

## Competitive Exams: Computer Terminology A to L

### Computer Terminology: A to L

- **Access Method:** The Algorithm by which an item of physical data is identified and located, and the routines external to the application program by which the item is stored and retrieved.
- **Access Path:** The route taken through the logical structure of the database, in terms of the data relationships used by the system, in order to locate a desired logical data-unit.
- **Access Time:** The time interval between the instant the run-unit calls for a unit of data to be transferred to or from its user work area and the instant the operation is completed.
- **Active Domain:** The collection of values pertaining to that domain which are actually represented at some instant.
- **Airea;** A named logical subdivision of the addressable storage space in the database, which may contain occurrences of records, sets and parts of sets of various types; and which can be mapped onto storage media.
- **Array:** An dimensional collection of data-items all of which have identical characteristics.
- **Assembly Languages:** Assembly languages were developed to make programming easier.
- **Associative Memory:** A processor main store in which data is identified by its Value rather than by an address and upon which any given operation may be performed simultaneously with all data-items meeting specified criteria.
- **Associative Transaction:** The pre-defined processing of one or more items in the database, which is automatically invoked on the change in value of some other item.
- **Attribute Migration:** Replacement of a relation by two or more of its projections such that it may be recovered by taking the natural join of these projections.
- **Binding:** The firm association of the specific data-types required by a program with that data as physically stored in the database.
- **Candidate Key:** An attribute or combination of attributes of a relation such that for each of that relation the value of the key uniquely identifies that. and no attribute in the key can be discarded without destroying this uniqueness.
- **Chain:** A continuous series of linked records in which each contains pointers to its successor and/or predecessor in the chain, such that it is possible from any point in the chain to

process all records by following the chain subsequently.

- **Checkpoint:** The act of recording the state of units of data and those application programs operating on them, for the purpose of reconstructing the data and restarting the programs.
- **Composition:** The operation of combining two relations with some domain in common, where this common domain is then discarded.
- **Compound Domain:** An expanded Cartesian product of a finite number of simple domains.
- **Content Addressable Store (CAS):** A secondary storage device designed for the rapid retrieval of data by a sequential scan of the values stored, rather than by the use of hardware addressing techniques.
- **Contention:** The situation where more than one run-unit is attempting at the same point in time to access the same units of data.
- **Currency:** The present state of a run-unit in terms of the units of data which it has last accessed of each type of physical and logical structures.
- **Data-Aggregate:** A named collection of data items within a record.
- **Data Analysis:** The detailed analysis of the total data of an enterprise to identify the data elements and the relationships between them with a view to rationalizing the control of data within the enterprise and to minimizing data redundancy.
- **Database:** A generalized, common, integrated collection of company or installation-owned data which fulfills the data requirements of all applications which access it, and which is structured to model the natural data relationships which exists in an enterprise. Of A finite collection of time-varying relations defined on a finite collection of domains.
- **Database Administrator (DBA):** A person or persons given the responsibility for the definition, organization, protection and efficiency of the database for an enterprise.
- **Database-Date-Nams:** A name given to a unit of data within the database for the purpose of identifying that unit of data.
- **Database Dictionary:** A documentation of the types of data-units in the database or available for inclusion in the database in terms of their definition, purpose, controls, formats, relationships with other data-units, and other properties relevant to database design and application development.
- **Database Directory:** A collection of descriptors of all units of data that are available to the database management system, these descriptors being derived from the data definition language statements.
- **Database Handler:** That part of the executable<sup>code</sup> of the database management system which enables run units to have access to the database.

