

# Data Base Management Systems

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1) DBMS?

→ Data is a collection of raw facts.

e.g. Numbers, text etc.

→ where we store that Data is known as Database

Databases when data is stored in an organized manner so that you can easily access, search, or update it, that is basically database.

→ Data storage techniques

1) Books and file system.

→ where we store the data in books. It has some disadvantages like, lost book then data will loss completely or Data Retrieving problems.

2) → flat file systems. Inside the computer we store the data in the file format ex (Notepad) it has also some disadvantages.

Advantages - Backup, Edit, Removal, sharing and portability.

→ It has disadvantage like data retrieving.

2) Redundancy problems

3 Database :- It provide security.  
it perform use SQL language.  
means only technical persons can use it.  
for Non technical still, there is Book and  
flat file system.

→ whatever we have data if like  
→ Name  
Roll No  
Class

Address if we will store it in the database (like MySQL, Oracle) or MongoDB.  
we will store on it.

Advantages.

- ↳ Data Retrieval :- we perform query for it
- ↳ Secure
- ↳ Redundancy Data (Repeated Data.)
- ↳ Data integrity :- means data should be accurate, correct, and reliable.

It ensures that data in the database is not changed wrongly, not lost, and always valid.

Ex:-

If Roll No 101 → Name: Ali, Marks 85

If someone enters Marks = 850 (by mistake)

that breaks the integrity.

• correct data = 85, not 850

⇒ DBMS - Not For Managing the Database  
we need the DBMS.

and for every ~~DB~~ Database there is a  
different way for that we use DBMS.  
Data Base Management system.

it is the software designed  
to create, manage and interact with  
databases.

it provide the systematic way to  
store, retrieve and manipulate data  
by ensuring data integrity, security and  
accessibility.

→ while the DBMS introduce set of  
data models are arrived in Market  
like

1 RDBMS

2 NOSQL DBMS

3 HDBMS → Hierarchical Data Systems

4 NDBMS → Network Database Management System

5 OODBMS → Object oriented DBMS.

→ RDBMS (Relational DataBase MS)

stores Data in Tabular format (row  
and column)

e.g. Oracle, MySQL, PostgreSQL, etc.

in the software our Data store in  
the Tabular format.