Conforming Dimensions

Breitzman 11/19/2024

Inmon vs Kimball

- Included in this week's files is an article summarizing Inmon v. Kimball. I don't want to spend 20 minutes on it, so read it when you get the chance.

- One of their fundamental differences is that Inmon thinks everything needs to be planned out at the enterprise level

- Kimball argues that an Enterprise Data Warehouse is great, but it's cheaper and easier to build a bunch of data marts and then roll them up into the Enterprise Data Warehouse

- That's what we are doing (Kimball), and as a consequence we will have things that don't quite fit together. We fix that by **Conforming Dimensions**

Example

- Suppose I want to Roll up Sean's data mart with Johann's…

- Before I think about appending the Fact tables together I have to make sure they are the same structure (They are)

- But…
  - I have to also make sure they share they have the same dimension tables (they don't)
  - And make sure the keys to each dimension table represent the same records (they don't)
  - Fixing these types of inconsistencies is called conforming dimensions

- Note in Inmon's way of doing things these problems don't occur

Product Dimension Table

- I spent this weekend Conforming the Product Table to create a 'Conformed' Version that will work with all the Data Marts and will allow us to roll up the Data Marts into a single Data Warehouse

- Step 1: Make sure everyone has the same SKU and Product Names
  - Product names all matched except Group A had 300+ duplicates in Product Table (see next slide)
  - At the end of this step every Product table had 2075 rows and agreed on SKU and Product Name

Group A Gets Duplicates Because of Multiple Product Class IDs Mapping to Same Subcategory

ProductKey	SKU	ProductName	ProductClass ID	Subcategory	Category	Department	ProductFamily	BrandName	Manufacturer
5	42084001	Coffee Original Blend	90	Coffee	Hot Beverages	Beverages	Drink	Yuban	Yuban
4	42084001	Coffee Original Blend	7	Coffee	Dry Goods	Baking Goods	Drink	Yuban	Yuban
25	42104001	Tri-State Asparagus	13	Fresh Vegetables	Vegetables	Produce	Food	Tri-State	Tri-State
26	42104001	Tri-State Asparagus	61	Fresh Vegetables	Vegetables	Produce	Food	Tri-State	Tri-State
27	42105001	Tri-State Baby Onion	13	Fresh Vegetables	Vegetables	Produce	Food	Tri-State	Tri-State
28	42105001	Tri-State Baby Onion	61	Fresh Vegetables	Vegetables	Produce	Food	Tri-State	Tri-State
29	42106001	Tri-State Beets	13	Fresh Vegetables	Vegetables	Produce	Food	Tri-State	Tri-State
30	42106001	Tri-State Beets	61	Fresh Vegetables	Vegetables	Produce	Food	Tri-State	Tri-State
252	42279001	Coffee Blonde Veranda	90	Coffee	Hot Beverages	Beverages	Drink	Starbucks	Starbucks
251	42279001	Coffee Blonde Veranda	7	Coffee	Dry Goods	Baking Goods	Drink	Starbucks	Starbucks
253	42280001	Coffee Breakfast Blend	7	Coffee	Dry Goods	Baking Goods	Drink	Starbucks	Starbucks
254	42280001	Coffee Breakfast Blend	90	Coffee	Hot Beverages	Beverages	Drink	Starbucks	Starbucks
372	42365001	Red Wing Counter Cleaner	21	Cleaners	Cleaning Supplies	Household	Non-Consumable	Red Wing	Red Wing
373	42365001	Red Wing Counter Cleaner	22	Cleaners	Cleaning Supplies	Household	Non-Consumable	Red Wing	Red Wing
374	42366001	Red Wing Glass Cleaner	21	Cleaners	Cleaning Supplies	Household	Non-Consumable	Red Wing	Red Wing
375	42366001	Red Wing Glass Cleaner	22	Cleaners	Cleaning Supplies	Household	Non-Consumable	Red Wing	Red Wing
377	42368001	Red Wing Toilet Bowl Cleaner	21	Cleaners	Cleaning Supplies	Household	Non-Consumable	Red Wing	Red Wing
378	42368001	Red Wing Toilet Bowl Cleaner	22	Cleaners	Cleaning Supplies	Household	Non-Consumable	Red Wing	Red Wing
408	42398001	Mocha Coffee	7	Coffee	Dry Goods	Baking Goods	Drink	Private Selection	Private Selection
409	42398001	Mocha Coffee	90	Coffee	Hot Beverages	Beverages	Drink	Private Selection	Private Selection
596	42585001	Anniversary Blend Coffee	7	Coffee	Dry Goods	Baking Goods	Drink	Peets	Peets
597	42585001	Anniversary Blend Coffee	90	Coffee	Hot Beverages	Beverages	Drink	Peets	Peets
598	42586001	Cafe Domingo Coffee	7	Coffee	Dry Goods	Baking Goods	Drink	Peets	Peets
599	42586001	Cafe Domingo Coffee	90	Coffee	Hot Beverages	Beverages	Drink	Peets	Peets
600	42587001	Cafe Solano Coffee	7	Coffee	Dry Goods	Baking Goods	Drink	Peets	Peets
601	42587001	Cafe Solano Coffee	90	Coffee	Hot Beverages	Beverages	Drink	Peets	Peets
602	42588001	Colombian Coffee	7	Coffee	Dry Goods	Baking Goods	Drink	Peets	Peets
603	42588001	Colombian Coffee	90	Coffee	Hot Beverages	Beverages	Drink	Peets	Peets
605	42589001	French Roast Coffee	90	Coffee	Hot Beverages	Beverages	Drink	Peets	Peets
604	42589001	French Roast Coffee	7	Coffee	Dry Goods	Baking Goods	Drink	Peets	Peets
606	42590001	House Blend Coffee	7	Coffee	Dry Goods	Baking Goods	Drink	Peets	Peets
607	42590001	House Blend Coffee	90	Coffee	Hot Beverages	Beverages	Drink	Peets	Peets
608	42591001	House Blend Decaf Coffee	7	Coffee	Dry Goods	Baking Goods	Drink	Peets	Peets
609	42591001	House Blend Decaf Coffee	90	Coffee	Hot Beverages	Beverages	Drink	Peets	Peets
610	42592001	Major Dickason Coffee	7	Coffee	Dry Goods	Baking Goods	Drink	Peets	Peets
611	42592001	Major Dickason Coffee	90	Coffee	Hot Beverages	Beverages	Drink	Peets	Peets
612	42593001	Major Dickason Decaf Coffee	7	Coffee	Dry Goods	Baking Goods	Drink	Peets	Peets
613	42593001	Major Dickason Decaf Coffee	90	Coffee	Hot Beverages	Beverages	Drink	Peets	Peets
614	42594001	Medium Brazil Monte Alegre Co	7	Coffee	Dry Goods	Baking Goods	Drink	Peets	Peets
615	42594001	Medium Brazil Monte Alegre Co	90	Coffee	Hot Beverages	Beverages	Drink	Peets	Peets
666	42645001	Coffee Aztec Blend Medium	7	Coffee	Dry Goods	Baking Goods	Drink	O Organics	O Organics
667	42645001	Coffee Aztec Blend Medium	90	Coffee	Hot Beverages	Beverages	Drink	O Organics	O Organics
668	42646001	Coffee Columbian Excelso	7	Coffee	Dry Goods	Baking Goods	Drink	O Organics	O Organics
669	42646001	Coffee Columbian Excelso	90	Coffee	Hot Beverages	Beverages	Drink	O Organics	O Organics
670	42647001	Coffee French Roast Dark	7	Coffee	Dry Goods	Baking Goods	Drink	O Organics	O Organics
671	42647001	Coffee French Roast Dark	90	Coffee	Hot Beverages	Beverages	Drink	O Organics	O Organics
672	42648001	Coffee Guatemalan	7	Coffee	Dry Goods	Baking Goods	Drink	O Organics	O Organics
673	42648001	Coffee Guatemalan	90	Coffee	Hot Beverages	Beverages	Drink	O Organics	O Organics

