

**Prerna Singh**

**DBMS Day-2 Assignment**

**Emp Code- 654870**

**SQL DBMS Slowly Changing Dimensions**

```
CREATE TABLE EMPLOYEE(  
    EmployeeName varchar(255),  
    EmployeeDOB date,  
    EmployeeGender varchar(15),  
    EmployeeLocation varchar(15),  
    EmployeeContact number,  
    PRIMARY KEY (EmployeeContact)  
);
```

**--- TYPE 1 SLOWLY CHANGING DIMENSION (SCD) :- Updating Date ---**

```
CREATE TABLE D_EMPLOYEE(  
    PK_Employee_Key int,  
    E_Contact_number number,  
    E_Name varchar(255),  
    E_DOB date,  
    E_Gender varchar(15),  
    E_Location varchar(15),  
    Created_date timestamp,  
    Updated_date timestamp,  
    PRIMARY KEY (PK_Employee_Key)  
);
```

```
Select sysdate from dual;
```

```
INSERT INTO EMPLOYEE (EmployeeName, EmployeeDOB, EmployeeGender, EmployeeLocation,  
EmployeeContact)
```

```
VALUES ('Ram Kumar', '01-JAN-1990', 'Male', 'Delhi', 7898528527);
```

```
INSERT INTO EMPLOYEE (EmployeeName, EmployeeDOB, EmployeeGender, EmployeeLocation,  
EmployeeContact)
```

```
VALUES ('Sunita', '02-FEB-1991', 'Female', 'Bangalore', 9517538525);
```

```
INSERT INTO EMPLOYEE (EmployeeName, EmployeeDOB, EmployeeGender, EmployeeLocation,  
EmployeeContact)
```

```
VALUES ('Ajay', '01-JAN-1985', 'Male', 'Bangalore', 9638527415);
```

```
INSERT INTO EMPLOYEE (EmployeeName, EmployeeDOB, EmployeeGender, EmployeeLocation,  
EmployeeContact)
```

```
VALUES ('Nitin', '01-FEB-1985', 'Male', 'Chennai', 8527539515);
```

```
select * from EMPLOYEE;
```

```
INSERT INTO D_EMPLOYEE (PK_Employee_Key, E_Contact_number, E_Name, E_DOB,  
E_Gender, E_Location, Created_date, Updated_date)
```

```
VALUES
```

```
(1, 7898528527, 'Ram Kumar', '01-JAN-1990', 'Male', 'Delhi', '30-Aug-2023 10:02', '');
```

```
INSERT INTO D_EMPLOYEE (PK_Employee_Key, E_Contact_number, E_Name, E_DOB,  
E_Gender, E_Location, Created_date, Updated_date)
```

```
VALUES
```

```
(2, 9517538525, 'Sunita', '02-FEB-1991', 'Female', 'Bangalore', '30-Aug-2023 10:02', '');
```

```
INSERT INTO D_EMPLOYEE (PK_Employee_Key, E_Contact_number, E_Name, E_DOB,  
E_Gender, E_Location, Created_date, Updated_date)
```

```
VALUES
```

```

(3, 9638527415, 'Ajay', '01-JAN-1985', 'Male', 'Bangalore', '30-Aug-2023 10:02', '');

INSERT INTO D_EMPLOYEE (PK_Employee_Key, E_Contact_number, E_Name, E_DOB,
E_Gender, E_Location, Created_date, Updated_date)

VALUES

(4, 8527539515, 'Nitin', '01-FEB-1985', 'Male', 'Chennai', '30-Aug-2023 10:02', '');


select * from EMPLOYEE;


update EMPLOYEE set EmployeeLocation='Pune' where EmployeeContact=8527539515;

select * from EMPLOYEE;


update D_EMPLOYEE set E_Location='Pune' where E_Contact_number = 8527539515;

update D_EMPLOYEE set Updated_date = (select sysdate from dual) where E_Contact_number
= 8527539515;

select * from D_EMPLOYEE;

