Module 11: MySQL Views

Views:

- View consists of a SELECT statement that's stored as an object in the database.
- The tables referenced in the SELECT statement are called the base tables for the view.
- View behaves like virtual table, it

- We can refer view, like we use table in SELECT, INSERT, UPDATE and DELETE statement.

Benefits of Views:

- **Data Security:**
  - Views can

- **Simplified Queries:**
  - It can be used to hide the complexity of a SELECT statement.
- **Save Storage:**
  - Views are virtual and hence don't occupy storage.

Create Views:

- CREATE VIEW is the statement used for creating a view.
- The syntax is:
  - **CREATE [OR REPLACE] VIEW view_name**
  - **[(column_alias_1) [, column_alias_2] …)]**
  - **AS**
  - **select_statement**
- OR REPLACE will replace any existing view that has the same name.
- If you name the columns of a view in CREATE VIEW, then you have to name all the columns.
- If you name the columns of a view in SELECT clause, then you can name just the columns you need to rename.

Updatable View:

- Updatable view is a view that can be used in an INSERT, UPDATE or DELETE statement to update data in the base table.
- Requirements for creating updatable views:
  - Select list can't use: DISTINCT clause, aggregate functions, GROUP BY clause, HAVING clause, ORDER BY and LIMIT clause.
- If a view isn't updatable it's called read only view.

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Altering Views:

- To change the definition of an existing view, we use the ALTER VIEW statement.
- ALTER VIEW discards the current definition for the view and replaces it with new definition in the statement.
- It is an error if the named view does not exists.

Dropping View:

- To destroy view we use DROP VIEW statement.
- The syntax is:
  - **DROP VIEW [IF EXISTS] view_name [,view_name] …;**

Checking Views:

- When we define a view, any object referenced by the view (such as table, view or column) must exist.
- View can become invalid if a table, view or column on which it depends is dropped or altered.
- The syntax is:
  - **CHECK TABLE view_name**

MCQs:

Consider the following table:

```
mysql> select * from book;
+----+---------------+--------+------+--------+
| id | name          | author | nop  | price  |
+----+---------------+--------+------+--------+
| 50 | complete java | vishal |  554 | 600.00 |
| 60 | pure java     | umesh  |  784 | 900.00 |
| 70 | java diamonds | rao    |  145 | 200.00 |
+----+---------------+--------+------+--------+
3 rows in set (0.00 sec)
```

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MCQs

Q1) Which of the following is a correct view creation statement assuming the view book_java does not exists?

Options:

A. create table book_java as select id, name from book where name like '%java%';

B. alter view book_java as select id, name from book where name like '%java%';

C. create view book_java as select id, name from book where name like '%java%';

D. replace view book_java as select id, name from book where name like '%java%';

Solution:

Q2) Which of the following is a correct view creation statement assuming the view book_v1 does not exists?

Options:

A. create view book_v1 (book_name) as select name, nop from book;

B. create view book_v1 (book_name, book_nop) as select * from book;

C. create view book_v1 (book_nop) as select name, nop from book;

D. create view book_v1 (book_name, book_nop) as select name, nop from book;

Solution:

Q3) Which of the following is a correct view creation statement assuming the view book_v2 does not exists? (Select two).

Options:

A. create view book_v2 as select name as "Book Name", nop AS Number OP from book;

B. create view book_v2 as select name as "Book Name", nop AS NOP from book;

C. create view book_v2 as select name is "Book Name", nop IS NOP from book;

D. create view book_v2 as select name as "Book Name", nop AS “NOP” from book;

Solution:

Q4) Which of the following is a correct way of dropping a view book_v2

Options:

A. drop book_v2;

B. drop table book_v2;

C. drop view book_v2;

D. alter view book_v2 drop;

Solution:

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