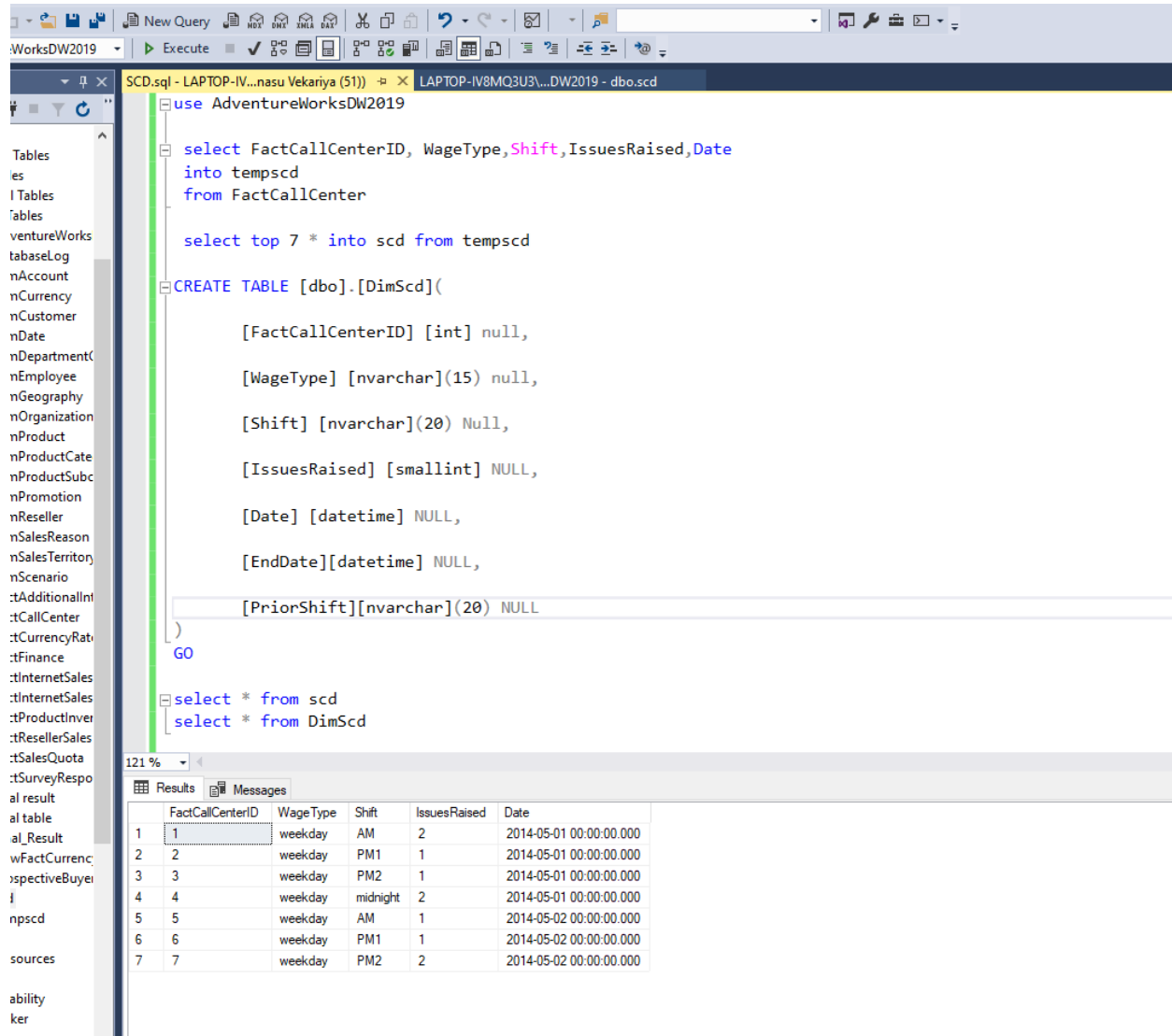


HW 04 SCD

Jignasuben Vekariya (002981797)

First, I retrieved column from the table which is already available and made new table for Slowly Dimension changing Task.



```
use AdventureWorksDW2019

select FactCallCenterID, WageType, Shift, IssuesRaised, Date
into tempscd
from FactCallCenter

select top 7 * into scd from tempscd

CREATE TABLE [dbo].[DimScd](
    [FactCallCenterID] [int] null,
    [WageType] [nvarchar](15) null,
    [Shift] [nvarchar](20) Null,
    [IssuesRaised] [smallint] NULL,
    [Date] [datetime] NULL,
    [EndDate][datetime] NULL,
    [PriorShift][nvarchar](20) NULL
)
GO

select * from scd
select * from DimScd
```

