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SOUS-MINISTRE ADJOINT (DONNÉES, INNOVATION ET ANALYTIQUE)  
OFFICE OF CHIEF DATA OFFICER • BUREAU DU RESPONSIBLE DES DONNEES



# ADM(DIA)

## WebI Author Course

## Exercise Booklet

CANADIAN ARMED FORCES

FORCES ARMÉES CANADIENNES

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## Overview of Exercise Booklet

The intent of the Exercise Booklet is to have the student attempt the exercise indicated. Once the exercise has been attempted the student may then review the Answer Guide for detailed steps on how to perform the exercise. Example files are given during this course should you need to catch up to any exercise.

NOTE: Screenshots of the Examples below are using a style which makes the table headers blue and easier to read when displaying on an overhead projector or printing. Your standard reports will look slightly different because you are not using a style.

### Exercise 1: Creating a Webl Document with an Excel Spreadsheet

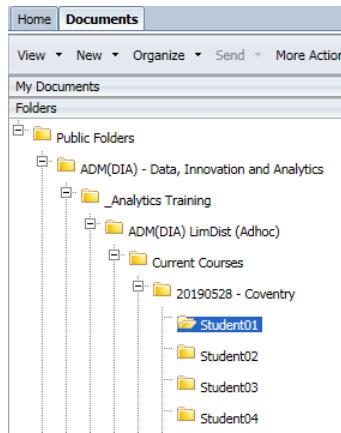
Create a Web Intelligence (Webl) Document (WID) starting with a Template and an Excel Spreadsheet as the data source. The newly created WID will display the data from the Spreadsheet in a table.

#### Overview steps to complete the exercise:

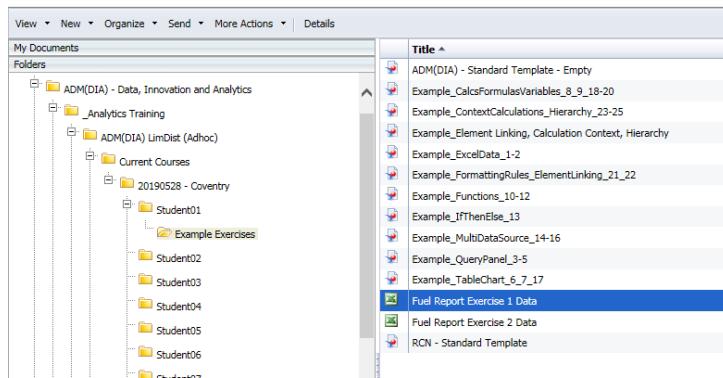
1. Locate the Excel Spreadsheet *Fuel Report Exercise 1 Data* and the Template file in your copy of the *Example Exercises* sub-folder.
2. Copy these two files, the Excel Spreadsheet and the Webl Template document into your student folder, using the right-click *Organize* menu.
3. Rename the Template to a more meaningful name, such as, <Your Name> - Exercise 1  
**This is the naming convention we will be using for the rest of the exercises.**
4. Open the copy of the empty Webl template in Modify mode and create a data provider based on the *Fuel Report Exercise 1 Data* Spreadsheet that you have saved in your student folder.
5. Review the *Query Panel* and ensure that the objects have been imported into Webl correctly. There will be at least two objects that are incorrectly imported and need to have their qualification changed.
6. Delete the *Temp.Query* data source that came with the Template.
7. Run the query (Or Close and Apply) and when prompted select the option to not automatically generate a table with the result objects.
8. Create a table with all the objects in the query.
9. Save the Webl document (from the toolbar or with *Ctrl-S*).

### Answer Guide:

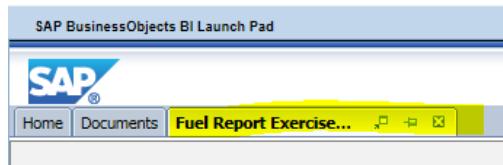
1. In BI Launch Pad open the Folders panel and navigate to your training folder as indicated by the instructor. Most likely it is: \Public Folders\ADM(DIA)\\_Analytics Training\ADM(DIA) LimDist (Adhoc)\Current Courses\<Your Course>\<Your Student ID>\



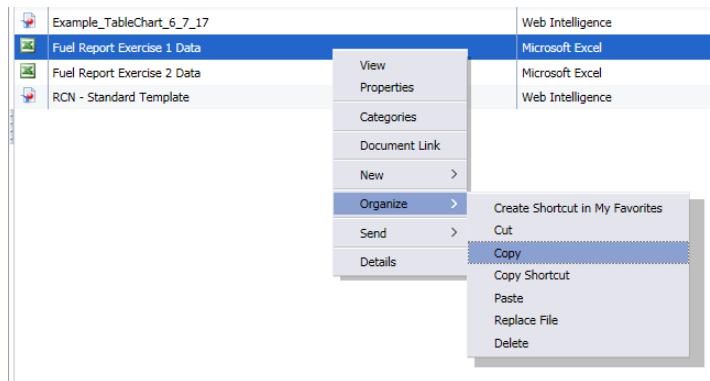
2. Navigate to your *Sample Exercises* folder and locate the Excel Spreadsheet *Fuel Report Exercise 1 Data*. If you wish, open the file, let the browser download it and observe the data in Excel.



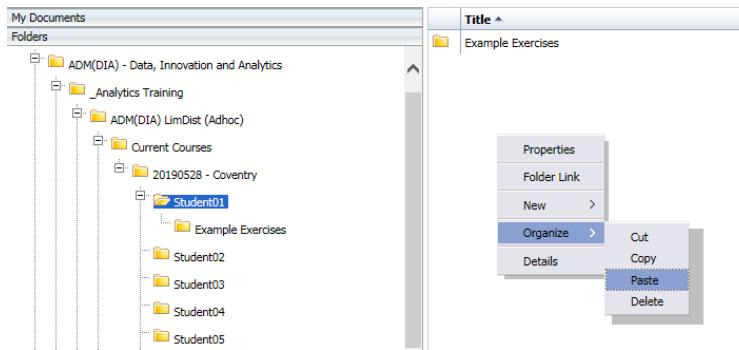
3. Close the spreadsheet and any extra windows that opened up.



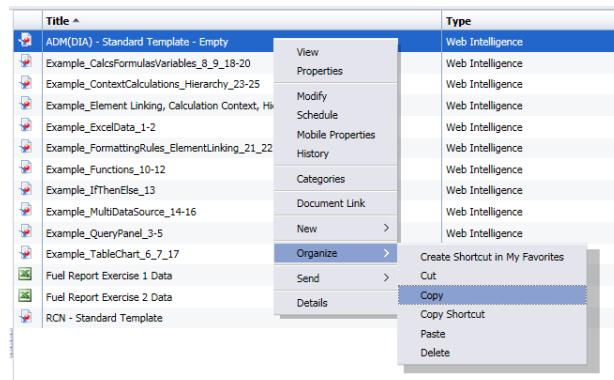
4. Right click on the spreadsheet data file and select *Organize → Copy*



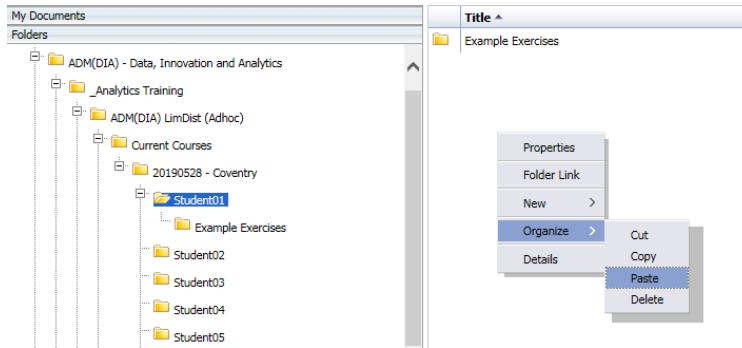
5. Navigate up to your student folder, and place a copy of the data file by right clicking on the empty white space in the folder and select *Organize → Paste*



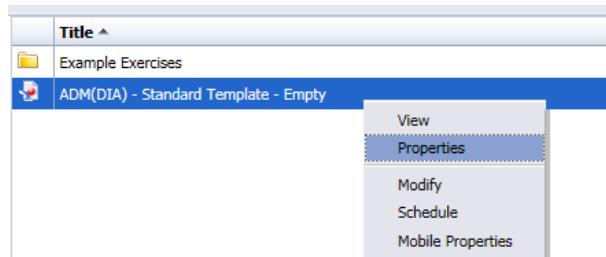
6. Navigate back to the *Sample Exercises* and find the template File *ADM(DIA) Standard Template – Empty* right-click and select *Organize → Copy*



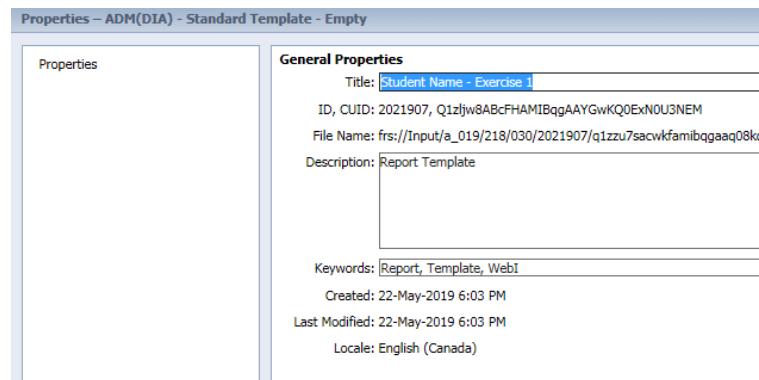
7. Navigate up to your student folder, and place a copy of the template document by right clicking on the empty white space in the folder and select Organize → Paste



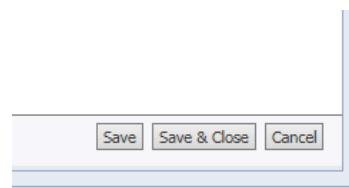
8. Rename the copy of the template document by right-click and select *Properties*.



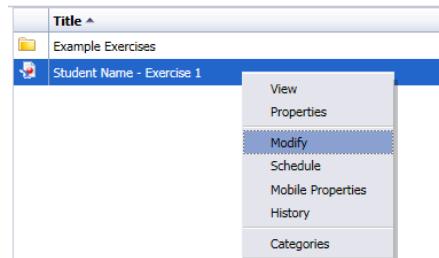
9. Change the Title in the General Properties to <Student Name> - Exercise 1.



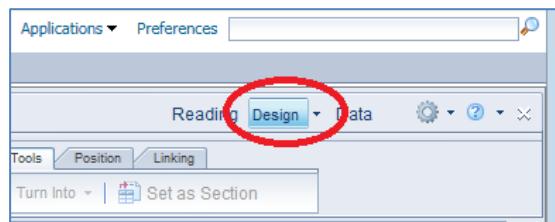
10. Select Save & Close



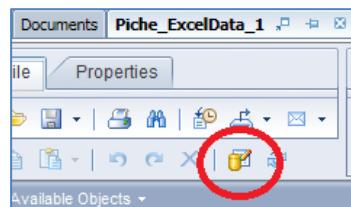
11. Right click on your renamed document and select *Modify*



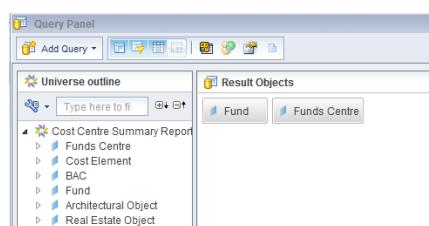
If you simply double clicked to open the document, it will start in View mode and the following screens may look quite different. Switch the document into *Design* mode and note that for these lessons, the *Modify* option should be selected to open the WebI document.



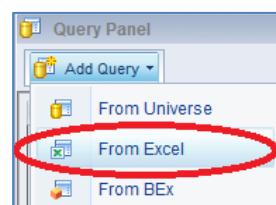
12. Click on the *Edit Data Provider* button. There are several similar ways to add a data provider.



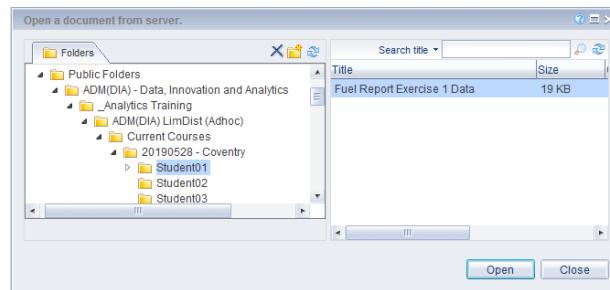
13. This will open up the *Query Panel*.



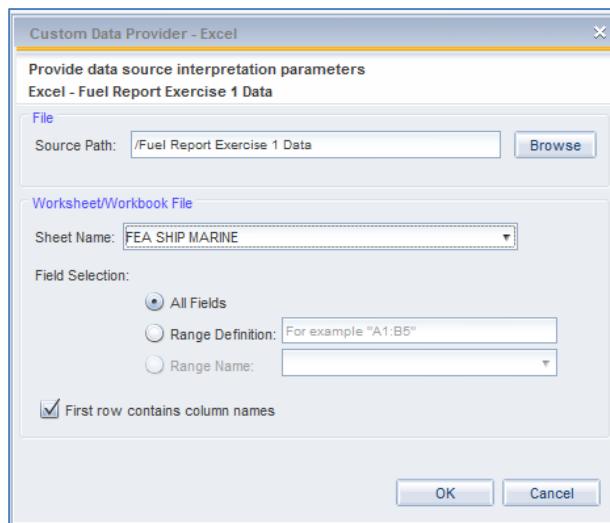
14. Click on the *Add Query* dropdown and choose *From Excel*.



15. Choose the desired Excel Spreadsheet by navigating to your Student Folder and select *Fuel Report Exercise 1 Data*, and click on the *Open* button.



16. In the next screen, ensure that the *Field Selection* is set to *All Fields* and the *First row contains column names* is checked on. Click the *OK* button and continue.



17. You'll be presented with the Query Panel as shown here.

	Item	FY Year	SHIP NAME	Funded By	(CUM)	Fuel Type	Price/GAL	\$CAD
1	2016	NANAIMO	CJOC	74	F76	3.25	82374.83	
2	2016	WHITEHORSE	CJOC	84.5	F76	3.25	9574695	
3	2016	CALGARY	MARPAC	308.4	F76	3.25	344527.63	
4	2016	CALGARY	MARPAC	126.8	F76	3.25	148082.03	
5	2016	WINNIPEG	CJOC	139	F76	3.25	162603.35	
6	2016	WINNIPEG	CJOC	419.5	MGO	3.33	482925.92	
7	2016	EDMONTON	MARPAC	64.3786	MGO	3.69	8158258	
8	2016	WINDSOR	MARPAC	146.3443	MGO	3.33	167359.14	
9	2016	WINDSOR	MARPAC	96.725	MGO	3.33	110614.61	
10	2016	NANAIMO	CJOC	57.1	MGO	3.33	67234.5	

18. Click on the *FY Year* object and change the *Object Properties*. Change the *Qualification* from a *Measure* to *Dimension* and the *Type* from *Number* to a *String*.

Item	FY Year	SHIP NAME	Funded By	(CUM)	Fuel Type	Price/GAL	\$CAD
1	2016	NANAIMO	CJOC	74	F76	3.25	82374.83
2	2016	WHITEHORSE	CJOC	84.5	F76	3.25	9574695
3	2016	CALGARY	MARPAC	308.4	F76	3.25	344527.63
4	2016	CALGARY	MARPAC	126.8	F76	3.25	148082.03
5	2016	WINNIPEG	CJOC	139	F76	3.25	162603.35
6	2016	WINNIPEG	CJOC	419.5	MGO	3.33	482925.92
7	2016	EDMONTON	MARPAC	64.3786	MGO	3.69	8158258
8	2016	WINDSOR	MARPAC	146.3443	MGO	3.33	167359.14
9	2016	WINDSOR	MARPAC	98.725	MGO	3.33	110614.61
10	2016	NANAIMO	CJOC	57.1	MGO	3.33	67234.5

FY Year has now changed to a Dimension object:

19. Change these objects as well:

*Item*:

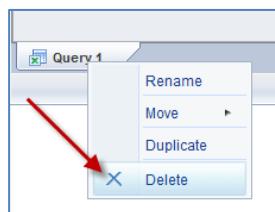
*Qualification* → *Dimension*

*Type* → *Number*

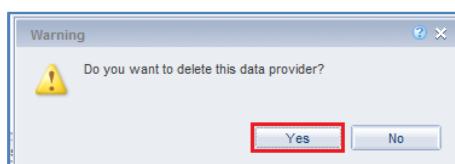
*Price/GAL*:

*Aggregate Function* → *Average*

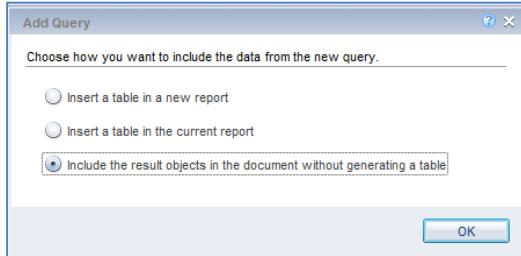
20. After adding a query you can delete the *Temp.Query* which comes with the template, right click on the name of the query tab and select *delete*. The pre-existing query is not needed for any reports.



21. You'll be presented with a warning message and click on Yes to confirm your delete action.

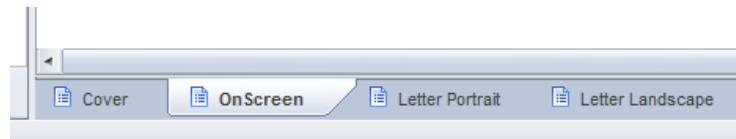


22. Click *Close* → *Apply Changes* in the upper right corner of the *Query Panel*.
23. When prompted, choose **Include the result objects in the document without generating a table** and click on **OK** button.

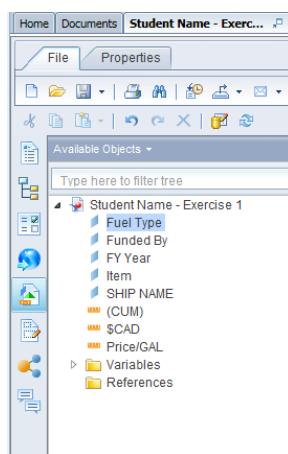


Note: this *Add Query* prompt is only shown once at the time when you add a new query. When you go back to the *Edit Data Provider* and add/remove objects in an existing query, you would not be shown this window to add the table again. However, this (adding a table) can be done very easily from the Report Panel's *Available Objects* tab.

24. Select a blank page in the template document to start with. Perhaps the *OnScreen* tab.



25. Click on the Available Object  button found on the left hand side of the *BI Launchpad*.



26. Create a table using the objects imported from the data source by dragging each object over to the report. Drag each *Available Object* to the Report one by one, or you can select the first object, hold down the *Ctrl* key, then select each object and drag them both to the new report.

FY Year	SHIP NAME (CUM)	
2016	BRANDON	102.12
2016	CALGARY	<input type="text" value="Fuel Type"/>
2016	CHICOUTIMI	85
2016	EDMONTON	189.09
2016	NANAIMO	177.99
2016	SASKATOON	292.5

You can do this with any number of available objects to save time when creating a table like below:

Item	FYYear	Fuel Type	Funded By	SHIP NAME	(CUM)	\$CAD	Price/GAL
1	2016	F76	CJOC	NANAIMO	74	82,374.83	3.25
2	2016	F76	CJOC	WHITEHORSE	84.5	9,574,695	3.25
3	2016	F76	MARPAC	CALGARY	308.4	344,527.63	3.25
4	2016	F76	MARPAC	CALGARY	126.8	148,082.03	3.25
5	2016	F76	CJOC	WINNIPEG	139	162,603.35	3.25
6	2016	MGO	CJOC	WINNIPEG	419.5	482,925.92	3.33
7	2016	MGO	MARPAC	EDMONTON	64.38	8,158,258	3.69
8	2016	MGO	MARPAC	WINDSOR	146.34	167,359.14	3.33
9	2016	MGO	MARPAC	WINDSOR	96.73	110,614.61	3.33
10	2016	MGO	CJOC	NANAIMO	57.1	67,234.5	3.33
11	2016	MGO	CJOC	SASKATOON	63.9	75,424.5	3.33
12	2016	MGO	CJOC	NANAIMO	46.89	55,323	3.33
13	2016	MGO	CJOC	SASKATOON	88.65	105,384.66	3.33
14	2016	F76	CJOC	WINNIPEG	194	208,233.12	2.97

Note what happens to the measure fields as you add / remove dimensions from the table.

You may also make several independent tables on the page and add/remove columns to existing tables.

27. Click on the *Save* button (or, press *Ctrl-S*) to save your WebI document.

## Exercise 2: Replace the Excel Spreadsheet and Refresh the Report

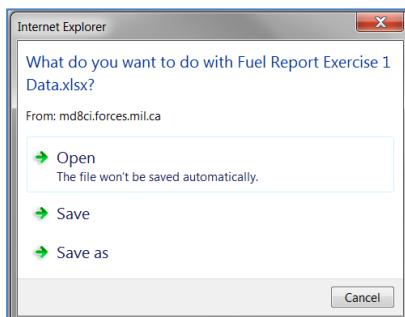
The intent of this exercise is to edit your Excel data source that was created in Exercise 1 and upload it in *BI Launch Pad*. After the upload, refresh the data source to show the change in the report/table.

### Overview steps to complete the exercise:

1. Open your document created in Exercise 1.
2. You have been tasked with updating the Excel Spreadsheet that is being used in Exercise 1.
3. Open the *Fuel Report Exercise 1 Data* Spreadsheet that was used as the data source.
4. Find the Excel Spreadsheet *Fuel Report Exercise 2 Data* found in your copy of the students folder, and open it in Excel. You will have both spreadsheet files open.
5. Copy the additional rows from the *Fuel Report Exercise 2 Data* Spreadsheet and paste them at the bottom of the *Fuel Report Exercise 1 Data* Spreadsheet.
6. Ensure that the data aligns properly with the appropriate column and be sure to maintain the existing format.
7. Save the Excel *Fuel Report Exercise 1 Data* Spreadsheet on your desktop and/or your local drive.
8. **Replace** the *Fuel Report Exercise 1 Data* Spreadsheet in your student folder that was used as the data source for your report, with the one from your desktop and/or your local drive.
9. Open your Webl Document and choose to refresh the data.
10. Verify your table shows the additional data.
11. Save the Webl document (with the toolbar button or with *Ctrl-S*).

### Answer Guide:

1. Navigate to your student folder in the *BI Launch Pad*.
2. Double click on *Fuel Report Exercise 1 Data* to open the Excel Spreadsheet.
3. When prompted, click on *Open*.

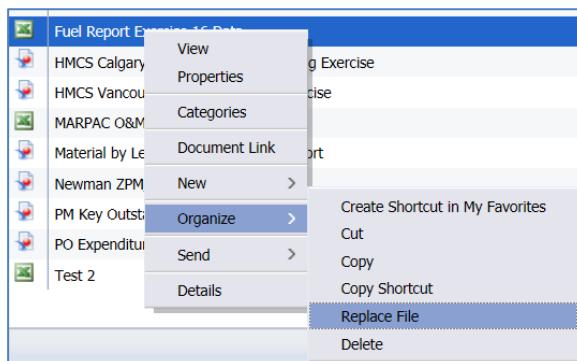


4. Leave the *Fuel Report Exercise 1 Data* Excel Spreadsheet open.
5. Navigate to your copy of the *Sample Exercises* in your student folder.
6. Double click on *Fuel Report Exercise 2 Data*.
7. Select the extra data (not the header row) row 2 to 17.
8. Right click → *Copy*.

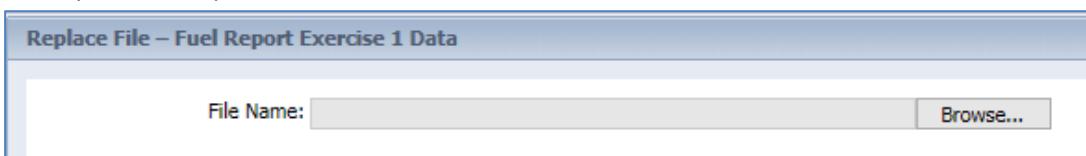
9. Go back to *Fuel Report Exercise 1 Data* and paste in the rows.