Product Keys

- Better Than Usual

- B and C matched with each other. A did not. We'll go with B and C's version which runs 1 to 2075

AProductKey	BProductKey	CProductKey	SKU	ProductName	AProducts.subc	BProducts.subc	CProducts.sub
1	1	1	42081001	Jambalaya Rice Mix	Rice	Rice	Rice
2	2	2	42082001	Jambalaya Rice Mix	Rice	Rice	Rice
3	3	3	42083001	Guacamole Regular	Baby Food	Dips	Dips
4	4	4	42084001	Coffee Original Blend	Coffee	Coffee	Coffee
6	5	5	42085001	GoGurt Variety Pack	Yogurt	Yogurt	Yogurt
7	6	6	42086001	Italian Dressing	Deli Salads	Sauces	Sauces
8	7	7	42087001	Cheeseburger Heat & Serve Sliders	Cottage Cheese	Frozen Snacks	TV Dinner
9	8	8	42088001	Choice Cuts Poultry	Pet Food	Pet Food	Pet Food
10	9	9	42089001	Farmers Pick Concord Grape	Baby Food	Juice	Flavored Drinks
11	10	10	42090001	Juice Red Grape	Juice	Juice	Juice
12	11	11	42091001	Cereal Whole Grain Biscuit	Cereal	Cereal	Cereal
13	12	12	42092001	Shells & Cheese Microwave Cup	Cheese	Pasta	Pasta
14	13	13	42093001	Shells & Cheese Original	Cheese	Pasta	Pasta
15	14	14	42094001	Splash Berry Blend	Juice	Juice	Juice
16	15	15	42095001	Splash Mango Peach	Juice	Juice	Juice
17	16	16	42096001	V-Fusion Berry	Juice	Juice	Juice
18	17	17	42097001	V-Fusion Pomegranate Blueberry	Juice	Juice	Juice
19	18	18	42098001	V-Fusion Refreshers Peach Strawbe	Juice	Juice	Juice
20	19	19	42099001	Whole Grain Original Cereal	Cereal	Cereal	Cereal
21	20	20	42100001	Iced Tea Lemon	Baby Food	Flavored Drinks	Flavored Drinks
22	21	21	42101001	Orange Juice Some Pulp	Juice	Juice	Juice
23	22	22	42102001	Trop50 Calcium	Juice	Juice	Juice
24	23	23	42103001	Tri-State Almonds	Nuts	Nuts	Nuts
25	24	24	42104001	Tri-State Asparagus	Fresh Vegetable	Fresh Vegetable	Fresh Vegetab
27	25	25	42105001	Tri-State Baby Onion	Fresh Vegetable	Fresh Vegetable	Fresh Vegetab
29	26	26	42106001	Tri-State Beets	Fresh Vegetable	Fresh Vegetable	Fresh Vegetab
31	27	27	42107001	Tri-State Broccoli	Fresh Vegetable	Fresh Vegetable	Fresh Vegetab
33	28	28	42108001	Tri-State Canned Peanuts	Nuts	Nuts	Nuts
34	29	29	42109001	Tri-State Cantelope	Fresh Fruit	Fresh Fruit	Fresh Fruit
35	30	30	42110001	Tri-State Cauliflower	Fresh Vegetable	Fresh Vegetable	Fresh Vegetab
37	31	31	42111001	Tri-State Corn on the Cob	Fresh Vegetable	Fresh Vegetable	Fresh Vegetab
39	32	32	42112001	Tri-State Dried Mushrooms	Fresh Vegetable	Fresh Vegetable	Fresh Vegetab
41	33	33	42113001	Tri-State Elephant Garlic	Fresh Vegetable	Fresh Vegetable	Fresh Vegetab
43	34	34	42114001	Tri-State Fancy Plums	Fresh Fruit	Fresh Fruit	Fresh Fruit

2021 Class Product Keys

SKU	Brendan_ProdKey	Brian_ProdKey	John_ProdKey	Trim_ProdKey
42092001	10	12	12	12
42159001	100	79	79	79
43103001	1000	1018	1018	1018
43104001	1001	1019	1019	1019
43105001	1002	1020	1020	1020
43106001	1003	1021	1021	1021
43107001	1004	1022	1022	1022
43108001	1005	1023	1023	1023
43108001	1006	1023	1023	1023
43109001	1007	1024	1024	1024
43109001	1008	1024	1024	1024
43110001	1009	1025	1025	1025
42160001	101	80	80	80
43111001	1010	1026	1026	1026
43111001	1011	1026	1026	1026
43112001	1012	1027	1027	1027
43112001	1013	1027	1027	1027
43113001	1014	1028	1028	1028
43113001	1015	1028	1028	1028
43114001	1016	1029	1029	1029
43114001	1017	1029	1029	1029
43115001	1018	1030	1030	1030
43115001	1019	1030	1030	1030
42161001	102	81	81	81
43116001	1020	1031	1031	1031
43116001	1021	1031	1031	1031
43117001	1022	1032	1032	1032
43118001	1023	1033	1033	1033
43118001	1024	1033	1033	1033
43119001	1025	1034	1034	1034
43120001	1026	1035	1035	1035
43120001	1027	1035	1035	1035

- 4 Different Data Marts. 2 Different Product Keys
- Next round the ETL team will need to conform these
- This is better than previous year. See next slide

