Nepal College of Information Technology

Balkumari , Lalitpur

Database Management System

Lab 6

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Title: VIEWS

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Objective:

To create and manipulate various database objects of table using views.

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Procedure:

A view is the tailored presentation of data contained in one or more table and can also be said as restricted view to the data's in the tables.

A view is a 'virtual table' or a 'stores query' which takes the output of a query and treats it as a table. The table upon which a view is created is called as base table.

A view is a logical table bases on a table or another view. A view contains no data of its own but is like a window through which data from table can be viewed or changed. The view is stores as a SELECT statement in the data dictionary.

Advantages of a view:

- Additional level of table security.
- Hides data complexity.
- Simplifies the usages by combining multiple tables into a single table.
- Summarize data from various tables which helps to generate reports.

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SQL Command:

1. **Creating views**
   - Database views are created using CREATE VIEW statement.
   - Views can be created from a single table, multiple tables, or another view.
   - Syntax:

        CREATE VIEW view_name AS
        SELECT column1, column2.....
        FROM table_name
        WHERE [condition];

   - Example:

        CREATE VIEW customer_view AS
        SELECT name, age
        FROM customer;

2. **TO query view**
   - Syntax:

        SELECT * FROM view_name WHERE clause

   - Example:

        SELECT * FROM customer_view

3. **Update view**
   - Syntax:

        - ALTER VIEW view_name AS
          SELECT column1, column2.....
          FROM table_name
          WHERE [condition];

        - UPDATE view_name
          SET column_name = value
          WHERE clause

- Example:

  - ALTER VIEW customer_view AS
    SELECT name, age, address
    FROM customer;

  - UPDATE customer_view
    SET AGE = 35
    WHERE name='ram';

4. **Delete view**
   - Syntax:

     - DROP VIEW view_name

     - DELETE FROM view_name WHERE clause

   - Example:

     - DROP VIEW customer_view

     - DELETE FROM customer_view
       WHERE age = 22;

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LAB EXERCISE:

1. To display only the details of employees who are AP.
2. To display only name, salary and department of employee whose salary is greater than 10000.
3. To display name, age of customer as well as order date and amount.
4. Update view of Q.N.3 to include address and salary of customer.
5. Again update view of Q.N.4 to include only salary greater than 5000.
6. Drop above view.

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Table1: customer

```
+----+----------+-----+----------+----------+
| cid| name     | age | address  | salary   |
+----+----------+-----+----------+----------+
|  1 | ram      |  32 | kathmandu|  2000.00 |
|  2 | shyam    |  25 | patan    |  1500.00 |
|  3 | hari     |  23 | dharan   |  2000.00 |
|  4 | gopal    |  25 | pokhara  |  6500.00 |
|  5 | sita     |  27 | bhaktapur|  8500.00 |
|  6 | gita     |  22 | illam    |  4500.00 |
|  7 | rita     |  24 | banepa   | 10000.00 |
+----+----------+-----+----------+----------+
```

Table 2: order

```
+-----+--------------------+------------+--------+
|oid  | date               | cid        | amount |
+-----+--------------------+------------+--------+
| 102 | 2015-10-08 00:00:00 |          3 |   3000 |
| 100 | 2014-10-08 00:00:00 |          3 |   1500 |
| 101 | 2014-11-20 00:00:00 |          2 |   1560 |
| 103 | 2013-05-20 00:00:00 |          4 |   2060 |
+-----+--------------------+------------+--------+
```

Table 3: employee

```
+----+----------+-----+----------+----------+
| eid| ename    | job | did      | salary   |
+----+----------+-----+----------+----------+
|  1 | arjun    | AP  | 1        | 10000.00|
|  2 | rabi     | JP  | 2        | 12000.00|
|  3 | rohan    | AP  | 2        | 15000.00|
|  4 | krishna  | AP  | 1        | 20000.00|
```

Table 4: department

```
+----+----------+----------+
| did| dname    | location |
+----+----------+----------+
|  1 | accounting| kathmandu|
|  2 | sales    | patan    |
|  3 | research | banepa   |
|  4 | operations| bhaktapur|
```