

The background image is a photograph of a modern office interior, specifically a conference room. It features a long, dark wooden conference table surrounded by several black office chairs. Large windows on the right side of the room offer a view of a city skyline. The entire image is overlaid with a semi-transparent orange filter. The title text is centered in the middle of the image.

# MySQL Aggregate Functions

A photograph of a modern office interior, featuring a long conference table and several ergonomic chairs. The room has large windows on the right side, offering a view of a cityscape. The image is overlaid with a semi-transparent blue filter. The text "COUNT()" is centered in the middle of the image.

COUNT()

COUNT()

So far:

# COUNT()

## So far:

- Theory of Relational Databases
- SQL Theory
- Coding Techniques and Best Practices
- SELECT, INSERT, UPDATE, DELETE

# COUNT()

## So far:

- Theory of Relational Databases
- SQL Theory
- Coding Techniques and Best Practices
- SELECT, INSERT, UPDATE, DELETE

## Next:

# COUNT()

## So far:

- Theory of Relational Databases
- SQL Theory
- Coding Techniques and Best Practices
- SELECT, INSERT, UPDATE, DELETE

## Next:

- Aggregate Functions

# COUNT()

## aggregate functions

they gather data from *many* rows of a table, then aggregate it into a *single* value

# COUNT()

## aggregate functions

they gather data from *many* rows of a table, then aggregate it into a *single* value

## INPUT



# COUNT()

## aggregate functions

they gather data from *many* rows of a table, then aggregate it into a *single* value

## INPUT

the information contained  
in *multiple* rows

# COUNT()

## aggregate functions

they gather data from *many* rows of a table, then aggregate it into a *single* value

### INPUT

the information contained in *multiple* rows →

# COUNT()

## aggregate functions

they gather data from *many* rows of a table, then aggregate it into a *single* value

### INPUT

the information contained  
in *multiple* rows



### OUTPUT

# COUNT()

## aggregate functions

they gather data from *many* rows of a table, then aggregate it into a *single* value

### INPUT

the information contained  
in *multiple* rows



### OUTPUT

the *single* value they  
provide

COUNT()

COUNT()

COUNT()

COUNT()

SUM()

# COUNT()



COUNT()

SUM()

MIN()

# COUNT()



COUNT()

SUM()

MIN()

MAX()



# COUNT()



COUNT()

SUM()

MIN()

MAX()

AVG()

**COUNT()**

**COUNT()**

**SUM()**

**MIN()**

**MAX()**

**AVG()**

**COUNT()**

**COUNT()**

**SUM()**

**MIN()**

**MAX()**

**AVG()**

**aggregate functions**

COUNT()

COUNT()

SUM()

MIN()

MAX()

AVG()

aggregate functions

=

summarizing functions

# COUNT()

- Why do these functions exist?

# COUNT()

- Why do these functions exist?

- they are a response to the information requirements of a company's different organizational levels

# COUNT()

- Why do these functions exist?

- they are a response to the information requirements of a company's different organizational levels
- top management executives are typically interested in *summarized* figures and rarely in detailed data

# COUNT()

## COUNT()

applicable to both *numeric* and *non-numeric* data



# COUNT()

- **COUNT(DISTINCT )**

helps us find the number of times unique values are encountered in a given column

## COUNT()

- aggregate functions *typically* ignore null values throughout the field to which they are applied

## COUNT()

- aggregate functions typically ignore null values throughout the field to which they are applied

## COUNT()

- aggregate functions typically ignore null values throughout the field to which they are applied



## COUNT()

- aggregate functions typically ignore null values throughout the field to which they are applied



only if you have indicated a *specific* column name within the parentheses

## COUNT()

- aggregate functions typically ignore null values throughout the field to which they are applied



only if you have indicated a *specific* column name within the parentheses

Alternatively:

## COUNT()

- aggregate functions typically ignore null values throughout the field to which they are applied



only if you have indicated a *specific* column name within the parentheses

### Alternatively:

- COUNT(\*)

## COUNT()

- aggregate functions typically ignore null values throughout the field to which they are applied



only if you have indicated a *specific* column name within the parentheses

### Alternatively:

- `COUNT(*)`

\* returns the number of all rows of the table, `NULL` values *included*



COUNT()

COUNT()

# COUNT()

## COUNT()

the parentheses and the argument must be attached to the name of the aggregate function

# COUNT()

## COUNT()

the parentheses and the argument must be attached to the name of the aggregate function

- you shouldn't leave white space before opening the parentheses

# COUNT()

## COUNT()

the parentheses and the argument must be attached to the name of the aggregate function

- you shouldn't leave white space before opening the parentheses

COUNT()

# COUNT()

## COUNT()

the parentheses and the argument must be attached to the name of the aggregate function

- you shouldn't leave white space before opening the parentheses

COUNT()

COUNT ( )

# COUNT()

## COUNT()

the parentheses and the argument must be attached to the name of the aggregate function

- you shouldn't leave white space before opening the parentheses

COUNT()

COUNT\_()

# COUNT()

## COUNT()

the parentheses and the argument must be attached to the name of the aggregate function

- you shouldn't leave white space before opening the parentheses

COUNT()

~~COUNT\_()~~