	FactCallCenterID	WageType	Shift	IssuesRaised	Date
1	1	weekday	AM	2	2014-05-01 00:00:00.000
2	2	weekday	PM1	1	2014-05-01 00:00:00.000
3	3	weekday	PM2	1	2014-05-01 00:00:00.000
4	4	weekday	midnight	2	2014-05-01 00:00:00.000
5	5	weekday	AM	1	2014-05-02 00:00:00.000
6	6	weekday	PM1	1	2014-05-02 00:00:00.000
7	7	weekday	PM2	2	2014-05-02 00:00:00.000

HW 04 SCD

Jignasuben Vekariya (002981797)

Resulted Tables with DimScd for SCD task

The screenshot displays the Microsoft SQL Server Enterprise Manager interface. The left pane shows the server hierarchy for 'reWorksDW2019'. The central pane contains a T-SQL query script for a Slowly Changing Dimension (SCD) task. The query defines a table structure with columns [Date], [EndDate], and [PriorShift], and then executes a select statement to retrieve data from the 'scd' and 'DimScd' tables. The bottom pane shows the results of the query, displaying a table with 7 rows and 6 columns: FactCallCenterID, WageType, Shift, IssuesRaised, Date, and EndDate. The 'Date' column contains timestamps from 2014-05-01 00:00:00.000 to 2014-05-02 00:00:00.000.

```
SCD.sql - LAPTOP-IV...nasu Vekariya (51) - LAPTOP-IV8MQ3U3...DW2019 - dbo.scd

[Date] [datetime] NULL,

[EndDate][datetime] NULL,

[PriorShift][nvarchar](20) NULL

)
GO

select * from scd
select * from DimScd
```

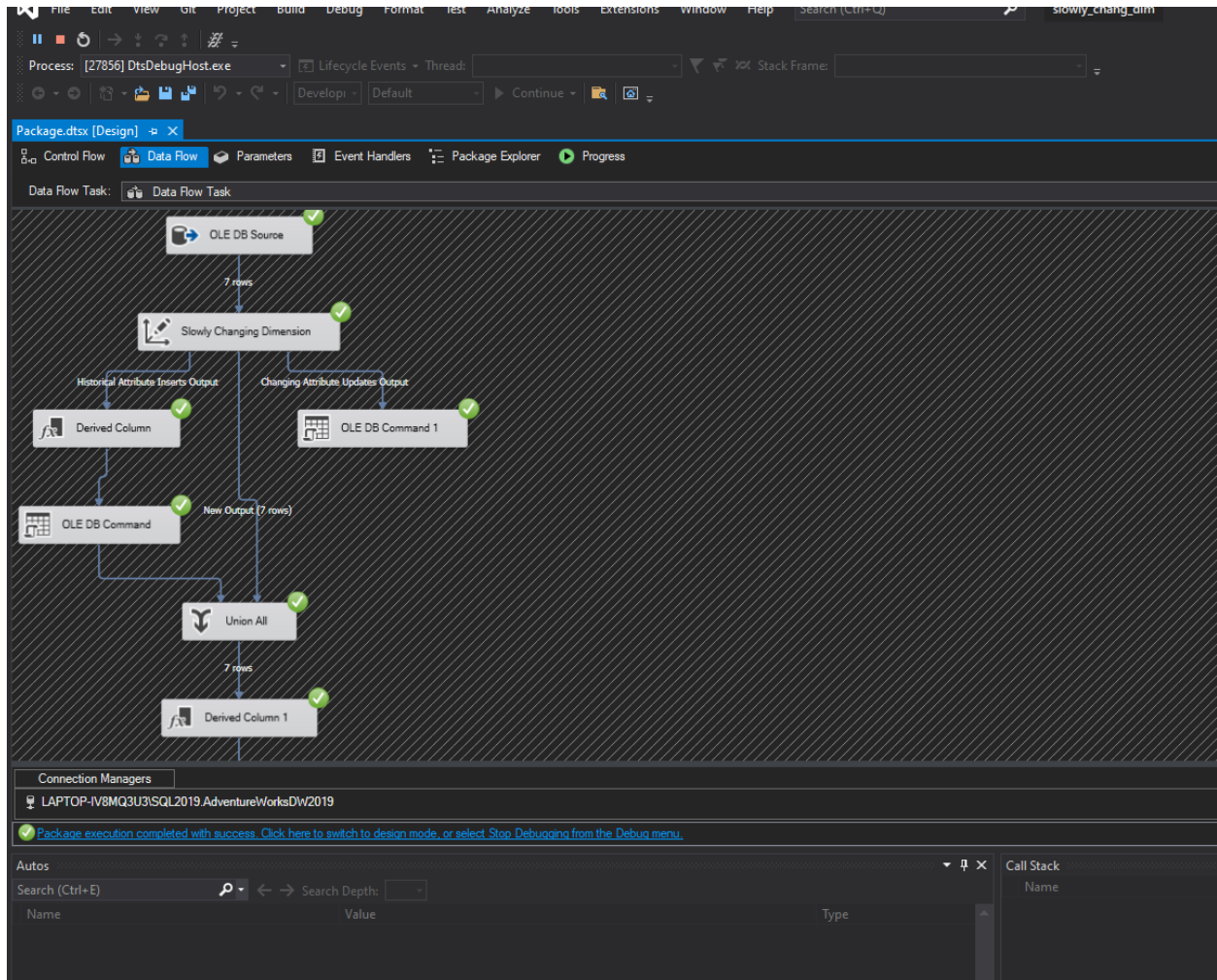
	FactCallCenterID	WageType	Shift	IssuesRaised	Date
1	1	weekday	AM	2	2014-05-01 00:00:00.000
2	2	weekday	PM1	1	2014-05-01 00:00:00.000
3	3	weekday	PM2	1	2014-05-01 00:00:00.000
4	4	weekday	midnight	2	2014-05-01 00:00:00.000
5	5	weekday	AM	1	2014-05-02 00:00:00.000
6	6	weekday	PM1	1	2014-05-02 00:00:00.000
7	7	weekday	PM2	2	2014-05-02 00:00:00.000

