

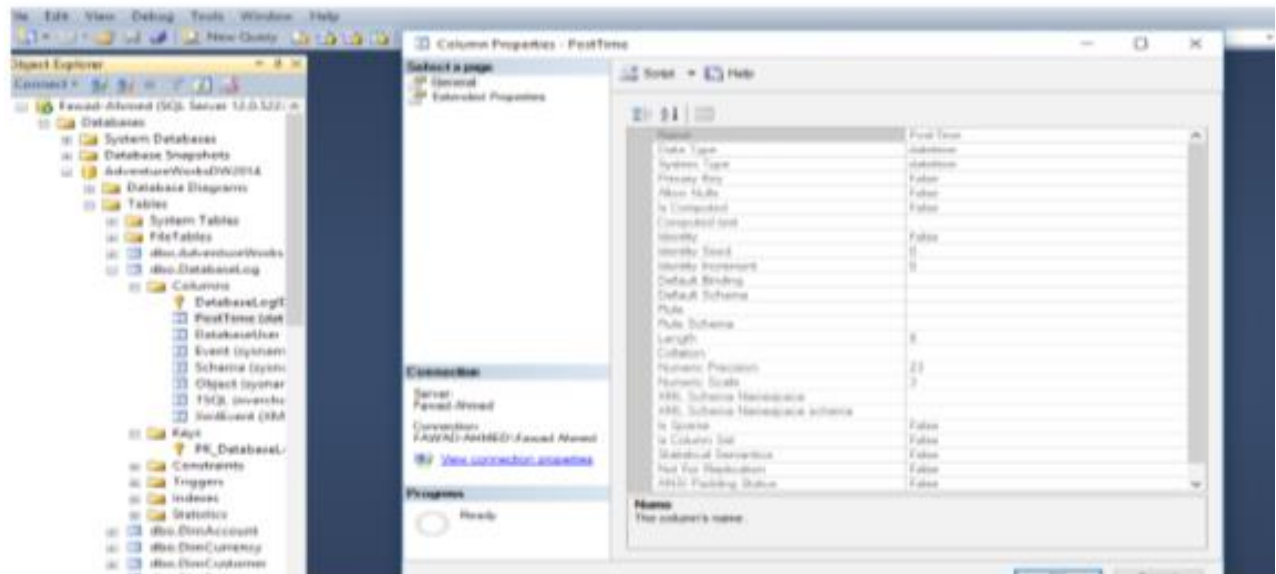
LAB 6,7,8 DWHM 16SW81

Lab # 6,7,8

Objective: To become familiar with DW implementation, query execution and result analysis

- To learn physical DW Design
- To learn executing queries in DW
- To learn analyzing results of DW queries

Generate reports using both MDX and Excel Pivot table for the following scenarios:



Excel Output

Sales Amount	Column Labels				
Row Labels	Accessory	Mountain	Road	Touring	Grand Total
Australia	\$127,128.61	\$2,906,994.45	\$5,029,120.41	\$997,757.12	\$9,061,000.58
Canada	\$82,736.07	\$672,429.31	\$948,943.35	\$273,736.13	\$1,977,844.86
France	\$55,001.21	\$917,158.25	\$1,323,295.80	\$348,562.45	\$2,644,017.71
Germany	\$54,382.29	\$1,021,094.33	\$1,390,063.25	\$428,772.47	\$2,894,312.34
United Kingdom	\$67,636.33	\$1,185,550.41	\$1,610,247.36	\$528,278.11	\$3,391,712.21
United States	\$217,168.79	\$3,547,956.78	\$4,322,438.41	\$1,302,225.54	\$9,389,789.51
Grand Total	\$604,053.30	\$10,251,183.52	\$14,624,108.58	\$3,879,331.82	\$29,358,677.22

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1. Display the standard cost of all the products along with their categories according to the regions in which they were sold. Which region is the most and the least expensive according to the result retrieved?

Standard Cost	All Products						
Product Standard Cost	Column Labels						
Row Labels	Australia	Canada	France	Germany	United Kingdom	United States	Grand Tot
Accessory	\$64,761.25	\$40,468.50	\$27,657.95	\$27,319.44	\$34,163.66	\$107,830.73	\$302,2
Mountain	\$1,582,704.84	\$357,452.76	\$497,307.11	\$554,815.98	\$643,648.68	\$1,914,816.94	\$5,550,7
Road	\$3,108,482.54	\$580,711.94	\$817,651.80	\$859,371.09	\$996,673.78	\$2,659,111.63	\$9,022,0
Touring	\$619,196.88	\$169,290.16	\$215,136.14	\$265,435.06	\$326,735.31	\$807,049.42	\$2,402,8
Grand Total	\$5,375,145.51	\$1,147,923.36	\$1,557,752.99	\$1,706,941.57	\$2,001,221.43	\$5,488,808.71	\$17,277,7

2. Display the Tax amount for customers according to their educations and occupations over calendar year. Do these factors impact the tax amount paid by a customer? Which class of customers pays the highest tax amount?

