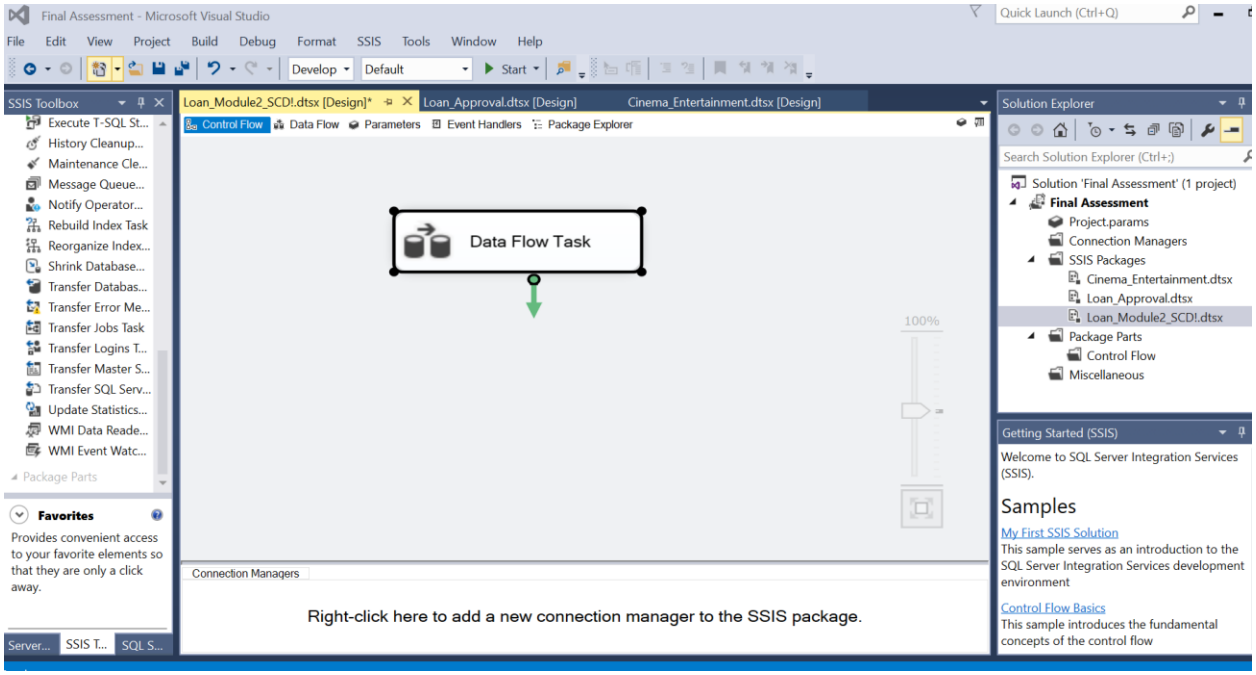
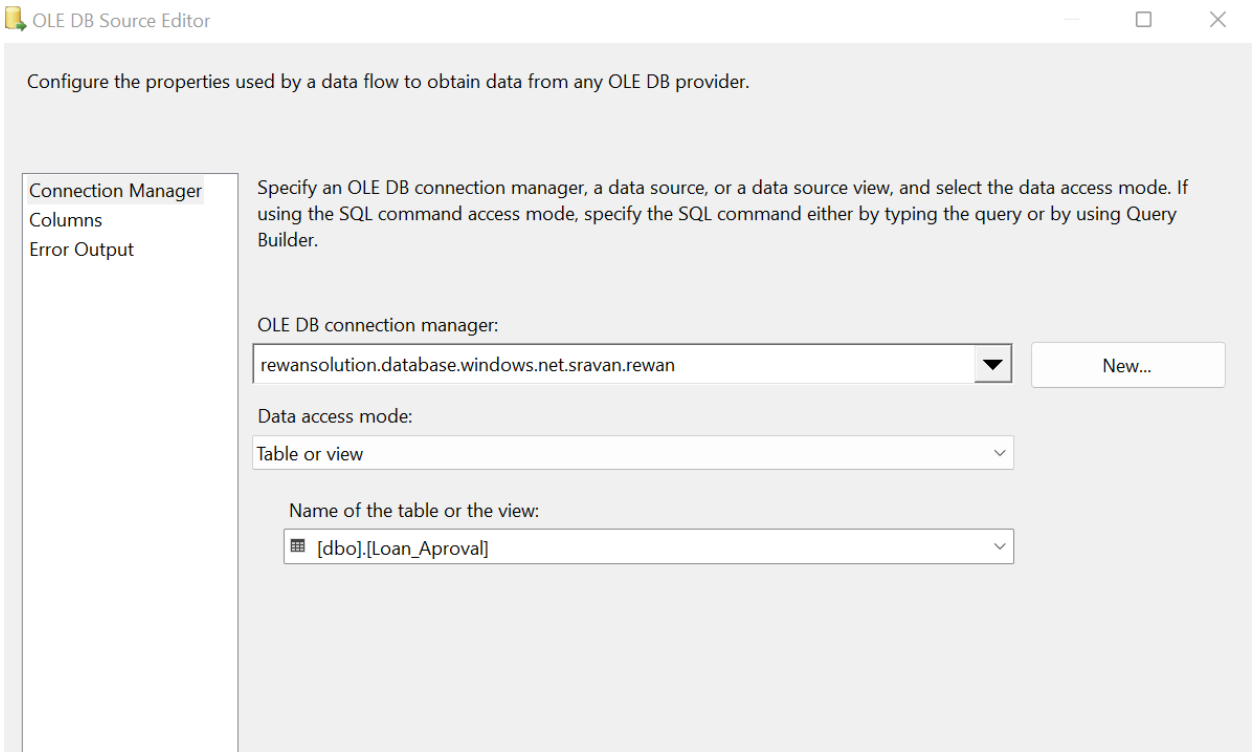
1. Slowly Changing Dimension Type 1 (Loan_Approval)

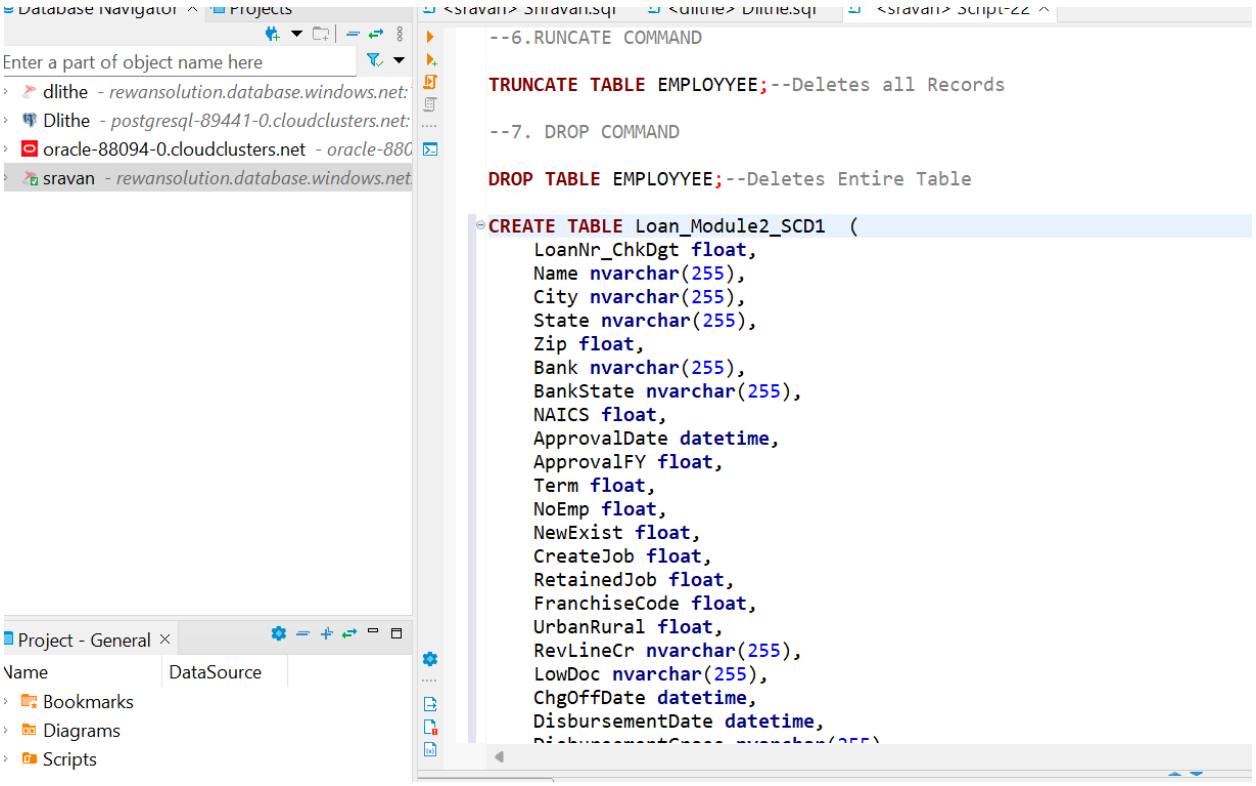
Package for SCD1



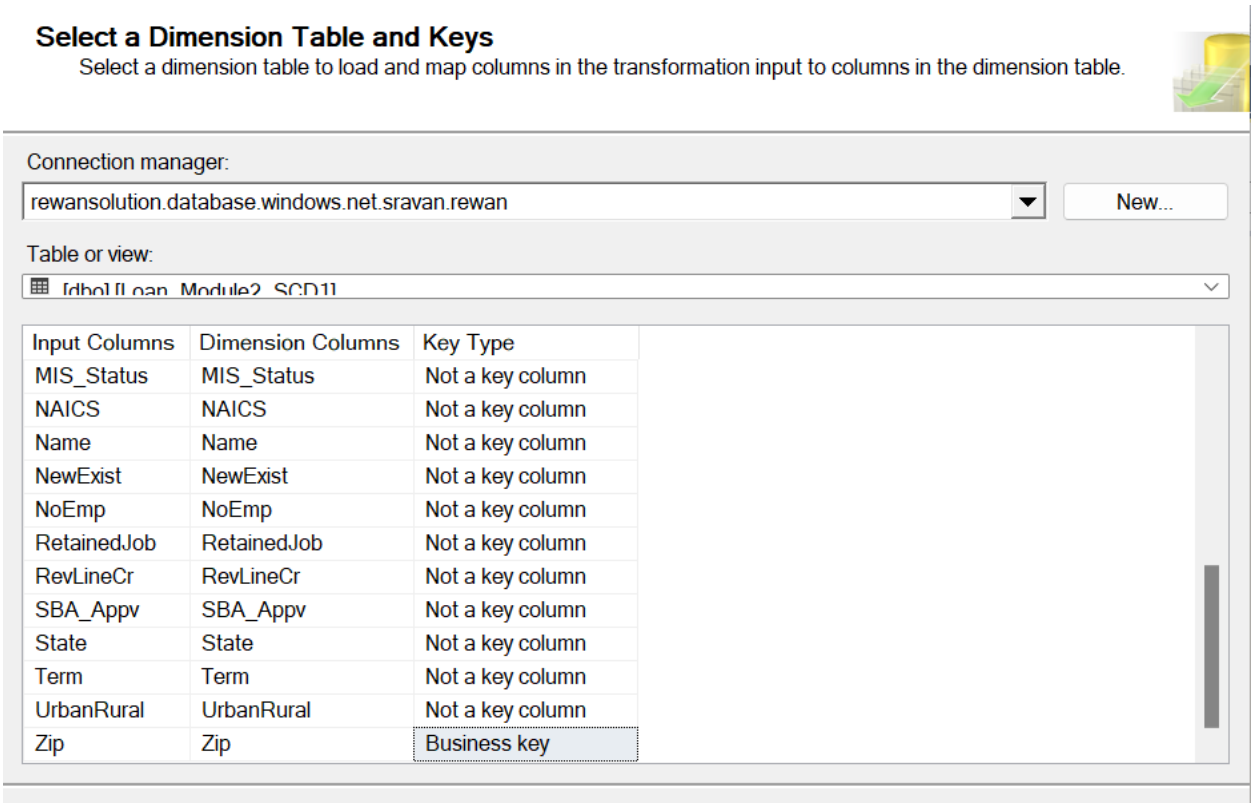
Creating Connection and Selecting the Table



