Function of DBMS

- Data dictionary management

- Data storage management

- Data transformation & presentation

- Security management

- Multi user access control

- Backup & recovery management

- Data integrity management

- Database access language

[1] Data dictionary management:-

- Data dictionary stores information on definition of the of the data and the relationship that exists among the data.

- DBMS user data dictionary to look-up data, their type and size, and relationship with other data.

- The application programmer does not have to code such complete structural information.

- DBMS provides data abstraction and remove structural and data independence from the system.

[2] Data storage management:-

- DBMS creates the structure required for the storage of the data.

- We do not need to define and program the physical data characteristic.

- DBMS not only provides storage of data but also for related data entry forms or screen definition, report definition, data validation rules, etc..

[3] Data transformation & presentation:-

- DBMS transforms the entered data to confirm to the data structure that are required to store the data.

- By maintaining data independence, the DBMS translate logical request for the data into commands that physically locate and retrieve the request data.

- DBMS formats the physically retrieved data to make it confirm to the user's logical expectation.

[4] Security management:-

- DBMS create a security system that enforce user security and data privacy with in the database.

- Security rules determine who can access the database , what data can be accessed & what operation the user can perform.

- In multi-user environment this is especially important since many users access the database simultaneously.

[5] Multi user access control:-

- With the help of data integrity & data consistency the DBMS user algorithm to ensure multiple users can access the data concurrently and still guarantee the integrity of the database.

[6] Backup & recovery management:-

- For the safety of the data DBMS provides this type of facilities such as back up and recovery.

- The recovery management deals with recovery of the database after a failure, such as bad sector in the disk, a power failure and so on.

[7] Data integrity management:-

- The DBMS enforce integrity rule for the minimizing data redundancy and maximizing data consistency.

[8] Database access language:-

- DBMS supports data access language DBMS query language to access data.
- DBMS query language has three component:- DDL, DCL DML

Explain role of DBA

- There are six major role of DBA.

[1] Defining the conceptual schema

[2] Defining the internal schema

[3] Communicate with users

[4] Defining security and integrity constraints

[5] Defining dump / restore schema

[6] Monitoring performance and responding to changing requirements:-

[1] Defining the conceptual schema:-

- DBA decide exactly "what" information to be stored in database.

- This process is usually referred to as a logical database designing.

[2] defining the internal schema:-

- The DBA must also decide how the data is to be represented in the stored database.

- This process is usually referred to as physical database designing.

[3] Communicate with users:-

- It is business of DBA to co-operate with user to ensure that data which user want are available or not.

[4] Defining security and integrity constraints:-

- Security and integrity is a part of conceptual schema. DBA is responsible for defining authentication schema.

- DBA must ensure that data which are stored in database must be accurate and correct.

[5] defining dump / restore schema:-

- Once database system is completed and number of translation are successfully done DBA must ensure your data each are updated.

- If any damage of any portion from database by human of system failure in hardware of operating system so at that time DBA able to repair those kind of failure of losses with the help of back up.

[6] Monitoring performance and responding to changing requirements:-

- For good and better performance by database DBA must monitor whole database system.

- If the system are not working properly than DBA is responsible to take appropriate technical decision to improve system performance.