

Introduction

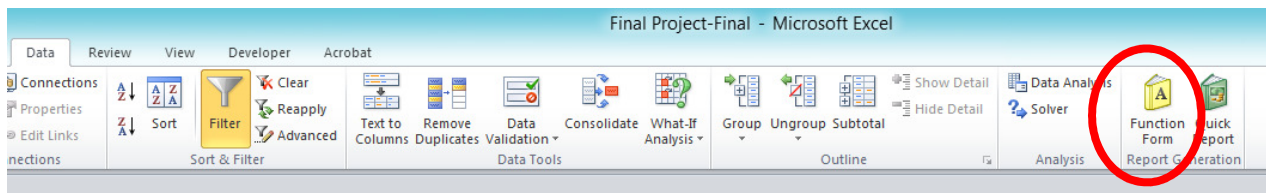
This project is based on a real business problem that is related to an accounting task at College of Fine Art Center at BYU. Every month accounting manager will need to analyze reports generated from TotalTrans, which includes all income and expenses from the beginning of the year to the date of the completed month. Because this report includes so many transactions (more than 3000 transaction as of September 30, 2011), performing an analysis involves many procedures to break down the transactions into each unit, and then each account and corresponding individual subclass. Most of the procedures are routine, having one click or as few clicks as possible to generate the report will be very effective.

Executive Summary

The purpose of this project is to break down all transactions by “Operating Unit”, “Account”, “Subclass”, and lastly by “Month”. Operating Unit is department; Account is the category of transaction (such as supplies, rental expense, salaries); Subclass is the separation of discretionary budgets, faculty research funds, or special project expenses.

The user can specify what operating unit, account, subclass, or month for the report, it will then automatically generate a chart to show the profit and loss for the specific unit and calculate the subtotal for the report. A userform has been created to allow user input search keywords and to allow choosing “Quick Find”, “Quick Totals”, and “Generate Report”. The code that was written is flexible because many functions are created to allow user to modify more easily. This is expected to save about 6-10 hours monthly for the analysis of the TotalTrans. Because of flexibility of the code, most of them will be applicable to use in other reports generated monthly; therefore, with consideration of all other reports and this TotalTrans report, it is anticipated to reduce approximately 10-15 hours per month for generating reports.

Implementation



To make this project user friendly, I followed the template that was used in the project “Userform” to use a ribbon on the “Data” tab. When the user clicks on the “Function Form” ribbon, a userform will pop up and give the user variety of choices: “Calculate”, “Generate Report”, and “Quick Find”. I will show the breakdown below.

The userform title is called “TotalTrans Analysis”, it includes several fields that let user look at the information briefly.

The screenshot shows a 'TotalTrans Analysis' dialog box overlaid on a spreadsheet. The dialog box contains the following fields and buttons:

- Operating Unit:** Two text input boxes.
- Description:** One text input box.
- Account:** Two text input boxes.
- Journal ID:** One text input box.
- Class:** Two text input boxes.
- Journal Date:** One text input box.
- Month:** A dropdown menu and one text input box.
- Row #:** One text input box.
- Total Matched Entries:** One text input box.
- Entries Subtotal:** One text input box.
- Buttons:** 'Calculate', 'Generate Report', 'Quick Find', and 'Close'.

- Operating Unit is the classification code for specific department. The user can input the operating unit code to search for any record with operating unit entered. The box on the right will display the record.
- Account is the classification code for specific account (such as supplies, rental expense, software expense)
- Class is the classification code for specific subclass within the department. Examples of class are faculty's discretionary, research fund, areas, or departments.
- Month field allows the user to choose a range from 1 to 12 (January to December).
- Description, Journal ID, Journal Date, and Row # are the data that was associated with the record that was found based on the criteria(s).
- Total Matched Entries is the total records that meet the criteria(s). This will only be shown when the user clicks "Calculate" button.
- Entries Subtotal is the total amount of all records that meet the criteria(s). This will only be shown when the user clicks "Calculate" button.
- "Close" button allows the user close the userform.
- Notes: If any field(s) was left blank, all of the records of that criteria will be shown.

