

LAPORAN

TUGAS 2

DATA WAREHOUSE DAN BUSINESS INTELLIGENCE



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Module 2 Assignment using Web PivotTable

Assignment 1 provides experience with WebPivotTable, an open source application for business intelligence. Using WebPivotTable, you will customize a pivot table and extend it to show more aggregated fields. WebPivotTable is a pure Javascript application that can be used in any browser without plugins.

Before starting this assignment, you should read the Web pivot table tutorial. The tutorial demonstrates the usage of WebPivotTable and the OLAP cube source used for this assignment. It also demonstrates MDX to specify a pivot table. If you have not read the tutorial yet, please refer to it prior to starting this assignment.

1. Load the Data Cube

- a. Select the preloaded OLAP cube Microsoft Adventure Works (same cube used in tutorial) from the Demo list to create the pivot table.

The screenshot shows the 'Connect data source' dialog box. On the left, a sidebar lists connection methods: CSV File (.csv), Excel File (.xlsx/.xls), Google Spreadsheet, Web Service, and OLAP Mode (which is selected). The main panel contains the following fields:

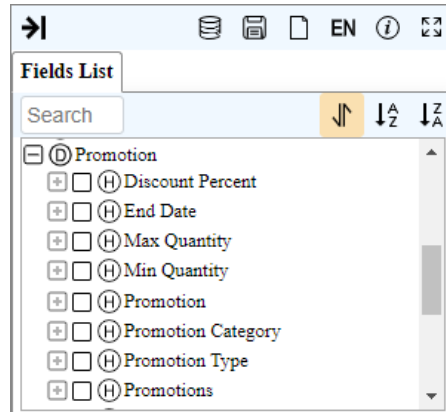
- XMLA Server URL:
- Get Cubes:
- DataSource:
- Catalog:
- Cube Name:

- b. Take some time exploring the data cube before beginning on the details of the assignment.

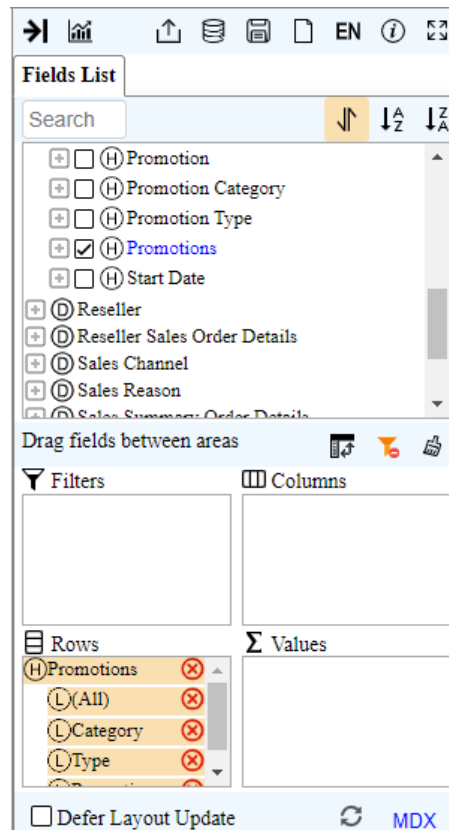
2. Create the Pivot Table

Create a customized pivot table that shows the following:

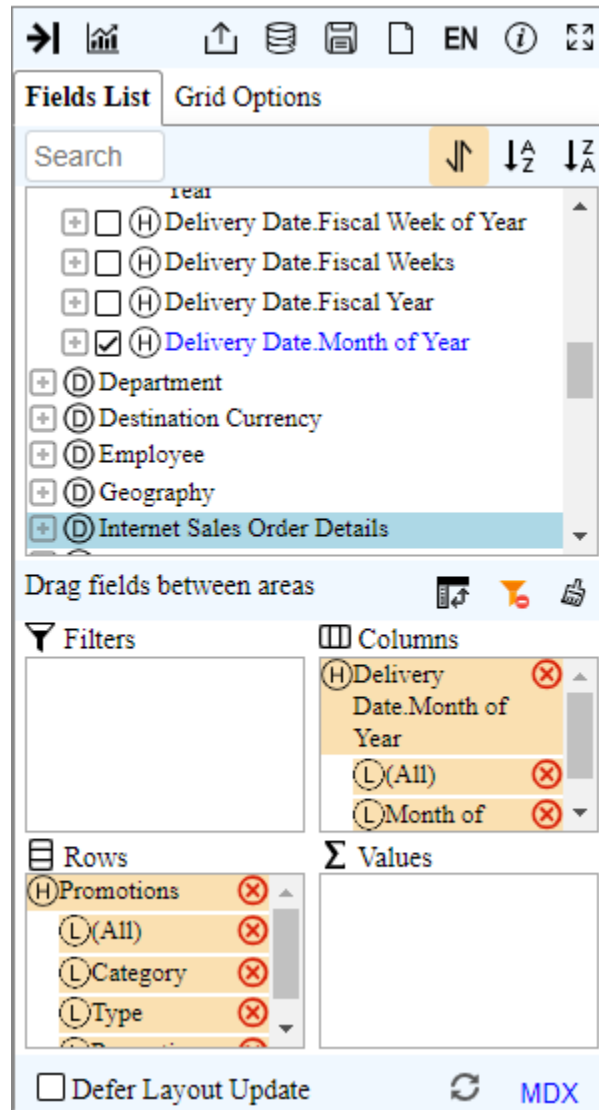
- a. Expand the “Promotions” dimension in the Fields List.



- b. Select “Promotions” field inside the “Promotions” dimensions in the Rows area.



- c. Expand the “Delivery Date” dimension in the Fields List.



- d. Select “Delivery Date.Month of Year” in the Columns area. If it appears in the Rows area, move it from the Rows to the Columns area.

Connect to data source: Choose here
Open Dialog

Load a wpt file: Choose here
Open Dialog

English
Chinese
Toggle Panel
Reset
Save

(Promotional (Promotional)	All Periods									
All Promotions	\$80,450,596.98	\$5,548,668.64	\$9,352,570.54	\$8,098,830.31	\$4,928,991.09	\$8,861,113.53	\$7,399,106.49	\$3,693,205.85	\$6,984.9	
No Discount	\$75,027,907.96	\$4,695,124.24	\$8,367,661.20	\$6,986,406.66	\$4,594,193.14	\$8,533,866.58	\$7,054,127.36	\$3,587,565.05	\$6,834.3	
Reseller	\$5,422,689.03	\$853,544.41	\$984,909.33	\$1,112,423.65	\$334,797.95	\$327,246.94	\$344,979.13	\$105,640.81	\$150.5	
Discontinued Product	\$276,826.84									
Mountain-100 Clea...	\$250,927.70									
Mountain-500 Silve...	\$25,899.14									
Excess Inventory	\$49,986.08	\$22,197.77	\$27,788.32							
Road-650 Overstock	\$49,986.08	\$22,197.77	\$27,788.32							
New Product	\$1,024,575.83	\$229,482.64	\$367,263.25	\$427,829.94						
Touring-3000 Prom...	\$443,244.20	\$95,974.72	\$149,073.16	\$198,196.32						
Touring-1000 Prom...	\$581,331.63	\$133,507.92	\$218,190.09	\$229,633.62						
Seasonal Discount	\$16,549.73	\$16,549.73								
Sport Helmet Disco...	\$7,448.83	\$7,448.83								
Sport Helmet Disco...	\$9,100.90	\$9,100.90								
Volume Discount	\$4,054,750.54	\$585,314.27	\$589,857.77	\$684,593.71	\$334,797.95	\$327,246.94	\$344,979.13	\$105,640.81	\$150.5	
Volume Discount 1...	\$2,891,221.68	\$381,744.20	\$445,949.59	\$458,636.75	\$196,249.79	\$227,413.98	\$276,137.97	\$85,830.38	\$124.5	
Volume Discount 1...	\$1,037,643.33	\$192,524.36	\$134,082.87	\$192,495.05	\$105,240.57	\$96,079.68	\$64,002.17	\$19,331.75	\$26.0	
Volume Discount 2...	\$124,148.53	\$11,045.71	\$9,825.30	\$33,461.92	\$33,307.58	\$3,753.28	\$4,838.99	\$478.67		
Volume Discount 4...	\$1,736.99									

Fields List
Grid Options

Search

Delivery Date Fiscal Week of Year
Delivery Date Fiscal Weeks
Delivery Date Fiscal Year
Delivery Date Month of Year

Department
Destination Currency
Employee
Geography
Internet Sales Order Details

Drag fields between areas

Filters
Columns

Rows
Values

e. Expand the Measures in the Fields List.

