

Chon Fong Kou (Ben)

4/14/2015

MBA 614

## **Final Project: Family Income and Expense Report**

### **Executive Summary**

**Project Description:** For the final project I would like create a budget builder and expense tracker for me and fiancée. For the past few year we have been supported by our family. We believe it is the time that we have to take upon our own financial responsibility and the first thing we decide to do is to create a budget builder and expense tracker.

Keeping a budget is something that we take very seriously. We try to keep track of where I am spending money and for areas where I can save. In the past, I would spend three to four hours a month manually entering each transaction into each designated category. Needless to say this process is tedious and frustrating.

**The Problem:** My fiancée and I need a spreadsheet that allow us to keep track of our budget, actual income and expenses. Also, we would want spreadsheet to automatically generate reports that can allow us to compare the estimated and actual income.

**The solution:** For my final project, I wrote several macros and created new worksheets and tables that automate all of the above listed tasks. This is broken down into the following steps:

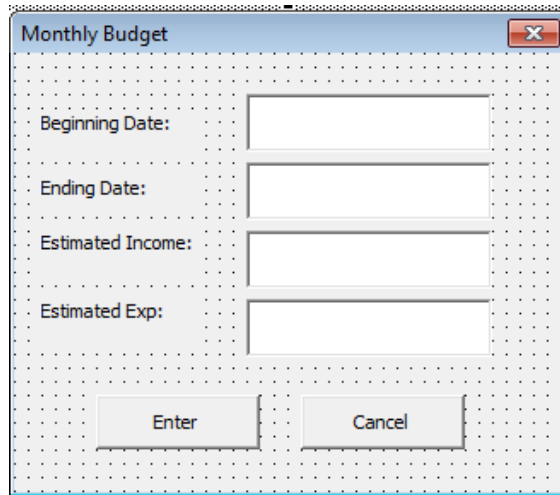
1. I created a budget form that allow users to enter the beginning date, ending date, estimated income, and estimated expense. After entering the information, the budget form will automatically generate the estimated saving
2. I created an actual cash flow form that allow users to enter the transaction date, amount, description, category, and users/earner for the cash flow. User can change the category manually by editing the category spreadsheet.

3. I wrote macros that allow users to input their expenses on credit card automatically. The user only need to download the expense CSV file and click the button. Then the macros will automatically write all the transaction into the actual expense workbook. The macros will also update the expense category sheet.
4. The final macros that I wrote will generate a monthly statement for the specific date range you selected. The macros will first prompt you to enter the beginning date and ending date, then it will generate (a) a report and a chart that compares the actual and estimated income/expenses, (b) a pivot table and a pivot chart that categorize the expenses spent in the period, and (c) a pivot table and a pivot chart that categorize the income earned in the period.
5. I created a tab on the ribbon with buttons for each of the above macros.

## Implementation Documentation

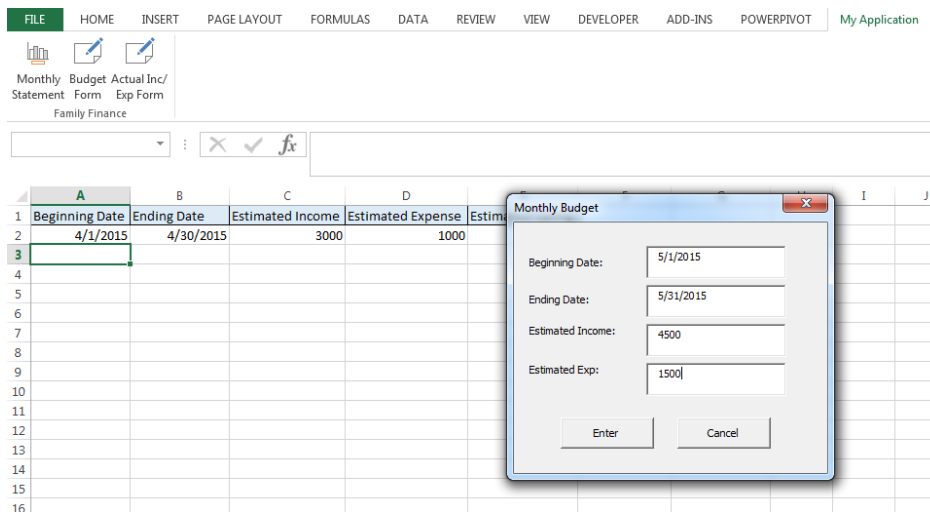
Details of Implementation:

1. The budget form that I create allow users to enter the beginning date, ending date, estimated income, and estimated expense.