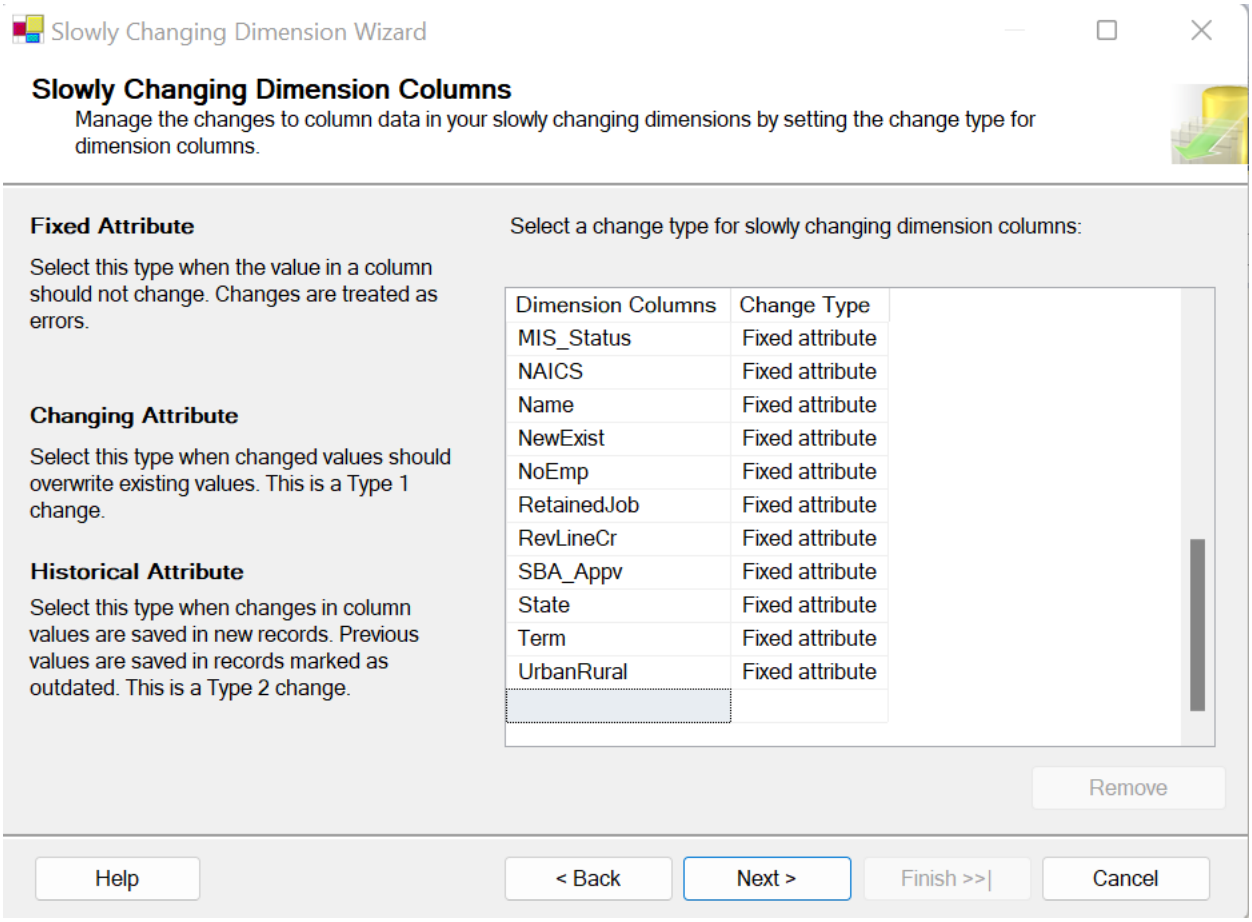
Creating Destination Table for SCD1



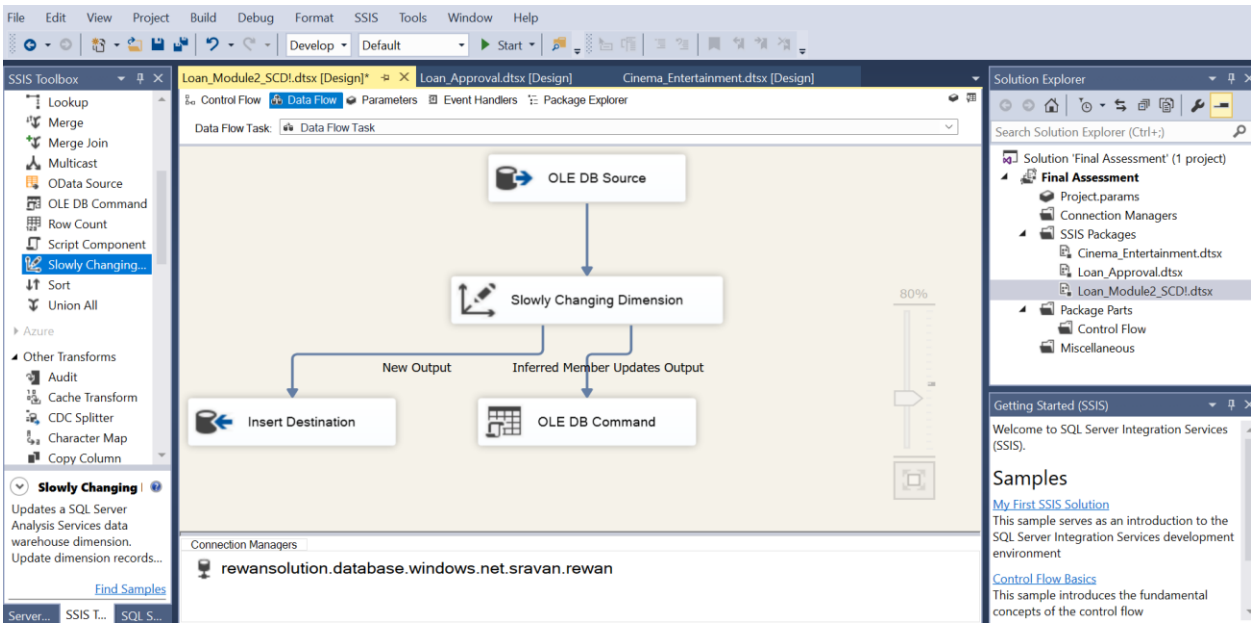
Selecting Business Key



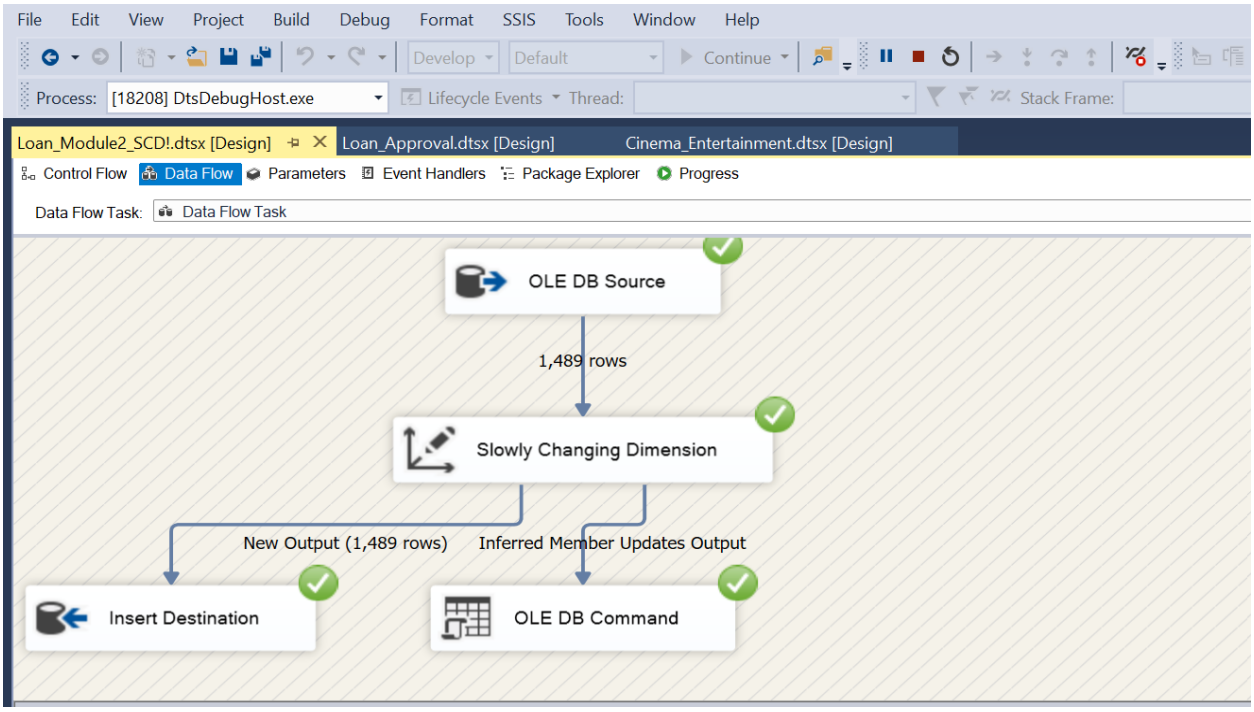
Setting Attributes



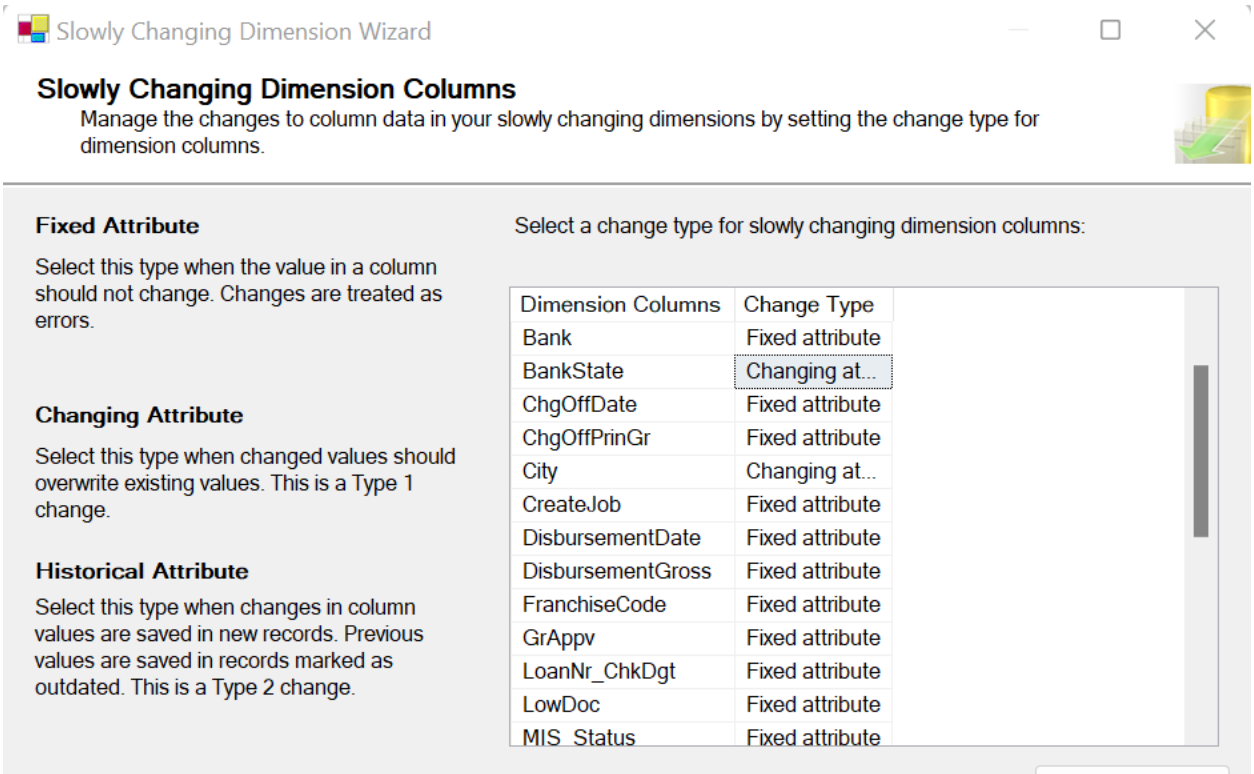
Data Flow task of SCD1



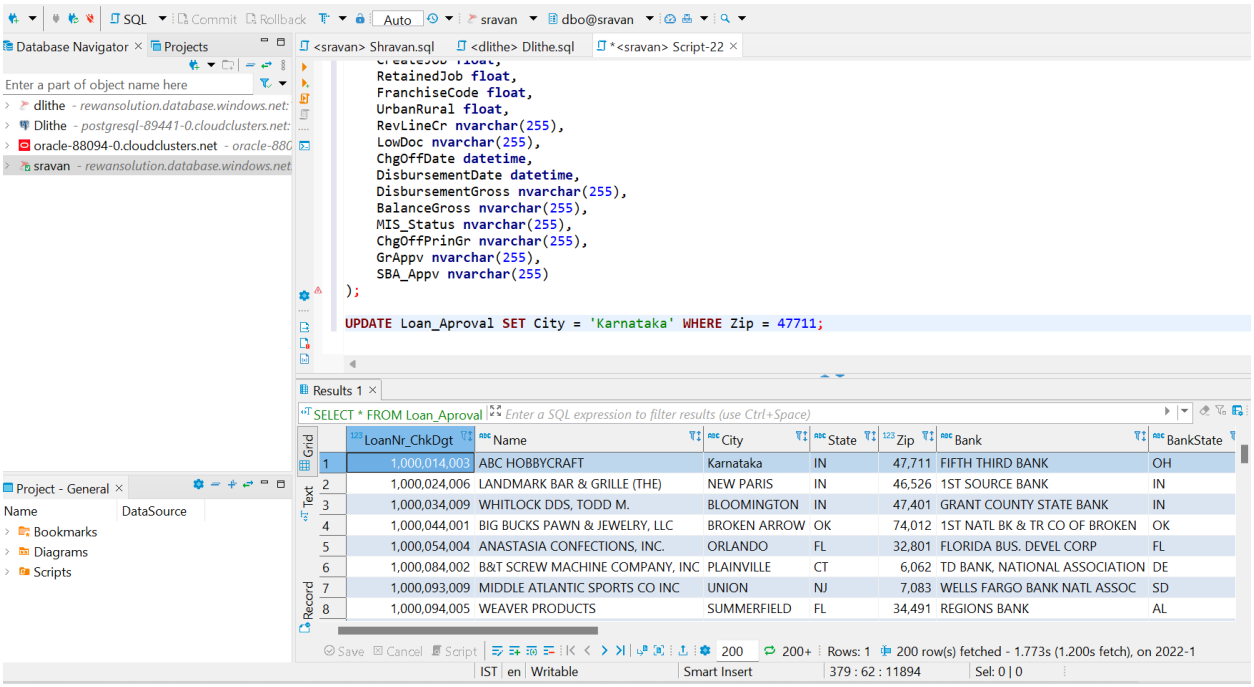
Execution of Package



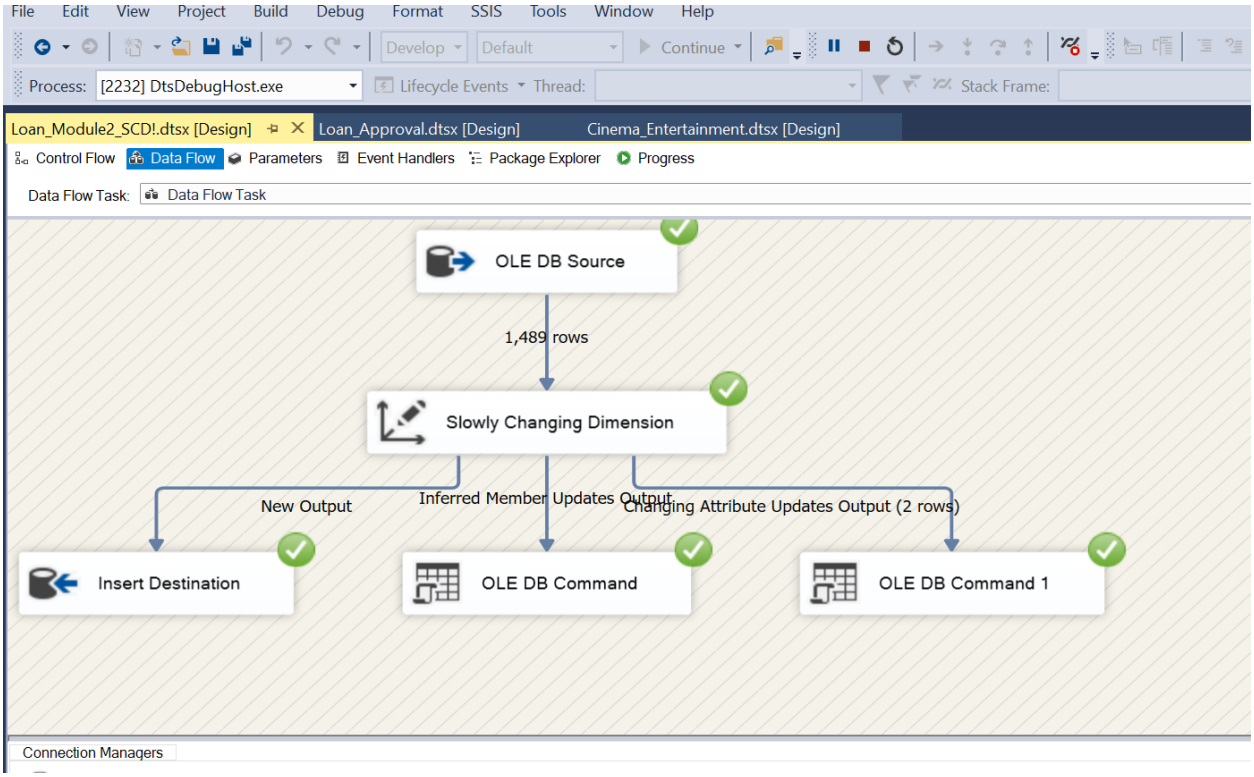
Changing Attributes to Changing Data



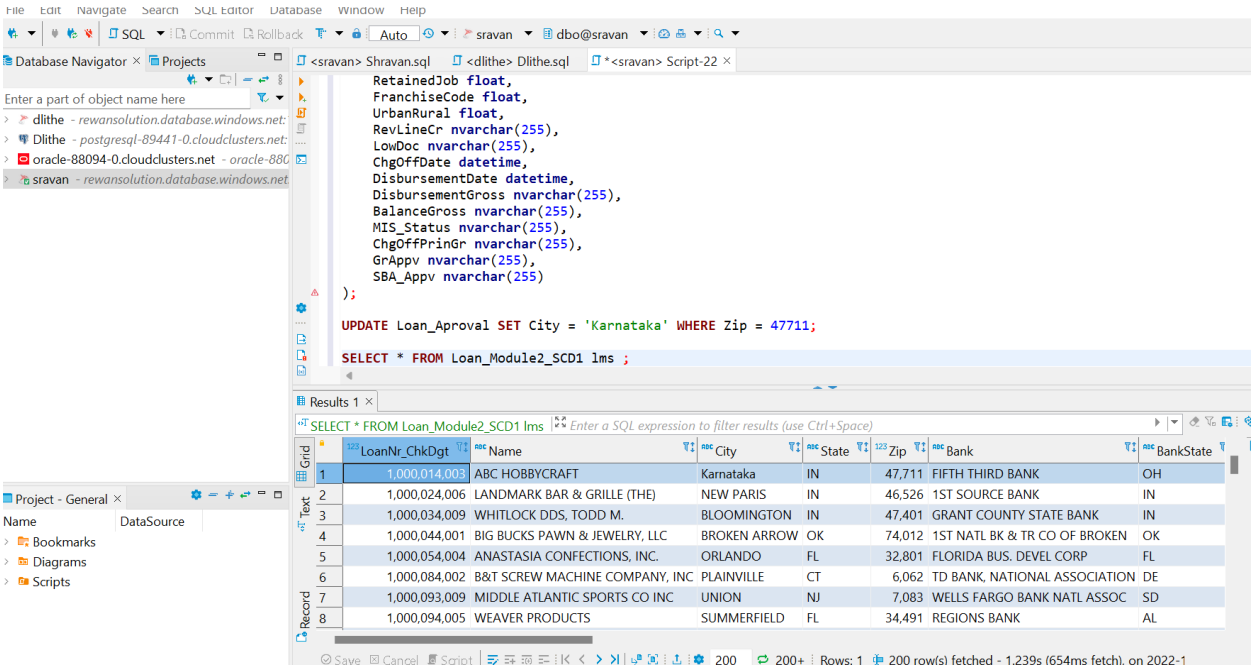
Updating Record in Source



Execution after Updating

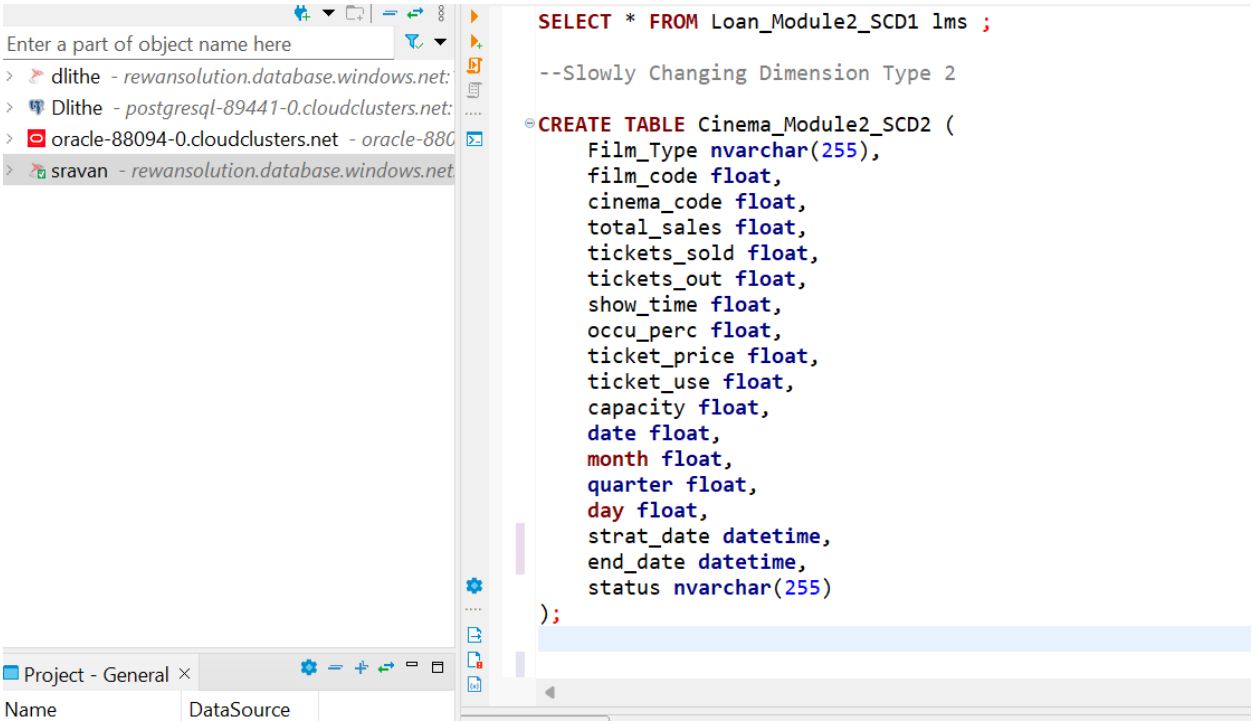


Data is Updated in Destination

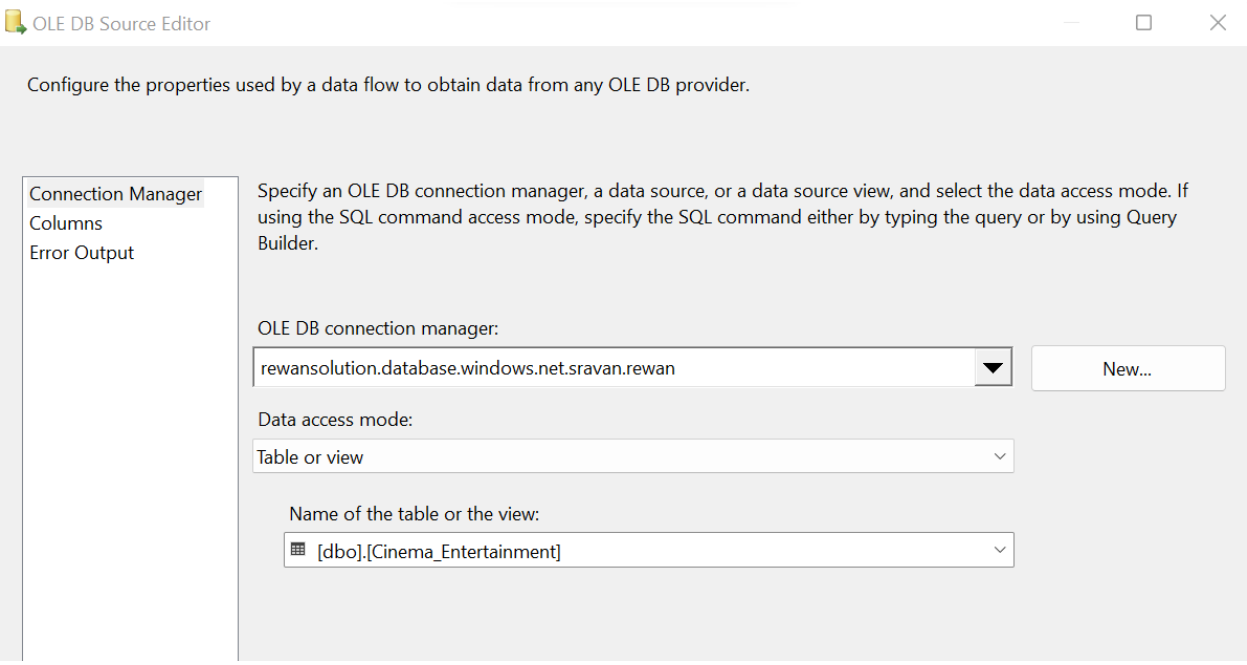


2. Slowly Changing Dimension Type 2(Cinema Entertainment)

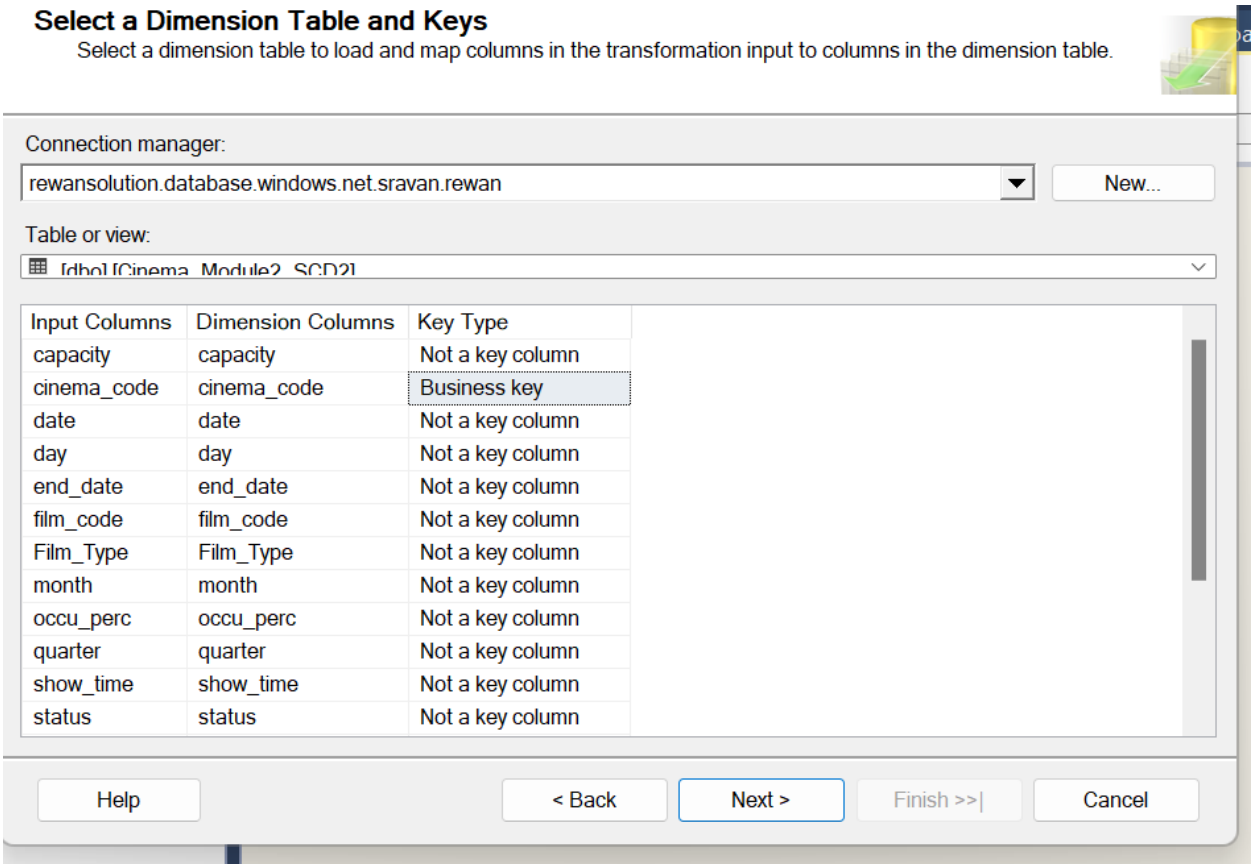
Creating Destination Table for SCD2



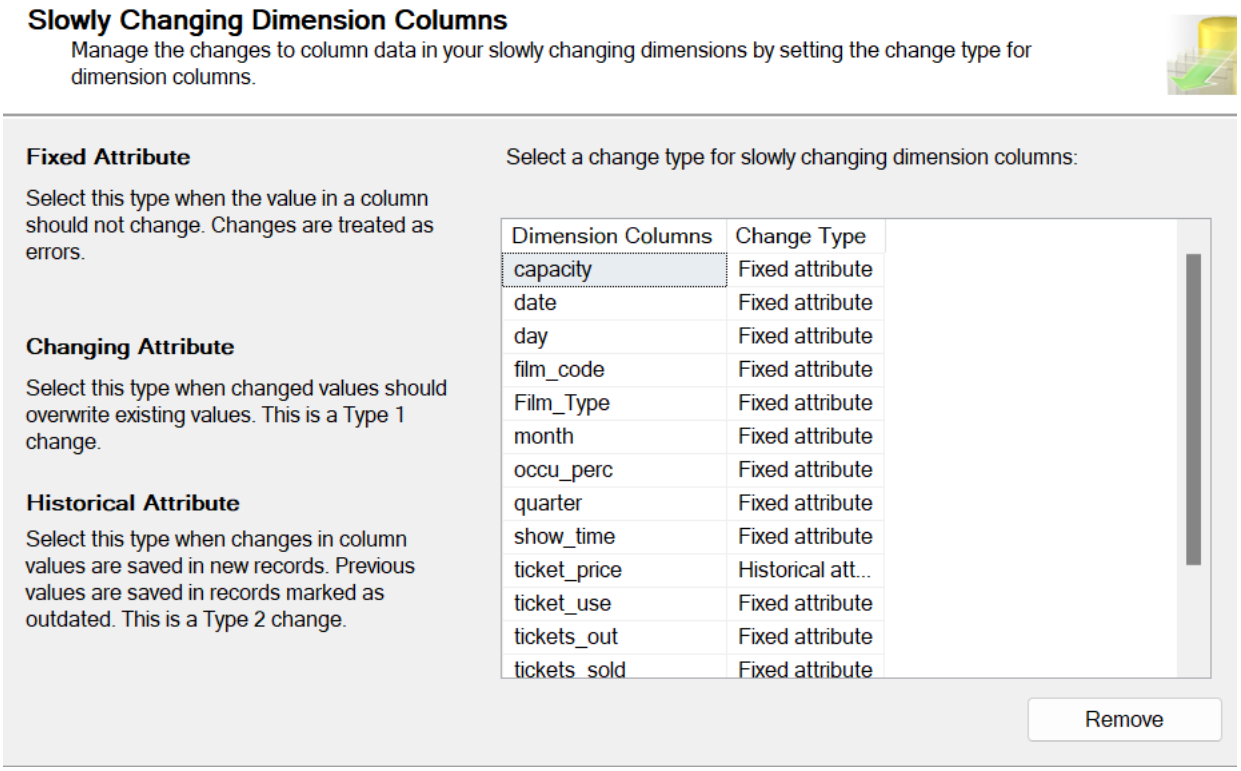
Creating Connection and Selecting the Table for SCD2