- **Database Identifier:** The unique identification, of a unit of data within the database, consisting of its data-name qualified by the name of any larger unit of data of which it forms a part, and which itself is uniquely named within the database.
- **Database Key:** The unique identifier assigned by the DBMS to each and every record occurrence in the database.
- **Database Management System (DBMS):** The data processing system providing the means to access, organize and control all information stored in the database.
- **Database-Parameter:** A user assigned name for a system communication location whereby the run-unit transmits certain control data to the DBMS.
- **Database-Procedure:** A routine specific to the requirements of a particular database, written by Us database administrator and stored within the system and invoked by the DBMS whenever it is needed.
- **Database Processor:** A hardware/software system dedicated to the control and maintenance of a database, and satisfying requests to access the database from run-units in one or more associated host processors.
- **Data Description Language (DDL):** The language used to describe the database, or that part of the database known to a program.
- **Data Dictionary:** A standard description of all data elements relevant to the enterprise in terms of their source; users, ownership, relationships, controls and storage.
- **Data-Item:** The smallest unit of named data, an occurrence of which is a representation of a value.
- **Data Integrity:** The concept that all units of data must be protected against accidental or deliberate invalidation
- **Data Manipulation Language (DML):** The language used to cause data to be transferred between the application program and the database.
- **Data Privacy:** The concept that units of data can be altered viewed or processed only by users who have the proper authority.
- **Data Selection:** The formation from an existing collection of relations, of a new normalized relation having the properties defined in the selection criteria.
- **Data Structure:** The user's own conception of his data, independent of the way in which it is stored, providing a picture of the database in terms of its structural components and attributes.
- **Data Unit:** A generic term denoting by collection of data, be it a data-item, data aggregate, record, set or file.

- **Deadlock:** The situation where two or more run-units are competing for the same resources and none may proceed as each run-unit is waiting for one of the others to release a resource the latter has already claimed.
- **Degree:** The number of domains whom a relation.
- **Derived Data-Items** A data-item whose contents are generated by the DBMS.
- **Device Media Control Language (VICL):** The language used to specify the storage of data at a physical level, including control of space on each device, overflow, buffering and paging.
- **Distributed Database:** A database under the overall control of a central DBMS, but where the devices on which it is stored are not all attached to the same processor.
- **Domains:** The groups of like data upon which a relation is defined.
- **Entity:** A person, place, thing or event of interest to the enterprise, and about which data may be recorded.
- **Entity Name:** The symbol by which a person, place, thing, class or any object of thought is known.
- **Entity Stream:** All the entities of one type, and hence the form in which the application processes its data.
- **Entry:** A definition in the schema or subschema of a named data-unit type.
- **Exclusive Control:** A facility to allow only a single run-unit to operate on all or part of a database in order to prevent multiple concurrent interactions such that the integrity of the data is preserved.
- **File Management:** A generic term for the functions of creation, insertion, deletion and modification of records; reorganizing, sorting, merging and other processes commonly performed on files.
- **First Normal Form:** The type of relation which has the property that none of its domains have, elements which are themselves relations.
- **Foreign Key:** A segment of a record which is not its primary key, but whose elements are values of the primary key of some other record.
- **Functional Dependence:** An attribute or collection of attributes of a relation is functionally dependent on a second attribute of that relation if at every instant of time, each value of the first attribute has no more than one value of the second attribute associated with it under the relation.  $R. A. \rightarrow R. B.$
- **Hierarchy:** One or more sets of directed relationships between two or more units of data, such that some units of data are considered owners while others are members, and such that, one unit of data has no owner, and all others have exactly one owner.

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- **Host Language:** The programming language used to write the application program, and in which the data manipulation language commands are embedded.
- **Identifier:** A unit of data whose value uniquely identifies an occurrence of that unit of data or of a different unit of data.
- **Inverted File:** A storage organization in which an index is provided for the values of each type of data-item.
- **Join:** The operation of combining two relations with some domain in common, such that all the original information is preserved.
- **Linkage:** A mechanism for connecting one unit
- of data to another.
- **List:** A series of linked records in which each contains a pointer to its successor in the list.
- **List Processing:** Processing associated items which are linked by means of pointers.
- **Location Mode:** The method by which the DBMS controls the assignment of database-keys to records.
- **Logical Data:** The data which the application program presents to or receives from the database.
- **Logical Record:** A collection of data-items independent of their physical environment. Portions of the same logical record may be located in different physical records.