

Designing ETL Package for multiple transformation in SSIS

Source: Flat File

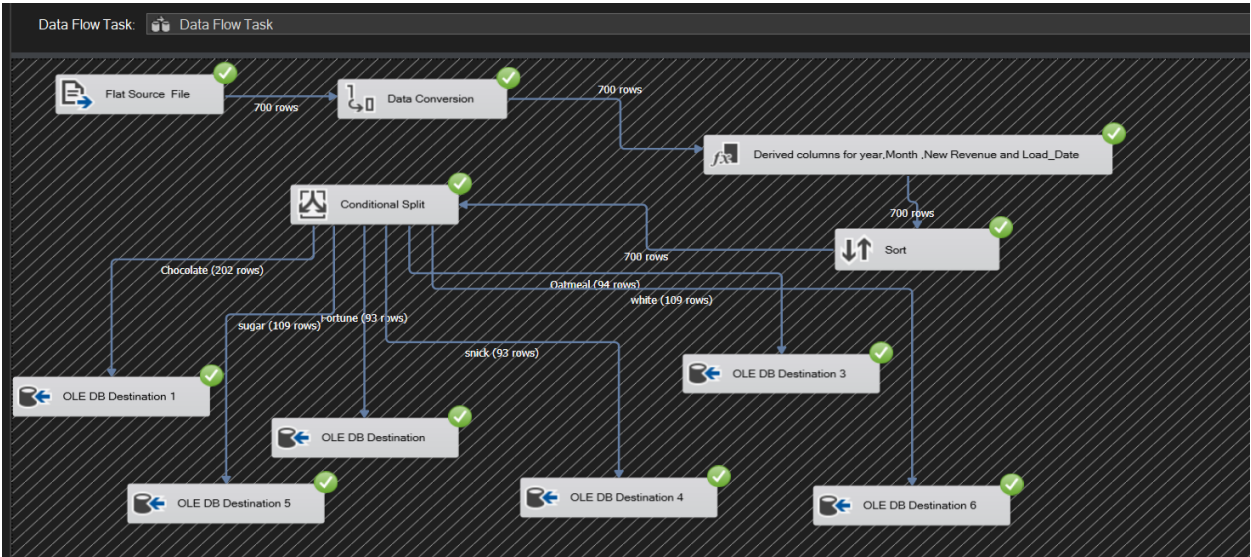
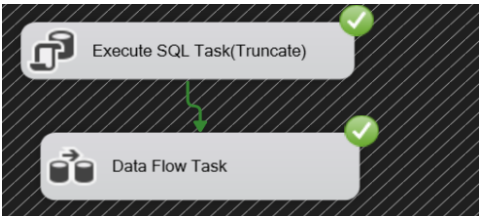
Destination: Microsoft SQL server Management

Activities:

1. Truncate the tables.
2. Data type transformation
3. Derived column transformations:
 - Add a new derived column Sold_year, sold_month , New_Revenu and Load_date.
 - If the Product type is Chocolate Chips, the new revenue will be 2 * the old revenue else put the old revenue as its.
4. Sorting transformations:
 - Sort the data based on Revenue in descending order.
5. Conditional split transformation
 - Load the data to different table based on the following unique product name.

Chocolate Chip
Fortune Cookie
Oatmeal Raisin
Snickerdoodle
Sugar
White Chocolate Macadamia Nut

Solution:



- Data type transformation:

Available Input Columns

☒ Name

☐ Customer_ID

☐ Order_ID

☐ Product

☐ Units_Sold

☒ Date

☒ Revenue

☐ Cost

Input Column	Output Alias	Data Type	Length	Precision	Scale
Date	Copy of Date	database date [DT_DBDATE]			
Revenue	Copy of Revenue	currency [DT_CY]			

- Derived column transformations:

Derived Column Name	Derived Column	Expression
sold_year	<add as new column>	YEAR((DT_DBDATE)Date)
sold_month	<add as new column>	MONTH((DT_DBDATE)Date)
New_Revenue	<add as new column>	(Product == "Chocolate Chip") ? (2 * (DT_I4)Revenue) : (DT_I4)Revenue
Load_Date	<add as new column>	GETDATE()