QUICK FIND

11264000																	
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
175	23264035	4210	00250	-90.00	Thomas, Tony	SHOE BOWS	AP439GFT01	JE	30-Jun-2011	028	02-May-2011	4	2011	6			
176	23264035	4210	00250	303.37	Reverse PCAAP43903 Ln 4	TOOLS	PCAREV10	JE	31-Mar-2011	476	31-Mar-2011	4	2011	3			
177	13264069	4580	00000	-38.00	Divine Comedy		AELAW001	JE	11-Feb-2011	084	11-Feb-2011	4	2011	2			
178	13264069	4580	00000	-42.00	Divine Comedy		AELAW001	JE	12-Feb-2011	084	12-Feb-2011	4	2011	2			
179	13264069	4580	00000	-804.00	Divine Comedy		AELAW001	JE	08-Apr-2011	084	08-Apr-2011	4	2011	4			
180	13264069	4580	00000	-308.70	Divine Comedy		TWILSON01	JE	03-Aug-2011	084	03-Aug-2011	4	2011	8			
181	23264035	4790	00000	400.00	Marny Parkin LTUE 2010 gift	TR	TLR030015	JE									
182	23264035	4790	00000	400.00	Marny Parkin LTUE 2010 gift	TR	TLR030016	JE									
183	23264035	4790	00000	-400.00	Marny Parkin LTUE 2010 gift	TR	TLR02013	JE									
184	23264035	5350	21798	-5,912.50	reclass Shawnda Moss-adjunct	ROGERS,T	WILSON0701	JE									
185	11264000	5699	21789	-29,409.57	2010 MPS student wage	TR	TLR2008	JE									
186	11264000	5920	00000	5.70	BENEFITS FACULTY SPRING/SUMMER		0000474970										
187	11264000	5920	00000	5.70	BENEFITS FACULTY SPRING/SUMMER		0000475580										
188	11264101	5960	00000	22.24	BENEFITS STUDENT TIME CARD		0000474403										
189	11264101	5960	00000	24.81	BENEFITS STUDENT TIME CARD		0000474974										
190	11264000	5970	00000	26.94	BENEFITS TEMPORARY PART-TIME		0000474975										
191	11264000	5970	00000	3.35	BENEFITS TEMPORARY PART-TIME		0000475585										
192	11264000	6100	00000	-100.19	Costco Check	PC909299	TLR04022	JE									
193	13264027	6100	00000	-2,250.00	KCACTF-Supplies	TR	TLR030041	JE									
194	13264048	6100	00000	-24.00	The Wolf & the Ewe	SCL	TLR030026	JE	03-Mar-2011	036	15-Mar-2011	4	2011	3			
195	13264074	6100	35304	339.96	Erica Hill HOC Fulton Funds		TLR04008	JE	04-Apr-2011	036	06-Apr-2011	4	2011	4			
196	11264000	6109	00000	-20.00	Alicia McIntire Stain Glass	SIGCARDJA	TLR080014	JE	01-Aug-2011	036	17-Aug-2011	4	2011	8			
197	11264105	6109	00000	-2,500.00	Support transfer-MAL	TR	TLR070028	JE	31-Jul-2011	036	31-Jul-2011	4	2011	7			
198	23264051	6109	21719	-2,000.00	Mr. Bellpond's Masterpiece		SMB9MAR03	JE	08-Mar-2011	626	08-Mar-2011	4	2011	3			
199	23264051	6109	21738	-1,500.00	Untitled SFP-support Transfer	TR	TLR2016	JE	14-Feb-2011	036	22-Feb-2011	4	2011	2			
200	11264000	6110	00000	-13.95	DCOMEDY BK Postage and Pkging	BK7815JA	TLR080018	JE	01-Aug-2011	036	22-Aug-2011	4	2011	8			
201	11264000	6110	00000	-224.99	KCRAPO Hnr Thesis Doc 2TB	BK_7815_JA	TLR070020	JE	05-Jul-2011	036	27-Jul-2011	4	2011	7			
202	11264000	6110	00000	-360.38	SBLEDEAU vesa mounts reclass	BS7815	TLR060015	JE	01-Jun-2011	036	06-Jun-2011	4	2011	6			

TotalTrans Analysis

Operating Unit

11264000

Description

Costco Check

Account

6100

Journal ID

TLR04022

Class

00000

Journal Date

4/4/2011

Month

4

April

Row #

292

Total Matched Entries

Entries Subtotal

Calculate

Generate Report

Quick Find

Close

“Quick Find” allows user to find all records that meet the criteria what the user enter in the criteria box.

Calculate

11264000																	
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
175	23264035	4210	00250	-90.00	Thomas, Tony	SHOE BOWS	AP439GFT01	JE	30-Jun-2011	028	02-May-2011	4	2011	6			
176	23264035	4210	00250	303.37	Reverse PCAAP43903 Ln 4	TOOLS	PCAREV10	JE	31-Mar-2011	476	31-Mar-2011	4	2011	3			
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179	13264069	4580	00000	-804.00	Divine Comedy		AELAW001	JE	08-Apr-2011	084	08-Apr-2011	4	2011	4			
180	13264069	4580	00000	-308.70	Divine Comedy		TWILSON01	JE	03-Aug-2011	084	03-Aug-2011	4	2011	8			
181	23264035	4790	00000	400.00	Marny Parkin LTUE 2010 gift	TR	TLR030015	JE									
182	23264035	4790	00000	400.00	Marny Parkin LTUE 2010 gift	TR	TLR030016	JE									
183	23264035	4790	00000	-400.00	Marny Parkin LTUE 2010 gift	TR	TLR02013	JE									
184	23264035	5350	21798	-5,912.50	reclass Shawnda Moss-adjunct	ROGERS,T	WILSON0701	JE									
185	11264000	5699	21789	-29,409.57	2010 MPS student wage	TR	TLR2008	JE									
186	11264000	5920	00000	5.70	BENEFITS FACULTY SPRING/SUMMER		0000474970										
187	11264000	5920	00000	5.70	BENEFITS FACULTY SPRING/SUMMER		0000475580										
188	11264101	5960	00000	22.24	BENEFITS STUDENT TIME CARD		0000474403										
189	11264101	5960	00000	24.81	BENEFITS STUDENT TIME CARD		0000474974										
190	11264000	5970	00000	26.94	BENEFITS TEMPORARY PART-TIME		0000474975										
191	11264000	5970	00000	3.35	BENEFITS TEMPORARY PART-TIME		0000475585										
192	11264000	6100	00000	-100.19	Costco Check	PC909299	TLR04022	JE									
193	13264027	6100	00000	-2,250.00	KCACTF-Supplies	TR	TLR030041	JE									
194	13264048	6100	00000	-24.00	The Wolf & the Ewe	SCL	TLR030026	JE	03-Mar-2011	036	15-Mar-2011	4	2011	3			
195	13264074	6100	35304	339.96	Erica Hill HOC Fulton Funds		TLR04008	JE	04-Apr-2011	036	06-Apr-2011	4	2011	4			
196	11264000	6109	00000	-20.00	Alicia McIntire Stain Glass	SIGCARDJA	TLR080014	JE	01-Aug-2011	036	17-Aug-2011	4	2011	8			
197	11264105	6109	00000	-2,500.00	Support transfer-MAL	TR	TLR070028	JE	31-Jul-2011	036	31-Jul-2011	4	2011	7			
198	23264051	6109	21719	-2,000.00	Mr. Bellpond's Masterpiece		SMB9MAR03	JE	08-Mar-2011	626	08-Mar-2011	4	2011	3			
199	23264051	6109	21738	-1,500.00	Untitled SFP-support Transfer	TR	TLR2016	JE	14-Feb-2011	036	22-Feb-2011	4	2011	2			
200	11264000	6110	00000	-13.95	DCOMEDY BK Postage and Pkging	BK7815JA	TLR080018	JE	01-Aug-2011	036	22-Aug-2011	4	2011	8			
201	11264000	6110	00000	-224.99	KCRAPO Hnr Thesis Doc 2TB	BK_7815_JA	TLR070020	JE	05-Jul-2011	036	27-Jul-2011	4	2011	7			
202	11264000	6110	00000	-360.38	SBLEDEAU vesa mounts reclass	BS7815	TLR060015	JE	01-Jun-2011	036	06-Jun-2011	4	2011	6			