Data Warehousing Spring 2019 Product Keys

SKU	KevinProductKey	PatrickProductKey	ThomasProductKey	RussProductKey
42081001	0001	1	1481	2083
42082001	0002	2	1482	2084
42083001	0003	3	1187	2155
42084001	0004	4	1483	1419
42085001	0005	5	1	100
42086001	0006	6	1484	2070
42087001	0007	7	1188	1982
42088001	0008	8	2	2154
42089001	0009	9	1189	2063
42090001	0010	10	3	101
42091001	0011	11	4	102
42092001	0012	12	1485	2152
42093001	0013	13	1486	2153
42094001	0014	14	5	103
42095001	0015	15	6	104
42096001	0016	16	7	105
42097001	0017	17	8	106
42098001	0018	18	9	107
42099001	0019	19	10	108
42100001	0020	20	1190	2012
42101001	0021	21	11	109
42102001	0022	22	12	110
42103001	0023	23	13	111
42104001	0024	24	14	112

- 4 Different Data Marts. 4 Different Product Keys
- In this case the ETL Team would have to build a map to match and standardize these

Already Conforming Fields

- Everyone's table agrees on the following
  - SKU
  - Product Name
  - Brand Name
  - Size
  - # Per Case

- To determine that we need at least 5 queries with multiple If statements (if [TeamA]![Products]<>[TeamB]![Products] etc)

Suppliers Don't Always Match

- Group A changed anything containing 'milk' to Rowan Dairy

SKU	ProductName	AProducts.Supplier	BProducts.Supplier	CProducts.Supplier
42157001	Thresher Malted Milk Balls	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
42242001	Hot Cocoa Mix Milk Chocolate	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
42243001	Hot Cocoa Mix Milk Chocolate Canister	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
42244001	Hot Cocoa Mix Milk Chocolate No Sugar Added	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
42304001	Soy Milk Vanilla	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
42318001	Almond Milk Original	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
42319001	Soymilk Light Chocolate	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
42480001	Grands Biscuits Buttermilk	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
42481001	Grands Biscuits Flaky Layers Buttermilk	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
42482001	Grands Biscuits Southern Homestyle Buttermilk	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
42483001	Grands Biscuits Southern Homestyle Buttermilk	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
42484001	Grands Junior Biscuits Flaky Layers Buttermilk	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
42511001	Evaporated Milk Original	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
42660001	Hot Cocoa Mix Milk Chocolate	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
42662001	Milk Banana Strawberry	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
42719001	Musial Malted Milk Balls	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
42854001	American Singles 2% Milk	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
42877001	Eggo Pancakes Buttermilk	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
42882001	Eggo Waffles Buttermilk	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
43182001	Gulf Coast Malted Milk Balls	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
43191001	Coconut Milk Original	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
43778001	Choice Malted Milk Balls	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
43828001	Original Malted Milk Drink Mix	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
43894001	Condensed Milk Sweetened	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
44112001	Atomic Malted Milk Balls	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
44121001	Coconut Milk Lite	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
44148001	Almond Milk Original	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
44149001	Almond Milk Unsweetened	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
44150001	Almond Milk Vanilla	Rowan Dairy	Rowan Warehouse	Rowan Warehouse
44159001	Coconut Milk Unsweetened	Rowan Dairy	Rowan Warehouse	Rowan Warehouse

Suppliers Match

- (Last year one team decided to use Harvard Warehouse instead of Rowan Warehouse. – It's funny until you're on an ETL team!)

- Better than Previous year. See next slide

Last Year. Suppliers Match – when they exist!
Compare to previous year; next slide

SKU	ProductName	john_supplier	Trim_supplier	Brendan_supplier	Brian_supplier
42355001	1.00% Milk	Rowan Dairy	Rowan Dairy		
42360001	Whole Milk Milk	Rowan Dairy	Rowan Dairy		
42359001	Whole Milk Milk	Rowan Dairy	Rowan Dairy		
42358001	2.00% Milk	Rowan Dairy	Rowan Dairy		
42357001	2.00% Milk	Rowan Dairy	Rowan Dairy		
42356001	1.00% Milk	Rowan Dairy	Rowan Dairy		
42772001	Coffee Medium Original	Rowan Warehouse	Rowan Warehouse		
42768001	Coffee Medium Gourmet	Rowan Warehouse	Rowan Warehouse		
42775001	Coffee Medium Original Decaf	Rowan Warehouse	Rowan Warehouse		
42774001	Coffee Medium Original Decaf	Rowan Warehouse	Rowan Warehouse		
42774001	Coffee Medium Original Decaf	Rowan Warehouse	Rowan Warehouse		
42773001	Coffee Medium Original	Rowan Warehouse	Rowan Warehouse		
42776001	Coffee Medium Vanilla	Rowan Warehouse	Rowan Warehouse		
42772001	Coffee Medium Original	Rowan Warehouse	Rowan Warehouse		
42776001	Coffee Medium Vanilla	Rowan Warehouse	Rowan Warehouse		
42771001	Coffee Medium Lite	Rowan Warehouse	Rowan Warehouse		
42771001	Coffee Medium Lite	Rowan Warehouse	Rowan Warehouse		
42770001	Coffee Medium Lite	Rowan Warehouse	Rowan Warehouse		
42770001	Coffee Medium Lite	Rowan Warehouse	Rowan Warehouse		
42769001	Coffee Medium House Blend	Rowan Warehouse	Rowan Warehouse		
42892001	Eggo Waffles Oats & Mixed Berrie	Rowan Warehouse	Rowan Warehouse		
42773001	Coffee Medium Original	Rowan Warehouse	Rowan Warehouse		
42780001	Coffee One Love Ethpia Yirgchfe M	Rowan Warehouse	Rowan Warehouse		
42788001	With Ultra Leakguards Size 4	Rowan Warehouse	Rowan Warehouse		
42894001	Eggo Waffles Thick & Fluffy Cinnai	Rowan Warehouse	Rowan Warehouse		
42787001	With Ultra Leakguards Size 4	Rowan Warehouse	Rowan Warehouse		
42786001	With Ultra Leakguards Size 3	Rowan Warehouse	Rowan Warehouse		
42785001	With Ultra Leakguards Size 3	Rowan Warehouse	Rowan Warehouse		
42775001	Coffee Medium Original Decaf	Rowan Warehouse	Rowan Warehouse		
42781001	Coffee Talking Blue Medium	Rowan Warehouse	Rowan Warehouse		

A Fair Amount of Disagreement on Suppliers
Spring 2019 Class
This is why we check!