Fields List
Grid Options

Search

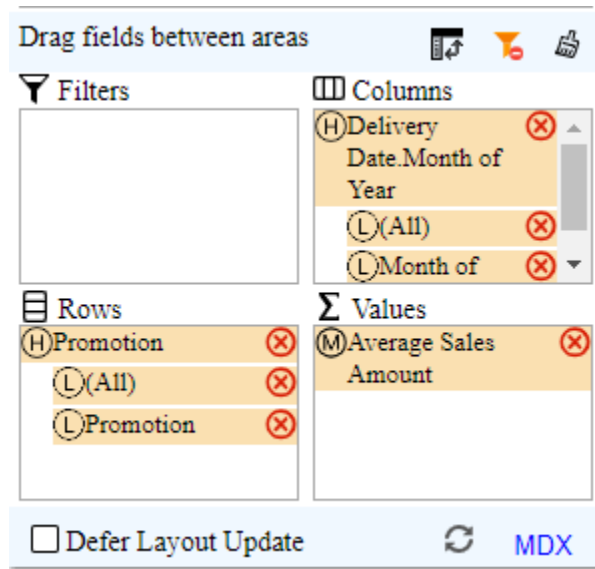
Measures
Amount
Add To Values
Average Unit Price
Customer Count
Discount Amount
Discount Percentage
End of Day Rate

Drag fields between areas

Filters
Columns

Rows
Values

- f. Select “Average Sales Amount” in the values area



- g. Take a screen snapshot and paste it into a document as the snapshot for part 2 of the WebPivotTable assignment. The snapshot should show All Promotions and All Periods with complete expansion on the rows and columns with Average Sales Amount in the cells.

Connect to data source:

Load a wpt file:

English Chinese Toggle Panel Reset Save

	All Periods									
All Promotions	\$3,590.42	\$4,484.31	\$5,727.83	\$4,197.65	\$3,105.24	\$4,441.60	\$3,575.58	\$2,412.12	\$3,4	
No Discount	\$3,407.78	\$4,007.91	\$5,289.69	\$3,735.02	\$2,939.88	\$4,319.94	\$3,444.39	\$2,356.91	\$3,3	
Reseller	\$2,474.75	\$4,416.00	\$3,886.08	\$4,406.66	\$2,082.00	\$2,110.07	\$1,953.38	\$1,250.55	\$1,5	
Discontinued Product	\$3,218.92									
Mountain-100 Clea...	\$10,455.32									
Mountain-500 Silve...	\$417.73									
Excess Inventory	\$819.44	\$924.91	\$751.04							
Road-650 Overstock	\$819.44	\$924.91	\$751.04							
New Product	\$7,184.00	\$8,419.12	\$8,010.33	\$6,375.83	\$1,836.83					
Touring-3000 Prom...	\$3,785.88	\$4,429.97	\$3,838.18	\$3,557.97	\$742.35					
Touring-1000 Prom...	\$5,371.27	\$5,531.04	\$6,025.90	\$4,926.44	\$2,384.07					
Seasonal Discount	\$250.75	\$250.75								
Sport Helmet Disco...	\$206.91	\$206.91								
Sport Helmet Disco...	\$303.36	\$303.36								
Volume Discount	\$2,166.60	\$4,042.45	\$3,191.03	\$3,511.68	\$2,085.39	\$2,110.07	\$1,953.38	\$1,250.55	\$1,5	
Volume Discount 1...	\$1,851.21	\$3,158.55	\$2,844.99	\$2,853.76	\$1,516.82	\$1,775.85	\$1,795.21	\$1,215.43	\$1,5	
Volume Discount 1...	\$2,990.33	\$4,936.52	\$2,529.87	\$3,377.11	\$4,783.66	\$3,558.51	\$2,285.79	\$1,487.06	\$2,3	
Volume Discount 2...	\$1,748.57	\$690.36	\$982.53	\$2,573.99	\$4,758.23	\$1,251.09	\$691.28	\$478.67		
Volume Discount 4...	\$868.49									

Fields List Grid Options

Search

Measures

- ☐ Amount
- ☐ Average Rate
- ☒ Average Sales Amount
- ☐ Average Unit Price
- ☐ Customer Count
- ☐ Discount Amount
- ☐ Discount Percentage
- ☐ End of Day Rate