42	2016	SASKATOON	CJOC	83.00	F76	2.71	88001.27178
43	2016	VANCOUVER	MARPAC	176.58	MGO	3.18	192450.2838
44	2016	SASKATOON	CJOC	56.95	MGO	2.97	64651.00126
45	2016	EDMONTON	CJOC	57.60	F76	2.63	61070.7621
46	2016	VANCOUVER	MARPAC	124.91	F76	2.63	128596.3378
47	2017	EDMONTON	CJOC	45.47	F76	1.9	31960.10704
48	2017	SASKATOON	CJOC	50.89	F76	1.9	41301.15561
49	2017	SASKATOON	CJOC		MGO	3.33	100753.146
50	2017	CALGARY	MARPAC	1351.525	F76	1.9	839869.16
51	2017	CALGARY	MARPAC	40.988	JP5		27015.04
52	2017	VANCOUVER	MARPAC	1616.47	F76	1.9	1045123.69
53	2017	VANCOUVER	MARPAC	120.25	JP5	1.91	68327.194
54	2017	YELLOWKNIFE	MARPAC	91	F76	1.9	62009.35
55	2017	OTTAWA	MARPAC	359	F76	1.9	196471.21
56	2017	WINNIPEG	MARPAC	401.8	F76	1.9	266834.1
57	2017	SASKATOON	MARPAC	115.251	F76	1.9	61880.91
58	2017	WINNIPEG	MARPAC	519	F76	2.28	407798.976
59	2017	VANCOUVER	MARPAC	0	F76	0	0
60	2017	OTTAWA	MARPAC	672	F76	2.28	534449.3628
61	2017	EDMONTON	MARPAC	62.64	F76	2.28	49047.49353

10. Save the *Fuel Report Exercise 1 Data* Excel document to your desktop.
11. Close both Excel Spreadsheets.
12. Navigate to your student folder on *BI Launch Pad*.
13. Right click on the *Fuel Report Exercise 1 Data*. This must be the exact same file that was used as the data provider in Exercise 1.
14. Select *Organize → Replace File*.



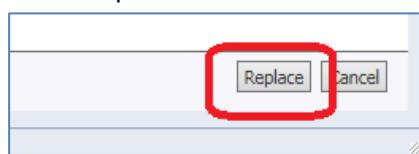
15. This opens the *Replace File* window.



16. Click on the *Browse...* button, and choose the *Fuel Report Exercise 1 Data* Excel document which you saved to your desktop, then click on *Open*.

Open

17. Click on the *Replace* button on the replace file window.



18. Double click your <Student Name> - ExcelData\_1 WebI document you created in exercise 1 to open it in *View* mode.
19. Observe your existing report, especially the last row of data. If needed, switch to *Design* mode and place the *Item* object as the first column, this will set the default sort and force the individual rows to be shown and avoid any consolidation of the measure values.

Item	FYYear	Fuel Type	Funded By	SHIP NAME	(CUM)	\$CAD	Price/GAL
1	2016	F76	CJOC	NANAIMO	74	82,374.83	3.25
2	2016	F76	CJOC	WHITEHORSE	84.5	9,574,695	3.25
3	2016	F76	MARPAC	CALGARY	308.4	344,527.63	3.25
4	2016	F76	MARPAC	CALGARY	126.8	148,082.03	3.25
5	2016	F76	CJOC	WINNIPEG	139	162,603.35	3.25
6	2016	MGO	CJOC	WINNIPEG	419.5	482,925.92	3.33
7	2016	MGO	MARPAC	EDMONTON	64.38	8,158,258	3.69
8	2016	MGO	MARPAC	WINDSOR	146.34	167,359.14	3.33
9	2016	MGO	MARPAC	WINDSOR	96.73	110,614.61	3.33
10	2016	MGO	CJOC	NANAIMO	57.1	67,234.5	3.33
11	2016	MGO	CJOC	SASKATOON	63.9	75,424.5	3.33

You may have to scroll down or jump to the last page of the report to see the last row of data.



20. Click on the *Refresh*  button to refresh the data being used on the report. The document will pull the new data from the same spreadsheet provider that you just updated. Scroll down or jump to the last page and see the last row of data.

Item	FYYear	Fuel Type	Funded By	SHIP NAME	(CUM)	\$CAD	Price/GAL
45	2016	F76	MARPAC	VANCOUVER	124.91	128,596.34	2.63
46	2017	F76	CJOC	EDMONTON	45.47	31,960.11	1.9
47	2017	F76	CJOC	SASKATOON	50.89	41,301.16	1.9
48	2017	MGO	CJOC	SASKATOON		100,753.15	3.33
49	2017	F76	MARPAC	CALGARY	1,351.53	839,869.16	1.9
50	2017	JP5	MARPAC	CALGARY	40.99	27,015.04	
51	2017	F76	MARPAC	VANCOUVER	1,616.47	1,045,123.69	1.9
52	2017	JP5	MARPAC	VANCOUVER	120.25	68,327.19	1.91
53	2017	F76	MARPAC	YELLOWKNIFE	91	62,009.35	1.9
54	2017	F76	MARPAC	OTTAWA	359	196,471.21	1.9
55	2017	F76	MARPAC	WINNIPEG	401.8	266,834.1	1.9

21. Click on the *Save* button (or, press *Ctrl-S*) to save your WebI document.

## Exercise 3: Create a Web Intelligence Document with a BEx Query

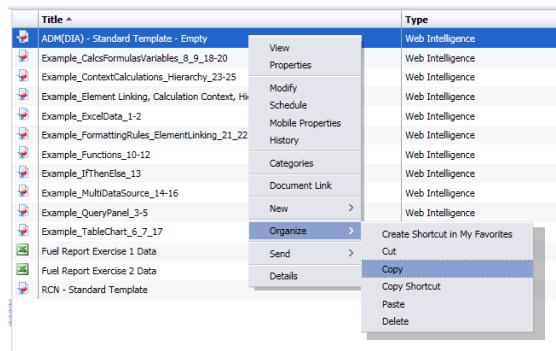
Create a Webl Document using the standard Template and use a BEx query as the data source. Also, delete the *Temp.Query* that comes with the standard template.

### Overview steps to complete the exercise:

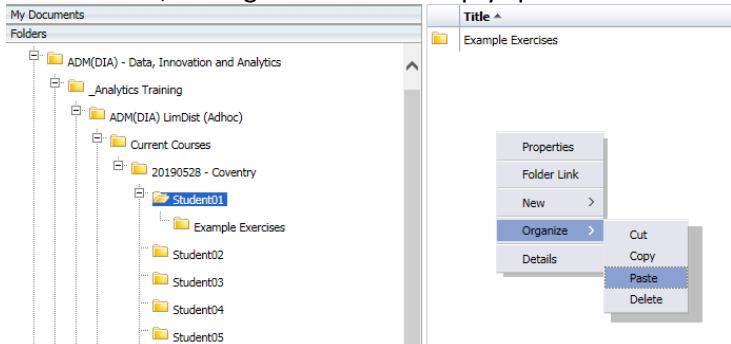
1. Create a new Webl document based on the Template as you did in exercise 1.
2. Rename the document using <Student Name> - Exercise 3.
3. Create a Data Provider based on a BEx query called *Expenditure Report – Master Query* (technical name *ZCXX\_ZBWFM01\_CATS019*).
4. Select *FMF CAPE B* for the *Org. Hierarchy Nodes(s)* when prompted.
5. Select *Maintenance plant, Calendar Year/Month, Order Type, Order, Work Centre, Cur. System Status, Current User Status, Expended Hours-RT, Expended Hours-OT, and Total (RT+OT) Hours* objects.
6. Click on the *Set Variable*  button to only keep prompts for *Org. Hierarchy Nodes(s)* and *Plant – Auth Relevant*.
7. Delete *Query 1* that came with the Template.
8. Save the Webl document (*Ctrl-S*) as it will be used later in this course.

### Answer Guide:

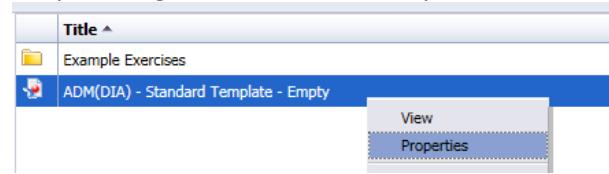
1. Navigate to your copy of the *Sample Exercises*.
2. Select the Template document, and from the context menu (right click on the filename), select *Organize → Copy*.



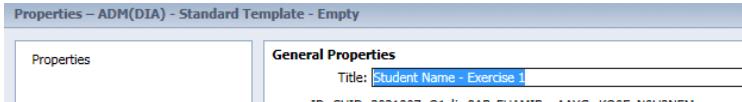
3. Navigate to your student folder, and right click in the empty space and select *Organize → Paste*.



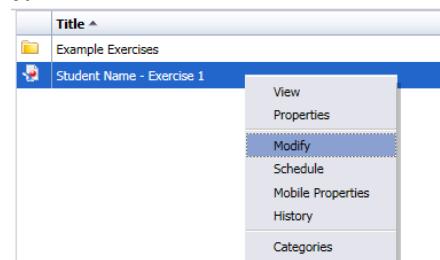
4. Rename the copied template. Right click and select *Properties*.



5. Change the name to <Student folder>-Exercise3, and you may also change the *Description* and *Keywords* sections. Choose the *Save&Close* button at the bottom.



6. Now, right click and select *Modify*.

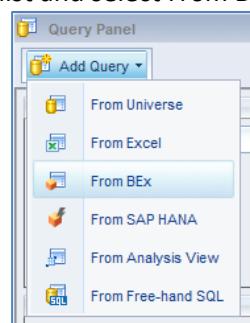


7. At this point the WebI document should be opened in *Design mode*.

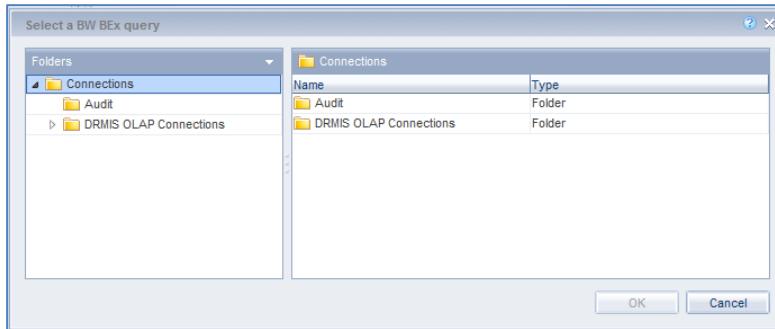


8. Click on *Edit Data Provider*  button.

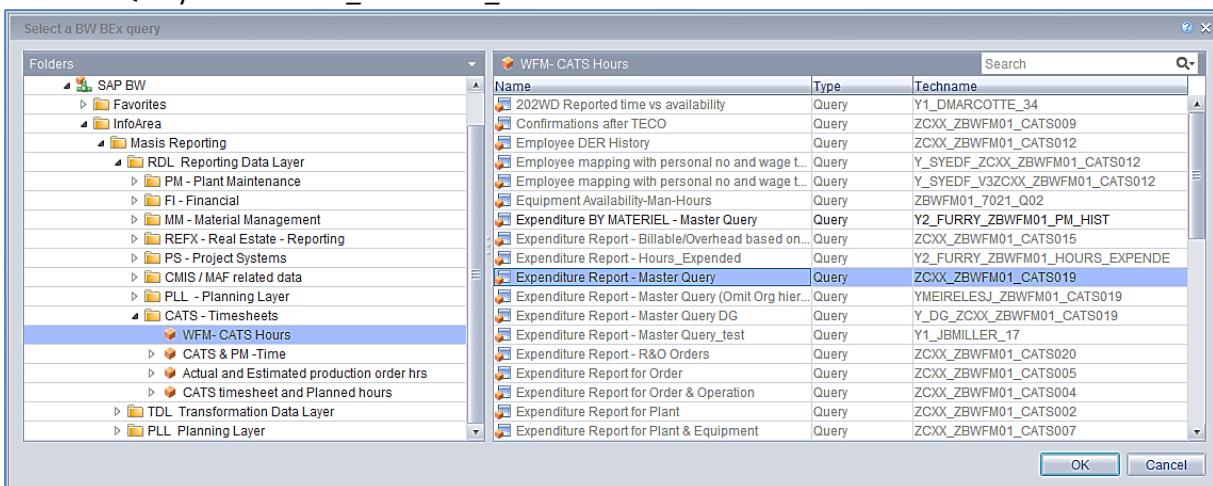
9. Click on the *Add Query* dropdown list and select *From BEx*.



10. This opens up the *Select a BW BEx query* window:

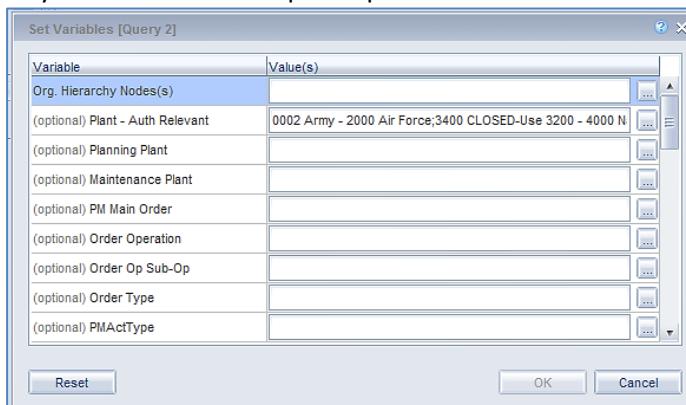


11. Now drill down to find the *Expenditure Report – Master Query* under the file structure *RDL Reporting Data Layer\CATS – Timesheets\WFM – CATS Hours*:  
BEx Query Name: ZCXX\_ZBWM01\_CATS019



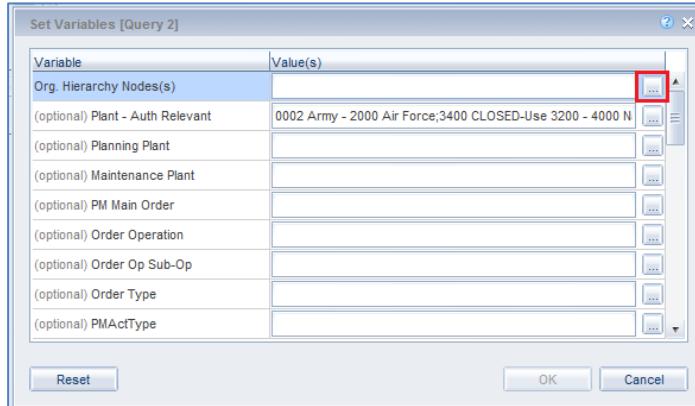
In most cases the *Technname* of the BEx query is already known. It is possible to search for the name directly. Click on the magnifying glass button and select *Technical*.

12. Select the BEx query and click *OK*. This opens up the *Set Variables* window:

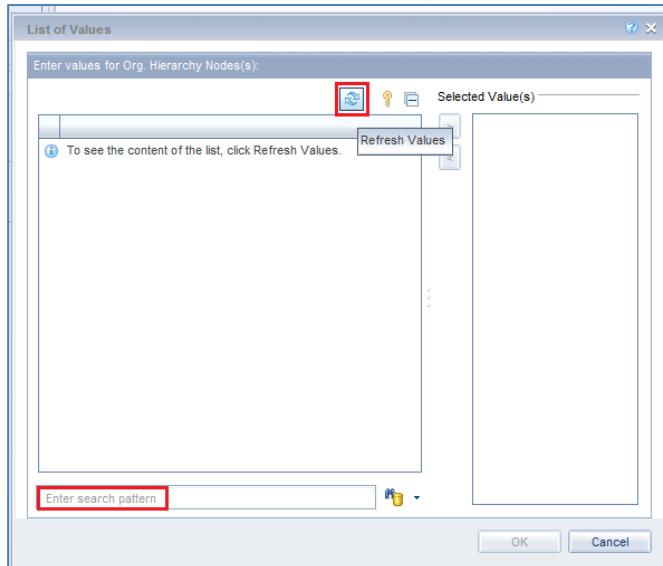


13. For the mandatory variable *Org. Hierarchy Nodes(s)*, find *FMF CAPE B* under the *MND, CDS Branch, RCN*, and *MARPAC*.

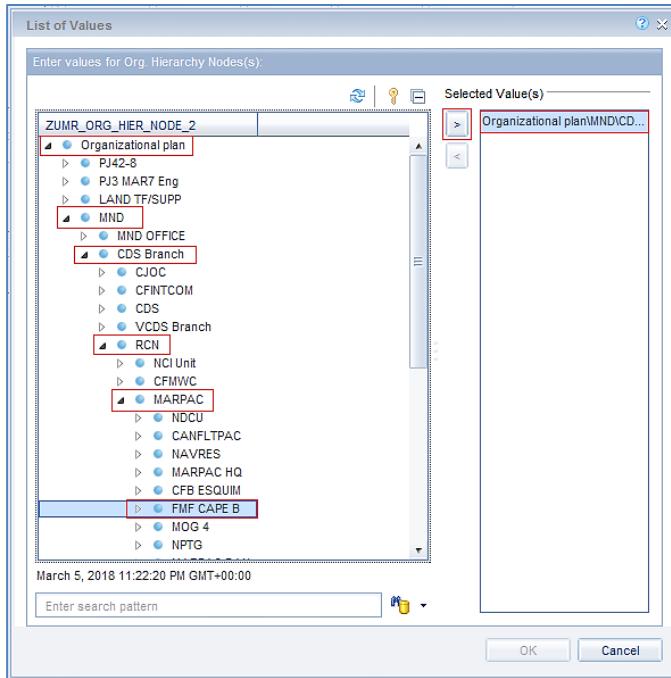
- Click on the ellipsis menu beside *Org. Hierarchy Nodes(s)*:



- In the *List of Values* window, click on the *Refresh Values* button to see the possible values and choose your item from the list.



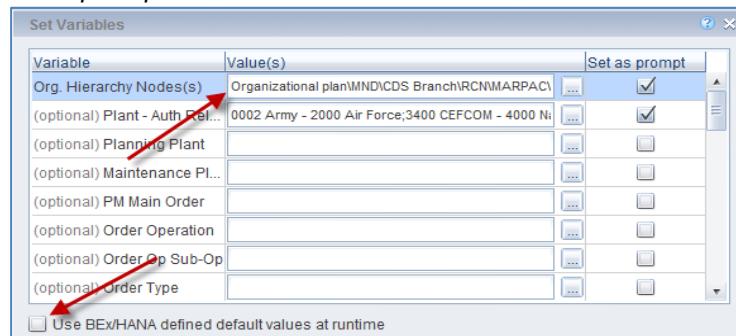
- After clicking on the *Refresh Values* follow the path below and click on the *add to the list* > button to add *FMF CAPE B* to the *Selected Value(s)* section. The Key  button is used to display the internal key values.



14. Click on *OK* again to get back to the *Query Panel*.
15. Move Select *Maintenance plant*, *Calendar Year/Month*, *Order Type*, *Order*, *Work Centre*, *Cur. System Status*, *Current User Status*, *Expended Hours-RT*, *Expended Hours-OT*, and *Total (RT+OT) Hours* objects to the *Result Objects* panel:



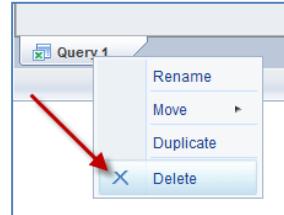
16. Click on the *Set Variables* button in the top left corner of the *Query Panel*. At *Set Variables*, first uncheck the *Use BEx/HANA defined default values at runtime* check-box. Then uncheck the *Set as prompt* check boxes beside all variables except *Org. Hierarchy Nodes(s)* and *Plant – Auth Relevant* objects. You would need to scroll down on this window to find all the other variables and uncheck their *Set as prompt* check-box.



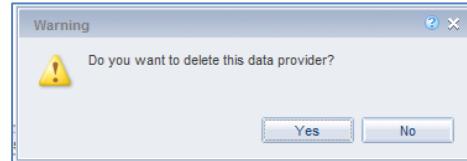
NOTE: if you do not see the *Use BEx/HANA defined default values at runtime* check-box, maximize the window so that you are able to see the box at the bottom left.

17. Click on *OK* again to get back to the *Query Panel*.

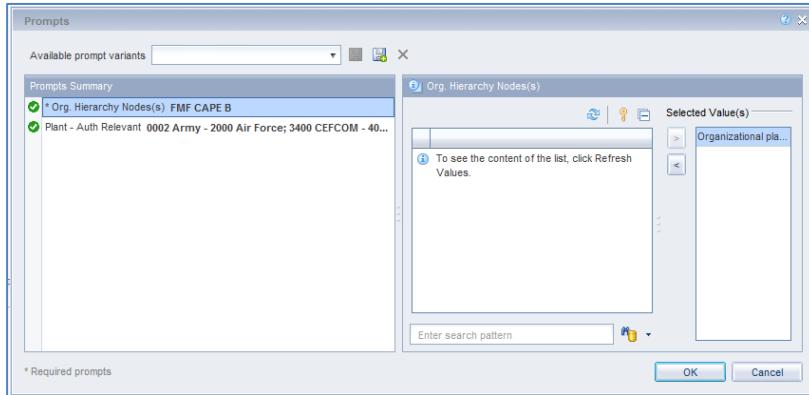
18. To delete the query that comes with the template, right click on the query tab and select delete.



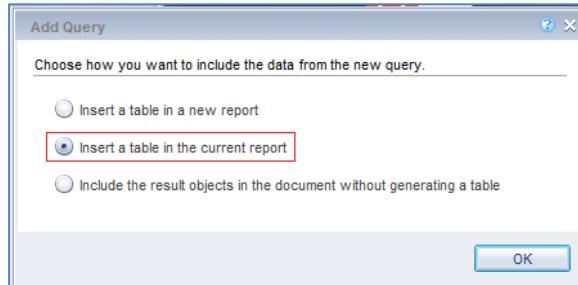
19. You'll be presented with a warning message and click on Yes to confirm your delete action.



20. Click on *Run Queries* and you will be presented with the *Prompts* window. You can just click on the *OK* button to accept the values as that are already there.



21. Now you will be asked to insert a table for this new query into your current report or a new report or not to include this table at all. For this exercise let's choose the second option.



Even if you decide not to include this table at this moment you can very easily do that at a later time.

Note: this *Add Query* prompt is only shown once at the time when you add a new query. When you go back to the *Edit Data Provider* and add/remove objects in an existing query, you'd not be shown this window to add the table again. However, this (adding a table) can be done very easily from the Report Panel's *Available Objects* tab.

22. In the WebI Report you will now have a table containing the selected columns/fields.

Example_QueryPanel_1-4											
Refreshed 06/03/2018		Subtitle									
Maintenance	Calendar Year	Order type	Order	Work Center	Cur.System	Current User	Expended Ho	Expended Ho	Total (F)		
4TH MAROPS	MAR 2004	Maintenance	DYNAMIC SO	SHIP'S SIGN/ CLSD		ACKN			7.5		
4TH MAROPS	JAN 2006	Engineering	HMCS EDMO	OPERATIONS CLSD		SCHD		7.5			
4TH MAROPS	MAY 2006	Engineering	HMCS EDMO	OPERATIONS CLSD		SCHD		2			
4TH MAROPS	DEC 2006	NP Configuration	EC20020133	OPERATIONS CLSD		SCHD		1			
4TH MAROPS	DEC 2006	NP Configuration	EC20020134	OPERATIONS CLSD		ACKN		1			
4TH MAROPS	JAN 2013	Maintenance	YEL 10 023 4	SAWS	CLSD	ACKN		16			
4TH MAROPS	JAN 2013	Engineering	SRR-504 WA C4I	CLSD		ACKN		1			

23. Click on the *Save* button (or, press *Ctrl-S*) to save your WebI document.

## Exercise 4: Add Query Filters to the WebI Document

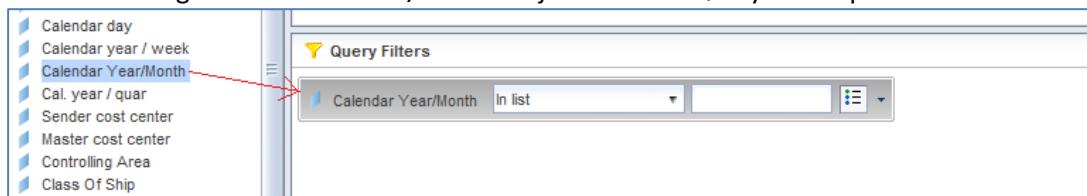
Add a filter to an existing WebI document at the query level. Query filters can be used to reduce the time it takes for a BEx query to run, as well as filtering out irrelevant data.

