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TE IT- A

**Assignment No. 8**

**Title:** Use of views

**Problem Statement:** Execute DDL statement which demonstrate the use of views. Try to update the base table using its corressponding view. Also consider restrictions on updatableviews and perform view creation from multiple tables.

**Requirements:** Mysql

**Prerequisites :** Basic knowledge of Mysql

**Theory:**

* **View definition** – A view is defined as a database object that allows us to create a virtual table in the database whose contents are defined by a query or taken from one or more tables.
* **Types of Views** –
  1. Simple View
  2. Complex Views

1. Simple view –
   1. The views which are based on only one table called as Simple view.
   2. Allow to perform DML operations
   3. Cannot have any join or grouping condition
2. Complex view –
   * The views which are based on more than one table called as complex view.
   * Do not allow DML operations to be performed
   * Can have join or grouping condition

* **Creating view –**
  + - * To create view a sub query must be embedded within the create view statement

***Syntax*** – create view view\_name as sub\_query

Ex. create view v1 as select inst\_id,inst\_name,salary from instructor;

* **Dropping views –**
  + To drop a view use drop view statement.

***Syntax*** – drop view view\_name;

Ex. Drop view v1;

* **Modifying a View –**
  + The create or replace statement in view syntax is used to modify view

***Syntax*** – create or replace view view\_name as sub\_query

Ex. Create or replace view v1 as select \* from instructor where dept\_name=’Computer’ and salary > 75000;

* **Renaming Views –**
  + The rename statement in view syntax is used to rename view

Syntax – rename table tbl\_name to new\_tbl\_name;

Change name view emp1.

Ex. Rename table emp1 to emp2

* **Advantages of views –**
  + Security
    - View can restrict user from accessing all data
  + Hides complexity
    - View may be result of very complex query so we can store such result to a view and access it whenever we want.
  + Dynamic nature
    - View definition remains unaffected although there is any change in structure of a table.
  + Does not allows direct access to the tables of data dictionary.
    - This act like functionality of safeguard to data stored in the data dictionary.
  + Data integrity
    - If data is accessed through a view, DBMS can automatically check the data to check for specified integrity constraints.
* **Disadvantages of view –** 
  + Performance
    - Sometimes a simple query may takes longer time to run.
  + View management
    - Need to keep all information of all views in such a case so as to it will become very difficult to manage views
  + Update restrictions
* Update is possible for simple views
* Complex views cannot be updated

**Conclusion:** Hence, we studied view operations like creation,remaning,drop and modify also advantages and disadvantages.