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IT471

Type 1 and 2 Changes – Project

Q1: Type 2 Change results

SQLQuery2.sql - (Adventureworks2008) - X

```
SELECT CASE WHEN dimDate.Date_Key < 20180817 THEN 'Dedham' ELSE 'Norwood' END AS Store, SUM(CASE WHEN dimDate.Date_Key < 20180817 THEN GrossSale ELSE 0 END) AS [Gross Sales Before],  
SUM(CASE WHEN dimDate.Date_Key >= 20180817 THEN GrossSale ELSE 0 END) AS [Gross Sales After]  
FROM dimDate INNER JOIN factSales ON dimDate.Date_Key = factSales.Date_Key INNER JOIN dimStore ON factSales.Store_Key = dimStore.Store_Key  
WHERE dimStore.StoreLocation = 'Dedham' or dimStore.StoreLocation='Norwood' GROUP BY CASE WHEN dimDate.Date_Key < 20180817 THEN 'Dedham' ELSE 'Norwood' END
```

Store	Gross Sales Before	Gross Sales After
1 Dedham	4802.00	0.00
2 Norwood	0.00	5808.00

Sum of Gross Sales						Qtr
Store Location						2018-Q1
						2018-Q2
						2018-Q3
						2018-Q4
						Grand Total
Boston						2576
Danvers						3173
Dedham						570
Pawtucket						2876
Norwood						2876
Grand Total						9195

Sum of Gross Sales						Qtr
Store Location						2018-Q1
						2018-Q2
						2018-Q3
						2018-Q4
						Grand Total
Boston						2576
Danvers						3173
Dedham						570
Pawtucket						2876
Norwood						2876
Grand Total						9195

- Do the results match?
 - No, the result does not match. Before I made the changes, the baseline table only showed the Dedham store. After making the changes the new pivot table shows that the store belongs to Norwood while also properly disrupting the tax revenue between Dedham and Norwood.
- With a Type 2, change, would the query need to have been written?
 - I do not think a query is necessary for a Type 2 change.
- Explain why this needs to be a Type 2 change and what problems could arise if a Type 1 change was used instead
 - A type 2 change is needed because the pivot table automatically reflected the correct result without any queries needed. With a Type 1 change you need to write a query to fix any issue. Overall, with the Type 2 change, we have made queries unnecessary, are able to track any changes in the scenario, and correctly report the tax revenue for each town

Q2: New Product launch

- Show screenshots from SQL Server with all rows that have been added or modified in each table

SKU_key	SKU	Description	SKUDescription	ProductCateg...
1	100100	Std. Scuba Tank, Yellow	100100 Std. Scu...	Diving Equipm...
2	100200	Std. Scuba Tank, Magenta	100200 Std. Scu...	Diving Equipm...
3	101100	Dive Mask, Large Clear	101100 Dive Ma...	Diving Equipm...
4	101200	Dive Mask, Med Clear	101200 Dive Ma...	Diving Equipm...
5	201000	Half-dome Tent	201000 Half-do...	Camping Equip...
6	202000	Half-dome Tent Vestibule	202000 Half-do...	Camping Equip...
7	301000	Light Fly Climbing Harness	301000 Light Fl...	Camping Equip...
8	302000	Locking Carabiner, Oval	302000 Locking...	Camping Equip...
9	204000	Toasting Sleeping Bag	204000 Toasty S...	Camping Equip...
10	204010	Fry 'em Cooking Stove	204010 Fry 'em ...	Camping Equip...
11	205042	Bigger Better Sleeping Bag	205042 Bigger B...	Camping Equip...
11	NULL	NULL	NULL	NULL

