## What are counters?

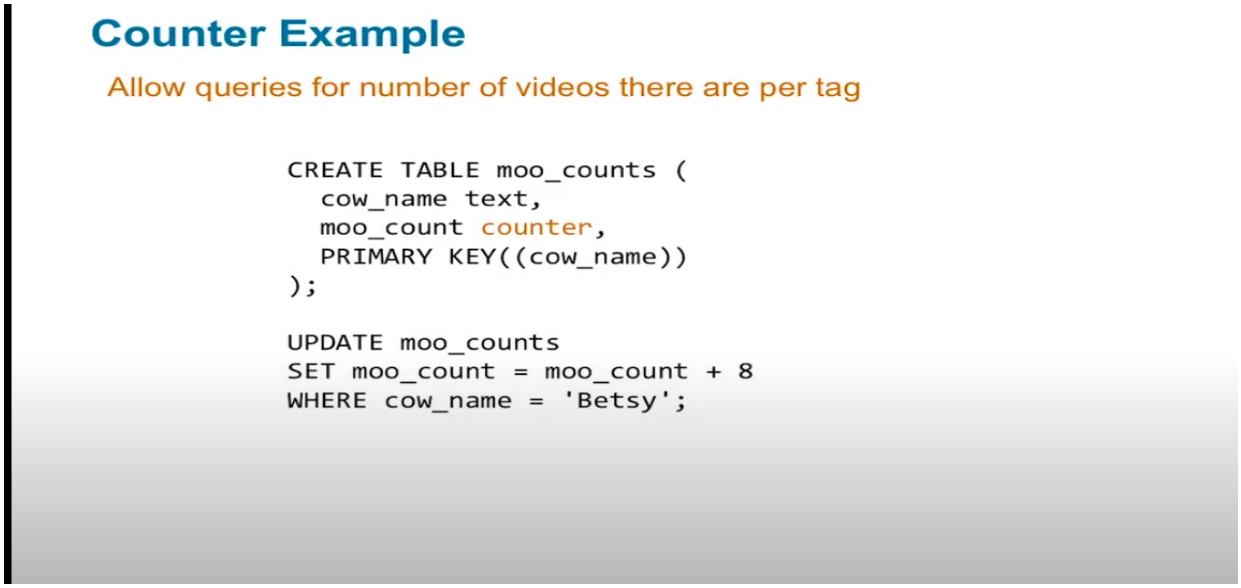
The counter type is used to define counter columns(column data type). A counter column is a column whose value is a 64-bit signed integer and on which 2 operations are supported: incrementing and decrementing

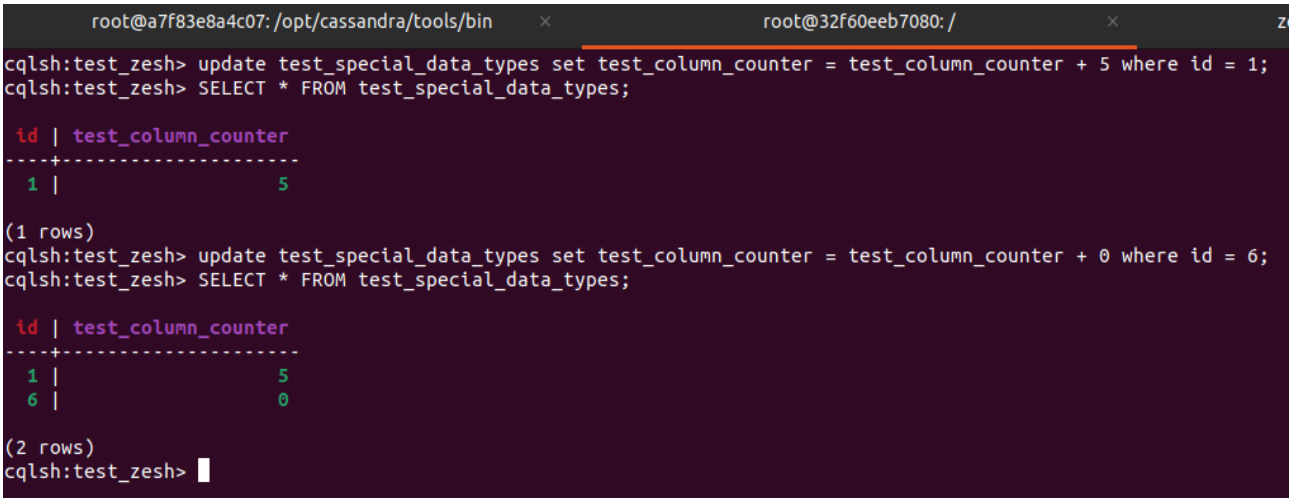
## What is 64-bit signed integer?

A 64-bit signed integer is a data type that can hold integer values ranging from -9,223,372,036,854,775,808 to 9,223,372,036,854,775,807. It uses 64 bits of memory to represent the value, with one bit reserved for the sign (positive or negative) and the remaining 63 bits used to store the magnitude of the number.

## How to implement counters?

Here is an example of how you can create counter data type onto a column.



**Counter column limitations on table:**

1. They cannot be used for columns part of the PRIMARY KEY of a table.
2. Tables with counters must have all columns as counters or none at all
3. Counters do not support expiration
4. Counter updates are, by nature, not idempotent. An important consequence is that if a counter update fails unexpectedly (timeout or loss of connection to the coordinator node), the client has no way to know if the update has been applied or not. In particular, replaying the update may or may not lead to an over count.