### Overview steps to complete the exercise:

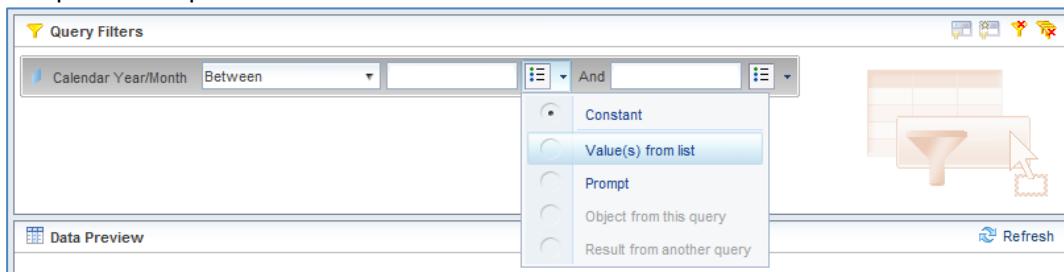
1. Make a copy the report created in *Exercise 3* and rename the copy to <Student Name> - *Exercise 4*.
2. Edit Data provider and create a filter for *Calendar Year/Month* and add the values 2016.01 through to the last available year/month from the query.
3. Create another filter *Maintenance Plant* and add the *HMCS Calgary, HMCS Ottawa, HMCS Vancouver, HMCS Winnipeg, and HMCS Regina*.
4. Verify the report.
5. Save the WebI Document (*Ctrl-S*).

### Answer Guide:

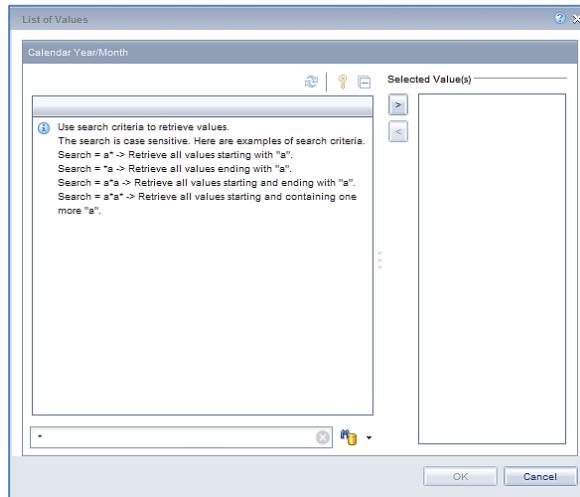
1. Right click on the WebI document you created in previous exercise and select *Organize → Copy*.
2. In the white space for the folder select *Organize → Paste*.
3. On the new copied document right click and select *Properties* to rename the document and then click *Save&Close*.
4. Right click on the renamed WebI document and select *Modify*.
5. Click on *Edit Data Provider*  button.
6. Select and drag the *Calendar Year/Month* object into the Query Filters panel.



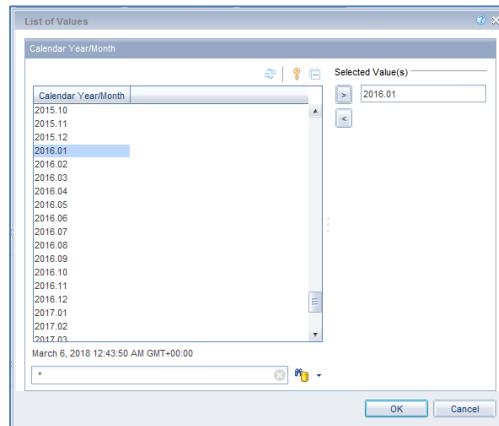
7. Select the *Between* operator and select the *Value(s) from list* option from the drop down list beside the operands' input field:



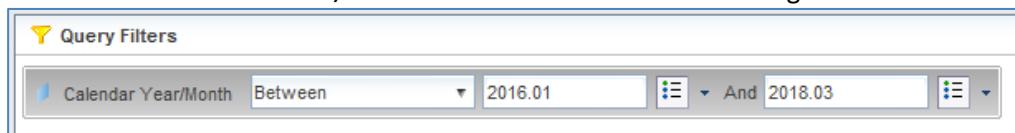
8. As the refresh button is unavailable, insert an asterisk (\*) into the search field and press enter.



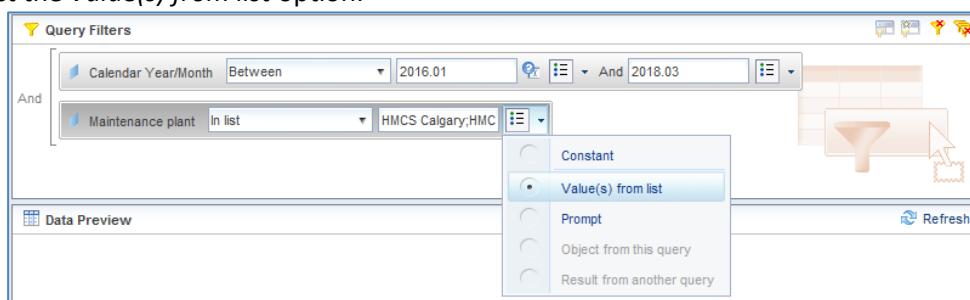
9. Add the values by double clicking or selecting them and clicking the > arrow. The box should resemble the following.



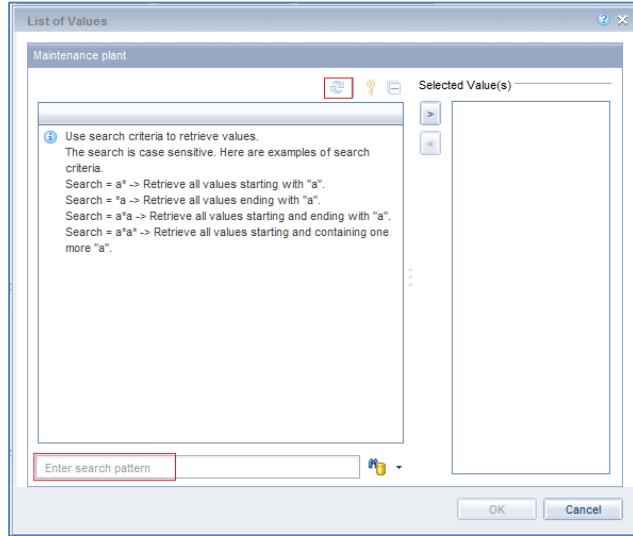
10. Add 2016.01 for the starting value and whatever is the last value from the query in the ending box.  
The from and to *Calendar Year/Month* filter should look like following:



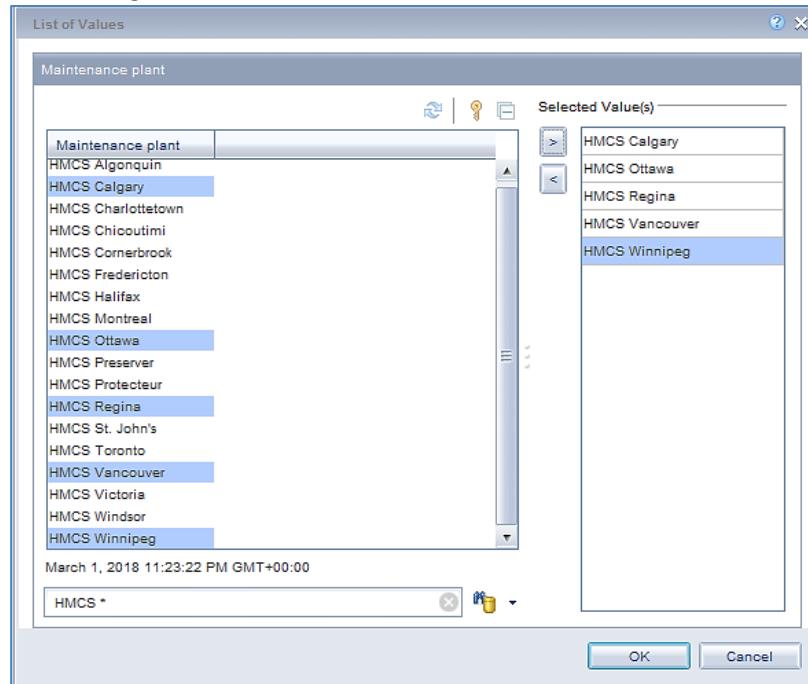
11. Select and drag the *Maintenance Plant* object into the *Query Filters* panel.  
12. Select the *Value(s) from list* option.



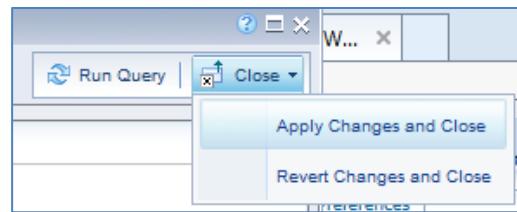
13. As the refresh button is unavailable, insert an asterisk (\*) into the *Enter search pattern* field and press enter:



14. Add the values by double clicking or selecting them and clicking the > arrow. The box should resemble the following:



15. Click on *OK*.  
 16. Click on *Run Query*.  
 17. When the prompt appears, keep the existing values and click *OK*.  
 18. Alternatively, instead of clicking on the *Run Query* button, you could have clicked on *Close*, then *Apply changes and Close* button to come out of the *Query Panel* saving all your work.



19. Now click on the *Save* button (or, press *Ctrl-S*) to save your WeBI document.

## Exercise 5: Adding Filters with Prompts to the Web Intelligence Document

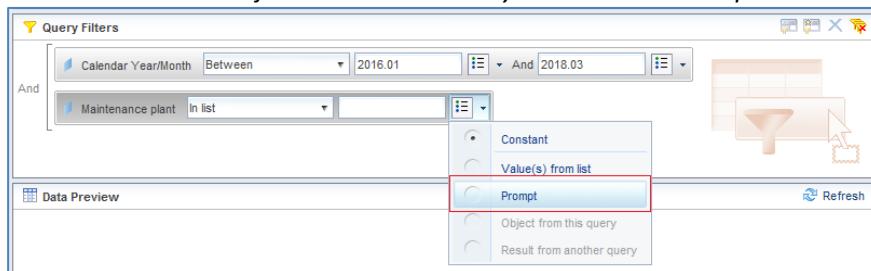
The intent of this exercise is to create query filter with prompt. This is an essential skill for an author when creating interactive Webl reports.

### Overview steps to complete this exercise:

1. Make a copy the report created in the last exercise and rename the copy to <Student Name> - *Exercise 5*.
2. Open the renamed document in *Modify* mode.
3. Change the previously created filter for the *Maintenance Plant* object.
4. Add in prompts for the *Maintenance Plant* object and make Webl prompt the consumer each time the report data is refreshed.
5. Set the prompt default values as *HMCS Calgary*, *HMCS Ottawa*, *HMCS Vancouver*, *HMCS Winnipeg*, and *HMCS Regina*, and “*CFB Esquimalt*, *FMF-CB*.”
6. Ensure the boxes *Prompt with list of values*, *keep last values selected*, and *Select only from list* are checked.
7. Run the Query and verify the report.
8. Save the Webl Document (*Ctrl-S*).

### Answer Guide:

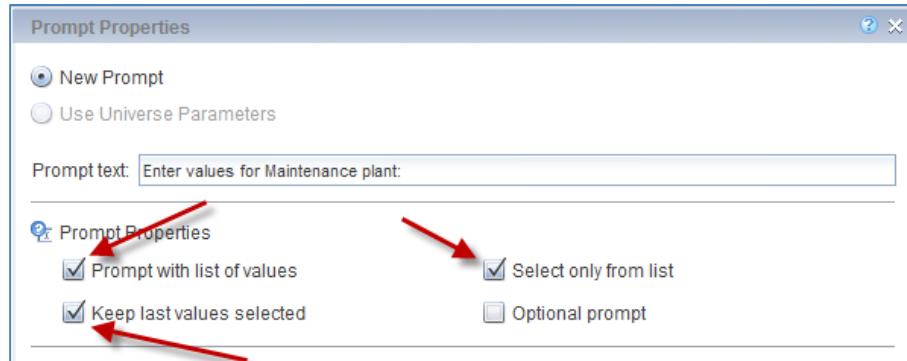
1. Right click on the Webl document you created in previous exercise and select *Organize* → *Copy*.
2. In the white space for the folder select *Organize* → *Paste*.
3. On the new copied document right click and select *Properties* to rename the document and then click *Save&Close*.
4. Right click on the renamed Webl document and select *Modify*.
5. Click on  *Edit Data Provider*.
6. Set the *Maintenance Plant* object filter in the *Query Filter* box to *Prompt*.



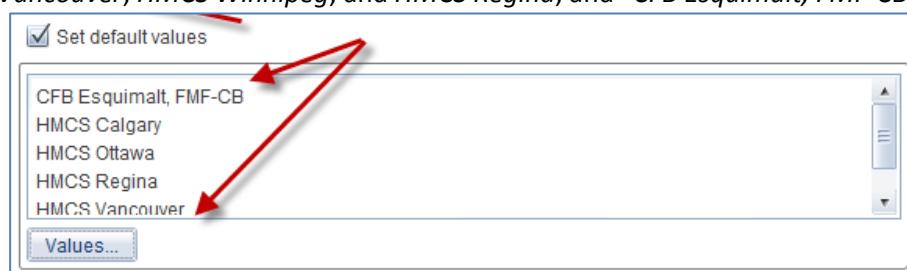
7. Click on the *Show Prompt Properties*  button beside the prompt which will take you to the *Prompt Properties* window.



8. In the Prompt Properties, check the *Prompt with list of values*, *Select only from list*, and *Keep last values selected* check-boxes.



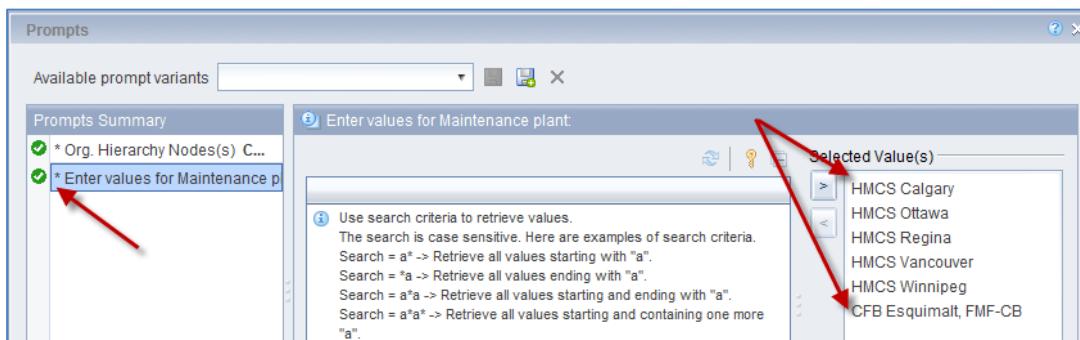
9. Also check the *Set default values* and enter the following values: *HMCS Calgary, HMCS Ottawa, HMCS Vancouver, HMCS Winnipeg, and HMCS Regina, and "CFB Esquimalt, FMF-CB."*



10. Click *OK* to continue.

11. Click *Run Query*.

12. At the *Prompts* window check to ensure that the values you selected are the default values pre-selected.



13. Click *OK* to continue.

14. Now click on the *Save* button (or, press *Ctrl-S*) to save your Webl document.

## Exercise 6: Create a Web Intelligence Document with a table

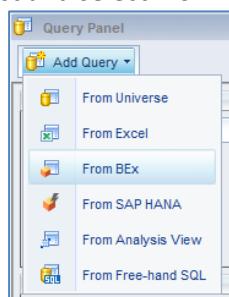
The intent of this exercise is to create a table in your Webl document. Tables are a necessary first step in visualizing data. Once a table is created, it can be used to create other visualization objects (Exercise 7).

### Overview steps to complete the exercise:

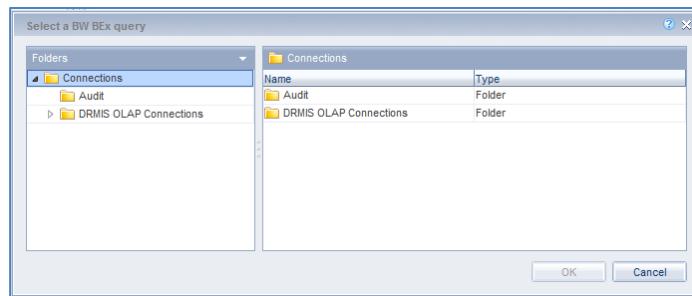
1. Create a new document based on the Template as seen in the first exercise.
2. Rename the document using <Student Name> - Exercise 6.
3. Open the renamed document using *Modify* mode.
4. Create a Data Provider based on the *Deployed DRMIS PM Status* query, technical name *ZPM\_M019\_7031\_Q01*.
5. Select the Maintenance Plan Date prompt for *01/01/2017* to the present. If no data is returned, select the earliest date shown in the list for the starting date.
6. Within the Query Panel, Select the objects *Maintenance plant, PM Order, Order Type, Active Sys Status, Mn.wk ctr, PM Estimate Hours (Orders), PM Confirmed Hours (Order)*, and *Days Past Due*.
7. Create a filter for *Maintenance Plant* and select the values *HMCS Vancouver (1331), HMCS Regina (1334), HMCS Calgary (1335), HMCS Winnipeg (1338), HMCS Ottawa (1341)*  
NOTE: You will need to click on the *Show/Hide key values*  button to get the key values.
8. Delete *Query 1* that came with the Template so that only your newly selected query remains.
9. Select *Run Query*.
10. When prompted select the option to not automatically generate a table with the result objects.
11. Within one of the Report tabs, create a table with the *Maintenance plant, Mn.wk ctr, and PM Confirmed Hours (Order)* objects.
12. Save your Webl document (*Ctrl-S*) as it will be used later in this course.

### Answer Guide:

1. Create a new document based on the Template as seen in the first exercise.
2. Rename the document using <Student Name> - Exercise 6.
3. Now, open this Webl document in *Modify* mode. At this point the Webl document should be opened in the *Design* mode.
4. Click on *Edit Data Provider*  button. This will open the *Query Panel*.
5. Click on the *Add Query* dropdown list and select *From BEx*.



This opens up the *Select a BW BEx query* window:



6. Now drill down to find the *Deployed DRMIS PM Status* query (technical name *ZPM\_M019\_7031\_Q01*) under the file structure *RDL Reporting Data Layer\PM – Plant Maintenance\Maintenance Plans\Maintenance Plans and Work Orders*:

Name	Type	Technname
CBRN-NBC Filters Changeout Dates	Query	Y1_GS_ZPMMQ01
DGMGEPM Deployed PM KPI	Query	Y1_GC_M0197031Q01DPMF
DGMGEPM Deployed PM KPI	Query	Y1_GS_M0197031Q01DPMF
DGMGEPM Deployed PM KPI	Query	Y1_SA_FOR_FUTURE_MAINT
DGMGEPM Deployed PM KPI	Query	Y1_SA_M0197031Q01DPMF
Deployed DRMIS PM Status	Query	ZPM_M019_7031_Q01
Forecast Report	Query	ZPM_M019_7045_Q01
Fury_DRMIS Navy PM Planning	Query	Y1_FURRY_PM_PLANNING
Future Maintenance	Query	Y1_SA_M0197031Q01DPMF_FUTURE_M
GSS Deployed Orders and Notifications	Query	Y1_GS_M0197031Q01
GSS Deployed PM KPI	Query	Y1_GS_MDA7031Q01
HFX Future Maint Fixed	Query	Y1_SA3_M0197031Q01DPMF
HFX Future Maintenance	Query	Y1_SA2_M0197031Q01DPMF
MSR Ship Preventive Maintenance Performance	Query	Y1_GS_7031Q01
NMPRO Deployed PM KPI	Query	Y1_GS_NMPRO7031Q01
PB Deployed PM Status	Query	Y1_PUBEROGLU_DEP_PM_STATUS
PUBEROGLU_Deployed DRMIS PM Status	Query	Y1_PUBEROGLUZPM_M019_7031_Q01
PM Key Forecast Report (6M and Above)	Query	Y1_SH_ZPM_M019_7045_Q02

7. Select the BEx query and click *OK*. This opens up the *Set Variables* window where you would select the required dates for *Maintenance Plan Date object* from *01/01/2017* to the *present*.

Variable	Value(s)
Maintenance Plan Date	<input type="text"/>
(optional) Maintenance Plant	<input type="text"/>

8. In the *Query Panel*, select the objects *Maintenance plant*, *PM Order*, *Order Type*, *Active Sys Status*, *Mn.wk ctr*, *PM Estimate Hours (Orders)*, *PM Confirmed Hours (Order)*, and *Days Past Due* into the *Result Objects* panel.

9. Insert the *Maintenance Plant* into the *Query Filter* and select the required values.

NOTE: You will need to click on the *Show/Hide key values* button to get the key values

Maintenance Plant	In list	1331;1335;1338;13
-------------------	---------	-------------------

10. Click on *Run Queries*  and you will be presented with the *Prompts* window. You can just click on the *OK* button to accept the values that are already there.

11. When prompted select the option to not automatically generate a table with the result objects.

12. Create a table that resemble the picture below.

Maintenance Plant	Mn.wk ctr	PM Confirmed hours (Order)
HMCS Vancouver	DECK DEPARTMENT	350.5
HMCS Vancouver	Electrical Division	1,166.2
HMCS Vancouver	Hull Division	1,230.6
HMCS Vancouver	Marine Systems Division	1,873
HMCS Vancouver	HMCS Vancouver	
HMCS Vancouver	NET Communications Section	
HMCS Vancouver	VANCOUVER STORE	
HMCS Vancouver	W ENG TECH - ARM	433.4
HMCS Vancouver	W ENG TECH - COMM	687
HMCS Vancouver	W ENG TECH - FC	708
HMCS Vancouver	W ENG TECH - RADAR	98
HMCS Vancouver	W ENG TECH - SONAR	381
HMCS Vancouver	Electrical Division	
HMCS Vancouver	1340/MWC-VAN	
HMCS Regina	1330/REG-STOR	
HMCS Regina	1331/REG-STOR	

13. Click on the *Save* button (or, press *Ctrl-S*) to save your WebI document.

## Exercise 7: Create a Web Intelligence Document with Chart

The intent of this exercise is to create a chart in your WeBI document as well as modify the chart's settings. Charts are used to visually show variation between various data points which is a useful tool in quickly reviewing information.

### Overview steps to complete the exercise:

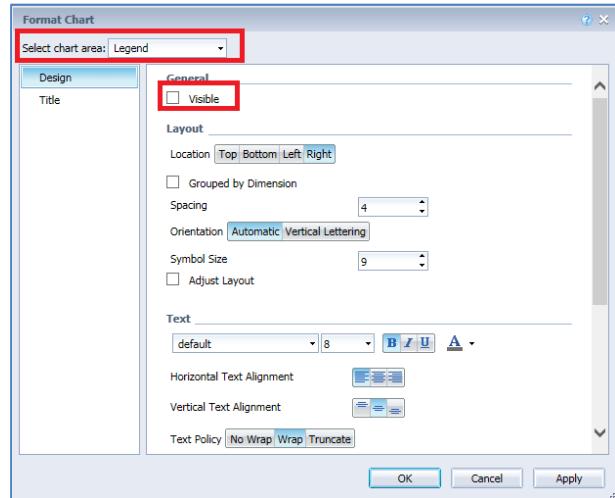
1. Make a copy the document created in the last exercise and rename the copy to <Student Name> - Exercise 7.
2. In a new Report tab, create a chart with the objects *Maintenance Plant* and *PM Confirmed Hours*.
3. Remove the legend.
4. Turn on the Data Label Displaying Mode and position the data label outside the column and in a horizontal orientation.
5. Increase the font to size 12 for both the data labels and the axis' design and title options.
6. Give the chart a name, like, *Chart1*.
7. Copy the chart and turn that copied table into a *Vertical Table*.
8. Give the table a name, like, *Table1*.
9. Set the horizontal and vertical position of the chart (i.e. *Chart1*) as 1 cm away from left of the report and 1 cm down from the top of the report.
10. Set the horizontal and vertical position of the table (i.e. *Table1*) as 1 cm away from the right of the chart (i.e. *Chart1*) and 0 cm down from the top of the chart (i.e. *Chart1*).
11. In the chart:
  - Show the value axis
  - Set the maximum value of the value axis to 50000
  - Hide the Category Axis Grid lines (not the Category Axis itself)
  - Change the color of the data series to Green
12. Save your WeBI Document (*Ctrl-S*).

