

Functions and responsibilities of DBAs

DBA: person in the organization who controls the design and the use of the database refers as DBA.

1. Schema Definition:

- The DBA defines the logical Schema of the database. A Schema refers to the overall logical structure of the database.
- According to this schema, database will be developed to store required data for an organization.

2. Storage Structure and Access Method Definition:

- The DBA decides how the data is to be represented in the stored database.

3. Assisting Application Programmers:

- The DBA provides assistance to application programmers to develop application programs.

4. Physical Organization Modification:

- The DBA modifies the physical organization of the database to reflect the changing needs of the organization or to improve performance.

5. Approving Data Access:

- The DBA determines which user needs access to which part of the database.
- According to this, various types of authorizations are granted to different users.

6. Monitoring Performance:

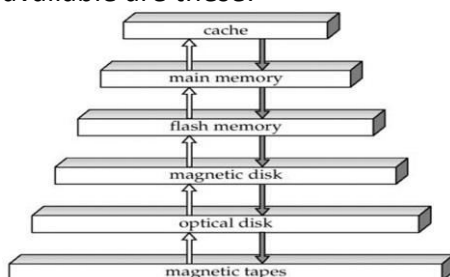
- The DBA monitors performance of the system. The DBA ensures that better performance is maintained by making changes in physical or logical schema if required.

7. Backup and Recovery:

- Database should not be lost or damaged.
- The DBA ensures this periodically backing up the database on magnetic tapes or remote servers.
- In case of failure, such as virus attack database is recovered from this backup.

Unit 3 Storage Hierarchy Overview of Physical Storage Media

Several types of data storage exist in most computer systems. These storage media are classified by the speed with which data can be accessed, by the cost per unit of data to buy the medium, and by the medium's reliability. Among the media typically available are these:



The various storage media can be organized in a hierarchy (Figure 10.1) according to their speed and their cost. The higher levels are expensive, but are fast. As we move down the hierarchy, the cost per bit decreases, whereas the access time increases. This trade-off is reasonable; if a given storage system were both faster and less expensive than another—other properties being the same—then there would be no reason to use the slower, more expensive memory