Ans:- Yes these factor impact on customer you can see in image given Below.

-The Bachelors class pays highest tax amount.

Tax Amount	Column Labels					
Row Labels	2011	2012	2013	2014	Grand Total	
Bachelors	\$172,461.18	\$160,816.61	\$442,053.43	\$16,680.22	\$792,011.44	
Clerical	\$25,448.19	\$29,721.47	\$58,080.54	\$2,612.07	\$115,862.27	
Management	\$40,039.63	\$34,805.79	\$123,944.69	\$5,399.90	\$204,190.01	
Manual	\$2,231.04	\$535.71	\$2,681.96	\$90.93	\$5,539.64	
Professional	\$76,704.01	\$65,480.06	\$172,437.13	\$5,946.10	\$320,567.30	
Skilled Manual	\$28,038.31	\$30,273.58	\$84,909.11	\$2,631.23	\$145,852.23	
Graduate Degree	\$105,882.55	\$79,039.38	\$243,369.69	\$8,553.20	\$436,844.83	
Clerical	\$14,585.62	\$16,259.52	\$47,699.57	\$1,775.30	\$80,320.01	
Management	\$40,090.20	\$26,658.24	\$91,483.42	\$2,998.85	\$161,230.70	
Manual	\$1,687.04	\$1,212.61	\$2,708.52	\$259.68	\$5,867.85	
Professional	\$28,915.48	\$22,132.07	\$65,341.69	\$2,297.59	\$118,686.82	
Skilled Manual	\$20,604.21	\$12,776.95	\$36,136.50	\$1,221.78	\$70,739.45	
High School	\$97,674.30	\$70,919.14	\$193,290.71	\$9,157.94	\$371,042.09	
Clerical	\$2,688.21	\$723.71	\$2,033.24	\$48.72	\$5,493.88	
Management	\$13,112.62	\$10,509.55	\$30,759.82	\$771.02	\$55,153.02	

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19	Management	\$13,112.62	\$10,508.55	\$30,759.82	\$771.02	\$55,152.02
20	Manual	\$21,999.27	\$21,642.25	\$43,842.80	\$2,961.71	\$90,446.02
21	Professional	\$25,297.79	\$19,246.34	\$69,511.49	\$3,741.99	\$117,797.62
22	Skilled Manual	\$34,576.40	\$18,798.29	\$47,143.36	\$1,634.51	\$102,152.55
23	Partial College	\$142,540.73	\$126,017.29	\$336,201.38	\$13,124.04	\$617,883.45
24	Clerical	\$36,406.76	\$36,448.49	\$74,306.94	\$2,594.22	\$149,756.41
25	Management	\$3,428.52	\$2,344.85	\$7,519.99	\$660.25	\$13,953.60
26	Manual	\$18,076.96	\$26,362.73	\$40,545.30	\$1,887.45	\$86,872.44
27	Professional	\$35,817.54	\$30,300.98	\$130,484.85	\$4,307.14	\$200,910.51
28	Skilled Manual	\$48,810.96	\$30,560.24	\$83,344.30	\$3,674.98	\$166,390.48
29	Partial High School	\$29,640.40	\$30,115.28	\$68,664.57	\$2,492.17	\$130,912.42
30	Clerical	\$7,361.39	\$5,953.78	\$9,723.32	\$311.90	\$23,350.38
31	Management	\$628.45	\$690.30	\$1,181.88	\$401.97	\$2,902.60
32	Manual	\$8,078.39	\$11,147.89	\$20,206.38	\$479.06	\$39,911.73
33	Professional	\$6,737.54	\$7,480.76	\$19,772.55	\$685.09	\$34,675.94
34	Skilled Manual	\$6,834.63	\$4,842.56	\$17,780.44	\$614.14	\$30,071.77
35	Grand Total	\$548,199.16	\$466,907.71	\$1,283,579.79	\$50,007.58	\$2,348,694.23
36						
37						

3. Display the sales amount for all products (use product hierarchy) purchased according to the calendar year and filter the results according to the customers' genders. What type of customers bought the most Biking products?