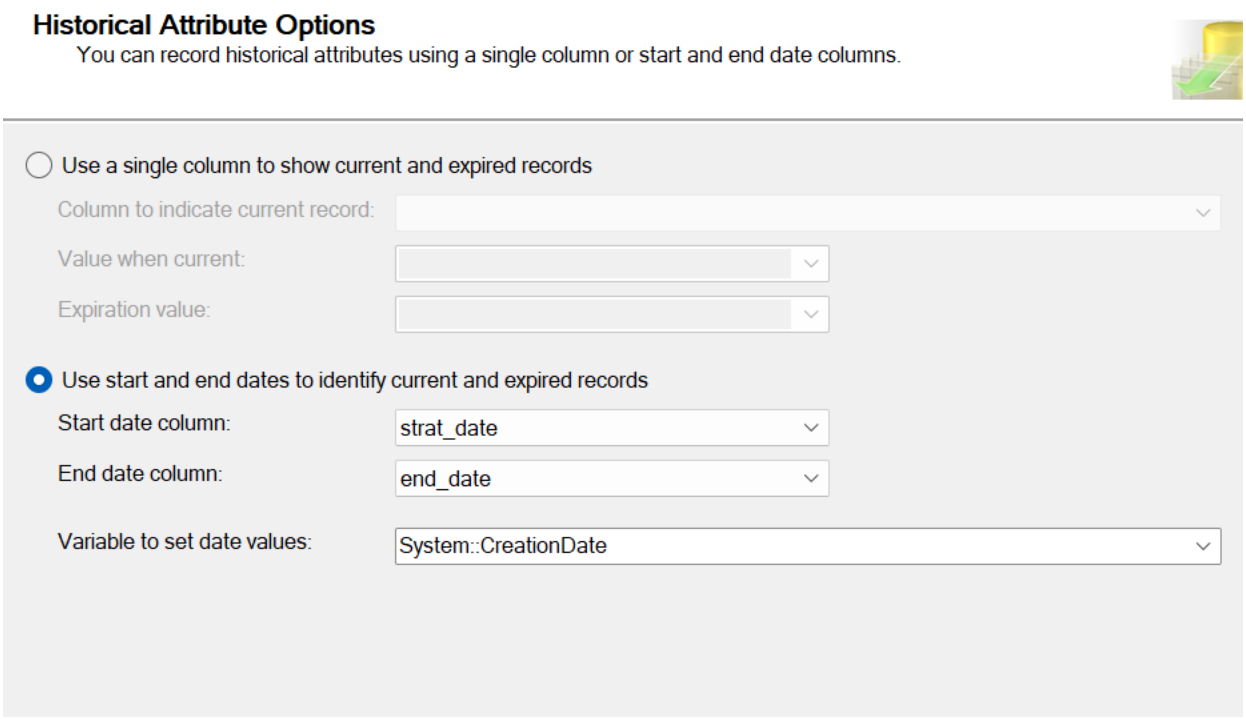
Creating Connection and Selecting Business Key for SCD2



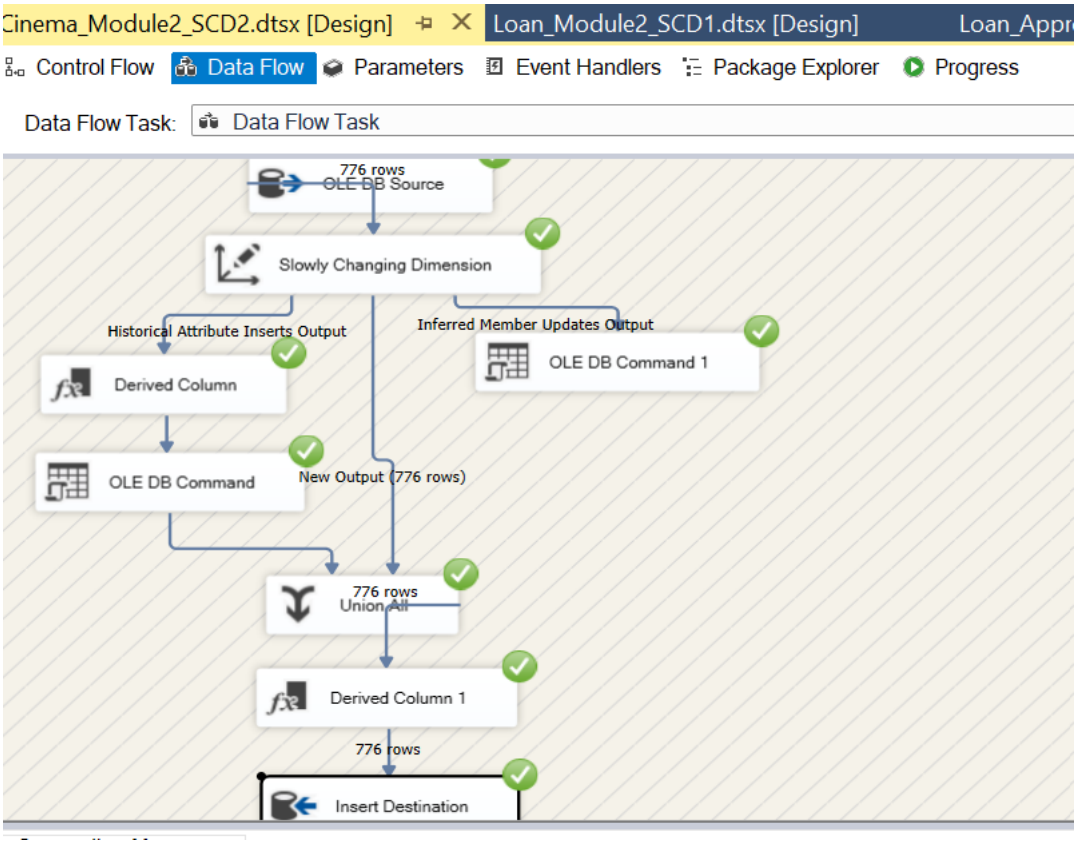
Selecting Historical Attribute



Selecting Start time and End time



Execution of SCD2



Updated Destination table with start date

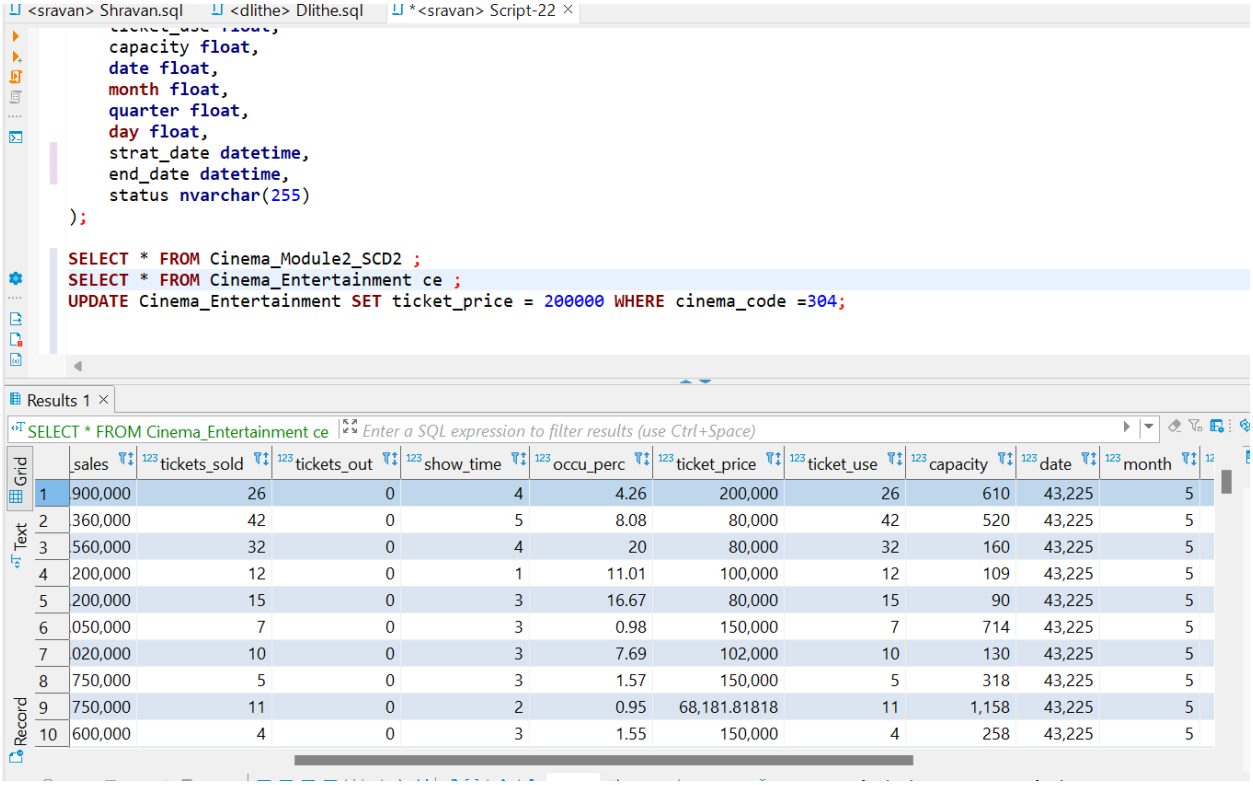
```
    date float,
    month float,
    quarter float,
    day float,
    strat_date datetime,
    end_date datetime,
    status nvarchar(255)
);

SELECT * FROM Cinema_Module2_SCD2 ;
```

Results 1

SELECT * FROM Cinema_Module2_SCD2 — Enter a SQL expression to filter results (use Ctrl+Space)

	ticket_price	ticket_use	capacity	date	month	quarter	day	strat_date	end_date	status
1	150,000	26	610	43,225	5	2	5	2022-10-06 11:50:58.000	[NULL]	[NULL]
2	80,000	42	520	43,225	5	2	5	2022-10-06 11:50:58.000	[NULL]	[NULL]
3	80,000	32	160	43,225	5	2	5	2022-10-06 11:50:58.000	[NULL]	[NULL]
4	100,000	12	109	43,225	5	2	5	2022-10-06 11:50:58.000	[NULL]	[NULL]
5	80,000	15	90	43,225	5	2	5	2022-10-06 11:50:58.000	[NULL]	[NULL]
6	150,000	7	714	43,225	5	2	5	2022-10-06 11:50:58.000	[NULL]	[NULL]
7	102,000	10	130	43,225	5	2	5	2022-10-06 11:50:58.000	[NULL]	[NULL]
8	150,000	5	318	43,225	5	2	5	2022-10-06 11:50:58.000	[NULL]	[NULL]
9	68,181.81818	11	1,158	43,225	5	2	5	2022-10-06 11:50:58.000	[NULL]	[NULL]
10	150,000	4	258	43,225	5	2	5	2022-10-06 11:50:58.000	[NULL]	[NULL]

Price is Updated in Source Table



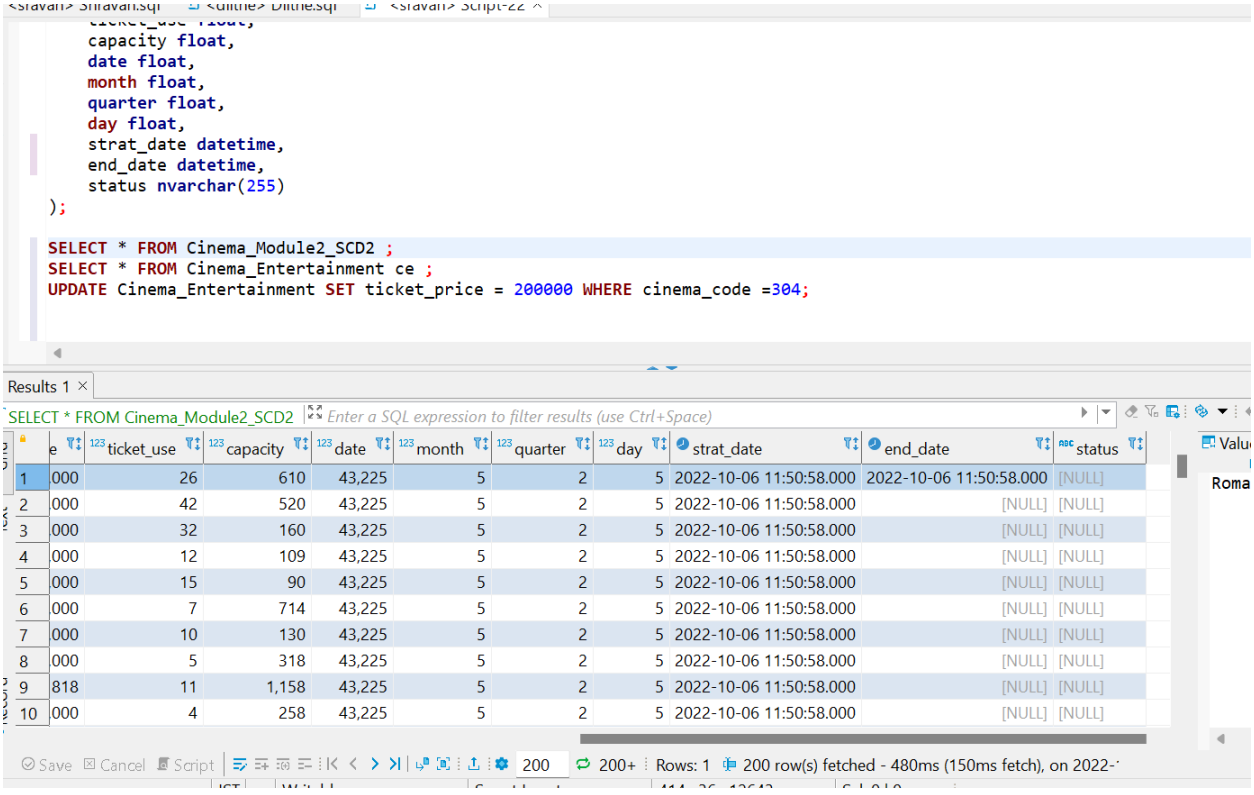
```
    capacity float,
    date float,
    month float,
    quarter float,
    day float,
    strat_date datetime,
    end_date datetime,
    status nvarchar(255)
);

SELECT * FROM Cinema_Module2_SCD2 ;
SELECT * FROM Cinema_Entertainment ce ;
UPDATE Cinema_Entertainment SET ticket_price = 200000 WHERE cinema_code =304;
```

Results 1

SELECT * FROM Cinema_Entertainment ce — Enter a SQL expression to filter results (use Ctrl+Space)

	sales	tickets_sold	tickets_out	show_time	occu_perc	ticket_price	ticket_use	capacity	date	month
1	900,000	26	0	4	4.26	200,000	26	610	43,225	5
2	360,000	42	0	5	8.08	80,000	42	520	43,225	5
3	560,000	32	0	4	20	80,000	32	160	43,225	5
4	200,000	12	0	1	11.01	100,000	12	109	43,225	5
5	200,000	15	0	3	16.67	80,000	15	90	43,225	5
6	050,000	7	0	3	0.98	150,000	7	714	43,225	5
7	020,000	10	0	3	7.69	102,000	10	130	43,225	5
8	750,000	5	0	3	1.57	150,000	5	318	43,225	5
9	750,000	11	0	2	0.95	68,181.81818	11	1,158	43,225	5
10	600,000	4	0	3	1.55	150,000	4	258	43,225	5

End Date is Updated



```
    capacity float,
    date float,
    month float,
    quarter float,
    day float,
    strat_date datetime,
    end_date datetime,
    status nvarchar(255)
);

SELECT * FROM Cinema_Module2_SCD2 ;
SELECT * FROM Cinema_Entertainment ce ;
UPDATE Cinema_Entertainment SET ticket_price = 200000 WHERE cinema_code =304;
```

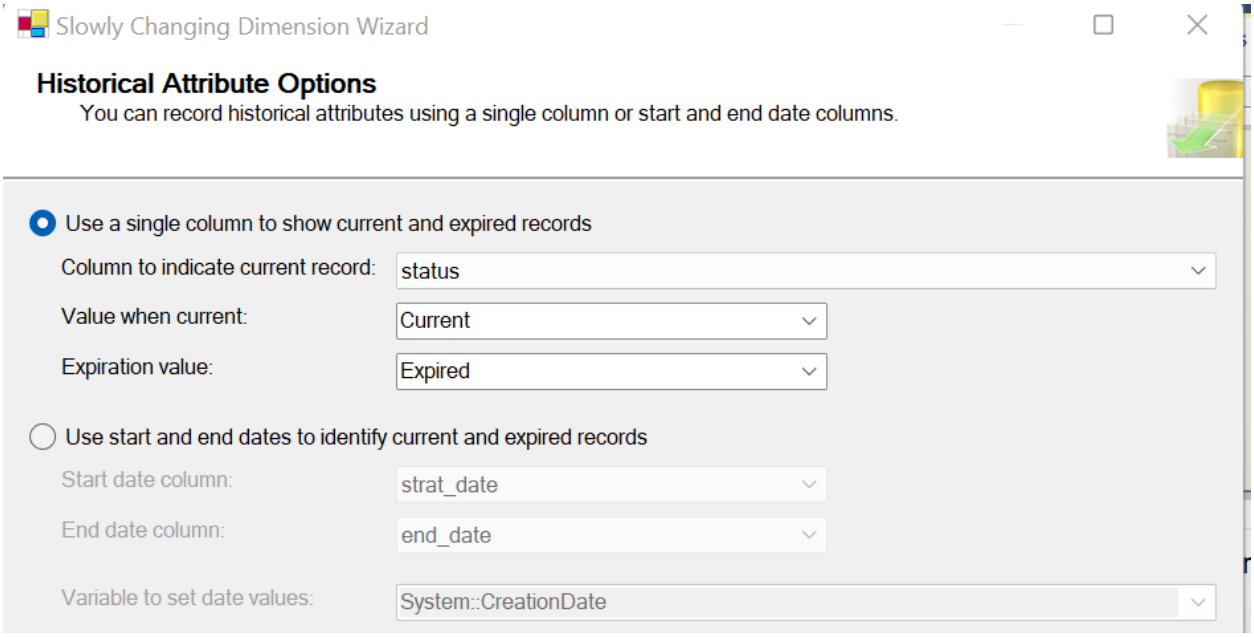
Results 1

SELECT * FROM Cinema_Module2_SCD2 — Enter a SQL expression to filter results (use Ctrl+Space)

