



**Whitemarsh**  
Information Systems Corporation

## Section of Glossary

Whitemarsh Information Systems Corporation  
2008 Althea Lane  
Bowie, Maryland 20716  
Tele: 301-249-1142  
Email: [mmgorman@wiscorp.com](mailto:mmgorman@wiscorp.com)  
Web: [www.wiscorp.com](http://www.wiscorp.com)

## **Note to readers:**

I used to remember thinking that a discipline “came of age” once it needed a glossary. The fact that this glossary is about 100 pages says something, but I’m not sure what. I’ve tried to identify synonyms by citing them and then pointing to a root concept or term. The index is also included and serves as a way of interrelating glossary entries.

## **4GL**

Fourth Generation Language--A broad class of computer languages that are simpler, easier to use than third generation languages such as COBOL or FORTRAN. Prior to ANSI SQL/CLI (call level interface), 4GLs were commonly bound to particular DBMSs. For example, FORMS with Oracle. Since SQL/CLI, 4GLs can invoke DBMS engine functions through calls.

## **Abnormal termination**

An unplanned cessation of processing such that user control is not returned to the processor that was being utilized at the time the error occurred.

## **Abstract data type**

An abstract data type is described by an abstract data type descriptor which in turn specifies a set of columns whose values represent the value of an abstract data type instance, the operations that define the equality and ordering relationships of the abstract data type, and the operations that implement the behavior of the abstract data type.

When the abstract data type name, address, contains multiple columns such as STREET, CITY, STATE, and ZIP, it acts as a group data element.

When a collection data type (e.g., set, list, or multiset) is the abstract data type ADDRESS, then the address can have multiple occurrences and it acts as a repeating group.

An abstract data type can contain an abstract data type. In this situation, the table EMPLOYEE with a list of the abstract data type DEPENDENTS with the column DEPENDENT SSN, DEPENDENT FIRST NAME, DEPENDENT LAST NAME, and the contained abstract data type MEDICAL CONDITIONS which in turn contains the columns CONDITION NAME, DATE OF ONSET, and DATE OF RESOLUTION.

## **Access control**

See security schema



## **Access method**

A technique used to obtain data from or to place data onto a mass storage device; usually this refers to operating system software capability provided by mainframe manufacturers.

## **Access path**

See view

## **Access strategy**

The access strategy of the DBMS is that set of DBMS routines that analyze storage structure constructs to determine the access path in the database to find, retrieve, store, or modify any of the data contained in any of the storage structure components under the control of the DBMS. The access strategy typically involves DBMS vendor software and O/S vendor access methods.

## **Action type**

Action type identifies the types of actions that can take place

SELECT—viewing or reading data

DELETE—removing data from the database

INSERT—placing new data into the database

UPDATE—change data from one value to another

## **After image recovery**

See backup and recovery

## **Aggregate**

See data element

## **Alias**

An alternate identifier for a column or table name. Typically employed in different programming languages to avoid naming illegalities. For example, CODE-NAME is legal in COBOL, but means CODE minus NAME in FORTRAN. Consequently, an alias, CODNAM, would be required.



## **ANSI**

American National Standards Institute. An organization of technical committees that standardizes many areas including data and information processing (committee X3). The committees that address database standards are SPARC, X3H2, and X3H4.

## **ANSI NDL**

See NDL data model

## **ANSI SQL**

See SQL data model

## **Application database**

An organized collection of data designed to support only a specific application.

## **Application optimization**

Those DBMS facilities for determining the overall performance characteristics of an installed database against a set of benchmark database operations. The DBMS application optimization facilities produce statistics that indicate such performance indicators as I/Os, CPU time, overlay processing, and the like.

## **Archival database**

See backup.

## **Area**

A CODASYL concept to identify a collection of rows. A particular row is assigned to a single area and may not migrate between areas. For all CODASYL DBMSs, an area may contain occurrences from one or more record types. For some CODASYL DBMSs a record type may have instances stored in more than one area. In other CODASYL DBMSs all the instances from a record type may be restricted to just one area. In CODASYL DBMSs the relationship between an



area and an O/S file varies. Because of these great differences in the AREA concept, the ANSI NDL does not contain a specification for AREA.

### **Assertion**

A set of independently defined pseudo code that when executed, must test true when no updating is occurring. An action that causes a violation to an assertion is rejected. An assertion is the same as a table constraint except that it is independently named and defined.

### **Atomic**

An attribute of a data element indicating that it was not derived from within the system.

### **Attribute**

See data element

### **Attribute name**

See data element name

