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## KULLIYYAH OF INFORMATION & COMMUNICATION TECHNOLOGY

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SEMESTER 2, 2021/2022

SEM2 INFO 4311 DATA WAREHOUSING

SECTION 01

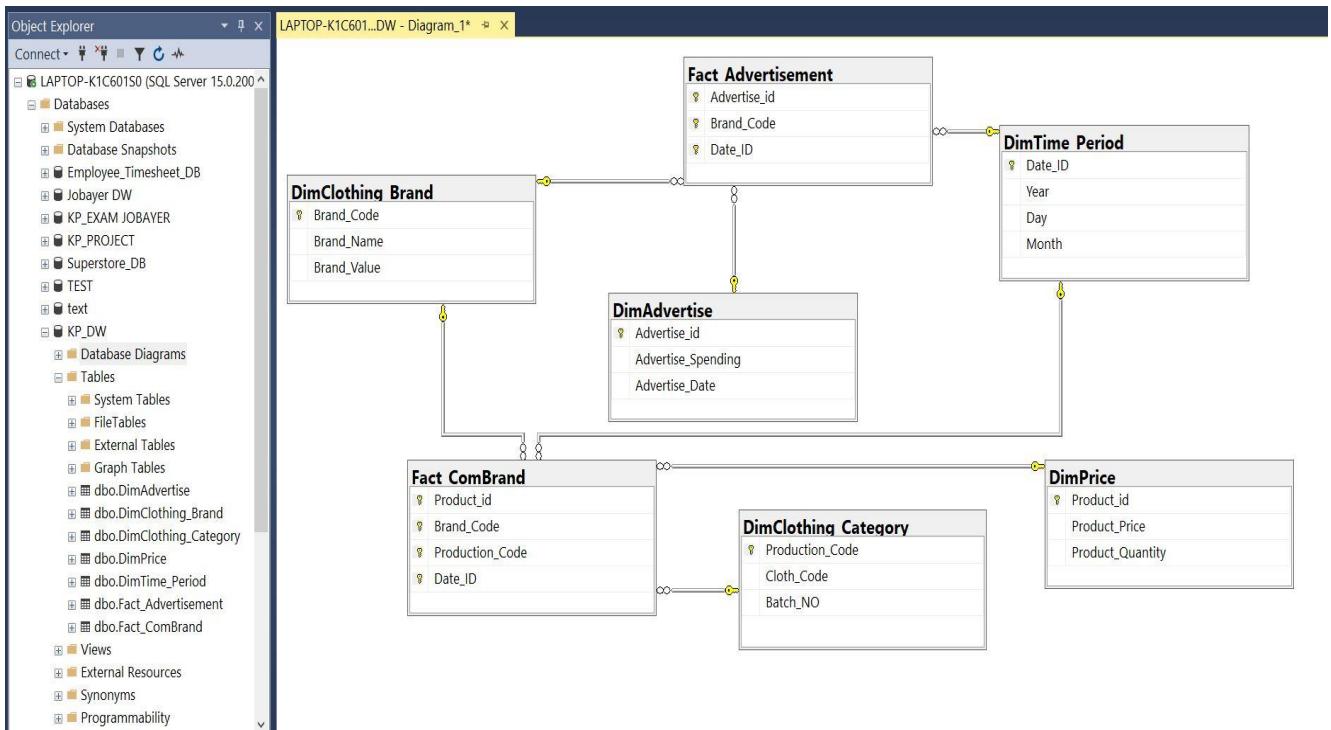
*TITLE:DATA WAREHOUSING FINAL ASSESSMENT 1*

PREPARED BY:

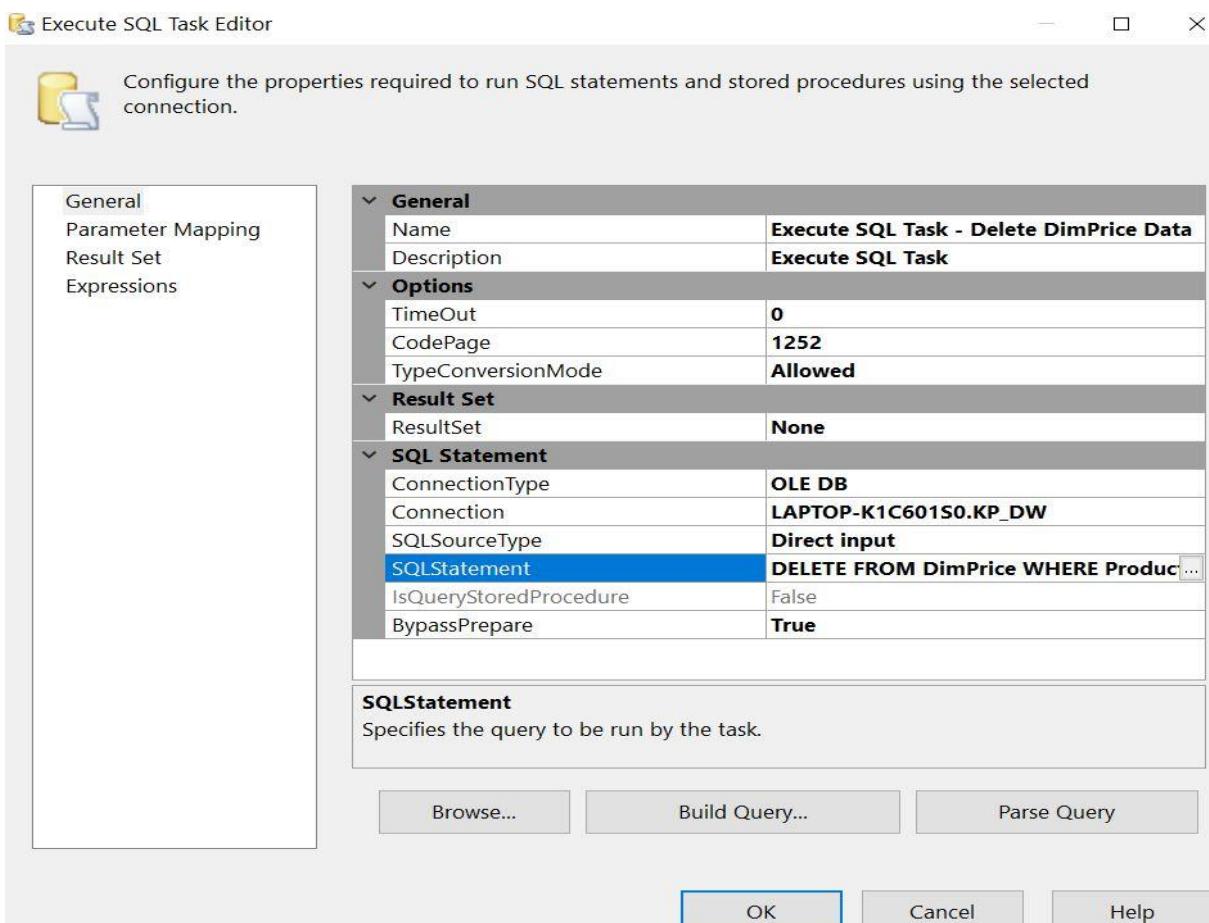
NAME	MATRIC NO.
JOYADDAR MD JOBAYER	1731833

LECTURER  
LILI MARZIANA BT. ABDULLAH

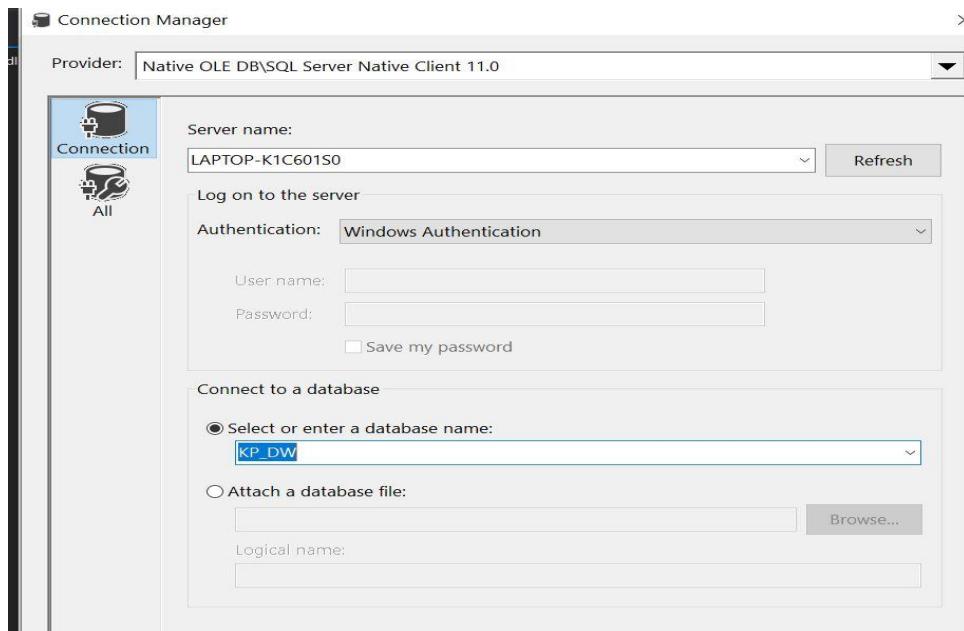
DUE  
16 JUNE 2022



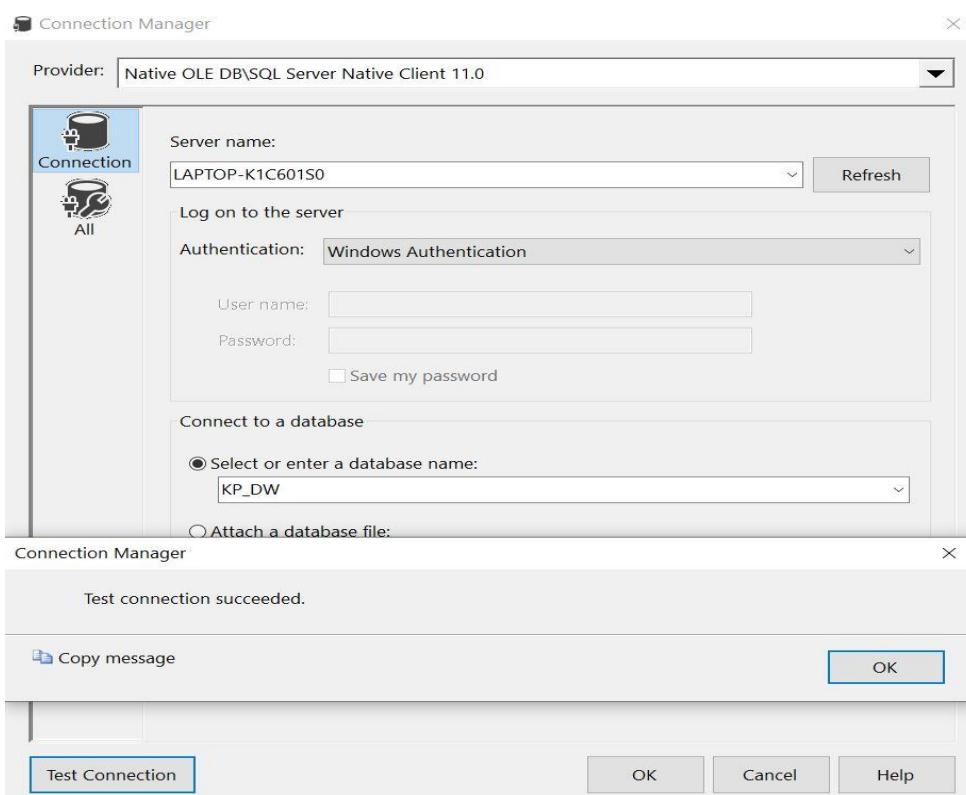
## 1. MULTI FACT STAR MODEL DATABASE DIAGRAM