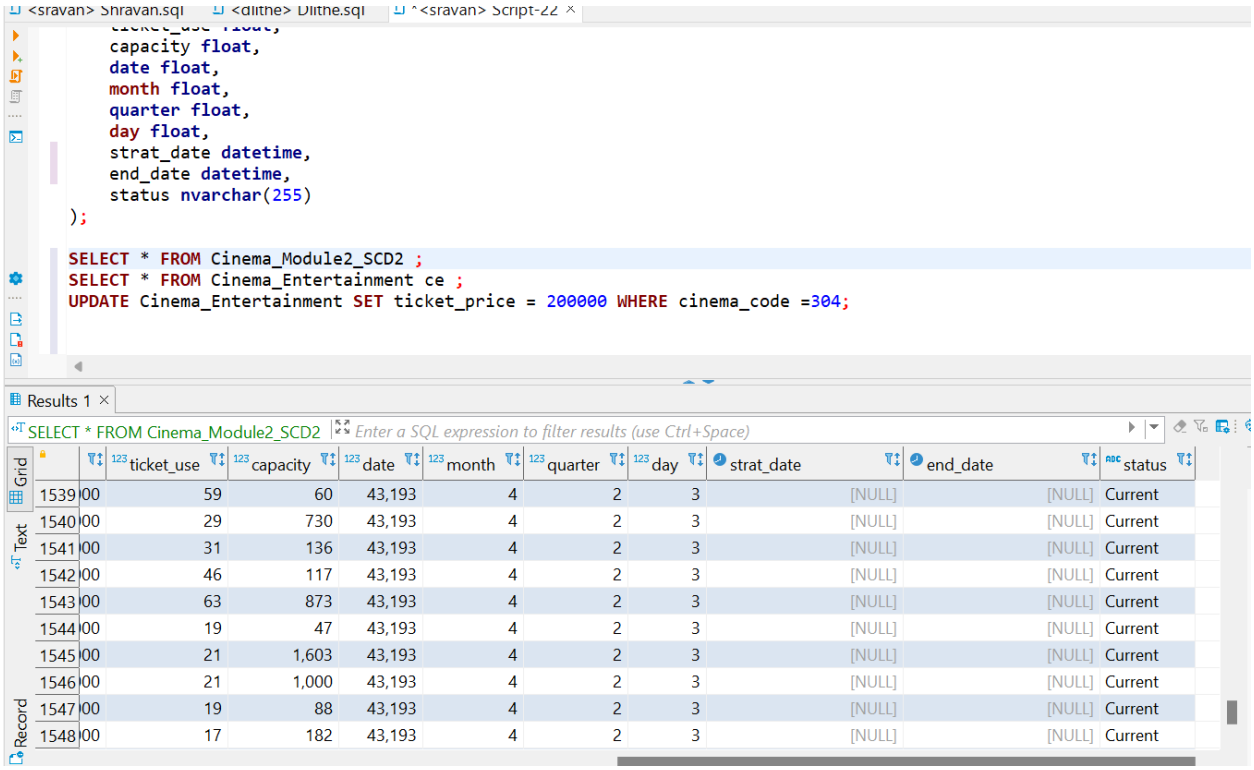
	e	ticket_use	capacity	date	month	quarter	day	strat_date	end_date	status
1	000	26	610	43,225	5	2	5	2022-10-06 11:50:58.000	2022-10-06 11:50:58.000	[NULL]
2	000	42	520	43,225	5	2	5	2022-10-06 11:50:58.000	[NULL]	[NULL]
3	000	32	160	43,225	5	2	5	2022-10-06 11:50:58.000	[NULL]	[NULL]
4	000	12	109	43,225	5	2	5	2022-10-06 11:50:58.000	[NULL]	[NULL]
5	000	15	90	43,225	5	2	5	2022-10-06 11:50:58.000	[NULL]	[NULL]
6	000	7	714	43,225	5	2	5	2022-10-06 11:50:58.000	[NULL]	[NULL]
7	000	10	130	43,225	5	2	5	2022-10-06 11:50:58.000	[NULL]	[NULL]
8	000	5	318	43,225	5	2	5	2022-10-06 11:50:58.000	[NULL]	[NULL]
9	818	11	1,158	43,225	5	2	5	2022-10-06 11:50:58.000	[NULL]	[NULL]
10	000	4	258	43,225	5	2	5	2022-10-06 11:50:58.000	[NULL]	[NULL]

Save | Cancel | Script | 200 | 200+ | Rows: 1 | 200 row(s) fetched - 480ms (150ms fetch), on 2022-

Selecting status as the Historical option



Status is Updated as Current



```
    capacity float,
    date float,
    month float,
    quarter float,
    day float,
    strat_date datetime,
    end_date datetime,
    status nvarchar(255)
);

SELECT * FROM Cinema_Module2_SCD2 ;
SELECT * FROM Cinema_Entertainment ce ;
UPDATE Cinema_Entertainment SET ticket_price = 200000 WHERE cinema_code =304;
```

Results 1

SELECT * FROM Cinema_Module2_SCD2

	ticket_use	capacity	date	month	quarter	day	strat_date	end_date	status
1539	00	59	60	43,193	4	2	3	[NULL]	[NULL]	Current
1540	00	29	730	43,193	4	2	3	[NULL]	[NULL]	Current
1541	00	31	136	43,193	4	2	3	[NULL]	[NULL]	Current
1542	00	46	117	43,193	4	2	3	[NULL]	[NULL]	Current
1543	00	63	873	43,193	4	2	3	[NULL]	[NULL]	Current
1544	00	19	47	43,193	4	2	3	[NULL]	[NULL]	Current
1545	00	21	1,603	43,193	4	2	3	[NULL]	[NULL]	Current
1546	00	21	1,000	43,193	4	2	3	[NULL]	[NULL]	Current
1547	00	19	88	43,193	4	2	3	[NULL]	[NULL]	Current
1548	00	17	182	43,193	4	2	3	[NULL]	[NULL]	Current

Record is Updated in Source Table

```
    date float,
    month float,
    quarter float,
    day float,
    strat_date datetime,
    end_date datetime,
    status nvarchar(255)
);

SELECT * FROM Cinema_Module2_SCD2 ;
SELECT * FROM Cinema_Entertainment ce ;
UPDATE Cinema_Entertainment SET ticket_price = 200000 WHERE cinema_code =304;

UPDATE Cinema_Entertainment SET ticket_price = 200000 WHERE cinema_code =529;
```

Results 1

SELECT * FROM Cinema_Entertainment ce — Enter a SQL expression to filter results (use Ctrl+Space)

	le	cinema_code	total_sales	tickets_sold	tickets_out	show_time	occu_perc	ticket_price	ticket_use	capac
762	,481	165	2,360,000	59	0	1	98.33	40,000	59	
763	,481	277	2,320,000	29	0	2	3.97	80,000	29	
764	,481	450	2,170,000	31	0	1	22.79	70,000	31	
765	,481	516	2,160,000	54	8	1	46.15	40,000	46	
766	,481	321	1,575,000	63	0	2	7.22	25,000	63	
767	,481	529	1,140,000	19	0	1	40.43	200,000	19	
768	,481	64	1,050,000	21	0	5	1.31	50,000	21	
769	,481	221	840,000	21	0	2	2.1	40,000	21	
770	,481	164	760,000	19	0	2	21.59	40,000	19	
771	,481	507	425,000	17	0	1	9.34	25,000	17	

Record is Updated as Expired

```
SELECT * FROM Cinema_Module2_SCD2 ;
SELECT * FROM Cinema_Entertainment ce ;
UPDATE Cinema_Entertainment SET ticket_price = 200000 WHERE cinema_code =304;

UPDATE Cinema_Entertainment SET ticket_price = 200000 WHERE cinema_code =529;
```

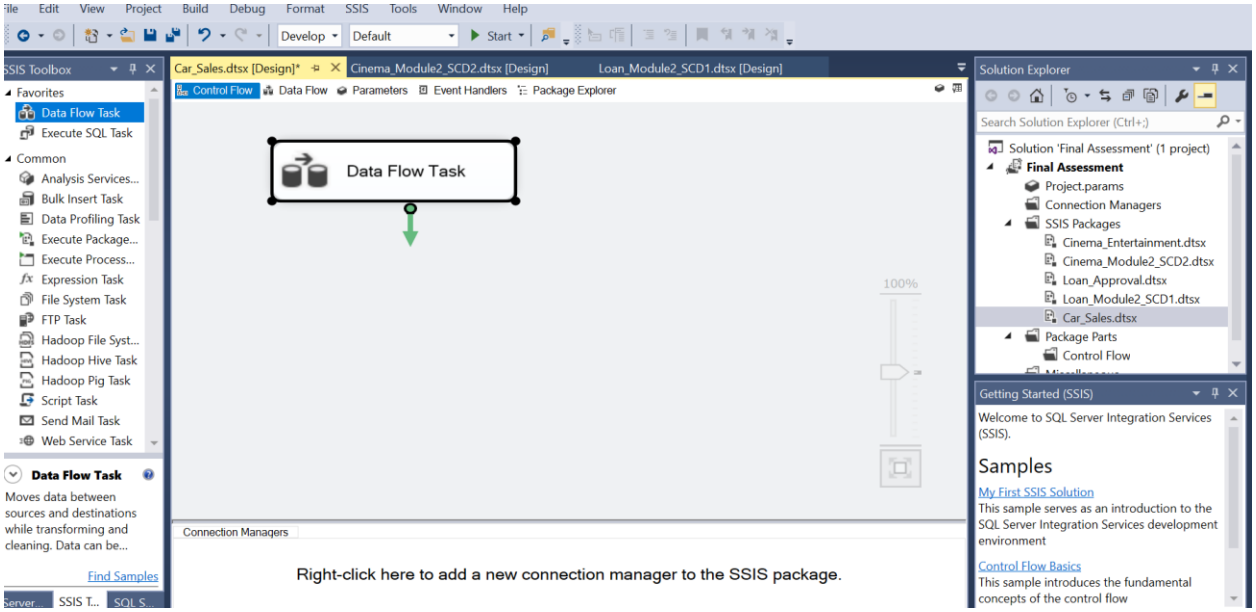
Results 1

SELECT * FROM Cinema_Module2_SCD2 — Enter a SQL expression to filter results (use Ctrl+Space)

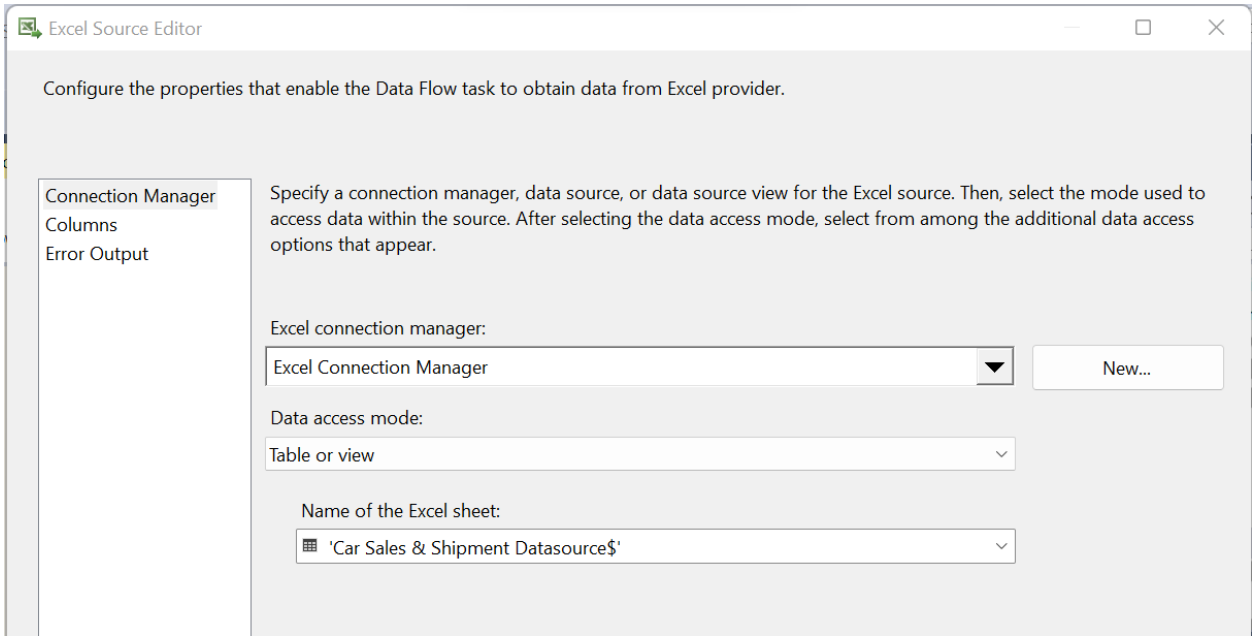
	e	ticket_use	capacity	date	month	quarter	day	strat_date	end_date	status
1138	000	369	640	43,196	4	2	6	[NULL]	[NULL]	Current
1139	000	365	442	43,196	4	2	6	[NULL]	[NULL]	Current
1140	922	358	452	43,196	4	2	6	[NULL]	[NULL]	Current
1141	000	227	576	43,196	4	2	6	[NULL]	[NULL]	Expired
1142	000	386	1,572	43,196	4	2	6	[NULL]	[NULL]	Current
1143	000	321	1,820	43,196	4	2	6	[NULL]	[NULL]	Current
1144	659	261	2,639	43,196	4	2	6	[NULL]	[NULL]	Current
1145	577	213	1,246	43,196	4	2	6	[NULL]	[NULL]	Current
1146	421	259	621	43,196	4	2	6	[NULL]	[NULL]	Current
1147	000	697	743	43,221	5	2	1	[NULL]	[NULL]	Current

