

## **Types of DBMS**

Four Types of DBMS systems are:

### **A. Hierarchical DBMS**

In a Hierarchical database, model data is organized in a tree-like structure. Data is Stored Hierarchically (top down or bottom up) format. Data is represented using a parent-child relationship. In Hierarchical DBMS parent may have many children, but children have only one parent.

### **B. Network Model**

The network database model allows each child to have multiple parents. It helps you to address the need to model more complex relationships like as the orders/parts many-to-many relationship. In this model, entities are organized in a graph which can be accessed through several paths.

### **C. Relational model**

Relational DBMS is the most widely used DBMS model because it is one of the easiest. This model is based on normalizing data in the rows and columns of the tables. Relational model stored in fixed structures and manipulated using SQL.

### **D. Object-Oriented Model**

In Object-oriented Model data stored in the form of objects. The structure which is called classes which display data within it. It defines a database as a collection of objects which stores both data member's values and operations.


## **Advantages of DBMS**

- ✚ DBMS offers a variety of techniques to store & retrieve data
- ✚ DBMS serves as an efficient handler to balance the needs of multiple applications using the same data
- ✚ Uniform administration procedures for data
- ✚ Application programmers never exposed to details of data representation and storage.
- ✚ A DBMS uses various powerful functions to store and retrieve data efficiently.
- ✚ Offers Data Integrity and Security
- ✚ The DBMS implies integrity constraints to get a high level of protection against prohibited access to data.
- ✚ A DBMS schedules concurrent access to the data in such a manner that only one user can access the same data at a time
- ✚ Reduced Application Development Time

## **Disadvantage of DBMS**

- ✚ DBMS may offer plenty of advantages but, it has certain flaws–
- ✚ Cost of Hardware and Software of a DBMS is quite high which increases the budget of your organization.
- ✚ Most database management systems are often complex systems, so the training for users to use the DBMS is required.
- ✚ In some organizations, all data is integrated into a single database which can be damaged because of electric failure or database is corrupted on the storage media
- ✚ Use of the same program at a time by many users sometimes lead

to the loss of some data.

 DBMS can't perform sophisticated calculations

### **When not to use a DBMS system?**

Although, DBMS system is useful. It is still not suited for specific task mentioned below:

Not recommended when you do not have the budget or the expertise to operate a DBMS. In such cases, Excel/CSV/Flat Files could do just fine.