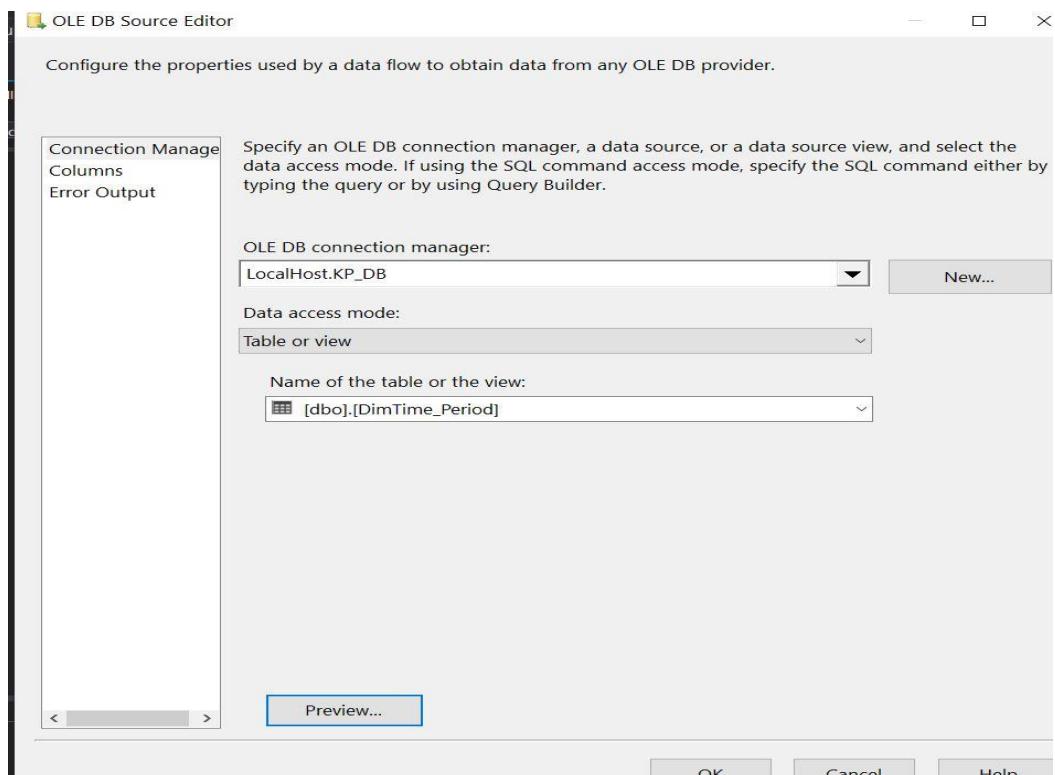
## 2. EXECUTE SQL TASK EDITOR



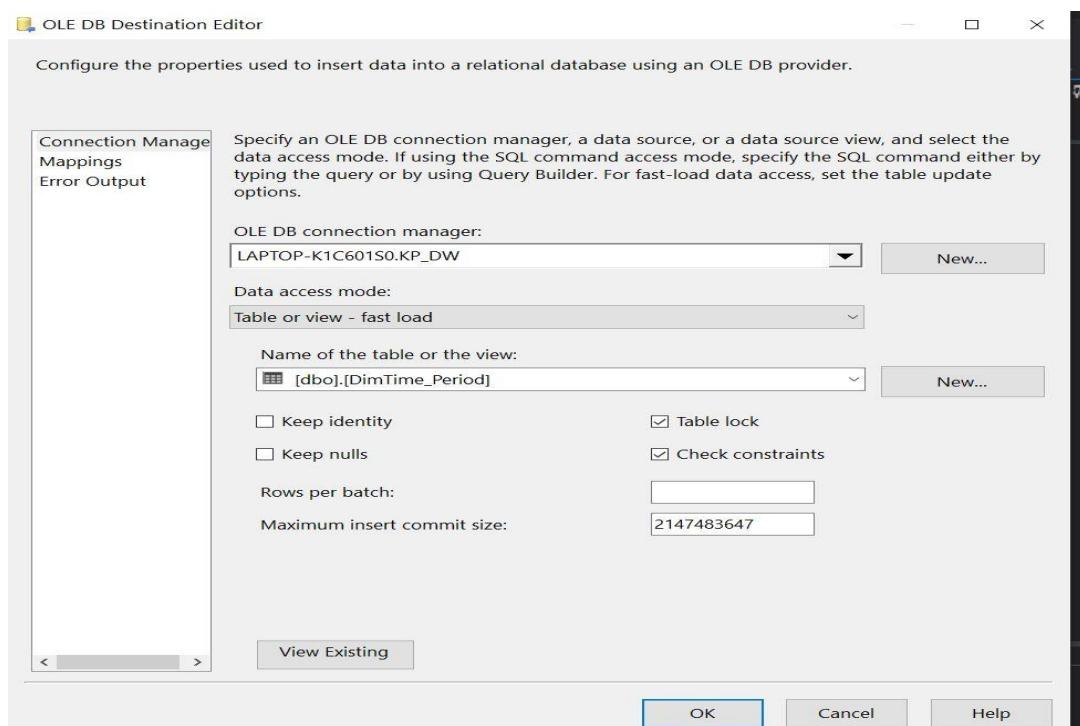
### 3. CONNECTION MANAGER



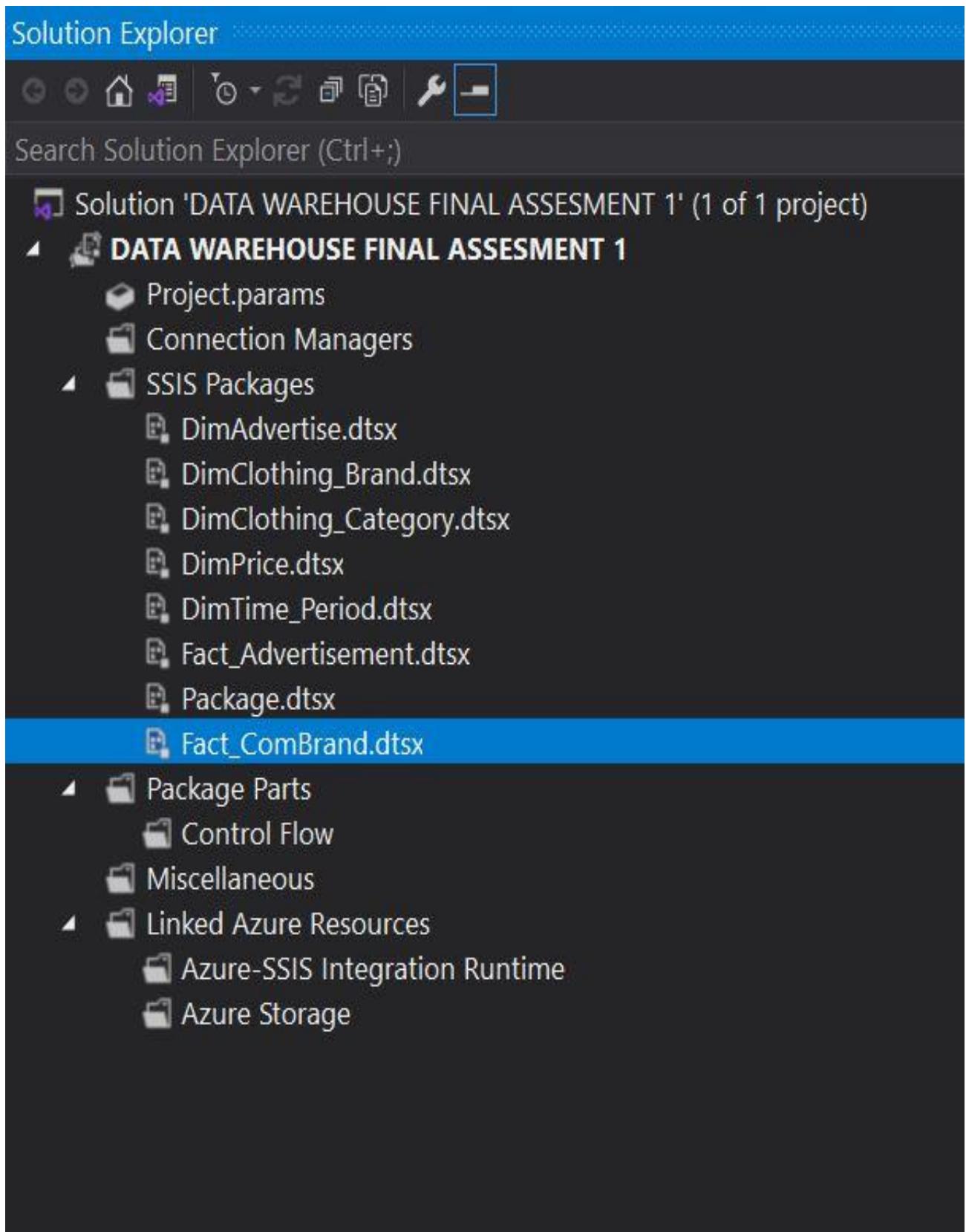
### 4. TEST CONNECTED PROOF



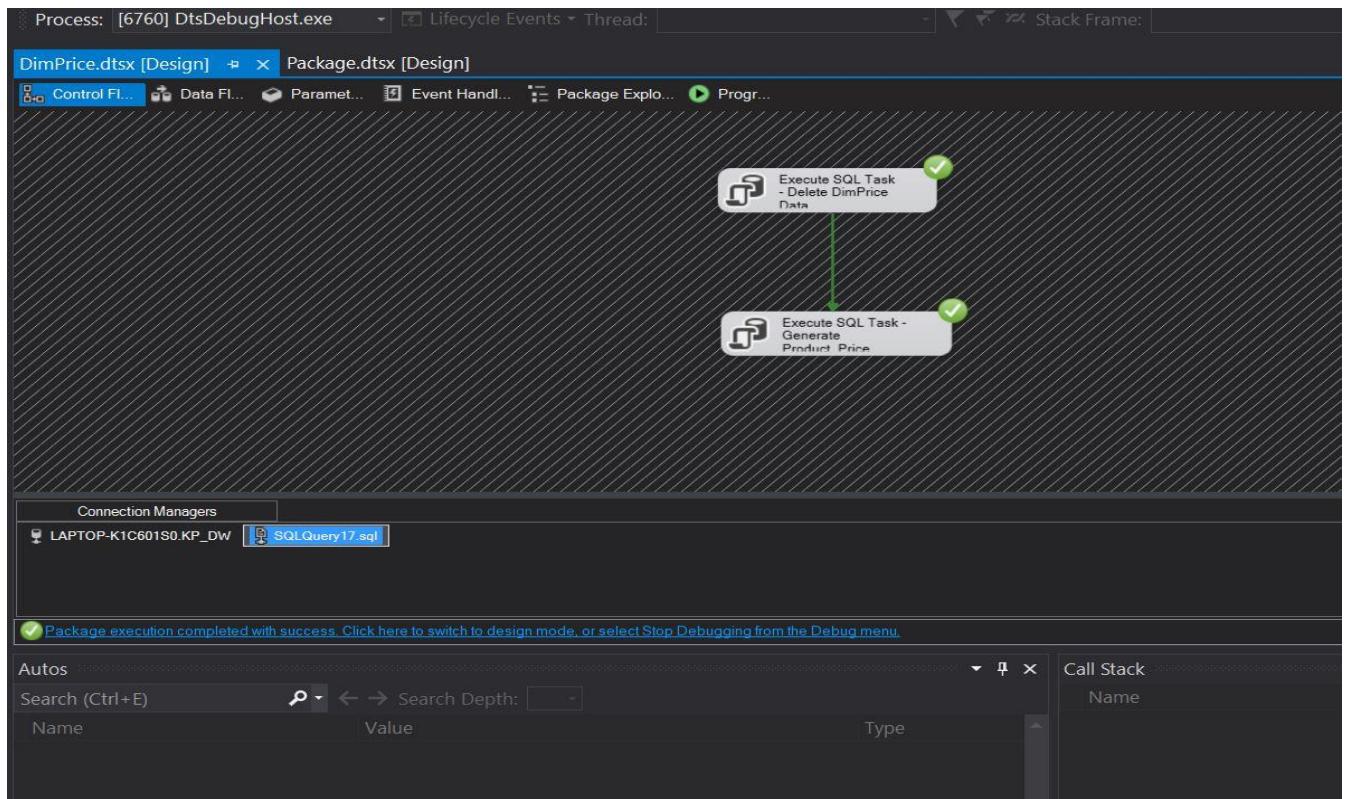
## 5. OLE DB SOURCE EDITOR



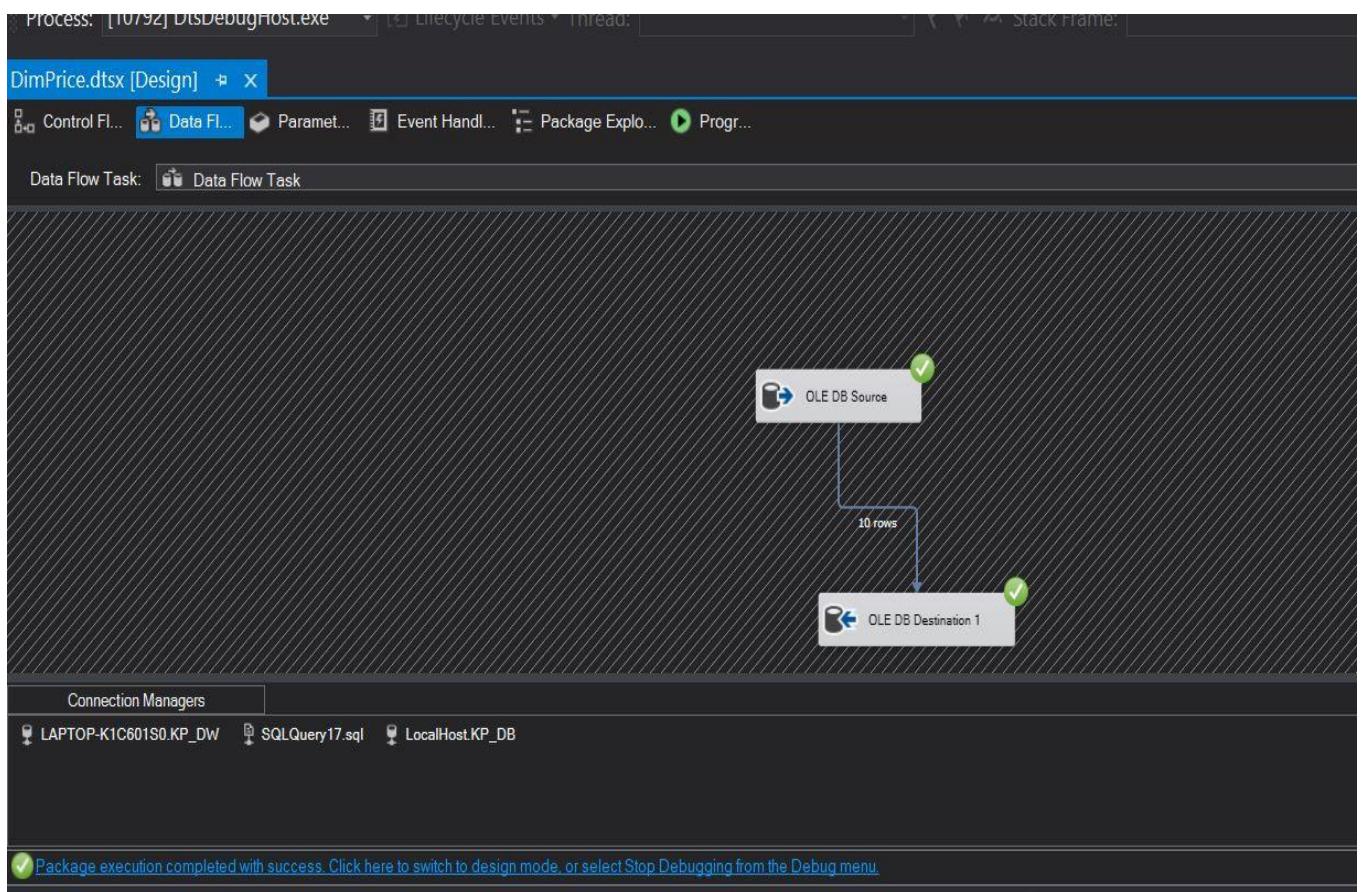
## 6. OLE DB DESTINATION EDITOR



## 7. VISUAL STUDIO MY FILE WITH TABLES



## 8. DIM PRICE CONTROL FLOW



## 9. DIM PRICE DATA FLOW

Output

Show output from: Debug

```
SSIS package "C:\Users\User\source\repos\DATA WAREHOUSE FINAL ASSESSMENT 1\DimPrice.dtsx" starting.
Information: 0x4004300A at Data Flow Task, SSIS.Pipeline: Validation phase is beginning.
Information: 0x4004300A at Data Flow Task, SSIS.Pipeline: Validation phase is beginning.
Warning: 0x80049304 at Data Flow Task, SSIS.Pipeline: Warning: Could not open global shared memory to communicate with performance DLL; data flow performance may be impacted.
Information: 0x40043006 at Data Flow Task, SSIS.Pipeline: Prepare for Execute phase is beginning.
Information: 0x40043007 at Data Flow Task, SSIS.Pipeline: Pre-Execute phase is beginning.
Information: 0x4004300C at Data Flow Task, SSIS.Pipeline: Execute phase is beginning.
Information: 0x4020900F at Data Flow Task, OLE DB Destination 1 [2]: The final commit for the data insertion in "OLE DB Destination 1" has started.
Information: 0x402090E0 at Data Flow Task, OLE DB Destination 1 [2]: The final commit for the data insertion in "OLE DB Destination 1" has ended.
Information: 0x40043008 at Data Flow Task, SSIS.Pipeline: Post Execute phase is beginning.
Information: 0x4004300B at Data Flow Task, SSIS.Pipeline: "OLE DB Destination 1" wrote 10 rows.
Information: 0x40043009 at Data Flow Task, SSIS.Pipeline: Cleanup phase is beginning.
SSIS package "C:\Users\User\source\repos\DATA WAREHOUSE FINAL ASSESSMENT 1\DimPrice.dtsx" finished: Success.
The program '[10792] DtsDebugHost.exe: DTS' has exited with code 0 (0x0).
```