3. Extracting Data from Excel Source

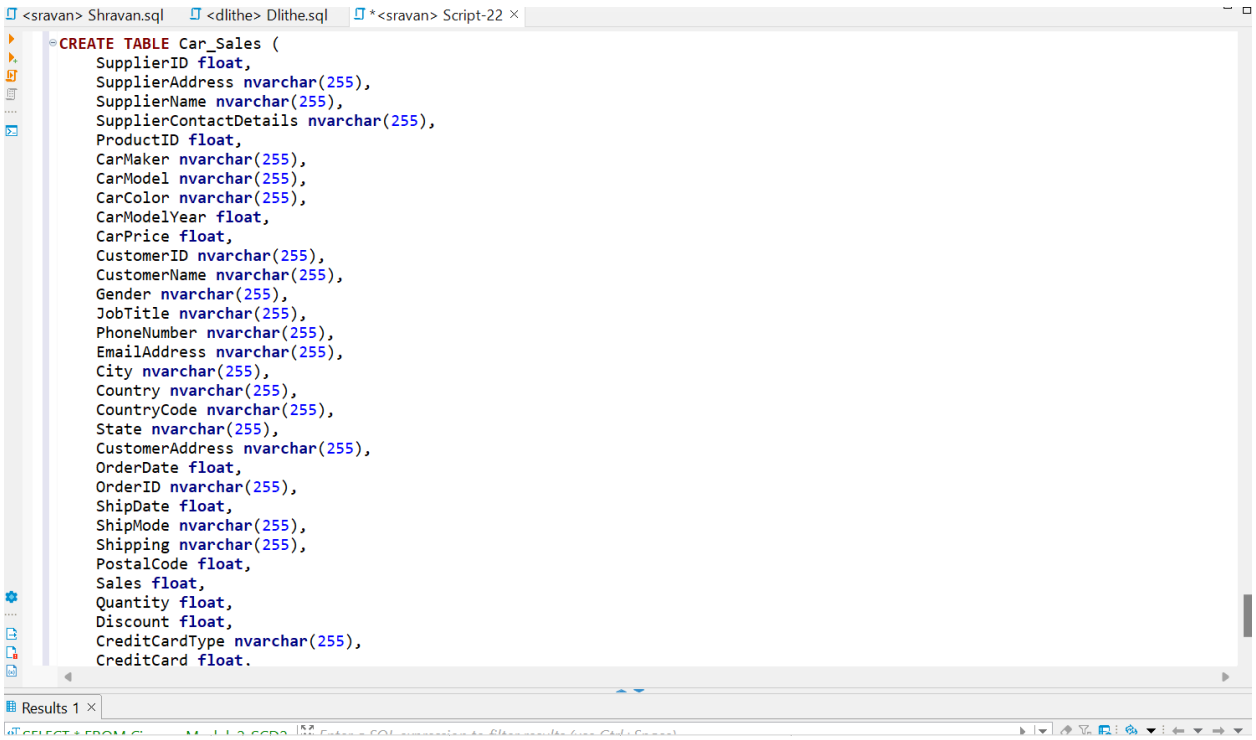
Data Flow Task for Car_Sales Package



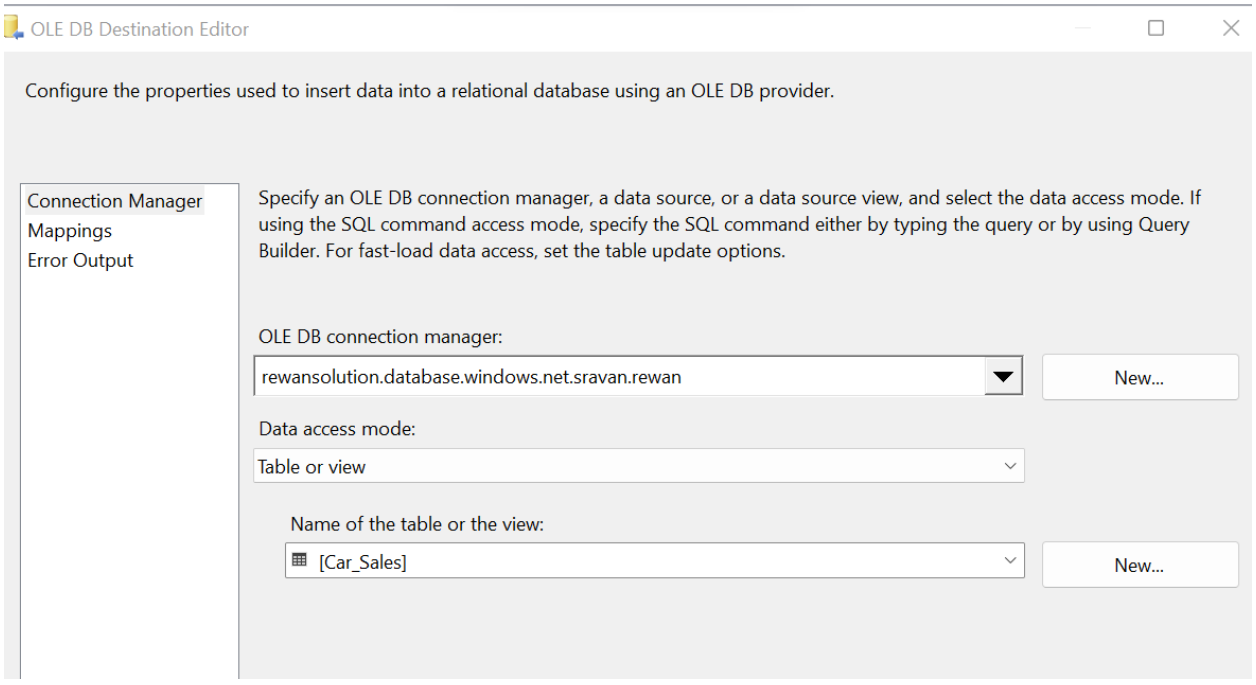
Creating Excel Connection



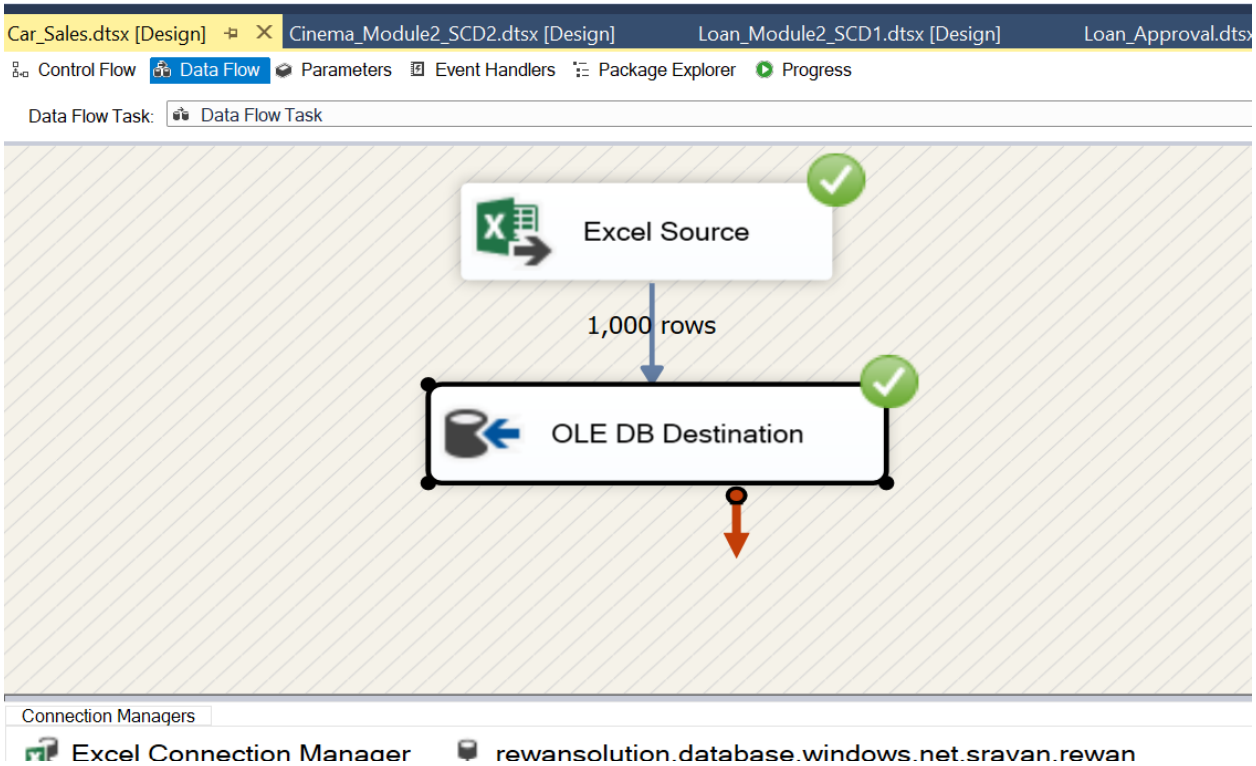
Creating Destination table



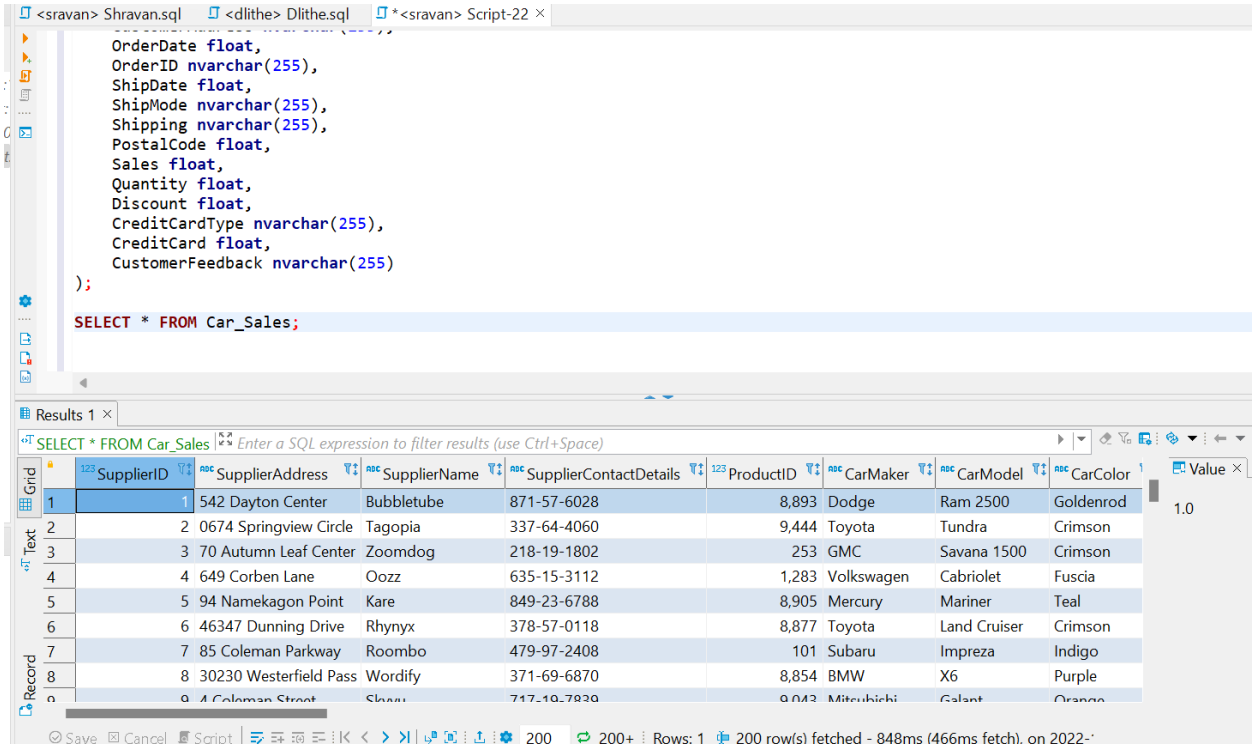
Creating SQL Server Connection



Execution of Car_Shipment Package

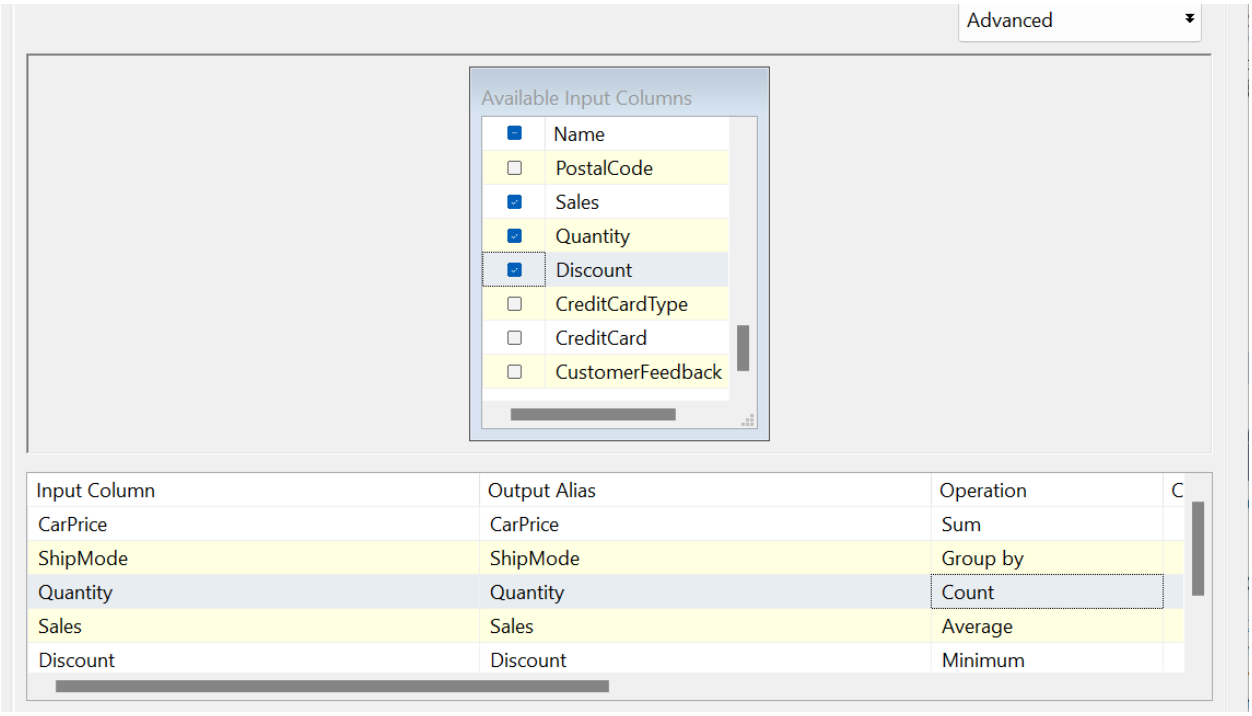


Data Inserted in Destination

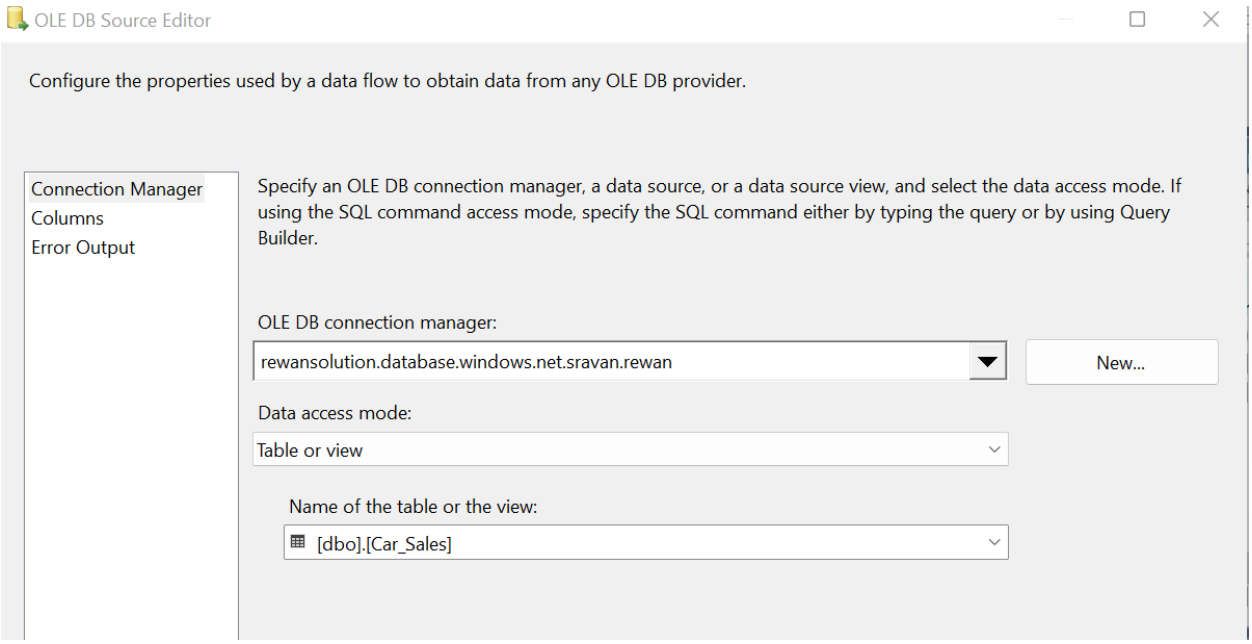


4. Aggregate Transformation

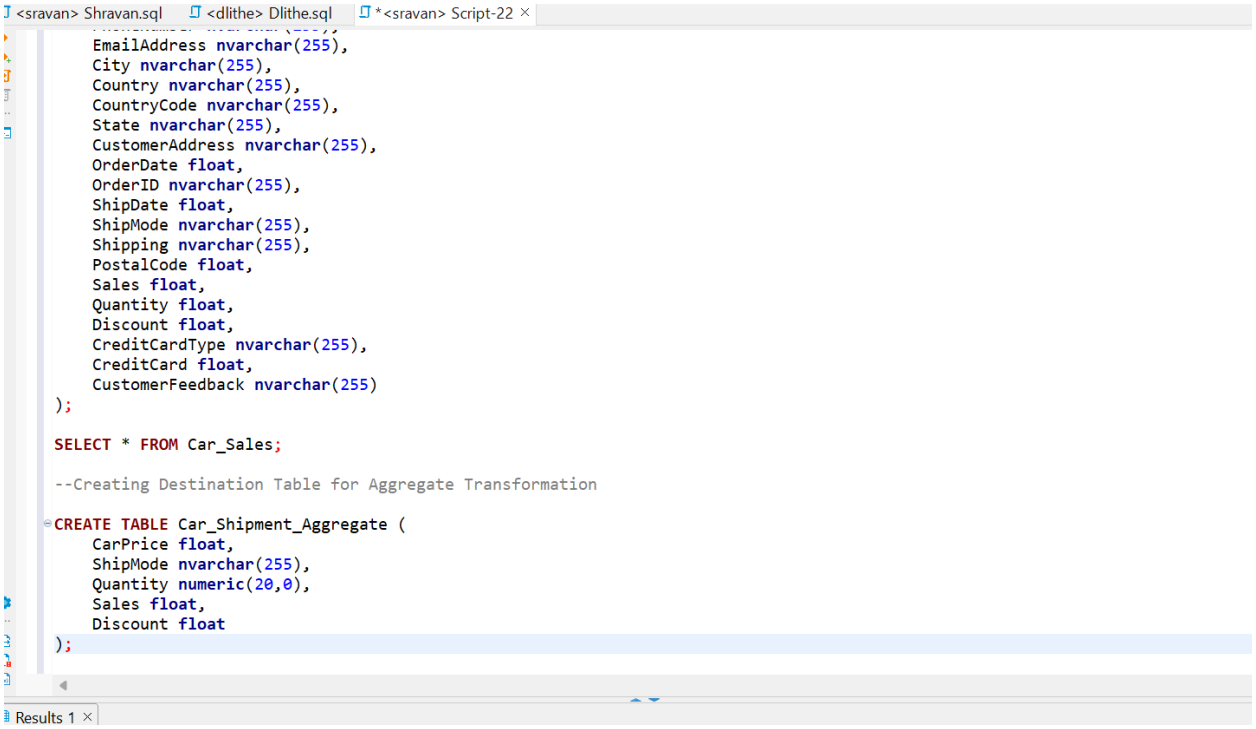
Aggregate Transformation



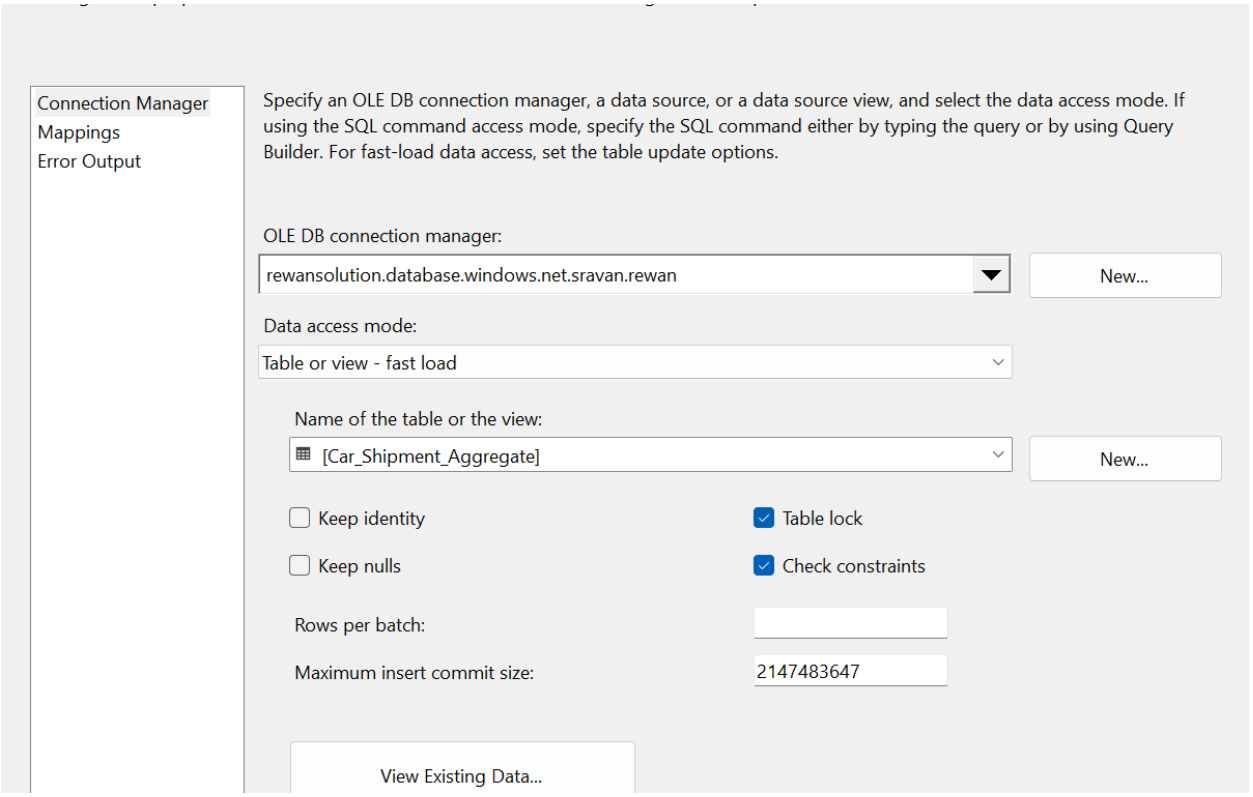
Connecting SQL Server for Source



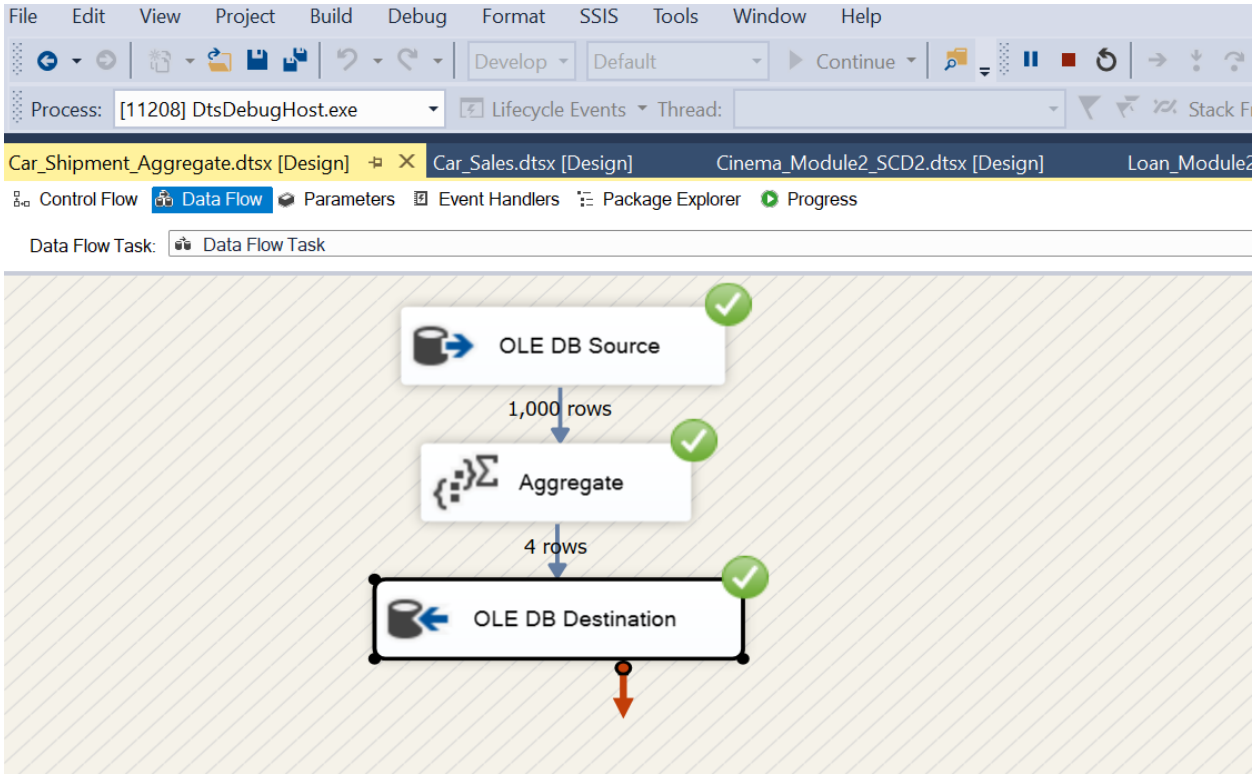
Creating Table for Aggregate



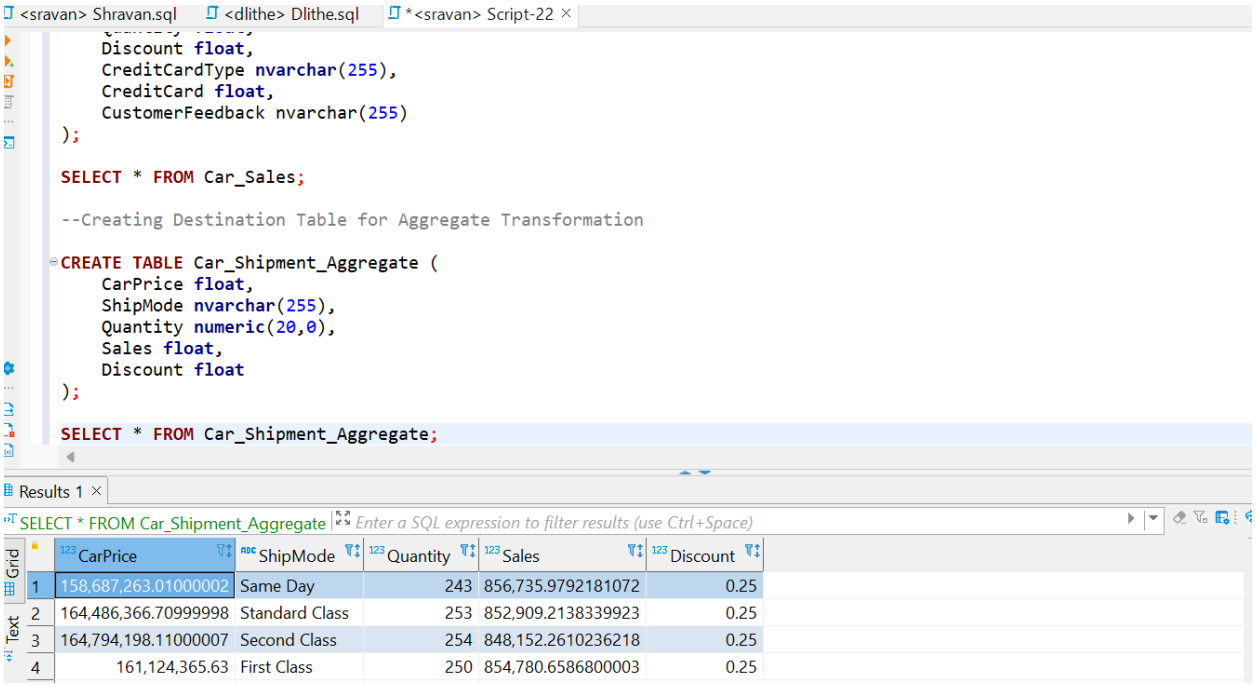
Connecting SQL Server for Destination



Execution of Aggregate Transformation

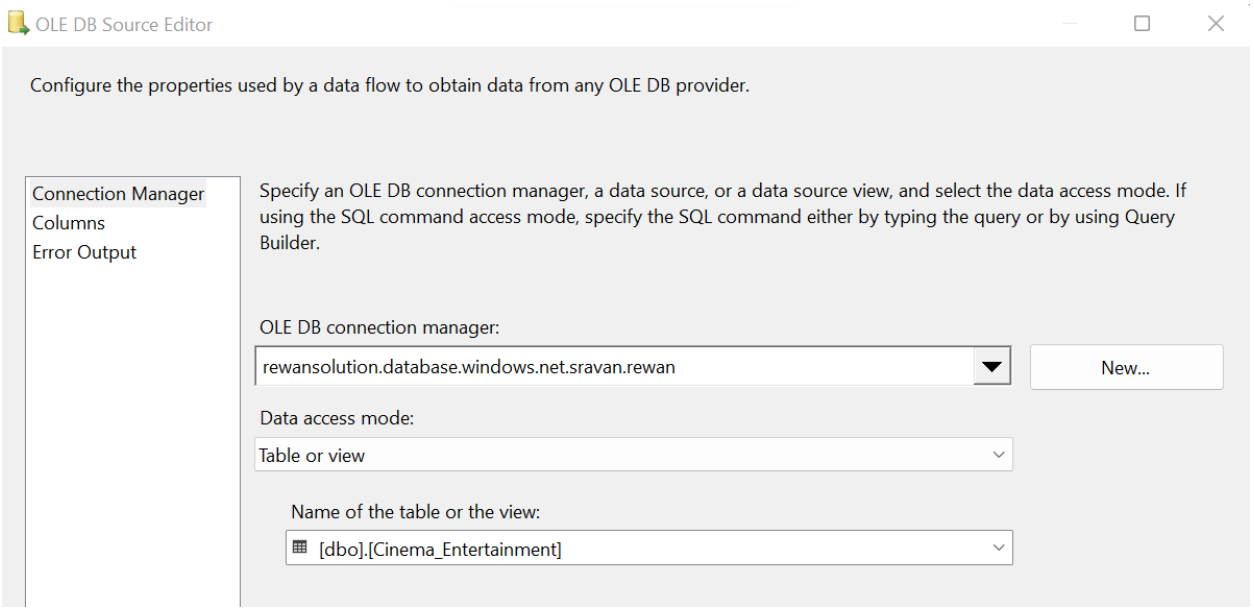


Destination Table with Aggregate Results



5. Slowly Changing Dimension Type 1(Cinema Entertainment)

Connecting Source Table



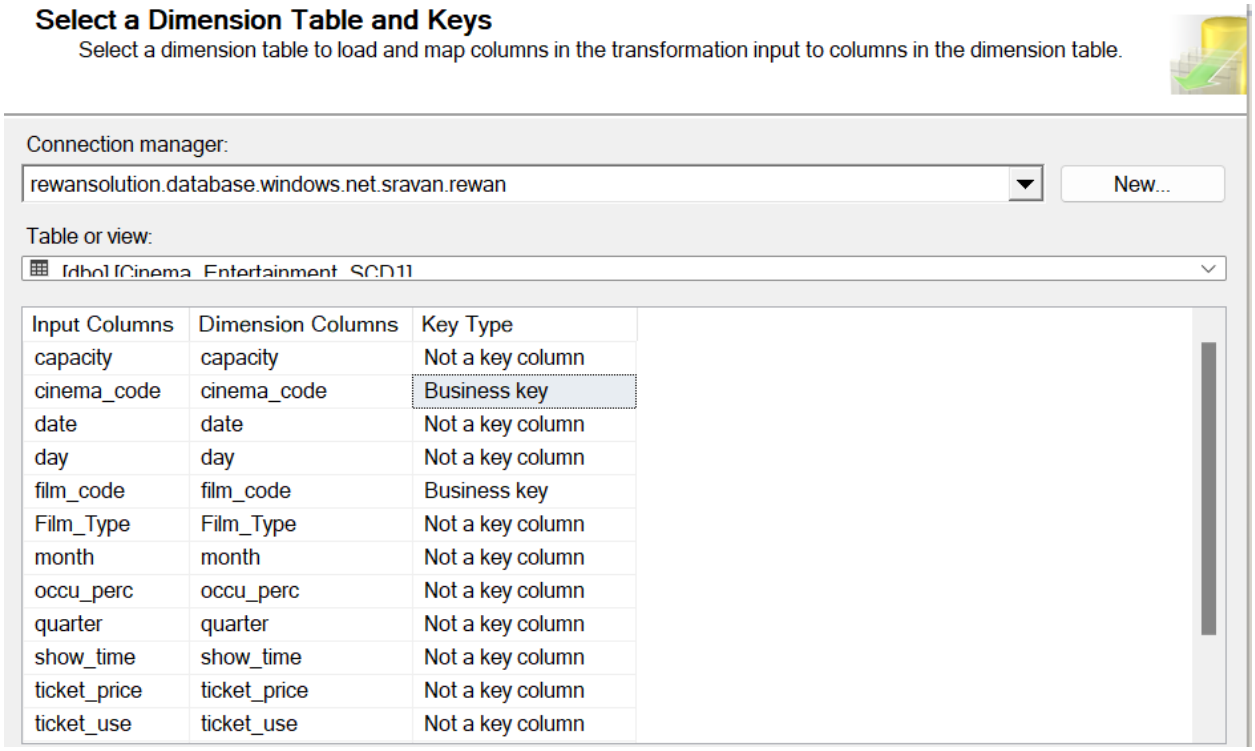
Creating Destination Table for SCD1 of Cinema Table Creating Destination Table for SCD1 of Cinema Table

```
CREATE TABLE Cinema_Entertainment_SCD1(
    Film_Type nvarchar(255),
    film_code float,
    cinema_code float,
    total_sales float,
    tickets_sold float,
    tickets_out float,
    show_time float,
    occu_perc float,
    ticket_price float,
    ticket_use float,
    capacity float,
    date float,
    month float,
    quarter float,
    day float
);
```

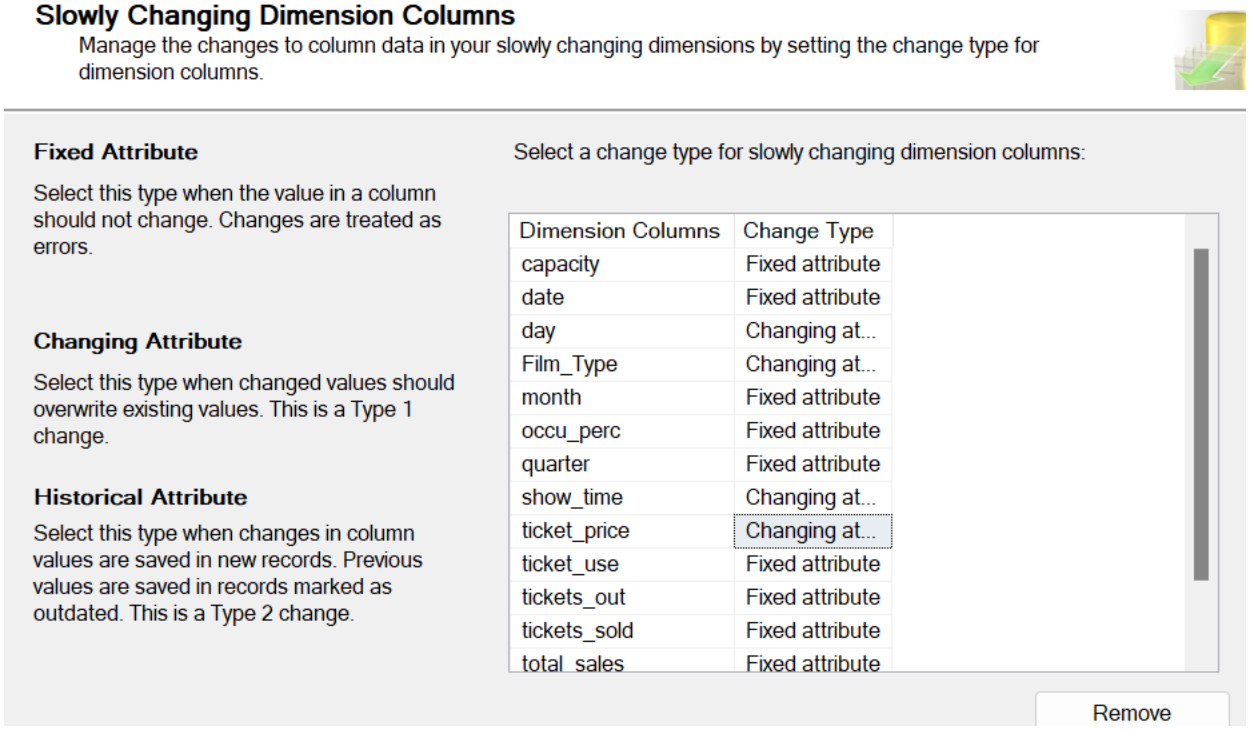
Statistics 1

Name	Value
Updated Rows	0
Query	CREATE TABLE Cinema_Entertainment_SCD1(
	Film_Type nvarchar(255),
	film_code float,
	cinema_code float,
	total_sales float,
	tickets_sold float,

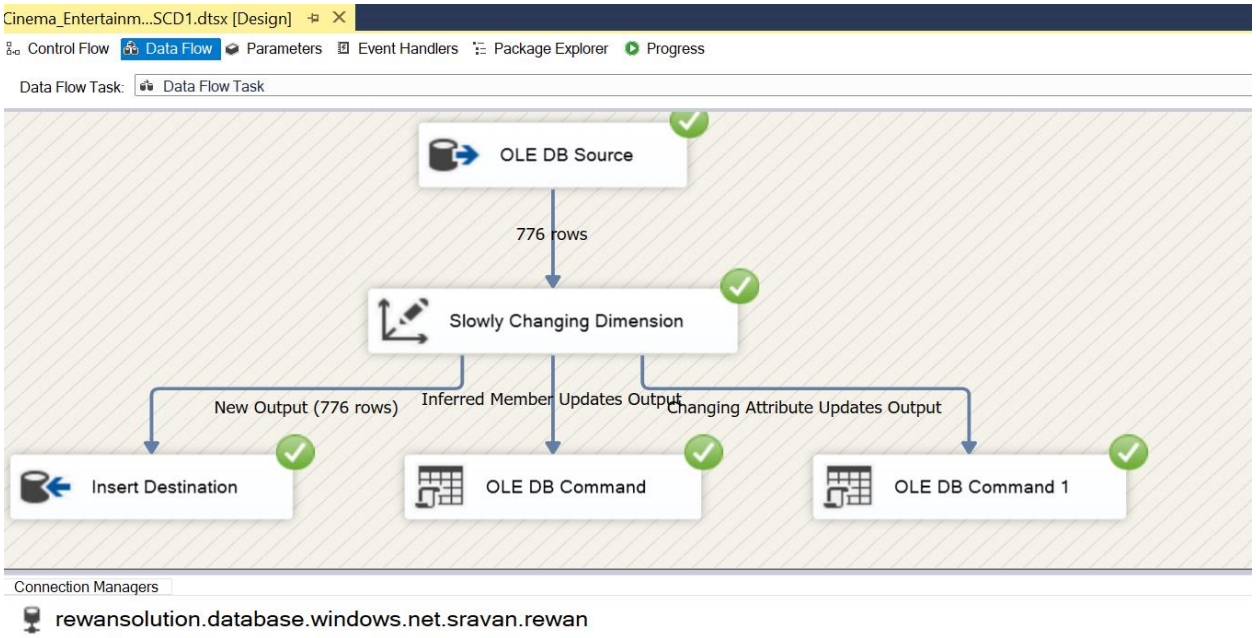
Connecting Destination and Selecting Business Key



