METADATA (DATA DICTIONARY)

Metadata means data about data. In simple words it gives information about available data.

Like consider this number “74”.

we know that this is numeric number seventy-four. But what it represents here?

Now consider this “Flat no. 74”.

Now we can understand that this is a flat number.

So, these kind of information about any data is known as metadata. (Not about the characteristics (74 is a number) but properties related (74 is a flat number)).

Metadata is also known as Data Dictionary or system catalog because its also works as index for all other data present is database.

It helps to understand and differentiate the all-data items, like which one is schema, which one is record, which one is constraints and which one is output.

Metadata is used to differentiate and understand the following:

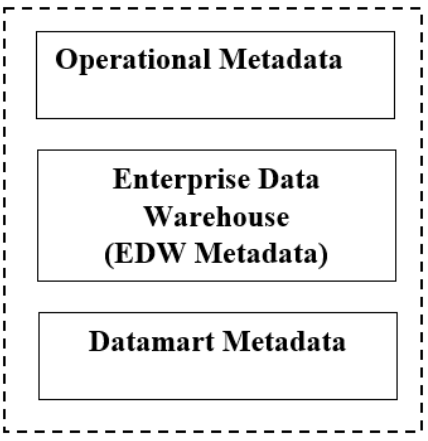
1. Schema data
2. Views data
3. Programs data
4. Authorization data
5. Physical storage and communication technique related data
6. Constraint’s data
7. Accounting of all activities

TYPES OF METADATA:

On the basis of data collection strategy, we can divide metadata in three categories.

1. **Operational Metadata:**
2. **Enterprise Data Warehouse (EDW Metadata)**
3. **Datamart Metadata**

Layers of MetaData



Operational Metadata:

This is first stage where end users put their data as an information with the help of different types of applications like online exam form filling, ticket booking, hotel reservation, online documentation apply etc. Also, it stores the all-other data like procedures and access methods of the application, rather than information and keep track and record of both data items. This data goes to Enterprise Data Warehouse as a collection.

These kinds of lots of Operational Metadata feeds the EDW but this is not that much easy. All the Operational Metadata have different formats with individual separate quality so to arrange and manage this kind of data needs highly advance technology and machineries. Also, the Operational Metadata is very vulnerable because it can be lost or damaged while transferring or relocating.

Enterprise Data Warehouse (EDW Metadata):

This is second stage where all the Operational Metadata collected from different sources (various running applications). Here the data is filtered and arranged in different groups as per their types and future scopes. In this stage analytics and researchers analyze the data and find out their required information. Also, the data is validated and reconciled with the help of tools to find its accuracy. Finally generated output data is transferred to the Data mart metadata.

Datamart Metadata:

This is third stage where actually fully furbished data is available in all separate sections. This data mart almost considers all possible categories and hold the data from all categories. Here we can find any type of data which is significantly well arranged and ready to use.

Also, it follows the encapsulation rule to present summarized data for the selection.

Each single DataMart is a collection of specific and specially associated data related to a specific category allotted.

Let's take an example:

Data mart is like sections of a supermarket just like grocery section, electronics sections, household section etc.

The supermarket is like Enterprise Data Warehouse.

Operational Metadata is like all the supplies a super market receive for trade like grocery items, bakery items, electronics items etc.