

DBMS

DBMS :- Database Management System

DBMS stands for Database management system.

"Database management system is software that is used to manage the database".

• Database:- The database is collection of data that are related in a meaningful way.

→ It is a systematic collection of data.

→ Databases makes data management easy.

→ It is also used to organize the data in the form of a table, schema, views and reports.

→ For example:- The college database organizes the data about the admin, staff and students etc.

→ Using the database, you can retrieve, insert and delete information.

Database Management System :-

- Database management system is a software which is used to manage the database.
- **for example** :- MySQL, Oracle, etc are a very popular commercial database which is used in different applications.
- DBMS provides an interface to perform various operations like database creation, storing data, updating data a lot more.

DBMS allows users the following tasks:-

- (i) **Data Definition**:- It helps in creation, modification and removal of definition that defines the organization of data in the database.
- (ii) **Data Updation**:- It is used for the insertion, modification and deletion.

ciii) Data Retrieval :- It is used to retrieve the data from the database.

civ) User Administration :- It helps in registering and monitoring users, maintain data integrity, monitoring performance, dealing with concurrency control.

* Characteristics of DBMS

- It is used to provide security of data.
- It supports sharing of data and multiuser transaction process.
- It contains automatic backup and recovery procedures.
- It can reduce the complex relationship between the data.
- It supports multiple views of data (according to the requirement of the user).

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* Advantages of DBMS :-

- (i) Reduce Time :- It reduces the application development time.
- (ii) Easily Maintenance :- It can be easily maintain due to centralized nature of database system.
- (iii) Data sharing :- In DBMS, the authorized users of an organization can share the data among multiple users.
- (iv) Backup :- It provides backup and recovery sub system.
- (v) Data Integrity :- It means data is accurate and consistent in DBMS.

* Disadvantages of DBMS :-

- (i) Size :- It occupies large memory to run efficiently
- (ii) Complexity :- Database system creates additional complexity and requirements
- (iii) Cost of Hardware and Software :- It requires a high speed of data processor and large memory size to run DBMS software.