Meaning

**SQL** is a database computer language designed for the retrieval and management of data in a relational database. **SQL** stands for **Structured Query Language**. This tutorial will give you a quick start to SQL.

SQL is a Standard - BUT....

Although SQL is an ANSI/ISO standard, there are different versions of the SQL language.

However, to be compliant with the ANSI standard, they all support at least the major commands (such as SELECT, UPDATE, DELETE, INSERT, WHERE) in a similar manner.

**Note:** Most of the SQL database programs also have their own proprietary extensions in addition to the SQL standard!

## Using SQL in Your Web Site

To build a web site that shows data from a database, you will need:

* An RDBMS database program (i.e. MS Access, SQL Server, MySQL)
* To use a server-side scripting language, like PHP or ASP
* To use SQL to get the data you want
* To use HTML / CSS to style the page

Syntax

## Database Tables

A database most often contains one or more tables. Each table is identified by a name (e.g. "Customers" or "Orders"). Tables contain records (rows) with data.

In this tutorial we will use the well-known Northwind sample database (included in MS Access and MS SQL Server).

Some of The Most Important SQL Commands

* SELECT - extracts data from a database
* UPDATE - updates data in a database
* DELETE - deletes data from a database
* INSERT INTO - inserts new data into a database
* CREATE DATABASE - creates a new database
* ALTER DATABASE - modifies a database
* CREATE TABLE - creates a new table
* ALTER TABLE - modifies a table
* DROP TABLE - deletes a table
* CREATE INDEX - creates an index (search key)
* DROP INDEX - deletes an index

Conditional Statement

# Types of SQL Statements

## Data Definition Language (DDL) Statements

Data definition language (DDL) statements let you to perform these tasks:

* Create, alter, and drop schema objects
* Grant and revoke privileges and roles
* Analyze information on a table, index, or cluster
* Establish auditing options
* Add comments to the data dictionary

The CREATE, ALTER, and DROP commands require exclusive access to the specified object. For example, an ALTER TABLE statement fails if another user has an open transaction on the specified table.

The GRANT, REVOKE, ANALYZE, AUDIT, and COMMENT commands do not require exclusive access to the specified object. For example, you can analyze a table while other users are updating the table.

## Data Manipulation Language (DML) Statements

Data manipulation language (DML) statements access and manipulate data in existing schema objects. These statements do not implicitly commit the current transaction. The data manipulation language statements are:

* CALL
* DELETE
* EXPLAIN PLAN
* INSERT
* LOCK TABLE
* MERGE
* SELECT
* UPDATE

The SELECT statement is a limited form of DML statement in that it can only access data in the database. It cannot manipulate data in the database, although it can operate on the accessed data before returning the results of the query

## Transaction Control Statements

Transaction control statements manage changes made by DML statements. The transaction control statements are:

* COMMIT
* ROLLBACK
* SAVEPOINT
* SET TRANSACTION

All transaction control statements, except certain forms of the COMMIT and ROLLBACK commands, are supported in PL/SQL. For information on the restrictions, see [COMMIT](https://docs.oracle.com/cd/B19306_01/server.102/b14200/statements_4010.htm#i2060233) and [ROLLBACK](https://docs.oracle.com/cd/B19306_01/server.102/b14200/statements_9021.htm#i2104635).

## Session Control Statements

Session control statements dynamically manage the properties of a user session. These statements do not implicitly commit the current transaction.

PL/SQL does not support session control statements. The session control statements are:

* ALTER SESSION
* SET ROLE

## System Control Statement

The single system control statement, ALTER SYSTEM, dynamically manages the properties of an Oracle Database instance. This statement does not implicitly commit the current transaction and is not supported in PL/SQL.