```

**--- TYPE 2 SLOWLY CHANGING DIMENSION (SCD) :- Keeping History of Change (Version) ---**

```

CREATE TABLE D_EMPLOYEE_SCD2(
    PK_Employee_Key int,
    E_Contact_number number,
    E_Name varchar(255),
    E_DOB date,
    E_Gender varchar(15),
    E_Location varchar(15),
    Start_Date DATE,
    End_Date DATE,

```

```

Version INT,
Flag CHAR,
PRIMARY KEY (PK_Employee_Key)
);

INSERT INTO D_EMPLOYEE_SCD2 (PK_Employee_Key, E_Contact_number, E_Name, E_DOB,
E_Gender, E_Location, Start_Date, End_Date,Version,Flag)
VALUES
(1, 7898528527, 'Ram Kumar', '01-JAN-1990', 'Male', 'Delhi', '30-Aug-2023', '',1,'Y');

INSERT INTO D_EMPLOYEE_SCD2 (PK_Employee_Key, E_Contact_number, E_Name, E_DOB,
E_Gender, E_Location, Start_Date, End_Date,Version,Flag)
VALUES
(2, 9517538525, 'Sunita', '02-FEB-1991', 'Female', 'Bangalore', '30-Aug-2023', '',1,'Y');

INSERT INTO D_EMPLOYEE_SCD2 (PK_Employee_Key, E_Contact_number, E_Name, E_DOB,
E_Gender, E_Location, Start_Date, End_Date,Version,Flag)
VALUES
(3, 9638527415, 'Ajay', '01-JAN-1985', 'Male', 'Bangalore', '30-Aug-2023', '',1,'Y');

INSERT INTO D_EMPLOYEE_SCD2 (PK_Employee_Key, E_Contact_number, E_Name, E_DOB,
E_Gender, E_Location, Start_Date, End_Date,Version,Flag)
VALUES (4, 8527539515, 'Nitin', '01-FEB-1985', 'Male', 'Chennai', '30-Aug-2023', '',1,'Y');

select * from D_EMPLOYEE_SCD2;

update D_EMPLOYEE_SCD2 set End_Date = (select sysdate from dual) where
E_Contact_number = 7898528527;

update D_EMPLOYEE_SCD2 set Flag='N' where E_Contact_number = 7898528527;

INSERT INTO D_EMPLOYEE_SCD2 (PK_Employee_Key, E_Contact_number, E_Name, E_DOB,
E_Gender, E_Location, Start_Date, End_Date,Version,Flag)
VALUES

```

```
(5, 7898528527, 'Ram Kumar', '01-JAN-1990', 'Male', 'Delhi', '30-Aug-2023', '', 2, 'Y');
```

```
select * from D_EMPLOYEE_SCD2;
```

**--- TYPE 3 SLOWLY CHANGING DIMENSION (SCD) :- Keeping History of Change (non-version) ---**  
-

```
CREATE TABLE D_EMPLOYEE_scd3(  
    PK_Employee_Key int,  
    E_Contact_number number,  
    E_Name varchar(255),  
    E_DOB date,  
    E_Gender varchar(15),  
    E_Location varchar(15),  
    prev_E_Name varchar(255),  
    prev_E_DOB date,  
    prev_E_Gender varchar(15),  
    prev_E_Location varchar(15),  
    created_date timestamp,  
    updated_date timestamp,  
    PRIMARY KEY (PK_Employee_Key)  
);
```

```
INSERT INTO D_EMPLOYEE_scd3 (PK_Employee_Key, E_Contact_number, E_Name, E_DOB,  
    E_Gender, E_Location, prev_E_Name, prev_E_DOB, prev_E_Gender, prev_E_Location,  
    created_date, updated_date)  
VALUES
```

```
(1, 7898528527, 'Ram Kumar', '01-JAN-1990', 'Male', 'Delhi', null, null, null, null, '30-Aug-2023 10:02', '');
```

```
INSERT INTO D_EMPLOYEE_scd3 (PK_Employee_Key, E_Contact_number, E_Name, E_DOB, E_Gender, E_Location, prev_E_Name, prev_E_DOB, prev_E_Gender, prev_E_Location, created_date, updated_date)
```

```
VALUES
```

```
(2, 9517538525, 'Sunita', '02-FEB-1991', 'Female', 'Bangalore', null, null, null, null, '30-Aug-2023 10:02', '');
```

```
INSERT INTO D_EMPLOYEE_scd3 (PK_Employee_Key, E_Contact_number, E_Name, E_DOB, E_Gender, E_Location, prev_E_Name, prev_E_DOB, prev_E_Gender, prev_E_Location, created_date, updated_date)
```

```
VALUES
```

```
(3, 9638527415, 'Ajay', '01-JAN-1985', 'Male', 'Bangalore', null, null, null, null, '30-Aug-2023 10:02', '');
```

```
INSERT INTO D_EMPLOYEE_scd3 (PK_Employee_Key, E_Contact_number, E_Name, E_DOB, E_Gender, E_Location, prev_E_Name, prev_E_DOB, prev_E_Gender, prev_E_Location, created_date, updated_date)
```

```
VALUES
```

```
(4, 8527539515, 'Nitin', '01-FEB-1985', 'Male', 'Chennai', null, null, null, null, '30-Aug-2023 10:02', '');
```

```
select * from D_EMPLOYEE_scd3;
```

```
update EMPLOYEE set EmployeeLocation='BBSR' where EmployeeContact=9638527415;
```

```
select * from EMPLOYEE;
```