- Sorting transformations:

Available Input Columns

<input checked="" type="checkbox"/>	Name	Pass T...
<input type="checkbox"/>	Customer_ID	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Order_ID	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Product	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Units_Sold	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Date	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	Revenue	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Cost	<input checked="" type="checkbox"/>

Input Column	Output Alias	Sort Type	Sort Order
Revenue	Revenue	descending	1

- Sample result after loading the data to SQL server with having a total of 6 table:

<div> <div>Tables</div> <div> <div>System Tables</div> <div>FileTables</div> <div>External Tables</div> <div>Graph Tables</div> <div>dbo.OLE DB Chocolate</div> <div>dbo.OLE DB Fortune</div> <div>dbo.OLE DB Oatmel</div> <div>dbo.OLE DB Snick</div> <div>dbo.OLE DB Sugar</div> <div>dbo.OLE DB White</div> <div>dbo.Order_ETL_Table</div> </div> <div>Views</div> <div>External Resources</div> <div>Synonyms</div> <div>Programmability</div> <div>Query Store</div> <div>Service Broker</div> </div>												
	Customer_ID	Order_ID	Product	Units_Sold	Date	Revenue	Cost	Copy of Date	sold_year	sold_month	New_Revenue	Load_Date
1	5	617395	Sugar	3245	2020-01-01	9733.5	4055.625	2020-01-01	2020	1	9734	2023-03-07 14:39:06.457
2	4	780393	Sugar	2954	2019-11-01	8862	3692.5	2019-11-01	2019	11	8862	2023-03-07 14:39:06.460
3	2	856913	Sugar	2935	2019-11-01	8805	3668.75	2019-11-01	2019	11	8805	2023-03-07 14:39:06.460
4	1	887151	Sugar	293	2020-12-01	879	366.25	2020-12-01	2020	12	879	2023-03-07 14:39:06.460
5	2	800536	Sugar	2903	2020-03-01	8709	3628.75	2020-03-01	2020	3	8709	2023-03-07 14:39:06.460
6	4	439635	Sugar	2877	2020-10-01	8631	3596.25	2020-10-01	2020	10	8631	2023-03-07 14:39:06.457
7	1	632111	Sugar	2844	2020-02-01	8532	3555	2020-02-01	2020	2	8532	2023-03-07 14:39:06.457
8	2	701669	Sugar	2844	2020-06-01	8532	3555	2020-06-01	2020	6	8532	2023-03-07 14:39:06.457
9	3	355287	Sugar	2838	2020-04-01	8514	3547.5	2020-04-01	2020	4	8514	2023-03-07 14:39:06.457
10	2	363822	Sugar	2807	2020-08-01	8421	3508.75	2020-08-01	2020	8	8421	2023-03-07 14:39:06.457
11	3	528145	Sugar	280	2020-12-01	840	350	2020-12-01	2020	12	840	2023-03-07 14:39:06.460
12	5	210209	Sugar	2747	2020-02-01	8241	3433.75	2020-02-01	2020	2	8241	2023-03-07 14:39:06.457
13	4	752965	Sugar	2729	2020-12-01	8187	3411.25	2020-12-01	2020	12	8187	2023-03-07 14:39:06.457
14	4	340032	Sugar	269	2019-10-01	807	336.25	2019-10-01	2019	10	807	2023-03-07 14:39:06.460
15	5	639651	Sugar	2689	2020-10-01	8067	3361.25	2020-10-01	2020	10	8067	2023-03-07 14:39:06.457
16	4	750389	Sugar	2682	2019-11-01	8046	3352.5	2019-11-01	2019	11	8046	2023-03-07 14:39:06.457
17	1	199727	Sugar	267	2019-10-01	801	333.75	2019-10-01	2019	10	801	2023-03-07 14:39:06.460
18	2	774130	Sugar	2663	2020-12-01	7989	3328.75	2020-12-01	2020	12	7989	2023-03-07 14:39:06.457
19	5	454417	Sugar	266	2019-12-01	798	332.5	2019-12-01	2019	12	798	2023-03-07 14:39:06.457