

MODULE-2 SSIS

Make connection to different data source Flatfile, SQL Server)

Extract, Transform and Load to new target system - SQL Server

Data source used : CinemaTicket_Ref_Entertainment

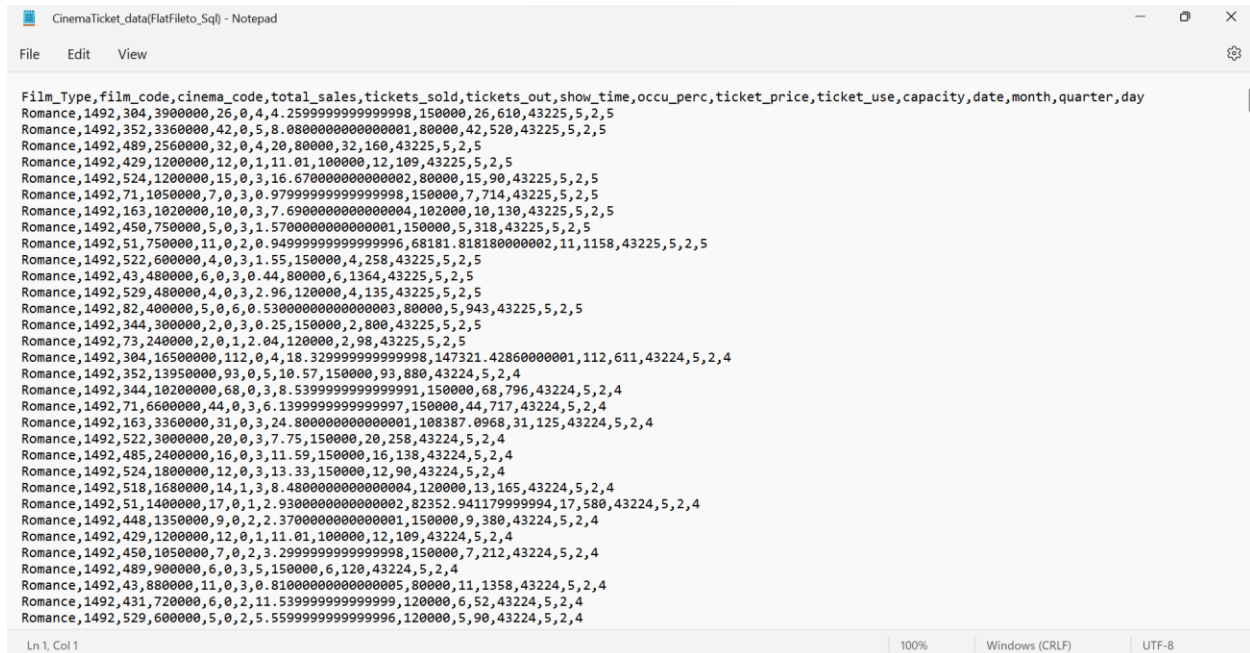
1.FlatFile to SQL Server

Step1: Create the table DFA_CINEMATICKET_DATA in database.



```
CREATE TABLE DFA_CINEMATICKET_DATA
(
    Film_Type VARCHAR(100),
    film_code VARCHAR(100),
    cinema_code VARCHAR(100),
    total_sales VARCHAR(100),
    tickets_sold VARCHAR(100),
    tickets_out VARCHAR(100),
    show_time VARCHAR(100),
    occu_perc VARCHAR(100),
    ticket_price VARCHAR(100),
    ticket_use VARCHAR(100),
    capacity VARCHAR(100),
    t_date VARCHAR(100),
    t_month VARCHAR(100),
    t_quarter VARCHAR(100),
    t_day VARCHAR(100),
);
```

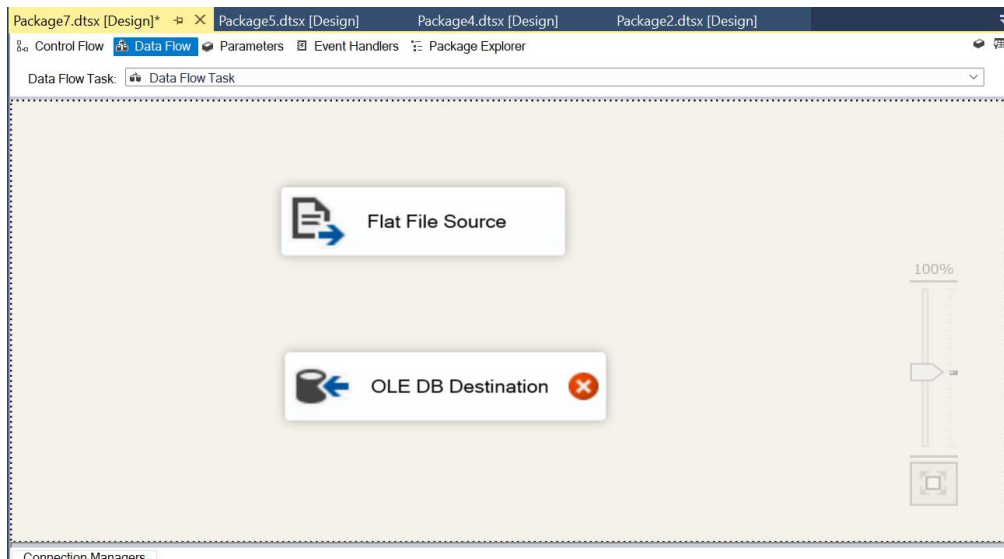
This is the Flat File from which data is extracted to SQL database.



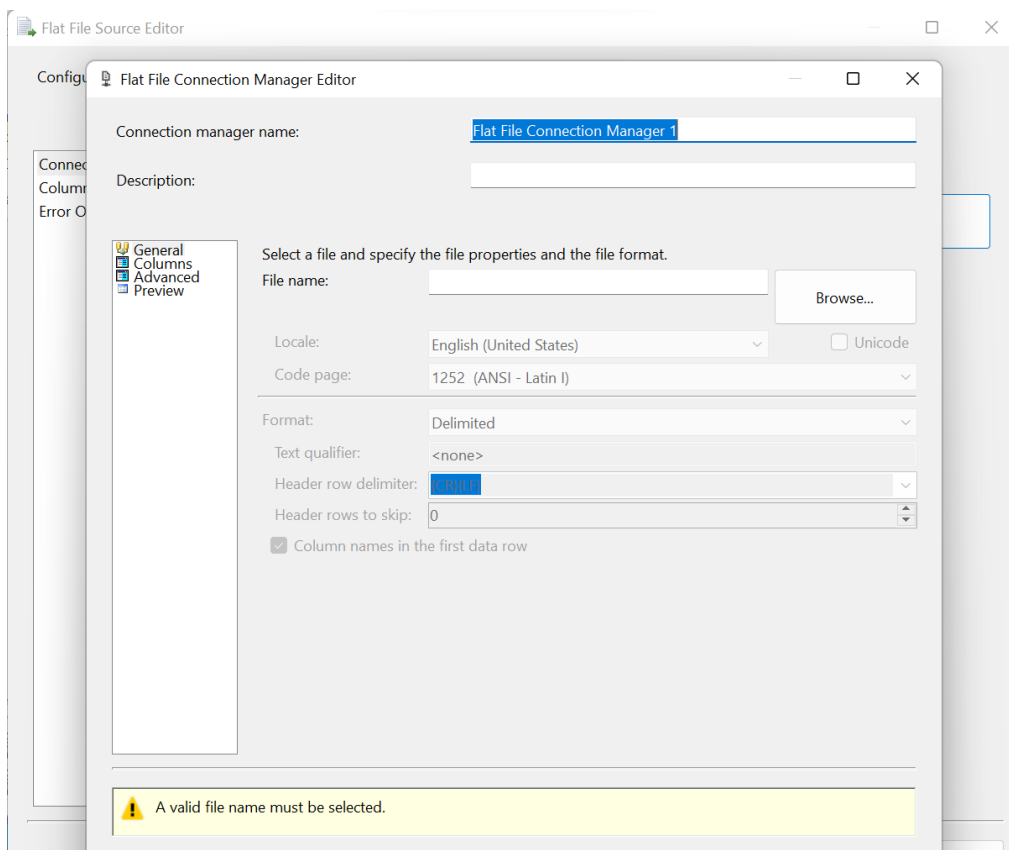
```
CinemaTicket_data(FlatFileto_Sql) - Notepad

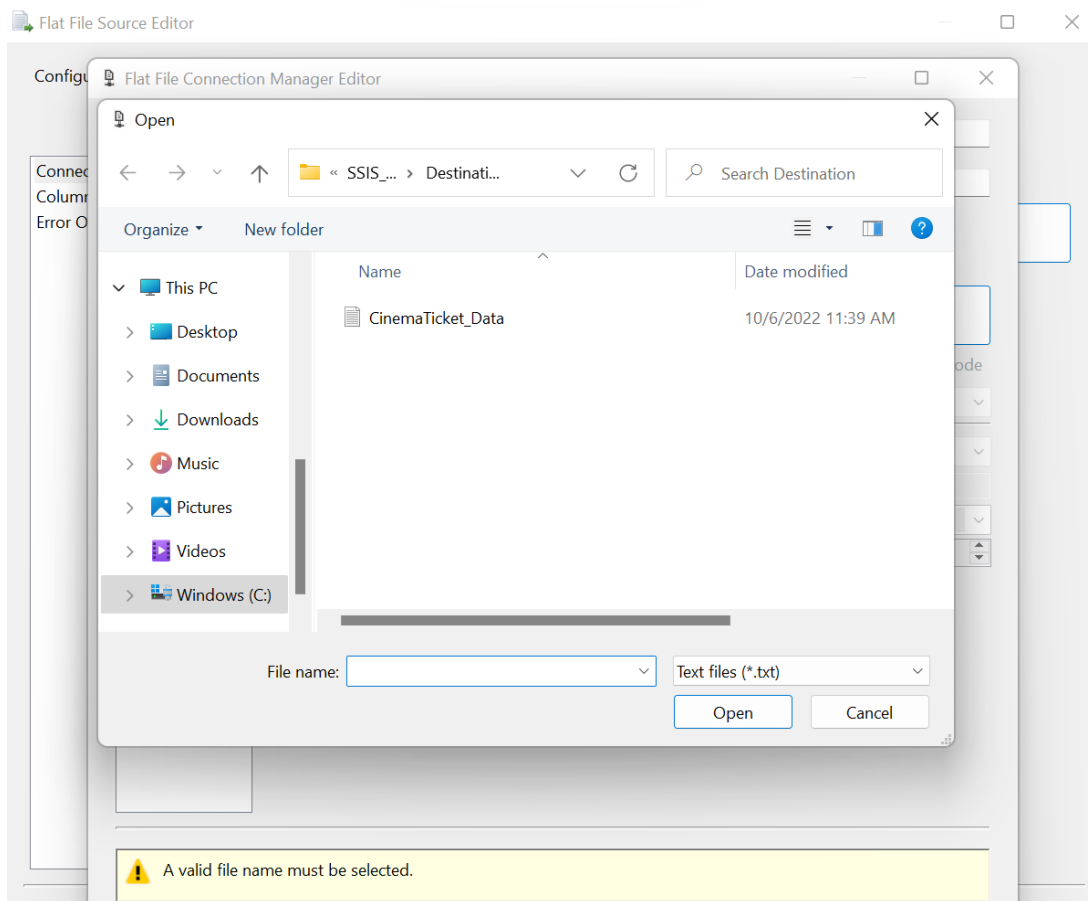
Film_Type,film_code,cinema_code,total_sales,tickets_sold,tickets_out,show_time,occu_perc,ticket_price,ticket_use,capacity,date,month,quarter,day
Romance,1492,304,3900000,26,0,4,4.2599999999999998,150000,26,610,43225,5,2,5
Romance,1492,352,3360000,42,0,5,8.0800000000000001,80000,42,520,43225,5,2,5
Romance,1492,489,2560000,32,0,4,20,80000,32,160,43225,5,2,5
Romance,1492,429,1200000,12,0,1,11.01,100000,12,109,43225,5,2,5
Romance,1492,524,1200000,15,0,3,16.670000000000002,80000,15,90,43225,5,2,5
Romance,1492,71,1050000,7,0,3,0.9799999999999998,150000,7,714,43225,5,2,5
Romance,1492,163,1020000,10,0,3,7.6900000000000004,102000,10,130,43225,5,2,5
Romance,1492,450,750000,5,0,3,1.5700000000000001,150000,5,318,43225,5,2,5
Romance,1492,51,750000,11,0,2,0.9499999999999996,68181.818180000002,11,1158,43225,5,2,5
Romance,1492,522,600000,4,0,3,1.55,150000,4,258,43225,5,2,5
Romance,1492,43,480000,6,0,3,0.44,80000,6,1364,43225,5,2,5
Romance,1492,529,480000,4,0,3,2.96,120000,4,135,43225,5,2,5
Romance,1492,82,400000,5,0,6,0.5300000000000003,80000,5,943,43225,5,2,5
Romance,1492,344,300000,2,0,3,0.25,150000,2,800,43225,5,2,5
Romance,1492,73,240000,2,0,1,2.04,120000,2,98,43225,5,2,5
Romance,1492,304,1650000,112,0,4,18.329999999999998,147321.42860000001,112,611,43224,5,2,4
Romance,1492,352,13950000,93,0,5,10.57,150000,93,880,43224,5,2,4
Romance,1492,344,1020000,68,0,3,8.5399999999999991,150000,68,796,43224,5,2,4
Romance,1492,71,660000,44,0,3,6.1399999999999997,150000,44,717,43224,5,2,4
Romance,1492,163,3360000,31,0,3,24.800000000000001,108387.0968,31,125,43224,5,2,4
Romance,1492,522,3000000,20,0,3,7.75,150000,20,258,43224,5,2,4
Romance,1492,485,2400000,16,0,3,11.59,150000,16,138,43224,5,2,4
Romance,1492,524,1800000,12,0,3,13.33,150000,12,90,43224,5,2,4
Romance,1492,518,1680000,14,1,3,8.4800000000000004,120000,13,165,43224,5,2,4
Romance,1492,51,1400000,17,0,1,2.9300000000000002,82352.941179999994,17,580,43224,5,2,4
Romance,1492,448,1350000,9,0,2,2.3700000000000001,150000,9,380,43224,5,2,4
Romance,1492,429,1200000,12,0,1,11.01,100000,12,109,43224,5,2,4
Romance,1492,450,1050000,7,0,2,3.2999999999999998,150000,7,212,43224,5,2,4
Romance,1492,489,900000,6,0,3,5,150000,6,120,43224,5,2,4
Romance,1492,43,880000,11,0,3,0.8100000000000005,80000,11,1358,43224,5,2,4
Romance,1492,431,720000,6,0,2,11.539999999999999,120000,6,52,43224,5,2,4
Romance,1492,529,600000,5,0,2,5.5599999999999996,120000,5,90,43224,5,2,4
```

Step2: Open SSIS drag and drop the Flat File Source for Source connection and the OLE DB Destination where the data to be loaded from the Flat File .

