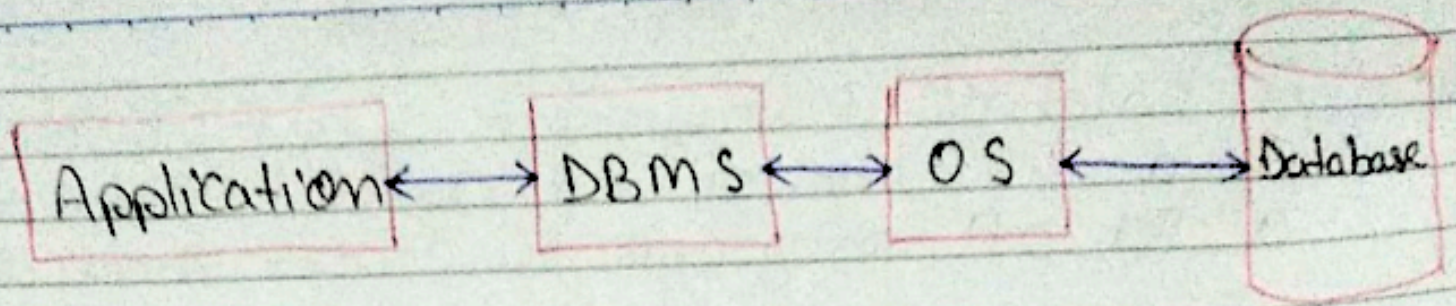


Introduction of DBMS

- A Database Management System (DBMS) is a Collection of interrelated data and a set of programs to access those data.
- DBMS (Database management System) is used to organize the data in the form of a table, Schema, view and report etc.
- The Primary goal of a DBMS is to provide a way to store and retrieve database information that is both convenient and efficient.
- Database management System is the combination of two words:-

Database + Management System = DBMS

- A Database is a Collection of related information stored, so that it is available to many users for different purpose.
- Database management System is a Collection of programs that enables users to create and maintain the database.



DBMS Can also be define as an interface between the Application program and the operating System to Access and manipulate that database.

- 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.

Characteristics and Applications of DBMS# Characteristics of DBMS

- It Uses a digital repository established on a server to store and manage the information.
- It Can provide a clear and logical view of the process that manipulates data.
- DBMS Contains automatic backup and recovery procedures.
Atomicity Consistency Isolation Durability
- It Contains ACID properties which maintain data in a healthy state in case of failure.
- It Can reduce the complex relationship between data.
- It is used to support manipulation and processing of data.
- It is used to provide security of data.
- It Can view the database from different viewpoints according to the requirements of the user.

Applications of DBMS

1. Banking → For maintaining Customer information, accounts, loans and banking transactions.
2. Universities → For maintaining Student records, Course registration and grades.
3. Railway Reservation → For checking the availability of reservation in different trains, tickets, etc.
4. Airlines → For reservation and schedule information.
5. Telecommunication → For keeping records of calls made, generating monthly bills etc.
6. Finance → For storing information about holidays, sales and purchase of financial instruments.

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Advantages and Disadvantages of DBMS

Advantages of DBMS →

- Control Database redundancy → It can control data redundancy because it stores all the data in one single database file and that recorded data is placed in the database.
- Data Sharing → In DBMS, the authorized users of an organization can share the data among multiple users.
- Easily maintenance → It can be easily maintainable due to the centralized nature of the database system.
- Reduce time → It reduces development time and maintenance need.

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Different types of user interface like graphical user interfaces, application program interfaces

Disadvantages of DBMS

- Cost of Hardware and Software → It requires a high speed of data processor and large memory size to run DBMS sys.
- Size → It occupies a large space of disks and large memory to run them efficiently.
- Complexity → Database system creates additional complexity and requirements.
- Higher impact of failure → failure is highly impacted the database because in most of the organizations all the data stored in a

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