SQL CHEAT SHEET

AGGREGATION FUNCTIONS

SUM()
AVG()
MIN()
MAX()
COUNT()

COMPARISON OPERATORS

= (equal to)
!= (not equal to)
<> (not equal to)
> (greater than)
>= (greater than or equal to)
< (less than)
<= (less than or equal to)

MATHEMATICAL OPERATORS

***** (multiplied by)
/ (divided by)
+ (plus)
- (minus)

LOGICAL OPERATORS

AND
OR
IN
NOT IN
LIKE
NOT LIKE
BETWEEN

ORDER OF SQL STATEMENTS

SQL statements should always be written with the keywords in the following order:

SELECT
FROM
JOIN
WHERE
GROUP BY
HAVING
ORDER BY
LIMIT

Any keywords that are not needed can be left out of the query.

QUERY EXAMPLES

SQL BASICS

SELECT *
FROM edt.customers
Select all columns and rows from the customers table in the edt database.

SELECT *
FROM customers
WHERE age > 21
AND state = 'PA'
Select all columns and rows from the customers table where the value in the age column is greater than 21 and the value in the state column is 'PA'.

SELECT *
FROM customers
WHERE plan IN ("free", "basic")
Select all columns and rows from the customers table where the value in the plan column is "free" or "basic".

ORDER/GROUP BY

SELECT *
FROM customers
WHERE age > 21
ORDER BY age DESC
Select all columns and rows from the customers table where the value in the age column is greater than 21, and order the results by age starting with the highest value and DESC down.

SELECT gender,
COUNT(*)
FROM students
GROUP BY gender
Select the gender column and the number of rows in the students table, and group by the value of the gender column.

CASE STATEMENTS

SELECT name,
CASE WHEN age > 18 THEN "adult" ELSE "minor" END "type"
FROM customers
Create a column called "type" which assigns whether someone is an "adult" or "minor" based on their age.

SELECT name,
CASE WHEN sum(tenure) > 5 THEN 1 ELSE 0 END "flag"
FROM customers
Create a column called "flag" which assigns a 1 if someone's tenure is greater than 5 years.

& MORE

SELECT MAX(age)
FROM customers
Select only the max age from the customers table.

SELECT customers.name, orders.item
FROM customers
LEFT JOIN orders
ON customers.id = orders.customer_id
Join the customers table and orders table based on customer ID to select all instances of "name" from the customers table and show then associated "item" from the orders table.

EXTRAS

EXPLORATORY

Tricks for learning what data is available in a table

HELP TABLE database.table
This will show you the names of all the columns in a table

SELECT * FROM database.table LIMIT 20
or
SELECT TOP 20 * FROM database.table
This will give you a sample of 20 rows from every column in the table

REMINDERS

Always add a semicolon (;) at the end of your SQL query.

If you have more than one query written, SQL will not run them unless they all have semicolons at the end.