A screenshot of a 'Monthly Budget' dialog box. The dialog has a title bar with a close button (X). Inside, there are four input fields labeled 'Beginning Date:', 'Ending Date:', 'Estimated Income:', and 'Estimated Exp:'. Below these fields are two buttons: 'Enter' and 'Cancel'.

When the user click the Budget Form under My Application tab in the ribbon, the budget form will appear, activate the budget sheet, and allow the user to enter the information.



A screenshot of an Excel spreadsheet showing the 'My Application' tab in the ribbon. The ribbon includes tabs for 'Monthly Statement', 'Budget Form', 'Actual Inc/Exp Form', and 'Family Finance'. The 'Budget Form' tab is active. The spreadsheet has columns labeled 'Beginning Date', 'Ending Date', 'Estimated Income', 'Estimated Expense', and 'Estimated Exp'. The first row of data shows '4/1/2015', '4/30/2015', '3000', and '1000'. A 'Monthly Budget' dialog box is open over the spreadsheet, showing the same input fields as the first screenshot, but with values entered: 'Beginning Date: 5/1/2015', 'Ending Date: 5/31/2015', 'Estimated Income: 4500', and 'Estimated Exp: 1500'.

When the user hit enter the information will be enter to the worksheet and jump to the next row.

	A	B	C	D	E
1	Beginning Date	Ending Date	Estimated Income	Estimated Expense	Estimated Saving
2	4/1/2015	4/30/2015	3000	1000	2000
3	5/1/2015	5/31/2015	4500	1500	3000
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

The form will also prompt the user if the user forgot to enter information or enter invalid information. For instance, if you enter 6/31/2015 in the ending date the form will prompt you to enter a valid date.

Monthly Budget

Beginning Date: 6/1/2015

Ending Date: 6/31/2015

Estimated Income: 3000

Estimated Exp: 1200

Enter Cancel

Microsoft Excel

Please enter the valid date

OK

2. The actual cash flow form allows users to enter the transaction date, amount, description, category, and users/earner for the cash flow.

Enter the income/expense:

Date

Amount

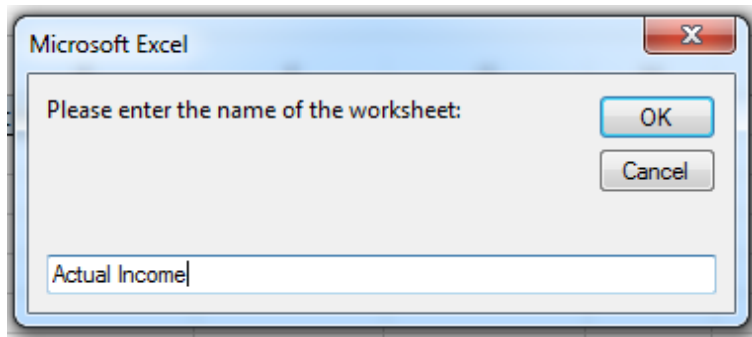
Description

Category:

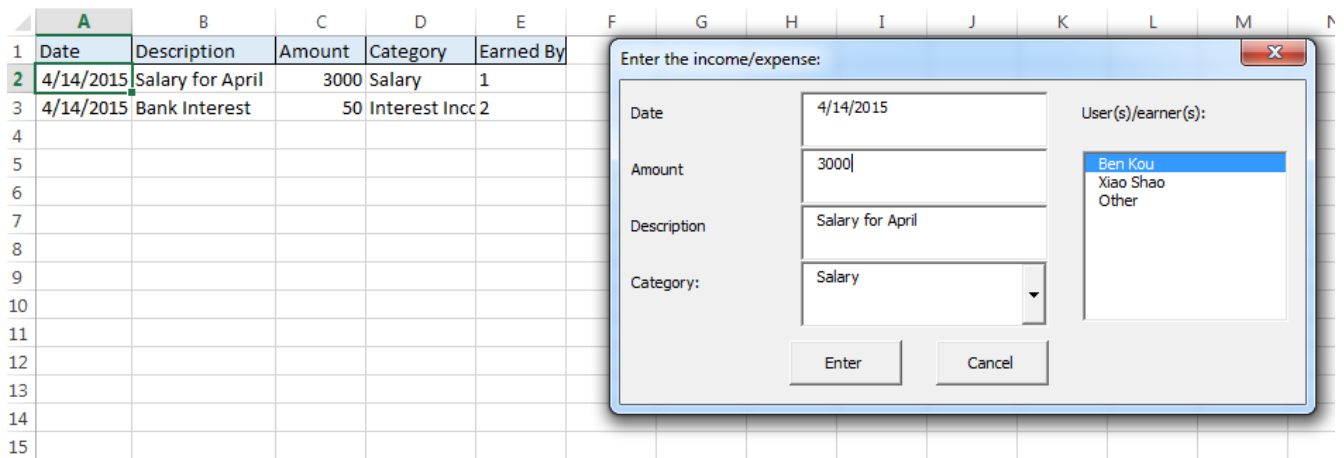
User(s):

Enter Cancel

The actual form will first ask user to whether you want enter income or expense. If the user want to enter income he/she can type “Actual Income”.