### 10. DIM PRICE OUTPUT

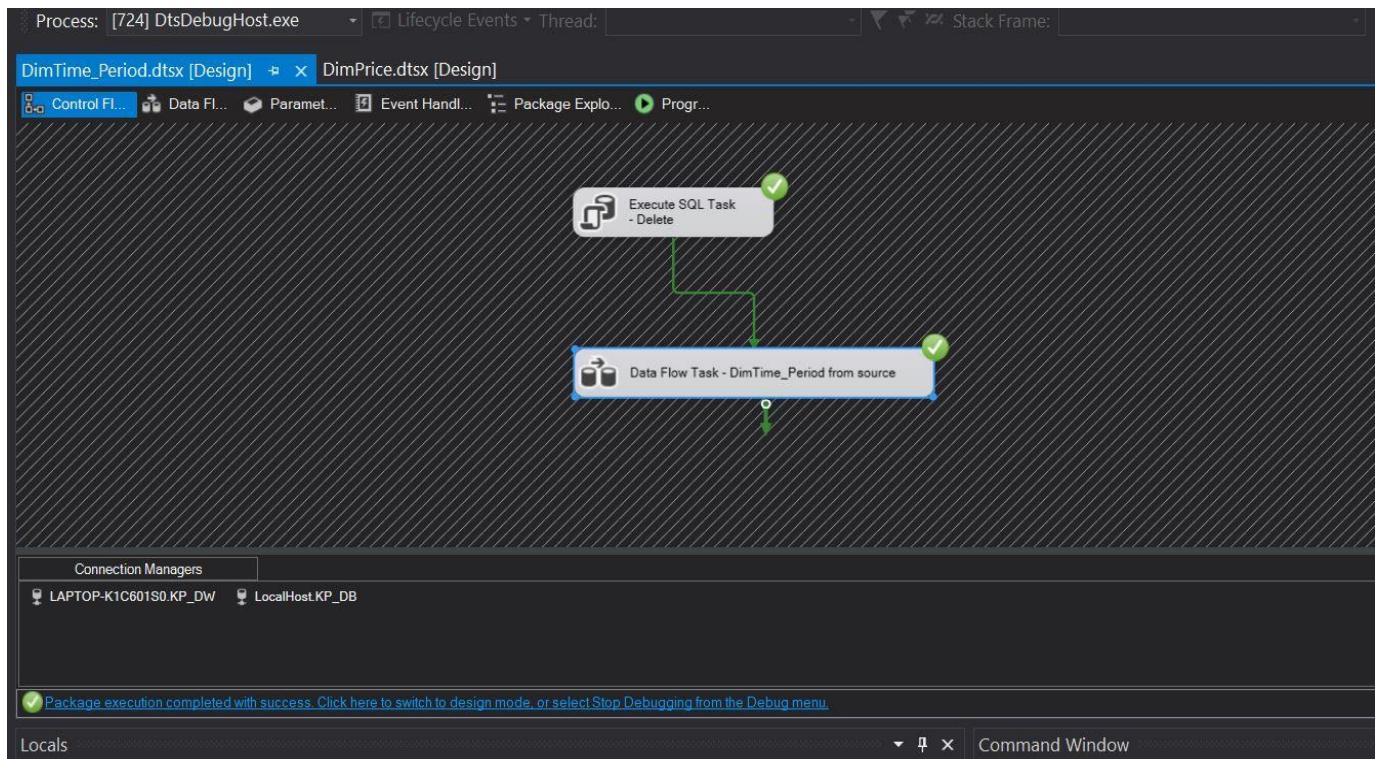
The screenshot shows the SSMS interface with the following details:

- Object Explorer:** Shows the database structure for **KP\_DW**, including databases, tables, and other objects.
- Query Window:** Contains the following T-SQL script:
 

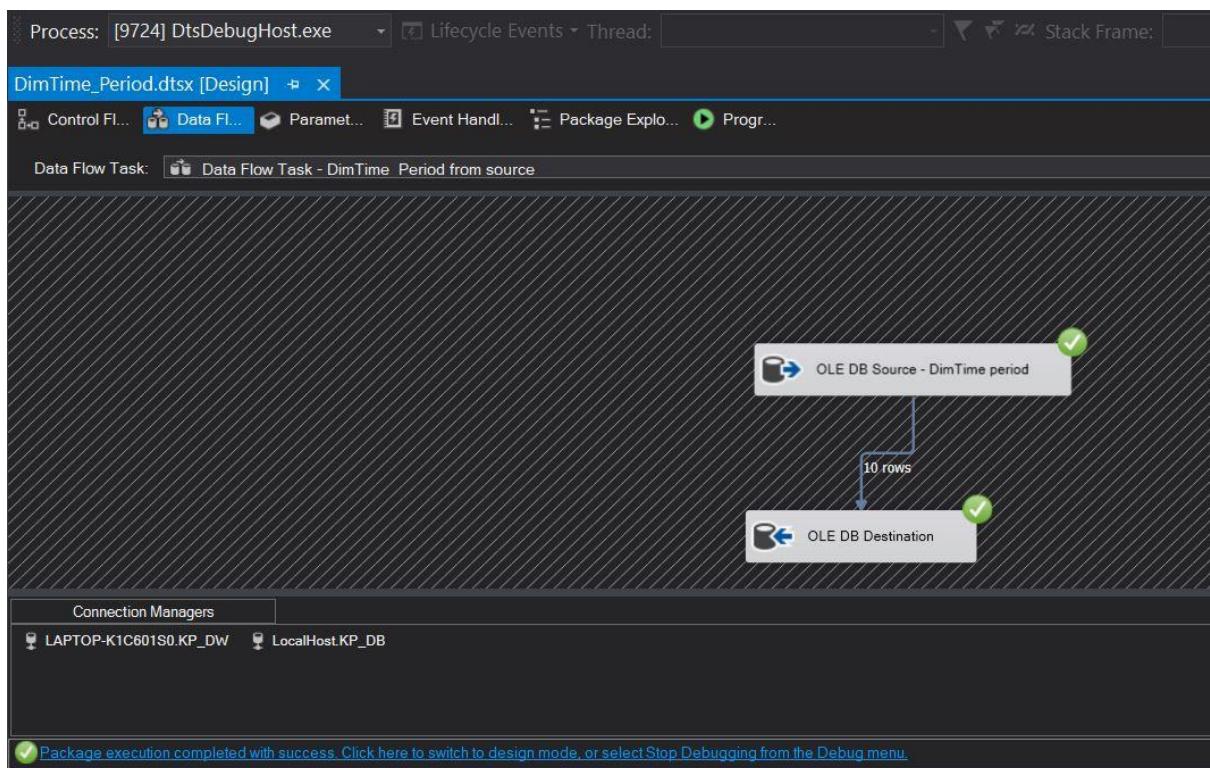
```
/*
***** Script for SelectTopNRows command from SSMS *****/
SELECT TOP (1000) [Product_id]
      ,[Product_Price]
      ,[Product_Quantity]
  FROM [KP_DW].[dbo].[DimPrice]
```
- Results Grid:** Displays the output of the query, showing 10 rows of data:
 

	Product_id	Product_Price	Product_Quantity
1	1	74	1
2	2	74	2
3	3	85	3
4	4	75	4
5	5	80	5
6	6	52	6
7	7	110	7
8	8	90	8
9	9	55	9
10	10	75	10
- Status Bar:** Shows the message "Query executed successfully."

### 11. DIM PRICE POPULATED DATA



## 12. DIM TIME PERIOD CONTROL FLOW



## 13. DIM TIME PERIOD DATA FLOW

```

Output
Show output from: Debug
SSIS package "C:\Users\User\source\repos\DATA WAREHOUSE FINAL ASSESSMENT 1\DimTime_Period.dtsx" starting.
Information: 0x4004300A at Data Flow Task - DimTime_Period from source, SSIS.Pipeline: Validation phase is beginning.
Information: 0x4004300A at Data Flow Task - DimTime_Period from source, SSIS.Pipeline: Validation phase is beginning.
Warning: 0x80049304 at Data Flow Task - DimTime_Period from source, SSIS.Pipeline: Warning: Could not open global shared memory to communicate with performance DLL; data flow per
this package as an administrator, or on the system's console.
Information: 0x40043006 at Data Flow Task - DimTime_Period from source, SSIS.Pipeline: Prepare for Execute phase is beginning.
Information: 0x40043007 at Data Flow Task - DimTime_Period from source, SSIS.Pipeline: Pre-Execute phase is beginning.
Information: 0x4004300C at Data Flow Task - DimTime_Period from source, SSIS.Pipeline: Execute phase is beginning.
Information: 0x4020900F at Data Flow Task - DimTime_Period from source, OLE DB Destination [2]: The final commit for the data insertion in "OLE DB Destination" has started.
Information: 0x4020900E at Data Flow Task - DimTime_Period from source, OLE DB Destination [2]: The final commit for the data insertion in "OLE DB Destination" has ended.
Information: 0x40043008 at Data Flow Task - DimTime_Period from source, SSIS.Pipeline: Post Execute phase is beginning.
Information: 0x4004300B at Data Flow Task - DimTime_Period from source, SSIS.Pipeline: "OLE DB Destination" wrote 10 rows.
Information: 0x40043009 at Data Flow Task - DimTime_Period from source, SSIS.Pipeline: Cleanup phase is beginning.
SSIS package "C:\Users\User\source\repos\DATA WAREHOUSE FINAL ASSESSMENT 1\DimTime_Period.dtsx" finished: Success.
The program '[9724] DtsDebugHost.exe: DTS' has exited with code 0 (0x0).

```

## 14. DIM TIME PERIOD OUTPUT

The screenshot shows the SSMS interface with the Object Explorer on the left and a query results window on the right.

**Object Explorer:**

- Connected to LAPTOP-K1C601S0 (SQL Server 15.0.200)
- Databases:
  - System Databases
  - Database Snapshots
  - Employee\_Timesheet\_DB
  - Employee\_Timesheet\_DW
- Jobayer DW
- KP\_DB
- KP\_DW:
  - Database Diagrams
  - Tables:
    - System Tables
    - FileTables
    - External Tables
    - Graph Tables
    - dbo.DimAdvertise
    - dbo.DimClothing\_Brand
    - dbo.DimClothing\_Category
    - dbo.DimPrice
    - dbo.DimTime\_Period** (selected)
    - dbo.Fact\_Advertisement
    - dbo.Fact\_ComBrand
  - Views
  - External Resources
  - Synonyms
  - Programmability
  - Service Broker
  - Storage
  - Security