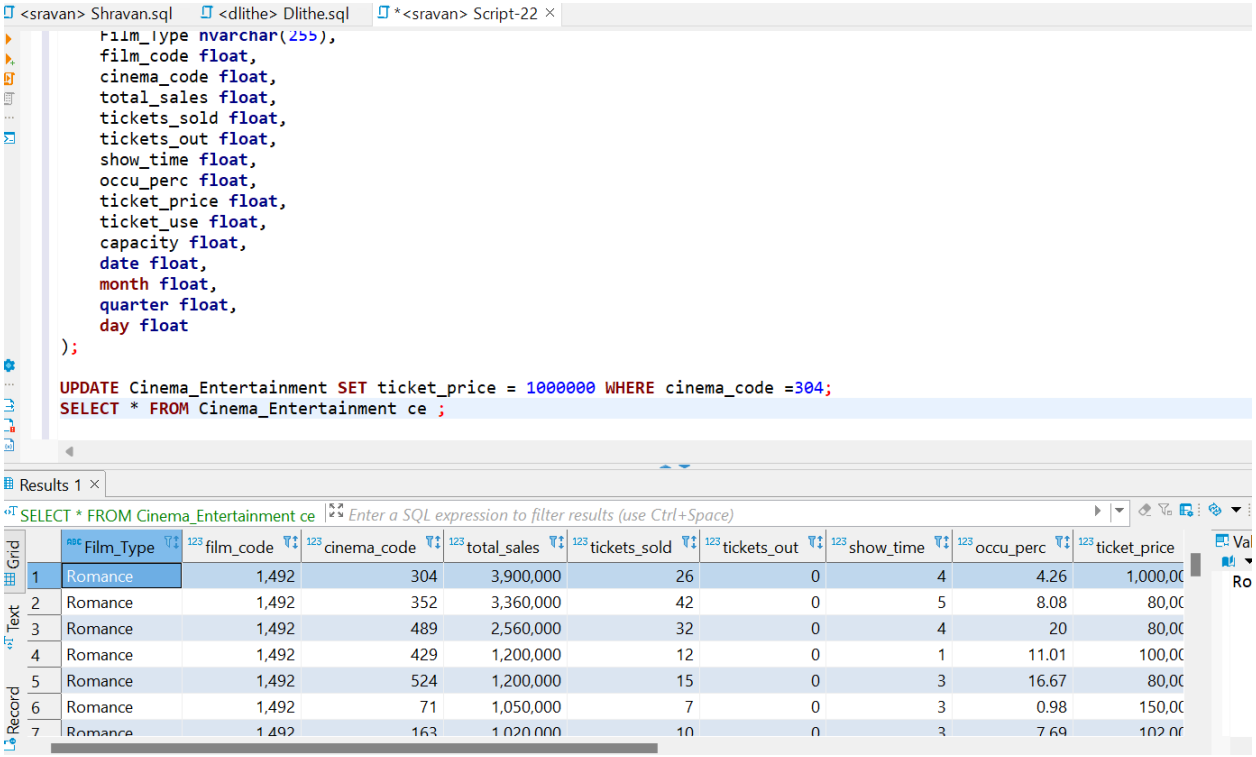
Setting Changing Attributes



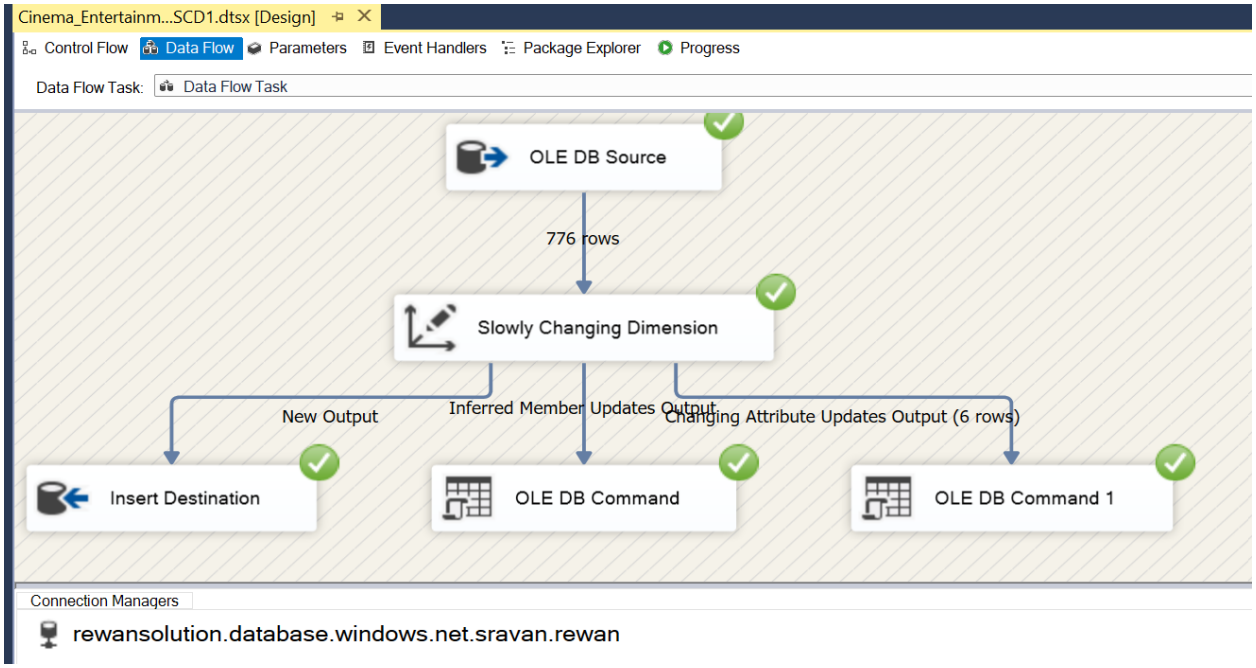
All rows are passed at first



12 Rows are Updated



Only updated rows are passed



Updated Result

```
    total_sales float,
    tickets_sold float,
    tickets_out float,
    show_time float,
    occu_perc float,
    ticket_price float,
    ticket_use float,
    capacity float,
    date float,
    month float,
    quarter float,
    day float
);

UPDATE Cinema_Entertainment SET ticket_price = 1000000 WHERE cinema_code =304;
SELECT * FROM Cinema_Entertainment ce ;

SELECT * FROM Cinema_Entertainment_SCD1;
```

Results 1

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

	_code	cinema_code	total_sales	tickets_sold	tickets_out	show_time	occu_perc	ticket_price	ticket_use	c
1	1,492	304	3,900,000	26	0	4	4.26	1,000,000	26	
2	1,492	352	3,360,000	42	0	5	8.08	80,000	42	
3	1,492	489	2,560,000	32	0	4	20	80,000	32	
4	1,492	429	1,200,000	12	0	1	11.01	100,000	12	
5	1,492	524	1,200,000	15	0	3	16.67	80,000	15	
6	1,492	71	1,050,000	7	0	3	0.98	150,000	7	
7	1,492	163	1,020,000	10	0	3	7.69	102,000	10	

6. Slowly Changing Dimension Type 2(Loan Approval)

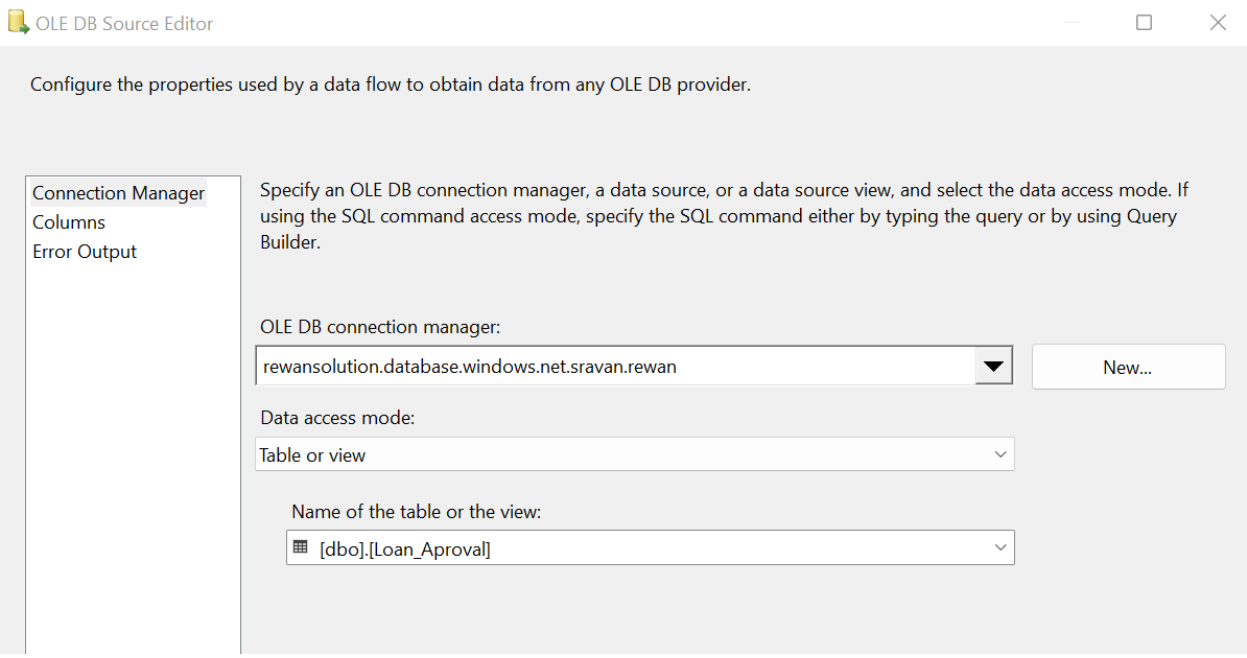
Destination table for SCD2 Loan Approval

```
    [ApprovalFY] float,
    [Term] float,
    [NoEmp] float,
    [NewExist] float,
    [CreateJob] float,
    [RetainedJob] float,
    [FranchiseCode] float,
    [UrbanRural] float,
    [RevLineCr] nvarchar(255),
    [LowDoc] nvarchar(255),
    [ChgOffDate] datetime,
    [DisbursementDate] datetime,
    [DisbursementGross] nvarchar(255),
    [BalanceGross] nvarchar(255),
    [MIS_Status] nvarchar(255),
    [ChgOffPrinGr] nvarchar(255),
    [GrAppv] nvarchar(255),
    [SBA_Appv] nvarchar(255),
    [start_date] date,
    [end_date] date,
    [status] varchar
);
```