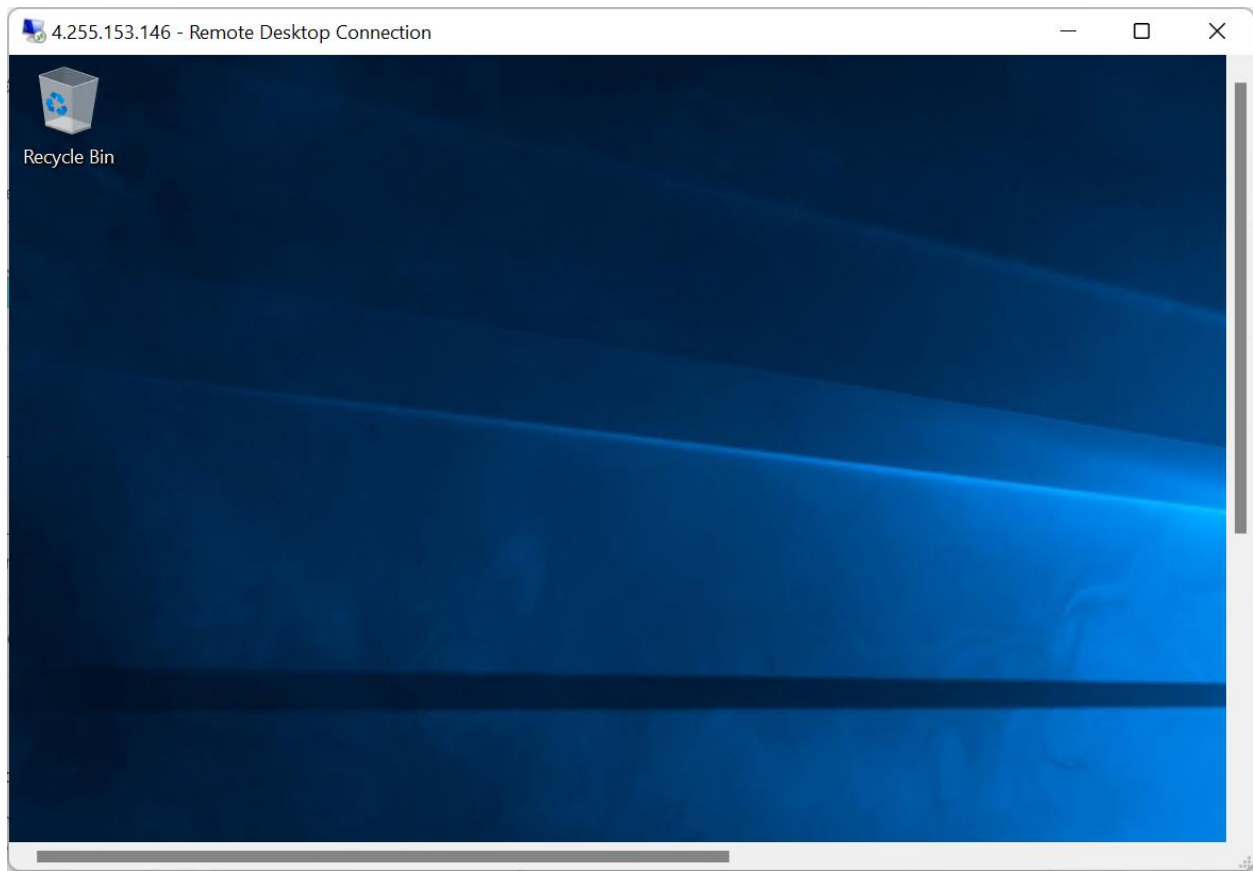
```
update D_EMPLOYEE_scd3 set E_Location = 'BBSR', prev_E_Location = 'Bangalore', updated_date = (select sysdate from dual) where E_Contact_number = 9638527415;
```

```
select * from D_EMPLOYEE_scd3;
```