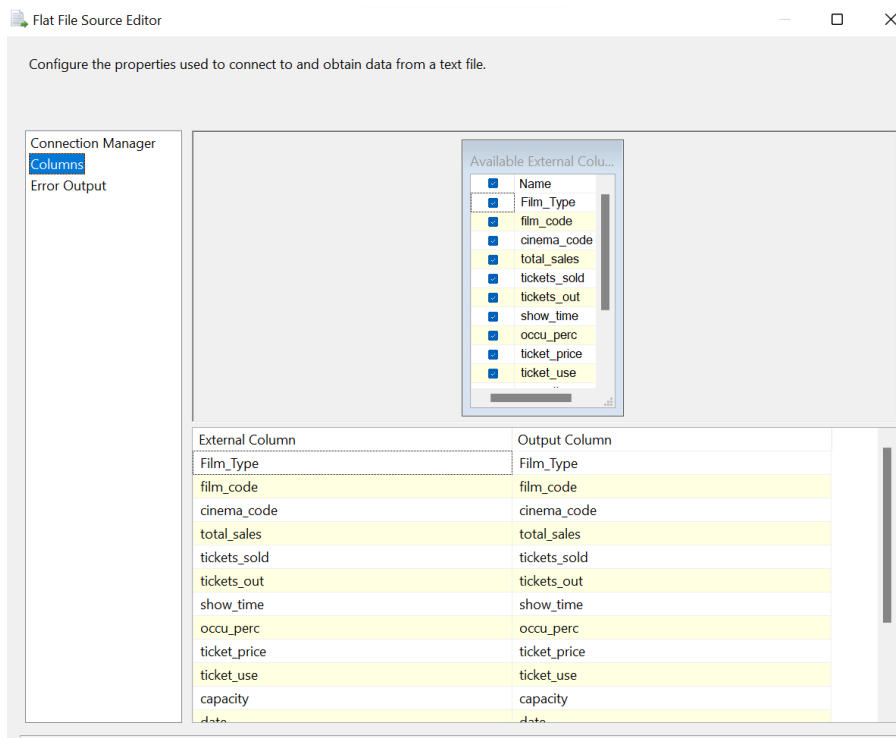


Step3: Double Click on the Flat File Source and Go to browse to select the source to select the source Flat File .

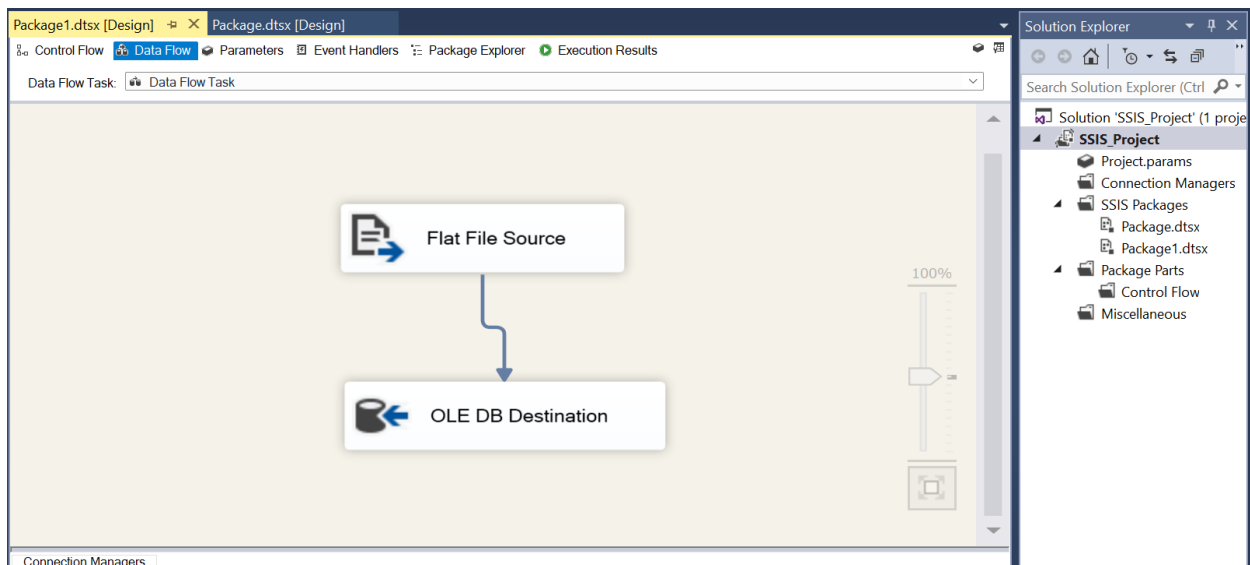




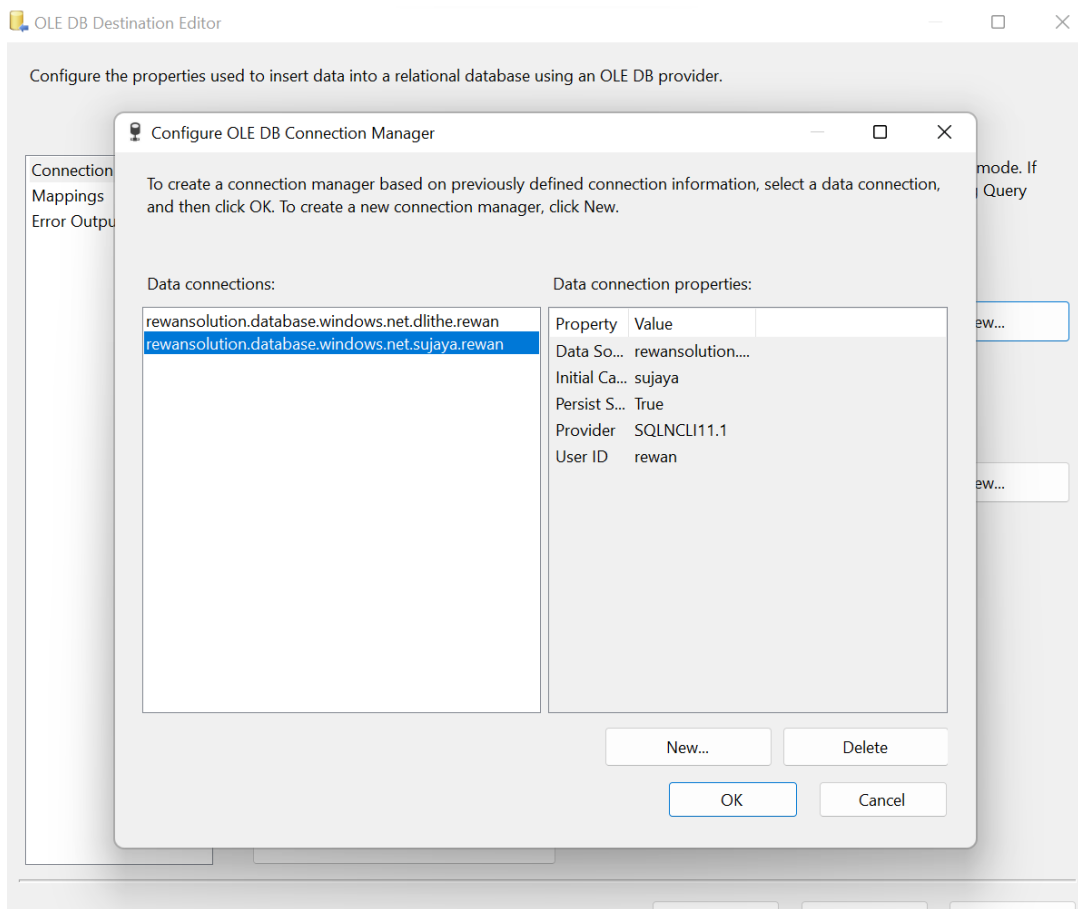
Step4:Select on Columns check the columns are present or not.



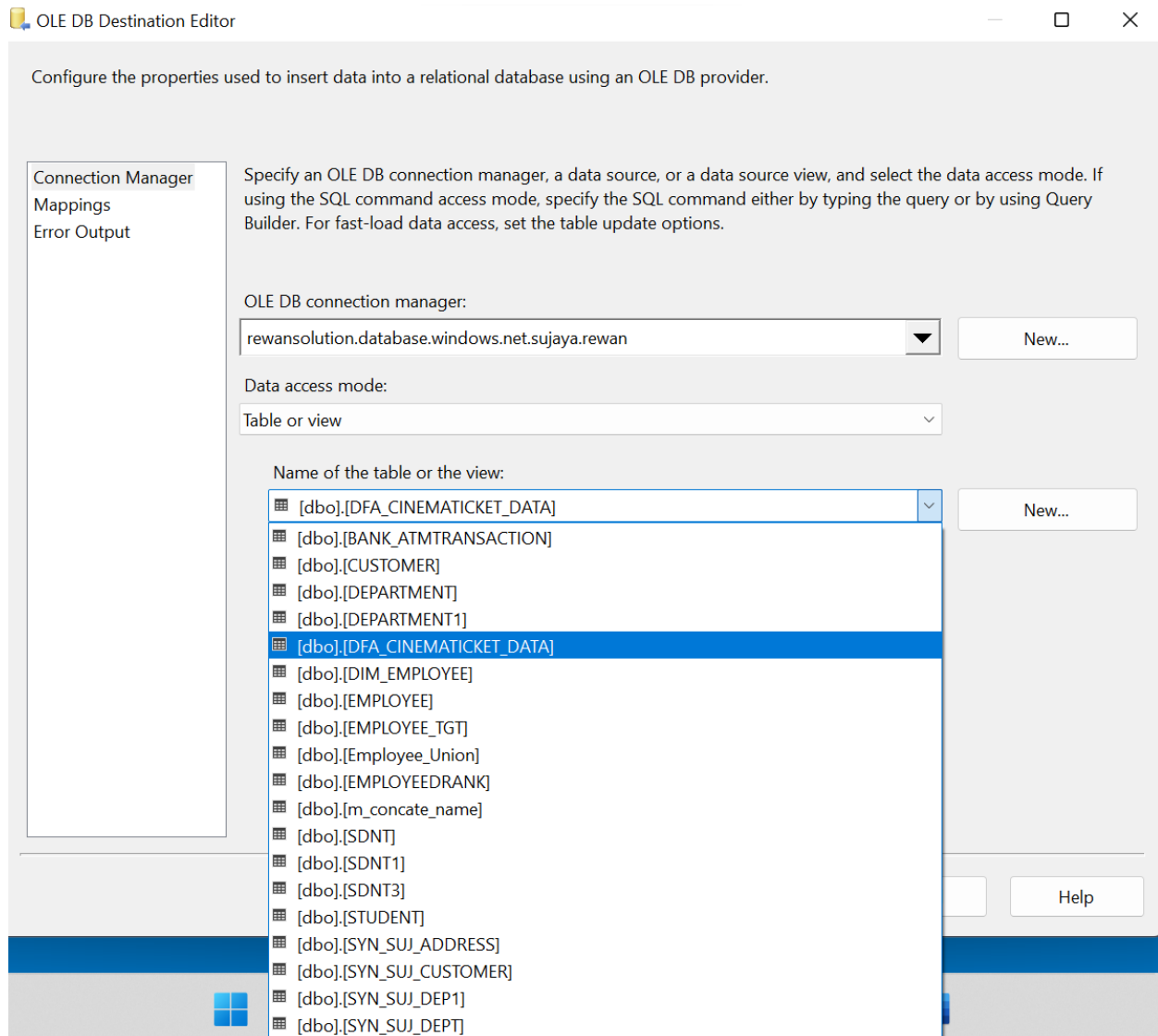
Step5: After connect the blue arrow head to OLE DB destination.



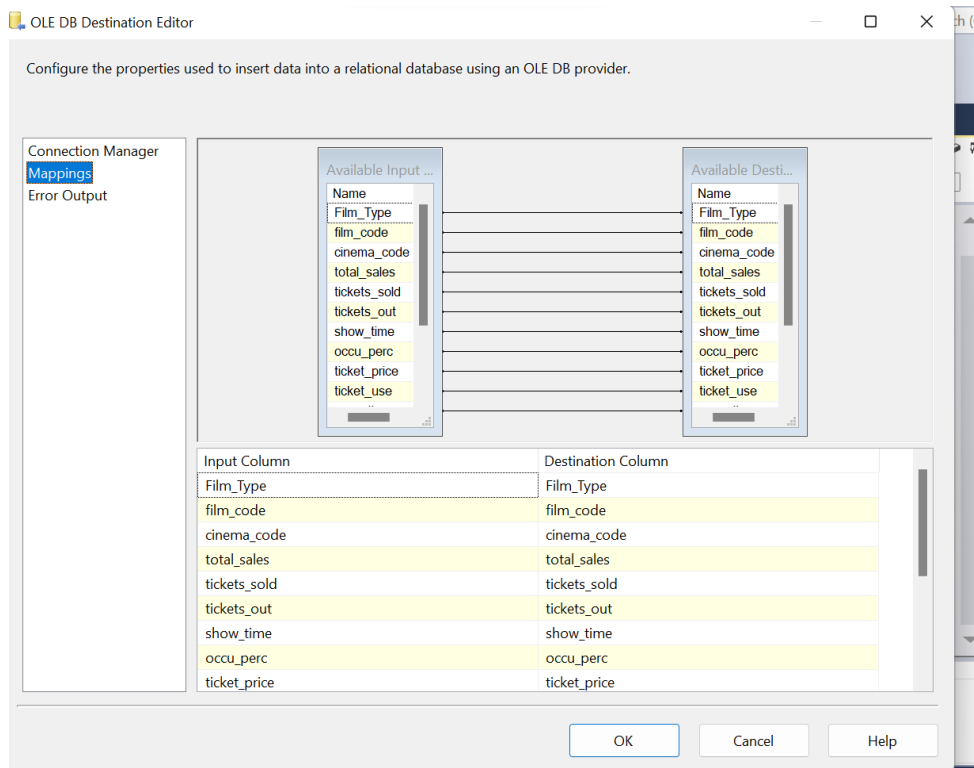
Step6: Double Click on OLE DB Destination and Go to connection manager and select the database connection and give OK.



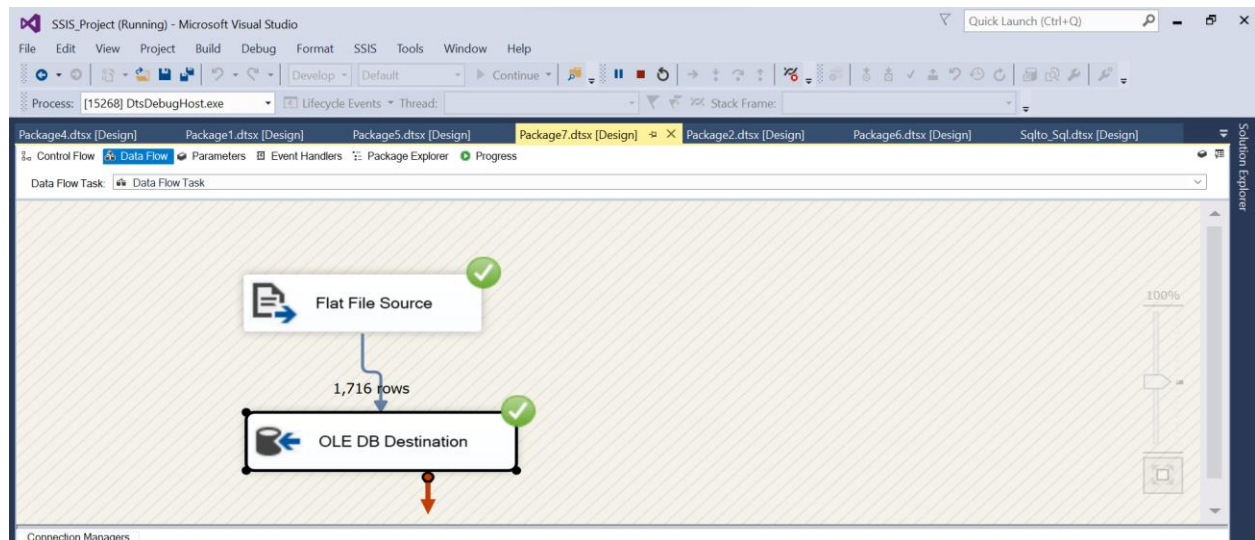
Step7:Go to name of the table and select the table from your database.