product_name	KevinSupplier	PatrickSupplier	ThomasSupplier	RussSupplier
Soy Milk Vanilla	Rowan Dairy	Rowan Warehouse	Rowan Warehouse	Rowan Dairy
Almond Milk Original	Rowan Dairy	Rowan Warehouse	Rowan Warehouse	Rowan Dairy
Soymilk Light Chocolate	Rowan Warehouse	Rowan Warehouse	Rowan Warehouse	Rowan Dairy
1.00% Milk	Rowan Dairy	Rowan Dairy	Rowan Warehouse	Rowan Dairy
1.00% Milk	Rowan Dairy	Rowan Dairy	Rowan Warehouse	Rowan Dairy
2.00% Milk	Rowan Dairy	Rowan Dairy	Rowan Warehouse	Rowan Dairy
2.00% Milk	Rowan Dairy	Rowan Dairy	Rowan Warehouse	Rowan Dairy
Whole Milk Milk	Rowan Dairy	Rowan Dairy	Rowan Warehouse	Rowan Dairy
Whole Milk Milk	Rowan Dairy	Rowan Dairy	Rowan Warehouse	Rowan Dairy
Evaporated Milk Original	Rowan Dairy	Rowan Dairy	Rowan Warehouse	Rowan Dairy
Carnation Reduced Fat	Rowan Dairy	Rowan Dairy	Rowan Warehouse	Rowan Dairy
American Singles 2% Milk	Rowan Dairy	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Coconut Milk Original	Rowan Dairy	Rowan Warehouse	Rowan Warehouse	Rowan Dairy
Gorilla Cheese Spread	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Gorilla Havarti Cheese	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Gorilla Head Cheese	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Gorilla Jack Cheese	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Gorilla Low Fat String Cheese	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Gorilla Mild Cheddar Cheese	Rowan Warehouse	Rowan Warehouse	Rowan Class	Rowan Warehouse
Gorilla Muenster Cheese	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Gorilla Sharp Cheddar Cheese	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Gorilla String Cheese	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Even Better Cheese Spread	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Even Better Havarti Cheese	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Even Better Head Cheese	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Even Better Jack Cheese	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Even Better Low Fat String Cheese	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Even Better Mild Cheddar Cheese	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Even Better Muenster Cheese	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Even Better Sharp Cheddar Cheese	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Surehouse
Even Better String Cheese	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Club Cheese Spread	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Club Havarti Cheese	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Club Head Cheese	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Club Jack Cheese	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Club Low Fat String Cheese	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Club Mild Cheddar Cheese	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Club Muenster Cheese	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Club Sharp Cheddar Cheese	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Club String Cheese	Rowan Warehouse	Rowan Warehouse	Rowan Dairy	Rowan Warehouse
Original Malted Milk Drink Mix	Rowan Warehouse	Rowan Warehouse	Rowan Warehouse	Rowan Dairy

Subcategories

- 654 of 2,075 products have at least one disagreement on subcategory

- That's awful, but better than the first time I did the class: 965 Fall 2017 but not as good as the 444 in Spring 2019

- What does this mean? It means if the CEO asked us to compute sales of Eggs, or Waffles, or Cookies, or Cereal or many other categories, the results would be wrong.

Subcategories: A few of the disagreements

SKU	ProductName	AProducts.subcategory	BProducts.subcategory	CProducts.subcategory
42083001	Guacamole Regular	Baby Food	Dips	Dips
42086001	Italian Dressing	Deli Salads	Sauces	Sauces
42087001	Cheeseburger Heat & Serve Sliders	Cottage Cheese	Frozen Snacks	TV Dinner
42089001	Farmers Pick Concord Grape	Baby Food	Juice	Flavored Drinks
42092001	Shells & Cheese Microwave Cup	Cheese	Pasta	Pasta
42093001	Shells & Cheese Original	Cheese	Pasta	Pasta
42100001	Iced Tea Lemon	Baby Food	Flavored Drinks	Flavored Drinks
42164001	Bagel Thins 100% Whole Wheat	Baby Food	Bagels	Bagels
42177001	English Muffins Double Fiber Honey Wheat	Muffins	Muffins	Bagels
42178001	English Muffins Hearty Grains 100% Whole W	Muffins	Muffins	Bagels
42229001	Cake Dreamies Creme Kakes	Baby Food	Snack Pastry	Donuts
42230001	Cake Kandy Kake Peanut Butter	Peanut Butter	Snack Pastry	Donuts
42241001	Hot Cocoa Mix Marshmallows	Baby Food	Chocolate	Chocolate
42242001	Hot Cocoa Mix Milk Chocolate	Soda	Chocolate	Chocolate
42243001	Hot Cocoa Mix Milk Chocolate Canister	Soda	Chocolate	Chocolate
42263001	Sunny Delight Original	Deli Meats	Flavored Drinks	Flavored Drinks
42264001	Orange Citrus Punch Smooth	Baby Food	Flavored Drinks	Flavored Drinks
42270001	Stuffing Mix Pork	Baby Food	Pancake Mix	Spices
42271001	Lasagna With Meat And Sauce Pasta	Frozen Vegetables	TV Dinner	Sauces
42272001	Sandwich Steaks Thin Sliced	Sliced Bread	Frozen Snacks	Hot Dogs
42305001	Baby Lotion Original	Baby Food	Conditioner	Shampoo
42313001	Jelly Grape	Jelly	Jam	Jelly
42363001	Honey Wheat Rods Pretzels	Sauces	Pretzels	Crackers
42368001	Red Wing Toilet Bowl Cleaner	Cleaners	Toilet Brushes	Cleaners
42480001	Grands Biscuits Buttermilk	Milk	Snack Pastry	Pancake Mix
42481001	Grands Biscuits Flaky Layers Buttermilk	Milk	Snack Pastry	Pancake Mix
42482001	Grands Biscuits Southern Homestyle Butterm	Milk	Snack Pastry	Pancake Mix
42483001	Grands Biscuits Southern Homestyle Butterm	Milk	Snack Pastry	Pancake Mix
42531001	Goldfish Blasted Burstin BBQ	Fresh Fish	Crackers	Crackers
42532001	Goldfish Blasted Cheddar	Fresh Fish	Crackers	Crackers
42533001	Goldfish Blasted Slammin Sour Cream & Onio	Sour Cream	Crackers	Crackers
42534001	Goldfish Blasted Xplosive Pizza	Pizza	Crackers	Crackers
42690001	Chips Ahoy Cookies Chewy Chocolate Chip	Chips	Cookies	Cookies
42691001	Chips Ahoy Cookies Chewy Chocolate Chip	Chips	Cookies	Cookies
42847001	Bread Crumbs Italian Style	Sliced Bread	Spices	Sliced Bread
42855001	Cool Whip Regular	Baby Food	Dips	Cheese
42883001	Eggo Waffles Chocolatey Chip	Frozen Vegetables	Waffles	Sauces
42884001	Eggo Waffles Cinnamon Toast Mini	Frozen Vegetables	Waffles	Sauces
42885001	Eggo Waffles Gluten Free Original	Frozen Vegetables	Waffles	Sauces
42886001	Eggo Waffles Homestyle	Frozen Vegetables	Waffles	Sauces
42971001	Muffin Mix Corn	Baby Food	Baking Mixes	Sugar
42972001	Muffin Mix Corn	Baby Food	Baking Mixes	Sugar
43698001	French Vanilla Coffee	Coffee	Coffee	Jelly
43699001	Hazelnut Coffee	Coffee	Coffee	Jelly
43700001	Original Blend Coffee	Coffee	Coffee	Jelly

Subcategories

- Before we laugh at these teams, we should keep in mind that every time I do this exercise we get silly errors.

