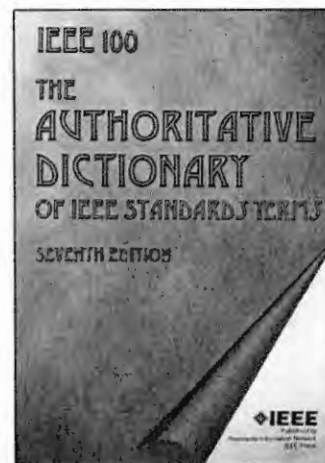


IEEE 100
The Authoritative Dictionary of
IEEE Standards Terms

Seventh Edition



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(6) Representations of static or dynamic entities in a formalized manner suitable for communication, interpretation, or processing by humans or by machines.

(SCC32) 1489-1999

data abstraction (A) (software) The process of extracting the essential characteristics of data by defining data types and their associated functional characteristics and disregarding representation details. *See also:* encapsulation; information hiding. **(B) (software)** The result of the process in definition (A). (C) 610.12-1990

data-access operation A processor-initiated load, store, or lock that involves a data-format copy and (for lock operations) a data-update action (such as swap or add).

(C/MM) 1596.5-1993

data access register A register that is used for arithmetic associated with random-access of data. (C) 610.10-1994w

data acquisition (supervisory control, data acquisition, and automatic control) (station control and data acquisition) The collection of data.

(SWG/PE/SUB) 999-1992w, C37.1-1994, C37.100-1992

data acquisition system (1) (supervisory control, data acquisition, and automatic control) (station control and data acquisition) A system that receives data from one or more locations. *See also:* telemetering. (PE/SUB) C37.1-1994

(2) A centralized system that receives data from one or more remote points—a telemetering system. Data may be transported by either analog or digital telemetering.

(SWG/PE) C37.100-1992

data administrator An individual who is responsible for the definition, organization, supervision, and protection of data within some organization. *See also:* database administrator.

(C) 610.5-1990w

data aggregate A collection of two or more data items that are treated as a unit. *Synonyms:* aggregate; group item. *See also:* composite data element. (C) 610.5-1990w

data attribute A characteristic of a unit of data.

(C) 610.5-1990w

data bank (A) A collection of data libraries. *Note:* A record contains one or more items, a file contains one or more records, a library contains one or more files, and a data bank contains one or more libraries. **(B)** A collection of data relating to a particular subject area. *Note:* The data may or may not be machine-readable. (C) 610.5-1990

data bar polling An end-of-write indicator. (ED) 1005-1998

database (DB) (1) (A) (data management) (software) A collection of logically related data stored together in one or more computerized files. *Note:* Each data item is identified by one or more keys. *See also:* database management system. **(B) (data management) (software)** In CODASYL, the collection of all the record occurrences, set occurrences, and areas controlled by a specific schema. (C) 610.5-1990

(2) A collection of data fundamental to a system.

(C/SE) 1074-1995s

(3) A collection of related data stored in one or more computerized files in a manner that can be accessed by users or computer programs via a database management system.

(C/SE) J-STD-016-1995

(4) A collection of interrelated data, often with controlled redundancy, organized according to a schema to serve one or more applications; the data are stored so that they can be used by different programs without concern for the data structure or organization. A common approach is used to add new data and to modify and retrieve existing data.

(C/DIS) 1278.4-1997

database access method A technique for organizing and storing a physical database in computer storage. (C) 610.5-1990w

database administration (DBA) The responsibility for the definition, operation, protection, performance, and recovery of a database. (C) 610.5-1990w

database administrator (DBA) An individual who is responsible for the definition, operation, protection, performance, and recovery of a database. *See also:* data administrator.

database command language (DBCL) A procedural data manipulation language used to access a database through a database management system. *See also:* database manipulation language. (C) 610.5-1990w

database creation The process of naming, allocating space, formatting, and defining a database. *See also:* database definition; database design. (C) 610.5-1990w

database definition (A) The process of translating a conceptual schema for a database into a data storage schema. *See also:* redefinition; database design; database creation. **(B)** The result of such a translation. (C) 610.5-1990

database description language (DBDL) *See:* data definition language.

database design (A) The process of developing a conceptual schema for a database that will meet a user's requirements. *Synonym:* implementation design. *See also:* database creation; database definition. **(B)** The result of the process in definition (A). (C) 610.5-1990

database engine A software engine that is specially designed for database applications; performs low-level database operations such as record creation, editing, and deletion. *See also:* relational engine. (C) 610.10-1994w

database extract A file, each record of which contains data items selected from a database based on a particular criterion. (C) 610.5-1990w

database integrity The degree to which the data in a database are current, consistent and accurate. *See also:* data integrity; database security; integrity. (C) 610.5-1990w

database key A field in a database that identifies a record in that database. (C) 610.5-1990w

database management system (DBMS) (1) A computer system involving hardware, software, or both that provides a systematic approach to creating, storing, retrieving and processing information stored in a database. A DBMS acts as an interface between computers' programs and data files as well as between users and the database. It may include backup/recovery, checkpoint processing, and ad-hoc query capability.

(C) 610.5-1990w

(2) An integrated set of computer programs that provide the capabilities needed to establish, modify, make available, and maintain the integrity of a database.

(C/SE) J-STD-016-1995

database manipulation language (DBML) *See:* data manipulation language.

database organization The manner in which a database is structured; for example, a hierarchical organization, a relational organization. *See also:* reorganization. (C) 610.5-1990w

database record (A) A collection of data elements that are stored in a database. *See also:* record. **(B)** A collection of hierarchically dependent segments (one root and all its descendants) within a hierarchical database. *See also:* record. (C) 610.5-1990

database reorganization *See:* reorganization.

database security The degree to which a database is protected from exposure to accidental or malicious alteration or destruction. *See also:* database integrity; data security. (C) 610.5-1990w

database segment *See:* segment.

database server On a network, a server that provides access to a database at the record level; that is, the server sends and locks only the records affected by a particular requestor. *See also:* file server; disk server; mail server; terminal server; network server; print server. (C) 610.7-1995

database sublanguage *See:* data sublanguage.

database system A software system that supports multiple applications using a common database. (C) 610.5-1990w

Database Task Group (DBTG) A task group of the CODASYL Programming Language Committee that established a set of standards for specification and design of network database structures. *See also:* CODASYL.