Collection of data produced and retrieved by computer. The data is usually stored on magnetic disk or tape. A database program enables the computer to generate files of data and later search for and retrieve specific items or groups of items. For example, a library database system can list, on screen, all the books on a particular subject and can then display further details of any selected book.

In computing, a structured collection of data, which may be manipulated to select and sort desired items of information. For example, an accounting system might be built around a database containing details of customers and suppliers. In larger computers, the database makes data available to the various programs that need it, without the need for those programs to be aware of how the data are stored. The term is also sometimes used for simple record-keeping systems, such as mailing lists, in which there are facilities for searching, sorting, and producing records. Examples of database software include Oracle, Sybase, and Microsoft Access.

There are four main types (or ‘models’) of database: relational, object-oriented, hierarchical, and network, of which relational databases (where data are viewed as a collection of linked tables) are the most widely used. Object-oriented databases have become more popular for certain types of application, and hybrids like object-relational are also available. A free-text database is one that holds the unstructured text of articles or books in a form that permits rapid searching. A telephone directory stored as a database might allow all the people whose names start with the letter B to be selected by one program, and all those living in Chicago by another.

A collection of databases is known as a databank. A database management system (DMS) is software that ensures that the integrity of the data is maintained by controlling the degree of access of the applications programs using the data.

Databases are usually created using a database tool that enables a user to define the database structure by selecting the number of fields, naming those fields, and allocating the type and amount of data that is valid for each field. To sort records within a database, one or more sort fields may be selected, so that when the data is sorted, it is ordered according to the contents of these fields. A key field is used to give a unique identifier to each record. Data programs also determine how data can be viewed on screen or extracted into files.

essays

Databases

Checking data is correct

Data: Designing Structure, Capturing, and Presenting Data
Data: Use and Misuse

Information: Reliability, Validity, and Bias

Company payroll systems

Standard application programs

APA

Chicago

Harvard

MLA


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APA

Chicago

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