## Create a VM on Windows-

The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the Azure logo, a search bar, and the user profile 'prema21nove@gmail.c...'. The main content area displays the 'Overview' page for a deployment named 'CreateVm-MicrosoftWindowsServer.WindowsServer-201-20230830161937'. The deployment status is 'Complete', indicated by a green checkmark. Key details include the deployment name, subscription ('Concierge Subscription'), resource group ('learn-7a700983-645a-449c-9665-6...'), start time ('8/30/2023, 4:26:25 PM'), and correlation ID ('e8d51eeb-424b-47b9'). A sidebar on the left lists navigation options: Overview, Inputs, Outputs, and Template. A right sidebar contains sections for 'Cost Management', 'Microsoft Defender for Cloud', 'Free Microsoft tutorials', and 'Work with an expert'. The main content area also includes a 'Next steps' section with links for 'Setup auto-shutdown', 'Monitor VM health, performance and network dependencies', and 'Run a script inside the virtual machine'. At the bottom, there are buttons for 'Go to resource' and 'Create another VM', and a 'Give feedback' link.

The screenshot shows the Microsoft Azure portal interface for the 'Connect' page of a virtual machine named 'test-vp-vm2'. The top navigation bar is consistent with the previous screenshot. The main content area displays the 'Connect' page, which includes a search bar, a 'Refresh' button, and a 'Troubleshooting' dropdown. The primary connection method is 'Connecting using public IP address' with the IP address '4.255.153.146'. Below this, the 'Admin username' is 'prema', and the 'Port' is '3389'. A 'Just-in-time policy' section indicates that the policy is 'Not configured for port 3389' and provides a link to 'Configure for this port'. A 'Most common' section highlights 'Native RDP' as the recommended method for connecting via the public IP address. A 'Select' button is visible at the bottom of the 'Native RDP' section. The left sidebar lists navigation options: Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Settings, Networking, Connect, Windows Admin Center, Disks, Size, Microsoft Defender for Cloud, Advisor recommendations, Extensions + applications, Availability + scaling, and Configuration.



Server Manager

Server Manager ▸ Dashboard

Dashboard

- Local Server
- All Servers
- File and Storage Services ▾

WELCOME TO SERVER MANAGER

**1** Configure this local server

- 2 Add roles and features
- 3 Add other servers to manage
- 4 Create a server group
- 5 Connect this server to cloud services

QUICK START

WHAT'S NEW

LEARN MORE

Hide

ROLES AND SERVER GROUPS

Roles: 1 | Server groups: 1 | Servers total: 1

File and Storage Services 1	Local Server 1	All Servers 1
<ul style="list-style-type: none"><li>Manageability</li><li>Events</li><li>Performance</li><li>BPA results</li></ul>	<ul style="list-style-type: none"><li>Manageability</li><li>Events</li><li>Services</li><li>Performance</li><li>BPA results</li></ul>	<ul style="list-style-type: none"><li>Manageability</li><li>Events</li><li>Services</li><li>Performance</li><li>BPA results</li></ul>

11:02 AM 8/30/2023



We can build the data lake solutions using the following services offered by azure-

- Azure hd insights
- Azure data lake store
- Azure data lake analytics