### Answer Guide:

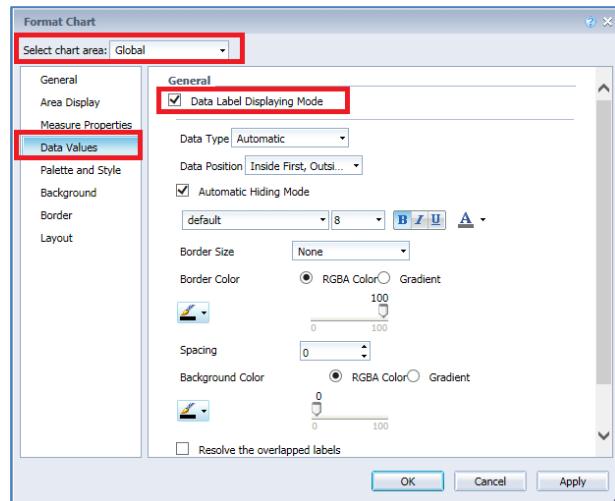
1. Right click on the WeBI document you created in previous exercise and select *Organize* → *Copy*.
2. In the white space for the folder select *Organize* → *Paste*.
3. On the new copied document right click and select *Properties* to rename the document and then click *Save&Close*.
4. Right click on the renamed WeBI document and select *Modify*.
5. Select an empty report tab or add a report tab.
6. Click on *Available Objects*  button and set it to *Arranged by* to *Query*.
7. Create a table by dragging *Maintenance Plant* and *PM Confirmed Hours* over to the new report tab.

**NOTE:** You can select *Maintenance Plant* hold down the Ctrl key, then select *PM Confirmed Hours* and drag them both to the new report. You can do this with any number of available objects to save time when creating a table.

8. Copy the table by right clicking the table, selecting *Copy*, then move to an empty part of the report and click *paste*.
9. Turn the copied table into a Column chart by selecting the table (you will see the four headed arrow cursor), right click select *Turn Into → Column Chart*. You now have a table and a chart. Note: changes made to the chart would not impact the table.
10. To remove the legend, select the chart, right click and select Format Chart. Then go to *Legend → Design*. Under the *Design* bar, uncheck *Visible* for the Legend to no longer be visible.

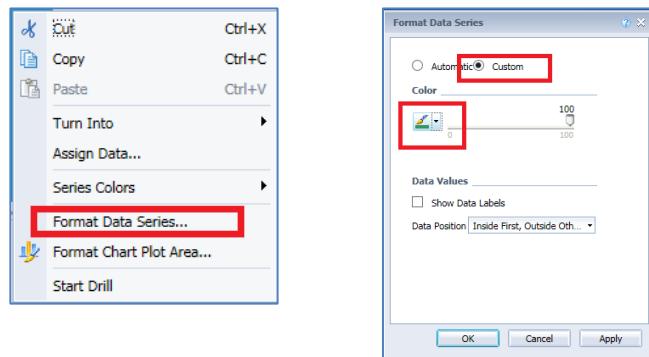


11. To turn on the Data Label Displaying Mode: *Format Chart → Global → Data Values → Data Label Displaying Mode*, and check it.

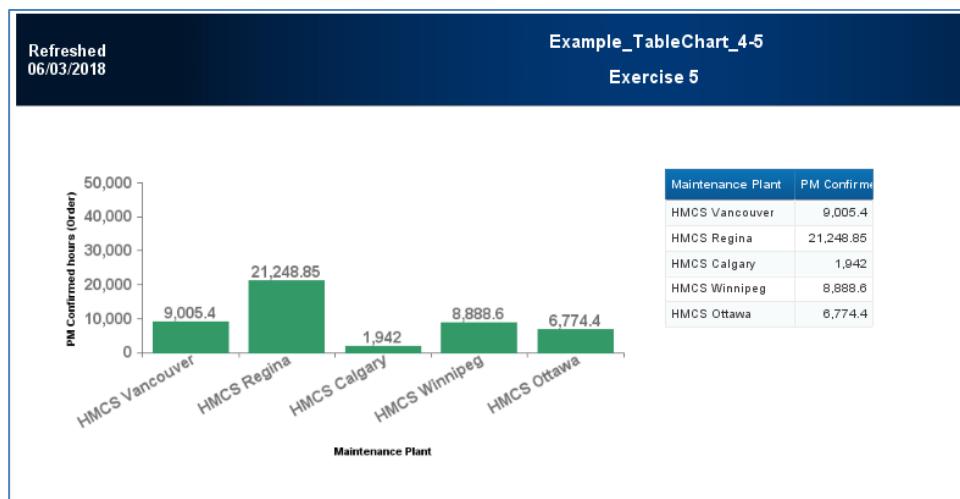


12. To give the chart a name, go to *Format Chart → Global → General → Name*, and enter *Chart1*.
13. To give the table a name, go to *Format Table → General → Name*, and enter *Table1*.
14. To set the horizontal and vertical position of the chart at *Format Chart → Global → Layout → Relative Position*, for *Horizontal* and for *Vertical*.
15. To set the horizontal and vertical position of the table at *Format Table → Layout → Relative Position*, for *Horizontal* and for *Vertical*.
16. To show the value axis by going to *Format Chart → Value Axis → Design → Layout → Display Axis*, and check this box.

17. To set the maximum value of the value axis, go to *Format Chart* → *Value Axis* → *Design* → *Scaling* → *Axis Scaling* → *Maximum Value*, and set it at *50000*.
18. To hide the Category Axis Grid lines (not the Category Axis itself), go to *Format Chart* → *Plot Area* → *Background* → *Category Axis Grid Color*, and set it to the color of your chart's background.
19. To change the color of the data series, right click on any of the bar and then select *Format Data Series* from the context menu. In that window, you would set the radio button to on at *Custom* and set the color to green using the dropdown of colors.



20. Format the chart to resemble the following.



21. Click on the *Save* button (or, press *Ctrl-S*) to save your WebI document.

## Exercise 8: Creating Calculations and Formulas

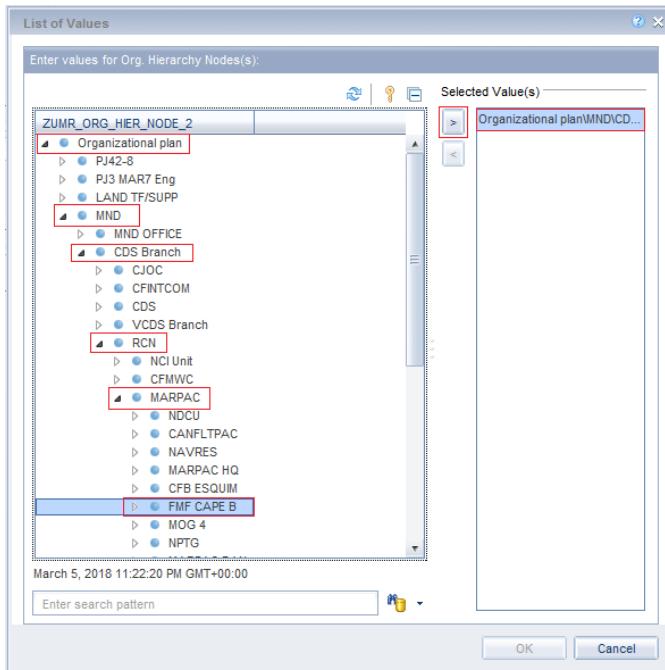
The intent of this exercise is to show how to perform calculations on tables and how to use formulas to perform next level data aggregation.

### Overview steps to complete the exercise:

1. Create a new document based on the Template as seen in the first exercise.
2. Rename the document using <Student Name> - Exercise 8.
3. Create a Data Provider based on the BEx query *Expenditure Report – Master Query*, technical name *ZCXX\_ZBWFMO1\_CATS019*.
4. Within the *Org. Hierarchy Nodes(s)* field, select the first *FMF Cape B*. Click *OK*.
5. Select the objects *PM planning plant*, *Work Center*, *Calendar Year/quar*, *Total (RT+OT) Hours*, *Expended Hours-OT*, and *Expended Hours-RT*.
6. Add a filter for *Calendar year/quar* and select the values greater than and equal to *20131*.
7. Select Set variable  button and unselect all other variables as prompts except the *Org. Hierarchy Nodes(s)* and the *(optional) Plant – Auth Relevant*.
8. Delete *Query 1* that came with the Template so that only your newly selected query remains.
9. Select *Run Query*. Within the Prompts screen, keep your variables and click *OK*.
10. When prompted select the option to not automatically generate a table with the result objects.
11. Create a table *PM planning plant*, *Calendar Year/quar*, *Total (RT+OT) Hours*, *Expended Hours-OT*, and *Expended Hours-RT*.
12. Add an empty column to the right of the *Expended Hours-RT* column, and enter the following formula:  $=[\text{Expended Hours-OT}]+[\text{Expended Hours-RT}]$
13. Give the title to this column as *Calculated Total*. This calculated column should match with *Total (RT+OT) Hours* column that is coming from the query.
14. Enable the footer for the table and enter a sum function in the footer of all the numeric columns.
15. Filter out the report for *Work Centers* that are either *DELETED* or *DO NOT USE*.
16. Save your Webl Document (*Ctrl-S*).

### Answer Guide:

1. Create a new document based on the Template as seen in the first exercise.
2. Rename the document using <Student Name> - Exercise 8.
3. Now, open this Webl document in *Modify* mode. At this point the Webl document should be opened in the *Design* mode.
4. Click on *Edit Data Provider*  button. This will open the *Query Panel*.
5. Click on the *Add Query* dropdown list and select *From BEx*.
6. Create the new document, rename it and select the new data provider as outlined.
7. Choose *Org. Hierarchy Nodes(s)*, find *FMF CAPE B* under the *MND*, *CDS Branch*, *RCN*, and *MARPAC*.



8. Select the *Set Variable* button in the top left corner of the Query Panel. Remove all prompts except the *Plant* prompt.
9. Add the listed objects and create filters. The Query Panel should resemble the following picture.

10. Run the Query and create a table.
11. Select the last column, right click and insert a column to the right.
12. Create a formula that sums the *Expedited Hours-OT* and *Expedited Hours-RT*, in the newly created column.
13. The finished report will resemble the following.

Refreshed  
06/03/2018

**Example\_CalcsFormulasVariables\_6-7**  
**Exercise 6**

PM planning plant	Cal.year / quar	Total (RT+OT) Hours	Expendited Hours-OT	Expendited Hours-RT	Total
CFB Esquimalt, FMF-CB	Q1 2017	263,416.55	8,885.65	254,530.9	263,416.55
CFB Esquimalt, FMF-CB	Q2 2016	265,714.6	4,583	261,131.6	265,714.6
CFB Esquimalt, FMF-CB	Q3 2016	241,556.44	8,998.33	232,558.11	241,556.44
CFB Esquimalt, FMF-CB	Q4 2016	248,512.93	8,983.26	239,529.67	248,512.93
FMF Cape Scott HMC Dockyard	Q4 2016	30.5	8	22.5	30.5
Not assigned	Q1 2017	2,970.99	431.11	2,539.88	2,970.99
Not assigned	Q2 2016	2,692.8	295.3	2,397.5	2,692.8
Not assigned	Q3 2016	2,365.92	285.35	2,080.57	2,365.92
Not assigned	Q4 2016	2,320.83	597.38	1,723.45	2,320.83
<b>Total</b>		<b>1,029,581.56</b>	<b>33,067.38</b>	<b>996,514.18</b>	<b>1,029,581.56</b>

14. Now go back into the *Edit Data Provider* and create a filter to remove unwanted work centers:



15. Click *Run Query*.  
 16. Now review the data in the table.  
 17. Click on the *Save* button (or, press *Ctrl-S*) to save your WebI document.

## Exercise 9: Creating Variables

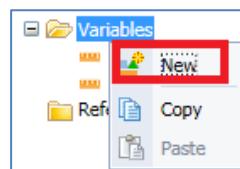
The intent of this exercise is to change an existing function into a variable. Variables can be used throughout the Webl Document, and you can copy them into other documents when needed.

### Overview steps to complete the exercise:

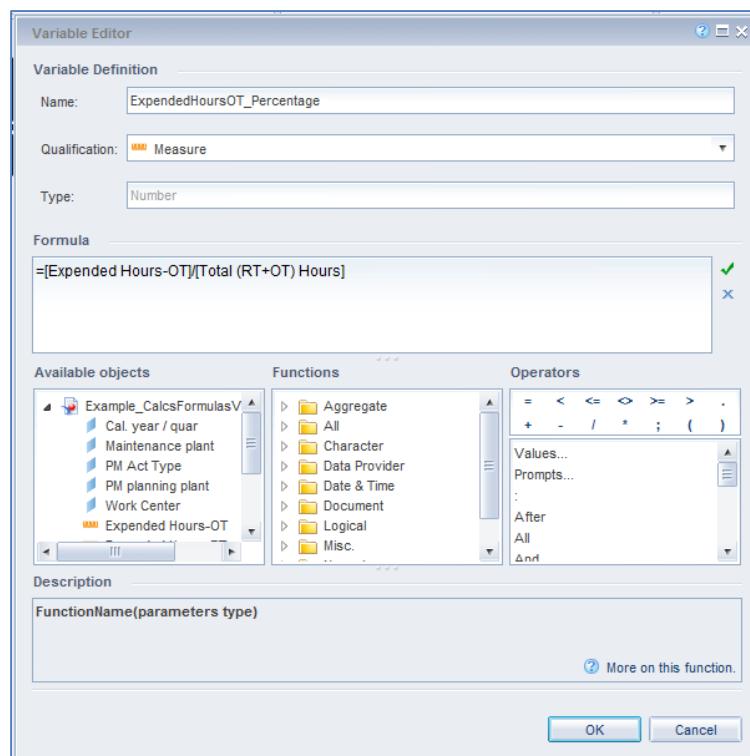
1. Copy the document from the *Exercise 8* and rename the copy to <Student Name> - *Exercise 9*.
2. Open the renamed document in *Modify* mode.
3. Add a new report. Create a table with *PM planning plant* and *Calendar Year/quar*.
4. Create two variables one for  $=[\text{Expended Hours-OT}]/[\text{Total (RT+OT) Hours}]$  and another one for  $=[\text{Expended Hours-RT}]/[\text{Total (RT+OT) Hours}]$ . Let's call them *ExpendedHoursOT\_Percentage* and *ExpendedHoursRT\_Percentage*, respectively.
5. Add this two variables in the table created above beside the two columns.
6. Save your Webl Document (*Ctrl-S*).

### Answer Guide:

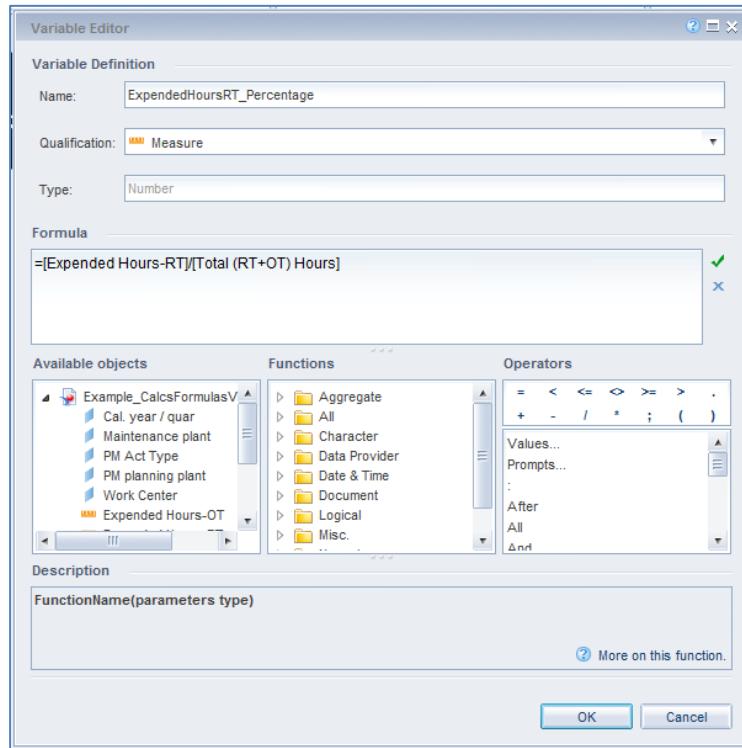
1. Add a report and create a vertical table with the objects listed above.
2. In *Available Objects* Right click on *Variables* and select *New*.



3. Create the first variable and name it *ExpendedHoursOT\_Percentage*:



4. Create the second variable and name it *ExpendedHoursRT\_Percentage*:



5. Insert these variables in the table, the same method as you would insert any other *Available Object*, by dragging it to the table next to the column you want to show.  
 6. The final report should resemble the following:

Example_CalcsFormulasVariables_6-7				
Exercise 7				
PM planning plant	Cal.year / quar	ExpendedHoursOT_Percentage	ExpendedHoursRT_Percentage	
CFB Esquimalt, FMF-CB	Q1 2017	0.03	0.97	
CFB Esquimalt, FMF-CB	Q2 2016	0.02	0.98	
CFB Esquimalt, FMF-CB	Q3 2016	0.04	0.96	
CFB Esquimalt, FMF-CB	Q4 2016	0.04	0.96	
FMF Cape Scott HMC Dockyard	Q4 2016	0.26	0.74	
Not assigned	Q1 2017	0.15	0.85	
Not assigned	Q2 2016	0.11	0.89	
Not assigned	Q3 2016	0.12	0.88	
Not assigned	Q4 2016	0.26	0.74	

7. Click on the *Save* button (or, press *Ctrl-S*) to save your WebI document.

## Exercise 10: Creating a Right() or Left() Variable

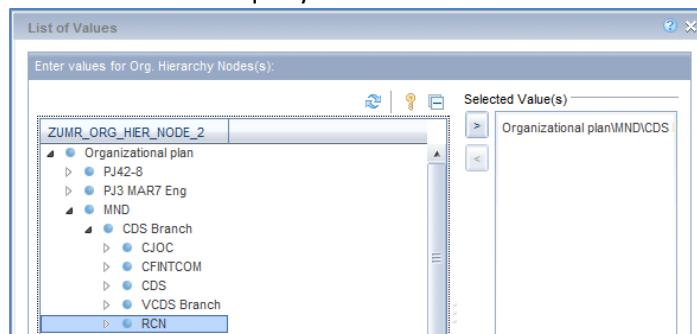
The intent of this exercise is to create other variables than what was created in exercise 9. There are many variables and you are encouraged to create more past this exercise.

### Overview steps to complete the exercise:

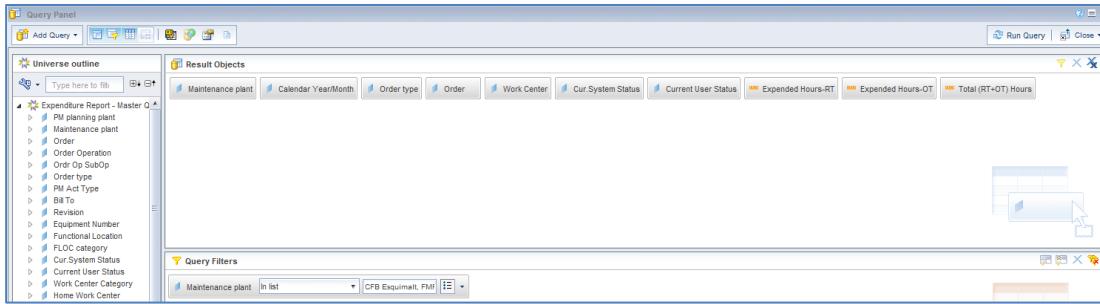
1. Create a new document based on the Template as seen in the first exercise.
2. Rename the document using <Student Name> - Exercise 10.
3. Open the renamed document using *Modify* mode.
4. Edit the data provider and select the BEx query *Expenditure Report – Master Query*, technical name *ZCXX\_ZBWFM01\_CATS019*.
5. When prompted, under the *Org. Hierarchy Node(s)*, select *RCN*.
6. Within the *Query Panel*, select the following dimensions and measures in this order: *Maintenance plant, Calendar Year/Month, Order Type, Order, Mn.wk ctr, Cur. System Status, Current User Status, Expended Hours-RT, Expended Hours-OT, and Total (RT+OT) Hours*.
7. Under *Query Filters*, create a filter for *Maintenance Plant* and select “*CFB Esquimalt, FMF-CB*.”
8. Delete *Query 1* that came with the Template so that only your newly selected query remains.
9. Select *Run Query*. Within the *Prompts* screen, keep your variables and click *OK*.
10. When prompted select the option to not automatically generate a table with the result objects.
11. Create a variable called *Plant* and use the *Right()* Function to remove the *CFB Esquimalt*, section within the *Maintenance Plant* object, so that only *FMF-CB* remains.
12. Create a new table with the new variable *Plant* and the *Calendar Year/Month, Order, Order Type, Cur. System Status, and Current User Status* objects.
13. Save your Webl Document (*Ctrl-S*).

### Answer Guide:

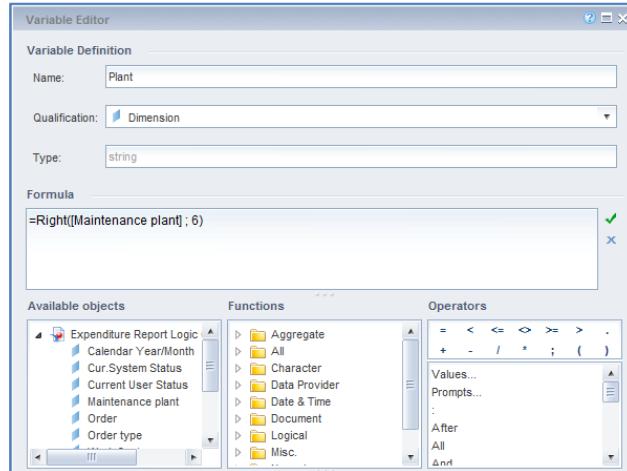
1. Create the new document based on the template.
2. Rename document by right clicking the document and select *Properties*, then change the *Title*.
3. Open the renamed document using *Modify* mode.
4. Add a data provider with the above query and variables.



5. Enter the *Query Panel* requirements, by dragging them onto the *Result Objects* panel.



6. Create the variable named *Plant* with the *Right()* function, and enter 6 after a semi-colon.



7. Create the table with the new *Plant* variable as the first column, and the remaining columns as indicated. The new table should appear as follows:

Plant	Calendar Year Month	Order	Order type	Cur.System Status	Current User Status
FMF-CB	NOV 2003	666000000 Shop 001 Overhead	Administrative Order	CLSD	ACKN
FMF-CB	NOV 2003	666000001 Shop 100 Overhead	Administrative Order	CLSD	ACKN
FMF-CB	NOV 2003	666000003 Shop 110 Overhead	Administrative Order	CLSD	ACKN
FMF-CB	NOV 2003	666000004 Shop 111 Overhead	Administrative Order	CLSD	ACKN

8. Click on the *Save* button (or, press *Ctrl-S*) to save your WebI document.

## Exercise 11: Creating a Replace() Variable

The intent of this exercise is to create a replace variable, which is often used when turning a standard code into a text that can be readable to consumers.

