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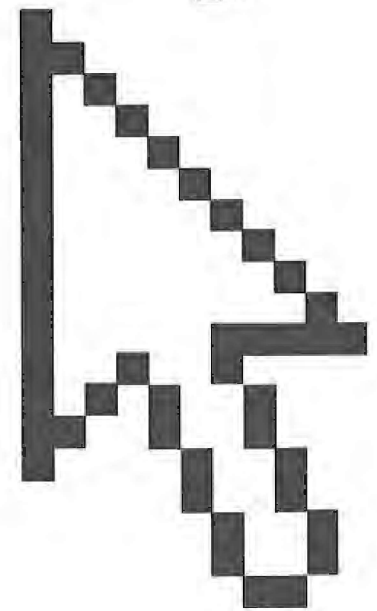
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Microsoft

# Computer Dictionary

Fifth Edition



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are some differences among them. *Also called:* system registry. *See also* hierarchical database, .ini, input/output port, property sheet, Registry Editor.

**Registry Editor** *n.* An application under Windows that allows the user to edit the entries in the registry. *Acronym:* REGEDIT. *See also* registry.

**regression analysis** *n.* In statistics, an analysis of the degree to which variations in an independent variable affect a dependent variable (a variable whose value depends on the value of another variable). *See also* multiple regression.

**regression testing** *n.* Complete retesting of a modified program, rather than a test of only the modified routines, to ensure that no errors have been introduced with the modifications.

**relation** *n.* A structure composed of attributes (individual characteristics, such as name or address, corresponding to the columns in a table) and tuples (sets of attribute values describing particular entities, such as customers, corresponding to the rows in a table). Within a relation, tuples cannot be repeated; each must be unique. Further, tuples are unordered within a relation; interchanging two tuples does not change the relation. Finally, if relational theory is to be applicable, the domain of each attribute must be atomic—that is, a simple value, rather than a structure such as an array or a record. A relation in which the domains of all attributes are atomic is said to be normalized or in first normal form. *See also* normal form (definition 1).

**relational algebra** *n.* A collection of rules and operators that permits relations (tables) to be manipulated. Relational algebra is usually described as having the following operators: SELECT, PROJECT, PRODUCT, UNION, INTERSECT, DIFFERENCE, JOIN (or INNER JOIN), and DIVIDE. In a relational database, relational algebra is used to develop procedures to build new relations based on the existing relations.

**relational calculus** *n.* In database management, a non-procedural method for manipulating relations (tables). There are two families of relational calculus: domain calculus and tuple calculus. The two families of relational calculus are mathematically equivalent to each other and to relational algebra. Using either family, one can formulate a description of a desired relation, based on the existing relations in the database.

**relational database** *n.* A database or database management system that stores information in tables—rows and columns of data—and conducts searches by using data in specified columns of one table to find additional data in another table. In a relational database, the rows of a table represent records (collections of information about separate items) and the columns represent fields (particular attributes of a record). In conducting searches, a relational database matches information from a field in one table with information in a corresponding field of another table to produce a third table that combines requested data from both tables. For example, if one table contains the fields EMPLOYEE-ID, LAST-NAME, FIRST-NAME, and HIRE-DATE, and another contains the fields DEPT, EMPLOYEE-ID, and SALARY, a relational database can match the EMPLOYEE-ID fields in the two tables to find such information as the names of all employees earning a certain salary or the departments of all employees hired after a certain date. In other words, a relational database uses matching values in two tables to relate information in one to information in the other. Microcomputer database products typically are relational databases. *Compare* flat-file database, inverted-list database.

**relational database management system** *n.* *See* relational database.

**relational expression** *n.* An expression that uses a relational operator such as “less than” or “greater than” to compare two or more expressions. A relational expression resolves to a Boolean (true/false) value. *See also* Boolean, relational operator.

**relational model** *n.* A data model in which the data is organized in relations (tables). This is the model implemented in most modern database management systems.

