

Comparison Between Hierarchical, Network and Relational model

Hierarchical Data Model	Network Data Model	Relational Data Model
1. Relationship between records is of the parent child type.	1. Relationship between records is expressed in the form of pointers or links.	1. Relationship between records is represented by a relation that contains a key for each record involved in the relationship.
2. Many to many relationship cannot be expressed in this model	2. Many to many relationship can also be implemented in this model	2. Many to many relationship can be easily implemented.
3. It is a simple, straightforward and natural method of implementing record relationships.	3. Record relationship implementation is quite complex due to the use of pointers.	3. Relationship implementation is very easy through the use of a key or composite key field.
4. This type of model is useful only when there is some hierarchical character in the database.	4. Network model is useful for representing such records which have many to many relationships.	4. Relational model is useful for representing most of the real world objects and relationships among them.
5. Searching for a record is very difficult since one can retrieve a child only after going through its parent record.	5. Searching for a record is easy since there are multiple access paths to a data element.	5. A unique, indexed key field is used to search for a data element.
6. In Hierarchical model record relations are physical.	6. In Network model record relations are physical.	6. Relational model does not maintain physical connection among records, data is organized logically in the form of rows and columns and stored in table.
7. During updation or deletion process, chances of data inconsistency is involved.	7. No problem of inconsistency exists in Network model.	7. Data integrity maintaining methods like Normalization process are adopted for consistency.