- So we are nowhere near being able to roll up all of the datamarts into a single data warehouse.

- This is not unexpected though…

Last Time: A few of the disagreements

SKU	manufacturer	product_name	Team C	Team A	Team B
42731001	Motrin Infant	Pain Reliever/Fever Reducer Original Berry	Aspirin	Ibuprofen	Cold Remedies
43287001	Gerber Good Start	Formula Soy Concentrate	Baby Food	Baby Food	Condiments
43256001	Gerber Graduates	Cookies Arrowroot	Baby Food	Baby Food	Cookies
43339001	Gerber	Stage 2 Mac & Cheese With Vegetables	Baby Food	Baby Food	Pasta
42815001	Lenders	Bagels Cinnamon Raisin Swirl	Bagels	Bagels	Sliced Bread
42376001	Red Spade	Red Spade Pimento Loaf	Bologna	Deli Meats	Bologna
42744001	Moms	Moms Pimento Loaf	Bologna	Deli Meats	Bologna
43728001	Cutting Edge	Cutting Edge Pimento Loaf	Bologna	Deli Meats	Bologna
42915001	Kelloggs	Nutri Grain Strawberry Cereal Bars	Breakfast Bars	Breakfast Bars	Cereal
42914001	Kelloggs	Nutri Grain Raspberry Cereal Bars	Breakfast Bars	Breakfast Bars	Cereal
42913001	Kelloggs	Nutri Grain Mixed Berry Cereal Bars	Breakfast Bars	Breakfast Bars	Cereal
42911001	Kelloggs	Nutri Grain Fruit Crunch Apple Cobbler Granola Bar	Breakfast Bars	Breakfast Bars	Cereal
42910001	Kelloggs	Nutri Grain Chocolatey Crunch Granola Bar	Breakfast Bars	Breakfast Bars	Cereal
42918001	Kelloggs	Nutri-Grain Harvest Strawberry Fruit & Oat Bars	Breakfast Bars	Breakfast Bars	Cereal
42917001	Kelloggs	Nutri Grain Toffee Crunch Bar	Breakfast Bars	Breakfast Bars	Cereal
42916001	Kelloggs	Nutri Grain Strawberry Vanilla Fruit Yogurt Bar	Breakfast Bars	Breakfast Bars	Cereal
43606001	Entenmanns	Chewy Chocolate Chip Cereal Bar	Breakfast Bars	Breakfast Bars	Donuts
42794001	Little Debbie	Bars Nutty	Breakfast Bars	Cookies	Donuts
42793001	Little Debbie	Bars Marshmallow Treat	Breakfast Bars	Cookies	Donuts
42631001	Oregon	Blueberries In Light Syrup	Canned Fruit	Canned Fruit	Sugar
42730001	Motts	Applesauce Cinnamon	Canned Fruit	Fresh Fruit	Sauces
43789001	Chef Boyardee	Beefaroni Whole Grain	Canned Vegetables	Soup	Soup
43791001	Chef Boyardee	Ravioli Beef	Canned Vegetables	Soup	Soup
43403001	General Mills	Fiber One Strawberry Streusel Bar	Cereal	Breakfast Bars	Cereal
43402001	General Mills	Fiber One Blueberry Streusel Bar	Cereal	Breakfast Bars	Cereal
42942001	Kelloggs	Special K Strawberry Cereal Bars	Cereal	Breakfast Bars	Cereal
42934001	Kelloggs	Special K Chocolatey Pretzel Cereal Bars	Cereal	Breakfast Bars	Cereal
42336001	Safeway Kitchens	Bran Flakes Cereal	Cereal	Cereal	Sliced Bread
42347001	Safeway Kitchens	Crispy Rice Cereal	Cereal	Cereal	Sliced Bread
42348001	Safeway Kitchens	Honey Nut Toasted Oats Cereal	Cereal	Cereal	Sliced Bread
42346001	Safeway Kitchens	Corn Flakes Cereal	Cereal	Cereal	Sliced Bread
43531001	Food For Life	Ezekiel 4:9 Cereal Golden Flax	Cereal	Cereal	Sliced Bread
43530001	Food For Life	Ezekiel 4:9 Cereal Almond	Cereal	Cereal	Sliced Bread

Last Time: A few of the disagreements

SKU	manufacturer	product_name	Team C	Team A	Team B
43006001	Idahoan	Mashed Potatoes Four Cheese	Cheese	Dehydrated Soup	Frozen Vegetables
44105001	Barber	Chicken Breast Stuffed Broccoli & Cheese	Cheese	Frozen Chicken	Frozen Chicken
42875001	Kelloggs	Eggo Breakfast Sandwiches Bacon Egg & Cheese	Cheese	Frozen Chicken	Pancakes
42856001	Kraft	Deluxe Mac & Cheese Four Cheese	Cheese	Pasta	Pasta
42857001	Kraft	Mac & Cheese Southwest Chipotle	Cheese	Pasta	Pasta
42093001	Velveeta	Shells & Cheese Original	Cheese	Pasta	Pasta
42092001	Velveeta	Shells & Cheese Microwave Cup	Cheese	Pasta	Pasta
43964001	Betty Crocker	Hamburger Helper Cheddar Cheese Melt	Cheese	Pasta	Pasta
43979001	Betty Crocker	Hamburger Helper Three Cheese	Cheese	Pasta	Pasta
43973001	Betty Crocker	Hamburger Helper Four Cheese Lasagna	Cheese	Pasta	Pasta
43776001	Classico	Pasta Sauce Four Cheese	Cheese	Sauces	Sauces
42931001	Kelloggs	Special K Chocolate Carmel Pastry Crisps	Chips	Breakfast Bars	Cereal
42929001	Kelloggs	Special K Brown Sugar Cinnamon Pastry Crisps	Chips	Breakfast Bars	Cereal
42928001	Kelloggs	Special K Blueberry Pastry Crisps	Chips	Breakfast Bars	Cereal
42927001	Kelloggs	Special K Berry Pastry Crisps	Chips	Breakfast Bars	Cereal
42943001	Kelloggs	Special K Strawberry Pastry Crisps	Chips	Breakfast Bars	Cereal
42935001	Kelloggs	Special K Delight Chocolatey Pastry Crisps	Chips	Breakfast Bars	Cereal
42715001	Nabisco	Wheat Thins Toasted Chips Multigrain	Chips	Crackers	Sliced Bread
42716001	Nabisco	Wheat Thins Toasted Chips Veggie	Chips	Crackers	Sliced Bread
43412001	Frito Lay	Doritos Jacked Ranch Dipped Hot Wings	Chips	Dips	Chips
43491001	Frito Lay	Tostitos Simply Organic Yellow Corn	Chips	Dips	Chips
43490001	Frito Lay	Tostitos Simply Organic Scoops	Chips	Dips	Chips
43488001	Frito Lay	Tostitos Simply Organic Black Bean	Chips	Dips	Sauces
43489001	Frito Lay	Tostitos Simply Organic Salsa Chunky Medium	Chips	Dips	Sauces
42300001	Starbucks	Hot Cocoa Mix Salted Caramel	Chocolate	Chocolate	Condiments
42301001	Starbucks	Hot Cocoa Mix Vanilla Brulee	Chocolate	Chocolate	Condiments
42660001	Nestle	Hot Cocoa Mix Milk Chocolate	Chocolate	Chocolate	Flavored Drinks
43192001	Got Milk	Flavor Straws Chocolate	Chocolate	Chocolate	Flavored Drinks
42238001	Tastykake	Pie Chocolate Klair	Chocolate	Pastries	Donuts
42233001	Tastykake	Cupcakes Chocolate	Chocolate	Pastries	Donuts
42241001	Swiss Miss	Hot Cocoa Mix Marshmallows	Chocolate Candy	Chocolate	Chocolate