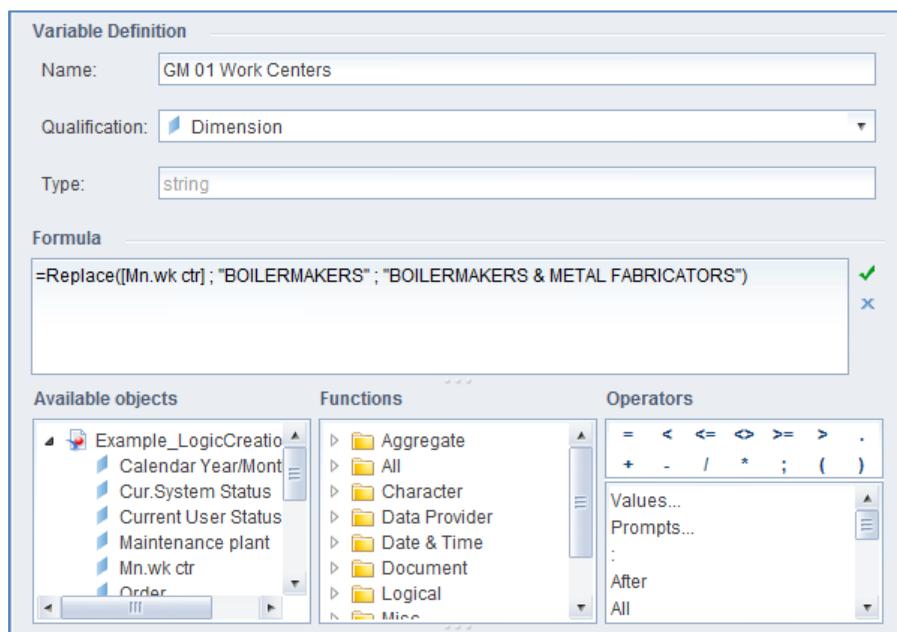
### Overview steps to complete the exercise:

1. Copy the document from *Exercise 10* and rename it to <Student Name> - *Exercise 11*.
2. Open the document in *Modify* mode.
3. Within a new report tab, create a table with the objects *Calendar Year/Month*, *Mn.wk ctr*, and *Total (RT + OT) Hours*.
4. To reflect the full name of the *BOILERMAKERS* work center, create a Replace variable within the *Mn.wk ctr* object and replace *BOILERMAKERS* with *BOILERMAKERS & METAL FABRICATORS*. Title the variable *GM 01 Work Centers*.
5. Replace the *Mn.wk ctr* column with the newly created variable.  
NOTE: the values for *GM 01 Work Centers* is not in order, you can sort the column to find the *BOILERMAKERS & METAL FABRICATORS* quickly.
6. Save your Webl document (*Ctrl-S*).

### Answer Guide:

1. Copy and rename the last document from the last exercise and open it in *Modify* mode.
2. Create a new report tab.
3. From the Available object select *Calendar Year/Month*, hold down *Ctrl* and select *Mn.wk ctr*, and *Total (RT + OT) Hours* and move them over to the newly created report tab.
4. Create a variable named *GM 01 Work Centers* to make the required replacement.

=Replace([Mn.wk ctr] ; "BOILERMAKERS" ; "BOILERMAKERS & METAL FABRICATORS")



5. Replace column *Mn.wk ctr* with the variable within the table.

Calendar Year/Month	GM 01 Work Centers	Total (RT+OT) Hours
NOV 2003	BOILERMAKERS & METAL FABRICATORS	430.5
NOV 2003	SCALERS & CLEANERS	669
NOV 2003	SHEETMETAL	628.5
NOV 2003	WELDERS	168
DEC 2003	BOILERMAKERS & METAL FABRICATORS	1,003.5
DEC 2003	SCALERS & CLEANERS	1,021
DEC 2003	SHEETMETAL	1,271
DEC 2003	WELDERS	284.5
JAN 2004	BOILERMAKERS & METAL FABRICATORS	1,106.33

6. Right click on *GM 01 Work Centers*, choose *Sort*. This will sort the data, allowing you to find which page had the line *BOILERMAKERS & METAL FABRICATORS* to ensure that it is working.
7. Click on the *Save* button (or, press *Ctrl-S*) to save your Webl document.

## Exercise 12: Handling Date Object with Character Functions

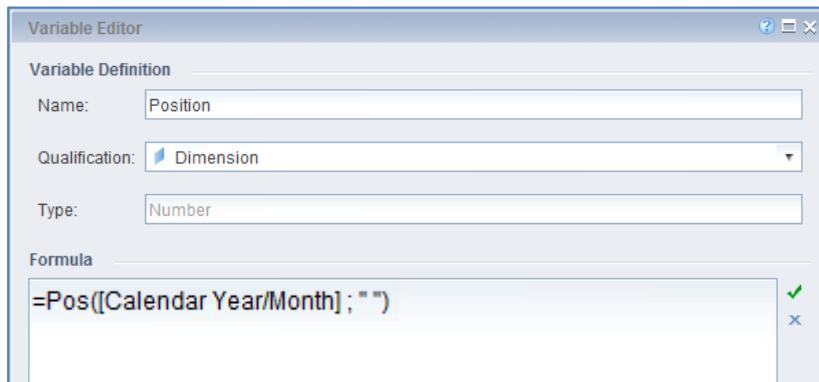
The intent of this exercise is to show how to create variables that modify date functions. Some date functions can be used for calculation, while others are used for text display.

### Overview steps to complete the exercise:

1. Open the document from the *Exercise 11* with *Modify* and use *Save As* to create a new document.
2. The document should be in *Design* mode.
3. Create a variable to know the position of the first space in the Calendar Year/Month Column. Name the variable *Position*.
4. Create a second variable using the =Substr and =Length formulas to edit the Calendar year/month column to only display the year and to remove the month. Name this variable *Year*.
5. Create a third variable named *Month* to display the month and remove the year.
6. Create a new report tab and input the *Plant*, *Year* and *Month* variables as well as the *Expended Hours-RT*, *Expended Hours-OT* and *Total (RT + OT) Hours*.
7. Sort the *Year* column and *Month* column so that the months are displayed in ascending order. However, the *Month* column will need to have *Custom Order* of values where you would set the values from *JAN* to *DEC* order.
8. Add a sum for the *Expended Hours-RT*, *Expended Hours-OT* and *Total (RT + OT) Hours* columns.
9. Save the Webl document (*Ctrl-S*).

### Answer Guide:

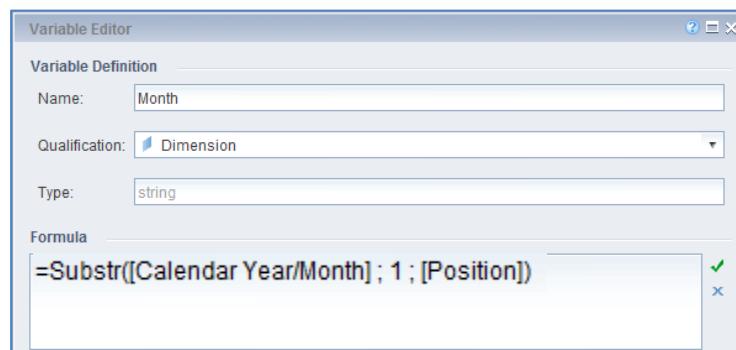
1. Create the *Position* variable.



2. Create the *Year* variable.



3. Create the *Month* variable.



4. Sort the *Year* variable in ascending order and *Month* in the ascending order as well but as per the custom sort order.

The Manage Sorts dialog box shows a list of sorts for "Vertical Table: Block 1" with "Year" and "Month" selected. The Order is set to "Ascending".

The Custom Sort dialog box for the Month variable shows a "Customized ascending list" containing the months from JAN to NOV. The list is ordered as JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV.

5. The report should appear as follows.

Refreshed 16/08/2017		Example_Functions_8-10 Exercise 10			
Plant	Year	Month	Expend Hours-RT	Expend Hours-OT	Total (RT+OT) Hours
FMF-CB	2003	NOV	16,042.06	556.05	16,598.11
FMF-CB	2003	DEC	37,241.71	797.54	38,039.25
FMF-CB	2004	JAN	37,594.3	1,922.67	39,516.97
FMF-CB	2004	FEB	37,202.46	1,494.15	38,696.61
FMF-CB	2004	MAR	43,724.6	1,451.7	45,176.3
FMF-CB	2004	APR	35,744.42	947.25	36,691.67
FMF-CB	2004	MAY	36,223.39	1,215.39	37,438.78
FMF-CB	2004	JUN	40,669.68	597.45	41,267.13
FMF-CB	2004	JUL	33,818.97	409.5	34,228.47
FMF-CB	2004	AUG	30,083.51	112	30,195.51
FMF-CB	2004	SEP	36,169.15	298.85	36,468
FMF-CB	2004	OCT	38,556.38	530.8	39,087.18
FMF-CB	2004	NOV	40,743.85	641.9	41,385.75
FMF-CB	2004	DEC	34,667.45	156	34,823.45

6. Click on the *Save* button (or, press *Ctrl-S*) to save your WebI document.

## Exercise 13: Creating an If, Then, and Else Function

The intent of this exercise is to add functionality to variables by using IF statements. This expands your current functionality and is used in many WebI Documents.

### Overview steps to complete the exercise:

1. Create a new document based on the Template.
2. Rename the document and open it in *Modify* mode.
3. Edit the data provider and select the BEx query *PO / Delivery Master Query*, technical name *ZCXX\_ZMCCMM03\_MMPO002*.
4. Select *2015, 2016 and 2017* for *Fiscal Year* values.
5. In the Query Panel, select the objects *Cal. Year/month, Document Type, Deliver Qty, Deliver Amount, Order Qty, Order Amount (Net), and Order Amount (Gross)*.
6. Create a filter for the *Plant Object* and select the value *1100 (Royal Canadian Navy)*.
7. Create a filter for *Purchasing Group* and select key value: *863 ((M) ESQ – BLOG)*.
8. Delete *Query 1* that came with the Template so that only your newly selected query remains.
9. Select *Run Query*.
10. When prompted select the option to not automatically generate a table with the result objects.
11. Create a table with all the objects in the query.
12. Create a variable using the If, Then, Else function. Insert a function to create a rating scheme, where above *1,000,000* equals *High Expenditure*, between *400,000* and *999,999* equals *Medium Expenditure* and lower than *400,000* equals *Low Expenditure*. Title the variable *Expenditure Cost*.
13. Save your WebI Document (*Ctrl-S*).

### Answer Guide:

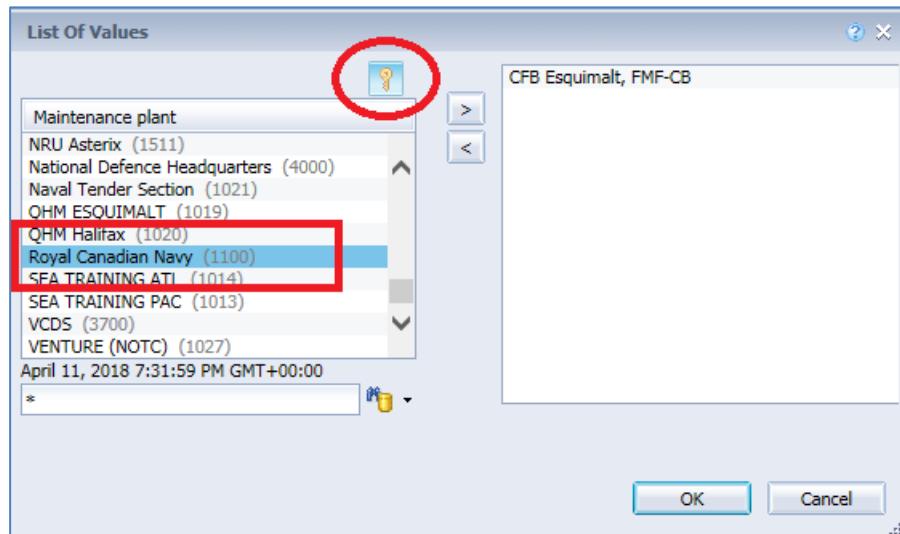
1. Create a new document from the Template, rename it, and open in *Modify* mode.
2. Edit the data provider and select the BEx query *PO / Delivery Master Query*, technical name *ZCXX\_ZMCCMM03\_MMPO002*, by using the search button:



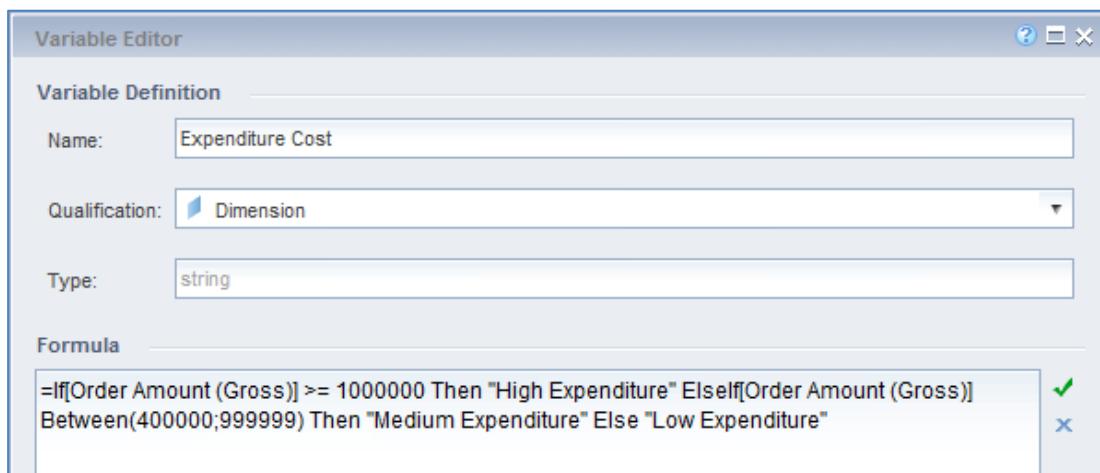
Or, find it in the following tree:

Name	Type	Search
Accountables Procurement Audit Report	Query	ZCXX_ZMCCMM03_MMPO008
Assets - Direct Purchase Receipts Report	Query	ZIMM_ZMCCMM03_Q02
COLOG Material Document List	Query	ZCXX_ZMCCMM03_MMPO003
COLOG Material Document List AM	Query	YCXX_AM_YMCCMM03_MMPO003
Goods Receipts on TECO Work Orders	Query	ZIMM_ZMCCMM03_Q01
MASIS Procurement Tracking Report	Query	ZCXX_ZMCCMM03_MMPO001
Material Document (GR) List	Query	ZCXX_ZMCCMM03_MMPO006
<b>PO / Delivery Master Query</b>	<b>Query</b>	<b>ZCXX_ZMCCMM03_MMPO002</b>
PO / Delivery Master Query AM	Query	YCXX_AM_YMCCMM03_MMPO002
PO Adhoc Query	Query	YMEIRELESJ001
PO Details for Project Stock	Query	ZIMM_ZMCCMM03_4005_Q02
PO_SERVICE_CONTRACTS_Q02_ASYED	Query	Y_ASYED_SERVICE_CONTRAC...
POs with GRs Completed	Query	ZCXX_ZMCCMM03_MMPO007
POs with GRs Outstanding	Query	ZCXX_ZMCCMM03_MMPO005
PWGSC / PO Spend	Query	Y1_FGDARD_08_NEW
PWGSC PO Spend	Query	ZMCCMM03_6013_Q01
Perfect Order Fulfillment: Stock Received from ...	Query	ZZMCCMM03_6022_Q03
Purchase Orders by Type, Purchase Group	Query	ZCXX_ZMCCMM03_MMPO004

3. Select 2015, 2016 and 2017 for *Fiscal Year* values.
4. In the Query Panel, select the objects *Cal. Year/month*, *Document Type*, *Deliver Qty*, *Deliver Amount*, *Order Qty*, *Order Amount (Net)*, and *Order Amount (Gross)* and move them over to the *Results Panel*.
5. Create a filter for the *Plant Object*, select the Key Show/Hide key values for and select the key value 1100 (Royal Canadian Navy).



6. Create a filter for *Purchasing Group* and select key value: 863 ((M) ESQ – BLOG)
7. Delete *Query 1* that came with the Template so that only your newly selected query remains.
8. Select *Run Query*.
9. Insert the required objects, create the filters, and run the query.
10. Create the Input controls and table.
11. Create the required variable and add it to the report.



```
= If [Order Amount (Gross)] >= 1000000
Then "High Expenditure"
Elseif [Order Amount (Gross)] between (400000; 999999)
Then "Medium Expenditure"
Else "Low Expenditure"
```

12. The report should appear as follows.

Refreshed 07/03/2018		Example_IfThenElse_11 Exercise 11					
Cal.year / mo	Document Type	Deliver Amount	Deliver Qty	Order Amount (I)	Order Amount (I)	Order Qty	Expenditure Cost
APR 2014	Call-Up Against SO	151,612.84	5,630.4	159,360.41	151,623.13	5,630.4	Low Expenditure
APR 2014	DFPS Replen STO	0	2	0	0	2	Low Expenditure
APR 2014	Other Govern. Dept.	2,722	1	2,722	2,722	1	Low Expenditure
APR 2014	PFC Order	85,340.02	1,513	109,982.68	104,745.4	1,515	Low Expenditure
APR 2014	Purchase Order	47,111.88	14,461	52,841.7	50,270.6	15,085	Low Expenditure
MAY 2014	Call-Up Against SO	213,754.18	2,690	224,441.78	213,754.06	2,690	Low Expenditure
MAY 2014	DFPS Replen STO			0	0	1	Low Expenditure
MAY 2014	PFC Order	354,001.54	13,994	534,476.41	509,024.96	14,010	Medium Expenditure
MAY 2014	Purchase Order	60,784.45	866	63,837.99	61,022.92	866	Low Expenditure
MAY 2014	PWGSC Purchase Order	43,177.72	4	45,337.19	43,178.27	4	Low Expenditure
MAY 2014	SA Contract	85.1	12	89.36	85.1	12	Low Expenditure
JUN 2014	Call-Up Against SO	158,969.04	6,030	167,133.68	158,964.54	6,030	Low Expenditure
JUN 2014	DFPS Replen STO	0	10	0	0	10	Low Expenditure
JUN 2014	PFC Order	90,840.92	1,372	131,424.46	124,640.13	1,379	Low Expenditure
JUN 2014	Purchase Order	126,687.27	2,570	131,206.54	126,379.74	2,570	Low Expenditure
JUN 2014	DND Service Cntr<25K	2,911.25	2,911.25	3,056.81	2,911.25	1	Low Expenditure
JUL 2014	Call-Up Against SO	250,454.07	759,857.4	252,626.08	240,596.23	759,857.4	Low Expenditure

13. Click on the *Save* button (or, press *Ctrl-S*) to save your Webl document.

## Exercise 14: Creating Reports with two BEx Queries

The intent of this exercise is showing how to combine and use multiple BEx queries in one WebI Document. Many reports have multiple data sources which range from Excel, BEx as well as Universes.

### Overview steps to complete the exercise:

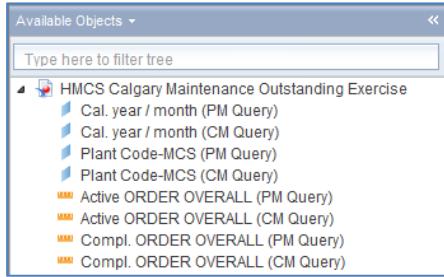
1. Create a new document based on the template, rename it and open in *Modify* mode.
2. Edit the Data Provider and add the BEx query *RCN Aggregate Trends PM orders*, technical name *Z\_ZPM\_M100\_7045\_Q01*.
3. Select the values of *2017.04* and *Maintenance Plant 1335* when prompted by the query. Rename the query *PM Query*.
4. Next, select *Add Query* and add the BEx query *RCN Aggregate Trends CM orders*, technical name *Z\_ZPM\_M100\_7045\_Q02*.
5. Select the same values of *2017.04* and *Maintenance Plant 1335* when prompted by the query. Rename the query *CM Query*.
6. Delete *Query 1* that came with the Template so that only your newly selected queries remain.
7. For the two queries added, select the objects *Cal. Year/month*, *Plant Code-MCS*, *Active ORDER OVERALL* and *Compl. ORDER OVERALL*.
8. Run the queries. Within the Prompts screen, keep your variables and click *OK*.
9. When prompted select the option to not automatically generate a table with the result objects.
10. Within a report tab, create a table with the objects from the first query.
11. In another report tab create a table with the objects from the second query.
12. Rename the report tabs and add titles to ensure a consumer will understand what the report is displaying, e.g. *PM Aggregate Maintenance* and *CM Aggregate Maintenance*.
13. Save the WebI document (*Ctrl-S*).

### Answer Guide:

1. Select the new queries by selecting the *Add Query* button. Then select the appropriate query.

Name	Type	Technname
PM validation data Staging 1_10	Query	Z_ZPM_M100_7045_Q07
PM validation data Staging 2_20	Query	Z_ZPM_M100_7045_Q06
PM validation data Staging 3_30	Query	Z_ZPM_M100_7045_Q05
Percent Completed vs. Outstanding ...	Query	Z_ZPM_M100_7045_Q04
Percent Completed vs. Outstanding ...	Query	Z_ZPM_M100_7045_Q03
RCN Aggregate Trends CM orders	Query	Z_ZPM_M100_7045_Q02
RCN Aggregate Trends CM orders AM	Query	Y_AM_YPM_M100_7045_...
RCN Aggregate Trends PM orders	Query	Z_ZPM_M100_7045_Q01
RCN Aggregate Trends PM orders AM	Query	Y_AM_YPM_M100_7045_...
RCN Dashboard Compliance indica...	Query	ZPM_M100_DASH_Q0001
RCN Dashboard Compliance indica...	Query	YPM_M100_AM_DASH_Q0...
RCN Dashboard Compliance indica...	Query	ZPM_M100_DASH_Q0002
RCN Dashboard Compliance indica...	Query	YPM_M100_AM_DASH_Q0...
RCN Dashboard Compliance test	Query	YZ_ZPM_M100_DASH_Q0...
RCN Dashboard Key positions per ...	Query	ZPM_M100_DASH_Q0003
RCN Dashboard Key positions per ...	Query	YPM_M100_AM_DASH_Q0...
RCN usage statistics KPI report	Query	Z_ZPM_M100_7045_Q08
Ship Dashboard Query	Query	Z_ZPM_M100_7045_Q01
test Percent Completed vs. Outstan...	Query	Y1_LW_Z_ZPM_M100_70...
test dashboard - q1	Query	Y_LW_ZPM_M100_DASH...

2. Select the four objects for each query. Rename each query and ensure you are naming the right report based on the Query name. The queries have objects with the same name and so will display which query each object is from.



3. Create a table for each query in its own report tab. The displayed tables should look similar to the following.

Refreshed  
07/03/2018

**Example\_MultiDataSource\_14-16**  
**Exercise 14-1**

PM Aggregate Maintenance

Plant Code-MCS	Cal. year / month	Active ORDER OVERALL	Compl. ORDER OVERALL
HMCS Calgary	APR 2016	217	109
HMCS Calgary	MAY 2016	261	66
HMCS Calgary	JUN 2016	172	215
HMCS Calgary	JUL 2016	131	126
HMCS Calgary	AUG 2016	190	24
HMCS Calgary	SEP 2016	108	137
HMCS Calgary	OCT 2016	130	75
HMCS Calgary	NOV 2016	98	135
HMCS Calgary	DEC 2016	162	3
HMCS Calgary	JAN 2017	0	89
HMCS Calgary	FEB 2017	160	0

4. Click on the *Save* button (or, press *Ctrl-S*) to save your WebI document.

## Exercise 15: Merging Dimension and Measure Objects in a Report

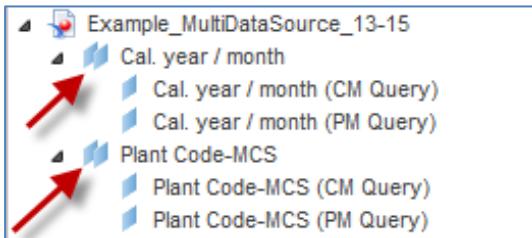
The intent of this exercise is to continue from exercise 14 with the two BEx queries and merge dimensions. This merging will be done with two BEx, but the same principles apply when merging Excel, BEx, Universes or all three.

### Overview steps to complete the exercise:

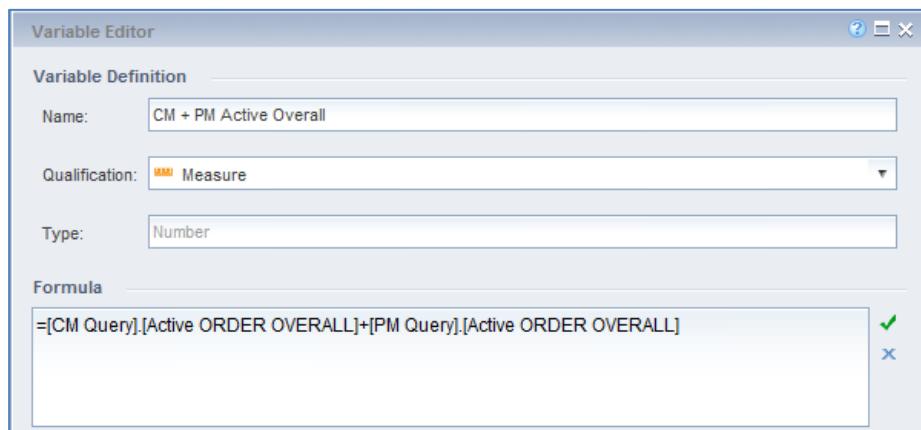
1. Open the document from *Exercise 14* and use *Save As* to create a new document.
2. Merge the *Cal. Year/month* dimension and the *Plant Code-MCS* dimension from both queries.
3. Create variables to merge the *Active ORDER OVERALL* and *Compl. ORDER OVERALL* measures from both queries.
4. In a new report tab, create a table with the merged *Cal. Year/month* and *Plant Code-MCS* dimensions and the two variables created.
5. Create a title for the table.
6. Save your WebI document (*Ctrl-S*).

