

# BREAK < INTO TECH >

## 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 in the following order:

SELECT  
FROM  
JOIN  
WHERE  
GROUP BY  
HAVING  
ORDER BY  
LIMIT

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

# BREAK < INTO TECH >

## SQL CHEAT SHEET

### 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.

# BREAK < INTO TECH >

## SQL CHEAT SHEET

### 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