What is SQL?

- SQL stands for Structured Query Language
- SQL lets you access and manipulate databases
- SQL became a standard of the American National Standards Institute (ANSI) in 1986, and of the International Organization for Standardization (ISO) in 1987

What Can SQL do?

- SQL can execute queries against a database
- SQL can retrieve data from a database
- SQL can insert records in a database
- SQL can update records in a database
- SQL can delete records from a database
- SQL can create new databases
- SQL can create new tables in a database
- SQL can create stored procedures in a database
- · SQL can create views in a database
- SQL can set permissions on tables, procedures, and views

COUNT() Syntax

```
SELECT COUNT(column_name)
FROM table_name
WHERE condition;
```

The AVG() function returns the average value of a numeric column.

AVG() Syntax

```
SELECT AVG(column_name)
FROM table_name
WHERE condition;
```

The SUM() function returns the total sum of a numeric column.

SUM() Syntax

```
SELECT SUM(column_name)
FROM table_name
WHERE condition;
```

SQL Statement:

SELECT Country FROM Customers;

Edit the SQL Statement, and click "Run

Run SQL »

Result:

Number of Records: 91

Country

Germany

Mexico

Mexico

UK

Sweden

Germany

France

Spain

SQL JOIN

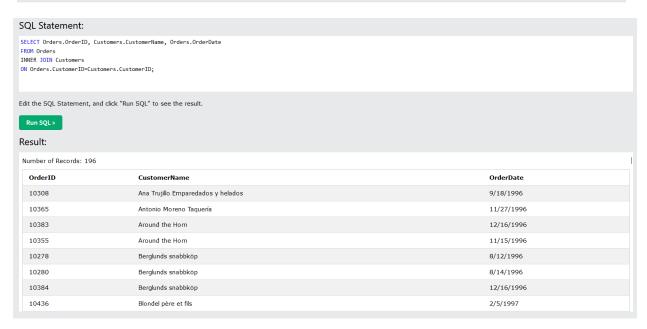
A JOIN clause is used to combine rows from two or more tables, based on a related column between them.

Let's look at a selection from the "Orders" table:

OrderID	CustomerID	OrderDate
10308	2	1996-09-18
10309	37	1996-09-19
10310	77	1996-09-20

Then, look at a selection from the "Customers" table:

CustomerID	CustomerName	ContactName	Country
1	Alfreds Futterkiste	Maria Anders	Germany
2	Ana Trujillo Emparedados y helados	Ana Trujillo	Mexico
3	Antonio Moreno Taquería	Antonio Moreno	Mexico



Single Line Comments

Single line comments start with -- .

Any text between -- and the end of the line will be ignored (will not be executed).

The following example uses a single-line comment as an explanation:

SQL Statement:

```
-- Select all:
SELECT * FROM Customers;
```

Edit the SQL Statement, and click "Run SQL" to see the result.

Run SQL»

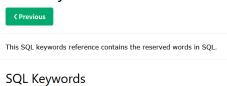
Result:

Error in SQL:

Invalid SQL statement; expected 'DELETE', 'INSERT', 'PROCEDURE', 'SELECT', or 'UPDATE'.

All of these seem straight forward especially with this guide. It would take time and use to get them down to memory but nothing here seems difficult to understand.

SQL Keywords Reference



Keyword	Description
ADD	Adds a column in an ex
ADD CONSTRAINT	Adds a constraint after
ALL	Returns true if all of the
ALTER	Adds, deletes, or modi
ALTER COLUMN	Changes the data type

Adde deletes er medi

Reference guides are nice.

The SQL CREATE DATABASE Statement

The CREATE DATABASE statement is used to create a new SQL database.

Syntax

CREATE DATABASE databasename;

CREATE DATABASE Example

The following SQL statement creates a database called "testDB":

Example

CREATE DATABASE testDB;