SKU_key	SalesDepartme...	Store_key	Warehouse_key	Date_key	Price	Quantity	GrossSale	Discount	DiscountPct	NetSale
5	1	3	1	20180914	136.0000	2	272.0000	41.0000	0.150735294117...	231.0000
5	1	1	1	20180620	50.0000	2	100.0000	18.0000	0.18	82.0000
5	1	1	4	20180128	327.0000	2	654.0000	0.0000	0	654.0000
11	1	4	1	20181002	59.0000	2	118.0000	0.0000	0	118.0000
4	3	1	4	20180503	122.0000	6	732.0000	27.0000	0.036885249901...	705.0000
4	3	1	4	20180829	77.0000	2	154.0000	5.0000	0.032467532467...	149.0000
4	3	3	3	20180311	100.0000	6	600.0000	94.0000	0.156666666666...	506.0000
4	3	3	3	20180708	40.0000	5	200.0000	18.0000	0.09	182.0000
4	3	3	3	20180110	50.0000	3	150.0000	34.0000	0.226666666666...	116.0000
6	1	1	3	20180209	115.0000	6	690.0000	205.0000	0.297101449275...	485.0000
11	3	1	1	20181224	68.0000	3	204.0000	38.0000	0.186274509803...	166.0000
4	3	1	3	20181024	60.0000	2	120.0000	0.0000	0	120.0000
6	1	4	1	20180128	40.0000	3	120.0000	13.0000	0.108333333333...	107.0000
2	3	4	1	20180819	118.0000	6	708.0000	115.0000	0.162429378531...	593.0000
6	1	4	4	20180806	63.0000	2	126.0000	4.0000	0.031746031746...	122.0000
6	1	4	4	20180410	300.0000	2	600.0000	13.0000	0.021666666666...	587.0000
6	1	5	4	20181208	78.0000	3	234.0000	46.0000	0.196581196581...	188.0000
6	1	4	4	20180410	52.0000	5	260.0000	7.0000	0.026923076923...	253.0000
11	1	5	4	20181109	115.0000	6	690.0000	109.0000	0.157971014492...	581.0000
11	1	5	2	20181013	158.0000	2	316.0000	72.0000	0.227848101265...	244.0000

- Show your baseline pivot table before the data was changed

SKU	Sum of Gross Sales	Sum of Discount	Sum of Net Sales
100200 Std. Scuba Tank, Magenta	11329	1374	9955
101100 Dive Mask, Large Clear	8798	740	8058
101200 Dive Mask, Med Clear	8614	745	7869
201000 Half-dome Tent	8620	1040	7580
202000 Half-dome Tent Vestibule	8800	1158	7642
204000 Toasty Sleeping Bag	2040	105	1935
204010 Fry 'em Cooking Stove	1225	60	1165
Grand Total	49426	5222	44204

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SKU	Sum of Gross Sales	Sum of Discount	Sum of Net Sales
100200 Std. Scuba Tank, Magenta	11329	1374	9955
101100 Dive Mask, Large Clear	8798	740	8058
101200 Dive Mask, Med Clear	8410	707	7703
201000 Half-dome Tent	8186	968	7218
202000 Half-dome Tent Vestibule	8110	1049	7061
204000 Toasty Sleeping Bag	2040	105	1935
204010 Fry 'em Cooking Stove	1225	60	1165
205042 Bigger Better Sleepignn Bag	1328	219	1109
Grand Total	49426	5222	44204

- Describe the changes and why there are differences
 - The main difference between the baseline table and new table is that the new product has been add to the new pivot table. There is also a change in dimSKU and factSales. In dimSKU

I made a new row where I added the new product. In factSales I changed some data because the product launched on Oct 2,

Q3: New Name

- Show screenshots from SQL Server with all rows that have been added or modified in each table

SKU_key	SKU	Description	SKUDescription	ProductCateq...
1	100100	Std. Scuba Tank, Yellow	100100 Std. Scu...	Diving Equipm...
2	100200	Std. Scuba Tank, Magenta	100200 Std. Scu...	Diving Equipm...
3	101100	Dive Mask, Large Clear	101100 Dive Ma...	Diving Equipm...
4	101200	Dive Mask, Med Clear	101200 Dive Ma...	Diving Equipm...
5	201000	Half-dome Tent	201000 Half-do...	Camping Equip...
6	202000	Half-dome Tent Vestibule	202000 Half-do...	Camping Equip...
7	301000	Light Fly Climbing Harness	301000 Light FL...	Camping Equip...
8	302000	Locking Carabiner, Oval	302000 Locking...	Camping Equip...
9	204000	Toasting Sleeping Bag	204000 Toasty S...	Camping Equip...
10	204010	Fry 'em Cooking Stove	204010 Fry 'em ...	Camping Equip...
11	205042	Bigger Better Sleeping Bag	205042 Bigger B...	Camping Equip...
12	205042	Bag O' Bear	205042 Bag O' ...	Camping Equip...
13	NULL	NULL	NULL	NULL