Then the actual income will activate and by default the first entry in the actual income sheet will be select.



The form will also prompt the user if the user forgot to enter information or enter invalid information. For instance, if you did not select an earner the form will prompt you to select one.

The screenshot shows two overlapping windows. The main window is titled "Enter the income/expense:" and contains the following fields:

- Date: 4/14/2015
- Amount: 10
- Description: bank interest
- Category: Interest Income (dropdown menu)
- User(s)/earner(s): A list box containing "Ben Kou", "Xiao Shao", and "Other".

At the bottom of the main window are "Enter" and "Cancel" buttons. Overlaid on the right is a smaller dialog box titled "Microsoft Excel" with the text "Please select user(s)" and an "OK" button.

- When the user click the Actual Form under My Application tab in the ribbon again and enter "Actual Expense", the actual form will appear and the form will activate the actual expense sheet.

The screenshot shows an Excel spreadsheet with columns A through J and rows 1 through 20. The spreadsheet has the following headers in row 1:

	A	B	C	D	E	F	G	H	I	J
1	Date	Description	Amount	Category	Used By					
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

The "Enter the income/expense:" form is overlaid on the spreadsheet. It contains the same fields as the first screenshot, but the "User(s)/earner(s)" list box is empty. A "Get credit report" button is visible in the background of the spreadsheet.

The actual expense form perform exactly like actual income form, except it allow you to input expense on the sheet instead of income.

Date	Description	Amount	Category	Used By
4/1/2015	soft drink	1.5	Supermarke	1

Get cr

Enter the income/expense:

Date:

Amount:

Description:

Category:

User(s)/earner(s):

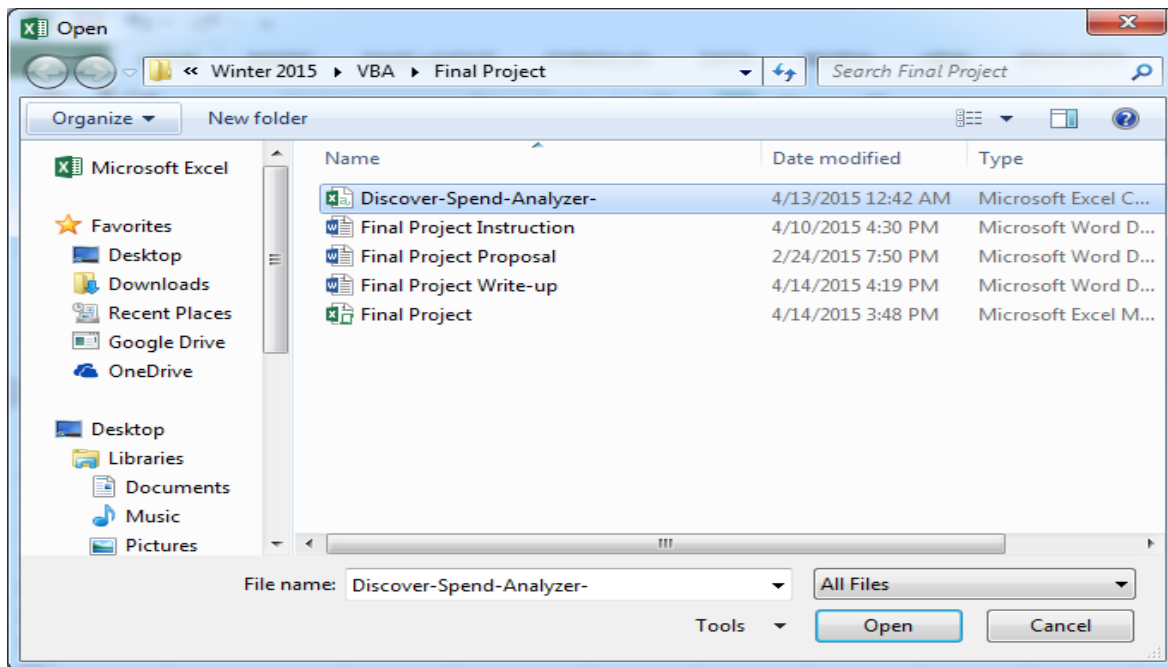
Ben Kou  
Xiao Shao  
Other

If you exit the form, the sheet has a command button that allow you to load the transactions on your Discover credit card to the expense sheet.

