

Fundamentals of Database Management Systems

Evolution of Database management systems

Since pre-stage flat-file system, to relational and object-relational systems, database technology has gone through several generations and its history that is spread over more than 40 years now.

Early Database Application –

The Hierarchical and Networking Models were announced in mid-1960 and conquered during the seventies. A bulk of the global database processing still occurs using these models.

1968 – Used Flat files to maintained data. There were some advantages and disadvantages of the this systems

- Advantages – several access methods; e.g., sequential, indexed, random
- Disadvantages –
 - 1) Have need of extensive programming in third-generation language such as COBOL, BASIC.
 - 2) Weak security.

Relational model based systems -

The model that was formerly announced in 1970 was heavily researched and experimented with IBM and academies. Relational DBMS Products developed in the 1980's.

Job roles related to database management systems

What is a roles database –

A roles database is a mechanism used to assign a user access to data or applications.

Access control information for an enterprise should be hosted centrally, and made available to remote applications as needed

Data Administrator (DA) –

The Data Administrator responsible for the management of the data resource including database planning, development and maintenance of standards, policies and procedures, and conceptual/logical database design. The DA consults with and advises senior managers, ensuring that the direction of database development will ultimately support corporate objectives.

- DA's responsibilities -
 - 1) Database design.
 - 2) Database accessibility
 - 3) Correct Performance issues
 - 4) Correct capacity issues
 - 5) Data replication
 - 6) Table maintenance
- Data administrator carries a massive amount of responsibilities.