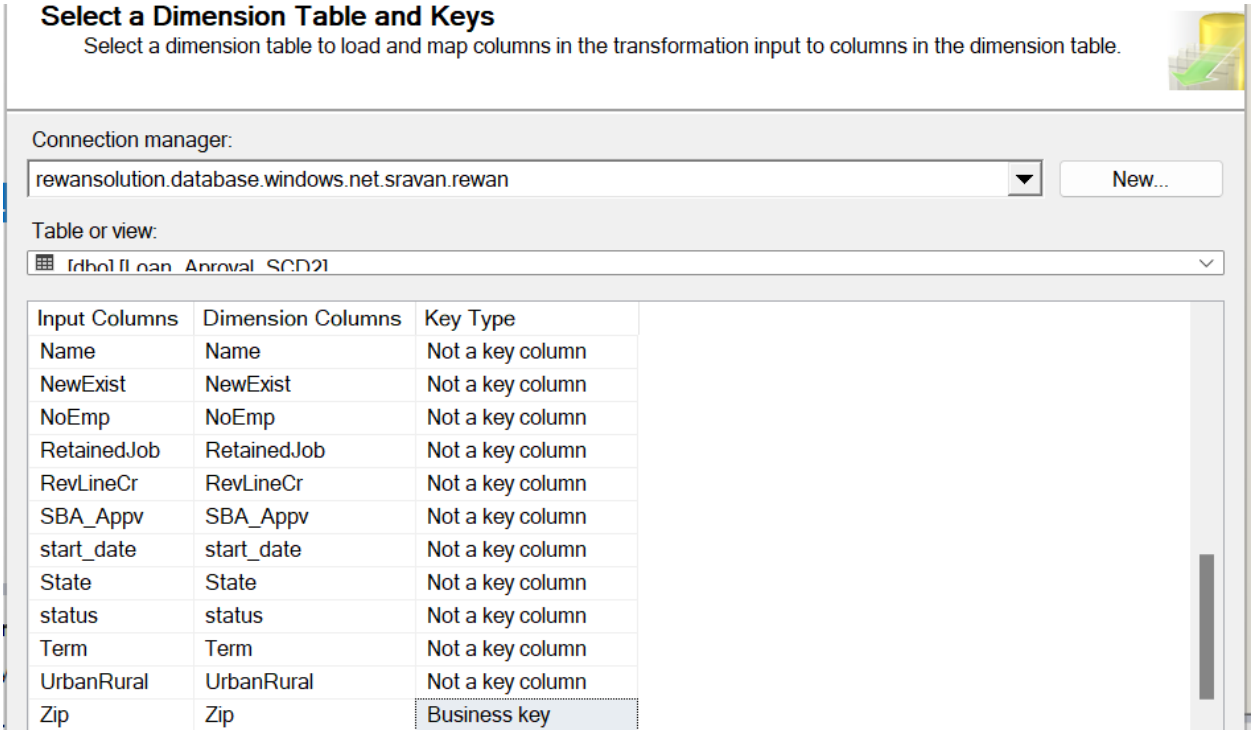
Statistics 1

Name	Value
Updated Rows	0
Query	CREATE TABLE Loan_Aproval_SCD2 (
	[LoanNr_ChkDgt] float,
	[Name] nvarchar(255),

Connecting Source SQL Table

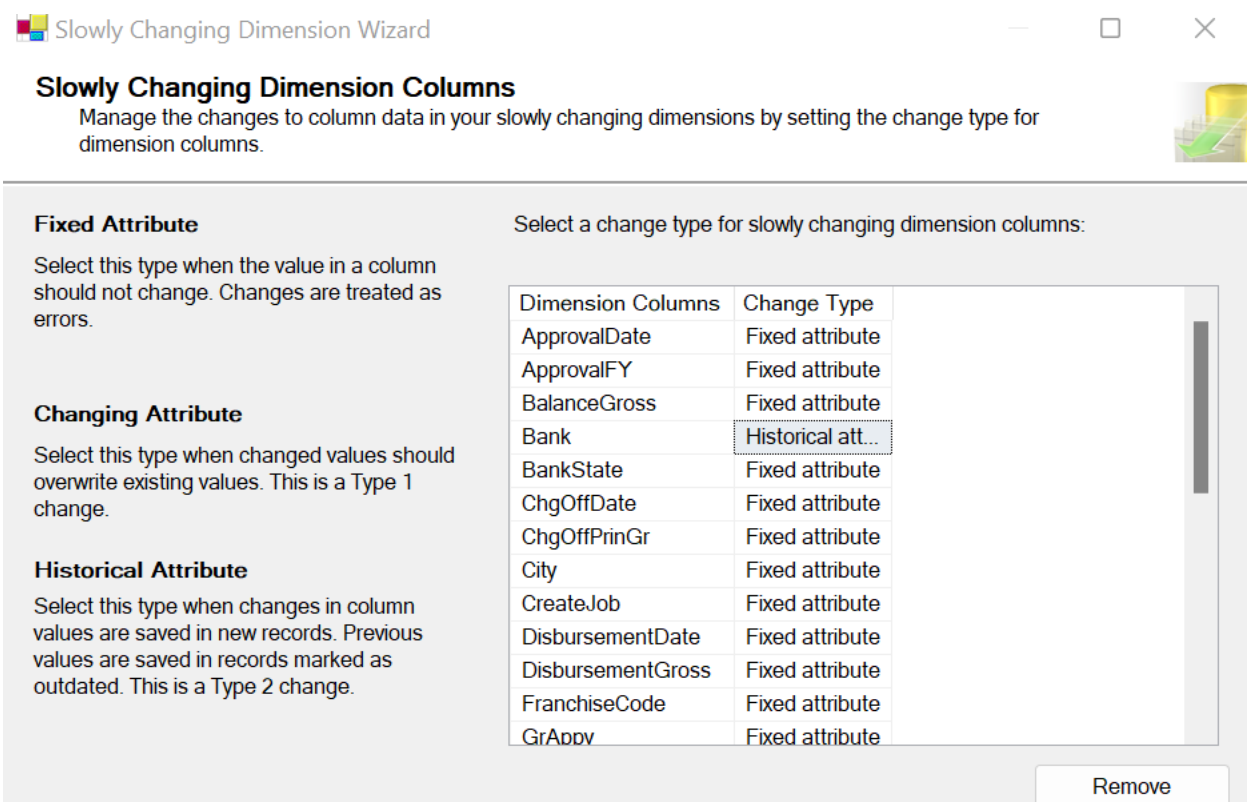


Selecting Destination and Business key



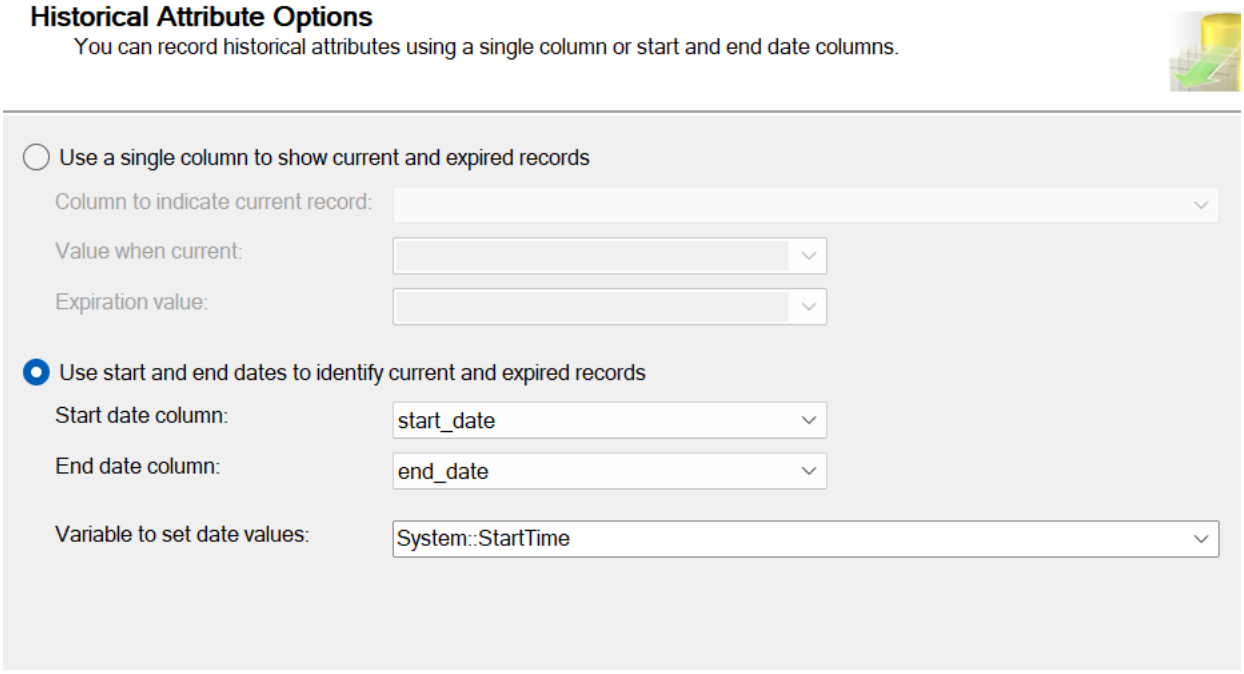
Input Columns	Dimension Columns	Key Type
Name	Name	Not a key column
NewExist	NewExist	Not a key column
NoEmp	NoEmp	Not a key column
RetainedJob	RetainedJob	Not a key column
RevLineCr	RevLineCr	Not a key column
SBA_Appv	SBA_Appv	Not a key column
start_date	start_date	Not a key column
State	State	Not a key column
status	status	Not a key column
Term	Term	Not a key column
UrbanRural	UrbanRural	Not a key column
Zip	Zip	Business key

Setting Historical Attribute

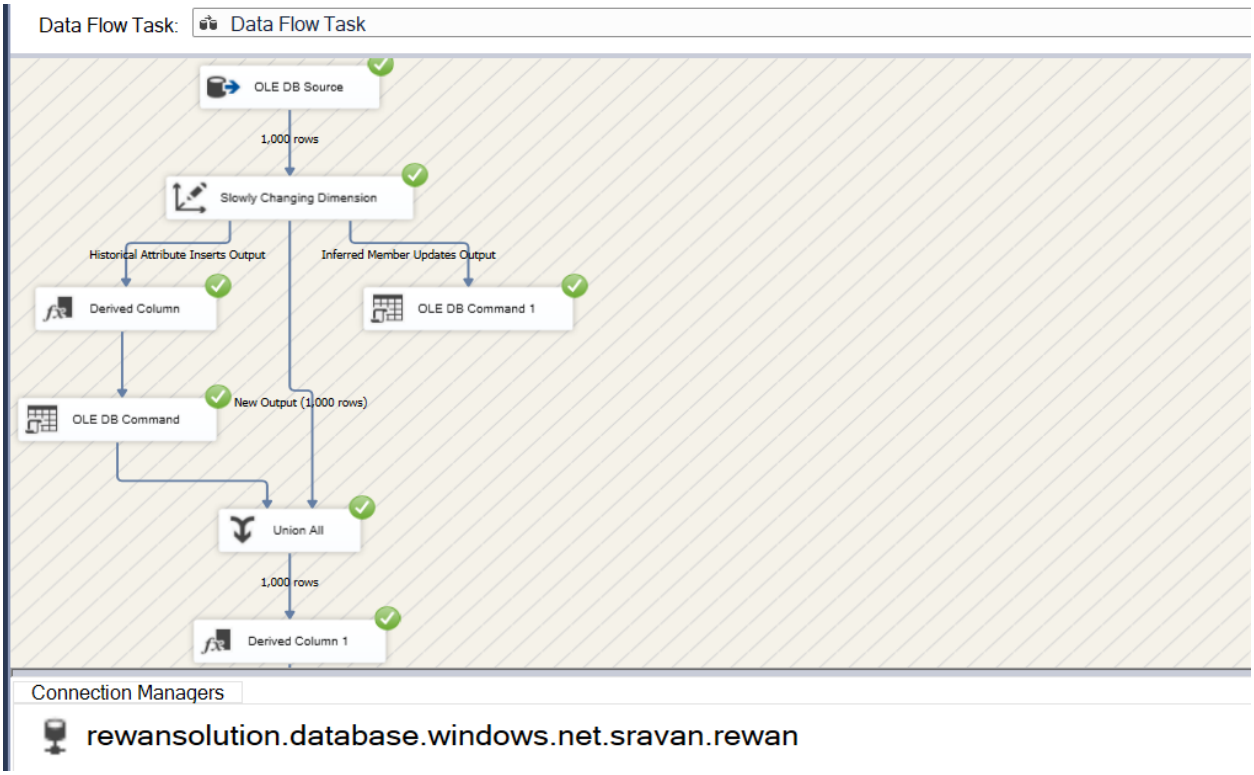


Dimension Columns	Change Type
ApprovalDate	Fixed attribute
ApprovalFY	Fixed attribute
BalanceGross	Fixed attribute
Bank	Historical att...
BankState	Fixed attribute
ChgOffDate	Fixed attribute
ChgOffPrinGr	Fixed attribute
City	Fixed attribute
CreateJob	Fixed attribute
DisbursementDate	Fixed attribute
DisbursementGross	Fixed attribute
FranchiseCode	Fixed attribute
GrAppv	Fixed attribute

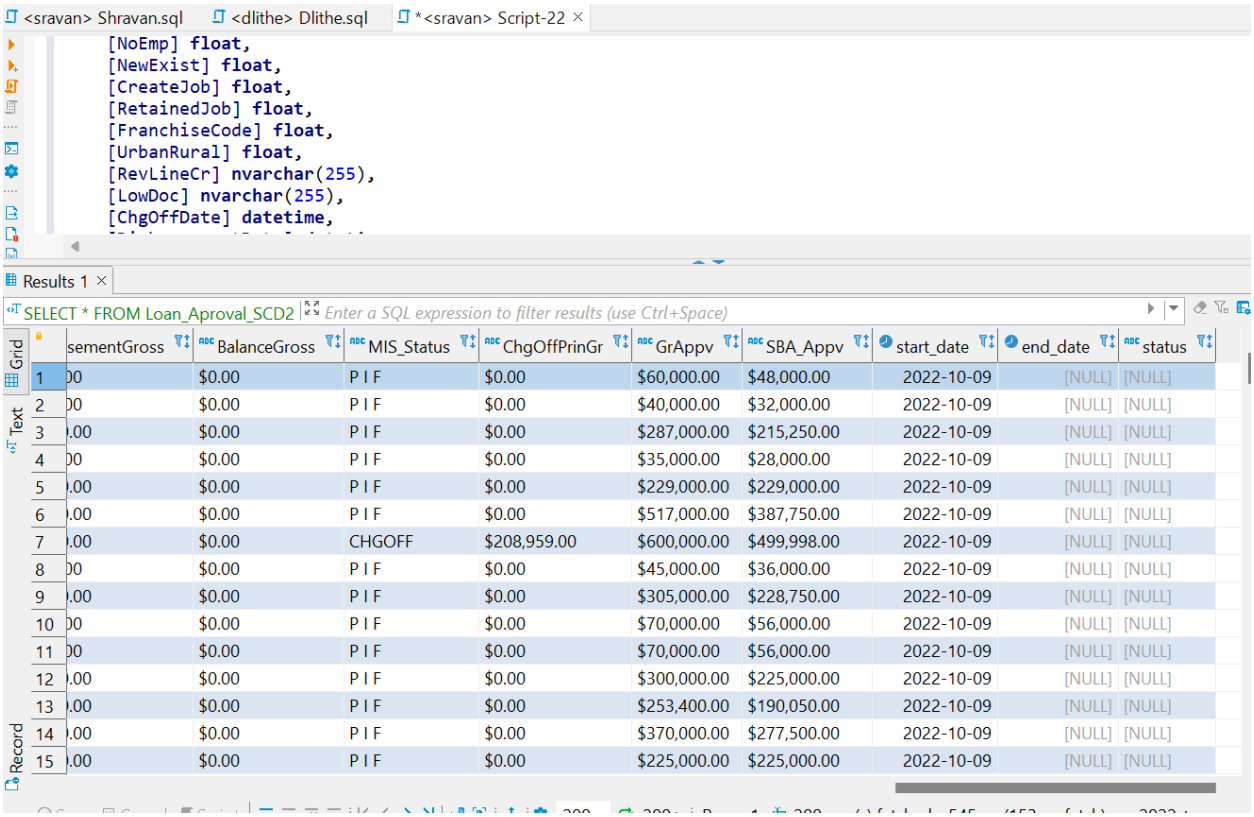
Identification of Historical Data by Date



