Lab 09: Views

Objective(s):

To learn the Views

Views

We should be able to use views to:

- Reduce apparent database complexity for end users
- Prevent sensitive columns from being selected, while still affording access to other important data
- Add additional indexing to your database to speed query performance

A view is, at its core, really nothing more than a stored query. What's great is that you can mix and match your data from base tables (or other views) to create what will, in most respects, function just like another base table. You can create a simple query that selects from only one table and leaves some columns out, or you can create a complex query that joins several tables and makes them appear as one

Syntax

The syntax for creating a view

```
CREATE VIEW <view name>
AS
<SELECT statement>
```

Example 1

We'll call this one our customer phone list, and create it as CustomerPhoneList_vw

```
CREATE VIEW CustomerPhoneList_vw
AS
SELECT CustomerName, Contact, Phone
FROM Customers
```

Example 2

Our manager would like to be able to do simple queries that will tell him or her. What orders have been placed for what parts and who placed them. So, we create a view that they can perform very simple queries

```
CREATE VIEW CustomerOrders_vw
AS
SELECT cu.CompanyName,o.OrderID,o.OrderDate,od.ProductID,p.ProductName,od.Quantity,
od.UnitPrice,od.Quantity * od.UnitPrice AS ExtendedPrice
FROM Customers AS cu
INNER JOIN Orders AS o
ON cu.CustomerID = o.CustomerID
INNER JOIN [Order Details] AS od
ON o.OrderID = od.OrderID
INNER JOIN Products AS p
ON od.ProductID = p.ProductID
```

Limit What's Inserted into Views—WITH CHECK OPTION

The rules are simple—in order to update or insert data using the view, the resulting row must qualify to appear in the view results. Restated, the inserted or updated row must meet any WHERE criterion that's used in the SELECT statement that underlies your view.

```
CREATE VIEW OregonShippers_vw
AS
SELECT ShipperID,
CompanyName,
Phone
FROM Shippers
WHERE Phone LIKE '(503)%'
OR Phone LIKE '(541)%'
OR Phone LIKE '(971)%'
WITH CHECK OPTION
```

Editing Views

The only differences between using the ALTER VIEW statement and the CREATE VIEW statement are:

- ALTER VIEW expects to find an existing view, whereas CREATE doesn't.
- ALTER VIEW retains any permissions that have been established for the view.
- ALTER VIEW retains any dependency information.

Dropping Views

It doesn't get much easier than this:

```
DROP VIEW <view name>, [<view name>,[ ...n]]
```

And it's gone.

Exercise

1. Create a view to display records of deptno 10 from EMP table with the following attributes: empno,ename,sal, deptno.

2. Display all the records from view created in question 1.

3. Through view created in question 1, update the deptno of employee 7782 from 10 to 20 and then display all the records from the same view and note which employee record is missing now, which was displayed in question 2.

4. Create any simple view with base table EMP in such a way that records can only be displayed but can never be manipulated through this view.

5. Create a view which displays the ename, dname and sal of all the employees of deptno 20.

6. Create a view MY_VU based on the table EMP55 which does not exists in the schema. Now create the table EMP55 from EMP table having records of deptno=10. Now select all the records from the view MY_VU.