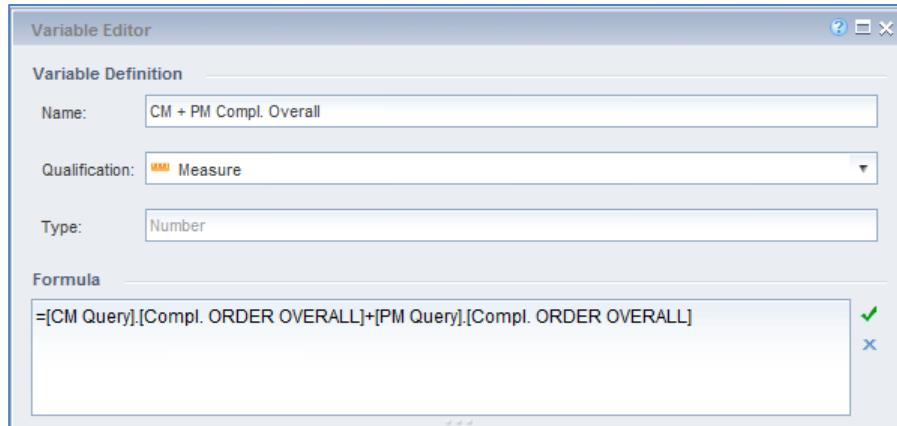
### Answer Guide:

1. Open the document from the last exercise and use *Save As* to create a new document.
2. Merge the dimensions.



3. Create variables to merge the *Active ORDER OVERALL* measures and the *Compl. ORDER OVERALL* measures.





4. Create a basic table with the merged objects. Create a title for the table. The table should resemble the following:

Refreshed 07/03/2018		Example_MultiDataSource_12-14			
Exercise 13					
PM & CM Aggregate Maintenance					
Plant Code-MCS	Cal.year / month	CM + PM Active Overall	CM + PM Compl. Overall		
HMCS Calgary	APR 2016	684	334		
HMCS Calgary	MAY 2016	701	193		
HMCS Calgary	JUN 2016	607	265		
HMCS Calgary	JUL 2016	592	186		
HMCS Calgary	AUG 2016	682	32		
HMCS Calgary	SEP 2016	604	175		
HMCS Calgary	OCT 2016	636	97		
HMCS Calgary	NOV 2016	619	152		
HMCS Calgary	DEC 2016	678	12		
HMCS Calgary	JAN 2017	500	95		
HMCS Calgary	FEB 2017	661	8		
HMCS Calgary	MAR 2017	710	0		
HMCS Calgary	APR 2017	538	316		

5. Click on the *Save* button (or, press *Ctrl-S*) to save your WebI document.

## Exercise 16: Adding Dimension Objects to existing Merged Objects in a Report

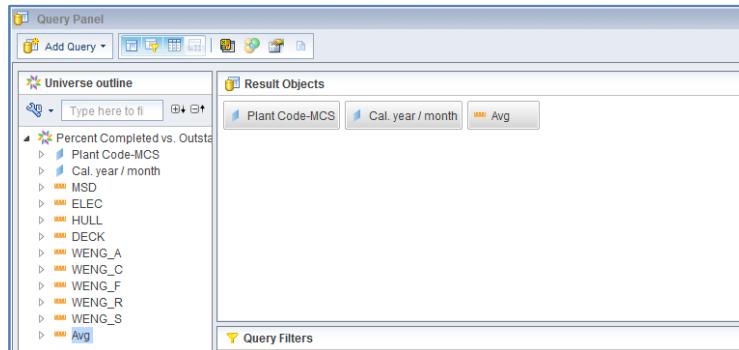
The intent of this exercise is to create new variables that are based on merged objects. This is often used to determine sums or calculations from two different data sources.

### Overview steps to complete the exercise:

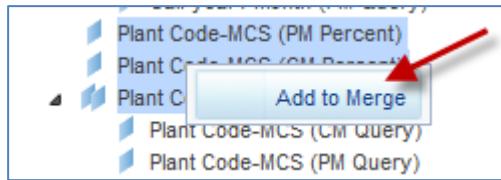
1. Open the document from *Exercise 15* and use *Save As* to create a new document.
2. Return to the Edit Data Provider and add the BEx Query *Percent Completed vs. Outstanding PM*, technical name *Z\_ZPM\_M100\_7045\_Q03*.
3. Select the values of *2017.04* for *Calendar Year/Month* and *1335* for *Plant* when prompted by the query.
4. Rename the query *PM Percent*.
5. Add a fourth BEx query *Percent Completed vs. Outstanding CM*, technical name *Z\_ZPM\_M100\_7045\_Q04*.
6. Select the values of *2017.04* for *Calendar Year/Month* and *1335* for *Plant* when prompted by the query.
7. Rename the query *CM Percent*.
8. Add the objects *Cal. Year/month*, *Plant Code-MCS*, and *Avg* in the *Result Objects* for each of the new queries.
9. Run the queries. Within the Prompts screen, keep your variables and click *OK*.
10. When prompted select the option to not automatically generate a table with the result objects.
11. Add the Cal. year/month dimensions from the two new queries to the existing merged dimension.
12. Add the Plant Code-MCS dimensions from the two new queries to the existing merged dimension.
13. Create two variables for the *Avg* measure from the *PM Percent* and *CM Percent* queries. Set the name of the variables as *PM Percent Compl. vs. Active* and *CM Percent Compl. vs. Active*, respectively, and set them to the *Avg* measure. This is a simple way to rename the object to avoid confusion between the two *Avg* objects, as they are from different queries.
14. Add the *PM Percent Compl. vs. Active* variable to the PM Aggregate table created in Exercise 14.  
Add the *CM Percent Compl. vs. Active* to the CM Aggregate table.
15. Save the Webl document (*Ctrl-S*).

### Answer Guide:

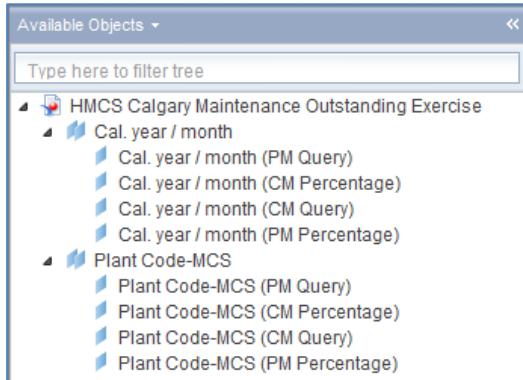
1. Add the two new queries and add the required three objects for each query.



2. Merge the dimensions following the process:



The merged dimensions will look like this when completed:



3. Create the below variables to change the name of the Avg measure to better explain what it is representing to consumers.

**Variable Definition**

Name:	PM Percent Compl. vs. Active
Qualification:	Measure
Type:	Number
Formula:	=[PM Percent].[Avg]

**Variable Definition**

Name:	CM Percent Compl. vs. Active
Qualification:	Measure
Type:	Number
Formula:	=[CM Percent].[Avg]

4. Add these to their respective tables so that they resemble the following. The Two tables should resemble the following:

Refreshed 07/03/2018		Example_MultiDataSource_12-14 Exercise 14		
<u>PM Aggregate Maintenance</u>				
Plant Code-MCS	Cal.year / month	Active ORDER OVERALL	Compl. ORDER OVERALL	PM Percent Compl. vs. Active
HMCS Calgary	APR 2016	217	109	32.12
HMCS Calgary	MAY 2016	261	66	30
HMCS Calgary	JUN 2016	172	215	59.71
HMCS Calgary	JUL 2016	131	126	70.62
HMCS Calgary	AUG 2016	190	24	19.67
HMCS Calgary	SEP 2016	108	137	20.07
HMCS Calgary	OCT 2016	130	75	41.72
HMCS Calgary	NOV 2016	96	135	51.43
HMCS Calgary	DEC 2016	162	3	0.82
HMCS Calgary	JAN 2017	0	89	44.44
HMCS Calgary	FEB 2017	160	0	0
HMCS Calgary	MAR 2017	188	0	0
HMCS Calgary	APR 2017	42	269	92.46

5. Click on the Save button (or, press *Ctrl-S*) to save your Webl document.

## Exercise 17: Creating Breaks and Using Sort

The intent of this exercise is to display table data in various methods using visual breaks by a sorted object. This is used to display long lists of data and often has a running sum for each of the sections.

### Overview steps to complete the exercise:

1. Copy the document created in *Exercise 6*.
2. Rename the new document to *Exercise 17* and open it with *Modify*.
3. Within a new Report tab, create a table with the columns *Maintenance plant*, *Mn. Wk ctr*, and *PM Confirmed hours (Order)*.
4. Insert a break into the *Maintenance Plant* column.
5. Sort the *PM Confirmed Hours (Order)* by descending.
6. Add a formula to add up the *PM Confirmed Hours (Order)* column.
7. Save the WebI document (*Ctrl-S*).

### Answer Guide:

1. Copy the document created in *Exercise 6*.
2. Rename the new document to *Exercise 17* and open it with *Modify*.
3. Right click the *Maintenance Plant* and add a break.
4. Right click the *PM Confirmed Hours* and add a sort by descending.
5. To sum up the *PM Confirmed Hours*, you can use the *Sum* function.
6. The table should resemble the following:

Refreshed  
06/03/2018

Example \_TableChart\_4-5  
Exercise 15



Maintenance Plant	Mn.wk.ctr	PM Confirmed hours (Order)
HMCS Vancouver	HMCS Vancouver	
	VANCOUVER Store	
	1340/MWC-VAN	
	Marine Systems Division	2,609.05
	Hull Division	1,533
	Electrical Division	1,527.7
	W ENG TECH - FC	885
	W ENG TECH - COMM	767.5
	W ENG TECH - SONAR	615.5
	W ENG TECH - ARM	531.65
	DECK DEPARTMENT	435
	W ENG TECH - RADAR	101
HMCS Vancouver		9,005.4
Maintenance Plant	Mn.wk.ctr	PM Confirmed hours (Order)
HMCS Regina	1331/REG-STOR	
	1334/CFSS	
	NET Communications Section	
	REGINA Store	
	1341/SWC-1285	
	1509/REG-STOR	
	W ENG TECH - FC	15,039
	Electrical Division	3,035

7. Click on the *Save* button (or, press *Ctrl-S*) to save your WebI document.

## Exercise 18: Creating Sections

The intent of this exercise is to create a section for a table and display the sum for each section. Sections have a similarity to breaks but have a different visualization.

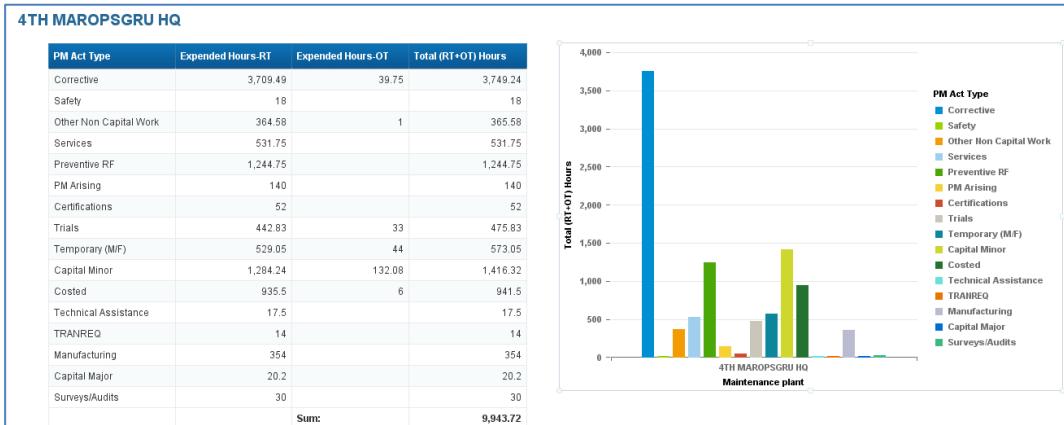
### Overview steps to complete the exercise:

1. Copy the document created in *Exercise 8*.
2. Rename the new document to *Exercise 18* and open it with *Modify*.
3. Edit the query and add the *Maintenance Plant* and *PM Act Type* dimensions.
4. Run the Query. Within the Prompts screen, keep your variables and click *OK*.
5. Create a new Report tab.
6. Create a table with the objects *Maintenance plant*, *PM Act Type*, *Expendeed Hours-RT*, *Expendeed Hours-OT* and *Total (RT+OT) Hours*.
7. Set the *Maintenance Plant* as Sections.
8. Insert a Sum Calculation for the *Total (RT+OT) Hours* in the table.
9. Add a column bar chart to the section.
10. Insert the objects *Maintenance Plant*, *PM Act Type*, and *Total (RT+OT) Hours*.
11. Format the chart so that the chart best visualizes the data.
12. Save the Webl document (*Ctrl-S*).

### Answer Guide:

1. Copy the document created in *Exercise 8*.
2. Rename the new document to *Exercise 18* and open it with *Modify*.
3. Insert *Maintenance Plant* and *PM Act Type* objects in the Query Panel.
4. Run the Query. Within the Prompts screen, keep your variables and click *OK*.
5. Create a new Report tab by duplicating one of the tabs (preferably a blank one) in the current report.
6. Create a table with the objects *Maintenance plant*, *PM Act Type*, *Expendeed Hours-RT*, *Expendeed Hours-OT* and *Total (RT+OT) Hours*.
7. Once you have created the report with the required objects, select the *Maintenance Plant* object and set it as the section.
8. Insert a Sum Calculation for the *Total (RT+OT) Hours* in the table.
9. Insert a column chart within a section. Ensure that it appears in each section.
10. Add *Maintenance Plant*, *PM Act Type*, and *Total (RT+OT) Hours* objects into the chart so that it displays the required data.

11. Format the chart so that the finished report should resemble the following:



12. Click on the Save button (or, press *Ctrl-S*) to save your Webl document.

## Exercise 19: Using Filters

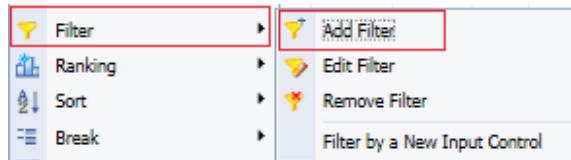
The intent of this exercise is to set filters in your Webl Reports at design time.

### Overview steps to complete the exercise:

1. Copy the document created in *Exercise 9*.
2. Rename the new document to *Exercise 19* and open it with *Modify*.
3. Make a copy of the table from that exercise and paste it beside the existing table.
4. Rename the two tables as *Table1* and *Table2*.
5. On *Table1* set a filter for *PM planning plant* to exclude the *Not assigned* values.
6. On *Table2* set a filter for *Cal. year / quar* to have only 2016 data.
7. Verify data in both tables to see whether they match your filters.
8. Now set a filter at the report level to filter out any *PM planning plant* data that belongs to *FMF Cape Scott HMC Dockyard*.
9. Verify the tables again to see the impact of this report level filter.
10. Save the Webl document (*Ctrl-S*).

### Answer Guide:

1. Copy the document created in *Exercise 9*.
2. Rename the new document to *Exercise 19* and open it with *Modify*.
3. Make a copy of the table created in that exercise and paste it beside the first table.
4. Rename the two tables as *Table1* and *Table2*. Condense the two Expenditures columns so both tables will fit side by side (see below).
5. For *Table 1*, right click on *PM planning plant* and choose *Filter*.
  - a. Choose *Add Filter*.



- b. Move all but *Not assigned* to the right so that the *Not assigned* is excluded from the values shown on the table.

PM planning plant	Cal. year / quar	Expend	Expend
CFB Esquimalt, FMF-CB	Q1 2017	0.03	0.97
CFB Esquimalt, FMF-CB	Q2 2016	0.02	0.98
CFB Esquimalt, FMF-CB	Q3 2016	0.04	0.96
CFB Esquimalt, FMF-CB	Q4 2016	0.04	0.96
FMF Cape Scott HMC Dockyard	Q4 2016	0.26	0.74

6. For *Table 2*, right click on *Cal. Year / quarter*, and choose *Filter*.
  - a. Choose *Add Filter*.
  - b. Move all of the 2016 data to the right, so that only 2016 data is shown in the table.

PM planning plant	Cal. year / quar	Expend	Expend
CFB Esquimalt, FMF-CB	Q2 2016	0.02	0.98
CFB Esquimalt, FMF-CB	Q3 2016	0.04	0.96
CFB Esquimalt, FMF-CB	Q4 2016	0.04	0.96
FMF Cape Scott HMC Dockyard	Q4 2016	0.26	0.74
Not assigned	Q2 2016	0.11	0.89
Not assigned	Q3 2016	0.12	0.88
Not assigned	Q4 2016	0.26	0.74

7. Now set a filter at the report level to filter out (exclude) any *PM planning plant* data that belongs to *FMF Cape Scott HMC Dockyard*. This applies to the whole report tab.
8. The final tables should look like the following (*Table 1* on the left, *Table 2* on the right):

PM planning plant	Cal. year / quar	Expend	Expend	PM planning plant	Cal. year / quar	Expend	Expend
CFB Esquimalt, FMF-CB	Q1 2017	0.03	0.97	CFB Esquimalt, FMF-CB	Q2 2016	0.02	0.98
CFB Esquimalt, FMF-CB	Q2 2016	0.02	0.98	CFB Esquimalt, FMF-CB	Q3 2016	0.04	0.96
CFB Esquimalt, FMF-CB	Q3 2016	0.04	0.96	CFB Esquimalt, FMF-CB	Q4 2016	0.04	0.96
CFB Esquimalt, FMF-CB	Q4 2016	0.04	0.96	Not assigned	Q2 2016	0.11	0.89
				Not assigned	Q3 2016	0.12	0.88
				Not assigned	Q4 2016	0.26	0.74

9. Save the Webl document (Ctrl-S).

## Exercise 20: Creating Input Controls

The intent of this exercise is to create an input control that allows consumers to change the view of a WebI Document. This is a very essential skill to have when creating interactive documents.

### Overview steps to complete the exercise:

1. Copy the document created in *Exercise 18*.
2. Rename the new document to *Exercise 20* and open it with *Modify*.
3. Within the Report tab used in Exercise 18 create an input control for the Maintenance Plant. Make it a multiple value, check boxes input. Apply it to the current report.
4. In the input control side tab, choose some of the plants, and observe the report results.

*4<sup>th</sup> MAROPSGRU HQ*

*"CFB Esquimalt, FMF-CB"*

*HMCS Calgary*

*HMCS Chicoutimi*

*HMCS Ottawa*

*HMCS Regina*

*HMCS Vancouver*

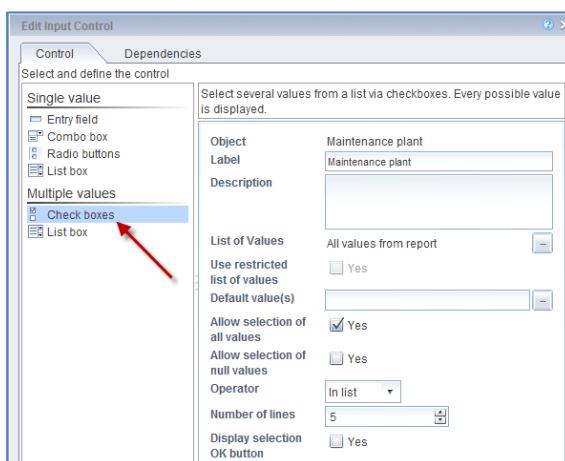
*HMCS Victoria*

*HMCS Winnipeg.*

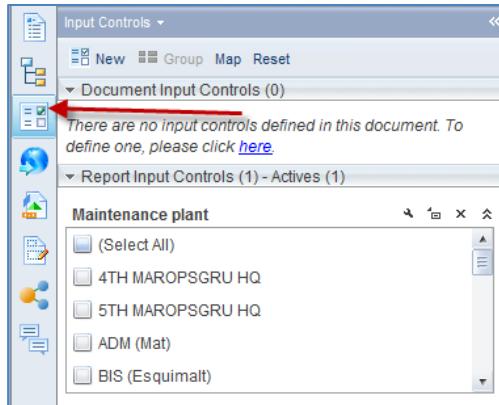
5. Save the WebI document (*Ctrl-S*).

### Answer Guide:

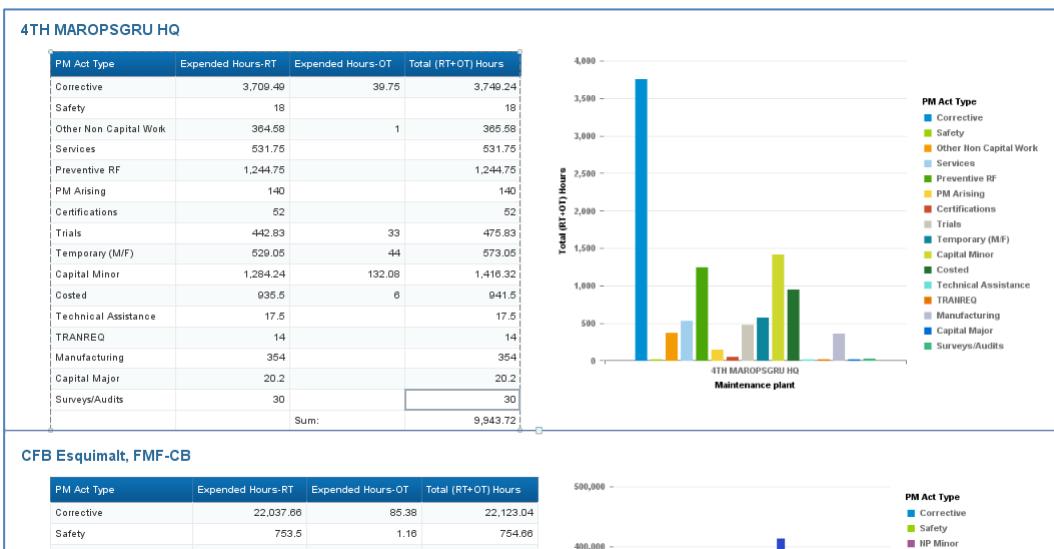
1. Copy the document created in *Exercise 18*.
2. Rename the new document to *Exercise 20* and open it with *Modify*.
3. Within the Report tab used in Exercise 18 create an input control for the Maintenance Plant.
4. Create an input control for the *Maintenance Plant* object.



5. Select the values of the Maintenance Plant input control that you wish to view.



6. Change your selections and observe the sections displayed.



7. Click on the Save button (or, press Ctrl-S) to save your Webl document.

## Exercise 21: Creating Formatting Rules

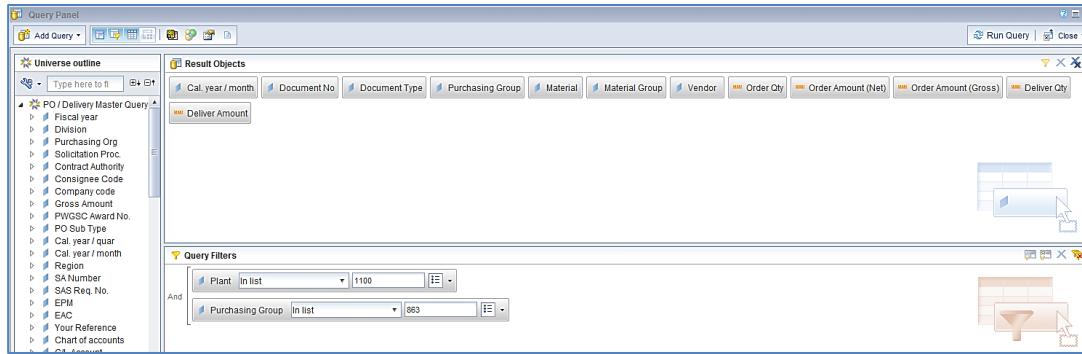
The intent of this exercise is to create rules to format a table. This method has been used by many authors as a first main report to show visualizations of changes. These formatting rules can use complex formulas as well as detailed visual effects.