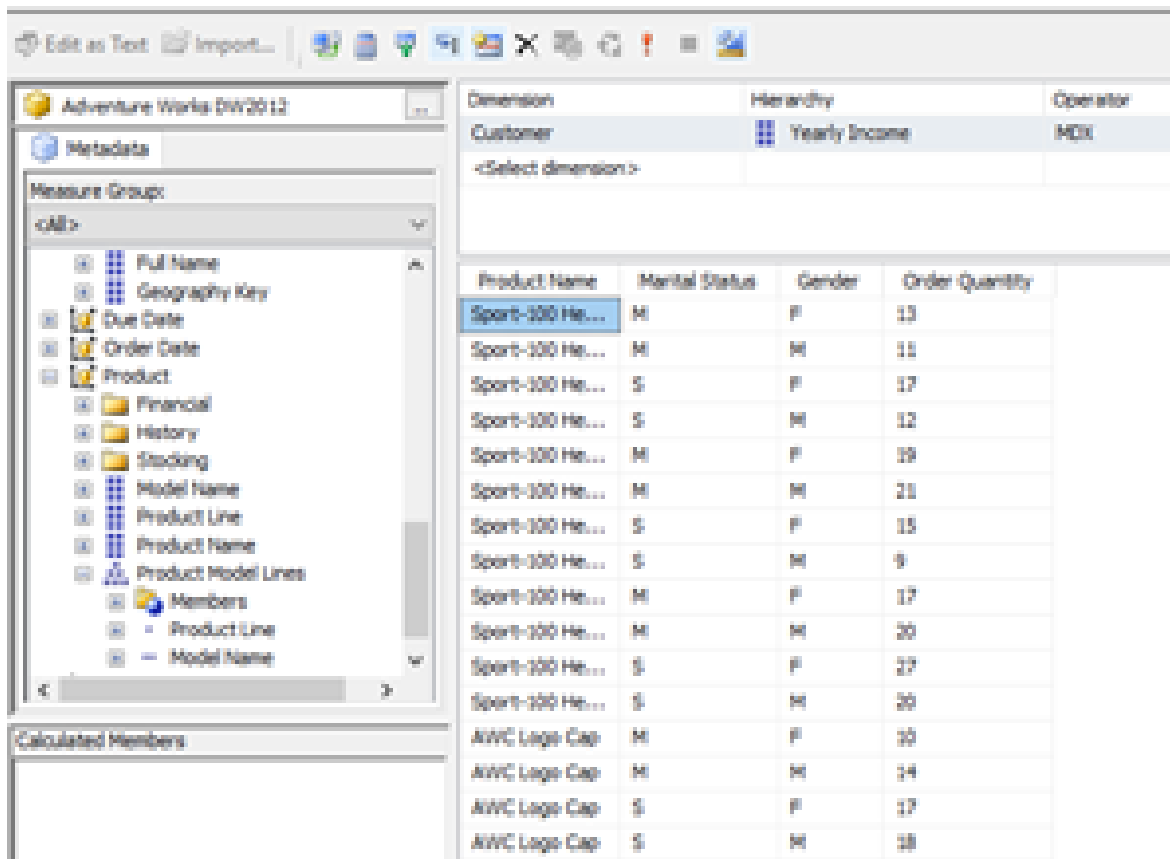
	A	B	C	D	E	F	G
1	Gender	All					
2							
3	Sales Amount	Column Labels					
4	Row Labels	2011	2012	2013	2014	Grand Total	
5	Accessory			\$559,348.25	\$44,705.05	\$604,053.30	
6	Mountain	\$1,290,321.19	\$2,184,915.57	\$6,518,670.97	\$257,275.79	\$10,251,183.52	
7	Road	\$5,562,168.19	\$3,651,430.25	\$5,234,312.63	\$176,197.50	\$14,624,108.58	
8	Touring			\$3,732,415.44	\$146,916.38	\$3,879,331.82	
9	Grand Total	\$6,852,489.38	\$5,836,345.82	\$16,044,747.30	\$625,094.72	\$29,358,677.22	
10							
11							
12							

4. Display the order quantity for all the products ordered by customers according to their marital statuses and genders. Filter the results for customers having yearly income greater than or equal to 50,000.

