

Assignment - 3

Name :- Jineshwar Anil Bagul

Div :- AI - A

Roll No :- 26

PRN :- 12310204

Title :- Execute DDL Statements which demonstrate the use of views. Try to update the base table using its corresponding view. Also consider restriction on updatable views and perform view creation from multiple tables.

A view is defined as 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.

Virtual Table :- A view does not store data itself but provides a way to access data from one or more base tables.

Types of View :

- 1) Simple View :- A Simple view in SQL is a virtual table based on a SELECT query.

Syntax : `CREATE VIEW view-name AS SELECT column1, column2, ... FROM table_name;`

Example :- `CREATE VIEW v1 AS SELECT ngo_name, ngo_phone FROM ngo_details;`

2) Update :- An update statement is SQL modifies existing records in a table.

Syntax :- Update view-name SET Column-name = Value WHERE Condition;

Example :- Update v2 SET item-no = 40 WHERE User_id = "N1004";

3) Simple view with Order by clause : The SQL ORDER BY clause is used to sort the data in ascending or descending order, based on one or more columns.

Syntax :- CREATE VIEW view-name AS SELECT column1, column2, ... FROM Table-name ORDER BY column-name;

Example :- CREATE VIEW v3 AS SELECT ngo_id, ngo-name FROM ngo-details ORDER BY ngo-name;

4) Multitable view :- A multitable view in SQL is a virtual table created from a SELECT Query that combines data from multiple table using joins.

Syntax :- CREATE VIEW view-name AS SELECT column1, column2, ... FROM table1, table2 WHERE Condition;

Example :- CREATE VIEW v4 AS SELECT ngo_details.ngo_id, donation.donation_item, donation.item-no FROM ngo_details, donation WHERE ngo_details.ngo_id = donation.item.donation_item;

5) Create Or Replace : create or Replace View updates an existing view or creates a new one if it doesn't exist, allowing you to change the view's definition without dropping it.

Syntax : CREATE OR REPLACE view-name AS SELECT column1, column2, ... FROM table-name WHERE condition;

Example :- CREATE OR REPLACE VIEW V4 AS SELECT ngo-details.ngo-id, donation-item.item-name, donation-item.item-no FROM ngo-details, donation-item WHERE ngo-details.ngo-id = donation-item.user_id;

- 6) Aggregative Functions :- in a view allow you to perform calculation like SUM, AVG, COUNT, MIN and MAX on a set of data within the view.

Syntax : CREATE VIEW view-name AS SELECT AGGREGATIVE FUNCTIONS (column-name) FROM view-name.

Example :- CREATE VIEW V6 AS SELECT SUM(item-no) FROM V4

- 7) Insert View : You can insert data into an updatable view using the INSERT INTO Statement.

Syntax : INSERT INTO view-name WHERE condition;

Example :- INSERT INTO V5 (user-id, item-no) VALUES ("N004", "30");

- 8) Deletion from view :- You can delete data from an updatable view using the 'DELETE' Statement, just like deleting from a table.

Syntax :- DELETE FROM view-name WHERE condition;

Example :- DELETE FROM V5 WHERE user-id = "N005";

9) Drop View :- you can delete a view using the
DROP VIEW Statement

Syntax : DROP view-name;

Example : DROP VIEW v5;