FactCallCenterID	WageType	Shift	IssuesRaised	Date	EndDate	PriorShift
------------------	----------	-------	--------------	------	---------	------------

HW 04 SCD

Jignasuben Vekariya (002981797)

Then, Connect tables in Visual Studio



HW 04 SCD

Jignasuben Vekariya (002981797)

After Connecting with Visual Studio, Resulted output

The screenshot shows the Microsoft SQL Server Enterprise Manager interface. The left pane displays the 'AdventureWorksDW2019' database structure, including tables like 'FactCallCenter' and 'DimScd'. The central query window contains the following SQL code:

```
GO

[Date] [datetime] NULL,

[EndDate][datetime] NULL,

[PriorShift][nvarchar](20) NULL

)

GO

select * from scd
select * from DimScd
```

The 'Results' pane shows the output of the query, displaying two tables. The first table has 7 rows of data from the 'FactCallCenter' table. The second table has 7 rows of data from the 'DimScd' table, with 'EndDate' and 'PriorShift' columns set to NULL.

	FactCallCenterID	WageType	Shift	IssuesRaised	Date
1	1	weekday	AM	2	2014-05-01 00:00:00.000
2	2	weekday	PM1	1	2014-05-01 00:00:00.000
3	3	weekday	PM2	1	2014-05-01 00:00:00.000
4	4	weekday	midnight	2	2014-05-01 00:00:00.000
5	5	weekday	AM	1	2014-05-02 00:00:00.000
6	6	weekday	PM1	1	2014-05-02 00:00:00.000
7	7	weekday	PM2	2	2014-05-02 00:00:00.000

	FactCallCenterID	WageType	Shift	IssuesRaised	Date	EndDate	PriorShift
1	1	weekday	AM	2	2022-02-28 23:31:32.000	NULL	NULL
2	2	weekday	PM1	1	2022-02-28 23:31:32.000	NULL	NULL
3	3	weekday	PM2	1	2022-02-28 23:31:32.000	NULL	NULL
4	4	weekday	midnight	2	2022-02-28 23:31:32.000	NULL	NULL
5	5	weekday	AM	1	2022-02-28 23:31:32.000	NULL	NULL
6	6	weekday	PM1	1	2022-02-28 23:31:32.000	NULL	NULL
7	7	weekday	PM2	2	2022-02-28 23:31:32.000	NULL	NULL

HW 04 SCD

Jignasuben Vekariya (002981797)

Multiple Updates Operation

The screenshot shows a SQL Server Enterprise Manager interface. The query window displays the following SQL code:

```
GO
select * from scd
select * from DimScd

update scd set WageType='everyday' where FactCallCenterID=1
update scd set IssuesRaised=4 where FactCallCenterID=1
```

The results grid shows two tables of data. The first table has 7 rows, and the second table has 8 rows.