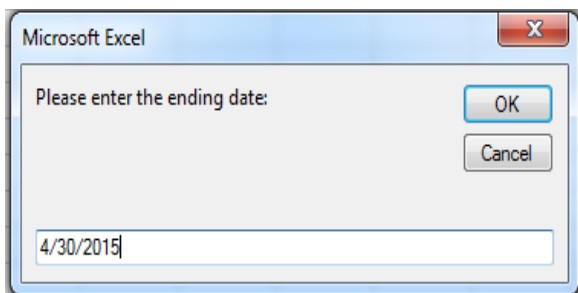
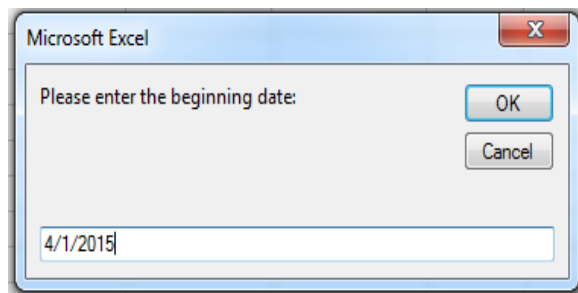
	A	B	C	D	E	F	G	H	I	J
1	Date	Description	Amount	Category	Used By					
2	4/1/2015	soft drink	1.5	Supermarke	1					
3	4/2/2015	NOODLE KING PI	9.03	Restaurants						
4	4/3/2015	CINEMARK THEA	46.25	Travel/ Entertainment						
5	4/4/2015	MACEYS PROVO	8.95	Supermarkets						
6	4/4/2015	PROVO UT RECR	5	Government Services						
7	4/7/2015	MACEYS PROVO	1.84	Supermarkets						
8	4/8/2015	ASIAN MARKET I	7.09	Supermarkets						
9	4/8/2015	CINEMARK THEA	43.75	Travel/ Entertainment						
10	4/8/2015	RICE GARDEN 05	14.63	Restaurants						
11	4/9/2015	HERFF JONES CC	61.9	Merchandise						
12	4/9/2015	MCDONALD'S F1	1.08	Restaurants						
13										
14										

Get credit report

To load the transactions to the workbook you have to select the correct CSV file in the window.