Step8:Go to mapping and check whether the column mapping is correct or not and give OK.



Step9: Save the Package and Click on Start. The Package runs successfully. And the data has been extracted and Loaded to OLE DB Destination.



Step10: Check in database whether the data has been loaded to database Table.

SQL queries.sql | dbo | SUJ_DEPT | <dlithe> Script-1 | dlithe | <sujoya> BasicSQL_que... | sujoya | <sujoya> DB_FinalAsses... | * <sujoya> SSIS(ETL) x

SELECT * FROM DFA_CINEMATICKET_DATA;

Results 1 x

Enter a SQL expression to filter results (use Ctrl+Space)

	Film_Type	film_code	cinema_code	total_sales	tickets_sold	tickets_out	show_time	occu_perc	ticket_price	ticket_use
1	Romance	1492	304	3900000	26	0	4	4.2599999999999998	150000	26
2	Romance	1492	352	3360000	42	0	5	8.0800000000000001	80000	42
3	Romance	1492	489	2560000	32	0	4	20	80000	32
4	Romance	1492	429	1200000	12	0	1	11.01	100000	12
5	Romance	1492	524	1200000	15	0	3	16.6700000000000002	80000	15
6	Romance	1492	71	1050000	7	0	3	0.9799999999999998	150000	7
7	Romance	1492	163	1020000	10	0	3	7.6900000000000004	102000	10
8	Romance	1492	450	750000	5	0	3	1.5700000000000001	150000	5
9	Romance	1492	489	460000	9	0	5	4.8600000000000003	51111.11110999998	9
10	Romance	1492	485	300000	2	0	3	1.45	150000	2
11	Romance	1492	198	280000	4	0	3	0.7800000000000003	70000	4
12	Thriller	1486	187	4000000	70	0	7	3.6200000000000001	57142.85714	70
13	Thriller	1486	431	3480000	48	0	6	30.77	72500	48
14	Thriller	1486	207	1300000	26	0	6	1.6699999999999999	50000	26
15	Thriller	1486	503	840000	13	0	1	81.25	64615.38461999997	13
16	Thriller	1486	466	240000	4	0	3	0.7800000000000003	60000	4
17	Horror	1484	368	5850000	117	0	1	31.620000000000001	50000	117
18	Horror	1484	480	5700000	95	46	2	43.18	60000	49
19	Horror	1484	492	5400000	99	3	1	47.600000000000001	54545.45455000002	96
20	Horror	1484	429	5200000	52	0	1	47.710000000000001	100000	52

Save | Cancel | Script | 200 | Rows: 1 | 200 row(s) fetched - 249ms (9ms fetch), on 2022-10-15 15:17:33 | Sel: 0 | 0

2.SQL to SQL Server

Datasource used :**Inpatient_provdrr_Covid_Healthcare**

Step1: Create the source table DFA_COVIDHEALTHCARE_DATA in database and Insert the data to table.

<dlithe> SQL_qu... | dbo | SUJ_DEPT | <dlithe> Script-1 | dlithe | <sujoya> BasicS...

```

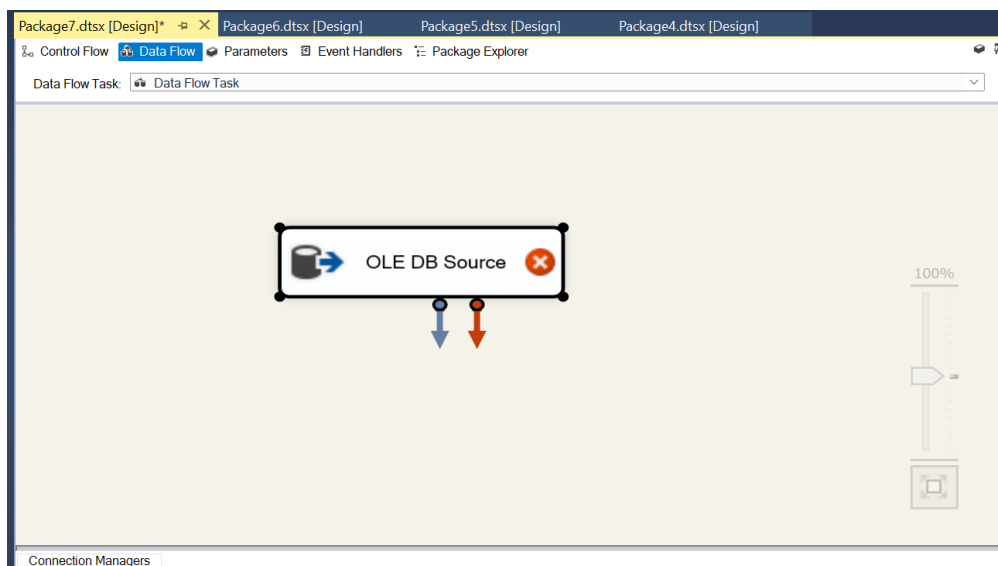
CREATE TABLE DFA_COVIDHEALTHCARE_DATA
(
    DRG_ID VARCHAR(100),
    DRG_Definition VARCHAR(100),
    Provider_Id VARCHAR(100),
    Provider_Name VARCHAR(100),
    Provider_Street_Address VARCHAR(100),
    Provider_City VARCHAR(100),
    Provider_State VARCHAR(100),
    Provider_ZipCode VARCHAR(100),
    Hospital_Referral_Region_Description VARCHAR(100),
    Total_Discharges VARCHAR(100),
    Average_Covered_Charges VARCHAR(100),
    Average_Total_Payments VARCHAR(100),
    Average_Medicare_Payments VARCHAR(100)
);

```

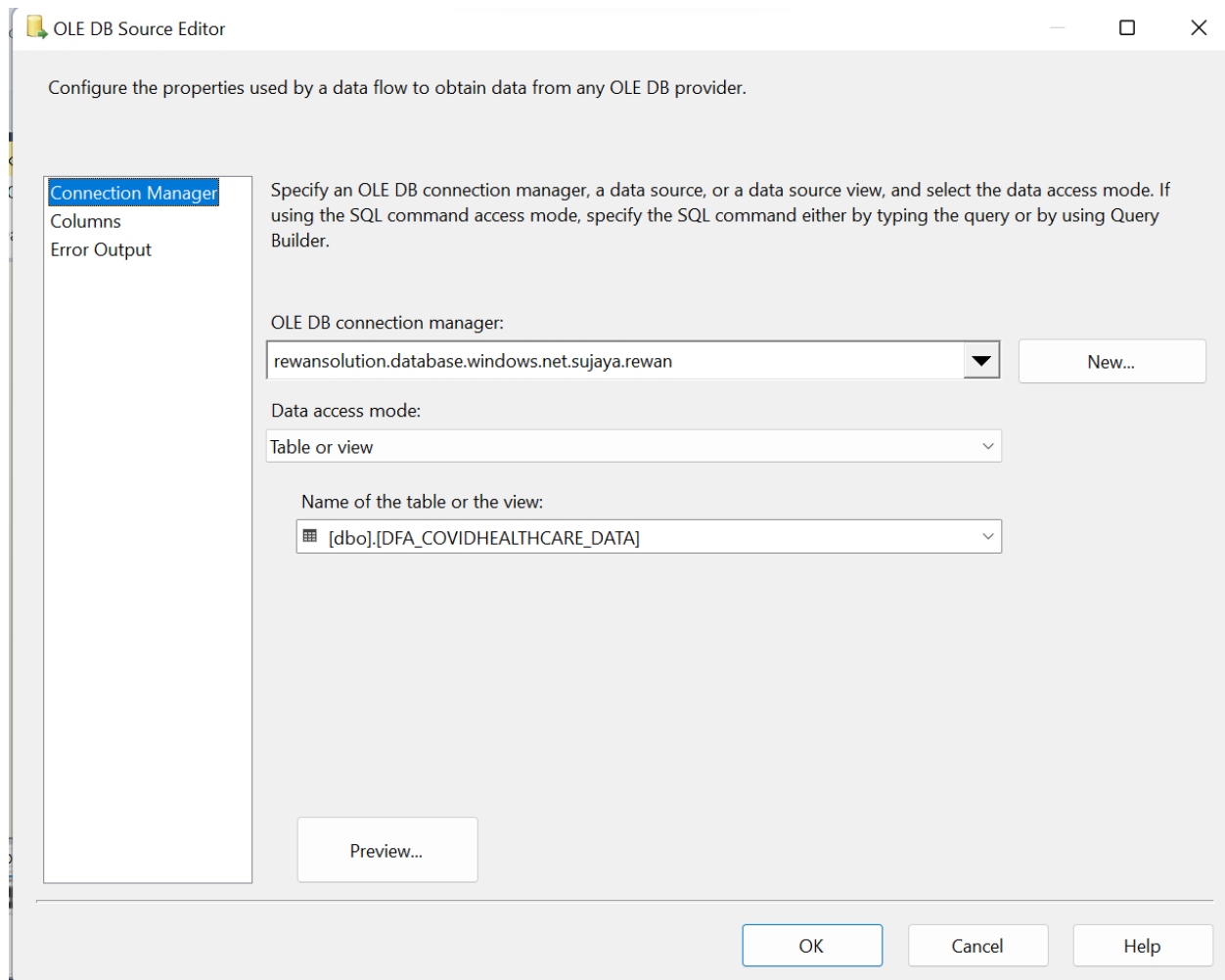
Create the destination table in database.


```
<dlihe> SQL_qu...  dbo  SUJ_DEPT  <dlihe> Script-1  dlihe  <sujoya> BasicS...  
  
CREATE TABLE DFA_COVIDHEALTHCARE_DATA1  
(  
    DRG_ID VARCHAR(100),  
    DRG_Definition VARCHAR(100),  
    Provider_Id VARCHAR(100),  
    Provider_Name VARCHAR(100),  
    Provider_Street_Address VARCHAR(100),  
    Provider_City VARCHAR(100),  
    Provider_State VARCHAR(100),  
    Provider_ZipCode VARCHAR(100),  
    Hospital_Referral_Region_Description VARCHAR(100),  
    Total_Discharges VARCHAR(100),  
    Average_Covered_Charges VARCHAR(100),  
    Average_Total_Payments VARCHAR(100),  
    Average_Medicare_Payments VARCHAR(100)  
);
```

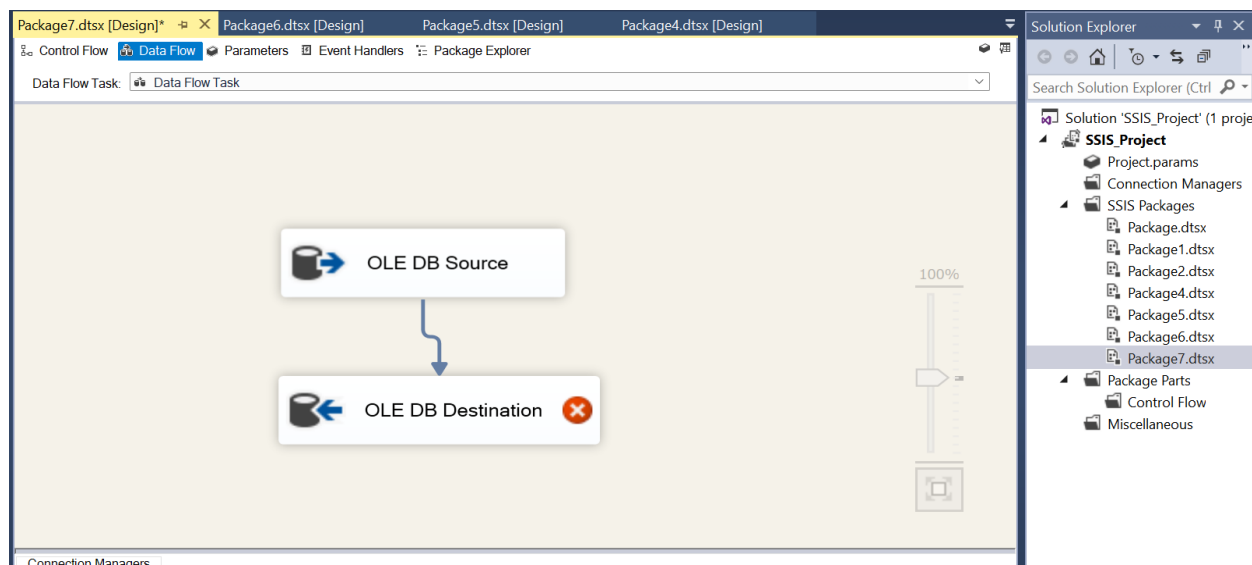
Step2: Drag and Drop the OLE DB source from SSIS Tool Box.



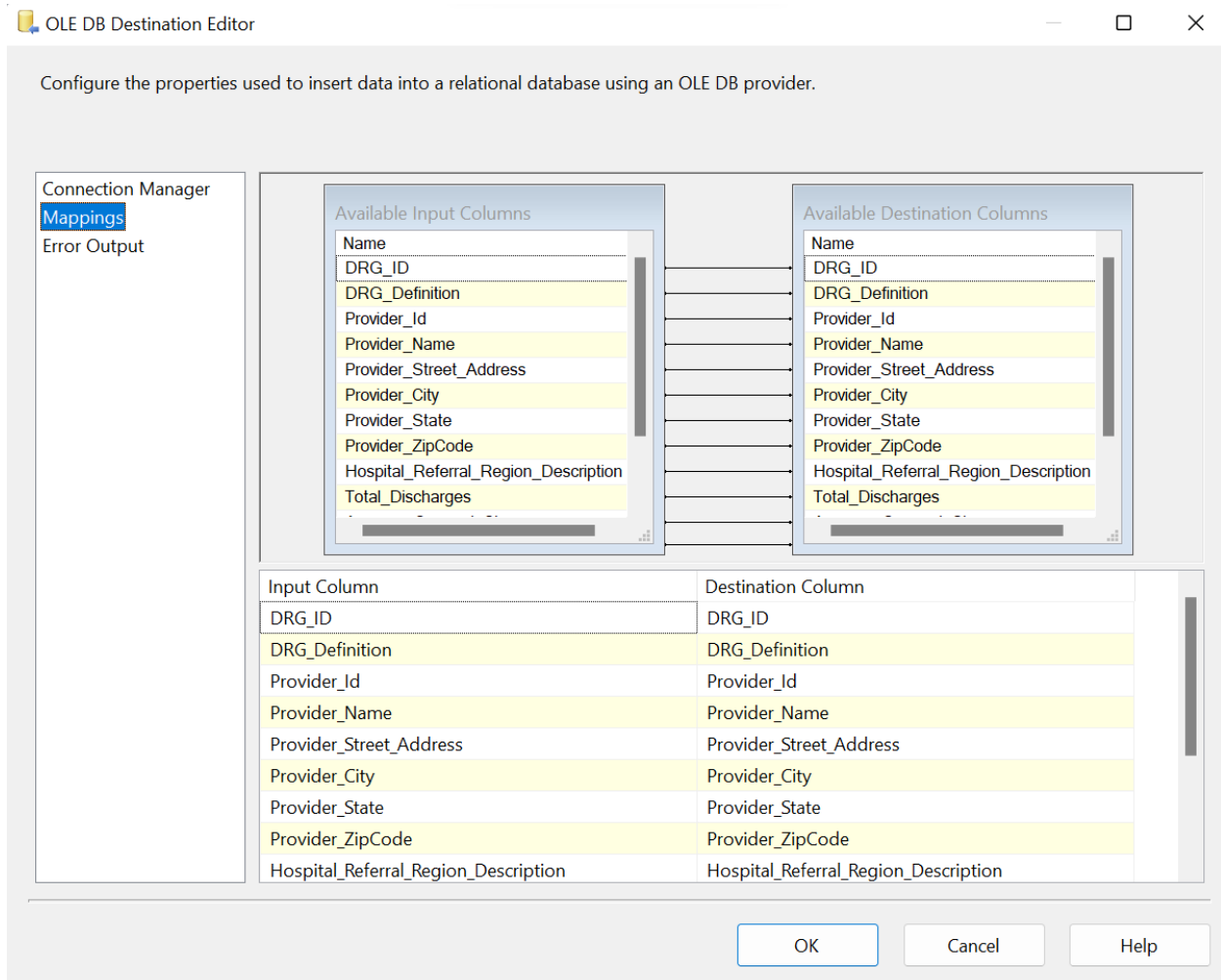
Step3: Double Click on OLE DB Destination and Go to connection manager and select the database connection and give OK. And Select the database table.