Drag fields between areas

Filters

Columns

- ☒ Delivery Date.Month of Year
- ☒ (All)
- ☒ Month of

Rows

- ☒ Promotions
- ☒ (All)
- ☒ Category
- ☒ Type

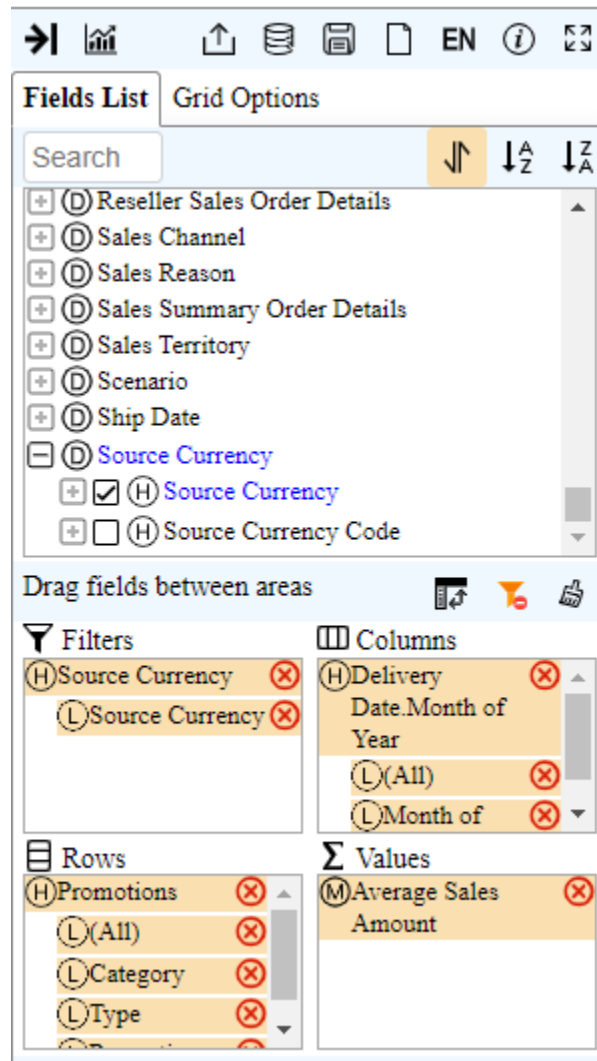
Values

- ☒ Average Sales Amount

- h. Keep the sheet open for the next part.

3. Extend the Pivot Table

- a. Add “Source Currency” level (Do NOT include “ALL” level) from the Source Currency dimension to the Filters area.



- b. Create a filter such that the pivot table displays value only for “Canadian Dollar” and “US Dollar”.

Source Currency [X]

Filter By []

Not filter Label

Manually include

Manually exclude

Please manually pickup labels which should be included

Search All None Total 105 1 100/page 1

- ☐ Brunei Dollar [[Source Currency].[Source Currency].&[Brunei Dollar]]
- ☐ Bulgarian Lev [[Source Currency].[Source Currency].&[Bulgarian Lev]]
- ☒ Canadian Dollar [[Source Currency].[Source Currency].&[Canadian Dollar]]
- ☐ Cedi [[Source Currency].[Source Currency].&[Cedi]]
- ☐ CFA Franc BCEAO [[Source Currency].[Source Currency].&[CFA Franc BCEAO]]
- ☐ Chilean Peso [[Source Currency].[Source Currency].&[Chilean Peso]]
- ☐ Colombian Peso [[Source Currency].[Source Currency].&[Colombian Peso]]
- ☐ Costa Rican Colon [[Source Currency].[Source Currency].&[Costa Rican Colon]]
- ☐ Croatian Kuna [[Source Currency].[Source Currency].&[Croatian Kuna]]
- ☐ Cuban Peso [[Source Currency].[Source Currency].&[Cuban Peso]]

OK

Source Currency [X]

