DBMS
(Database Management System)

What is Data?

Data is nothing but facts and statistics stored

generally it's raw and unprocessed.

Ex-your name, it's data, your age, it's data

What is Information?

Data becomes information when it is processed, turning it into something meaningful.

What is Information?

When the data are arranged in a systematic way then it is referred as information.

What is Information?

Information is the data that has been converted into more useful or intelligent form. For ex-: Report card sheet.

What is a Database?

A Database is a collection of related data organised in a way that data can be easily accessed, managed and updated..

What is DBMS?

A DBMS is a software that allows creation, definition and manipulation of database

allowing users to store, process and analyse data easily

What is DBMS?

DBMS provides us with an interface or a tool, to perform various operations like creating database, storing data in it, updating data, creating tables in the database and a lot more

What is DBMS?

DBMS also provides protection and security to the databases. It also maintains data consistency in case of multiple users

Popular DBMS

Here are some examples of popular DBMS used these days:

MySql
Oracle
SQL Server
IBM DB2
PostgreSQL

Advantages of DBMS

i) Controlling Data Redundancy

Data is recorded in only one place in the database & it is not duplicated. It saves the storage space.

Advantages of DBMS

ii) Data Consistency

Data appears only once(no redundancy) so the updated value is immediately available to all users.

Advantages of DBMS

iii) Backup and Recovery Procedures:

It automatically creates a backup of data and restore data if required.

Advantages of DBMS

iv) Data independence:

Data Independence is defined as a property of DBMS that helps you to change the Database schema at one level of a database system without requiring to change the schema at the next higher level. Data independence helps you to keep data separated from all programs that make use of it.

Advantages of DBMS

v) Enforcing Data integrity:

Data Independence is defined as a property of DBMS that helps you to change the Database schema at one level of a database system without requiring to change the schema at the next higher level. Data independence helps you to keep data separated from all programs that make use of it.

Advantages of DBMS

vi) Data Sharing:

The data stored in the database can be shared among multiple users or application program.

Characteristics of DBMS

- Data stored into Tables
- Reduced Redundancy
- Data Consistency
- Support Multiple user and Concurrent Access
- Security

Data stored into Tables

Data is never directly stored into the database. Data is stored into tables, created inside the database.

Data stored into Tables

DBMS also allows to have relationships between tables which makes the data more meaningful and connected.

Reduced Redundancy

In the modern world hard drives are very cheap, but earlier when hard drives were too expensive, unnecessary repetition of data in database was a big problem. But DBMS follows Normalisation which divides the data in such a way that repetition is minimum.