**VIEWS IN SQL**

**EXPT NO: 7 DATE: 18/11/2022**

**AIM:** To study views in SQL

**THEORY**

In SQL, a view is a virtual table based on the result-set of an SQL statement.

A view contains rows and columns, just like a real table. The fields in a view are fields from one or more real tables in the database. You can add SQL statements and functions to a view and present the data as if the data were coming from one single table.

Views, which are a type of virtual tables allow users to do the following −

* Structure data in a way that users or classes of users find natural or intuitive.
* Restrict access to the data in such a way that a user can see and (sometimes) modify exactly what they need and no more.
* Summarize data from various tables which can be used to generate reports.

Operations on Views :

1. A view is created with the **CREATE VIEW** statement.

Syntax: CREATE VIEW view\_name AS

SELECT column1, column2.....

FROM table\_name

WHERE condition;

1. A view can be updated with the **CREATE OR REPLACE VIEW** statement.

Syntax : CREATE OR REPLACE VIEW view\_name AS

SELECT column1,column2,..

FROM table\_name

WHERE condition;

1. A view is deleted with the **DROP VIEW** statement.

Syntax :  DROP VIEW view\_name;

**Uses of a View :** A good database should contain views due to the given reasons:

1. **Restricting data access –** Views provide an additional level of table security by restricting access to a predetermined set of rows and columns of a table.
2. **Hiding data complexity –** A view can hide the complexity that exists in a multiple table join.
3. **Simplify commands for the user –** Views allows the user to select information from multiple tables without requiring the users to actually know how to perform a join.
4. **Store complex queries –** Views can be used to store complex queries.
5. **Rename Columns –** Views can also be used to rename the columns without affecting the base tables provided the number of columns in view must match the number of columns specified in select statement. Thus, renaming helps to hide the names of the columns of the base tables.
6. **Multiple view facility –** Different views can be created on the same table for different users.

Inserting Rows in a View

Rows of data can be inserted into a view. The same rules that apply to the UPDATE command also apply to the INSERT command.

Deleting Rows in a View

Rows of data can be deleted from a view. The same rules that apply to the UPDATE and INSERT commands apply to the DELETE command.

**QUERIES**

1) Create a view containing the information about all books along with the publisher

and author details and check if view is updatable.

2) Create a view for every cardholder containing his personal details as well as details

of each and every book borrowed by him and the details of the library branch from

where the boks wewre borrowed. check if the view is updatable

3) Create a view to store the number of books per publisher and check if the view is

updatable

4) Using the view created above create another view to store the no. of books per

author.

5) Using the view created above, create another view to store the no. of books

borrowed per borrower.

6) Create a temporary table to store the details of book along with the book copies

information.

7) Using the temporary table above find the book with maximum no of copies.

8) Using the views created above answer the following questions

1. Find the author with maximum books.

2. Find the publisher with maximum books.

**CONCLUSION**

The concept of views in SQL and its various use cases was studied and understood.