**SQLQuery10.sql - ...601S0\User (61) :**

```

***** Script for SelectTopNRows command from SSMS *****/
SELECT TOP (1000) [Date_ID]
    ,[Year]
    ,[Day]
    ,[Month]
FROM [KP_DW].[dbo].[DimTime_Period]

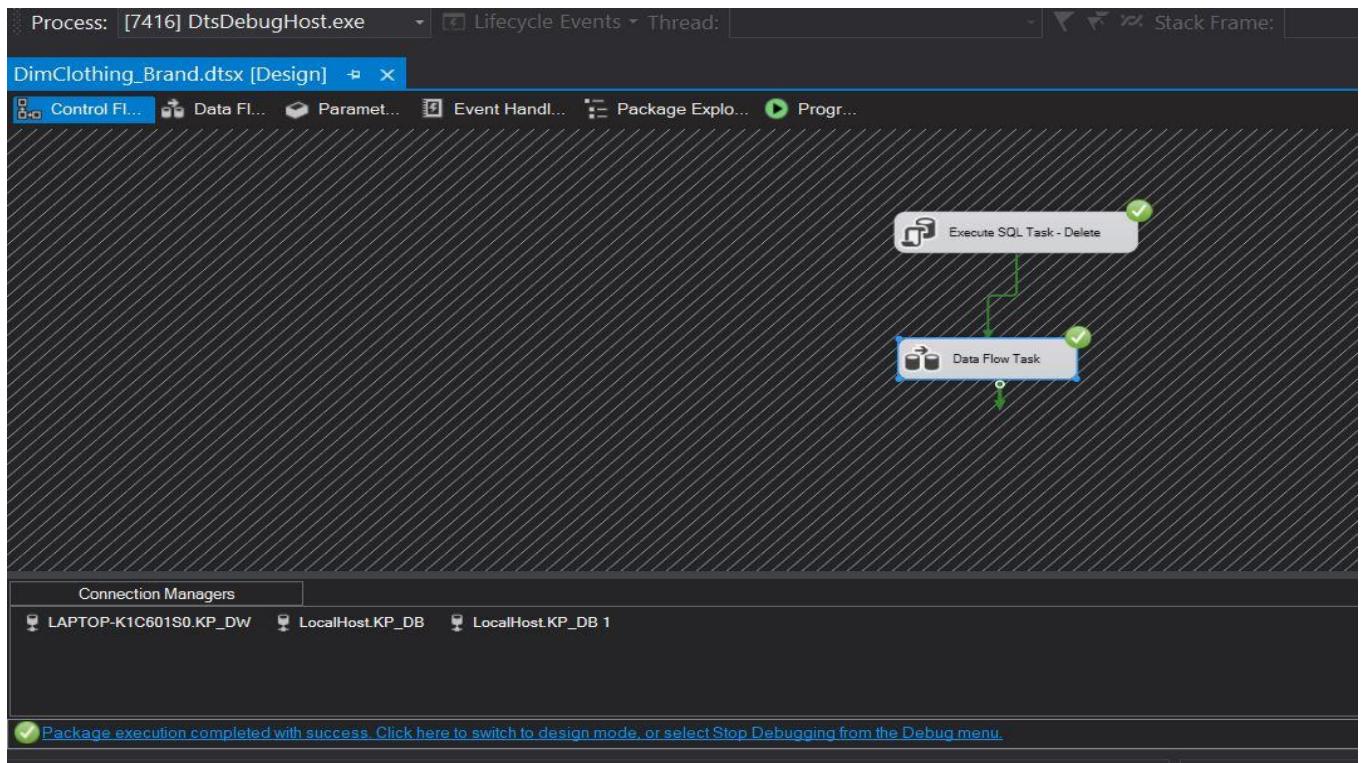
```

**Results:**

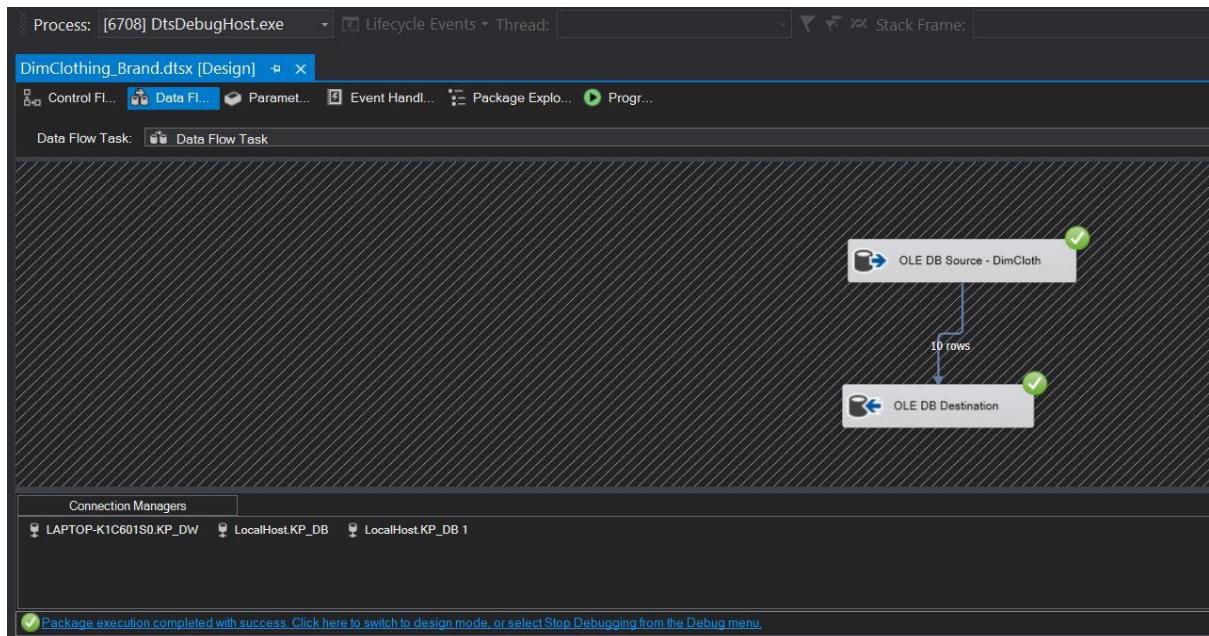
Date_ID	Year	Day	Month
1	20210121	2021	21
2	20210221	2021	21
3	20210321	2021	21
4	20210421	2021	21
5	20210521	2021	21
6	20210621	2021	21
7	20210721	2021	21
8	20210821	2021	21
9	20210921	2021	21
10	20211021	2021	21

Query executed successfully.

## 15. DIM TIME PERIOD POPULATED DATA



## 16. DIM CLOTHING BRAND CONTROL FLOW



## 17. DIM CLOTHING BRAND DATA FLOW

Output

Show output from: Debug

```
SSIS package "C:\Users\User\source\repos\DATA WAREHOUSE FINAL ASSESSMENT 1\DimClothing_Brand.dtsx" starting.
Information: 0x4004300A at Data Flow Task, SSIS.Pipeline: Validation phase is beginning.
Information: 0x4004300A at Data Flow Task, SSIS.Pipeline: Validation phase is beginning.
Warning: 0x80049304 at Data Flow Task, SSIS.Pipeline: Warning: Could not open global shared memory to communicate with performance DLL; data flow performance administrator, or on the system's console.
Information: 0x40043006 at Data Flow Task, SSIS.Pipeline: Prepare for Execute phase is beginning.
Information: 0x40043007 at Data Flow Task, SSIS.Pipeline: Pre-Execute phase is beginning.
Information: 0x4004300C at Data Flow Task, SSIS.Pipeline: Execute phase is beginning.
Information: 0x402090DF at Data Flow Task, OLE DB Destination [2]: The final commit for the data insertion in "OLE DB Destination" has started.
Information: 0x402090E0 at Data Flow Task, OLE DB Destination [2]: The final commit for the data insertion in "OLE DB Destination" has ended.
Information: 0x40043008 at Data Flow Task, SSIS.Pipeline: Post Execute phase is beginning.
Information: 0x4004300B at Data Flow Task, SSIS.Pipeline: "OLE DB Destination" wrote 10 rows.
Information: 0x40043009 at Data Flow Task, SSIS.Pipeline: Cleanup phase is beginning.
SSIS package "C:\Users\User\source\repos\DATA WAREHOUSE FINAL ASSESSMENT 1\DimClothing_Brand.dtsx" finished: Success.
The program '[6708] DtsDebugHost.exe: DTS' has exited with code 0 (0x0).
```

## 18. DIM CLOTHING BRAND OUTPUT

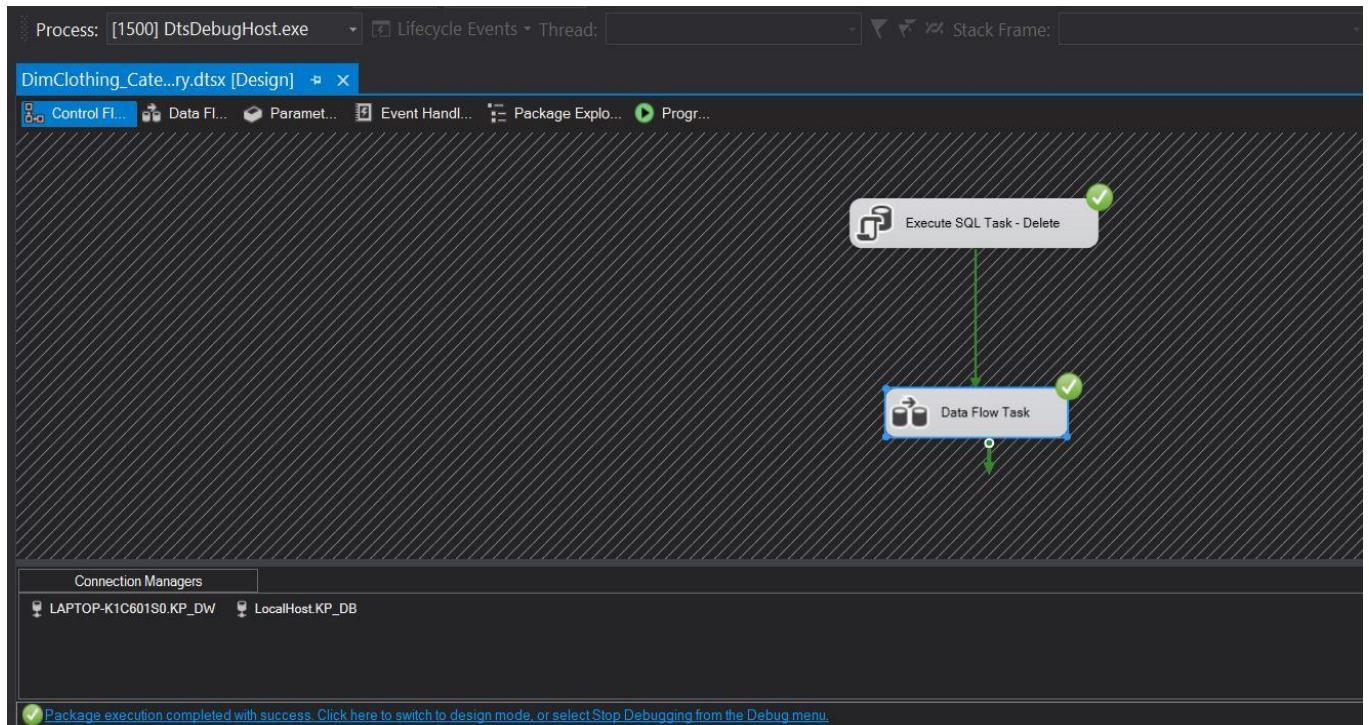
The screenshot shows the SQL Server Management Studio (SSMS) interface. The Object Explorer on the left shows the database structure for 'KP\_DW'. The central pane displays a T-SQL script for selecting top 1000 rows from the 'DimClothing\_Brand' table. The results grid below shows the populated data.

```
/*
***** Script for SelectTopNRows command from SSMS *****/
SELECT TOP (1000) [Brand_Code]
      ,[Brand_Name]
      ,[Brand_Value]
  FROM [KP_DW].[dbo].[DimClothing_Brand]
```