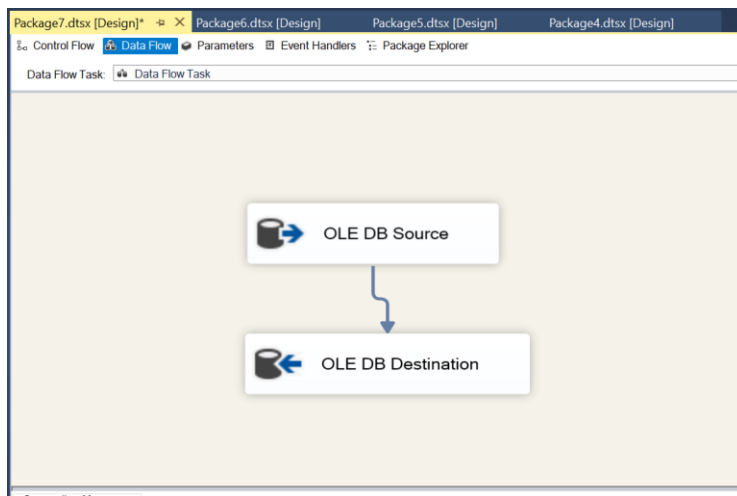
Step4: Connect the OLE DB source to OLE DB destination.

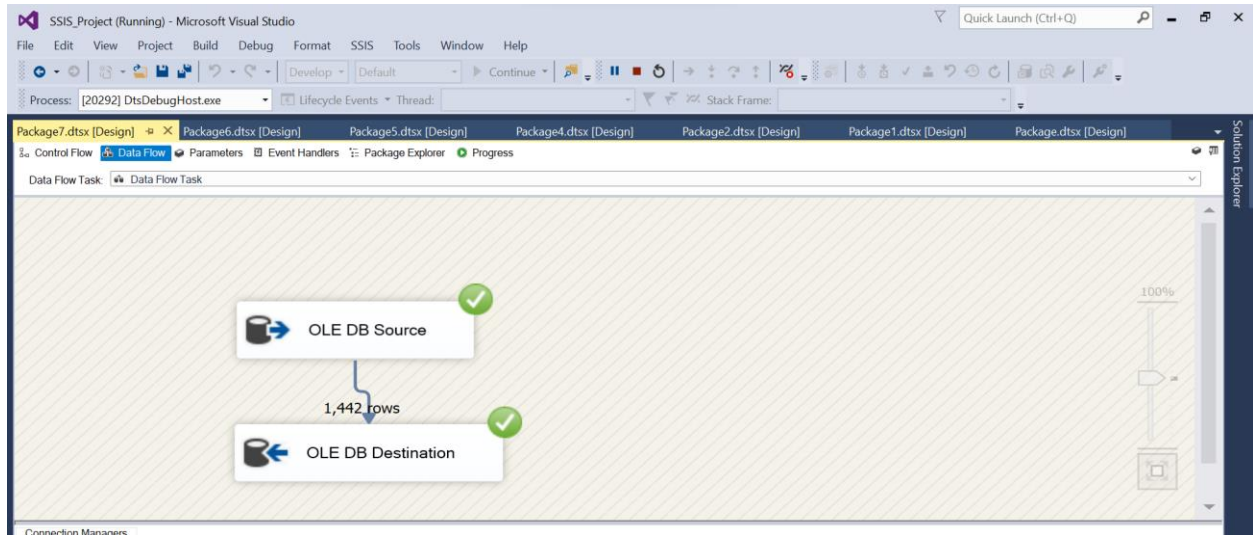


Step5: Repeat the same steps for connection and selecting the database file for OLE DB Destination . And Check the column mappings and give OK.



Step6: Then save the package and Click on Start to run the package. The package executed successfully and the data is loaded into Destination table.





Step 7: Check in database whether the data has loaded to destination table.

<dlithe> SQL_queries.sql <dbo> <SUJ_DEPT> <dlithe> Script-1 dlithe <sujoya> BasicSQL_que... sujoya <sujoya> DB_FinalAsses... * <sujoya> SSIS(ETL) x

SELECT * FROM DFA_COVIDHEALTHCARE_DATA1;

Results 1 x

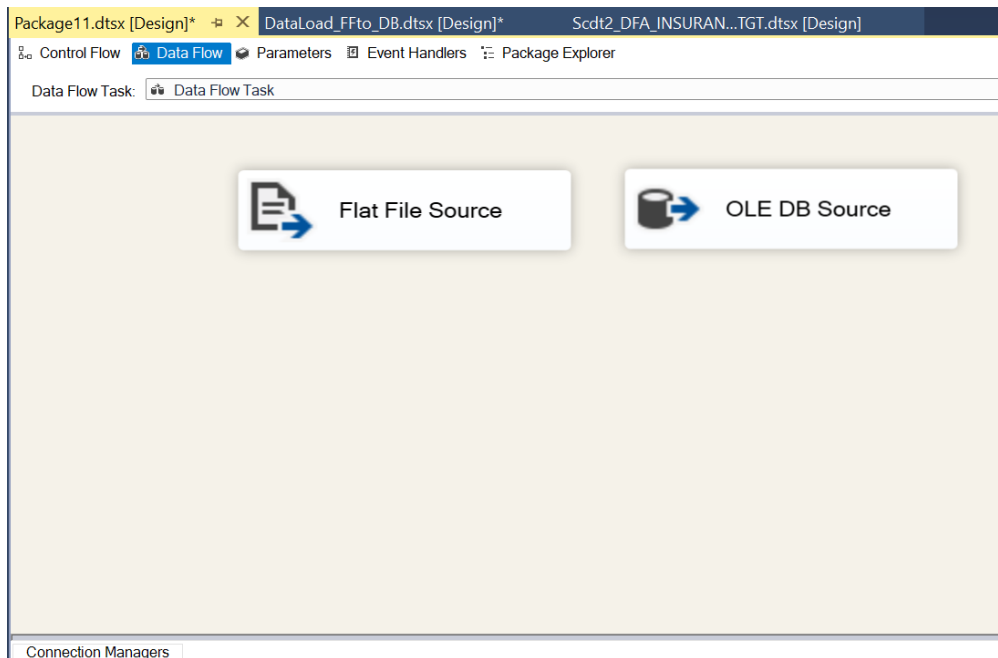
SELECT * FROM DFA_COVIDHEALTHCARE_DATA1; Enter a SQL expression to filter results (use Ctrl+Space)

Grid	DRG_ID	DRG_Definition	Provider_Id	Provider_Name	Provider_Street_Address	Provik
1	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10001	SOUTHEAST ALABAMA MEDICAL CENTER	1108 ROSS CLARK CIRCLE	DOTHAI
2	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10005	MARSHALL MEDICAL CENTER SOUTH	2505 U S HIGHWAY 431 NORTH	BOAZ
3	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10006	ELIZA COFFEE MEMORIAL HOSPITAL	205 MARENGO STREET	FLOREN
4	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10011	ST VINCENT'S EAST	50 MEDICAL PARK EAST DRIVE	BIRMINC
5	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10016	SHELBY BAPTIST MEDICAL CENTER	1000 FIRST STREET NORTH	ALABAS
6	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10023	BAPTIST MEDICAL CENTER SOUTH	2105 EAST SOUTH BOULEVARD	MONTG
7	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10029	EAST ALABAMA MEDICAL CENTER AND SNF	2000 PEPPERELL PARKWAY	OPELIKA
8	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10033	UNIVERSITY OF ALABAMA HOSPITAL	619 SOUTH 19TH STREET	BIRMINC
9	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10039	HUNTSVILLE HOSPITAL	101 SIVLEY RD	HUNTSV
10	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10040	GADSDEN REGIONAL MEDICAL CENTER	1007 GOODYEAR AVENUE	GADSD
11	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10046	RIVERVIEW REGIONAL MEDICAL CENTER	600 SOUTH THIRD STREET	GADSD
12	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10055	FLOWERS HOSPITAL	4370 WEST MAIN STREET	DOTHAI
13	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10056	ST VINCENT'S BIRMINGHAM	810 ST VINCENT'S DRIVE	BIRMINC
14	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10078	NORTHEAST ALABAMA REGIONAL MED CENTER	400 EAST 10TH STREET	ANNIST
15	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10083	SOUTH BALDWIN REGIONAL MEDICAL CENTER	1613 NORTH MCKENZIE STREET	FOLEY
16	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10085	DECATUR GENERAL HOSPITAL	1201 7TH STREET SE	DECATU
17	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10090	PROVIDENCE HOSPITAL	6801 AIRPORT BOULEVARD	MOBILE
18	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10093	D.C.H. REGIONAL MEDICAL CENTER	600 UNIVERSITY BOULEVARD EAST	TUSCAL

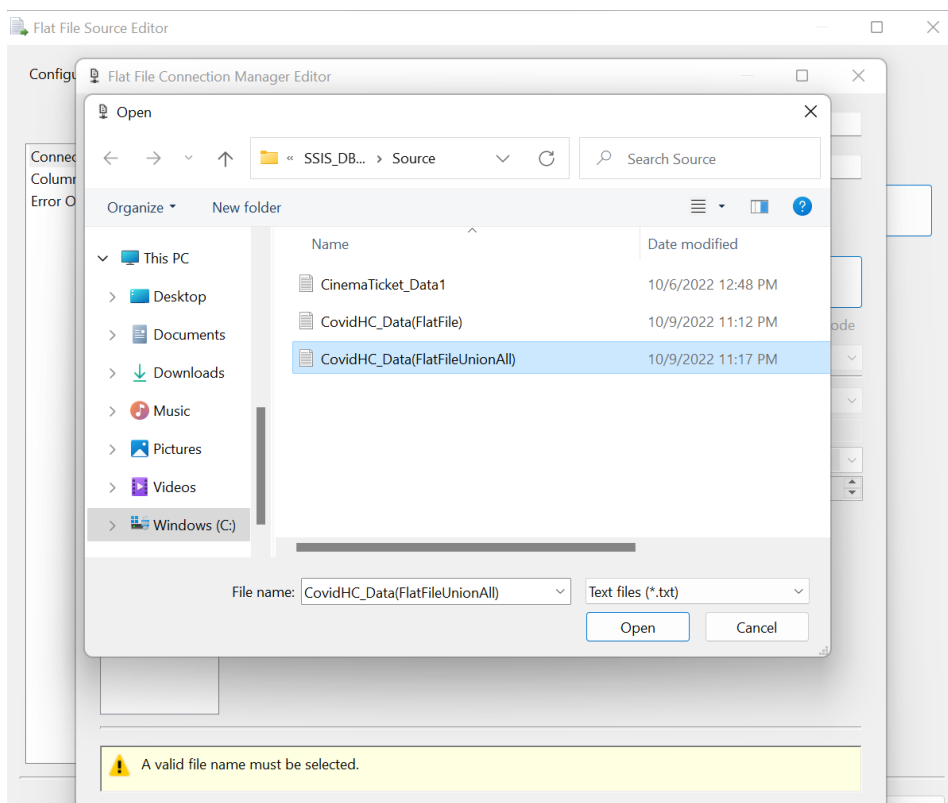
Save Cancel Script 200 Rows: 1 200 row(s) fetched - 251ms (28ms fetch), on 2022-11-17 17:40:1312 Sel: 0 | 0

Transform

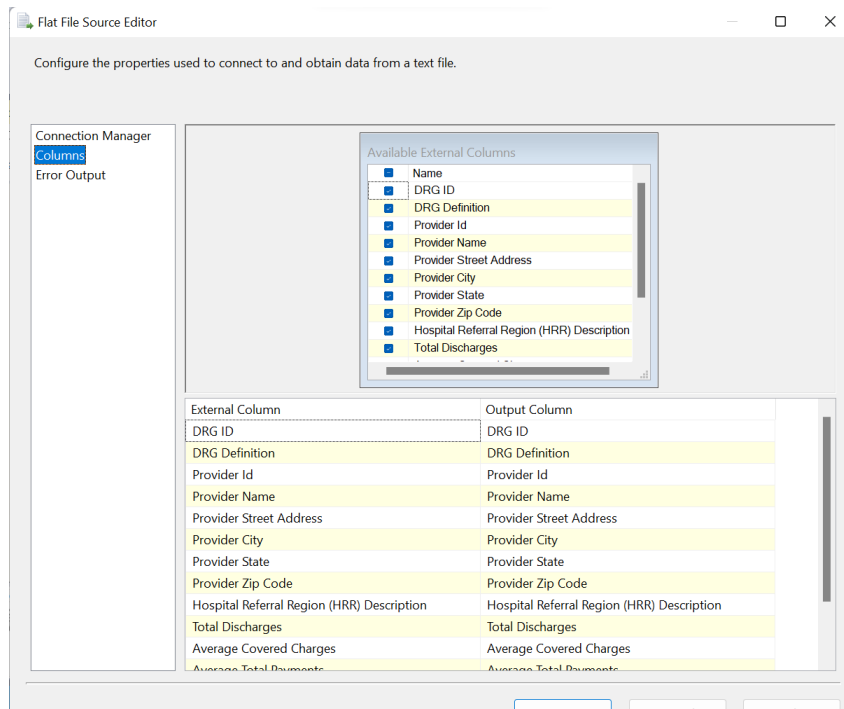
Step1: Drag and Drop two sources Flat File and OLE DB Destination.



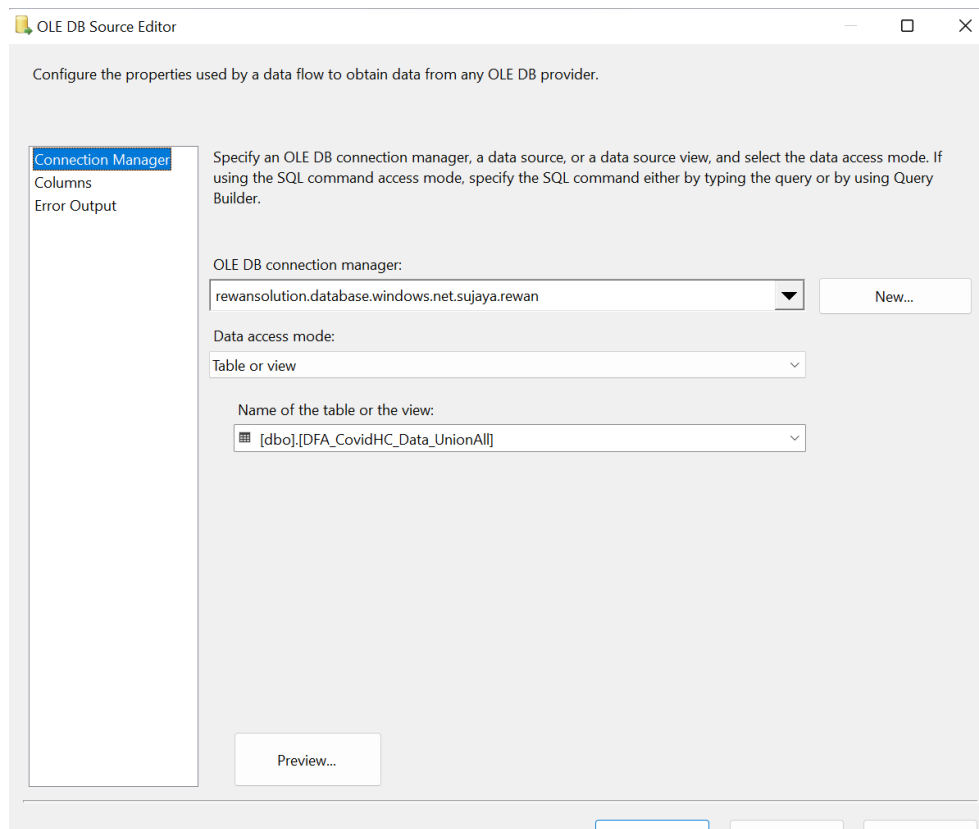
Step2: Double click on Flat File and Select the Flat File.



