**BACKGROUND**

SQL, 'Structured Query Language', is a programming language designed to manage data stored in relational databases. SQL operates through simple, declarative statements. This keeps data accurate and secure, and helps maintain the integrity of databases, regardless of size.

Here's an appendix of commonly used commands.

**COMMANDS**

ALTER TABLE

ALTER TABLE table\_name ADD column datatype;

ALTER TABLE lets you add columns to a table in a database.

AND

SELECT column\_name(s)

FROM table\_name

WHERE column\_1 = value\_1

AND column\_2 = value\_2;

AND is an operator that combines two conditions. Both conditions must be true for the row to be included in the result set.

AS

SELECT column\_name AS 'Alias'

FROM table\_name;

AS is a keyword in SQL that allows you to rename a column or table using an *alias*.

AVG

SELECT AVG(column\_name)

FROM table\_name;

AVG() is an aggregate function that returns the average value for a numeric column.

BETWEEN

SELECT column\_name(s)

FROM table\_name

WHERE column\_name BETWEEN value\_1 AND value\_2;

The BETWEEN operator is used to filter the result set within a certain range. The values can be numbers, text or dates.

COUNT

SELECT COUNT(column\_name)

FROM table\_name;

COUNT() is a function that takes the name of a column as an argument and counts the number of rows where the column is not NULL.

CREATE TABLE

CREATE TABLE table\_name (column\_1 datatype, column\_2 datatype, column\_3 datatype);

CREATE TABLE creates a new table in the database. It allows you to specify the name of the table and the name of each column in the table.

DELETE

DELETE FROM table\_name WHERE some\_column = some\_value;

DELETE statements are used to remove rows from a table.

GROUP BY

SELECT COUNT(\*)

FROM table\_name

GROUP BY column\_name;

GROUP BY is a clause in SQL that is only used with aggregate functions. It is used in collaboration with the SELECT statement to arrange identical data into groups.

INNER JOIN

SELECT column\_name(s) FROM table\_1

JOIN table\_2

ON table\_1.column\_name = table\_2.column\_name;

An inner join will combine rows from different tables if the *join condition* is true.

INSERT

INSERT INTO table\_name (column\_1, column\_2, column\_3) VALUES (value\_1, 'value\_2', value\_3);

INSERT statements are used to add a new row to a table.

LIKE

SELECT column\_name(s)

FROM table\_name

WHERE column\_name LIKE pattern;

LIKE is a special operator used with the WHERE clause to search for a specific pattern in a column.

LIMIT

SELECT column\_name(s)

FROM table\_name

LIMIT number;

LIMIT is a clause that lets you specify the maximum number of rows the result set will have.

MAX

SELECT MAX(column\_name)

FROM table\_name;

MAX() is a function that takes the name of a column as an argument and returns the largest value in that column.

MIN

SELECT MIN(column\_name)

FROM table\_name;

MIN() is a function that takes the name of a column as an argument and returns the smallest value in that column.

OR

SELECT column\_name

FROM table\_name

WHERE column\_name = value\_1

OR column\_name = value\_2;

OR is an operator that filters the result set to only include rows where either condition is true.

ORDER BY

SELECT column\_name

FROM table\_name

ORDER BY column\_name ASC|DESC;

ORDER BY is a clause that indicates you want to sort the result set by a particular column either alphabetically or numerically.

OUTER JOIN

SELECT column\_name(s) FROM table\_1

LEFT JOIN table\_2

ON table\_1.column\_name = table\_2.column\_name;

An outer join will combine rows from different tables even if the the join condition is not met. Every row in the *left* table is returned in the result set, and if the join condition is not met, then NULL values are used to fill in the columns from the *right* table.

**http://www.powerxing.com/sql-join/**

ROUND

SELECT ROUND(column\_name, integer)

FROM table\_name;

ROUND() is a function that takes a column name and an integer as an argument. It rounds the values in the column to the number of decimal places specified by the integer.

integer表示希望显示的小数位数

SELECT

SELECT column\_name FROM table\_name;

SELECT statements are used to fetch data from a database. Every query will begin with SELECT.

SELECT DISTINCT

SELECT DISTINCT column\_name FROM table\_name;

SELECT DISTINCT specifies that the statement is going to be a query that returns unique values in the specified column(s).

**http://www.w3school.com.cn/sql/sql\_distinct.asp**

SUM

SELECT SUM(column\_name)

FROM table\_name;

SUM() is a function that takes the name of a column as an argument and returns the sum of all the values in that column.

UPDATE

UPDATE table\_name

SET some\_column = some\_value

WHERE some\_column = some\_value;

UPDATE statments allow you to edit rows in a table.

WHERE

SELECT column\_name(s)

FROM table\_name

WHERE column\_name operator value;

WHERE is a clause that indicates you want to filter the result set to include only rows where the following *condition* is true.