2019: A few of the disagreements

SKU	manufacturer	product_name	Team C	Team A	Team B
43062001	Horatio	Horatio Graham Crackers	Crackers	Cookies	Cookies
42682001	Nationeel	Nationeel Graham Crackers	Crackers	Cookies	Cookies
42533001	Pepperidge Farm	Goldfish Blasted Slammin Sour Cream & Onion	Crackers	Crackers	Chips
42530001	Pepperidge Farm	Goldfish Baby Cheddar	Crackers	Crackers	Chips
42532001	Pepperidge Farm	Goldfish Blasted Cheddar	Crackers	Crackers	Chips
42534001	Pepperidge Farm	Goldfish Blasted Xplosive Pizza	Crackers	Crackers	Chips
42535001	Pepperidge Farm	Goldfish Blasted Xtra Cheddar	Crackers	Crackers	Chips
42717001	Nabisco	Wheat Thins Toasted Pita Garlic Herb	Crackers	Crackers	Sliced Bread
42714001	Nabisco	Wheat Thins Sundried Tomato & Basil	Crackers	Crackers	Sliced Bread
42270001	Stove Top	Stuffing Mix Pork	Deli Meats	Baking Mix	Dried Meat
43423001	Frito Lay	Lays Dip French Onion	Dips	Dips	Chips
43424001	Frito Lay	Lays Dip Ranch	Dips	Dips	Chips
43180001	Hawaiian Punch	Aloha Morning Orange Citrus	Flavored Drinks	Flavored Drinks	Juice
43179001	Hawaiian Punch	Aloha Morning Mixed Berry	Flavored Drinks	Flavored Drinks	Juice
43738001	Country Time	Lemonade Yellow	Flavored Drinks	Flavored Drinks	Juice
43851001	Campbells	Chicken Noodle Low Sodium	Frozen Chicken	Soup	Soup
43752001	College Inn	FF & LS Broth Chicken	Frozen Chicken	Soup	Soup
43962001	Betty Crocker	Hamburger Helper Bacon Cheeseburger	Hamburger	Pasta	Pasta
43965001	Betty Crocker	Hamburger Helper Cheeseburger Macaroni	Hamburger	Pasta	Pasta
43966001	Betty Crocker	Hamburger Helper Cheesy Enchilada	Hamburger	Pasta	Pasta
43967001	Betty Crocker	Hamburger Helper Cheesy Italian Shells	Hamburger	Pasta	Pasta
43968001	Betty Crocker	Hamburger Helper Chili Macaroni	Hamburger	Pasta	Pasta
43969001	Betty Crocker	Hamburger Helper Crunchy Taco	Hamburger	Pasta	Pasta
44157001	Aidells	Meatballs Sundried Tomato	Hamburger	TV Dinner	Frozen Chicken
44155001	Aidells	Meatballs Caramelized Onion	Hamburger	TV Dinner	Frozen Chicken
43719001	Del Monte	Fruit Burst Squeezers Mixed Berry	Juice	Fresh Fruit	Canned Fruit
43720001	Del Monte	Pear Halves In 100% Juice	Juice	Juice	Canned Fruit
42644001	Ocean Spray	Sparkling Juice Cranberry	Juice	Juice	Condiments
42643001	Ocean Spray	Juice White Grapefruit	Juice	Juice	Condiments
42642001	Ocean Spray	Juice Grape Cranberry	Juice	Juice	Condiments
42641001	Ocean Spray	Juice Citrus Tangerine Orange Juice	Juice	Juice	Condiments
42640001	Ocean Spray	Juice Cherry	Juice	Juice	Condiments
42854001	Kraft	American Singles 2% Milk	Milk	Cheese	Cheese
42809001	Listerine	Mint Shield Mouthwash	Mouthwash	Mouthwash	Personal Hygiene
42806001	Little Debbie	Muffins Blueberry	Muffins	Muffins	Donuts
42805001	Little Debbie	Muffins Banana Nut	Muffins	Muffins	Donuts
42234001	Tastykake	Cupcakes Krimpet Butterscotch	Pastries	Pastries	Donuts
42235001	Tastykake	Cupcakes Lemon	Pastries	Pastries	Donuts
42236001	Tastykake	Pie Apple	Pastries	Pastries	Donuts
42237001	Tastykake	Pie Cherry	Pastries	Pastries	Donuts
42560001	Pepperidge Farm	Goldfish Whole Grain Pretzel	Pretzels	Crackers	Chips
42551001	Pepperidge Farm	Goldfish Pretzel	Pretzels	Crackers	Chips
42732001	Morton	Salt Kosher	Spices	Spices	Condiments
42329001	Scotch-Brite	Sponges Blue	Sponges	Sponges	Cleaners
42880001	Kelloggs	Eggo Wafflers Brown Sugar Cinnamon	Sugar	Waffles	Waffles

Subcategories (2a)