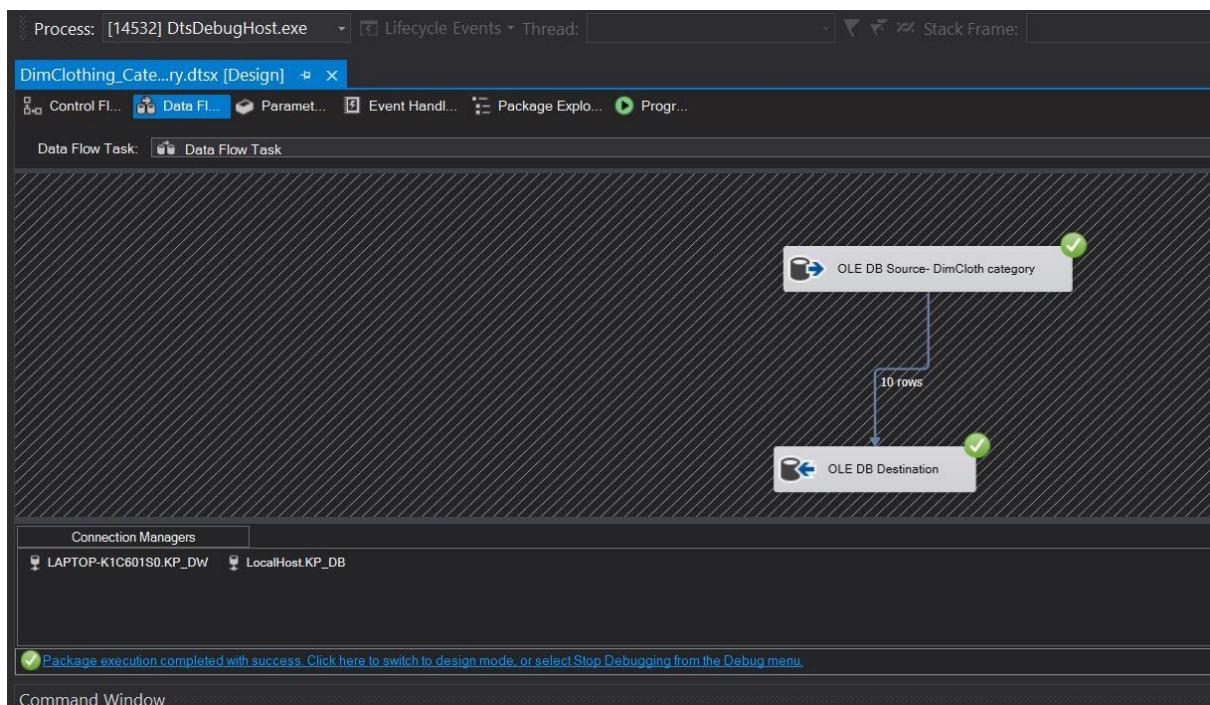
	Brand_Code	Brand_Name	Brand_Value
1	1	BBB	20000
2	10	Songket_Style	80000
3	2	Sublime_Expert	25000
4	3	Credoz	28000
5	4	Quaza	30000
6	5	Baju_Sarcastik	40000
7	7	Baju_Motor	60000
8	8	Arrow_Division	70000
9	9	Jawination	80000

Query executed successfully.

## 19. DIM CLOTHING BRAND POPULATED DATA



## 20. DIM CLOTHING CATEGORY CONTROL FLOW



## 21. DIM CLOTHING CATEGORY DATA FLOW

Output

Show output from: Debug

```
SSIS package "C:\Users\User\source\repos\DATA WAREHOUSE FINAL ASSESMEN 1\DimClothing_Category.dtsx" starting.
Information: 0x4004300A at Data Flow Task, SSIS.Pipeline: Validation phase is beginning.
Information: 0x4004300A at Data Flow Task, SSIS.Pipeline: Validation phase is beginning.
Warning: 0x80049304 at Data Flow Task, SSIS.Pipeline: Warning: Could not open global shared memory to communicate with performance DLL; data flow administrator, or on the system's console.
Information: 0x40043006 at Data Flow Task, SSIS.Pipeline: Prepare for Execute phase is beginning.
Information: 0x40043007 at Data Flow Task, SSIS.Pipeline: Pre-Execute phase is beginning.
Information: 0x4004300C at Data Flow Task, SSIS.Pipeline: Execute phase is beginning.
Information: 0x402090DF at Data Flow Task, OLE DB Destination [2]: The final commit for the data insertion in "OLE DB Destination" has started.
Information: 0x402090E0 at Data Flow Task, OLE DB Destination [2]: The final commit for the data insertion in "OLE DB Destination" has ended.
Information: 0x40043008 at Data Flow Task, SSIS.Pipeline: Post Execute phase is beginning.
Information: 0x4004300B at Data Flow Task, SSIS.Pipeline: "OLE DB Destination" wrote 10 rows.
Information: 0x40043009 at Data Flow Task, SSIS.Pipeline: Cleanup phase is beginning.
SSIS package "C:\Users\User\source\repos\DATA WAREHOUSE FINAL ASSESMEN 1\DimClothing_Category.dtsx" finished: Success.
The program '[14532] DtsDebugHost.exe: DTS' has exited with code 0 (0x0).
```

## 22. DIM CLOTHCATEGORY OUTPUT

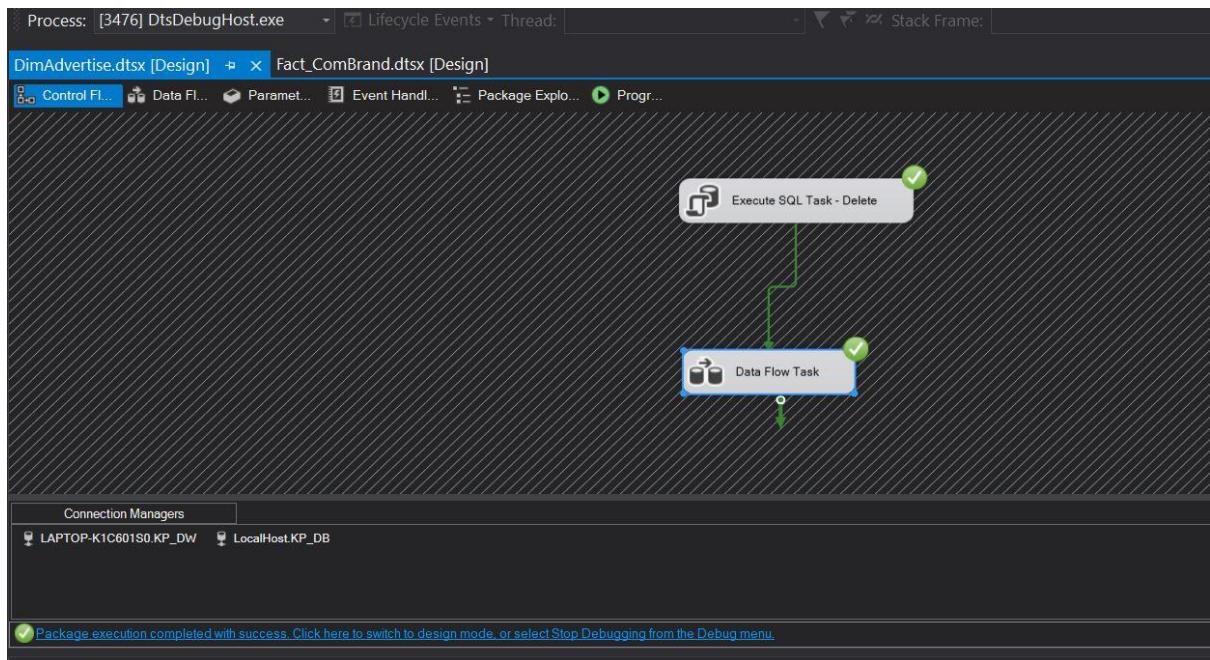
The screenshot shows the SQL Server Management Studio (SSMS) interface. The Object Explorer on the left shows the database structure for 'KP\_DW'. The central pane displays a T-SQL script for selecting top 1000 rows from the 'DimClothing\_Category' table. The results grid below shows the data being returned.

```
/*
***** Script for SelectTopNRows command from SSMS *****/
SELECT TOP (1000) [Production_Code]
      ,[Cloth_Code]
      ,[Batch_NO]
  FROM [KP_DW].[dbo].[DimClothing_Category]
```

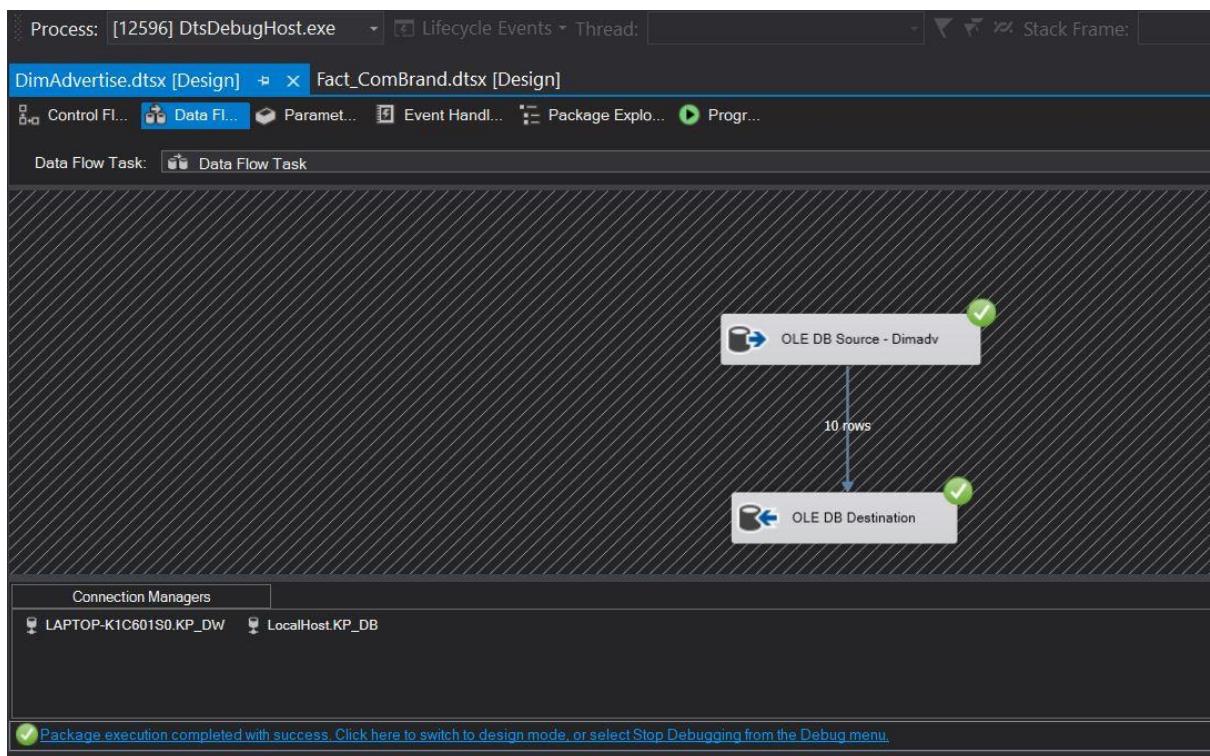
	Production_Code	Cloth_Code	Batch_NO
1	101	1	1001
2	102	2	1002
3	103	3	1003
4	104	4	1004
5	105	5	1005
6	106	6	1006
7	108	8	1008
8	109	9	1009
9	110	10	1010

Query executed successfully.