TotalTrans Analysis

Operating Unit

11264000

Description

Costco Check

Account

6100

Journal ID

TLR04022

Class

00000

Journal Date

4/4/2011

Month

4

April

Row #

292

Total Matched Entries

14

Entries Subtotal

305.99

Calculate

Generate Report

Quick Find

Close

“Calculate” shows the total matched records that meet criteria(s) and the total amount of those matched records.

Generate Report

D37 fx =SUBTOTAL(9, D52:D35)													
A	B	C	D	E	F	G	H	I	J	K	L	M	N
OPERATING UN	ACCOU	CLA	AMOUR	DESCRIPTION	REFEREN	JOURNAL	DETAIL	JOURNAL DA	SOUR	JOURNAL LINE DA	JOURNAL LI	YE	PERI
2	11264000	5600	21789	-373.88 OCKERMAN,CHANTEL M	58314199	PYA1101BW1		1/1/2011	265	1/1/2011	965	2011	1
3	11264000	5600	21789	-89.4 MACKAY,EMILY DENISE	132674289	PYA1101BW1		1/1/2011	265	1/1/2011	2161	2011	1
4	11264000	5600	21789	-33.5 ROPER,STEVEN MICHAEL	171551439	PYA1101BW1		1/1/2011	265	1/1/2011	2719	2011	1
5	11264000	5600	21789	-179.19 THACKER,BRYAN T	465954787	PYA1101BW1		1/1/2011	265	1/1/2011	5843	2011	1
6	11264000	5600	21789	-300.06 SPENCER,KEVIN ALAN	676694418	PYA1101BW1		1/1/2011	265	1/1/2011	8095	2011	1
7	11264000	5600	21789	-24 BILLS,JOHN WILLIAM	828034298	PYA1101BW1		1/1/2011	265	1/1/2011	9621	2011	1
8	11264000	5600	21789	406.35 Spencer, Kevin Alan	676694418	PYA1101BW1		1/7/2011	260	1/7/2011	2511	2011	1
9	11264000	5600	21789	212.04 Bills, John William	828034298	PYA1101BW1		1/7/2011	260	1/7/2011	2512	2011	1
10	11264000	5600	21789	118.98 Duff, Susan Clisty	509908462	PYA1101BW1		1/7/2011	260	1/7/2011	2513	2011	1
11	11264000	5600	21789	107.73 Damm, Jason Gary									
12	11264000	5600	21789	119.25 Duff, Susan Clisty									
13	11264000	5600	21789	152.88 Whatcott, Megan Lynn									
14	11264000	5600	21789	214.09 Ramirez, Daniel Jacob									
15	11264000	5600	21789	152.88 Whatcott, Megan Lynn									
16	11264000	5600	21789	637.13 Ockerman, Chantel M									
17	11264000	5600	21789	431.75 Thacker, Bryan T									
18	11264000	5600	21789	186 Roper, Steven Michael									
19	11264000	5600	21789	147.54 Robison, Jessica Leigh									
20	11264000	5600	21789	31.51 Ampuno, Maria Lorena									
21	11264000	5600	21789	67.5 Spencer, Kevin Alan									
22	11264000	5600	21789	400 Earls, Dalin Scott									
23	11264000	5600	21789	440.77 Thacker, Bryan T									
24	11264000	5600	21789	353.16 Bills, John William									
25	11264000	5600	21789	349.02 Spencer, Kevin Alan									
26	11264000	5600	21789	288.14 Robison, Jessica Leigh	336212711	PAY1101BW2		1/21/2011	260	1/21/2011	2948	2011	1
27	11264000	5600	21789	361.27 Whatcott, Megan Lynn	963164516	PAY1101BW2		1/21/2011	260	1/21/2011	2949	2011	1
28	11264000	5600	21789	362.88 Ockerman, Chantel M	58314199	PAY1101BW2		1/21/2011	260	1/21/2011	2950	2011	1
29	11264000	5600	21789	145.98 Duff, Susan Clisty	509908462	PAY1101BW2		1/21/2011	260	1/21/2011	2951	2011	1
30	11264000	5600	21789	430.88 Ramirez, Daniel Jacob	247690897	PAY1101BW2		1/21/2011	260	1/21/2011	2952	2011	1
31	11264000	5600	21789	331.2 Roper, Steven Michael	171551439	PAY1101BW2		1/21/2011	260	1/21/2011	2953	2011	1
32	11264000	5600	21789	321.03 Damm, Jason Gary	285817866	PAY1101BW2		1/21/2011	260	1/21/2011	2954	2011	1
33	11264000	5602	21789	395.8 Mackay, Emily Denise	132674289	PAY1101BW1		1/7/2011	260	1/7/2011	2524	2011	1
34	11264000	5602	21789	513 Mackay, Emily Denise	132674289	PAY1101BW2		1/21/2011	260	1/21/2011	2955	2011	1
35	11264000	5960	21789	69.07 BENEFITS STUDENT TIME CARD	473745			1/31/2011	ALO	1/31/2011	98	2011	1
36													
37				Subtotal									