**relational operator** *n.* An operator that allows the programmer to compare two (or more) values or expressions. Typical relational operators are greater than (>), equal to (=), less than (<), not equal to (<>), greater than or equal to (>=), and less than or equal to (<=). *See also* relational expression.

**relational structure** *n.* The record organization used in the implementation of a relational model.

**relative address** *n.* A location, as in a computer's memory, that is specified in terms of its distance (displacement or offset) from a starting point (base address). A relative

# T

**T prefix** *See* tera-.

**T1** or **T-1** *n.* A high-speed communications line that can handle digital communications and Internet access at the rate 1.544 Mbps (megabits per second). Although originally designed by AT&T to carry multiple voice calls over standard twisted-pair telephone wiring, this high-bandwidth telephone line can also transmit text and images. T1 speed is attained through multiplexing 24 separate 64 Kbps channels into a single data stream. T1 lines are commonly used by larger organizations for Internet connectivity. *Also called:* T-1 carrier. *See also* T-carrier. *Compare* fractional T1, T2, T3, T4.

**T.120 standard** *n.* A family of International Telecommunications Union (ITU) specifications for multipoint data communications services within computer applications, such as conferencing and multipoint file transfer.

**T2** or **T-2** *n.* A T-carrier that can handle 6.312 Mbps (megabits per second) or 96 voice channels. *See also* T-carrier. *Compare* T1, T3, T4.

**T3** or **T-3** *n.* A T-carrier that can handle 44.736 Mbps (megabits per second) or 672 voice channels. *See also* T-carrier. *Compare* T1, T2, T4.

**T4** or **T-4** *n.* A T-carrier that can handle 274.176 Mbps (megabits per second) or 4032 voice channels. *See also* T-carrier. *Compare* T1, T2, T3.

**TA** *n.* *See* terminal adapter.

**tab character** *n.* A character used to align lines and columns on screen and in print. Although a tab is visually indistinguishable from a series of blank spaces in most programs, the tab character and the space character are different to a computer. A tab is a single character and therefore can be added, deleted, or overtyped with a single keystroke. The ASCII coding scheme includes two codes for tab characters: a horizontal tab for spacing across the screen or page and a vertical tab for spacing down the screen or page. *See also* Tab key.

**Tab key** *n.* A key, often labeled with both a left-pointing and a right-pointing arrow, that traditionally (as in word processing) is used to insert tab characters into a docu-

ment. In other applications, such as menu-driven programs, the Tab key is often used to move the on-screen highlight from place to place. Many database and spreadsheet programs allow the user to press the Tab key to move around within a record or between cells. The word *tab* is short for “tabulator,” which was the name given to this key on typewriters, where it was used in creating tables. *See also* tab character.

**table** *n.* **1.** In programming, a data structure usually consisting of a list of entries, each entry being identified by a unique key and containing a set of related values. A table is often implemented as an array of records, a linked list, or (in more primitive languages) several arrays of different data types, all using a common indexing scheme. *See also* array, list, record<sup>1</sup>. **2.** In relational databases, a data structure characterized by rows and columns, with data occupying or potentially occupying each cell formed by a row-column intersection. The table is the underlying structure of a relation. *See also* relational database. **3.** In word processing, desktop publishing, and in HTML documents, a block of text formatted in aligned rows and columns.

**table lookup** *n.* The process of using a known value to search for data in a previously constructed table of values—for example, using a purchase price to search a tax table for the appropriate sales tax. *See also* lookup.

**tablet** *n.* *See* graphics tablet.

**Tablet PC** *n.* A touch-sensitive computer screen tablet designed by Microsoft for the entry of handwritten text using a stylus or digital pen. The Tablet PC runs Windows applications and can function as a primary personal computer as well as a note-taking device.

**tabulate** *vb.* **1.** To total a row or column of numbers. **2.** To arrange information in table form.

**TACACS** *n.* Acronym for **T**erminal **A**ccess **C**ontroller **A**ccess **C**ontrol **S**ystem. A network access technique in which users log into a single centralized server that contains a database of authorized accounts. After the access server authenticates the user, it forwards the login information to the data server requested by the user. *See also* authentication, server (definition 2).