## 23. DIM CLOTH CATEGORY POPULATED DATA



## 24.DIM ADVERTISE CONTROL FLOW



## 25. DIM ADVERTISE DATA FLOW

Output

Show output from: Debug

```
SSIS package "C:\Users\User\source\repos\DATA WAREHOUSE FINAL ASSESSMENT 1\DimAdvertise.dtsx" starting.
Information: 0x4004300A at Data Flow Task, SSIS.Pipeline: Validation phase is beginning.
Information: 0x4004300A at Data Flow Task, SSIS.Pipeline: Validation phase is beginning.
Warning: 0x80049304 at Data Flow Task, SSIS.Pipeline: Warning: Could not open global shared memory to communicate with performance DLL; data flow administrator, or on the system's console.
Information: 0x40043006 at Data Flow Task, SSIS.Pipeline: Prepare for Execute phase is beginning.
Information: 0x40043007 at Data Flow Task, SSIS.Pipeline: Pre-Execute phase is beginning.
Information: 0x4004300C at Data Flow Task, SSIS.Pipeline: Execute phase is beginning.
Information: 0x402090DF at Data Flow Task, OLE DB Destination [2]: The final commit for the data insertion in "OLE DB Destination" has started.
Information: 0x402090E0 at Data Flow Task, OLE DB Destination [2]: The final commit for the data insertion in "OLE DB Destination" has ended.
Information: 0x40043008 at Data Flow Task, SSIS.Pipeline: Post Execute phase is beginning.
Information: 0x4004300B at Data Flow Task, SSIS.Pipeline: "OLE DB Destination" wrote 10 rows.
Information: 0x40043009 at Data Flow Task, SSIS.Pipeline: Cleanup phase is beginning.
SSIS package "C:\Users\User\source\repos\DATA WAREHOUSE FINAL ASSESSMENT 1\DimAdvertise.dtsx" finished: Success.
The program '[12596] DtsDebugHost.exe: DTS' has exited with code 0 (0x0).
```

## 26. DIM ADVERTISE OUTPUT

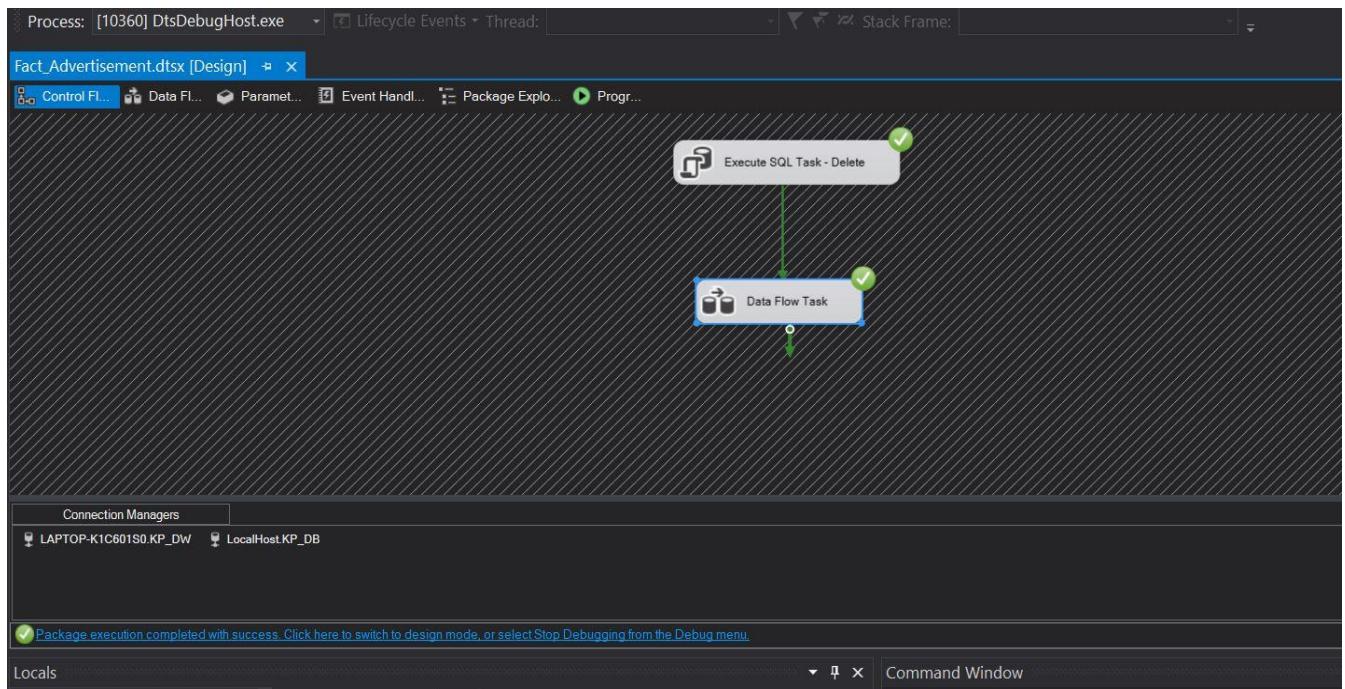
The screenshot shows the SSMS interface. On the left, the Object Explorer tree view displays the database structure for 'KP\_DW'. It includes nodes for 'Databases', 'System Databases', 'Database Snapshots', 'Employee\_Timesheet\_DB', 'Employee\_Timesheet\_DW', 'Jobayer DW', 'KP\_DB', and 'KP\_DW'. Under 'KP\_DW', there are 'Database Diagrams', 'Tables' (which further expand to show 'System Tables', 'FileTables', 'External Tables', 'Graph Tables', and specific tables like 'dbo.DimAdvertise', 'dbo.DimClothing\_Brand', etc.), 'Views', 'External Resources', and 'Synonyms'. On the right, the main pane shows a query window with the following script:

```
***** Script for SelectTopNRows command from SSMS *****/
SELECT TOP (1000) [Advertise_id]
 ,[Advertise_Spending]
 ,[Advertise_Date]
 FROM [KP_DW].[dbo].[DimAdvertise]
```

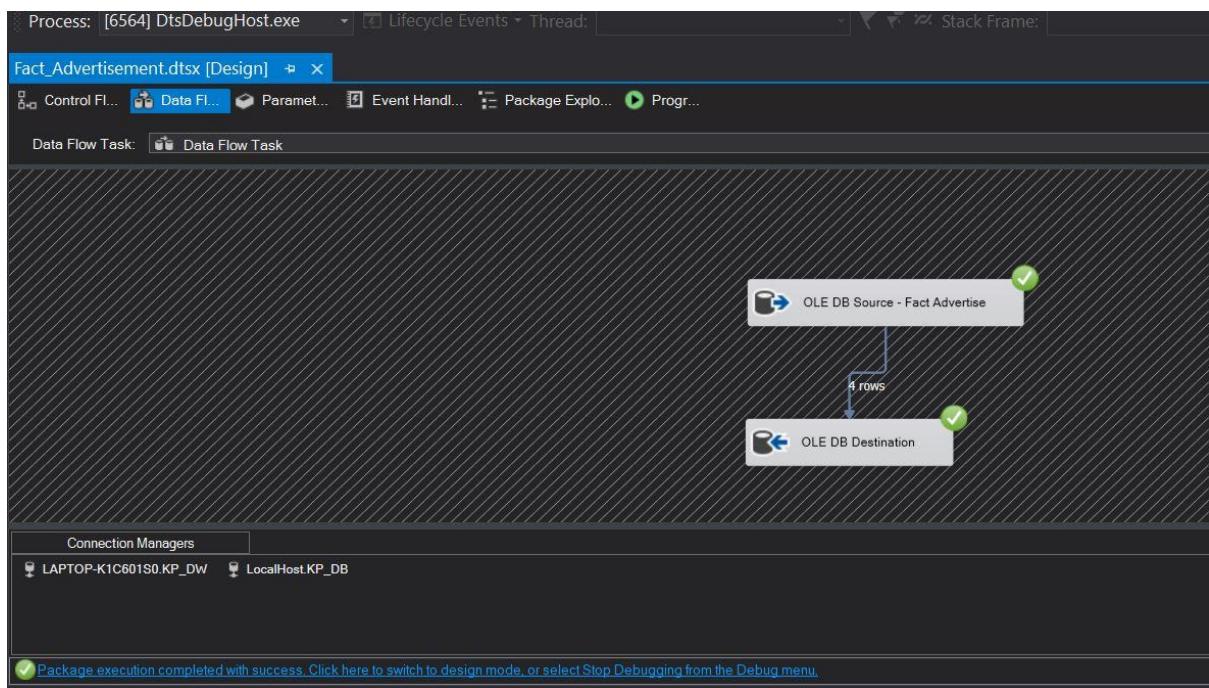
Below the script, the 'Results' tab is selected, showing a table with 10 rows of data:

	Advertise_id	Advertise_Spending	Advertise_Date
1	1	587	20210121
2	3	615	20210321
3	4	0	20210421
4	5	196	20210521
5	6	572	20210621
6	7	0	20210721
7	8	0	20210821
8	9	0	20210921
9	10	0	20211021