TotalTrans Analysis

Operating Unit

11264000

Description

Account

Journal ID

Journal Date

Class

21789

Row #

Month

1

Total Matched Entries

Entries Subtotal

Calculate

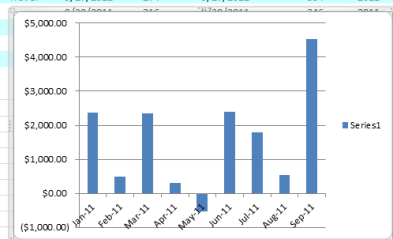
Generate Report

Quick Find

Close

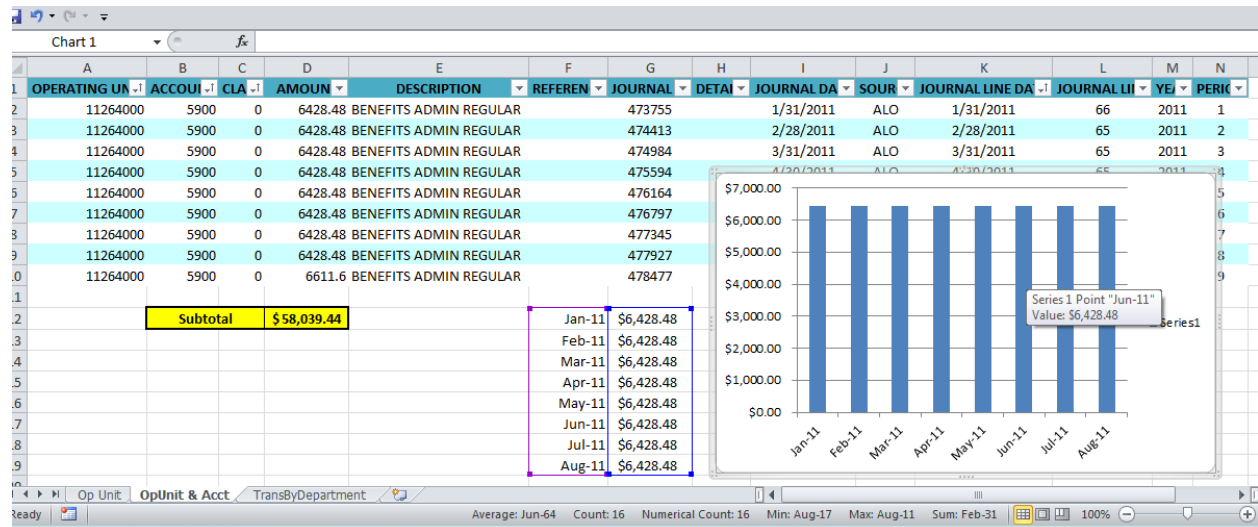
“Generate Report” button allows user to generate a report that has all records meet the criteria(s). The report generated will be formatted with color and a box on the bottom to show the total amount of the records. The heading of the records will also have the filter to allow user to sort or filter the reports. The report will be sorted by date initially.

101	11264000	6100	0	45.95 JANITORIAL RESTAUR	956607	PCARD00086		9/26/2011	256	9/2/2011	3037	2011	9
102	11264000	6100	0	16 HABIT FOR HUMANITY OF UTA	956608	PCARD00086		9/26/2011	256	9/2/2011	3038	2011	9
103	11264000	6100	0	199 HOLLWOOD REPORTER SUBS	956921	PCARD00086		9/26/2011	256	9/2/2011	3368	2011	9
104	11264000	6100	0	-10.82 TMA Department	PC946965KC	TLR090003	JE	9/1/2011	36	9/6/2011	2	2011	9
105	11264000	6100	0	-9.99 TMA Department	PC952301KC	TLR090004	JE	9/1/2011	36	9/6/2011	2	2011	9
106	11264000	6100	0	1.06 APL*APPLE ITUNES STORE	956727	PCARD00086		9/26/2011	256	9/6/2011	3163	2011	9
107	11264000	6100	0	25.96 LOWES #00178*	957260	PCARD00086		9/26/2011	256	9/6/2011	3716	2011	9
108	11264000	6100	0	25.13 AMAZON MKTPLACE PMTS	957885	PCARD00086		9/26/2011	256	9/8/2011	4374	2011	9
109	11264000	6100	0	20.98 AMAZON MKTPLACE PMTS	959601	PCARD00086		9/26/2011	256	9/13/2011	6167	2011	9
110	11264000	6100	0	65.67 Kerilyn Johnson	EX00028030	EXP460	Travel	9/14/2011	274	9/14/2011	6	2011	9
111	11264000	6100	0	-1.06 BBarber - P-Card Reimbursement	3317890	CASHN694		9/16/2011	258	9/16/2011	308	2011	9
112	11264000	6100	0	42.76 Kerilyn Johnson	EX00035807	EXP463	Travel	9/19/2011	274	9/19/2011	116	2011	9
113	11264000	6100	0	27.49 BASS PRO ONLINE	962214	PCARD00086		9/26/2011	256	9/21/2011	8889	2011	9
114	11264000	6100	0	329.99 REI*DAILY VARIETY	962861	PCARD00086		9/26/2011	256	9/22/2011	9543	2011	9
115	11264000	6100	0	399 SOUNDMINER INC	963023	PCARD00086		9/26/2011	256	9/22/2011	9711	2011	9
116	11264000	6100	0	38.62 MONOPRICE INC	963543	PCARD00086		9/26/2011	256	9/22/2011	10262	2011	9
117	11264000	6100	0	481.75 MYT PRINT	963251	PCARD00086		9/26/2011	256	9/23/2011	9964	2011	9
118	11264000	6100	0	30.59 Kerilyn Johnson	EX00035956	EXP468	Travel	9/26/2011	274	9/26/2011	170	2011	9
119	11264000	6100	0	77.63 NAT REED	EX00036355	EXP469	Travel	9/27/2011	274	9/27/2011	334	2011	9
120	11264000	6100	0	164.2 DELIVER TABLES & CHAIRS 8/25/1	F4394	PHP030							
121	11264000	6100	0	5.5 2 NAME TAGS	SALES	PHP030							
122	11264000	6100	0	181 DELIVER TABLES & CHAIRS 8/25/1	F4572	PHP030							
123	11264000	6100	0	2334.84 MAKE FURNITURE CHANGES AS NEEDED	F3607	PHP030							
124	11264000	6100	0	37 REKEY D-541A, D-541, D-581 HFA	F4930	PHP030							
125				Subtotal									
126													
127													
128													
129													
130													
131													
132													
133													
134													