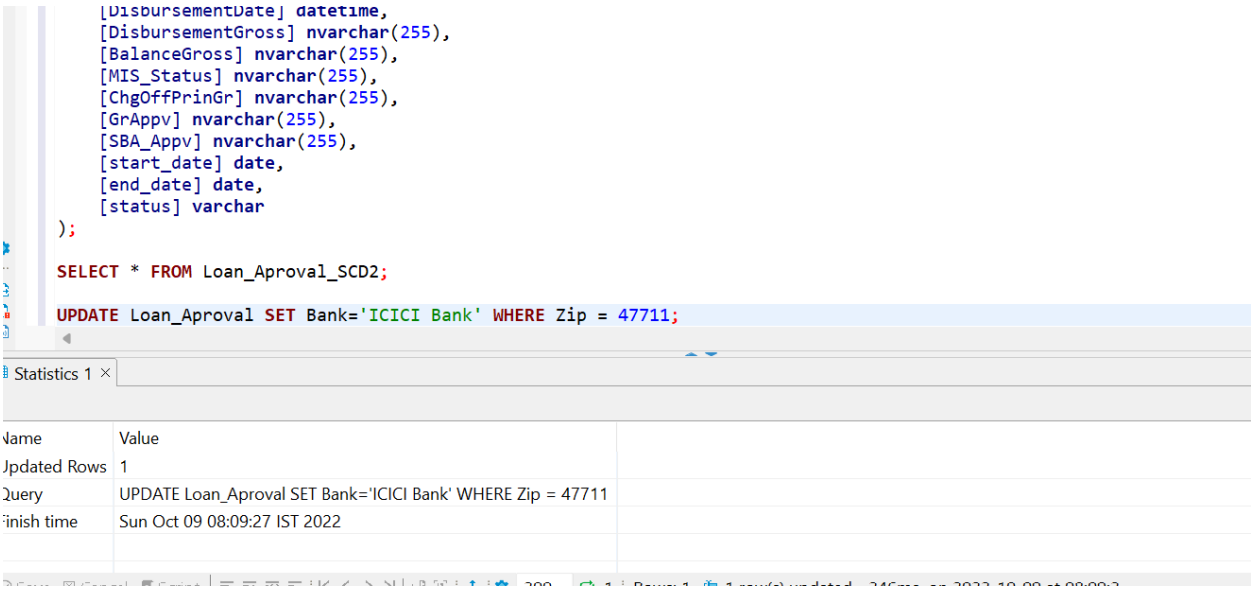
All rows are passed



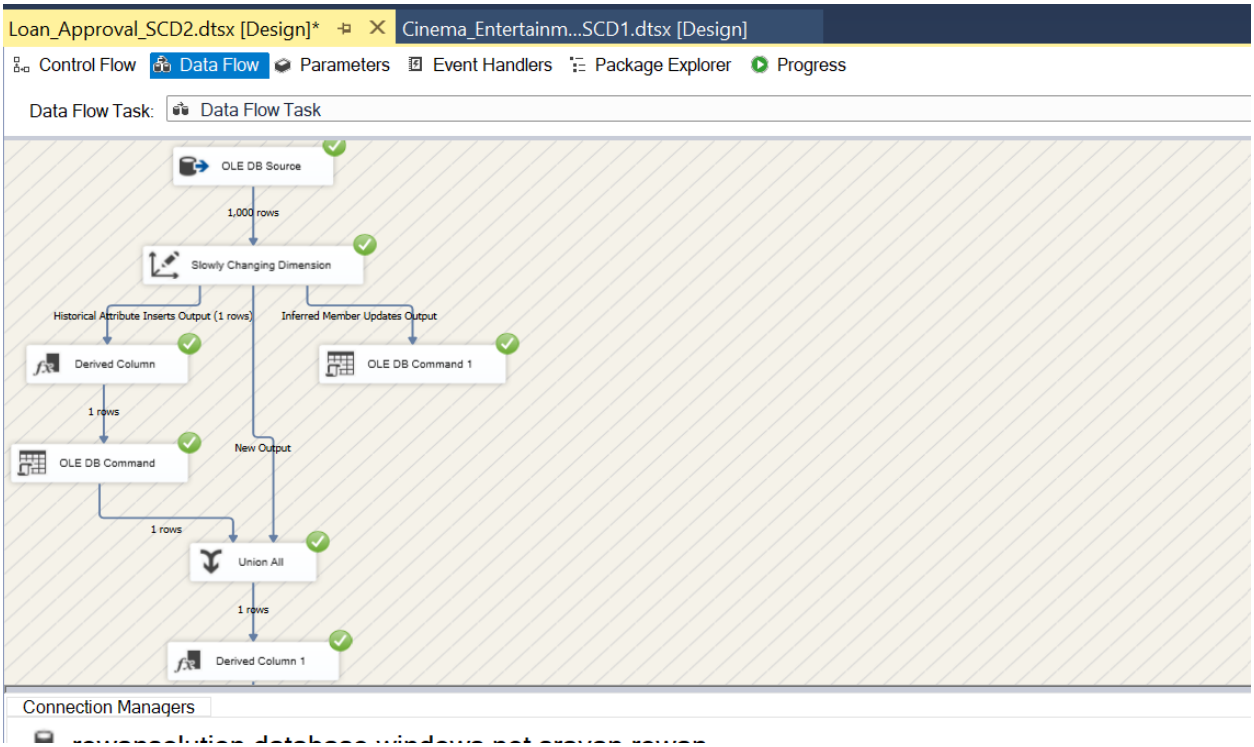
Rows are inserted with Start date



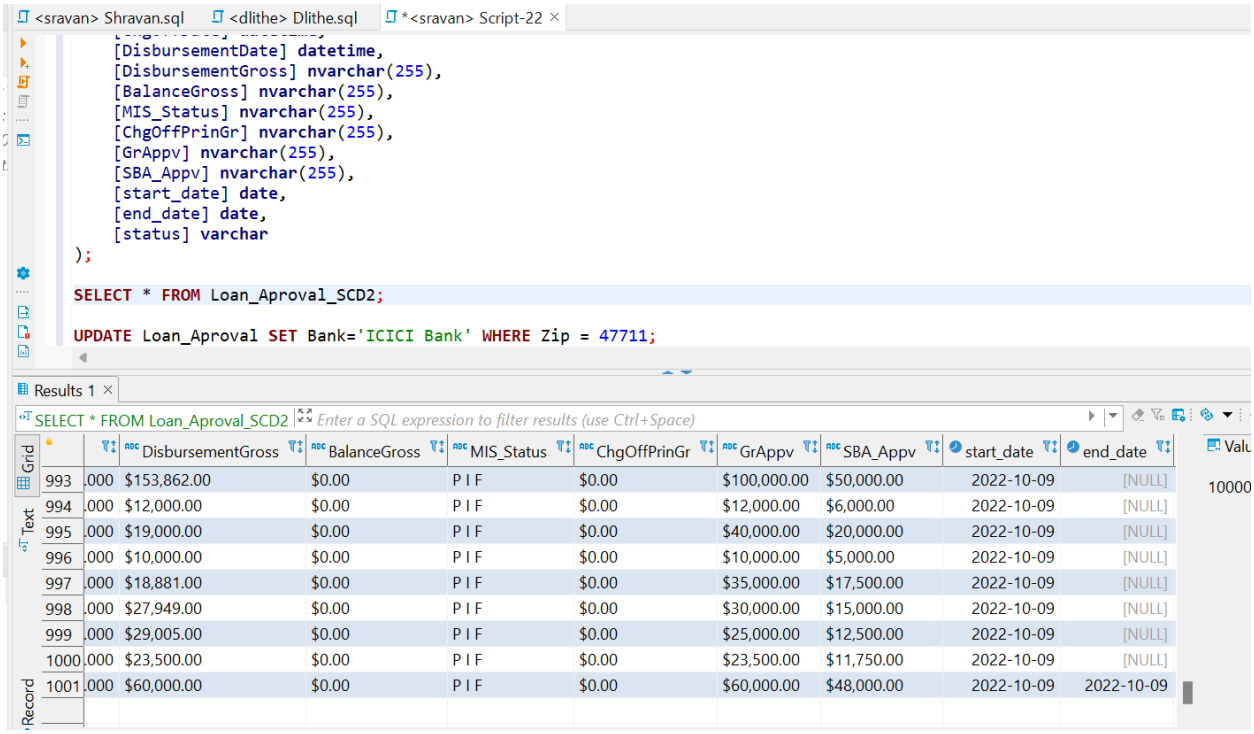
One row is updated in source



One row is passed

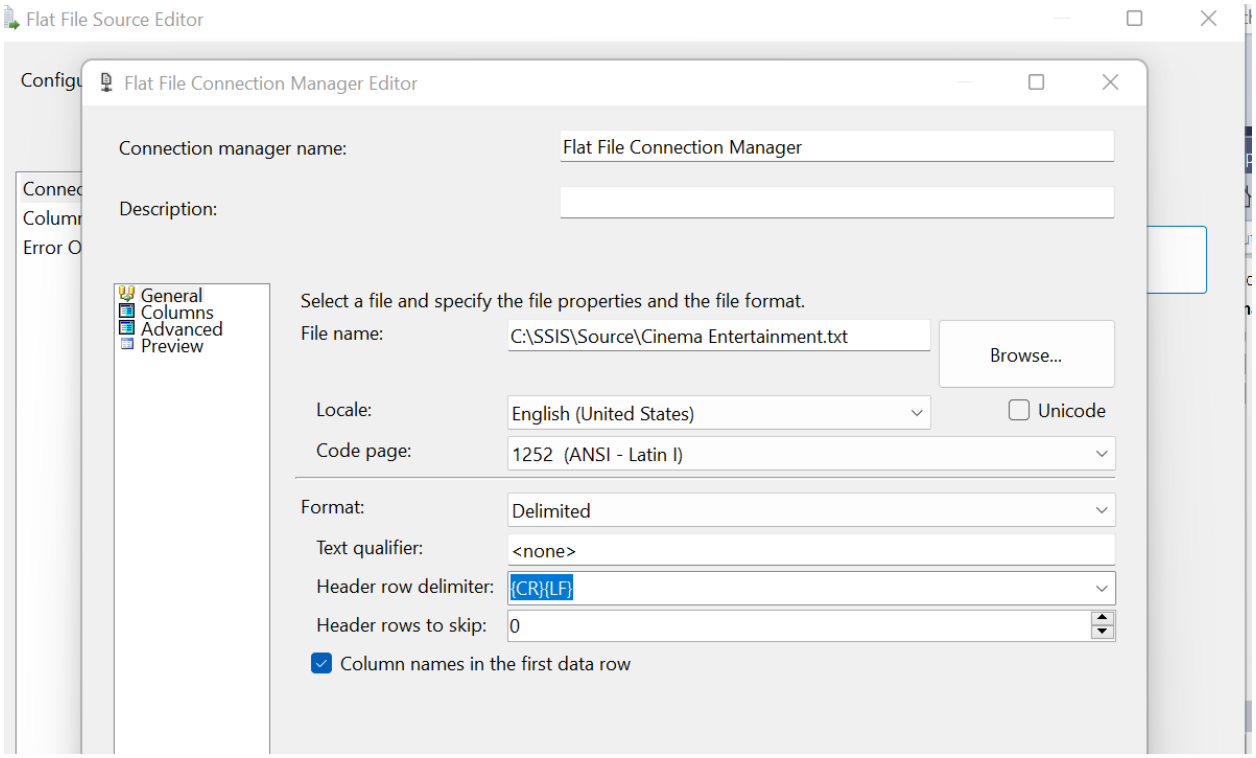


One row is inserted with end date

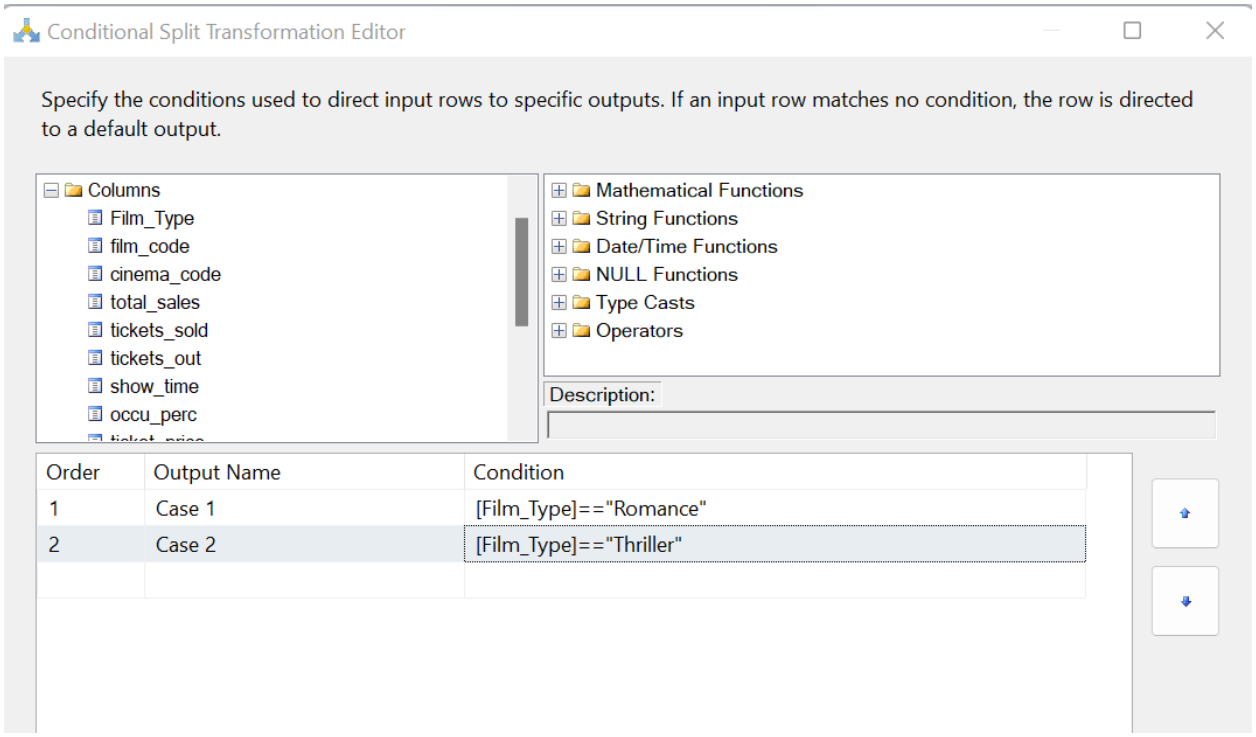


7. Conditional Split Using Flat File

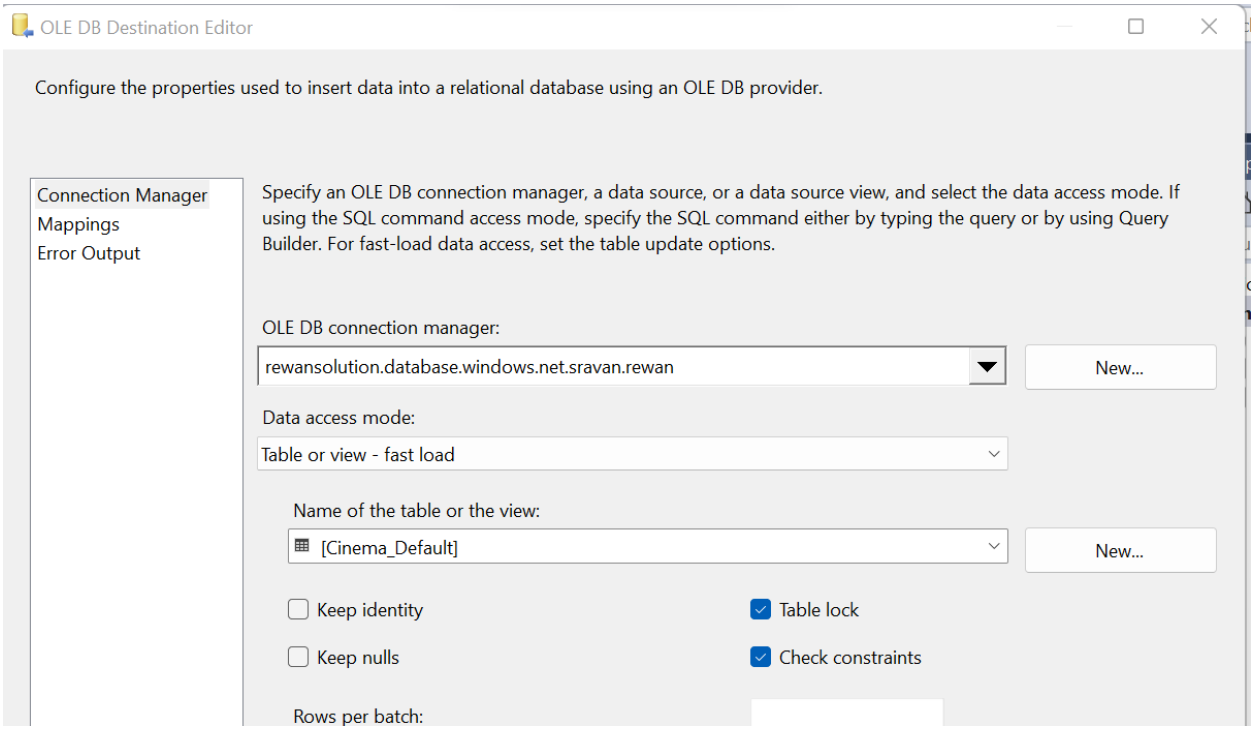
Flat File Connection



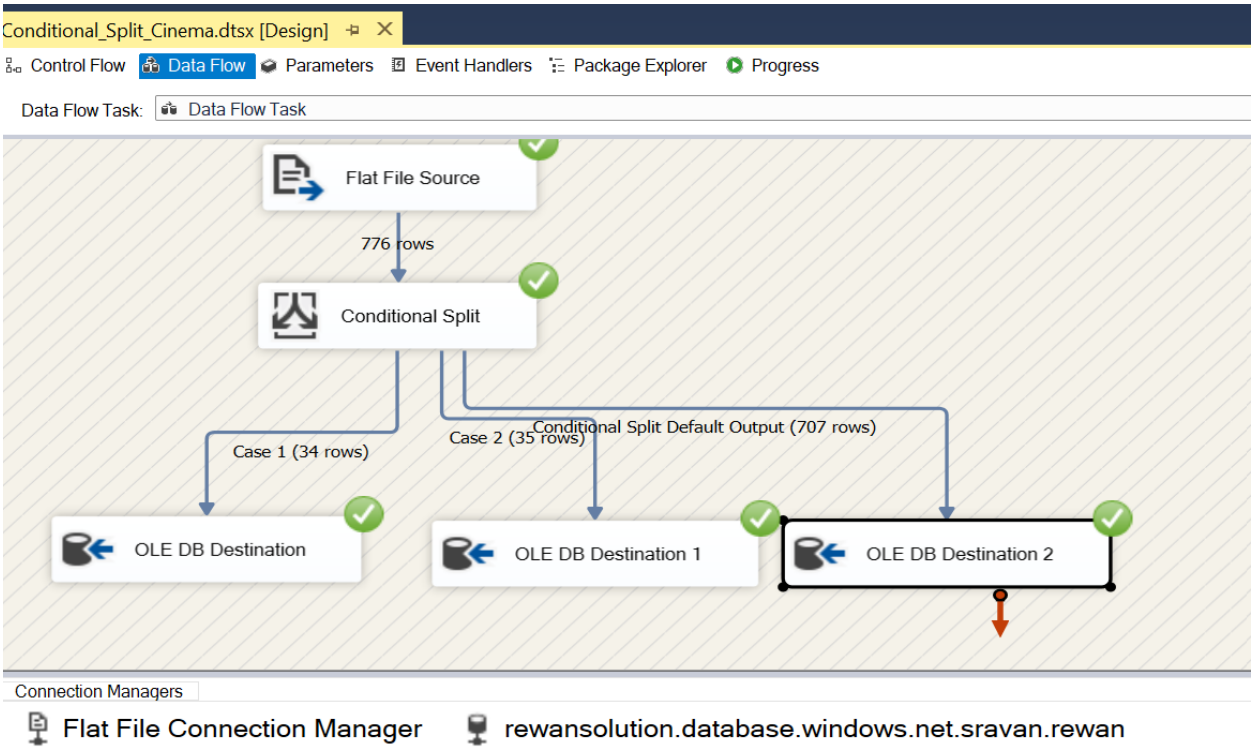
Condition for two groups



Connecting to target SQL Table



Records are Inserted to Respective Table



Cinema_Romance_Table

```
);
SELECT * FROM iics_Health_Care_tgt_scd2 ;

--Updating in Source table
UPDATE iics_Health_Care SET DISTRICT_NAME='Bangalore' WHERE PID=1;

--Replicatin Task

SELECT * FROM SF_CAR_SALES ;

SELECT * FROM Car_Shipmnt_Aggregate;

SELECT * FROM Cinema_Entertainment_Rank cer ;

SELECT * FROM Cinema_Case1 cc;
```

Results 1

SELECT * FROM Cinema_Case1 cc — 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
12	Romance	1492	529	480000	4	0	3	2.96	200000
13	Romance	1492	82	400000	5	0	6	0.53000000000000003	80000
14	Romance	1492	344	300000	2	0	3	0.25	150000
15	Romance	1492	73	240000	2	0	1	2.04	120000
16	Romance	1492	304	16500000	112	0	4	18.329999999999998	200000
17	Romance	1492	352	13950000	93	0	5	10.57	150000
18	Romance	1492	344	10200000	68	0	3	8.5399999999999991	150000

Save Cancel Script 200 34 Rows: 1 34 row(s) fetched - 434ms (4ms fetch), on 2022-10-C

Cinema_Thriller _Table

```
UPDATE iics_Health_Care SET DISTRICT_NAME='Bangalore' WHERE PID=1;

--Replicatin Task

SELECT * FROM SF_CAR_SALES ;

SELECT * FROM Car_Shipmnt_Aggregate;

SELECT * FROM Cinema_Entertainment_Rank cer ;

SELECT * FROM Cinema_Case1 cc;

SELECT * FROM Cinema_Case2 cc ;
```

Results 1

SELECT * FROM Cinema_Case2 cc — 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
22	Thriller	1486	417	2585000	29	0	4	2.1400000000000001	89137.9
23	Thriller	1486	396	1760000	22	0	3	4.9900000000000002	80000
24	Thriller	1486	414	1610000	23	0	3	5.3200000000000003	70000
25	Thriller	1486	61	1550000	20	2	8	0.78000000000000003	77500
26	Thriller	1486	88	1100000	11	0	7	2.46	100000
27	Thriller	1486	43	1050000	15	0	12	2.21	70000
28	Thriller	1486	82	880000	11	0	6	0.62	80000

Save Cancel Script 200 35 Rows: 1 35 row(s) fetched - 360ms (2ms fetch), on 2022-10-C

Cinema_Default_Table

```
--Updating in Source table
UPDATE iics_Health_Care SET DISTRICT_NAME='Bangalore' WHERE PID=1;

--Replicatin Task

SELECT * FROM SF_CAR_SALES ;

SELECT * FROM Car_Shipmnt_Aggregate;

SELECT * FROM Cinema_Entertainment_Rank cer ;

SELECT * FROM Cinema_Case1 cc;

SELECT * FROM Cinema_Case2 cc ;

SELECT * FROM Cinema_Default cd ;
```

Results 1

SELECT * FROM Cinema_Default cd

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	ticke
52	Drama	1471	304	6320000	79	0	1	53.7400000000000002	20000
53	Comedy	1480	155	2520000	44	0	6	3.7400000000000002	57272.
54	Comedy	1480	225	1820000	52	0	6	3.8199999999999998	35000
55	Comedy	1480	477	450000	18	0	1	9.0899999999999999	25000
56	Comedy	1480	466	90000	3	0	1	1.75	30000
57	Comedy	1480	155	1720000	30	0	6	2.5499999999999998	57333.
58	Comedy	1480	225	1470000	42	0	6	3.0800000000000001	35000
59	Comedy	1480	477	200000	4	0	1	2.02	50000