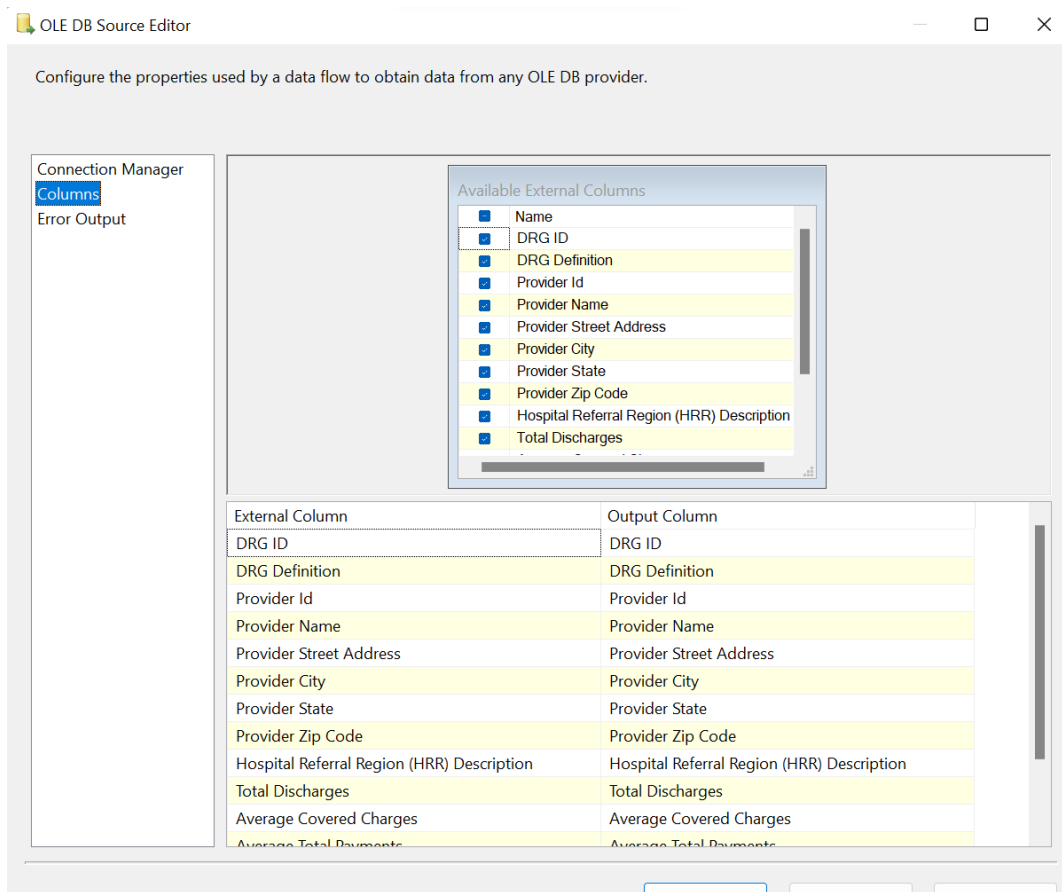
Step3: Check the column mappings.



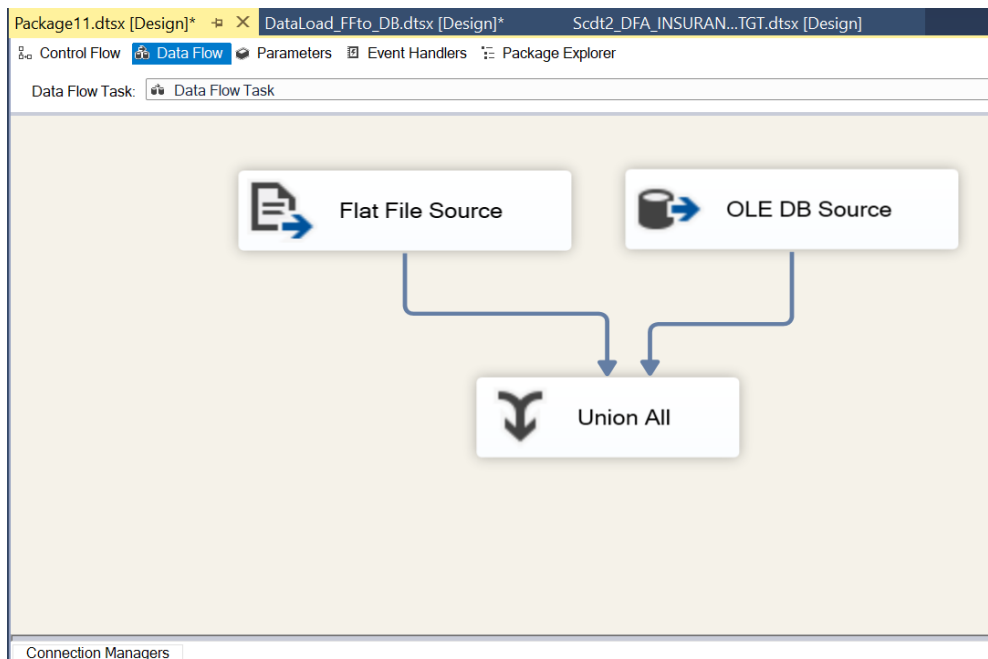
Step4: Double Click on OLE DB destination make the connection and select the table in database.



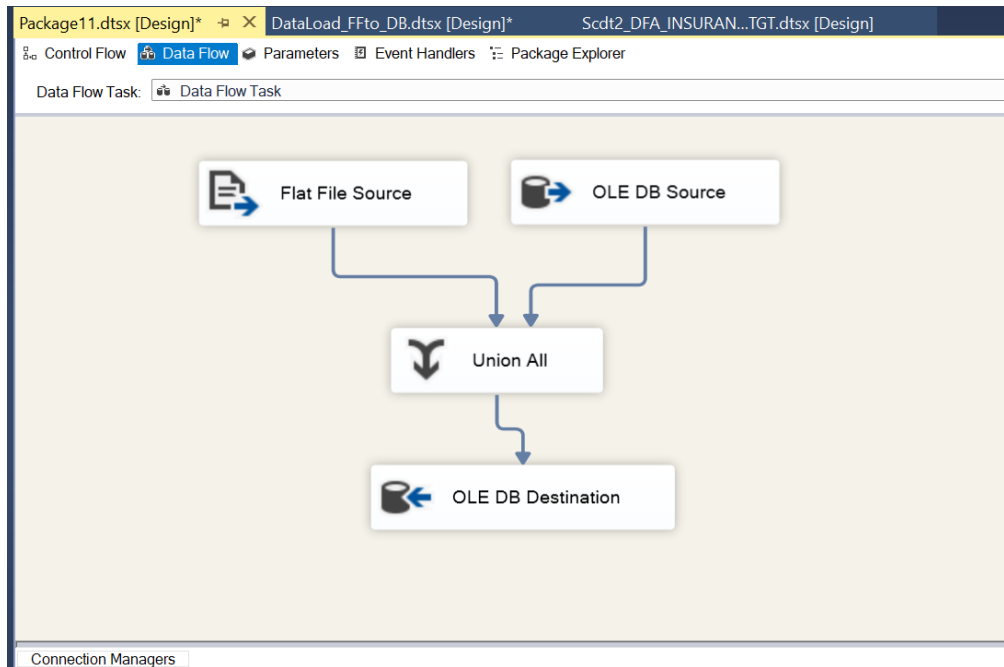
Step5: Check the column mappings.



Step6: Drag and Drop the Union all transformation and connect the Flat File and OLE DB to Union all transformation.



Step7: Drag and Drop the OLE DB destination. And Connect the Union all transformation to OLE DB destination.

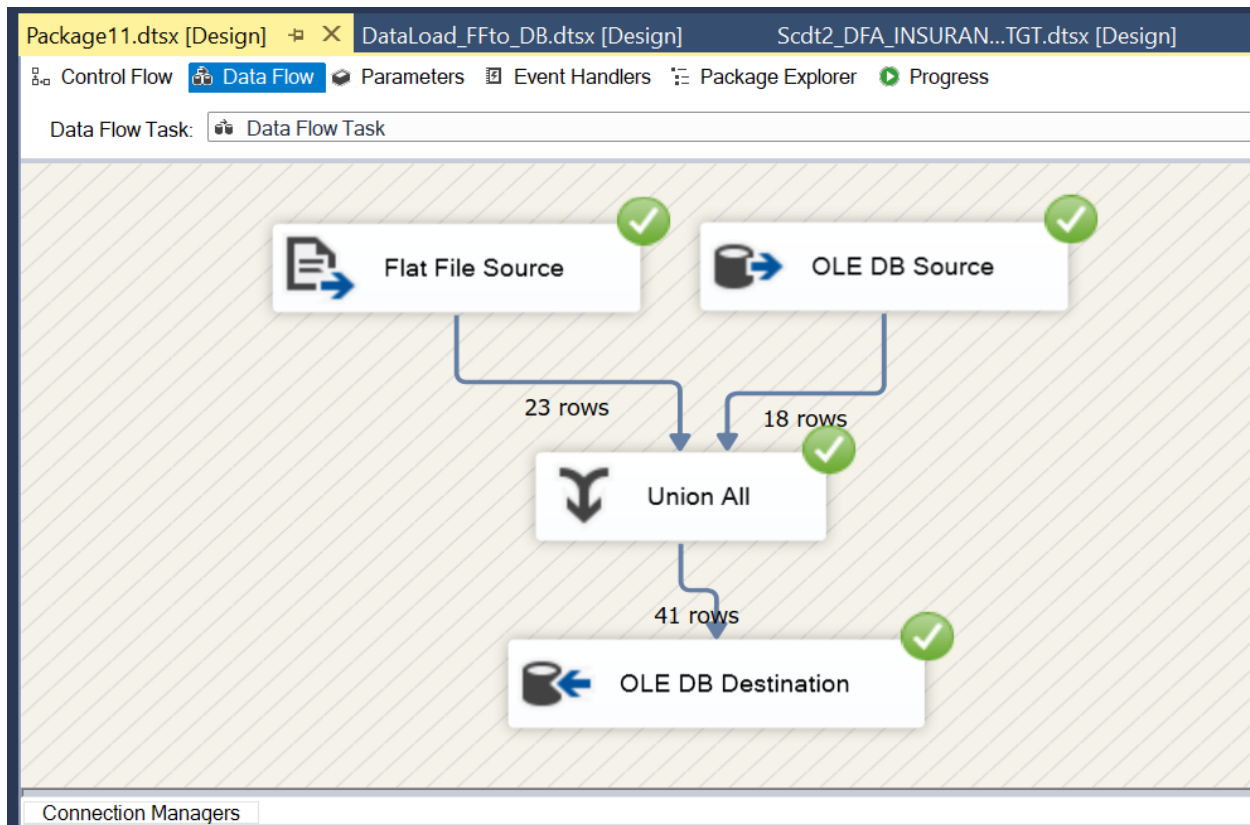


Step8: Double Click on OLE DB destination make the connection and select the table in database.

The 'OLE DB Destination Editor' dialog box is shown, used for configuring the properties for inserting data into a relational database using an OLE DB provider. The 'Connection Manager' tab is selected in the left sidebar. The main area contains the following configuration options:

- OLE DB connection manager:** A dropdown menu showing 'rewansolution.database.windows.net.sujaya.rewan' with a 'New...' button.
- Data access mode:** A dropdown menu showing 'Table or view - fast load'.
- Name of the table or the view:** A dropdown menu showing '[DFA_CovidHCare_Data_UnionAll]' with a 'New...' button.
- Options:**
 - ☐ Keep identity
 - ☐ Keep nulls
 - ☒ Table lock
 - ☒ Check constraints
- Rows per batch:** A text box with the value '2147483647'.
- Maximum insert commit size:** A text box with the value '2147483647'.
- Buttons:** 'View Existing Data...', 'OK', 'Cancel', and 'Help'.

Step9: Save and Run the package.



Step10: Check in database to view the loaded data from Flat File and OLE DB.

Results 1 x

SELECT * FROM DFA_CovidHCare_Data_Union

	DRG ID	DRG Definition	Provider Id	Provider Name	Provider Street Address	Provider City	
1	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10001	SOUTHEAST ALABAMA MEDICAL CENTER	1108 ROSS CLARK CIRCLE	DOTHAN	A
2	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10005	MARSHALL MEDICAL CENTER SOUTH	2505 U S HIGHWAY 431 NORTH	BOAZ	A
3	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10006	ELIZA COFFEE MEMORIAL HOSPITAL	205 MARENGO STREET	FLORENCE	A
4	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10011	ST VINCENT'S EAST	50 MEDICAL PARK EAST DRIVE	BIRMINGHAM	A
5	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10016	SHELBY BAPTIST MEDICAL CENTER	1000 FIRST STREET NORTH	ALABASTER	A
6	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10023	BAPTIST MEDICAL CENTER SOUTH	2105 EAST SOUTH BOULEVARD	MONTGOMERY	A
7	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10029	EAST ALABAMA MEDICAL CENTER AND SP	2000 PEPPERELL PARKWAY	OPELIKA	A
8	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10033	UNIVERSITY OF ALABAMA HOSPITAL	619 SOUTH 19TH STREET	BIRMINGHAM	A
9	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10039	HUNTSVILLE HOSPITAL	101 SIVLEY RD	HUNTSVILLE	A
10	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10040	GADSDEN REGIONAL MEDICAL CENTER	1007 GOODYEAR AVENUE	GADSDEN	A
11	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10046	RIVERVIEW REGIONAL MEDICAL CENTER	600 SOUTH THIRD STREET	GADSDEN	A
12	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10055	FLOWERS HOSPITAL	4370 WEST MAIN STREET	DOTHAN	A
13	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10056	ST VINCENT'S BIRMINGHAM	810 ST VINCENT'S DRIVE	BIRMINGHAM	A
14	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10078	NORTHEAST ALABAMA REGIONAL MED CI	400 EAST 10TH STREET	ANNISTON	A
15	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10083	SOUTH BALDWIN REGIONAL MEDICAL CEI	1613 NORTH MCKENZIE STREET	FOLEY	A
16	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10085	DECATUR GENERAL HOSPITAL	1201 7TH STREET SE	DECATUR	A
17	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10090	PROVIDENCE HOSPITAL	6801 AIRPORT BOULEVARD	MOBILE	A
18	39	EXTRACRANIAL PROCEDURES W/O CC/MCC	10092	D C H REGIONAL MEDICAL CENTER	809 UNIVERSITY BOULEVARD EA	TUSCALOOSA	A
19	292	HEART FAILURE & SHOCK W CC	450083	EAST TEXAS MEDICAL CENTER	1000 SOUTH BECKHAM STREET	TYLER	T
20	292	HEART FAILURE & SHOCK W CC	450085	GRAHAM REGIONAL MEDICAL CENTER	1301 MONTGOMERY ROAD	GRAHAM	T
21	292	HEART FAILURE & SHOCK W CC	440058	SOUTHERN TENNESSEE MEDICAL CENTER	185 HOSPITAL ROAD	WINCHESTER	T

