# Running an Associated Macro with your Power BI Report Results

> **What is a Macro?** A macro is a recording of each command and action you perform to complete a task in Excel. It is useful for tasks that you do over and over in Excel, such as creating pivot tables from Power BI financial data warehouse report results.
>
> **What does a Macro do?** A macro allows you to carry out tasks in your spreadsheets by simply running the macro instead of going through each command and action typically associated with achieving the desired result. In this case, the macro automatically creates an Excel pivot table based on the data in your saved Power BI data warehouse report results file(s).

1. These **macros** are available for reports that contain (macro) in their name:

    a. **General Ledger Trans Detail (General)** – for '*GL Transaction Detail (Macro)*' report

    b. **General Ledger Trans Detail (PCard only) -** ' *GL Transaction Detail (Macro)*' report

    c. **General Ledger Trans Detail with JE Line Number (General) –** for '*GL Transaction Detail (Macro) with JE line Num*' report

    d. **Grants R-Actuals –** for '*R-ACTUALS Expenditure Inquiry (MACRO)*' report

    e. **Labor Distribution (by Home Org) –** for '*US LD History by Employee & FY - Run by Home Org Rollup (Macro)*' and '*US LD History by Employee & Period - by Home Org Rollup (Macro)*' reports

2. Requirements for using these macros:

    a. Report results must be saved to Excel.

    b. The saved report results must have ***all columns in their original position/format*** as they appear in the corresponding standard report in the Public Financial Data Warehouse App.

    c. The desired macro must be downloaded to your computer (do not run from your browser). The macros (and the specific instructions for each macro) are available for download at https://www.cmu.edu/finance/systems/systems-services/macros.html.

   d. Macro security must be set to "medium".

3. To run a downloaded macro:

a. Double click on the downloaded/saved macro file to open it. Click Enable Editing, then click Enable Content.
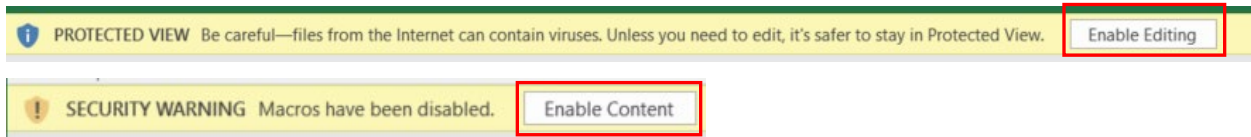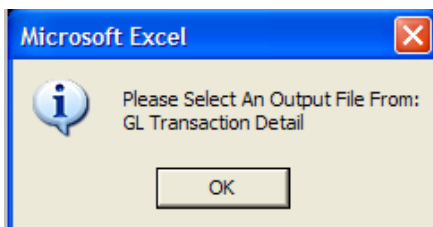

4. Proceed with instruction #1 on the Macro window. In the General Ledger macro example below instruction #1 is "Make Selections for your Pivot Table Preferences", but this step may vary in the different macros. For instance, in some of the other macros, instruction #1 will be "Press Here to Run Macro."
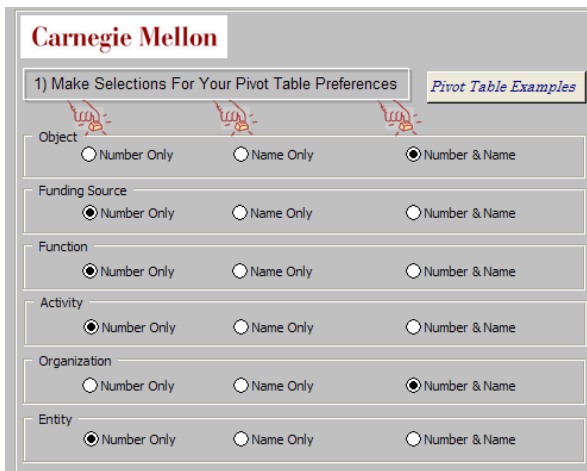
a. In this example, the resulting pivot table will include the General Ledger segment values. Based on the choices made in the screenshot above, the number AND name of the segment will display only for the Object Code and the Organization.

5. Proceed with instruction #2 on the Macro window "Press Here to Run Macro."
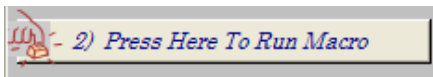
6. When you see this next message, click on OK. Then, select the saved report results file for which you would like to run the macro. Please note that the results file must be closed in order to select it.

7. Once the saved report results file is processed the following message will be displayed.

GL History Report

? Report: DC Demo EAC.xls has finished.

Do you want to process one more report?
If No GeneralLedger_TransactionDetail_General_Macro.xls will close.
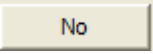
[Yes] [No]
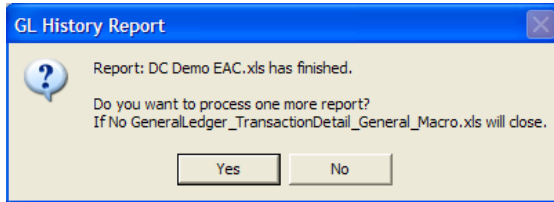
This allows you to process more than one saved report results file at a time. If you are only running the macro for one saved report results file, click the [No] button.

8. An Excel pivot table will be created from your saved report result file data.

    a. In this example of the **General Ledger Trans Detail (General)** macro and the **General Ledger Trans Detail with JE Line Number (General)** results, the pivot table is defaulted to show Object Code summary information by period.

