

Agenda

- DML - UPDATE, DELETE
- DDL - Truncate, DROP
- DELETE vs TRUNCATE vs DROP
- Using HELP
- SQL Functions
 - Numeric Functions
 - String Functions
 - Date and Time Functions
 - Control Flow Functions
 - NULL Functions
 - Misc/Info Functions
 - Group Functions

DELETE vs TRUNCATE vs DROP

- DELETE
 - Used to delete rows (not structure).
 - All rows or as per WHERE condition.
 - DML operation
 - DML ops can be rolled back (undo/discard) using transaction.
 - In most RDBMS, slower operation.
- TRUNCATE
 - Used to delete rows (not structure).
 - All rows.
 - DDL operation.
 - DDL ops cannot be rolled back.
 - In most RDBMS, faster operation.
- DROP
 - Used to delete rows as well as struct.
 - DDL operation.
 - DDL ops cannot be rolled back.
 - This is fastest operation.

Using HELP

```
HELP SELECT;  
HELP INSERT;  
HELP FUNCTIONS;  
HELP Numeric Functions;  
HELP String Functions;
```

NULL Functions

- NULL is a special value in RDBMS
- It is irerespective of datatype
- NULL is not 0,0.0,'\0',"NULL"
- It is used to represent absent/empty value.

Misc/Info Functions

```
SELECT VERSION();  
  
SELECT DATABASE();  
  
SELECT USER();
```

Group Functions

Single Row functions

- These are the functions that are executed for every single row individually.
- It produces result for every input value
- n input rows -> n output rows

MultiRow functions

- Also called as Group Functions,Aggegrate Functions
- These functions are executed for a group of rows
- It produces single result for group of input
- n input rows -> 1 output row

change sql mode permanently

```
-- check for sql_mode first  
SELECT @@sql_mode;  
--  
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_DATE,ERROR_  
FOR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION'  
  
-- if ONLY_FULL_GROUP_BY flag is not set then  
-- to check for limitations change sql mode  
-- set sql_mode in linux  
SET @@sql_mode=  
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_DATE,ERROR_  
FOR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION';
```

- For windows
 - step 1: Run Notepad -- "Run as Administrator".
 - step 2: Open my.ini from C:\ProgramData\MySQL\MySQL Server 8.0.

- step 3: Under [mysqld] change sql_mode.
 - sql-mode=ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES NO_ENGINE_SUBSTITUTION
 - step 4: Restart MySQL server (or restart computer).
- For Linux
 - In linux its by default set