What is SQL?

* SQL stands for Structured Query Language
* SQL lets you access and manipulate databases

## RDBMS

RDBMS stands for Relational Database Management System.

RDBMS is the basis for SQL, and for all modern database systems such as MS SQL Server, IBM DB2, Oracle, MySQL, and Microsoft Access.

The data in RDBMS is stored in database objects called tables. A table is a collection of related data entries and it consists of columns and rows.

Look at the "Customers" table:

* SQL keywords are NOT case sensitive: ­

Some database systems require a semicolon at the end of each SQL statement.

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

**Commands : -**

**To open Sql on linux : mysql -uroot -pbigdata**

* Show databases ;
* create database BigdataDB ;
* use ‘databases’;
* DROP DATABASE db\_name
* show tables;
* describe tablename;

## The SQL SELECT Statement

The SELECT statement is used to select data from a database.

The data returned is stored in a result table, called the result-set.

### **SELECT Syntax**

SELECT column1, column2, ...  
FROM table\_name;

SELECT \* FROM tablename limit 10 ;

SELECT column1 FROM tablename WHERE column1 = “value”;

|  |  |  |
| --- | --- | --- |
| Function | | SQL Query |
| To retrieve information | | SELECT from\_columns FROM table WHERE conditions; |
| To select all values | | SELECT \* FROM table; |
| To select a particular category values | | SELECT \* FROM table WHERE rec\_name = “value”;  SELECT \* FROM Customers WHERE CustomerID=1; |
| To select for multiple criteria | | SELECT \* FROM TABLE WHERE rec1 = “value1” AND rec2 = “value2”; |
| For selecting specific columns | | SELECT column\_name FROM table; |
| To retrieve unique output records | SELECT DISTINCT column\_name FROM table; | |
| lists the number of different (distinct) customer countries | SELECT COUNT(DISTINCT Country) FROM Customers; | |
| For sorting | SELECT col1, col2 FROM table ORDER BY col2; | |
| For sorting backward | SELECT col1, col2 FROM table ORDER BY col2 ASC|DESC ; | |
| For counting rows from the table | SELECT COUNT(\*) FROM table; | |