Manually include

Manually exclude

Please manually pickup labels which should be included

Search All None Total 105 1 100/page 1

- ☐ Swedish Krona [[Source Currency].[Source Currency].&[Swedish Krona]]
- ☐ Swiss Franc [[Source Currency].[Source Currency].&[Swiss Franc]]
- ☐ Taka [[Source Currency].[Source Currency].&[Taka]]
- ☐ Tolar [[Source Currency].[Source Currency].&[Tolar]]
- ☐ Trinidad and Tobago Dollar [[Source Currency].[Source Currency].&[Trinidad and Tobago Dollar]]
- ☐ Tunisian Dinar [[Source Currency].[Source Currency].&[Tunisian Dinar]]
- ☐ Turkish Lira [[Source Currency].[Source Currency].&[Turkish Lira]]
- ☐ United Kingdom Pound [[Source Currency].[Source Currency].&[United Kingdom Pound]]
- ☐ Uruguayan Peso [[Source Currency].[Source Currency].&[Uruguayan Peso]]
- ☒ US Dollar [[Source Currency].[Source Currency].&[US Dollar]]

OK

- c. Take a screen snapshot and paste it into a document as the snapshot for part 3 of WebPivotTable assignment. The snapshot should show a complete expansion of All Periods and All Promotions with January Average Sales Amount in the cells.

Month of Year

Filter By

Not filter

Label

Manually include

Manually exclude

Please manually pickup labels which should be included

Search

All

None

Total
12

<

1

>

20/page

1

☒ January [[Delivery Date].[Month of Year].&[1]]
☐ February [[Delivery Date].[Month of Year].&[2]]
☐ March [[Delivery Date].[Month of Year].&[3]]
☐ April [[Delivery Date].[Month of Year].&[4]]
☐ May [[Delivery Date].[Month of Year].&[5]]
☐ June [[Delivery Date].[Month of Year].&[6]]
☐ July [[Delivery Date].[Month of Year].&[7]]
☐ August [[Delivery Date].[Month of Year].&[8]]
☐ September [[Delivery Date].[Month of Year].&[9]]
☐ October [[Delivery Date].[Month of Year].&[10]]
☐ November [[Delivery Date].[Month of Year].&[11]]
☐ December [[Delivery Date].[Month of Year].&[12]]

OK

<input checked="" type="checkbox"/> All Promotions	<input checked="" type="checkbox"/> All Periods	\$4,331.38	\$5,485.85
<input type="checkbox"/> No Discount		\$4,111.90	\$4,904.10
<input type="checkbox"/> Reseller		\$2,667.13	\$4,999.50
<input type="checkbox"/> Discontinued Product		\$3,589.83	
Mountain-100 Clea...		\$10,455.32	
Mountain-500 Silve...		\$421.13	
<input type="checkbox"/> Excess Inventory		\$796.18	\$822.14
Road-650 Overstock		\$796.18	\$822.14
<input type="checkbox"/> New Product		\$6,969.55	\$10,428.79
Touring-3000 Prom...		\$3,761.72	\$5,589.74
Touring-1000 Prom...		\$5,277.55	\$6,873.46
<input type="checkbox"/> Seasonal Discount		\$224.90	\$224.90
Sport Helmet Disco...		\$199.05	\$199.05
Sport Helmet Disco...		\$261.54	\$261.54
<input type="checkbox"/> Volume Discount		\$2,379.28	\$4,904.20
Volume Discount 1...		\$2,002.66	\$3,743.68
Volume Discount 1...		\$3,017.97	\$5,586.41
Volume Discount 2...		\$1,793.25	\$667.80
Volume Discount 4...		\$868.49	

d. Keep the sheet open for the next part.

4. Extend the Pivot Table with Filter Changes and Rollups

- Modify the filter to show results only for the source Currency “EURO”.

Source Currency

Filter By

Not filter Label

Manually include Manually exclude

Please manually pickup labels which should be included

Search All None Total 105 1 50/page 1

Peso]]

- ☐ Dong [[Source Currency].[Source Currency].&[Dong]]
- ☐ Drachma [[Source Currency].[Source Currency].&[Drachma]]
- ☐ Egyptian Pound [[Source Currency].[Source Currency].&[Egyptian Pound]]
- ☐ El Salvador Colon [[Source Currency].[Source Currency].&[El Salvador Colon]]
- ☐ Emirati Dirham [[Source Currency].[Source Currency].&[Emirati Dirham]]
- ☒ EURO [[Source Currency].[Source Currency].&[EURO]]
- ☐ Fiji Dollar [[Source Currency].[Source Currency].&[Fiji Dollar]]
- ☐ Forint [[Source Currency].[Source Currency].&[Forint]]
- ☐ French Franc [[Source Currency].[Source Currency].&[French Franc]]
- ☐ Guarani [[Source Currency].[Source Currency].&[Guarani]]