FactCallCenterID	WageType	Shift	IssuesRaised	Date
1	everyday	AM	4	2014-05-01 00:00:00.000
2	weekday	PM1	1	2014-05-01 00:00:00.000
3	weekday	PM2	1	2014-05-01 00:00:00.000
4	weekday	midnight	2	2014-05-01 00:00:00.000
5	weekday	AM	1	2014-05-02 00:00:00.000
6	weekday	PM1	1	2014-05-02 00:00:00.000
7	weekday	PM2	2	2014-05-02 00:00:00.000

FactCallCenterID	WageType	Shift	IssuesRaised	Date	EndDate	PriorShift
1	weekday	AM	2	2022-02-28 23:31:32.000	2022-02-28 23:35:59.000	NULL
2	weekday	PM1	1	2022-02-28 23:31:32.000	NULL	NULL
3	weekday	PM2	1	2022-02-28 23:31:32.000	NULL	NULL
4	weekday	midnight	2	2022-02-28 23:31:32.000	NULL	NULL
5	weekday	AM	1	2022-02-28 23:31:32.000	NULL	NULL
6	weekday	PM1	1	2022-02-28 23:31:32.000	NULL	NULL
7	weekday	PM2	2	2022-02-28 23:31:32.000	NULL	NULL
8	everyday	AM	4	2022-02-28 23:35:59.000	NULL	NULL

HW 04 SCD

Jignasuben Vekariya (002981797)

Cross update check

The screenshot shows a SQL Server Enterprise Manager interface. The query window displays the following T-SQL code:

```
GO

select * from scd
select * from DimScd

update scd set WageType='everyday' where FactCallCenterID=1
update scd set IssuesRaised=4 where FactCallCenterID=1

update scd set IssuesRaised=7 where FactCallCenterID=1
update scd set WageType='weekends' where FactCallCenterID=1
```

The results grid shows the following data:

FactCallCenterID	WageType	Shift	IssuesRaised	Date
1	weekends	AM	7	2014-05-01 00:00:00.000
2	weekday	PM1	1	2014-05-01 00:00:00.000
3	weekday	PM2	1	2014-05-01 00:00:00.000
4	weekday	midnight	2	2014-05-01 00:00:00.000
5	weekday	AM	1	2014-05-02 00:00:00.000
6	weekday	PM1	1	2014-05-02 00:00:00.000
7	weekday	PM2	2	2014-05-02 00:00:00.000

The second results grid shows the following data:

FactCallCenterID	WageType	Shift	IssuesRaised	Date	EndDate	PriorShift
1	weekday	AM	2	2022-02-28 23:31:32.000	2022-02-28 23:35:59.000	NULL
2	weekday	PM1	1	2022-02-28 23:31:32.000	NULL	NULL
3	weekday	PM2	1	2022-02-28 23:31:32.000	NULL	NULL
4	weekday	midnight	2	2022-02-28 23:31:32.000	NULL	NULL
5	weekday	AM	1	2022-02-28 23:31:32.000	NULL	NULL
6	weekday	PM1	1	2022-02-28 23:31:32.000	NULL	NULL
7	weekday	PM2	2	2022-02-28 23:31:32.000	NULL	NULL
8	everyday	AM	4	2022-02-28 23:35:59.000	2022-02-28 23:38:39.000	NULL
9	weekends	AM	7	2022-02-28 23:38:39.000	NULL	NULL

HW 04 SCD

Jignasuben Vekariya (002981797)

Delete Column Query

APTOP-IV8MQ3U3\SQL2019\AdventureWorksDW2019 (LAPTOP-IV8MQ3U3\Jignasu Vekariya (51)) - Microsoft SQL Server Management Studio

File Query Project Tools Window Help

AdventureWorksDW2019

Execute

SCD.sql - LAPTOP-IV...nasu Vekariya (51) X LAPTOP-IV8MQ3U3...DW2019 - dbo.scd

```
update scd set IssuesRaised=7 where FactCallCenterID=1
update scd set WageType='weekends' where FactCallCenterID=1

update scd set Shift='midnight' where FactCallCenterID=7
delete from scd where FactCallCenterID=1
```

121 %

Results Messages

	FactCallCenterID	WageType	Shift	IssuesRaised	Date
1	2	weekday	PM1	1	2014-05-01 00:00:00.000
2	3	weekday	PM2	1	2014-05-01 00:00:00.000
3	4	weekday	midnight	2	2014-05-01 00:00:00.000
4	5	weekday	AM	1	2014-05-02 00:00:00.000
5	6	weekday	PM1	1	2014-05-02 00:00:00.000
6	7	weekday	midnight	2	2014-05-02 00:00:00.000