## 27. DIM ADVERTISE POPULATED DATA



## 28. FACT ADVERTISE CONTROL FLOW



## 29. FACT ADVERTISE DATA FLOW

Output

Show output from: Debug

```
SSIS package "C:\Users\User\source/repos\DATA WAREHOUSE FINAL ASSESSMENT 1\Fact_Advertisement.dtsx" starting.
Information: 0x4004300A at Data Flow Task, SSIS.Pipeline: Validation phase is beginning.
Information: 0x4004300A at Data Flow Task, SSIS.Pipeline: Validation phase is beginning.
Warning: 0x80049304 at Data Flow Task, SSIS.Pipeline: Warning: Could not open global shared memory to communicate with performance DLL; data flow administrator, or on the system's console.
Information: 0x40043006 at Data Flow Task, SSIS.Pipeline: Prepare for Execute phase is beginning.
Information: 0x40043007 at Data Flow Task, SSIS.Pipeline: Pre-Execute phase is beginning.
Information: 0x4004300C at Data Flow Task, SSIS.Pipeline: Execute phase is beginning.
Information: 0x402090DF at Data Flow Task, OLE DB Destination [2]: The final commit for the data insertion in "OLE DB Destination" has started.
Information: 0x402090E0 at Data Flow Task, OLE DB Destination [2]: The final commit for the data insertion in "OLE DB Destination" has ended.
Information: 0x40043008 at Data Flow Task, SSIS.Pipeline: Post Execute phase is beginning.
Information: 0x4004300B at Data Flow Task, SSIS.Pipeline: "OLE DB Destination" wrote 4 rows.
Information: 0x40043009 at Data Flow Task, SSIS.Pipeline: Cleanup phase is beginning.
SSIS package "C:\Users\User\source/repos\DATA WAREHOUSE FINAL ASSESSMENT 1\Fact_Advertisement.dtsx" finished: Success.
The program '[6564] DtsDebugHost.exe: DTS' has exited with code 0 (0x0).
```

### 30. FACT ADVERTISE OUTPUT

The screenshot shows the SQL Server Management Studio (SSMS) interface. On the left, the Object Explorer displays the database structure of 'KP\_DW'. Under 'Tables', several fact tables are listed: 'dbo.Fact\_Advertisement', 'dbo.Fact\_ComBrand', and 'dbo.Fact\_Clothing'. In the center, a query window is open with the following SQL script:

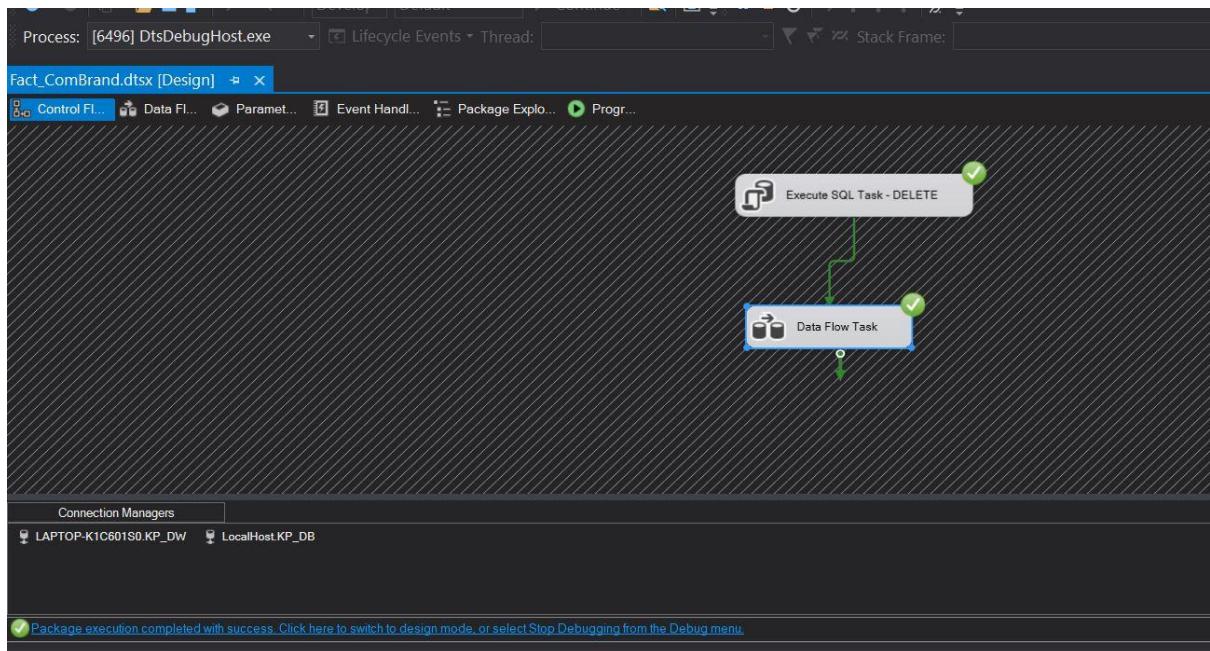
```
/*
***** Script for SelectTopNRows command from SSMS *****/
SELECT TOP (1000) [Advertise_id]
 ,[Brand_Code]
 ,[Date_ID]
 FROM [KP_DW].[dbo].[Fact_Advertisement]
```

The results grid shows two rows of data:

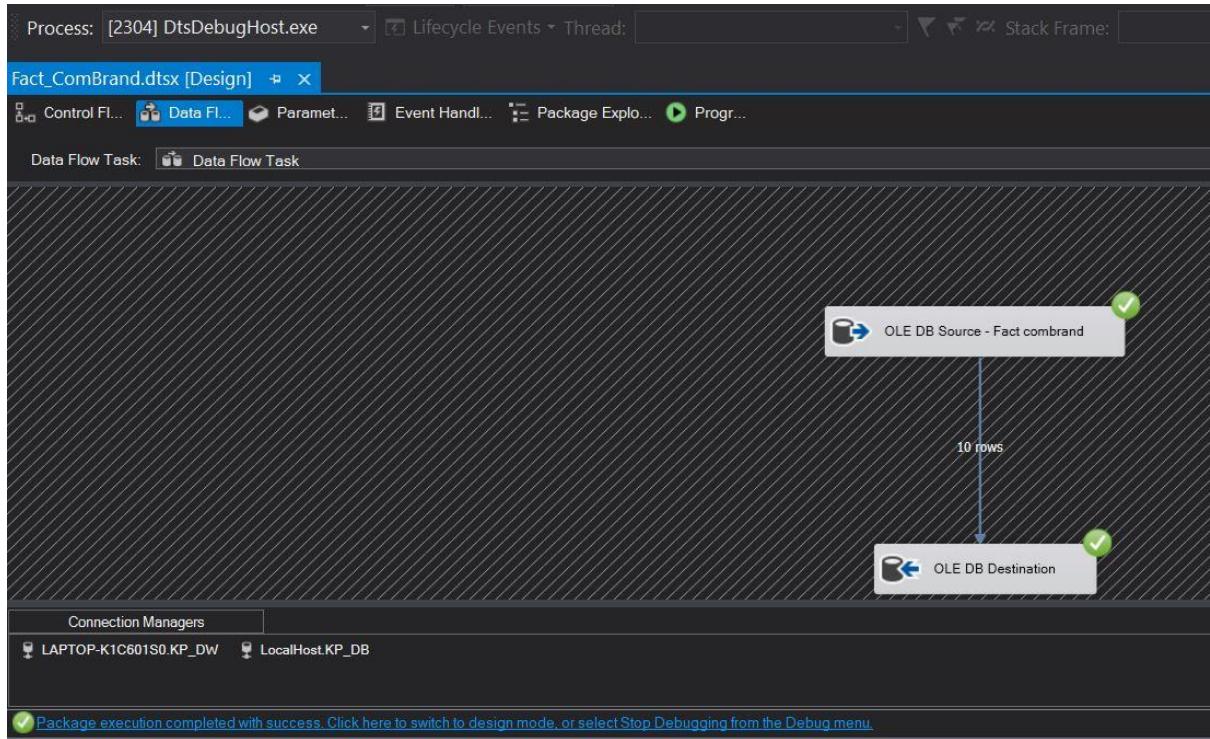
	Advertise_id	Brand_Code	Date_ID
1	1	1	20210121
2	4	4	20210421

At the bottom of the results grid, a message indicates: 'Query executed successfully.'

### 31. FACT ADVERTISE POPULATED DATA



### 32. FACT COMBRAND CONTROL FLOW



### 33. FACT COMBRAND DATA FLOW

```

Output
Show output from: Debug
SSIS package "C:\Users\User\source\repos\DATA WAREHOUSE FINAL ASSESSMENT 1\Fact_ComBrand.dtsx" starting.
Information: 0x4004300A at Data Flow Task, SSIS.Pipeline: Validation phase is beginning.
Information: 0x4004300A at Data Flow Task, SSIS.Pipeline: Validation phase is beginning.
Warning: 0x80049304 at Data Flow Task, SSIS.Pipeline: Warning: Could not open global shared memory to communicate with performance DLL; data flow administrator, or on the system's console.
Information: 0x40043006 at Data Flow Task, SSIS.Pipeline: Prepare for Execute phase is beginning.
Information: 0x40043007 at Data Flow Task, SSIS.Pipeline: Pre-Execute phase is beginning.
Information: 0x4004300C at Data Flow Task, SSIS.Pipeline: Execute phase is beginning.
Information: 0x402090DF at Data Flow Task, OLE DB Destination [2]: The final commit for the data insertion in "OLE DB Destination" has started.
Information: 0x402090E0 at Data Flow Task, OLE DB Destination [2]: The final commit for the data insertion in "OLE DB Destination" has ended.
Information: 0x40043008 at Data Flow Task, SSIS.Pipeline: Post Execute phase is beginning.
Information: 0x4004300B at Data Flow Task, SSIS.Pipeline: "OLE DB Destination" wrote 10 rows.
Information: 0x40043009 at Data Flow Task, SSIS.Pipeline: Cleanup phase is beginning.
SSIS package "C:\Users\User\source\repos\DATA WAREHOUSE FINAL ASSESSMENT 1\Fact_ComBrand.dtsx" finished: Success.
The program '[2304] DtsDebugHost.exe: DTS' has exited with code 0 (0x0).

```

## 34. FACT COMBRAND OUTPUT

The screenshot shows the SQL Server Management Studio (SSMS) interface. The Object Explorer on the left lists databases, tables, and other objects under the 'KP\_DW' database. In the center, a query window displays a T-SQL script for selecting top 1000 rows from the 'Fact\_ComBrand' table. The results grid below shows 7 rows of data with columns: Product\_id, Brand\_Code, Production\_Code, and Date\_ID.

	Product_id	Brand_Code	Production_Code	Date_ID
1	1	1	101	20210121
2	2	2	102	20210221
3	3	3	103	20210321
4	4	4	104	20210421
5	8	8	108	20210821
6	9	9	109	20210921
7	10	10	110	20211021

Query executed successfully.

## 35. FACT COMBRAND POPULATED DATA