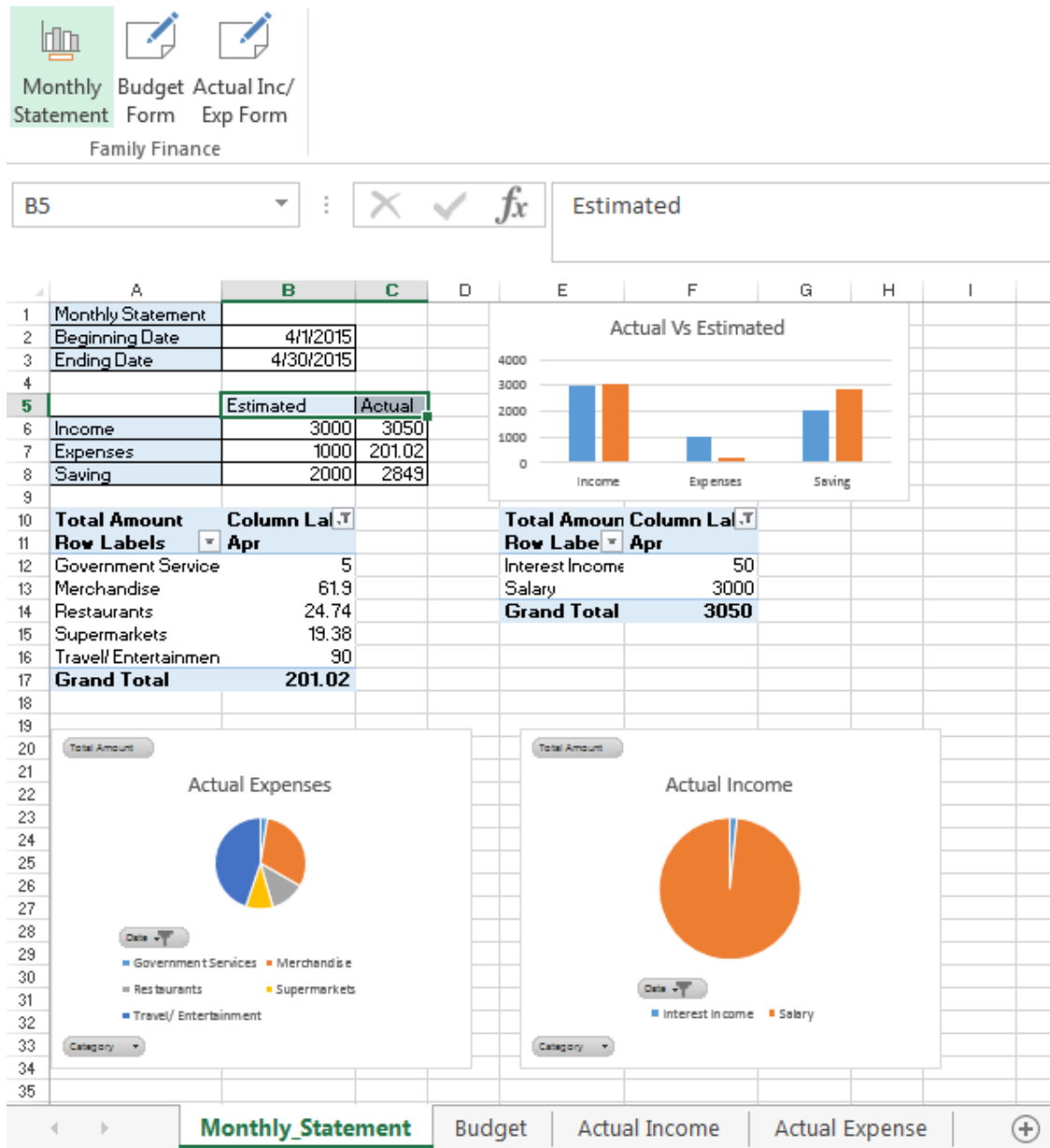


4. The final macros that I wrote will generate a monthly statement for the specific date range users selected. First it will prompt user to enter a date range.

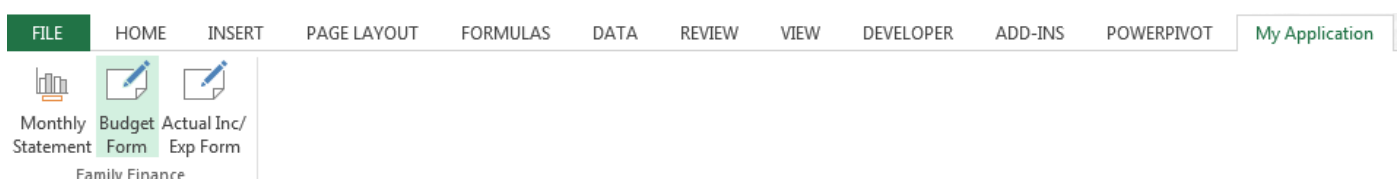




Then marcos will generate a report and a chart that compares the actual and estimated income/expenses, a pivot table and a pivot chart that categorize the expenses spent in the period, and a pivot table and a pivot chart that categorize the income earned in the period.



5. The ribbon and buttons I create allow user gain faster access to the marcos I wrote.



### **Discussion of learning and conceptual difficulties encountered**

This project has been a wonderful learning experience for me. Throughout the semester I have learned different vba skill for excel. However, applying all the things that I have learned into one project is much hard than I thought. I have encountered scoping problem when I was working project. I found out that I have been adding a lot of functions that might not be necessary for project. I learn that it is important to determine the scope of any project in the beginning and stick with it. This can help you to finish your project in a reasonable time frame.

Another things that I have learned is that how useful the online resource is. There are hundreds and thousands vba code and it is impossible to learn everything. For instance, I could not figure out how to use vba code to add a filter to pivot tables. I eventually learned how to do that by googling it and read other people's code.

I have also learned how to use record marco to learn some specific coding. For instance, I know how to copy all possible expense category and remove duplicate cells manually. I learned how to do through vba by recording myself doing the task and read the vba code it recorded to gain some insight.

There are one elements that I would like to include but could not get it to work. I tried to use the agent class module to directly import data from the credit card company website. However for security reason the website do not allow me to do that.

### **Assistance**

I have asked Prof. Gove how to use vba code to group the date in a pivot table. Other than that I did not receive any substantial assistance from anyone. Also I did not work with anyone on this project.