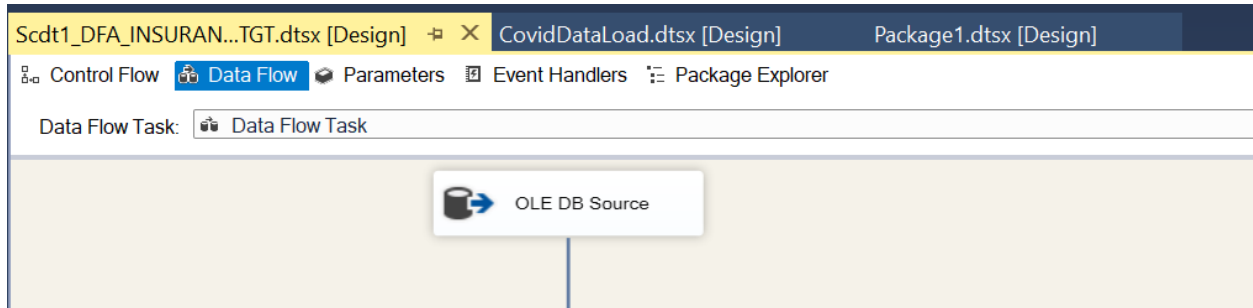
Save Cancel Script 200 41 Rows: 1 41 row(s) fetched - 253ms, on 2022-10-09 at 23:43:1

IST en Writable Overwrite 450 : 44 : 19789 Sel: 0 | 0

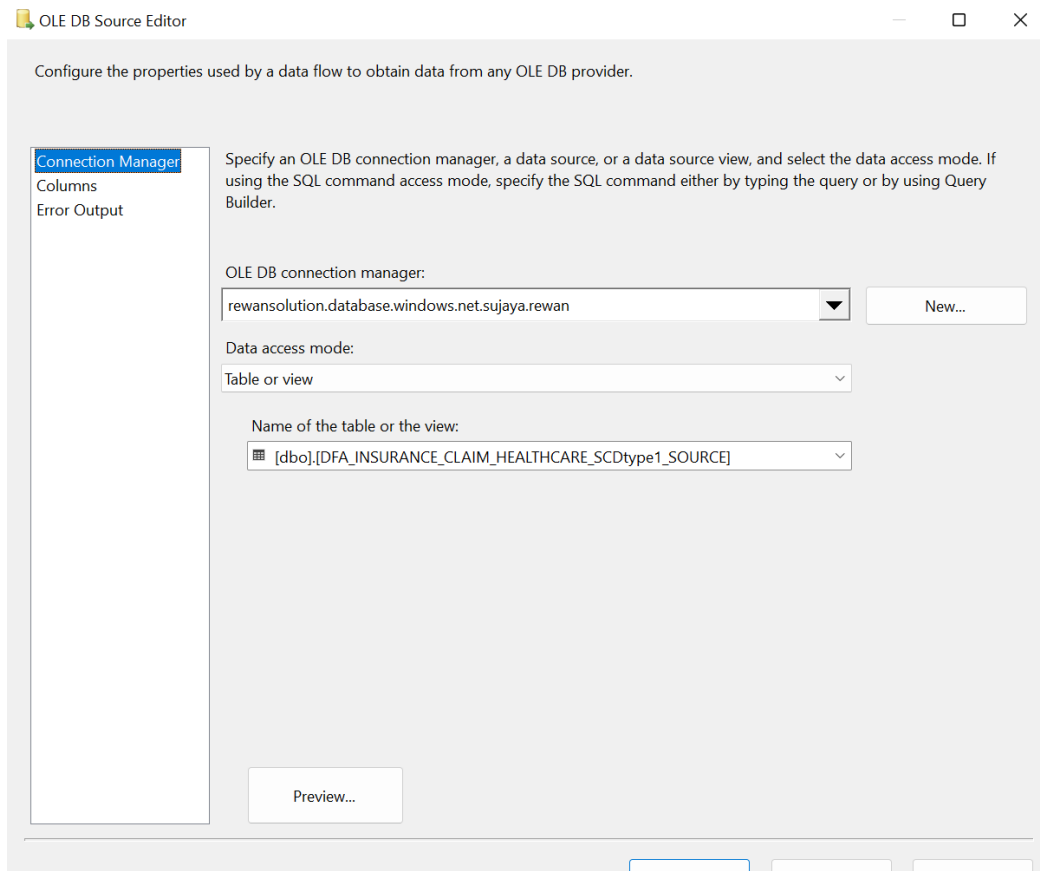
Perform SCD 1 & SCD2 dimension table modelling

SCD-1

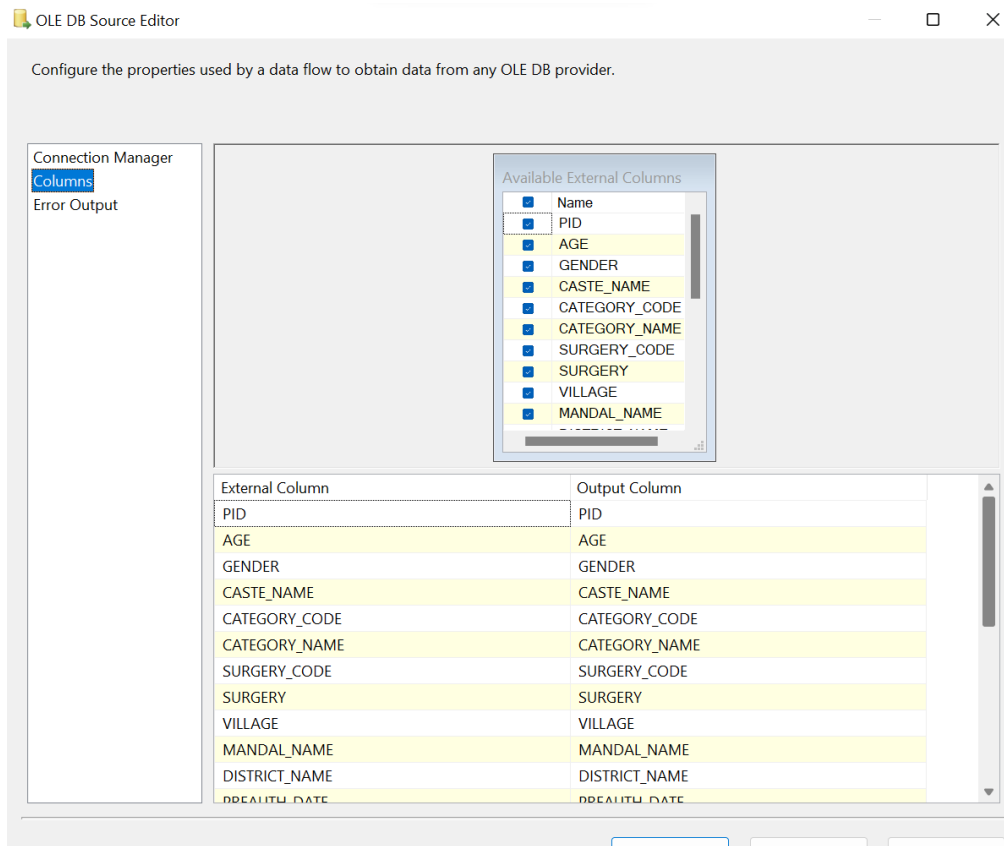
Step1: Drag and Drop the OLE DB source.



Step2: Click on the OLE DB source and select the source table.



Step3: check the column and preview the data.



Step4: Drag and Drop the and Double click on the slowly changing Dimension and choose the target table. And choose the business key from available column and click on next.

Slowly Changing Dimension Wizard

Select a Dimension Table and Keys

Select a dimension table to load and map columns in the transformation input to columns in the dimension table.

Connection manager: rewansolution.database.windows.net.sujaya.rewan New...

Table or view: [dbo].[IDEA_INSURANCE_CLAIM_HEALTHCARE_SCHEMA1_TGT]

Input Columns	Dimension Columns	Key Type
HOSP_NAME	HOSP_NAME	Not a key column
HOSP_TYPE	HOSP_TYPE	Not a key column
MANDAL_N...	MANDAL_NAME	Not a key column
MORTALITY	MORTALITY	Not a key column
MORTALITY...	MORTALITY_DATE	Not a key column
PID	PID	Business key
PREAUTH_...	PREAUTH_AMT	Not a key column
PREAUTH_...	PREAUTH_DATE	Not a key column
SRC_REGIS...	SRC_REGISTRAT...	Not a key column
SURGERY	SURGERY	Not a key column
SURGERY_...	SURGERY_CODE	Not a key column
SURGERY_...	SURGERY_DATE	Not a key column

Help < Back Next > Finish >>| Cancel

Step5: choose the changing attribute fixed attribute click on next.

Slowly Changing Dimension Wizard

Slowly Changing Dimension Columns

Manage the changes to column data in your slowly changing dimensions by setting the change type for dimension columns.

Fixed Attribute

Select this type when the value in a column should not change. Changes are treated as errors.

Changing Attribute

Select this type when changed values should overwrite existing values. This is a Type 1 change.

Historical Attribute

Select this type when changes in column values are saved in new records. Previous values are saved in records marked as outdated. This is a Type 2 change.

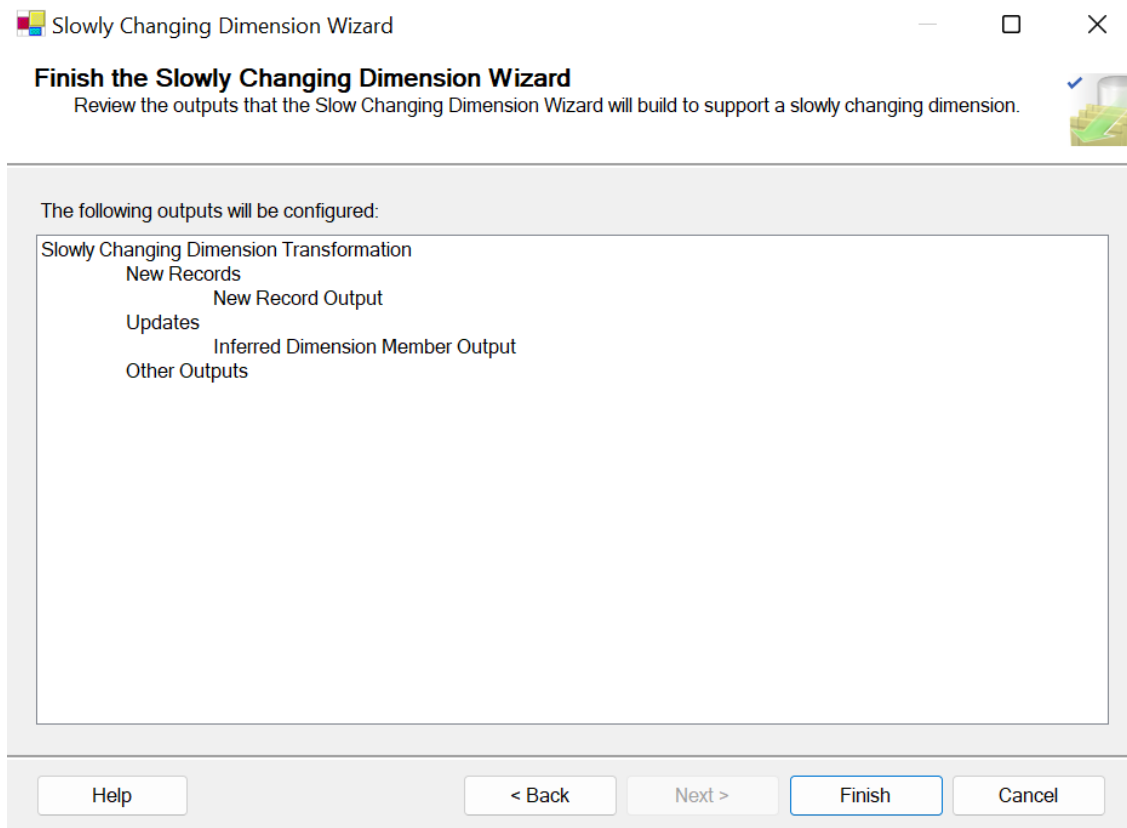
Select a change type for slowly changing dimension columns:

Dimension Columns	Change Type
AGE	Changing at...
GENDER	Fixed attribute
VILLAGE	Changing at...