	A	B	C	D
1	Yearly Income	(Multiple Items)		
2				
3	Order Quantity	Column Labels		
4	Row Labels	M	S	Grand Total
5	Accessory	8,187	5,619	13,806
6	F	3,792	3,114	6,906
7	M	4,395	2,505	6,900
8	Mountain	6,593	4,328	10,921
9	F	3,039	2,398	5,437
10	M	3,554	1,930	5,484
11	Road	4,695	3,835	8,530
12	F	2,217	2,098	4,315
13	M	2,478	1,737	4,215
14	Touring	1,354	1,132	2,486
15	F	644	603	1,247
16	M	710	529	1,239
17	Grand Total	20,829	14,914	35,743

Generate reports using MDX

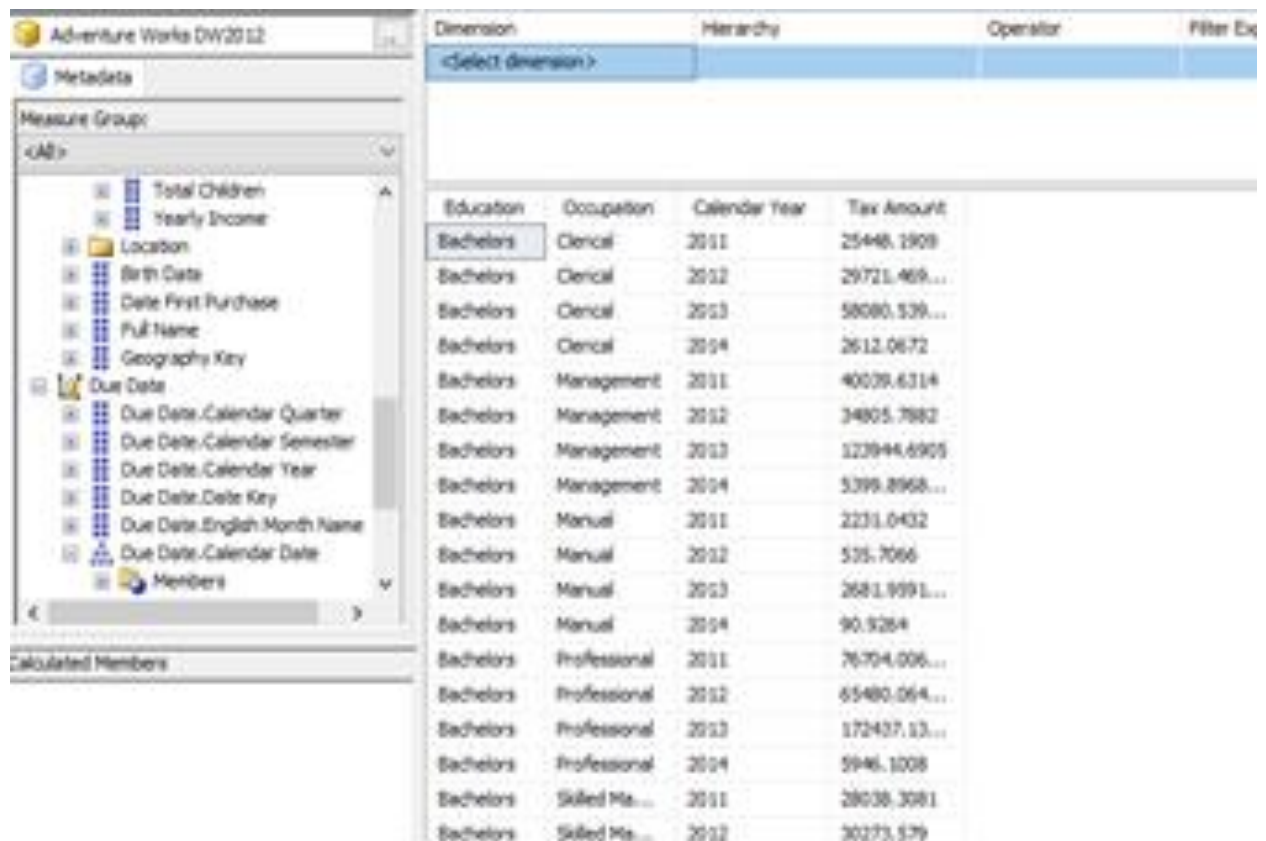
1. Display the order quantity for all the products ordered by customers according to their marital statuses and genders. Filter the results for customers having yearly income greater than or equal to 50,000.



Product Name	Marital Status	Gender	Order Quantity
Sport-100 He...	M	F	13
Sport-100 He...	M	M	11
Sport-100 He...	S	F	17
Sport-100 He...	S	M	12
Sport-100 He...	M	F	19
Sport-100 He...	M	M	21
Sport-100 He...	S	F	15
Sport-100 He...	S	M	9
Sport-100 He...	M	F	17
Sport-100 He...	M	M	20
Sport-100 He...	S	F	27
Sport-100 He...	S	M	20
AWC Logo Cap	M	F	10
AWC Logo Cap	M	M	14
AWC Logo Cap	S	F	17
AWC Logo Cap	S	M	18

2. Display the Tax amount for customers according to their educations and occupations over calendar year. Do these factors impact the tax amount paid by a customer? Which class of customers pays the highest tax amount?

