A database is a collection of information. The database may be in hard copy or electronic. A file cabinet is a database, as are a telephone book and PubMed.

A database has several purposes. The first is simply to act as a storage bin. A database’s most important function is to facilitate retrieval. Retrieving what is in the database is what we do when we “search.” Ease and efficiency of retrieval are the hallmarks of a good database.

Let’s say you wrote the names and addresses of all your personal contacts on index cards and tossed them into a shoebox. Whenever you needed contact information, you would have to go through every card until, by luck and perseverance, you hit on the right one. What would solve this problem is a good organization scheme. The organization scheme is what distinguishes a good database from the unarranged index cards in a shoebox.

There are many organization schemes. The telephone book uses the alphabet. The organization scheme you might use for your family pictures is chronology. Some of us organize our saved e-mails according to subject, others according to the person who sent the message. In order to retrieve what we want -- that is, conduct a successful search -- we need to know the organization scheme of the database we are using.

In summary, a database is a collection of information organized in a way to make retrieval of the information it holds efficient, reliable, reproducible, and methodical. The key to successful searching is understanding the organizational scheme of the database.

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