For any reports that no specific months were input as criteria, a chart will be generated when the user clicks “close” button. A subtotal for each month will also be shown on the bottom to let the user compare the total in numbers to analyze whether some months needs attention.

Report Format

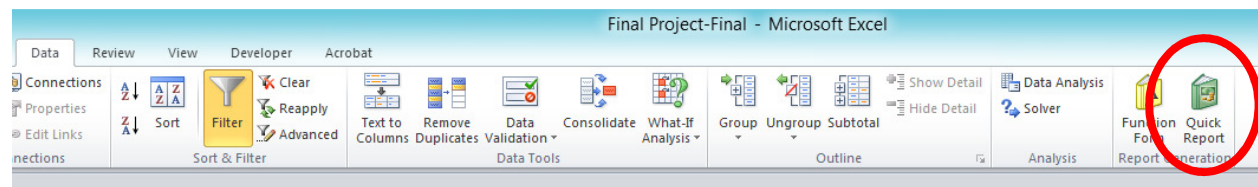


Each time a report is generated, a new tab will be used; there is a specific name that will be associated with it. If the user put in “Operating Unit” and “Account” as criteria, then a new tab “OpUnit & Acct” will be generated. If the user put in “Operating Unit” only, then a new tab “Op Unit” will be generated.

Whenever a new report is generated, the column width is also adjusted automatically. If the user decides to filter the report to get specific criteria, the user can click on the filter arrow on the report, the subtotal will calculate the total of the filtered records automatically.

The benefit of having the report instead of just sorting is the elimination of hidden rows when filtered. This report sometimes is distributed to the person who’s in charge of the area, it would not be appropriate to that the person would have opportunity to unhide the rows and look at other areas’ transactions. This report is formatted as user friendly and practical as possible for the user to perform analysis and identify the suspicious transactions.

