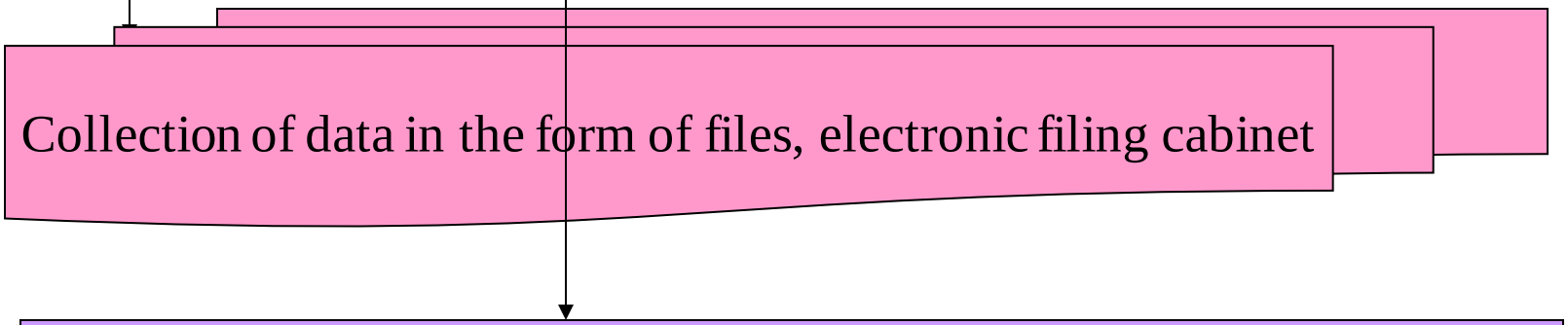
Database Management System (DBMS)

Non-technical

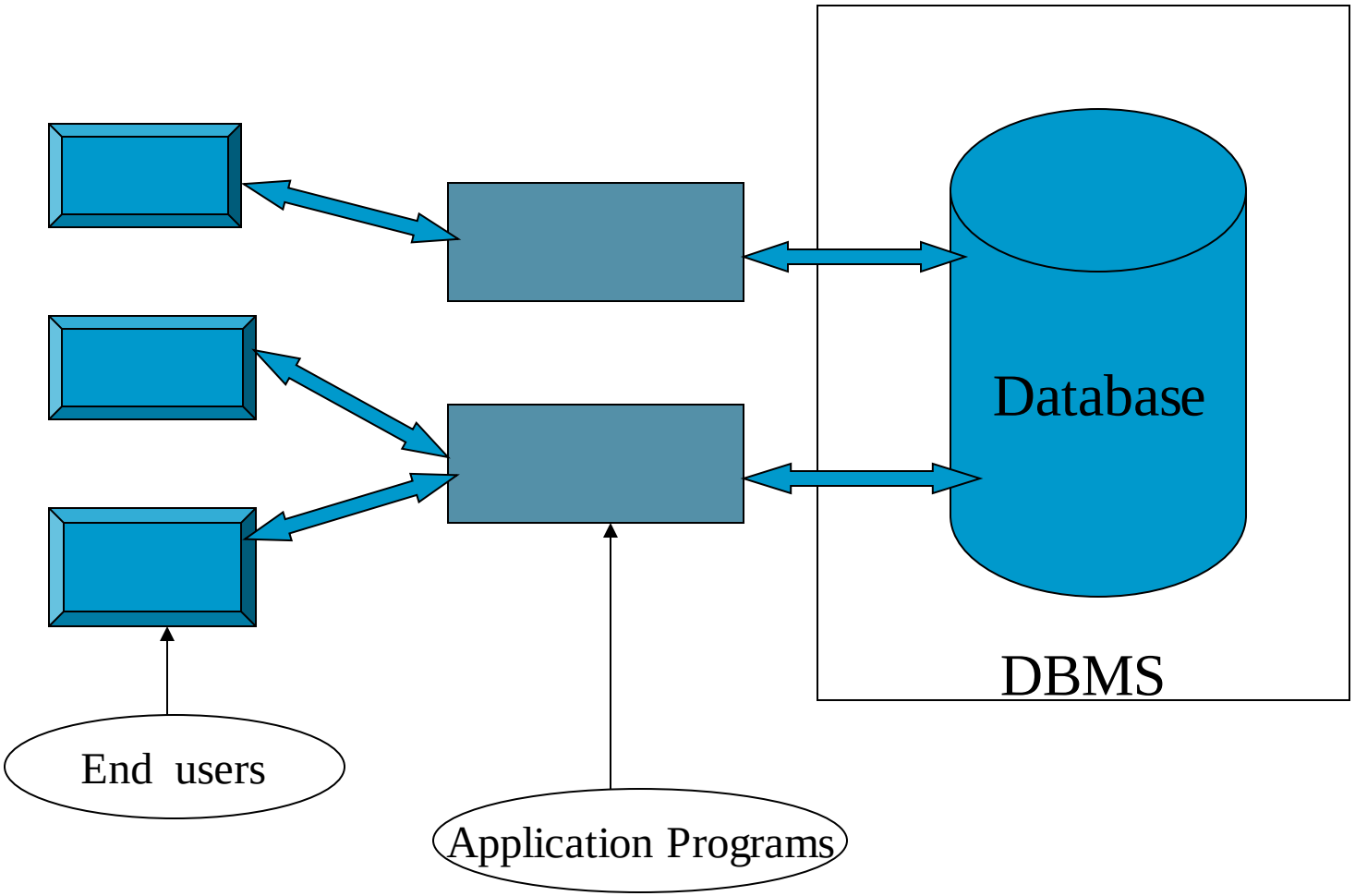
is just a computerized record-keeping system.



A software or application providing operations on the data like, adding new files, inserting new data, retrieving existing data, updating and deleting data,removing files etc.

- DBMS is an application, which holds user data permanently and then provide different operations on this data e.g., retrieval of data, insertion of data, updation of data etc.
- It is a computerized system whose overall purpose is to maintain information and to make that information available on demand.

How DBMS works



Important terms and definitions

- Retrieval, Insertion, Deletion, Updation
- Field, Record, Table
- Structured Query Language (SQL)
- Data vs. Information
- Single-user and Multi-user Systems
- Integrated and Shared
- Data Administration
  - identifying data and needs of enterprise w.r.t. data, deciding what data should be stored, establishing policies for maintaining and dealing with stored data
- Database Administration
  - creating actual database and implementing technical controls needed to enforce policy decisions made by data administrator and related technical services
- Database users
  - Application Programmers
  - End Users
  - DBA's

Important terms and definitions

- Data Sub languages
  - DDL
  - DML
  - DCL
  - Query Language
- Schema
  - Internal
  - External
  - Conceptual
- Data Dictionary
- Redundancy
- Client/Server Architecture
- Distributed Processing and Database System
- Security and Integrity
- Backup and Recovery

Advantages of DBMS

- DBMS vs. Traditional Paper Based System
  - Compactness
  - Speed
  - Less Drudgery
  - Currency
- Benefits in centralized control of data
  - Removal of Redundancy
  - Avoiding Inconsistency
  - Shared data
  - Enforcement of standards
  - Application of Security restrictions
  - Maintaining Integrity
  - Conflicting Requirements can be balanced

Jobs of DBA

- Defining Conceptual Schema
- Defining Internal Schema
- Liaising with users
- Defining Security and Integrity rules
- Defining Backup and Recovery procedures
- Monitoring performance and responding to changing requirements