OK

MDX

```
[Promotion].Members}, [~5])

SELECT
NON EMPTY Hierarchize(Union(CrossJoin([~0],[~2]),
CrossJoin([~1],[~2]))) ON COLUMNS ,
NON EMPTY {Hierarchize({[~3],[~4],[~5],[~6]})} ON ROWS
FROM [Adventure Works]
WHERE {Hierarchize({{[Source Currency].&[EURO]}})}
```

Run

<input type="checkbox"/> All Promotions	<input type="checkbox"/> All Periods	
	\$4,417.15	\$5,644.84
<input type="checkbox"/> No Discount	\$4,183.76	\$5,007.31
<input type="checkbox"/> Reseller	\$2,778.68	\$5,289.97
<input type="checkbox"/> Discontinued Product	\$3,465.52	
Mountain-100 Clea...	\$10,455.32	
Mountain-500 Silve...	\$415.42	
<input type="checkbox"/> Excess Inventory	\$805.13	\$843.59
Road-650 Overstock	\$805.13	\$843.59
<input type="checkbox"/> New Product	\$7,344.01	\$11,315.77
Touring-3000 Prom...	\$4,014.88	\$5,740.10
Touring-1000 Prom...	\$5,361.51	\$7,348.90
<input type="checkbox"/> Seasonal Discount	\$239.11	\$239.11
Sport Helmet Disco...	\$203.31	\$203.31
Sport Helmet Disco...	\$285.52	\$285.52
<input type="checkbox"/> Volume Discount	\$2,448.70	\$4,940.90
Volume Discount 1...	\$2,051.51	\$3,768.35
Volume Discount 1...	\$2,995.84	\$5,131.72
Volume Discount 2...	\$1,789.59	\$690.36
Volume Discount 4...	\$868.49	

- b. Collapse all reseller promotions except for Excess Inventory. Show only the subcategories within the Excess Inventory item.

<input type="checkbox"/> All Promotions	<input type="checkbox"/> All Periods	
	\$4,417.15	\$5,644.84
<input type="checkbox"/> No Discount	\$4,183.76	\$5,007.31
<input type="checkbox"/> Reseller	\$2,778.68	\$5,289.97
<input type="checkbox"/> Discontinued Product	\$3,465.52	
<input type="checkbox"/> Excess Inventory	\$805.13	\$843.59
Road-650 Overstock	\$805.13	\$843.59
<input type="checkbox"/> New Product	\$7,344.01	\$11,315.77
<input type="checkbox"/> Seasonal Discount	\$239.11	\$239.11
<input type="checkbox"/> Volume Discount	\$2,448.70	\$4,940.90

- c. Remove the pivot chart so that the sheet only displays the pivot table.
- d. Take a screen snapshot and paste it into a document as the snapshot for part 4 of the WebPivotTable assignment. The snapshot should show the Average Sales Amount for All Periods along with a subset of the expansion of All Promotions for Excess Inventory promotions.

All Promotions	All Periods										
No Discount	\$4,117.15	\$5,644.84	\$7,211.77	\$5,012.13	\$3,907.44	\$5,646.84	\$4,247.84	\$2,885.14	\$4,2		
Reseller	\$4,183.76	\$5,007.31	\$6,692.92	\$4,481.98	\$3,676.16	\$5,488.00	\$4,081.16	\$2,817.83			
Discontinued Product	\$2,778.68	\$5,289.97	\$3,980.87	\$4,735.02	\$2,328.49	\$2,346.16	\$2,137.65	\$1,346.38	\$1,7		
Excess Inventory	\$3,465.52										
Road-650 Overstock	\$805.13	\$843.59	\$779.86								
New Product	\$805.13	\$843.59	\$779.86								
Seasonal Discount	\$7,344.01	\$11,315.77	\$7,408.28	\$6,219.83	\$2,384.07						
Volume Discount	\$239.11	\$239.11									
	\$2,448.70	\$4,940.90	\$3,446.42	\$3,885.84	\$2,327.82	\$2,346.16	\$2,137.65	\$1,346.38	\$1,7		