A	B	C	D	E
Organization	(All)			
Funding Source	(All)			
Function	(All)			
Activity	(All)			
Entity	(All)			
Sum of Functional Net Activity	Period			
Object Code	146 Jul09-10	147 Aug09-10	148 Sep09-10	Grand Total
85111 AIRFARE-DOMESTIC-USA	336.05		1,865.90	2,201.95
85113 LODGING-DOMESTIC-USA	254.97	296.04	455.64	1,006.65
85115 TRAVEL MEALS DOMESTIC-USA			93.01	93.01
85117 OTHER TRAVEL-DOMESTIC-USA	(200.04)	3,476.38	(8,340.70)	(5,064.36)
85118 RENTAL CAR DOMESTIC-USA	34.66	28.53	490.05	553.24
85119 CONFERENCE REG DOMESTIC	407.88		545.00	952.88

    b. In this example of the **General Ledger Trans Detail (PCard only)** macro results, the pivot table is defaulted to show Object Code Number, then Merchant Name, and finally the Justification information.

	A	B	C	D	E
1	Purpose	(All)			
2	Organization Number	(All)			
3	Funding Source Number	(All)			
4	Function Number	(All)			
5	Activity Number	(All)			
6	Entity Number	(All)			
7					
8	Sum of Functional Net Activity			Period	
9	Object Code Number	Merchant Name	Justification	162 Oct10-11	Grand Total
10	⊟84104	⊟ANCHORPAD SECURITY INC	Locking cables for the studio comp	687.52	687.52
11			Padlocks for the studio computers	303.78	303.78
12		ANCHORPAD SECURITY INC Total		991.30	991.30
13		⊞APPLE STORE #R096		39.00	39.00
14		⊟BEST BUY 00005868	HP 57 Ink Cartridges	41.99	41.99
15		BEST BUY 00005868 Total		41.99	41.99
16		⊟BUY.COM	15' high speed extension cable for	5.99	5.99
17			USB hub for faculty	39.48	39.48
18			Wireless mouse for staff	26.97	26.97
19		BUY.COM Total		72.44	72.44
20		⊟CARNEGIE MELLON BOOKST	Glue for undergrad monitors	9.90	9.90
21		CARNEGIE MELLON BOOKST Total		9.90	9.90
22		⊟MONOPRICE COM	Mounting brackets for studio comp	971.26	971.26
23		MONOPRICE COM Total		971.26	971.26
24		⊟OFFICE MAX	2 carrying cases for laptop	92.98	92.98
25			Credit for returned carrying case f	(51.99)	(51.99)

c. In this example of the **Grants R-Actuals** macro results, the pivot table is defaulted to show expense amounts by Employee/Supplier by Expenditure Type and then by Expenditure Category.

	A	B	C	D	E	F
1	Business Month	(All)				
2	Project	(All)				
3	Task	(All)				
4	Award	(All)				
5						
6	Sort Key	Expnd Category	Expnd Type	Employee/Sup	Comment	Amt.
277						
278	⊟40					
279		⊟OPERATING EXPENSE				
280			⊟ADVERTISING PUBLIC RELATIONS			
281				⊟CONVERSATIONS NETWORK, THE		
282					UNDERWRITII	$ 6,000
283				CONVERSATIONS NETWORK, THE		$ 6,000
284						
285			ADVERTISING PUBLIC RELATIONS Total			$ 6,000
286						
287			⊟BOOKS			
288				⊟		
289					Purchased By:	$ 216
290				Total		$ 216
291						
292				⊟AMAZON.COM		
293					19 BOOKS ON	$ 310
294					COPY OF BOO	$ 20
295					FOUR BOOK C	$ 161
296					RETURN OF "(	$ (11)
297					TWO COPIES (	$ 45
298				AMAZON.COM Total		$ 523

d. The **Labor Distribution (by Home Org)** macro:

This Macro Will Perform The Following Functions:
1) Add a new percent column for each period.
   a. Based on either Employee or Assignment Number
2) Create two new worksheets
   a. One with amounts and percentages and a second with percentages only.
3) Combine the Object Code Number and Expenditure Type in one column.
4) Add a Total Column - *if there is more than one period*
5) Delete any rows containing object code 41105
6) Will move the Assignment Numbers to Column C - *for Employee and Assignment Report*

The results for this macro will look similar to this (shown with percentages only):

	Expenditure Type	Functional Currency	Set of Books Name	Period Number 105 Period Name Total Percentage
65	TECH/PROFESSIONAL EXEMPT FT	USD	Carnegie Mel	5%
66	TECH/PROFESSIONAL EXEMPT FT	USD	Carnegie Mel	45%
67	TECH/PROFESSIONAL EXEMPT FT	USD	Carnegie Mel	2%
68		USD	Carnegie Mel	100%
69		USD	Carnegie Mel	100%
70	SPECIAL FACULTY FT	USD	Carnegie Mel	100%
71	TECH/PROFESSIONAL EXEMPT FT	USD	Carnegie Mel	100%
72	TECH/PROFESSIONAL EXEMPT FT	USD	Carnegie Mel	75%
73	TECH/PROFESSIONAL EXEMPT FT	USD	Carnegie Mel	25%
74	ADMINISTRATIVE EXEMPT FT	USD	Carnegie Mel	100%
75		USD	Carnegie Mel	100%
76		USD	Carnegie Mel	48%

◄ ◄ ► ► **% By Emplyee Without Amts**   % By Employee With Amts   Original

o ***Note:*** *If you are not familiar with working with Excel Pivot Tables you may want to consider reviewing the* PivotTable Tutorial (with closed captioning) *(Download the* practice worksheet*) or leveraging Excel training available in* FocusU *or* LinkedInLearning.