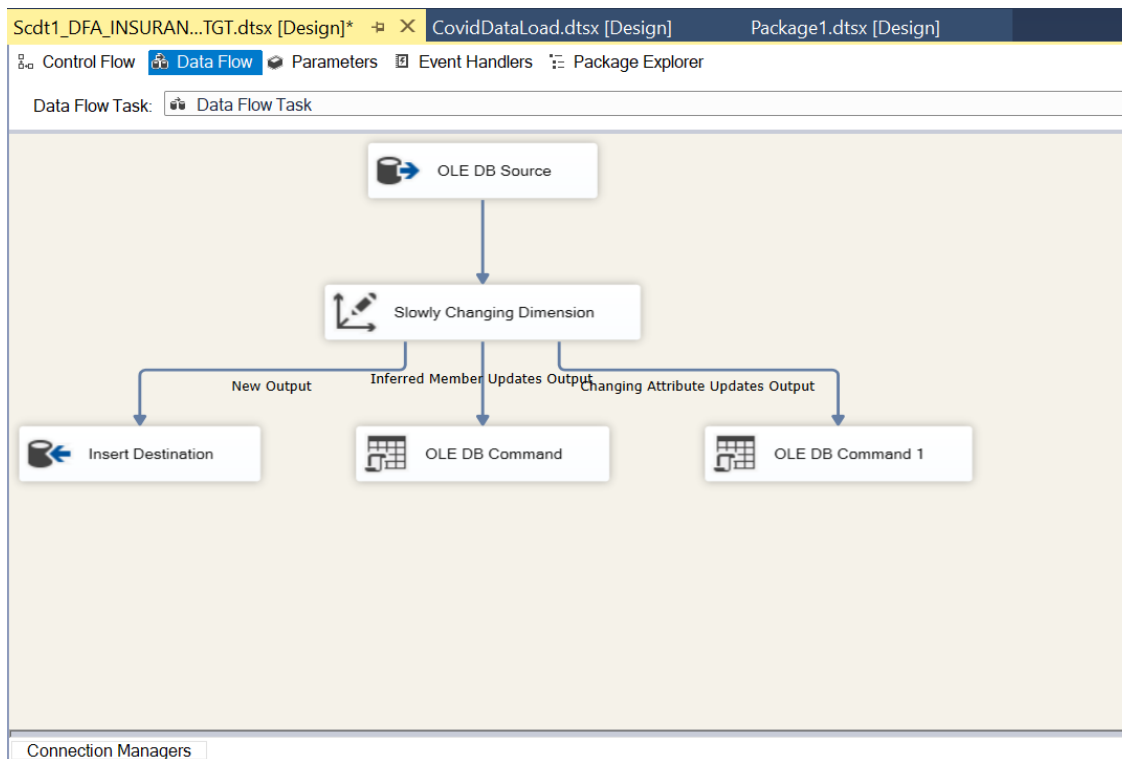
Remove

Help < Back Next > Finish >>| Cancel

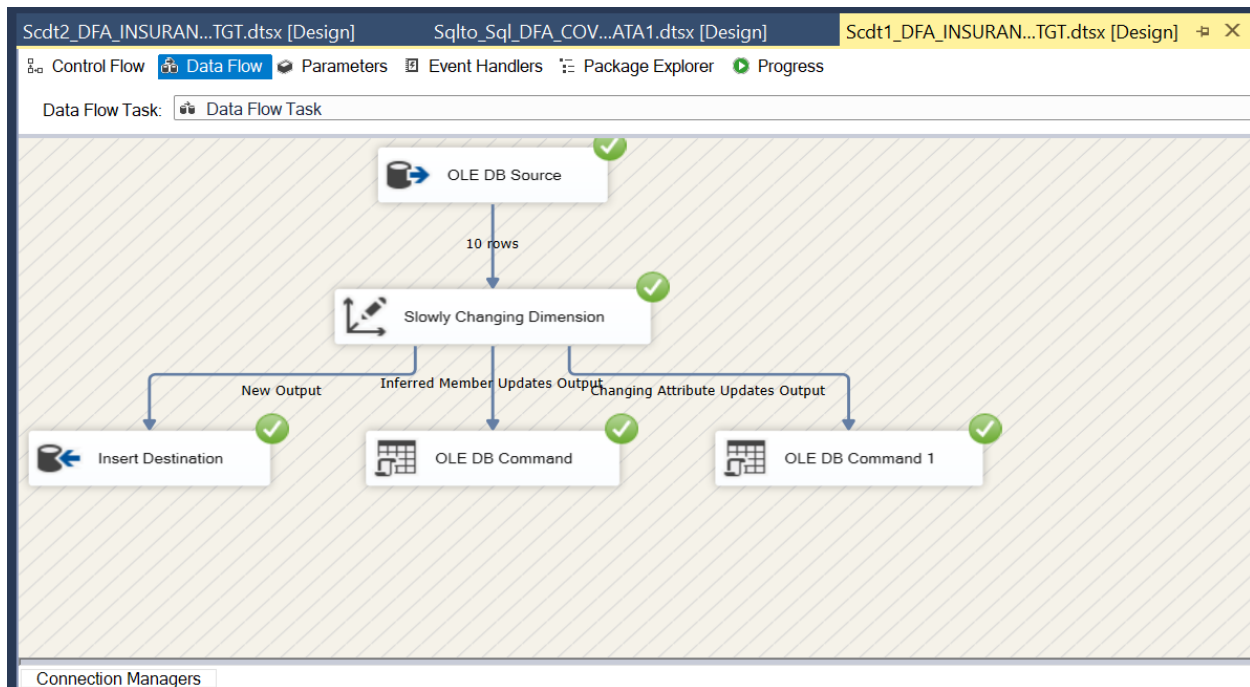
Step 7: click on Finish.



After performing these steps you will get connection as shown in the below snapshot



Step 8: Save and Run the package .



Step 10: after execution update the source column

```

<dlithe> SQL_qu...  dbo  SUJ_DEPT  <dlithe> Script-1  dlithe  <sujaya> BasicS...  sujaya

update DFA_INSURANCE_CLAIM_HEALTHCARE_SCDtype1_SOURCE
set AGE=57
where pid=10;

```

Step12: check the target table to view the updated record in target table.

Results 1 x

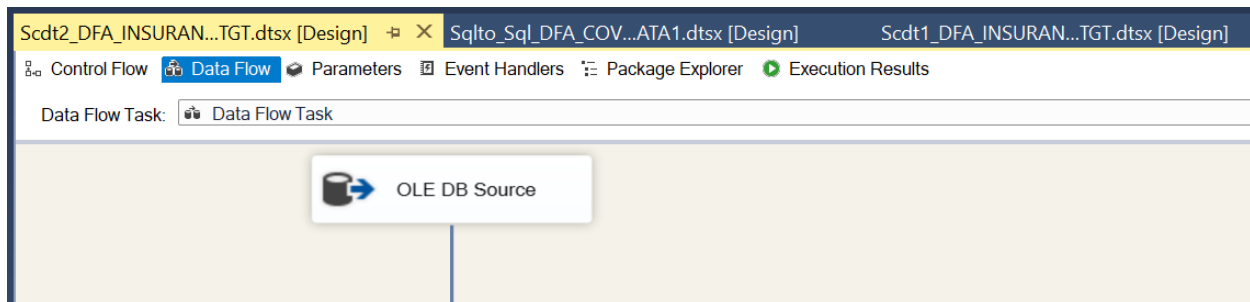
SELECT * from DFA_INSURANCE_CLAIM_HEALTHCARE_SCDtype1_SOURCE

Grid	PID	AGE	GENDER	CASTE_NAME	CATEGORY_CODE	CATEGORY_NAME	SURGERY_CODE	SURGERY	VILLAGE	MANDAL
1	1	56	Female	BC	M6	NEPHROLOGY	M6.5	Maintenance Hemodialysis For Crf	Lolugu	Ponduru
2	2	37	Male	BC	M6	NEPHROLOGY	M6.5	Maintenance Hemodialysis For Crf	Borivanka	Kaviti
3	3	50	Male	BC	M6	NEPHROLOGY	M6.5	Maintenance Hemodialysis For Crf	Kapasakuddi	Kaviti
4	4	45	Male	BC	M6	NEPHROLOGY	M6.5	Maintenance Hemodialysis For Crf	Telikipenta	Sarubujilli
5	5	54	Male	BC	M6	NEPHROLOGY	M6.5	Maintenance Hemodialysis For Crf	Thandemvalas	Srikakulur
6	6	35	Male	OC	M6	NEPHROLOGY	M6.5	Maintenance Hemodialysis For Crf	Phasigangupet	Pathapatnam
7	7	52	Male	OC	M6	NEPHROLOGY	M6.5	Maintenance Hemodialysis For Crf	Kranti Nagar	Nandyal
8	8	73	Male	BC	M6	NEPHROLOGY	M6.5	Maintenance Hemodialysis For Crf	Bhoghapuram	Bhoghapuram
9	9	56	Male	OC	S7	CARDIAC AND CARDIOT	S7.1.1.1	Coronary Balloon Angioplasty with	Vallur	Kakumanur
10	10	57	Male	OC	S7	CARDIAC AND CARDIOT	S7.2.1.1	Coronary Bypass Surgery	Ward-15	Guntur(C)

Save Cancel Script 200 10 Rows: 1 10 row(s) fetched - 412ms, on 2022-10-09 at 22:18:00

SCD-2

Step1: Drag and Drop the OLE DB source.



Step2: Double Click on OLB DB source and make the connection and select the source table in database.

OLE DB Source Editor

Configure the properties used by a data flow to obtain data from any OLE DB provider.

Connection Manager
Columns
Error Output

Specify an OLE DB connection manager, a data source, or a data source view, and select the data access mode. If using the SQL command access mode, specify the SQL command either by typing the query or by using Query Builder.

OLE DB connection manager:
rewansolution.database.windows.net.sujaya.rewan New...

Data access mode:
Table or view

Name of the table or the view:
[dbo].[DFA_INSURANCE_CLAIM_HEALTHCARE_SCDtype2_SOURCE]

Preview...

OK Cancel Help

Step3: Drag and Drop the Slowly Changing Dimension and Connect the OLE DB to Scd and double click on Scd and Select the Target table and Business Key.

Slowly Changing Dimension Wizard

Select a Dimension Table and Keys
Select a dimension table to load and map columns in the transformation input to columns in the dimension table.

Connection manager:
rewansolution.database.windows.net.sujaya.rewan New...

Table or view:
[dbo].[DFA_INSURANCE_CLAIM_HEALTHCARE_SCDtype2_TGT]

Input Columns	Dimension Columns	Key Type
MORTALITY	MORTALITY	Not a key column
MORTALITY...	MORTALITY_DATE	Not a key column
PID	PID	Business key
PREAUTH_...	PREAUTH_AMT	Not a key column
PREAUTH_...	PREAUTH_DATE	Not a key column
	SDATE	
SRC_REGIS...	SRC_REGISTRAT...	Not a key column
	STATUS	
SURGERY	SURGERY	Not a key column
SURGERY_...	SURGERY_CODE	Not a key column
SURGERY_...	SURGERY_DATE	Not a key column
VILLAGE	VILLAGE	Not a key column

Help < Back Next > Finish >>| Cancel

Step4:Select the Historical Attribute as change type for the column and give next.

Slowly Changing Dimension Wizard

Slowly Changing Dimension Columns

Manage the changes to column data in your slowly changing dimensions by setting the change type for dimension columns.

Fixed Attribute
Select this type when the value in a column should not change. Changes are treated as errors.

Changing Attribute
Select this type when changed values should overwrite existing values. This is a Type 1 change.

Historical Attribute
Select this type when changes in column values are saved in new records. Previous values are saved in records marked as outdated. This is a Type 2 change.

Select a change type for slowly changing dimension columns:

Dimension Columns	Change Type
DISTRICT_NAME	Historical att...

Remove

Help < Back Next > Finish >>| Cancel

Step5:Select the Start Date and End Date column and set the date values and click Finish.

Slowly Changing Dimension Wizard

Historical Attribute Options

You can record historical attributes using a single column or start and end date columns.

☐ Use a single column to show current and expired records

Column to indicate current record: STATUS

Value when current: Current

Expiration value: Expired

☒ Use start and end dates to identify current and expired records

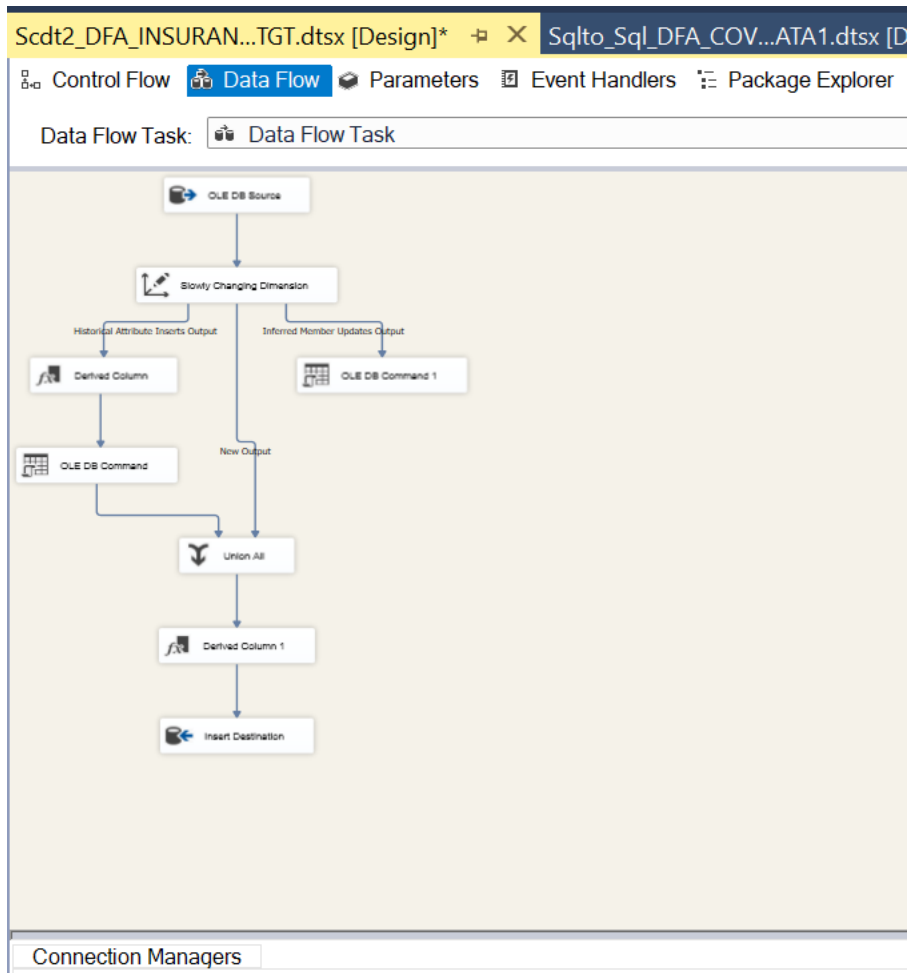
Start date column: SDATE

End date column: EDATE

Variable to set date values: System::StartTime

Help < Back Next > Finish >>| Cancel

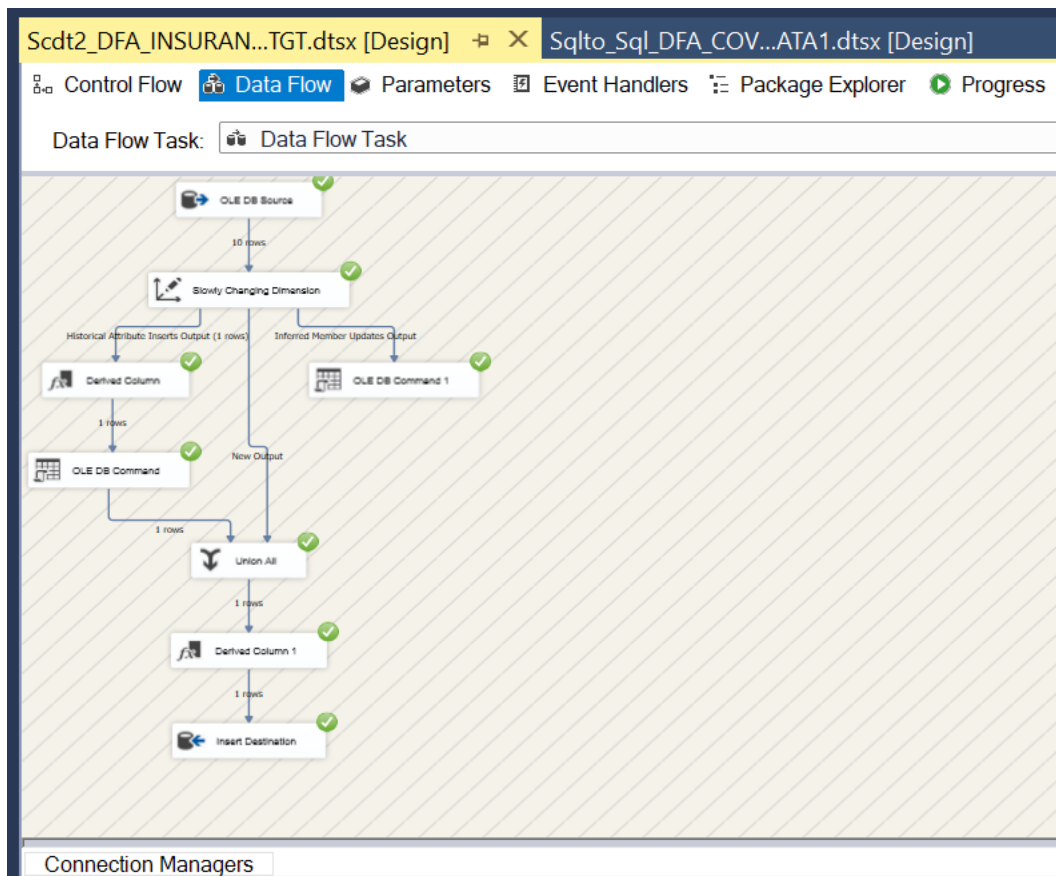
After performing these steps you will get connection as shown in the below snapshot. And save and run the package.



Step6: Go to database and update the source table and run the package again.

```
<dlithe> SQL_qu...  dbo  SUJ_DEPT  <dlithe> Script-1  dlithe  <sujaya> BasicS...  sujaya

UPDATE DFA_INSURANCE_CLAIM_HEALTHCARE_SCDtype2_SOURCE
SET DISTRICT_NAME='Guntur'
WHERE PID=10;
```



Step7:Check the target table to check whether the records are updated in the table.