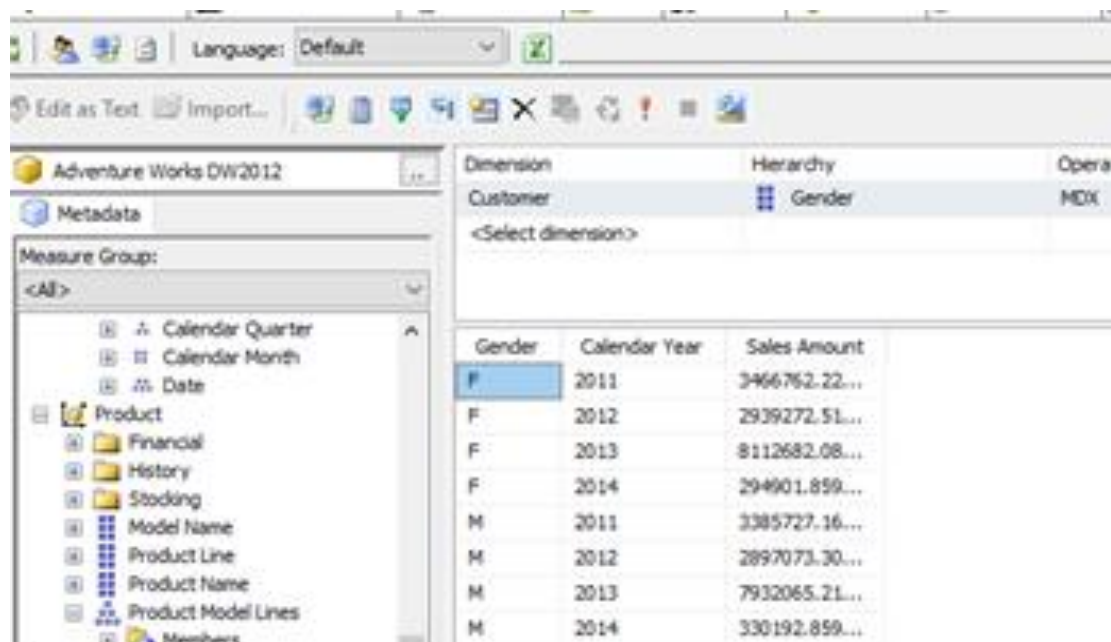
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Education	Occupation	Calendar Year	Tax Amount
Bachelors	Clerical	2011	25446.1909
Bachelors	Clerical	2012	29721.469...
Bachelors	Clerical	2013	58080.539...
Bachelors	Clerical	2014	2612.0672
Bachelors	Management	2011	40039.6314
Bachelors	Management	2012	34805.7882
Bachelors	Management	2013	123944.6905
Bachelors	Management	2014	5399.8968...
Bachelors	Manual	2011	2231.0432
Bachelors	Manual	2012	535.7066
Bachelors	Manual	2013	2681.9391...
Bachelors	Manual	2014	90.9284
Bachelors	Professional	2011	76704.006...
Bachelors	Professional	2012	65480.064...
Bachelors	Professional	2013	172437.13...
Bachelors	Professional	2014	5946.1008
Bachelors	Skilled Ma...	2011	28036.3081
Bachelors	Skilled Ma...	2012	30273.579

3. Display the sales amount for all products (use product hierarchy) purchased according to the calendar year and filter the results according to the customers' genders. What type of customers bought the most Biking products?

The Female bought the most biking Products Show In Below Image.



Gender	Calendar Year	Sales Amount
F	2011	3466762.22...
F	2012	2939272.51...
F	2013	8112682.08...
F	2014	294901.859...
M	2011	3385727.16...
M	2012	2897073.30...
M	2013	7932065.21...
M	2014	330192.859...

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The screenshot shows the SQL Server Enterprise Manager interface. On the left, the 'Adventure Works DW 2008' database is selected, and the 'Metadata' pane shows the 'Measure Group' hierarchy. The 'Sales Amount' measure is selected. The 'Dimension' pane shows the 'Customer' dimension, and the 'Hierarchy' pane shows the 'Gender' hierarchy. The 'Operator' pane shows the 'MDX' operator. The main pane displays a table with the following data:

Gender	Calendar Year	Sales Amount
F	2011	\$468,762.22...
F	2012	\$908,272.51...
F	2013	\$1,126,82.08...
F	2014	\$949,188...
M	2011	\$385,727.96...
M	2012	\$89,7575.35...
M	2013	\$9,02645.21...
M	2014	\$30,292,488...