SKU_key	SalesDepartment...	Store_key	Warehouse_key	Date_key	Price	Quantity	GrossSale	Discount	DiscountPct	NetSale
5	1	3	1	20180914	136.0000	2	272.0000	41.0000	0.150735294117...	231.0000
5	1	3	1	20180920	50.0000	2	100.0000	10.0000	0.10	90.0000
5	1	1	4	20180128	327.0000	2	654.0000	0.0000	0	654.0000
11	1	4	1	20181002	58.0000	2	116.0000	0.0000	0	116.0000
4	3	1	4	20180503	122.0000	6	732.0000	27.0000	0.03688254991...	705.0000
4	3	1	4	20180820	77.0000	2	154.0000	5.0000	0.032467532467...	149.0000
4	3	3	3	20180311	100.0000	6	600.0000	94.0000	0.156666666666...	506.0000
4	3	3	3	20180708	40.0000	5	200.0000	18.0000	0.09	182.0000
4	3	3	3	20180710	50.0000	3	150.0000	16.0000	0.106666666666...	134.0000
6	1	1	3	20180209	115.0000	6	690.0000	205.0000	0.29701448272...	485.0000
12	3	1	1	20181024	68.0000	3	204.0000	38.0000	0.186274928632...	166.0000
4	3	1	3	20181024	60.0000	2	120.0000	0.0000	0	120.0000
6	1	4	1	20180128	40.0000	3	120.0000	13.0000	0.108333333333...	107.0000
2	3	4	1	20180819	118.0000	6	708.0000	115.0000	0.162420178531...	593.0000
6	1	4	4	20180826	63.0000	2	126.0000	4.0000	0.031746031746...	122.0000
6	1	4	4	20180410	380.0000	2	760.0000	13.0000	0.016923076923...	747.0000
6	1	5	4	20181208	78.0000	3	234.0000	48.0000	0.205128205128...	186.0000
6	1	4	4	20180410	52.0000	5	260.0000	7.0000	0.026923076923...	253.0000
12	1	3	4	20181106	110.0000	6	660.0000	108.0000	0.163636363636...	552.0000
12	1	5	2	20180910	158.0000	2	316.0000	72.0000	0.227848101385...	244.0000
4	3	4	4	20180323	55.0000	5	275.0000	0.0000	0	275.0000
4	3	5	4	20181119	40.0000	3	120.0000	11.0000	0.091666666666...	109.0000
3	3	5	1	20181201	124.0000	2	248.0000	46.0000	0.185191519151...	202.0000
3	3	4	1	20180829	49.0000	3	147.0000	28.0000	0.190476190476...	119.0000

- Show a screenshot of your baseline pivot table before the name change

SKU	Sum of Gross Sales	Sum of Discount	Sum of Net Sales
100200 Std. Scuba Tank, Magenta	11329	1374	9955
101100 Dive Mask, Large Clear	8798	740	8058
101200 Dive Mask, Med Clear	8410	707	7703
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204000 Toasty Sleeping Bag	2040	105	1935
204010 Fry 'em Cooking Stove	1225	60	1165
205042 Bigger Better Sleepinng Bag	118	0	118
205042 Bag O' Bear	1210	219	991
Grand Total	49426	5222	44204

- Draw a conclusion as to whether the name change was successful or not – results can vary depending on the data you entered
 - In conclusion, I think that the name change was successful. I created a new row where a change SKU_key, Description, and SKUDescription. Then I updated any SKU_key for that product after Oct 4, 2018. Now that the name has been

changed to Bag O' Bear, the sales are predicted to go up. Also, you are able to track and compare sales from before and after the name was changed.