## Sources

- W3Schools.com
- DataQuest.io



















# Commands / Clauses

**SELECT** Select data from database **FROM** Specify table we're pulling from Filter query to match a condition WHERE AS Rename column or table with alias **JOIN** Combine rows from 2 or more tables Combine query conditions. All must be met **AND** Combine query conditions. One must be met OR LIMIT Limit rows returned. See also FETCH & TOP IN Specify multiple values when using WHERE CASE Return value on a specified condition Return only rows with a NULL value **IS NULL** LIKE Search for patterns in column Write transaction to database COMMIT ROLLBACK Undo a transaction block

**ALTER TABLE** Add/Remove columns from table

**UPDATE** Update table data

Create TABLE, DATABASE, INDEX or VIEW **CREATE** 

DELETE Delete rows from table **INSERT** Add single row to table

Delete TABLE, DATABASE, or INDEX **DROP** 

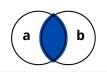
**GROUP BY** 

Group data into logical sets **ORDER BY** Set order of result. Use DESC to reverse order

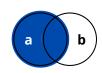
**HAVING** Same as WHERE but filters groups

Count number of rows COUNT Return sum of column **SUM AVG** Return average of column MIN Return min value of column MAX Return max value of column

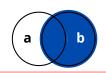
## **Joins**



#### a INNER JOIN b



a LEFT JOIN b



a RIGHT JOIN b



**Order Of** 

**Execution** 

WHERE

**GROUP BY** 

HAVING

**SELECT** 

**ORDER BY** 

1 FROM

# **Examples**

Select all columns with filter applied

SELECT \* FROM tbl WHERE col > 5;

Select first 10 rows for two columns

SELECT col1, col2 FROM tbl LIMIT 10;

Select all columns with multiple filters

SELECT \* FROM tbl WHERE col1 > 5 OR col2 < 2;

Select all rows from col1 & col2 ordering by col1

SELECT col1, col2 FROM tbl ORDER BY 1;

Return count of rows in table

SELECT COUNT(\*) FROM tbl;

Return sum of col1

SELECT SUM(col1) FROM tbl;

Return max value for col1

SELECT MAX(col1) FROM tbl;

Compute summary stats by grouping col2

SELECT AVG(col1) FROM tbl **GROUP BY col2**;

Combine data from 2 tables using left join

SELECT \* FROM tbl1 AS t1 LEFT JOIN tbl2 AS t2 ON t2.col1 = t1.col1;

**Aggregate and filter result** 

SELECT col1, COUNT(\*) AS total FROM tbl **GROUP BY col1** HAVING COUNT(\*) > 10;

**Implementation of CASE statement** 

SELECT col1, **CASE** WHEN col1 > 10 THEN 'more than 10' WHEN col1 < 10 THEN 'less than 10' ELSE '10' END AS NewColumnName FROM tbl;

## **Data Definition Language**

#### **CREATE**

CREATE DATABASE MyDatabase;

**CREATE TABLE MyTable (** id int. name varchar(10));

CREATE INDEX IndexName ON TableName(col1):

### **ALTER**

ALTER TABLE MyTable DROP COLUMN col5;

ALTER TABLE MyTable ADD col5 int;

**DROP** 

DROP DATABASE MyDatabase; DROP TABLE MyTable;

## **Data Manipulation Language**

## **UPDATE**

**UPDATE** MyTable SET col1 = 56
WHERE col2 = 'something';

INSERT INTO MyTable (col1, col2) VALUES ('value1', 'value2');

#### **DELETE**

**DELETE FROM MyTable** WHERE col1 = 'something':

#### **SELECT**

**INSERT** 

SELECT col1, col2 FROM MyTable;

LIMIT