### Overview steps to complete the exercise:

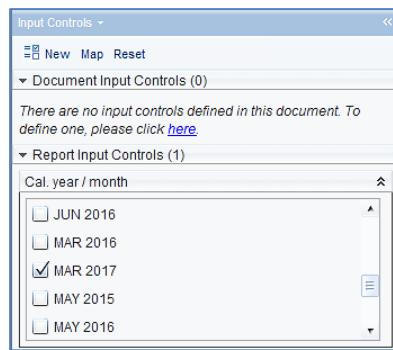
1. Create a new document based on the template, rename and then open it for editing.
2. Edit the data provider and open the BEx query *PO / Delivery Master Query*, technical name *ZCXX\_ZMCCMM03\_MMPO002*. For the variables, select *Fiscal Year* of 2016 and 2017. Click *OK*.
3. In the Query Panel, select the objects *Cal. Year/month*, *Document No*, *Document Type*, *Purchasing Group*, *Material*, *Material Group*, *Vendor*, *Order Qty*, *Order Amount (Net)*, *Order Amount (Gross)*, *Deliver Qty* and *Deliver Amount*.
4. Create a filter for the *Plant Object* and select the value *1100*.
5. Create a filter for *Purchasing Group* and select *863*.
6. Delete *Query 1* that came with the Template so that only your newly selected query remains.
7. Select *Run Query*. Within the Prompts screen, keep your variables and click *OK*.
8. When prompted select the option to not automatically generate a table with the result objects.
9. Create a table with all the objects except the Purchasing Group object in the Legal Landscape report tab.
10. Create an input control for the calendar year/month object as multiple values check boxes input, and apply it to all the objects of the current report only.
11. Choose the values *Jan 2017*, *Feb 2017*, and *Mar 2017*.
12. Create Sections by *Calendar year/month*.
13. Create Breaks by *Document Type*.
14. Create a rule. Name the rule *Greater than \$10,000*.
15. Within the filtered object or cell, select cell contents. Select *Greater or equal* for the operator and enter *10000* for the operands.
16. Within the Format, set the background to yellow and the text to black.
17. Apply the rule to the *Order Amount (Net)*, *Order Amount (Gross)*, and *Deliver Amount* columns.
18. Save your Webl document (*Ctrl-S*).

### Answer Guide:

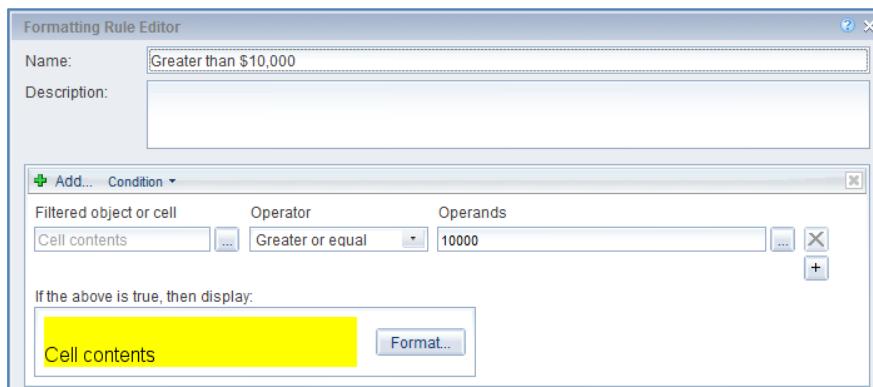
1. Create the document and select the variables. Insert the required objects and filters. Select the Query Variables and unselect all prompts except *Fiscal Year*.



2. Create the Input control and select the required dates.



3. Create the rule required. Leave the *Filtered object or cell* field as *Cell contents*.



4. The report will appear similar to the following:

Refreshed  
26/07/2017

**Example\_FormattingRulesVariables\_18**  
**Exercise 18**



**JAN 2017**

Document Type	Document No	Material	Material Group	Vendor	Deliver Amount	Deliver Qty	Order Amount (Gross)	Order Amount (Net)	Order Qty
Call-Up Against SO	4501508183	CAMERA SYSTEM,DIGITAL	Cameras, Still Picture	NIKON CANADA	146.72	2	154.06	146.72	2
	4501508301	PROJECTOR,MULTIMEDIA	Microfilm Duplicator	SHARPS AUC	4,570	1	4,798.5	4,570	1
	4501508304	Not assigned	miscellaneous items	Sharp's Audio\1	809.36	1	914.58	809.36	1
	4501508304	TOUCHSCREEN,DATA ENTRY	ADP Input/Output and	Sharp's Audio\1	14,372.75	1	16,241.21	14,372.75	1
	4501508308	Not assigned	miscellaneous items	ERGOCENTR	856.26	5	899.1	856.26	5
	4501508320	Not assigned	Electrical Hardware	Sharp's Audio\1	179.77	1	188.76	179.77	1
	4501508320	TOUCHSCREEN,DATA ENTRY	ADP Input/Output and	Sharp's Audio\1	8,474.15	1	8,897.86	8,474.15	1
	4501508379	Not assigned	Fuel Oils	IMPERIAL OIL	2,026.05	19,500	2,127.36	2,026.05	19,500
	4501508379	GASOLINE,AUTOMOTIVE	Liquid Propellants a	IMPERIAL OIL	4,385.55	6,500	4,604.82	4,385.55	6,500
	4501510534	LUBRICATING OIL,STEAM TURBINE	Oils and Greases: Cu	PETRO-CANU	33,800.4	72	35,490.42	33,800.4	72
	4501510559	Not assigned	Fuel Oils	Columbia Fuel	5,095.8	58,792	5,350.59	5,095.8	58,792
	4501510559	GASOLINE,AUTOMOTIVE	Liquid Propellants a	Columbia Fuel	11,339.51	14,698	11,906.49	11,339.51	14,698
	4501510961	Not assigned	Fuel Oils	Columbia Fuel	2,730.51	36,201.6	2,867.04	2,730.51	36,201.6
	4501510961	DIESEL FUEL	Fuel Oils	Columbia Fuel	6,271.93	9,050.4	6,585.52	6,271.93	9,050.4
	4501511044	Not assigned	Fuel Oils	Coastal Mount	134.96	2,780	141.71	134.96	2,780
	4501511044	FUEL OIL,NAVAL	Fuel Oils	Coastal Mount	857.44	920	900.31	857.44	920
	4501511047	Not assigned	ADP Input/Output and	DECISIVE TEC	393,602.78	89	413,282.93	393,602.78	89
	4501511047	INTERFACE UNIT,DATA TRANSFER	ADP Input/Output and	DECISIVE TEC	6,480	48	6,804	6,480	48

[Feedback](#) [Command Analytics Support Centre \(CASC\)](#) 1/21

5. Click on the Save button (or, press *Ctrl-S*) to save your Webl document.

## Exercise 22: Creating Element Linking

The intent of this exercise is to create linked tables using Element Linking. Element linking is used to control the content of one or more tables and charts based on the selected value of a particular table/chart.

### Overview steps to complete the exercise:

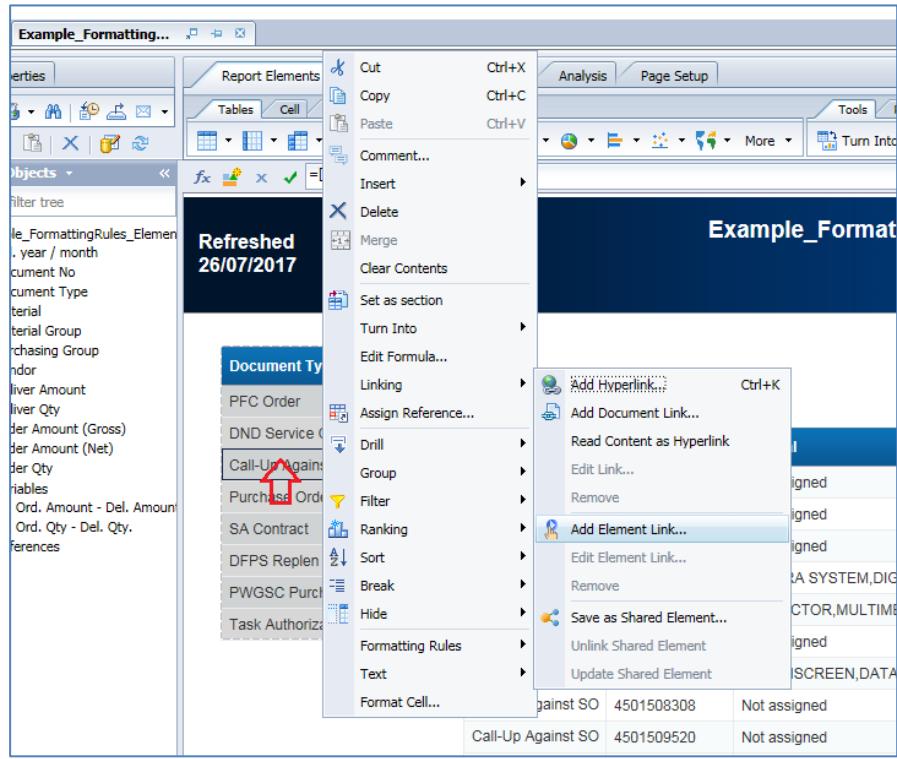
1. Copy the document from *Exercise 21*, rename to *Exercise 22* and open it for editing. OR open the document and select *Save As* to create a new document.
2. In a new Report tab, create a table with all the objects except the *Purchasing Group* object in the Legal Landscape report tab.
3. Create another table with just the *Document Type* object.
4. On this second table, add an Element Link to the first table.
5. Save your Webl document (*Ctrl-S*).

### Answer Guide:

1. Copy the document from *Exercise 21*, rename to *Exercise 22* and open it for editing. OR open the document and select *Save As* to create a new document.
2. In a new Report tab, create a table with all the objects except the *Purchasing Group* object in the Legal Landscape report tab.
3. Create another table with just the *Document Type* object.
4. Place the two table side-by-side:

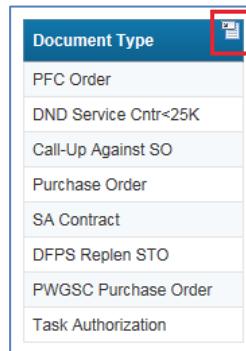
Example_FormattingRules_ElementLinking_20_21						
Exercise 21						
Document Type	Document No	Material	Material Group	Vendor	Deliver Amount	Deliver Qty
PFC Order	4501538125	Not assigned	Lumber and Related I	HOME LUMI	12,587.01	1,122
DND Service Cntr<25K	4501537758	Not assigned	NES Educational Ser	ORCA HEAL	3,900	1
Call-Up Against SO	4501538147	Not assigned	NES Educational Ser	ISLAND ESC		
Purchase Order	4501508183	CAMERA SYSTEM,DIGITAL	Cameras, Still Pictu	NIKON CAN.	146.72	2
SA Contract	4501508301	PROJECTOR,MULTIMEDIA	Microfilm Duplicator	SHARPS AU	4,570	1
DFPS Replen STO	4501508304	Not assigned	miscellaneous items	Sharps Audi	809.36	1
PWGSC Purchase Order	4501508304	TOUCHSCREEN,DATA ENTRY	ADP Input/Output and	Sharps Audi	14,372.75	1
Task Authorization	4501508308	Not assigned	miscellaneous items	ERGOCENT	856.26	5
	4501509520	Not assigned	Electrical Hardware	Sharps Audi	179.77	1
	4501509520	TOUCHSCREEN,DATA ENTRY	ADP Input/Output and	Sharps Audi	8,474.15	1
	4501509679	Not assigned	Fuel Oils	IMPERIAL O	2,026.05	19,500
	4501509679	GASOLINE,AUTOMOTIVE	Liquid Propellants a	IMPERIAL O	4,385.55	6,500

5. On this second table, add an Element Link to the first table by going to the context menu and selecting *Linking* → *Add Element Link* and follow the following steps:



- In the *Select Report Object* window, just click on *Next*.
- In the *Choose Control Type* window, just click on *Next*.
- In the *Assign Report Elements* window, click on the name of the other table (usually it is *Block 1*) and then click on *Finish*.

6. Once the link is created the second table would have a menu button that looks like following:



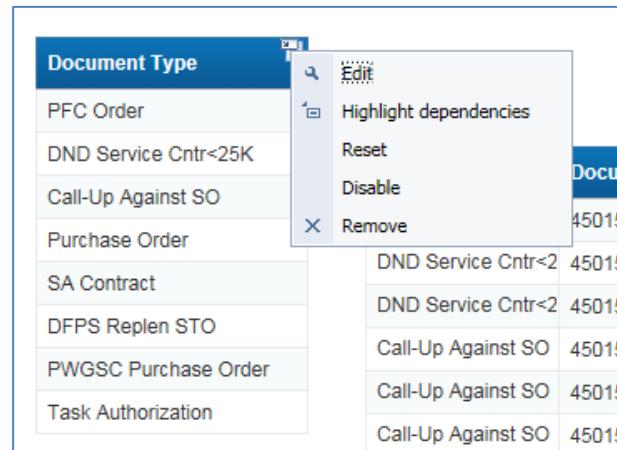
7. Now based on whatever Document Type is selected on the second table, the first table's content is changed accordingly:

Document Type		Example_FormattingRules_ElementLinking_20_21					
		Exercise 21					
Document Type		Document No	Material	Material Group	Vendor	Deliver Amount	Deliver Qty
PFC Order		DFPS Replen STO	TROUSERS,COMBAT	Clothing Special Pur	PLANT 3201	0	2
DND Service Cntr<25K		DFPS Replen STO	PADLOCK	Hardware, Miscellane	PLANT 3201		
Call-Up Against SO		DFPS Replen STO	STARTER,ENGINE,HAND	Engine Accessories,	PLANT 3201		
Purchase Order		DFPS Replen STO	BOOTS,COMBAT	Footwear, Men's	PLANT 3201	0	2
SA Contract		DFPS Replen STO	PLUG,WOOD	Lumber and Related I	PLANT 3201		
DFPS Replen STO		DFPS Replen STO	HOLSTER,PISTOL	Weapons, Miscellane	PLANT 3201		
PWGSC Purchase Order		DFPS Replen STO	BOOTS,COMBAT	Footwear, Men's	PLANT 3201		
Task Authorization							

8. Now, if you just click on the header of the second table, you'd get unfiltered data in the first table:

Document Type		Example_FormattingRules_ElementLinking_20_21					
		Exercise 21					
Document Type		Document No	Material	Material Group	Vendor	Deliver Amount	Deliver Qty
PFC Order		4501538125	Not assigned	Lumber and Related I	HOME LUMI	12,587.01	1,122
DND Service Cntr<25K		4501537758	Not assigned	NES Educational Ser	ORCA HEAL	3,900	1
Call-Up Against SO		4501538147	Not assigned	NES Educational Ser	ISLAND ESC		
Purchase Order		4501508183	CAMERA SYSTEM,DIGITAL	Cameras, Still Pictu	NIKON CAN.	146.72	2
SA Contract		4501508301	PROJECTOR,MULTIMEDIA	Microfilm Duplicator	SHARPS AU	4,570	1
DFPS Replen STO		4501508304	Not assigned	miscellaneous items	Sharps Audi	809.36	1
PWGSC Purchase Order		4501508308	TOUCHSCREEN,DATA ENTRY	ADP Input/Output an	Sharps Audi	14,372.75	1
Task Authorization		4501509520	Not assigned	miscellaneous items	ERGOCENT	856.26	5
		4501509520	Not assigned	Electrical Hardware	Sharps Audi	179.77	1
		4501509520	TOUCHSCREEN,DATA ENTRY	ADP Input/Output an	Sharps Audi	8,474.15	1
		4501509679	Not assigned	Fuel Oils	IMPERIAL O	2,026.05	19,500
		4501509679	GASOLINE,AUTOMOTIVE	Liquid Propellants a	IMPERIAL O	4,385.55	6,500

9. You can right-click on the Element Linking's menu button on the second table where you'd find various features of the link such as, edit the link, highlight dependencies, reset the link, disable the link, and also remove the link:



10. Click on the Save button (or, press *Ctrl-S*) to save your WebI document.

## Exercise 23: Creating Calculation Contexts

The intent of this exercise is to create Context Calculations. Using Calculation Contexts user can define/control the behavior of any calculation on a measure or a set of measures.

Create a report showing following scenarios:

- A. A table showing *Fiscal Year*, *Posting Period*, *Actuals per year/period*, and the *Actual* percentage within that year.
- B. A table showing *Fiscal Year*, *Posting Period*, *Actuals per year/period*, maximum *Actual* within that year, and then the difference between that period's *Actual* to the maximum for that year *Actual*.
- C. A table showing *Fiscal Year*, *total yearly Actual* and the maximum *Actual* within that year in a *Posting Period*.
- D. A table showing *Fiscal Year*, *Posting Period*, *Actuals per period* and *total yearly Actual*.

**NOTE:** Steps 1-9 are needed for Exercises 23 and 24 to function

### Overview steps to complete the exercise:

1. Create a new document based on the Template, rename it to *Exercise 23* and open it for editing.
  2. Create a Data Provider based on the *Plan vs Actuals (ORG)* query, technical name *ZMFMCO\_2100\_Q012*.
  3. Enter following values in the *Set Variables* window:
    - i. *Fiscal Year*: 2018;2017
    - ii. *Fiscal Period*: 1;2;3
    - iii. *BM Plan Version*: Approved BP
    - iv. *ORG Hierarchy*: Royal Canadian Navy (RCN)
  4. Rename the Query as *Plan vs Actuals (ORG)*.
  5. Within the Query Panel, select *Royal Canadian Navy (RCN)* hierarchy object from *Cost Ctr – Top WBS* dimension, *Fiscal Year – Key (Not Compounded)* object from *Fiscal Year* dimension, *Posting Period* dimension, *Struct.* dimension and *Actual* measure/key figure.
  6. Delete *Query 1* that came with the Template so that only your newly selected query remains.
  7. Select *Run Query* and make sure above mentioned values are still there when prompts window comes up.
  8. When prompted select the option to not automatically generate a table with the result objects.
- 
9. Within one of the available Reports tabs start by adding report level filters as follows:
    - i. *Struct.* equals to *DRMIS Data*.
    - ii. *Royal Canadian navy (RCN)* equals to *Royal Canadian navy (RCN)*.
  10. Now create a table as follows for scenario A:
    - i. Use *Fiscal Year* and *Posting Period* dimensions, and *Actual* measure/key figure.
    - ii. Create a variable called *A\_YearlyTotal* with following formula and add it to the table:  
$$=\text{Sum}([Actual] \text{ In } ([\text{Fiscal Year - Key (Not Compounded)}]))$$
    - iii. Create another variable called *A\_Percentage* with following formula and it to the table:  
$$=\text{Sum}([Actual]) / ([A_YearlyTotal])$$

11. Now create a table as follows for scenario B:
  - i. Use *Fiscal Year* and *Posting Period* dimensions, and *Actual* measure/key figure.
  - ii. Create a variable called *B\_YearlyMax* with following formula and add it to the table:  

$$=\text{Max}([\text{Actual}]) \text{ In } ([\text{Fiscal Year} - \text{Key (Not Compounded)}])$$
  - iii. Add another column to the table with following formula, and call this column as *Diff from Yearly Max*:  

$$=[\text{B_YearlyMax}] - \text{Sum}([\text{Actual}])$$
  
12. Now create a table as follows for scenario C:
  - i. Use *Fiscal Year* dimension and *Actual* measure/key figure.
  - ii. Create a variable called *C\_YearlyMax* with following formula and add it to the table:  

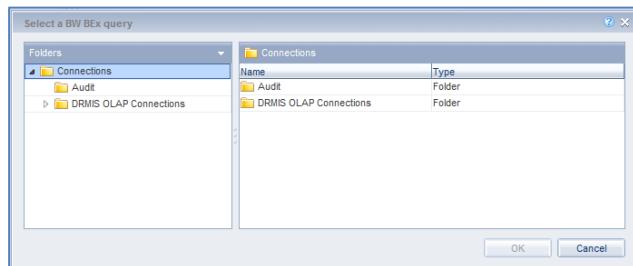
$$=\text{Max( [Actual] ForEach ( [Posting Period] ) )}$$
  
13. Now create a table as follows for scenario D:
  - i. Use *Fiscal Year* and *Posting Period* dimensions, and *Actual* measure/key figure.
  - ii. Create a variable called *D\_YearlyTotal* with following formula and add it to the table:  

$$=\text{Sum}([\text{Actual}]) \text{ ForAll ( [Posting Period] )}$$
  
14. Save your WebI document (*Ctrl-S*) as it will be used later in this course.

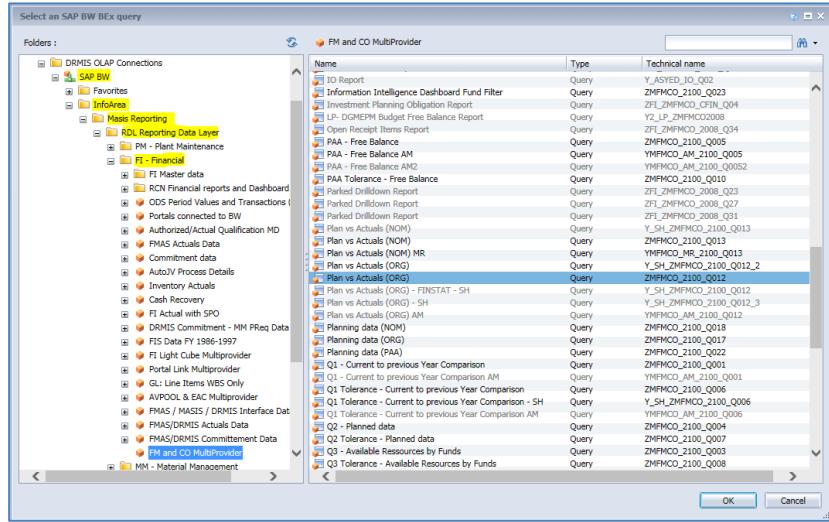
**Answer Guide:**

1. Create a new document from the Template, rename it to Exercise 23 and open it for editing.
2. Click on *Edit Data Provider* button.
3. Click on the *Add Query* dropdown list and select *From BEx*.

