**Database**

A database is a collection of information that is organized so that it can easily be accessed, managed, and updated. In one view, databases can be classified according to types of content: bibliographic, full-text, numeric, and images.

Systematically organized or structured repository of indexed information (usually as a group of linked data files) that allows easy retrieval, updating, analysis, and output of data.

SQL (Structured Query Language) is a standard language for making interactive queries from and updating a database such as IBM's DB2, Microsoft's SQL Server, and database products from Oracle, Sybase, and Computer Associates.

**DBMS**

A database management system (DBMS) is system software for creating and managing databases. The DBMS provides users and programmers with a systematic way to create, retrieve, update and manage data.

A DBMS makes it possible for end users to create, read, update and delete data in a database. The DBMS essentially serves as an interface between the database and end users or application programs, ensuring that data is consistently organized and remains easily accessible.

**Data warehouse**

A data warehouse is a subject-oriented, integrated, time-variant and non-volatile collection of data in support of management's decision making process.

* Subject-Oriented: A data warehouse can be used to analyze a particular subject area. For example, "sales" can be a particular subject.
* Integrated: A data warehouse integrates data from multiple data sources. For example, source A and source B may have different ways of identifying a product, but in a data warehouse, there will be only a single way of identifying a product.
* Time-Variant: Historical data is kept in a data warehouse. For example, one can retrieve data from 3 months, 6 months, 12 months, or even older data from a data warehouse. This contrasts with a transactions system, where often only the most recent data is kept. For example, a transaction system may hold the most recent address of a customer, where a data warehouse can hold all addresses associated with a customer.
* Non-volatile: Once data is in the data warehouse, it will not change. So, historical data in a data warehouse should never be altered.

**Datamart**

A data mart is basically a condensed and more focused version of a data warehouse that reflects the regulations and process specifications of each business unit within an organization. Each data mart is dedicated to a specific business function or region. This subset of data may span across many or all of an enterprise’s functional subject areas. It is common for multiple data marts to be used in order to serve the needs of each individual business unit (different data marts can be used to obtain specific information for various enterprise departments, such as accounting, marketing, sales, etc.).

**ETL**

ETL stands for extraction, transformation and loading. Etl is a process that involves the following tasks:

* extracting data from source operational or archive systems which are the primary source of data for the data warehouse
* transforming the data - which may involve cleaning, filtering, validating and applying business rules
* loading the data into a data warehouse or any other database or application that houses data

The ETL process is also very often referred to as Data Integration process and ETL tool as a Data Integration platform.

The terms closely related to and managed by ETL processes are: data migration, data management, data cleansing, data synchronization and data consolidation.

At present the most popular and widely used ETL tools and applications on the market are:

1. IBM Websphere DataStage (Formerly known as Ascential DataStage and Ardent DataStage)
2. Informatica PowerCenter
3. Oracle ETL
4. Ab Initio
5. Pentaho Data Integration - Kettle Project (open source ETL)
6. SAS ETL studio
7. Cognos Decisionstream-Reporting
8. Business Objects Data Integrator (BODI) \_Reporting
9. Sql server Reporting Service (SSRS) - Reporting
10. Microsoft SQL Server Integration Services (SSIS) - ETL

**Datatype**

Data type is a data storage format that can contain a specific type or range of values.

When computer programs store data in variables, each variable must be assigned a specific data type. Some common data types include [integers](http://techterms.com/definition/integer), [floating point numbers](http://techterms.com/definition/floatingpoint), [characters](http://techterms.com/definition/character), [strings](http://techterms.com/definition/string), and [arrays](http://techterms.com/definition/array). They may also be more specific types, such as dates, timestamps, [boolean](http://techterms.com/definition/boolean) values, and varchar (variable character) formats.

**Primary Key**

Primary key is a column or a set of columns in a table whose values uniquely identify a row in the table.

**Foreign Key**

A foreign key is a column or a set of columns in a table whose values correspond to the values of the primary key in another table.

**Natural Key/Business Key (Concept)**

A natural key is a single or a set of columns that uniquely identify a single record in a table, where the key columns are made of real data. Ex: SSN, ISBN, etc.

**Surrogate Key**

Surrogate key is like a natural key that uniquely identifies a single record in the table. Surrogate keys are normally system generated integer.

**Reference Link:**

Please go through the reference link below and read through

* Inner Join
* Left outer Join
* Right Outer Join

[**http://blog.sqlauthority.com/2009/04/13/sql-server-introduction-to-joins-basic-of-joins/**](http://blog.sqlauthority.com/2009/04/13/sql-server-introduction-to-joins-basic-of-joins/)

Please go through W3schools link below and go through the below SQL syntaxes

<http://www.w3schools.com/sql/default.asp?PHPSESSID=300ae3404d5fa2612f238abeebb8869c>

SQL Basic

SQL HOME

SQL Intro

SQL Syntax

SQL SELECT

SQL SELECT DISTINCT

SQL WHERE

SQL AND & OR

SQL ORDER BY

SQL SELECT TOP

SQL LIKE

SQL IN

SQL BETWEEN

SQL Aliases

SQL Joins

SQL INNER JOIN

SQL LEFT JOIN

SQL RIGHT JOIN

SQL UNION

SQL Count()

List of ETL Tools

<http://www.etltool.com/list-of-etl-tools/>

List of Databases/DBMS

<http://en.wikipedia.org/wiki/List_of_relational_database_management_systems>