Results 1 x

SELECT * FROM DFA_INSURANCE_CLAIM_HEAL

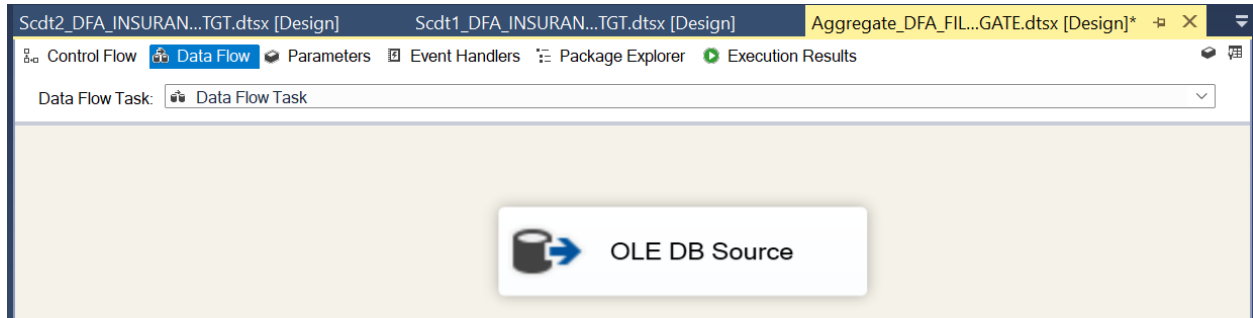
Grid	HOSP_DISTRICT	SURGERY_DATE	DISCHARGE_DATE	MORTALITY	MORTALITY_DATE	SRC_REGISTRATION	SDATE	EDATE	STATUS
1	Srikakulam	8/6/2013	9/7/2013	NO	5/6/2014	D	2022-10-07	[NULL]	[NULL]
2	Srikakulam	8/8/2013	9/9/2013	NO	15/5/2014	D	2022-10-07	[NULL]	[NULL]
3	Srikakulam	8/15/2013	10/18/2013	NO	5/8/2014	D	2022-10-07	[NULL]	[NULL]
4	Srikakulam	8/24/2013	9/27/2013	NO	9/5/2014	D	2022-10-07	[NULL]	[NULL]
5	Srikakulam	8/31/2013	10/2/2013	NO	8/9/2014	D	2022-10-07	[NULL]	[NULL]
6	Srikakulam	8/31/2013	10/2/2013	NO	8/5/2014	P	2022-10-07	[NULL]	[NULL]
7	Kurnool	8/31/2013	10/2/2013	NO	5/7/2014	D	2022-10-07	[NULL]	[NULL]
8	Vishakhapatnam	5/5/2014	7/5/2014	YES	5/23/2014	D	2022-10-07	[NULL]	[NULL]
9	Guntur	6/14/2014	6/16/2014	NO	7/5/2014	D	2022-10-07	[NULL]	[NULL]
10	Guntur	6/17/2014	6/25/2014	NO	5/8/2014	D	2022-10-07	2022-10-07	[NULL]
11	Guntur	6/17/2014	6/25/2014	NO	5/8/2014	D	2022-10-07	2022-10-09	[NULL]

Save Cancel Script 200 Rows: 1 22 row(s) fetched - 384ms (3ms fetch), on 2022-10-07

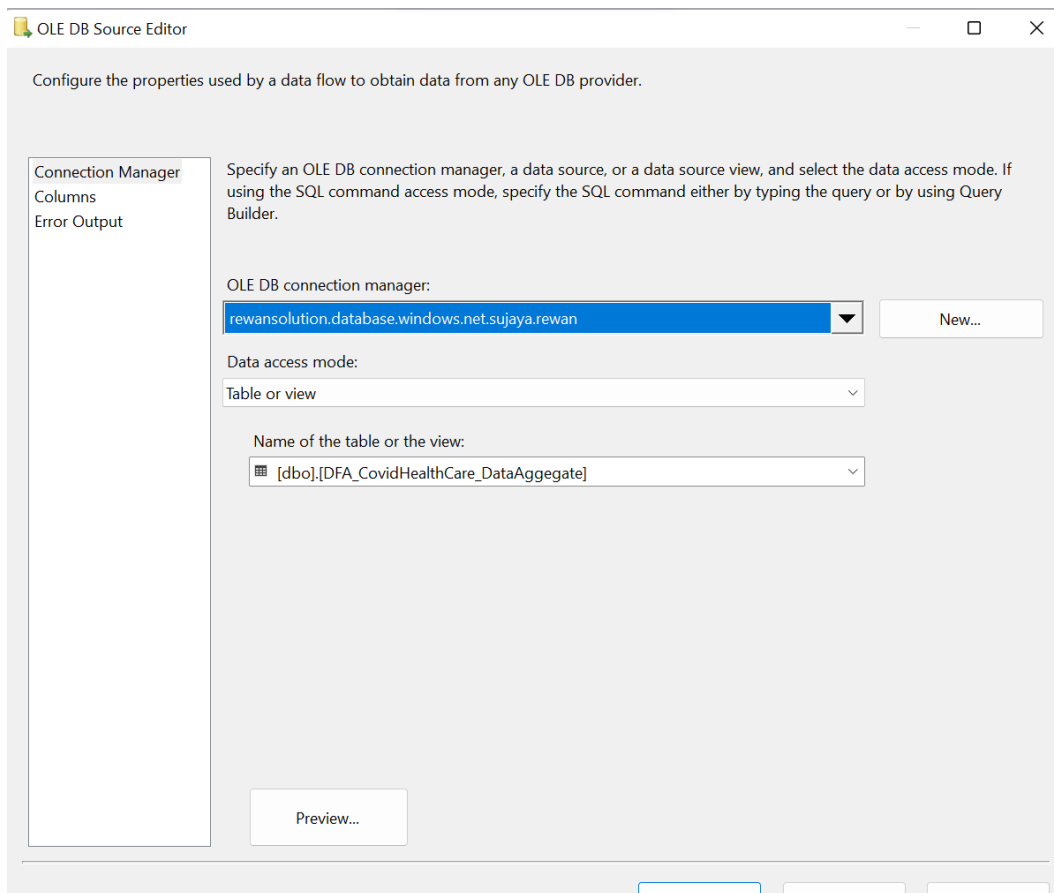
IST en Writable Overwrite 406 : 59 : 18764 Sel: 0 | 0

Create aggregate table based on the particular column(ex: Country code). Refer to the different data source from target system.

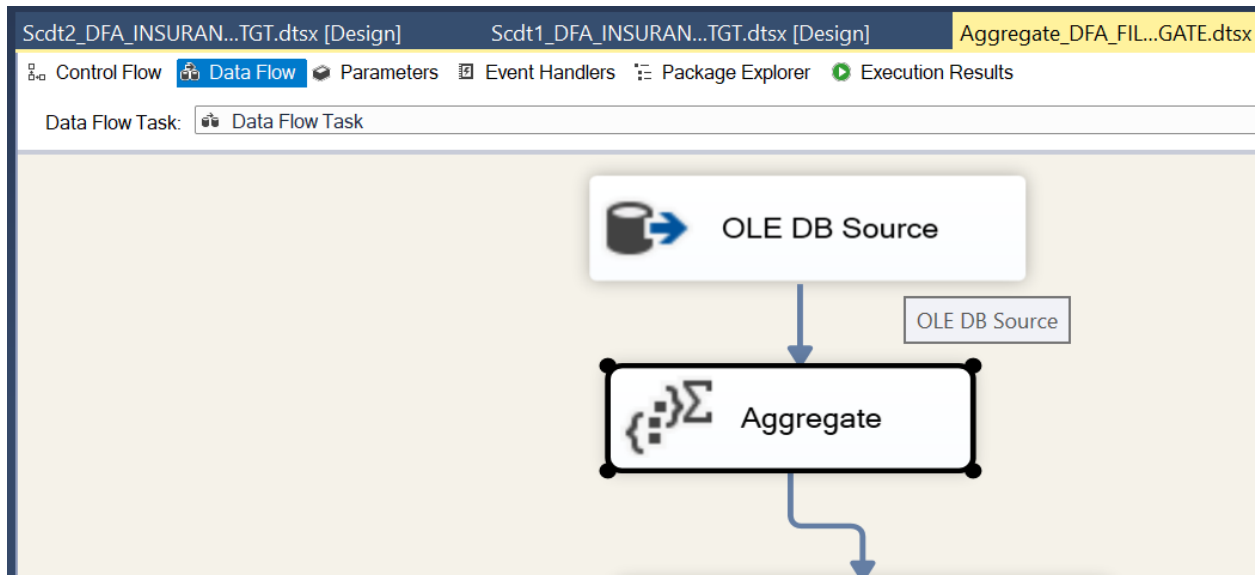
Step1: Drag and Drop the OLE DB source.



Step2: Double click on OLE DB and make the connection to database and select the table in database.



Step3: Drag and Drop the Aggregate from the SSIS toolbox and connect the OLE DB to Aggregate Function.



Step4: Double Click on Aggregate and Select the Column and Select the Aggregate operation.

Σ Aggregate Transformation Editor

Aggregations: Advanced

Configure the properties used to perform group by operations and to calculate aggregate values. Optionally, apply comparison options to the operation. To configure multiple group by operations, click Advanced.

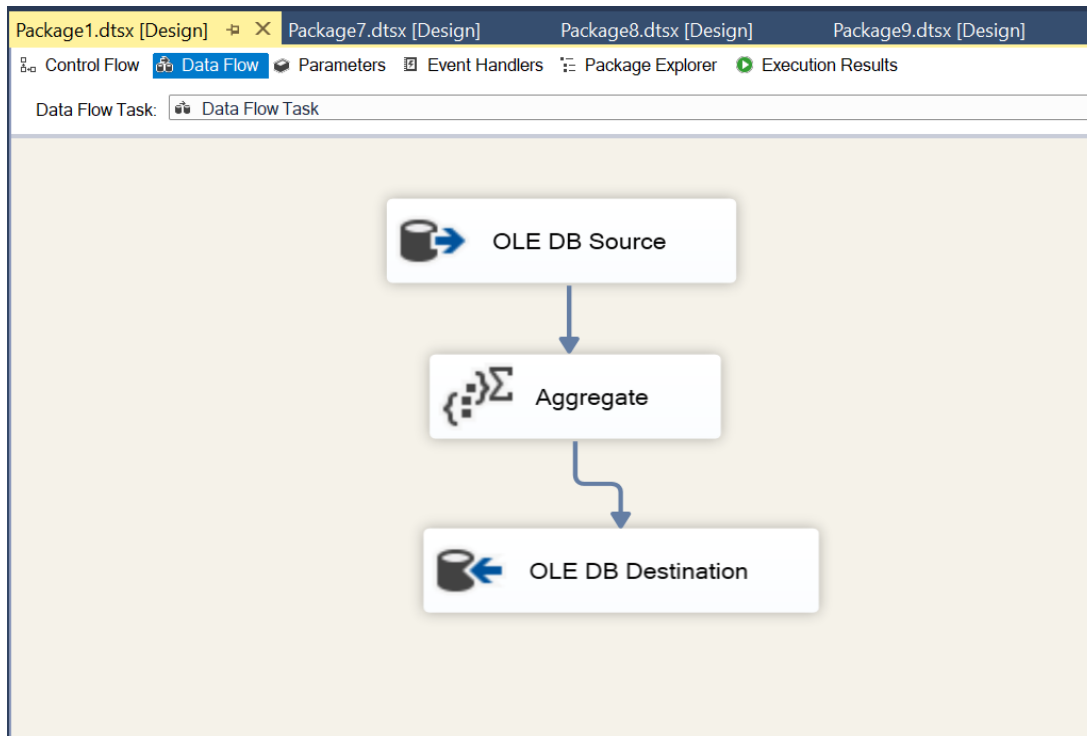
Advanced

Available Input Columns

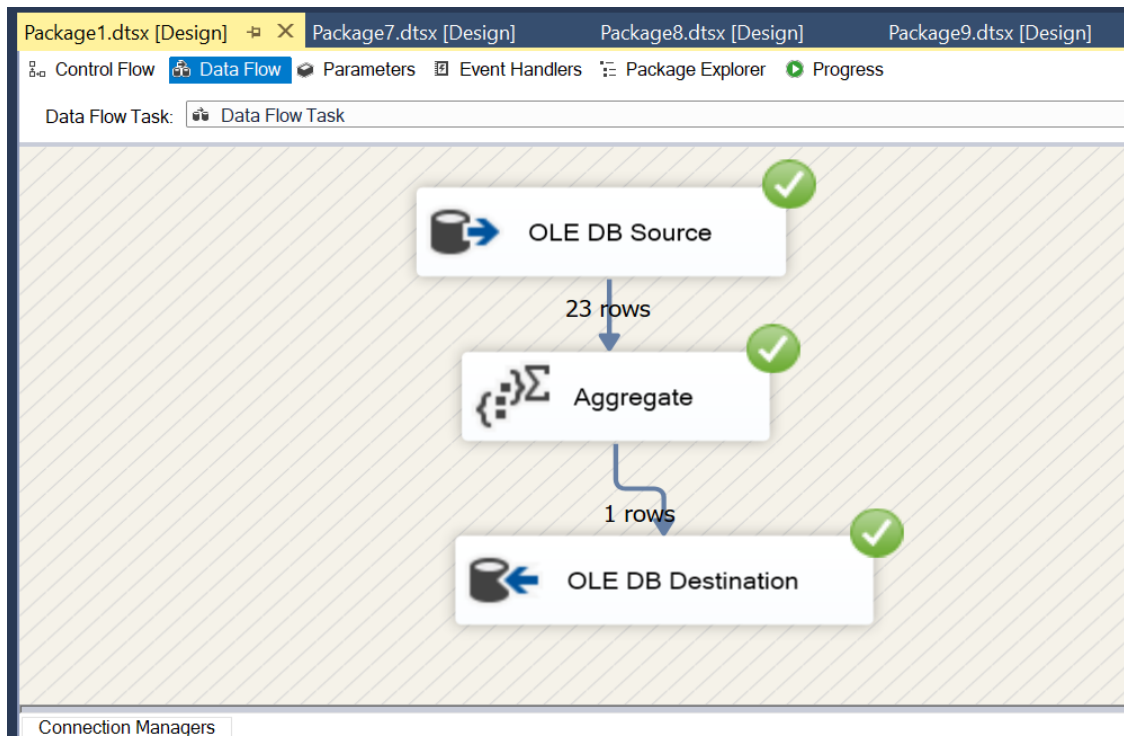
- ☒ Name
- ☐ (*)
- ☐ DRG ID
- ☐ DRG Definition
- ☐ Provider Id
- ☐ Provider Name
- ☐ Provider Street Address
- ☐ Provider City

Input Column	Output Alias	Operation	Comparison
Average Covered Charges	Average_Covered_Charges	Average	
Average Total Payments	Minimum_Total_Payments	Minimum	
Average Medicare Payments	Sum_Medicare_Payment	Sum	

Step5: Drag and Drop the OLE DB destination and make the connection to database and select the table in database.



Step6: Save and Run the Package.



Step7:Check the table in database .

SELECT * FROM DFA_CVD_Aggr;

Results 1 x

SELECT * FROM DFA_CVD_Aggr

	Average_Covered_Charges	Minimum_Total_Payments	Sum_Medicare_Payment
1	16,491.2608695652	4,854	117,312

Save Cancel Script 200 Rows: 1 1 row(s) fetched - 235ms, on 2022-10-10 at 17:45:04

IST en Writable Overwrite 459 : 44 : 19968 Sel: 0 | 0