

# Views

# View

- A virtual table that represents the data in one or more tables in an alternative way
- NO physical existence in database
- It contains data at run time only
- It can be used to
  - Select
  - Insert
  - Update
  - Delete data from the tables

# Views Continued....

- By using View we can join multiple tables and present the data as coming from a single table
- It is used for security purposes i.e. when you want to hide the actual tables or column of tables participating in the query
- View can be used in other Views and Stored Procedures
- View does not accept any parameter
- View cannot use Stored Procedure in it

# Operations

## □ Create

Can Only select query in body

```
CREATE VIEW ViewName  
AS  
SELECT * FROM TableName
```

## □ Drop

```
DROP VIEW ViewName
```

## □ Call

```
SELECT * FROM ViewName
```

## □ Alter

```
ALTER view ViewName  
as  
select Column1 from  
Table1 join table1  
table1,c1=table2.C1  
GO
```

# Insert Data Through View

- The data will be inserted in tables from which view is created
- Data will only be inserted if not constraints on underlying tables are violated

```
| create table customer2
| (customerID int not null
| ,
| customername varchar(10) null
| )
| go

| create view Cust2
| as
| select customerID from customer2
|
| go

| insert into Cust2 values (2)
| --This will run successfully
| --A new row will be inserted in Customer2
| --with values (2,null)
|
| go
```

```
create table customer1
(customerID int not null
,
customername varchar(10) not null
)
go

create view Cust1
as
select customerID from customer1
go

insert into Cust1 values (2)
--This insertion will give error
--As customer name cannot be null in Customer1
go
```

# Delete and Update through View

- Delete and update work similarly a Insert
- If Deletion and Update does not violate and constraints on underlying table

# Views WITH CHECK Option

- To restrict the changes that users can make
- Use the CREATE VIEW command's WITH CHECK OPTION clause when defining the view
- Note that any data can be added directly in the tables, but not through view

# Views WITH CHECK Option Example

- Create a view with Check Option

```
CREATE VIEW v_EmployeeDetailWithCheckOption
AS
SELECT E.*
FROM Employee E
WHERE E.EmployeeID < 15
WITH CHECK OPTION
```

- Adding any data via this view that does not fulfill where clause will not be inserted

```
INSERT INTO v_EmployeeDetailWithCheckOption (EmployeeID, NAME)
VALUES ( 17, 'Added with View')
```

-->>This will not be inserted

```
INSERT INTO v_EmployeeDetailWithCheckOption (EmployeeID, NAME)
VALUES ( 12, 'Added with View')
```

-->>This will be inserted Correctly