- A few of the 444 disagreements in Spring 2019

product_name	PatrickSubCat	ThomasSubCat	RussSubCat	KevinSubCat
Steady Buffered Aspirin	Aspirin	Aspirin	Aspirin	Coffee
Cookies Arrowroot	Baby Food	Baby Food	Baby Food	Cookies
Stage 2 Applesauce	Baby Food	Baby Food	Baby Food	Sauces
Stage 2 Applesauce	Baby Food	Baby Food	Baby Food	Sauces
Bananas Bunch	Bananas	Bananas	Bananas	Fresh Fruit
Brownies Cosmic	Cakes/Pies	Cakes/Pies	Cakes/Pies	Cookies
Brownies Fudge	Cakes/Pies	Cakes/Pies	Cakes/Pies	Cookies
Simply Homemade Bread Mix	Cakes/Pies	Cakes/Pies	Sliced Bread	Sliced Bread
Simply Homemade Cornbread Mix	Cakes/Pies	Cakes/Pies	Sliced Bread	Sliced Bread
Bars Marshmallow Treat	Cakes/Pies	Chocolate Candy	Cakes/Pies	Cereal
Bars Nutty	Cakes/Pies	Chocolate Candy	Cakes/Pies	Cereal
Mix Pizza Crust	Cakes/Pies	Pizza	Spices	Sugar
Mix Baking	Cakes/Pies	Spices	Spices	Sugar
Diced Mango Fruit Cup	Canned Fruit	Canned Fruit	Canned Fruit	Canned Vegetables
Blueberries In Light Syrup	Canned Fruit	Canned Fruit	Preserves	Chocolate
Rotel Diced Tomatoes& Green Chilies	Canned Vegetables	Canned Fruit	Canned Vegetables	Dried Fruit
Nutri Grain Blueberry Bliss Harvest Fruit & Oat Bars	Cereal	Cakes/Pies	Dried Fruit	Cereal
Nutri Grain Chocolatey Crunch Granola Bar	Cereal	Cakes/Pies	Dried Fruit	Cereal
Special K Berry Pastry Crisps	Chips	Cakes/Pies	Dried Fruit	Cereal
Cheese Burger Potato Crisps	Chips	Chips	Chips	Hamburger
Loud Salsa Fiesta Corn Crisps	Chips	Chips	Chips	Dips
Dutch Style Hot Cocoa Mix	Chocolate	Chocolate	Chocolate	Coffee
Hot Cocoa Mix Milk Chocolate	Chocolate	Chocolate	Chocolate	Coffee
Hot Cocoa Mix Mini Marshmallow	Chocolate	Chocolate	Chocolate	Coffee
Wheat Thins Toasted Chips Veggie	Crackers	Crackers	Chips	Eggs
Baby Lotion Original	Diapers	Conditioner	Personal Hygiene	Personal Hygiene
Mashed Potatoes Four Cheese	French Fries	Fresh Vegetables	Rice	Canned Vegetables
Guacamole Regular	Fresh Vegetables	Dips	Dips	Dips
Chicken Patties	Frozen Chicken	Hamburger	TV Dinner	TV Dinner
Oven Cravers Cordon Bleu	Frozen Chicken	TV Dinner	TV Dinner	TV Dinner
Chicken Breast Stuffed Broccoli & Cheese	Frozen Chicken	TV Dinner	TV Dinner	Frozen Chicken
All Purpose Cleaner Bleach 5-in-1	Shower Soap	Cleaners	Cleaners	Cleaners
Shower Automatic Refill Liquid Shower Cleaner	Shower Soap	Shower Soap	Dishwasher Soap	Cleaners
Brown N Serve Sausage Original Links	TV Dinner	Frozen Chicken	TV Dinner	Deli Meats
Brown N Serve Sausage Turkey	TV Dinner	Frozen Chicken	TV Dinner	Deli Meats
Eggo Pancakes Buttermilk	Waffles	Pancakes	Pancakes	Pancakes
Eggo French Toaster Sticks Cinnamon	Waffles	Pancakes	Waffles	Eggs
Eggo Breakfast Sandwiches Bacon Egg & Cheese	Waffles	TV Dinner	Waffles	Eggs

Subcategories (3)

- I spent the last few days finalizing the product table with the following rules

- Rule 1: Anything with Brand Name 'Gerber' or 'Beech-Nut' is baby food (ClassID: 209)
  - I scanned the list and there are no exceptions

Subcategories (4)

- Rule 2: 'Packaged Snacks'. Anything from Entenman*, Hostess*, Drakes*, Tastykake* goes to 250 'Packaged Snacks'

- UPDATE Products
  SET Products.[Product Class ID] = 250,
        Products.subcategory = "Packaged Snacks"
  WHERE (((Products.[Brand Name]) Like "entenm*" Or
        (Products.[Brand Name]) Like "tastyka*" Or
        (Products.[Brand Name]) Like "hostes*" Or
        (Products.[Brand Name]) Like "drake*"));

- This reduces the discrepancies down to something like 250

Subcategories (5)

- Rule 3: Pepperidge* and Goldfish* goes to 82: Crackers

- UPDATE Products
  SET Products.product_class_id = 82, Products.subcategory = "Crackers"
  WHERE (((Products.brand_name) Like "pepperidg*") AND
      ((Products.product_name) Like "Goldfish*"));

- This reduces the cases down to 200+

Subcategories (7)

- Other Rules:
  - 'Frito Lay' and not 'dip' goes to 12: Chips
  - 'Nabisco' and ('chips ahoy' or 'cookies') goes to 45: Cookies
  - Ten other steps
  - Go through last 100 by hand

- Final Table
  - The table below should be used for everyone's data mart
  - If you find any additional errors at this point… **ignore them!**

- Output is conformedProducts.txt
- Tab delimited; contains product key going from 1 to 2075. make all data-marts conform to that

Conforming Other Tables

- The Store Tables are easy

- Just append the 5 different store tables together.

- No modifications needed (except some spelled out their states and some used abbreviations – easy fix)

Conforming Other Tables

- Date Tables are largely the same

- We could just pick our favorite to combine into a big data warehouse of 10 stores