Quick Report

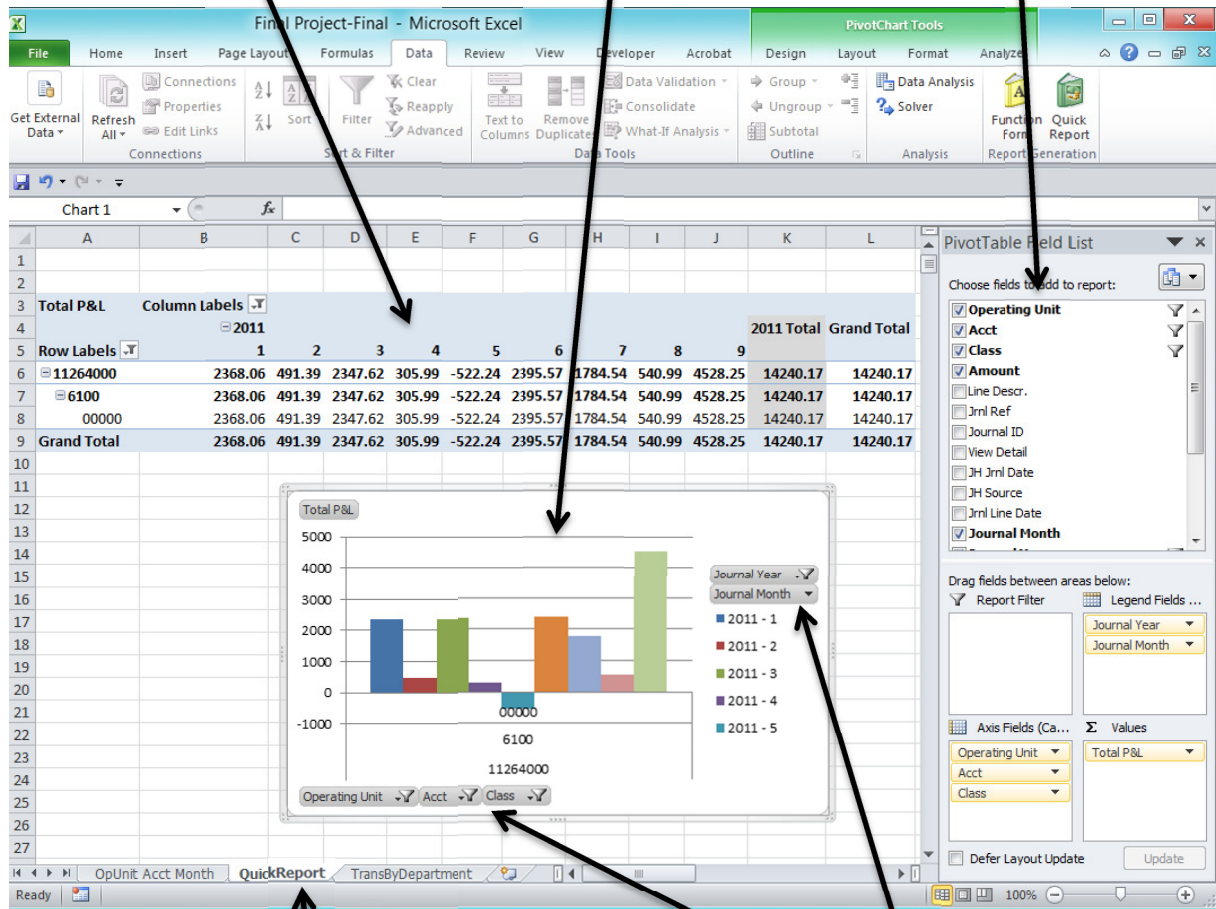


When user clicks on this “Quick Report” button, a quick report will then be generated automatically by using PivotTable function in Excel. Please see the screenshot below for more information.

This is the result of filtered information in PivotTable.

This is the chart based on the initially filtered data.

This is the criteria that I added for the report when it is generated initially.



A new tab "QuickReport" will be generated. Each time before the report is generated, the old "QuickReport" tab will be deleted, and a new "QuickReport" will replace the old tab.

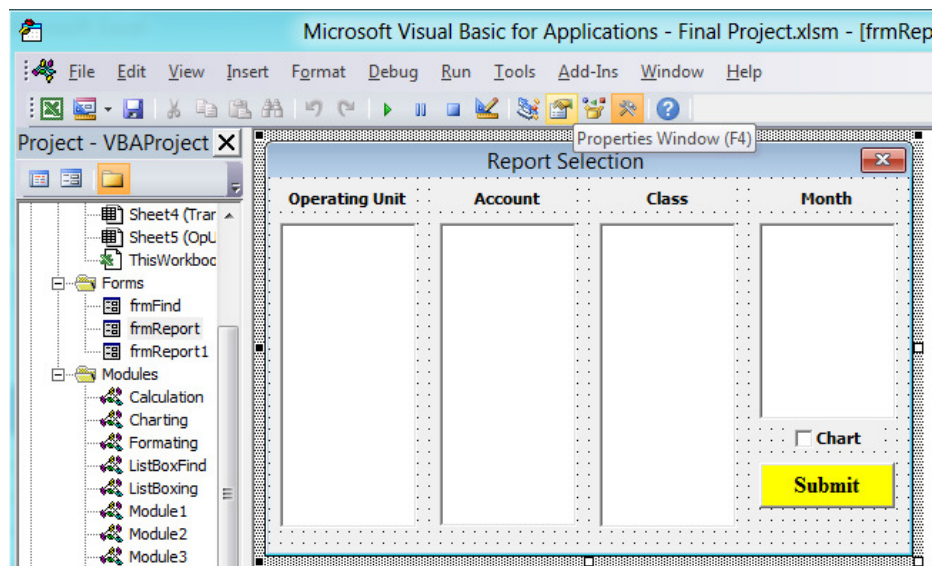
When it was initially generated, only one operating unit, one account, one class is included. In this case, the Operating unit is 11264000, account is 6100, and the class is 00000 (all months are included). The user can use these filter to select more criteria to be included, both PivotTable and the chart will also be updated along with the new selection.

Challenges

I started this project before the userform project, so I spent tremendous amount of time to figure the effective way to allow user filter result and generate report by clicking only one button. First thing that I did was to just create a Macro button to allow the user to format the filtered result as a report. However, that will lose the purpose of this project. Therefore I started to use what I learned from the class “userform”, to allow user to create report by entering what specific areas he wants.

CHALLENGE 1:

To map out what would be user friendly to the user. I created a template that is shown below.