This opens up the *Select a BW BEx query* window:

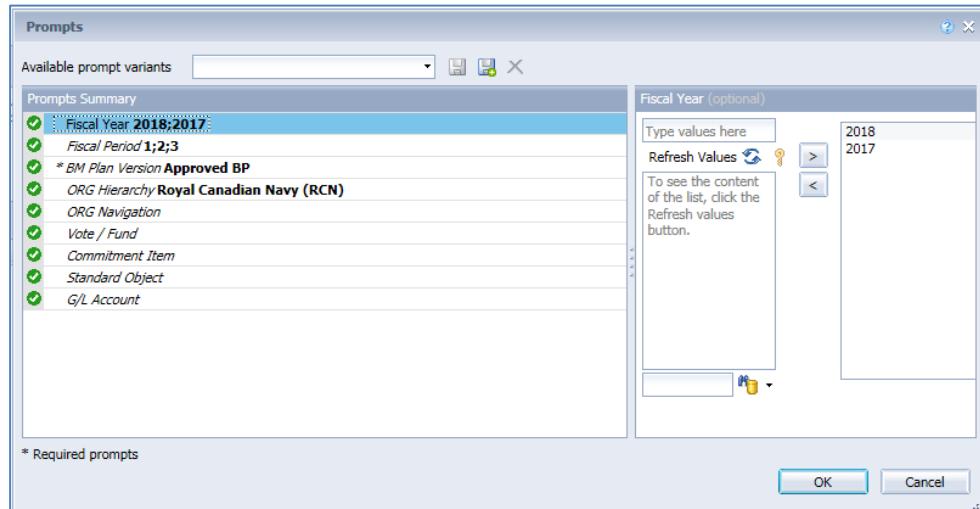


4. Now drill down or search to find the *Plan vs Actuals (ORG)* query (technical name *ZMFMCO\_2100\_Q012*) under the file structure *RDL Reporting Data Layer\FI – Financial\FM and CO MultiProvider*:

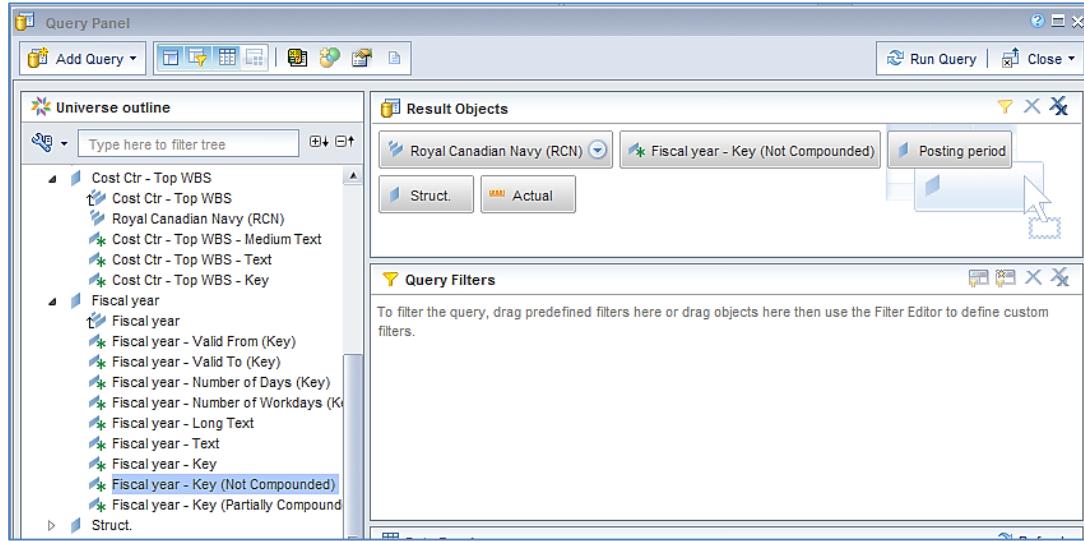


5. Select the BEx query and click *OK*. This opens up the *Set Variables* window where you would enter following values in the *Set Variables* window:

- Fiscal Year: 2018;2017*
- Fiscal Period: 1;2;3*
- BM Plan Version: Approved BP*
- ORG Hierarchy: Royal Canadian Navy (RCN)*



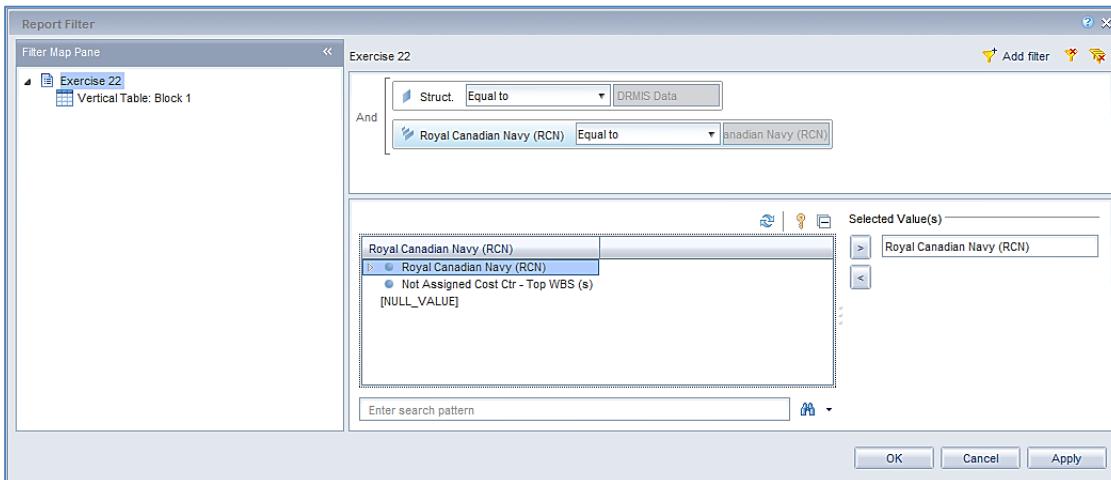
6. In the Query Panel, select the *Royal Canadian Navy (RCN)* hierarchy object from *Cost Ctr – Top WBS* dimension, *Fiscal Year – Key (Not Compounded)* object from *Fiscal Year* dimension, *Struct.* dimension, *Posting Period* dimension, and *Actual* measure/key figure into the *Result Objects* panel.



7. Rename the Query as *Plan vs Actuals (ORG)*.  
 8. Delete *Query 1* that came with the Template so that only your newly selected query remains.  
 9. Click *Run Query*.

10. Make sure above mentioned values are still there when prompts window comes up.  
 11. When prompted select the option to not automatically generate a table with the result objects.  
 12. Within one of the available Reports tabs start by adding report level filters as follows:

- i. Struct. equals to DR MIS Data
- ii. Royal Canadian navy (RCN) equals to Royal Canadian navy (RCN)

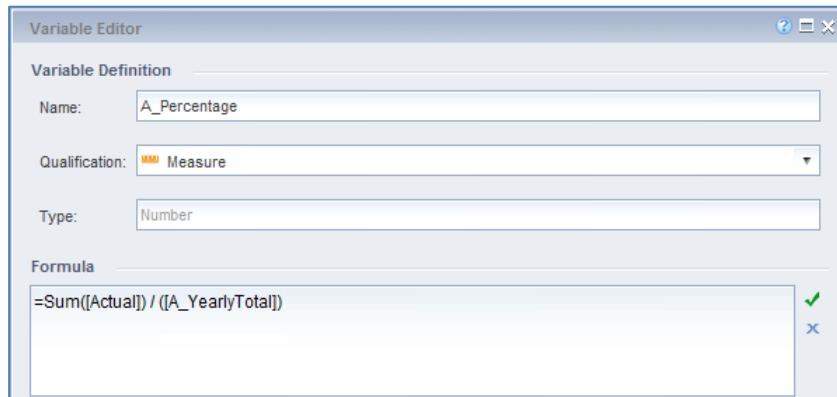


13. Now create a table as follows for scenario A:
- i. Use *Fiscal Year* and *Posting Period* dimensions, and *Actual* key figure.
  - ii. Create a variable called *A\_YearlyTotal* with following formula and add it to the table:  

$$=\text{Sum}(\text{[Actual]} \text{ In } (\text{[Fiscal Year - Key (Not Compounded)}]))$$



- iii. Create another variable called *A\_Percentage* with following formula and it to the table:  
 $=\text{Sum}([\text{Actual}]) / ([\text{A\_YearlyTotal}])$



- iv. The table should like following:

Scenario A:				
Fiscal year	Posting period	Actual	A_YearlyTotal	A_Percentage
2017	001	26,949.95	104,793.18	0.26
2017	002	36,742.41	104,793.18	0.35
2017	003	41,100.81	104,793.18	0.39
2018	001	25,970.19	114,539.12	0.23
2018	002	49,650.1	114,539.12	0.43
2018	003	38,918.83	114,539.12	0.34

14. Now create a table as follows for scenario B:
- Use *Fiscal Year* and *Posting Period* dimensions, and *Actual* measure/key figure.
  - Create a variable called *B\_YearlyMax* with following formula and add it to the table:  
 $=\text{Max}([\text{Actual}]) \text{ In } ([\text{Fiscal Year - Key (Not Compounded)}])$



- iii. Add another column to the table with following formula, and call this column as *Diff from Yearly Max*:

$$=[B\_YearlyMax] - \text{Sum}([Actual])$$

- iv. The table should like following:

Scenario B:				
Fiscal year	Posting period	Actual	B_YearlyMax	Diff from Yearly Max
2017	001	26,949.95	41,100.81	14,150.86
2017	002	36,742.41	41,100.81	4,358.4
2017	003	41,100.81	41,100.81	0
2018	001	25,970.19	49,650.1	23,679.91
2018	002	49,650.1	49,650.1	0
2018	003	38,918.83	49,650.1	10,731.27

15. Now create a table as follows for scenario C:

- i. Use *Fiscal Year* dimension and *Actual* key figure.

- ii. Create a variable called *C\_YearlyMax* with following formula and add it to the table:

$$=\text{Max}( [Actual] \text{ ForEach } ([Posting Period]) )$$

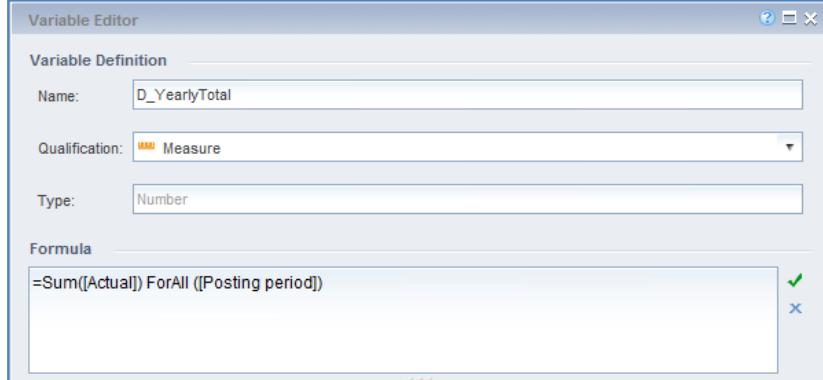

- iii. The table should like following:

Scenario C:		
Fiscal year	Actual	C_YearlyMax
2017	104,793.18	41,100.81
2018	114,539.12	49,650.1

16. Now create a table as follows for scenario D:

- i. Use *Fiscal Year* and *Posting Period* dimensions, and *Actual* key figure.
- ii. Create a variable called *D\_YearlyTotal* with following formula and add it to the table:

=Sum([Actual]) ForAll ([Posting Period])



- iii. The table should like following:

Scenario D:			
Fiscal year	Posting period	Actual	D_YearlyTotal
2017	001	26,949.95	104,793.18
2017	002	36,742.41	104,793.18
2017	003	41,100.81	104,793.18
2018	001	25,970.19	114,539.12
2018	002	49,650.1	114,539.12
2018	003	38,918.83	114,539.12

17. Click on the *Save* button (or, press *Ctrl-S*) to save your Webl document.

## Exercise 24: Creating Chart with Hierarchy Object

The intent of this exercise is to create a Chart with Hierarchy object. Using the hierarchy object users can drill up or down into the chart.

**NOTE:** Steps 1-9 in Exercise 23 need to be completed before continuing this exercise

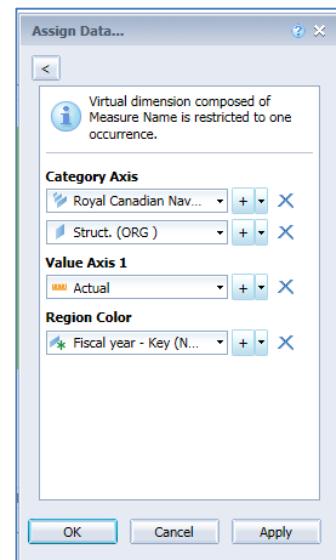
### Overview steps to complete the exercise:

1. Open the document created in *Exercise 23* and select Save As to create a new document.
2. Within one of the Report tabs, create a column chart with the *Royal Canadian navy (RCN)*, *Fiscal Year – Key (Not Compounded)*, *Struct.* and *Actual* objects.
3. Save your WebI document (*Ctrl-S*).
4. Now try the Drill up, Drill down, Collapse All Hierarchies, Expand All Hierarchies, Setting the Default Expansion Level, etc.

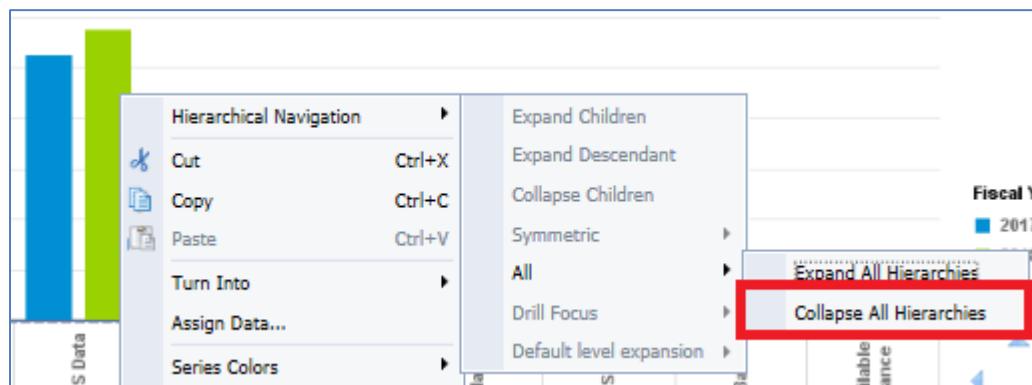
### Answer Guide:

1. Open the document created in *Exercise 23* and select Save As to create a new document.
2. Within one of the Report tabs, create a column chart with the *Royal Canadian navy (RCN)*, *Fiscal Year – Key (Not Compounded)*, *Struct.* and *Actual* objects.

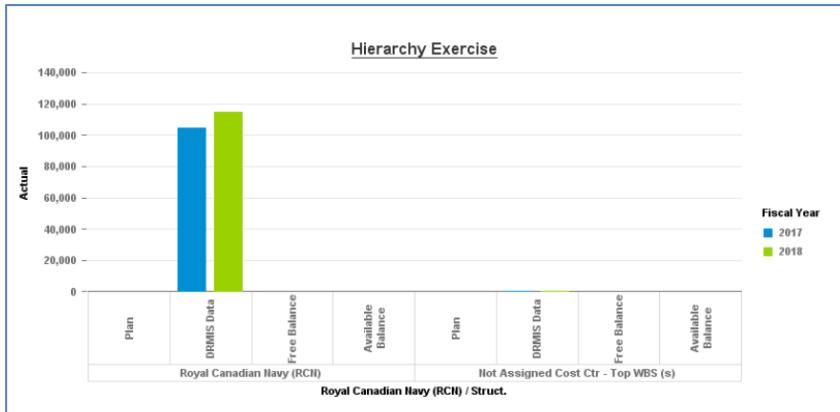
- a. First insert a new/empty Column chart on your report
- b. From the context menu of the chart, go to *Assign Data* and select all the objects as follows:
  - i. Category Axis:
    1. *Royal Canadian Navy (RCN)*
    2. *Struct.*
  - ii. Value Axis 1:
    1. *Actual*
  - iii. Region Color:
    1. *Fiscal Year – Key (Not Compounded)*



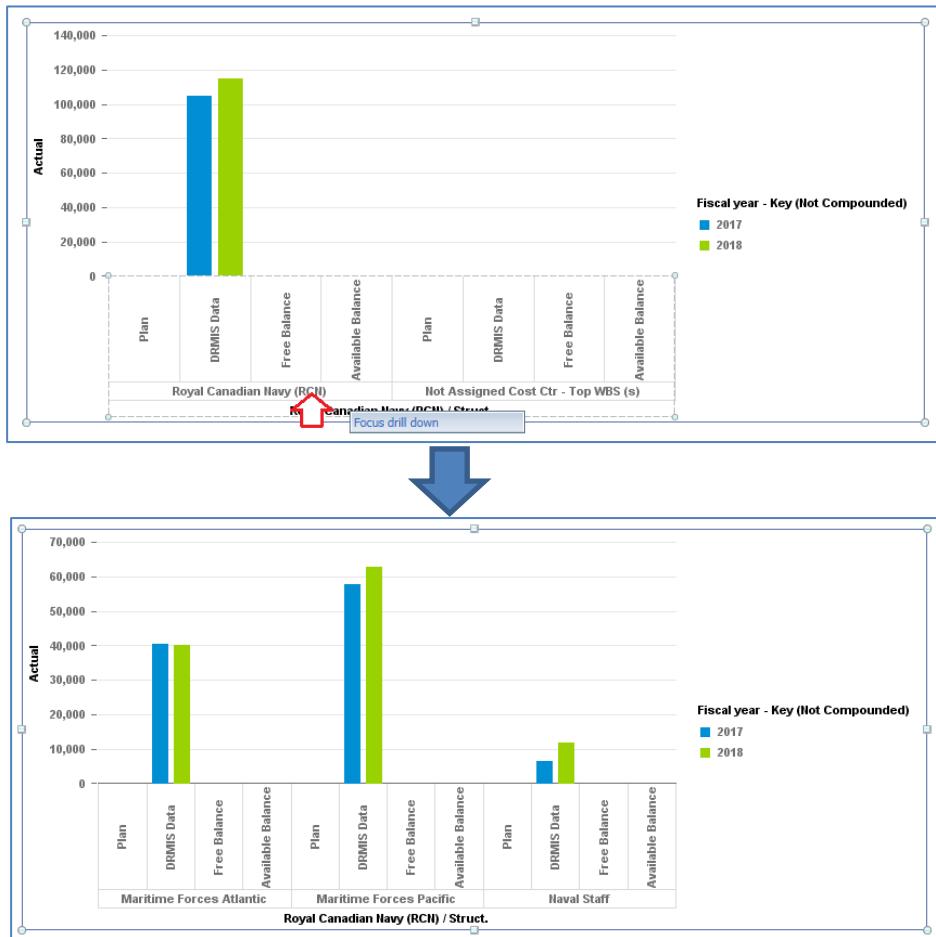
3. Right click, then select *Hierarchical Navigation* → *All* → *Collapse All Hierarchies*.



4. At this point, the chart should look like following:



5. Click on the *Save* button (or, press *Ctrl-S*) to save your WebI document.
6. Now try the Drill up, Drill down, Collapse All Hierarchies, Expand All Hierarchies, Setting the Default Expansion Level, etc., functions on the chart.
7. For example, in the chart, if you click on the *Royal Canadian navy (RCN)*, the chart will then drill one level down to show *MARLANT*, *MARPAC* and *Naval Staff*:



## Exercise 25: Creating Table with Hierarchy Object

The intent of this exercise is to create a table with Hierarchy object. Using the hierarchy object users can drill up or down into the table.

**NOTE:** Steps 1-9 in Exercise 23 need to be completed before continuing this exercise.

### Overview steps to complete the exercise:

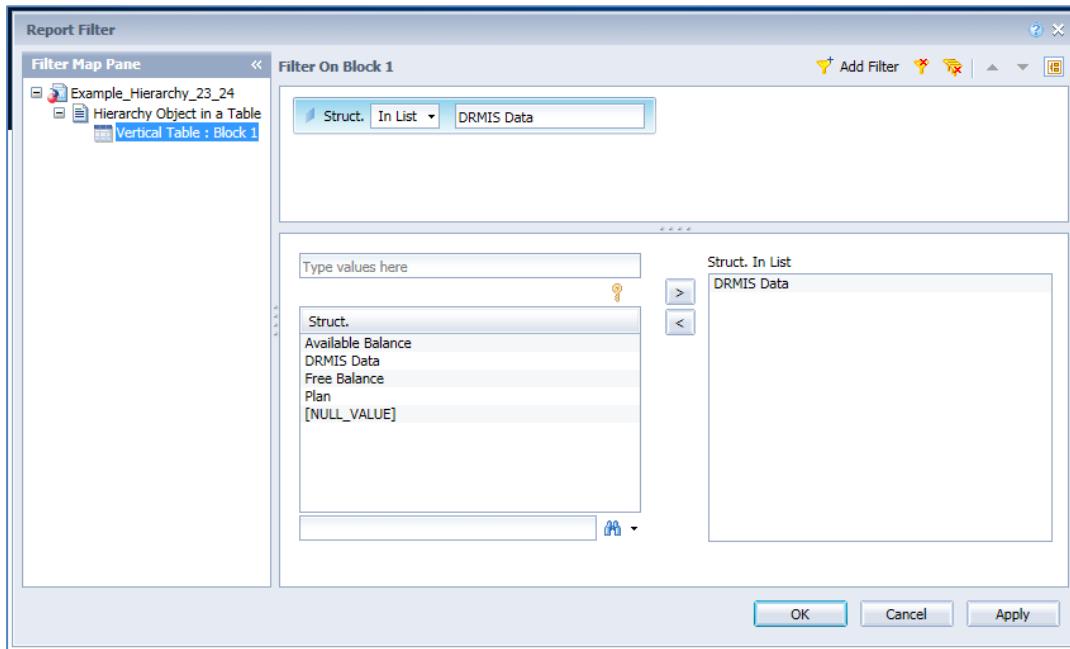
1. Open the document from Exercise 23 and Save As to create a new document.
2. In a new Report tab, create a table with *Royal Canadian navy (RCN)*, *Fiscal Year – Key (Not Compounded)*, *Struct.* and *Actual* objects.
3. Add a filter on the table for *Struct.* equals to *DRMIS Data*.
4. Then hide the *Struct.* dimension in the table.
5. Save your WebI document (*Ctrl-S*).
6. Now try the Drill up, Drill down, Collapse All Hierarchies, Expand All Hierarchies, Setting the Default Expansion Level, etc.

### Answer Guide:

1. Open the document from Exercise 23 and Save As to create a new document.
2. In a new Report tab, create a table with *Royal Canadian navy (RCN)*, *Fiscal Year – Key (Not Compounded)*, *Struct.* and *Actual* objects.

Royal Canadian Navy (RCN)	Fiscal year - Struct.	Actual
+ Royal Canadian Navy (RCN)	2017	Plan
	2017	DRMIS Data 104,793.18
	2017	Free Balance 0
	2017	Available Balance 0
	2018	Plan
	2018	DRMIS Data 114,539.12
	2018	Free Balance 0
	2018	Available Balance 0
Not Assigned Cost Ctr - Top WBS (s)	2017	Plan
	2017	DRMIS Data 14.71
	2017	Free Balance 0
	2017	Available Balance 0
	2018	Plan
	2018	DRMIS Data 7.76
	2018	Free Balance 0
	2018	Available Balance 0

3. Add a filter on the table for *Struct.* equals to *DRMIS Data*.



4. The filtered table should look like following:

Royal Canadian Navy (RCN)	Fiscal year	Struct.	Actual
+ Royal Canadian Navy (RCN)	2017	DRMIS Data	104,793.18
	2018	DRMIS Data	114,539.12
Not Assigned Cost Ctr - Top WBS (s)	2017	DRMIS Data	14.71
	2018	DRMIS Data	7.76

5. Now hide the *Struct.* dimension:

Royal Canadian Navy (RCN)	Fiscal year	Actual
+ Royal Canadian Navy (RCN)	2017	104,793.18
	2018	114,539.12
Not Assigned Cost Ctr - Top WBS (s)	2017	14.71
	2018	7.76

6. Save your WebI document (*Ctrl-S*).

7. Now try the Drill up, Drill down, Collapse All Hierarchies, Expand All Hierarchies, Setting the Default Expansion Level, etc.

8. For example, if you have click on the plus sign beside *Royal Canadian navy (RCN)* text in the table, it would expand to show *MARLANT*, *MARPAC* and *Naval Staff* as you can see in the following table:

Royal Canadian Navy (RCN)	Fiscal year	Actual
□ Royal Canadian Navy (RCN)	2017	104,793.18
	2018	114,539.12
⊕ Maritime Forces Atlantic	2017	40,373
	2018	40,047.01
⊕ Maritime Forces Pacific	2017	57,881.67
	2018	62,801.03
⊕ Naval Staff	2017	6,538.51
	2018	11,691.07
Not Assigned Cost Ctr - Top WBS (s)	2017	14.71
	2018	7.76

## **Exercise 26: Create your own Web Intelligence Document**

The intent of this exercise is to show how you can create a WID from an existing excel spreadsheet, include visualizations and input controls. After the exercise is complete, email your teacher a PDF of your output.

### **Overview steps to complete the exercise:**

1. Find a Data Source (Excel Spreadsheet or BEx query) you would wish to display the data into a WID.
2. If Excel, format the Excel Spreadsheet so that the first row has the column names.
  - a. Load that updated Excel into the *BI Launch Pad*.
3. Using the template, create your WID (recommend using Letter Portrait).
4. Your WID should have the following:
  - a. At least 1 table
  - b. At least 2 Document Input Controls
  - c. At least 2 visualizations of data (Graphs)
  - d. Correctly named tabs, titles, Input Controls, Titles, etc.
  - e. Keep Cover Page and Document tab, but remove any unused tabs
  - f. Review the document for clarity
  - g. Save document the way you want the report to be displayed when opened
5. Create an email and send to both the instructor as well as a colleague the following:
  - a. Description of your Web Intelligence Document
  - b. How to use your WID
  - c. Data Sources used to create the Web Intelligence Document
  - d. Link to your document (use the Document Link and adding  
<http://md8ci.forces.mil.ca:57500> to the prefix)