I haven't looked at other tables, but in the past discrepancies have been found

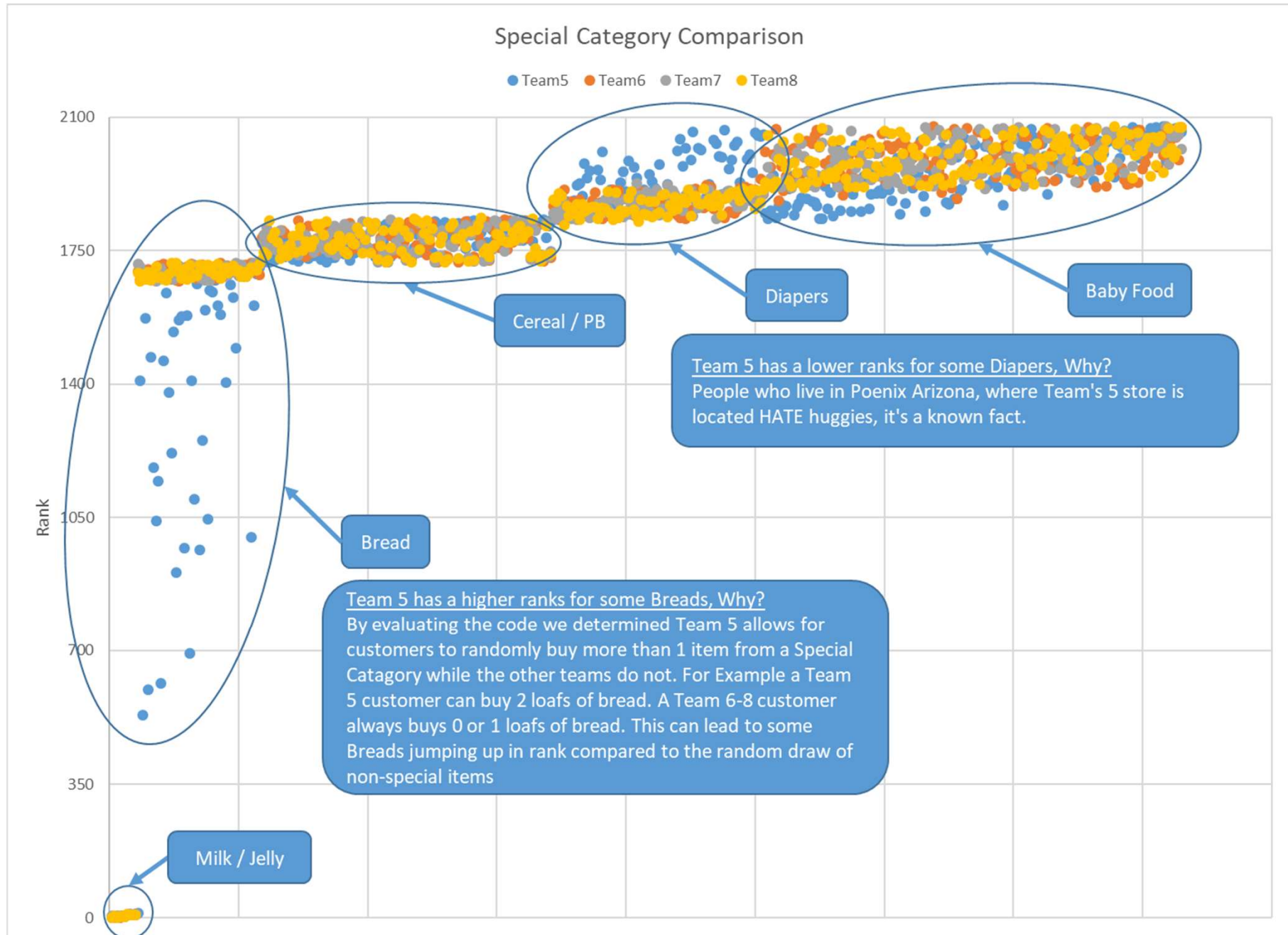|	Combined Sales (December)				Brenthony's Market	Gibtel's Market
	Combined Customer Count (December)				38496	38114

SKU	Best Selling Items Combined	# Sold	# Sold	Rank	# Sold	Rank
42357001	2.00% Milk	10092	4905	4	5187	1
42356001	1.00% Milk	10065	4889	5	5176	2
42360001	Whole Milk Milk	10051	5001	1	5050	4
42359001	Whole Milk Milk	9984	4947	2	5037	5
42358001	2.00% Milk	9952	4873	6	5079	3
42355001	1.00% Milk	9942	4924	3	5018	6
42311001	Jam Grape	1961	1422	7	539	1715
42313001	Jelly Grape	1939	1401	8	538	1717
42314001	Squeeze Jelly Grape	1910	1401	9	509	1727
42312001	Jam Strawberry	1865	1377	10	488	1749
42556001	Goldfish Whole Grain Cheddar	1778	768	22	1010	24
44068001	Pasta Jumbo Shells	1752	757	42	995	60
43412001	Doritos Jacked Ranch Dipped Hot V	1749	775	15	974	212
43161001	Hermanos Party Nuts	1749	754	55	995	63
42339001	Coffee Classic Decaf	1742	766	26	976	189
43105001	High Top Party Nuts	1742	721	329	1021	11
44057001	BBB Best Vegetable Oil	1741	736	145	1005	32
43998001	Best Choice Buttered Popcorn	1741	717	419	1024	9
43917001	Blue Label Canned Tuna in Water	1740	773	17	967	312
43829001	Carlson Blueberry Yogurt	1739	760	36	979	172
42093001	Shells & Cheese Original	1737	732	179	1005	31
43659001	Ebony Honey Dew	1737	790	12	947	692
43577001	Even Better Cheese Spread	1734	768	25	966	325
42176001	Bagels Plain Whole Grain	1733	748	84	985	119
42742001	Moms Low Fat Bologna	1732	748	83	984	130
43859001	Regular Coffee	1731	755	51	976	194

Cool Graph from a Previous Class

Special Category Comparison

● Team5   ● Team6   ● Team7   ● Team8

Rank

2100
1750
1400
1050
700
350
0

Cereal / PB

Diapers

Baby Food

Team 5 has a lower ranks for some Diapers, Why?
People who live in Poenix Arizona, where Team's 5 store is located HATE huggies, it's a known fact.

Bread

Team 5 has a higher ranks for some Breads, Why?
By evaluating the code we determined Team 5 allows for customers to randomly buy more than 1 item from a Special Catagory while the other teams do not. For Example a Team 5 customer can buy 2 loafs of bread. A Team 6-8 customer always buys 0 or 1 loafs of bread. This can lead to some Breads jumping up in rank compared to the random draw of non-special items

Milk / Jelly

Other Issues

- I haven't looked at anything else, but there are probably still issues.

- <mark>I did notice one team had the top selling products right, but the total of the 3 stores was off for every product. (Anthony Ung I think if I remember correctly)</mark>

- I haven't looked at the inventory tables but I'm sure they have issues as well

Remember These?

1. What is my Total Enterprise Profit for each of the last 4 quarters?
2. Which stores are my most profitable in each quarter?
3. Which stores have the highest daily sales in each quarter?
4. Which items are frequently purchased together?
5. Which items do I frequently run out of (by store by time)?
6. Which items are tying up the most money? Should I reduce inventory of these?
7. At any given time, how much money do I have wrapped up in inventory?
8. How much do we purchase from a specific manufacturer or vendor?

The Claim

- Right now, using the conformed product table we could answer all of the questions above (except #4) with the datamarts in a couple of hours

- Alternatively, we could now combine the data marts into an Enterprise Data Warehouse in a few hours and answer all of the questions in about half the time

- Note people that took Data Mining 1 can also answer question #4

So What Have We Learned?

- ETL people are underpaid!

- Seemingly reasonable scripts will do goofy things (e.g. map *chips* to chips category. Oops now Chips Ahoy Cookies are in the Chips category)

- Map egg* to eggs: Oops, now Eggo Waffles are in eggs.

- Just because something has bacon in its name doesn't make it meat!

- And just because something contains peanut butter doesn't make it peanut butter. Etc. etc.

- If you tell the CEO that you've sold X number of milk products, you better hope your not counting 'Malted Milk Balls' as Milk.