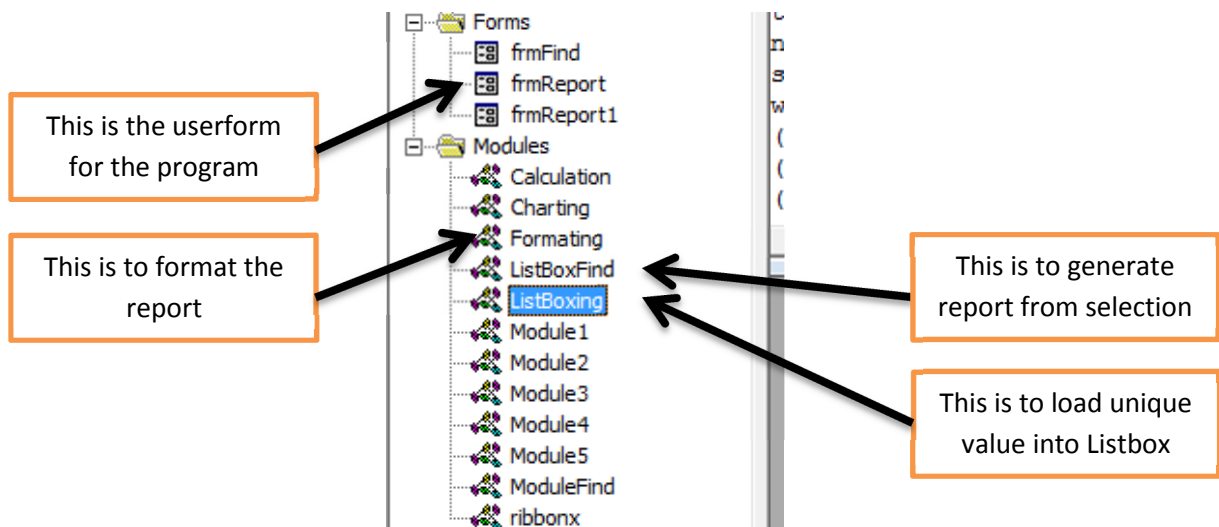


When the form initializes, it will load all the unique “Operating Unit”, “Account”, “Class”, and “Month” that is on the main worksheet. See below.

Transaction Query by DeptID & Account Range - with Link to Imaged Documents										
For Prompted Department 0695 & Accounts 4000-9260 & Date Range 1/1/2011 12:00:00 AM-9/30/2011 12:00:00										
Operating Unit	Ac	Clas	Amount	Line Descr.	Jrnl Ref	Journal ID	View Deta	JH Jrnl Da	JH Sour	Jrnl L Date
23264035	4200	00000	810.31	SEC Skandia Fd Settlement		AP439AUG01	JE	10-Aug-2011	432	01-Jul-11
13264025	4719	35329	7.82	KCACTF-Interest	TR	TLR030041	JE	23-Mar-2011	036	23-Mar-11
23264035	4790	21756	-400.00	Marny Parkin LTUE 2010 gift	TR	TLR030015	JE	03-Mar-2011	036	03-Mar-11
23264035	4790	21756	-400.00					03-Mar-2011	036	03-Mar-11
23264035	4790	21756	400.00					03-Feb-2011	036	14-Feb-11
32264045	4891	00000	3.00					28-Feb-2011	087	28-Feb-11
11264000	5309	00000	5.70					30-Mar-2011	452	23-Mar-11
11264000	5600	21789	-14.00					21-Apr-2011	635	21-Apr-11
13264048	5699	00000	7.50					31-Jul-2011	036	31-Jul-11
11264000	5699	21706	31.00					01-Feb-2011	036	31-Jan-11
11264000	5699	21789	37.44					03-Feb-2011	036	04-Feb-11
11264000	5720	35329	3.16					23-Mar-2011	036	24-Mar-11
11264103	5900	00000	19.00					31-Jan-2011	ALO	31-Jan-11
11264103	5900	00000	19.00					28-Feb-2011	ALO	28-Feb-11
11264103	5900	00000	19.00					31-Mar-2011	ALO	31-Mar-11
11264103	5900	00000	19.00					30-Apr-2011	ALO	30-Apr-11
11264000	6000	00000	49.99	Software Purchase	BKST7815KC	TLR090006	JE	01-Sep-2011	036	08-Sep-11
11264000	6100	00000	289.99	Transfer Funds for TMA	PC881027TT	TLR1002	JE	01-Feb-2011	036	17-Jan-11

However, it takes about 3 seconds to load all the unique data into the listbox. The listbox allows the user to select multiple data, and there's a checkbox for a chart included as well. The submit button will generate the results based on what the user selected.

However, it also take about 3 seconds to generate the report. Comparing to the filter feature that is already given in the Excel, the userform that I created was not as user-friendly and fast as the original feature. Therefore, I decided to think differently but still meet the achievement on my proposal. Here's some example of the code that I wrote to load unique value to the listbox and to generate report based on the selection.



Final Project.xlsm - frmReport (Code)

cmdSubmit Click

```
Private Sub UserForm_Initialize()
    listOpUnit
    listAccount
    listClass
    listMonth
End Sub
```

Final Project.xlsm - ListBoxing (Code)

(General) listOpUnit

```
Sub listOpUnit()
    Dim src As Range
    Dim dest As Range
    Set src = Range(Sheets("TransByDepartment").Range("a7"), Sheets("TransByDepartment").Range("a7").End(xlDown))
    Application.ScreenUpdating = False
    Sheets.Add
    Set dest = Range(Range("a2"), Cells(src.Cells.Count, 1))
    dest.Value = src.Value
    dest.RemoveDuplicates Columns:=1, Header:=xlNo
    ActiveSheet.Sort.SortFields.Clear
    ActiveSheet.Sort.SortFields.Add Key:=Range("A2"), SortOn:=xlSortOnValues, Order:=xlAscending, DataOption:=xlSortNormal
    ActiveSheet.Sort.SetRange dest
    ActiveSheet.Sort.Header = xlNo
    ActiveSheet.Sort.MatchCase = False
    ActiveSheet.Sort.Orientation = xlTopToBottom
    ActiveSheet.Sort.SortMethod = xlPinYin
    ActiveSheet.Sort.Apply
    frmReport.lstOpUnit.AddItem "SELECT ALL"
    For Each cell In Range(Range("a2"), Range("a2").End(xlDown))
        frmReport.lstOpUnit.AddItem cell.Value
    Next
    Application.DisplayAlerts = False
    ActiveSheet.Delete
    Application.DisplayAlerts = False
    Application.ScreenUpdating = True
End Sub
```

