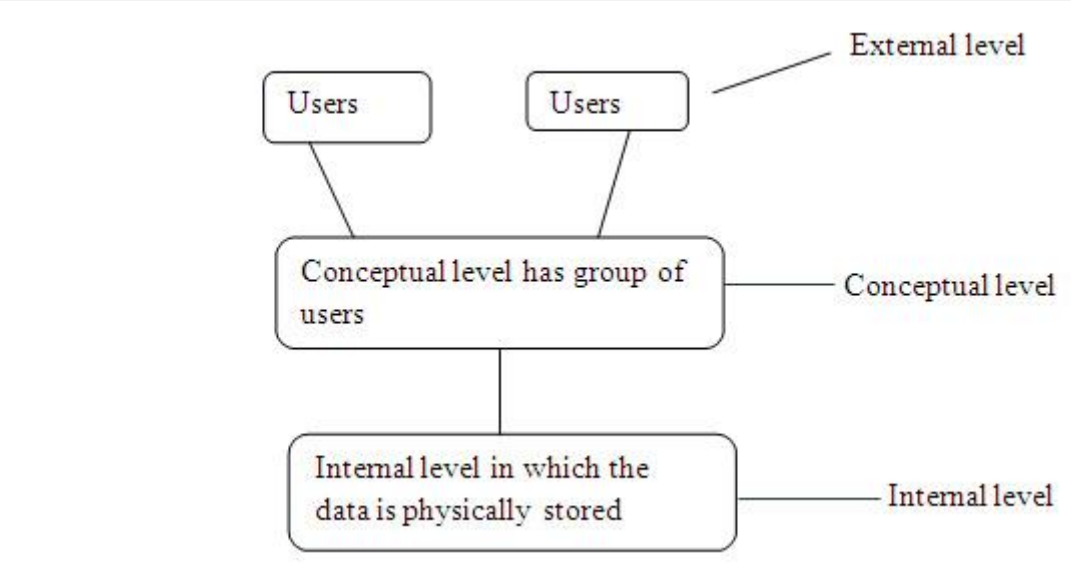

Fig 2: Architecture of Database

EXTERNAL LEVEL

In the block diagram it can be observed that there are many users in the external level the main function in it is concerned with the way the individual user view the data. In this the application programmers need to use a language and we define it as a host language and they are COBOL, PL/I, C.

- The PL/I user contains an external view of the database along it the each PL/I user personate with PL/I record and that record contains two fields, basically these fields are avoided from view. So, to define the record type P1/I structure is used in action with the P1/I rules.
- So, like application programmers embedded also need a language and that is DSL which stands for data sub language. Coming to the data sub language it is again consist of the Data definition language (DDL) and Data manipulation language (DML). The Data sub language (DSL) is used to define and manipulate the objects in which the Data definition language (DDL) plays a major in defining database objects while the Data manipulation language (DML) has the feature of manipulating database objects.

CONCEPTUAL LEVEL

It is seen in the block diagram that there is presence of only one conceptual level and this is used to represent the total information of the database. Basically users represent the data by using a specific hardware or software language because they are mandatory in doing so but in this level the data is represented as genuine data i.e. in the way it is.

- The conceptual record is neither like external record nor like stored record it is represented using a conceptual scheme, by using another data definition language (DDL) and can say that it is a combined groups of external data. In the conceptual schema about every conceptual record's information will be contained in it.
- The conceptual level has many advantages and has improved parameters like
- Security of data
- Integrity checking of information
- Having data dictionary models
- The records in this can checked with authorization
- Records include with feature of validation procedures

INTERNAL LEVEL

The much low class representation of the database is the internal level. In each level we represent data using a simple record or language, likewise internal level is made upon physical records or blocks.

- In terms of ANSI we call it as a stored record i.e. another name of internal level is stored record, internal schema is used in explaining stored records and also about the procedures like how the stored records are represented and where it is represented, also about stored record physical sequence. The internal schema is however represented using another data definition language (DDL).

So With the broad overview of any software and the architecture of it gives the knowledge of it's working, structure, internal process, defects and from this there is even chance of software improvement because of the acquired in depth knowledge. And it was all about **Database Architecture in DBMS with Diagram.** If you have still any doubt then please feel free to ask.