

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