


Database Management System

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- A database is a collection of related files that are usually integrated, linked or cross-referenced to one another.
- The advantage of a database is that data and records contained in different files can be easily organized and retrieved using specialized database management software called a database management system (DBMS) or database manager.


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- A database management system is a set of software programs that allows users to create, edit and update data in database files, and store and retrieve data from those database files.
 - Data in a database can be added, deleted, changed, sorted or searched all using a DBMS.

DBMSs are commonly used to manage:

- Membership and subscription mailing lists
- Accounting and bookkeeping information
- The data obtained from scientific research
- Customer information
- Inventory information
- Personal records
- Library information

DBMSs and File Management Systems

- Computerized file management systems are not considered true database management systems because files cannot be easily linked to each other.
- However, they can serve as useful data management functions by providing a system for storing information in files.

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- For example, a file management system might be used to store a mailing list or a personal address book.
 - When files need to be linked, a relational database should be created using database application software such as Oracle, Microsoft Access, IBM DB2, or FileMaker Pro.

Advantages of a DBMS

- **Improved availability**
- **User-friendly**
- **Minimized redundancy**
- **Accuracy**
- **Program and file consistency**
- **Improved security**

Disadvantages of a DBMS

- **Cost:** Implementing a DBMS system can be expensive and time-consuming, especially in large organizations. Training requirements alone can be quite costly.
- **Security:** Even with safeguards in place, it may be possible for some unauthorized users to access the database.