

# MySQL Views

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# Outline

- Introduction to View
- Advantages of View
- Restriction of Updatable View
- With Check Option

# Introduction

- A view is commonly known as a virtual table
- A view is a virtual table based on the result set of the SQL statement
- A view consists of a SELECT statement that is stored as an object in the database
- The tables referenced in the Views are known as a base table
- Technically views do not store any data. The data are retrieved at run time from the base tables
- MySQL supports nested view – a view that is based on another view
- MySQL does not support materialized view

# Advantages of Views

- **Simplified Queries**
  - Summarize data from various tables and contain complex logic
- **Data Security**
  - Restrict access to data by using SELECT statement with WHERE clause
- **DML Operation Over Data**
  - Update, Insert and delete data from base table (with restriction)

# Restriction of Updatable View

A view is not updatable if it contains any of the following:

- Aggregate functions (SUM(), MIN(), MAX(), COUNT(), and so forth)
- DISTINCT
- GROUP BY
- HAVING
- UNION or UNION ALL
- Subquery in the select list
- Certain joins (see additional join discussion later in this section)
- Nonupdatable view in the FROM clause
- A subquery in the WHERE clause that refers to a table in the FROM clause
- Refers only to literal values
- Uses ALGORITHM = TEMPTABLE
- Multiple references to any column of a base table.

# **With Check Option**

- **A view created with With Check Option will prevent modifying a row in such a way that it would no longer be part of the view result**

# Summary in Sixty Seconds

**#1 A view is a virtual table based on the result set of the SQL statement**

**#2 The tables referenced in the views are known as base tables**

**#3 The advantages of the views are**

Simplified Queries

Data Security

DML Operation Over Data

**#4 View does not store data within but retrieves data from the base tables at the run time**