	FactCallCenterID	WageType	Shift	IssuesRaised	Date	EndDate	PriorShift
1	1	weekday	AM	2	2022-02-28 23:31:32.000	2022-02-28 23:35:59.000	NULL
2	2	weekday	PM1	1	2022-02-28 23:31:32.000	NULL	NULL
3	3	weekday	PM2	1	2022-02-28 23:31:32.000	NULL	NULL
4	4	weekday	midnight	2	2022-02-28 23:31:32.000	NULL	NULL
5	5	weekday	AM	1	2022-02-28 23:31:32.000	NULL	NULL
6	6	weekday	PM1	1	2022-02-28 23:31:32.000	NULL	NULL
7	7	weekday	PM2	2	2022-02-28 23:31:32.000	2022-02-28 23:42:52.000	NULL
8	1	everyday	AM	4	2022-02-28 23:35:59.000	2022-02-28 23:38:39.000	NULL
9	1	weekends	AM	7	2022-02-28 23:38:39.000	NULL	NULL
10	7	weekday	midnight	2	2022-02-28 23:42:52.000	NULL	NULL

HW 04 SCD

Jignasuben Vekariya (002981797)

Insert row in the table

The screenshot shows a SQL Server Enterprise Manager interface. On the left, a tree view displays the database structure, including tables like AdventureWorks, DatabaseLog, DimAccount, DimCurrency, DimCustomer, DimDate, DimDepartment, DimEmployee, DimGeography, DimOrganization, DimProduct, DimProductCategory, DimProductSubcategory, DimPromotion, DimReseller, DimSalesReason, DimSalesTerritory, DimScenario, FactAdditionalInformation, FactCallCenter, FactCurrencyRate, FactFinance, FactInternetSales, FactProductInventory, FactResellerSales, FactSalesQuota, FactSurveyResponse, final result, final table, Final_Result, NewFactCurrency, ProspectiveBuyer, scd, tempscd, and Resources. The main window displays a query window titled 'SCD.sql - LAPTOP-IV...nasu Vekariya (51)' with the following SQL code:

```
update scd set Shift='midnight' where FactCallCenterID=7

delete from scd where FactCallCenterID=1

INSERT INTO scd (WageType, Shift, IssuesRaised)
VALUES ('everyday', 'PM2', 1);
```

Below the query window, the 'Results' tab shows a grid with 7 rows and 5 columns: FactCallCenterID, Wage Type, Shift, IssuesRaised, and Date. The data is as follows:

FactCallCenterID	Wage Type	Shift	IssuesRaised	Date
1	everyday	PM2	1	NULL
2	weekday	PM1	1	2014-05-01 00:00:00.000
3	weekday	PM2	1	2014-05-01 00:00:00.000
4	weekday	midnight	2	2014-05-01 00:00:00.000
5	weekday	AM	1	2014-05-02 00:00:00.000
6	weekday	PM1	1	2014-05-02 00:00:00.000
7	weekday	midnight	2	2014-05-02 00:00:00.000

Below the results grid, a second grid shows the 'Messages' tab with 11 rows and 7 columns: FactCallCenterID, Wage Type, Shift, IssuesRaised, Date, EndDate, and PriorShift. The data is as follows:

FactCallCenterID	Wage Type	Shift	IssuesRaised	Date	EndDate	PriorShift
1	weekday	AM	2	2022-02-28 23:31:32.000	2022-02-28 23:35:59.000	NULL
2	weekday	PM1	1	2022-02-28 23:31:32.000	NULL	NULL
3	weekday	PM2	1	2022-02-28 23:31:32.000	NULL	NULL
4	weekday	midnight	2	2022-02-28 23:31:32.000	NULL	NULL
5	weekday	AM	1	2022-02-28 23:31:32.000	NULL	NULL
6	weekday	PM1	1	2022-02-28 23:31:32.000	NULL	NULL
7	weekday	PM2	2	2022-02-28 23:31:32.000	2022-02-28 23:42:52.000	NULL
8	everyday	AM	4	2022-02-28 23:35:59.000	2022-02-28 23:38:39.000	NULL
9	weekends	AM	7	2022-02-28 23:38:39.000	NULL	NULL
10	weekday	midnight	2	2022-02-28 23:42:52.000	NULL	NULL
11	everyday	PM2	1	2022-02-28 23:51:18.000	NULL	NULL