Final Project.xlsm - frmReport (Code)

cmdSubmit Click

```
Private Sub cmdSubmit_Click()
    Application.DisplayAlerts = False
    Sheets.Add().Name = "tempSheet"
    lstOpFind
    Sheets("tempSheet").Delete
End Sub
```

Final Project.xlsm - ListBoxFind (Code)

(General) lstOpFind

```
Sub lstOpFind()
    Dim listItem As Integer
    Dim totalTransRow As Integer
    Dim totalTempRow As Integer
    Dim varTemp As Integer
    Dim varTrans As Integer
    Dim resultTrans(6000) As Range
    Dim varResult As Integer
    Application.ScreenUpdating = False
    For listItem = 0 To frmReport.lstOpUnit.ListCount - 1
        If frmReport.lstOpUnit.Selected(listItem) = True Then
            ActiveSheet.Cells(listItem + 1, 1) = frmReport.lstOpUnit.List(listItem)
            frmReport.lstOpUnit.Selected(listItem) = False
        End If
    Next
    Range("a1:a150").RemoveDuplicates Columns:=1, Header:=xlNo
    Sheets.Add().Name = "Report"
    totalTransRow = Sheets("TransByDepartment").Range("a7").End(xlDown).Row
    totalTempRow = Sheets("tempSheet").Range("a2").End(xlDown).Row
    Sheets("TransByDepartment").Select
    For varTemp = 2 To totalTempRow
        For varTrans = 7 To totalTransRow

```

CHALLENGE 2:

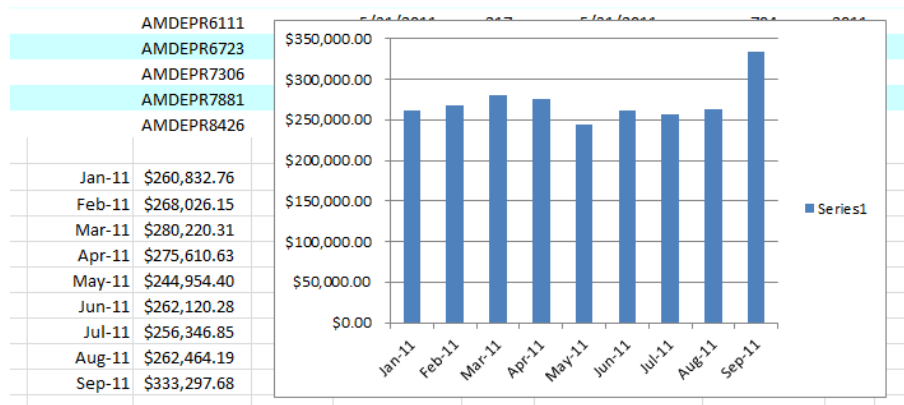
After changing to a new method for the project as shown in part 1, there are many challenges that needed to be solved to proceed. For example, there are four criteria on the form; in order to meet all four criteria, I created different subprocedures to return a value if found. Because this one is very similar to the project “userform”, therefore some of the difficulties were solved during the “userform” project. Other than those, the largest challenge is to get all the values from those meet the criteria. Because each report is named differently, I had to find out how to create a sheet with names and other names if a name is used already.

For formatting of the report, one of the challenges that I had was to put a formula in a cell as subtotal. I spent some time to figure out the correct usage of the subtotal formula

Cells (newTotalRow + 2, 4).FormulaR1C1 = “=Subtotal (9, R[-2]C:R2C)”

The other challenges are to find out the specific language to change cell color, border, number format, and sorting. I also had tried to make the report look fancy with different fonts and with different shapes added to show what would be in the report, but it turns out to be not practical and cause distraction on the report.

Another challenge on the project is the charting. A chart will always be included for every report generated except for specific month criteria is chosen. It is because practically the user will analyze the report by monthly net inflow or outflow, if a specific month is entered, a monthly chart for analysis will not be reasonable. In order to have comparison by monthly, there is a section below the report that shows the subtotal for each month.



First of all, we need to know what months were in the report. Next, we need to get only the unique value and change them to date format. Finally, the corresponding value will be summed and put under the section. The chart will be created based on the numbers calculated in the section. This charting was not hard, but the logic behind (associated with those calculations) was hard. At the end, I used many “for loops” to accomplish the tasks.

Conclusion:

Overall, the project takes me tremendous amount of hours on figuring out the best way to generate a report. I started it by creating a sorting and filtering function on userform as I mentioned on challenge 1. Because it is not effective so I decided to use different way. After we needed to work on the “Userform” project, I realized a similar approach could be used; so I created different functions in the form to let the user “quick find” and “calculate” without generating the report. When the user wants a report, the “Generate Report” button will do the task and make the report in user-friendly format, a subtotal will be calculated under the last row of data, and a chart will also be generated if month criteria are left blank. It is very useful because a report is now easily generated, and the format will also be consistent.

After the last class we were taught using VBA for PivotTable, I wanted to try that. So I also put the PivotTable one for my project. When the button is clicked, a PivotTable report will be generated with a chart, including three four criteria: Operating Unit, Account, Class, and Month. Because of extensive amount of data, only one of each criterion is generated to be more practical. The user is able to use filter to choose more data and the chart will also be changed along with it. This is very useful if we want to look into the report for more details or want multiple accounts.

I am grateful to be in this class and I learned a great deal out of it. I am sure the things that I’ve learned throughout this semester will be extremely useful for my career. I am sure this will help me stand out from my colleagues, and I will be able to use these skills to make my work more effectively. There are many times I have to use Excel to do some calculation or looking into data, whether or not it’s related to my job, these skills will benefit me on making routine tasks automatically. I enjoyed it and I appreciate your time and effort in teaching us.