Cameron Davis
Project Write-up
MBA 614 – VBA

As per your instructions I have not posted my files on the blog (due to sensitive information) but rather uploaded them to Canvas.

I.   Executive Summary

My wife works for a small web company as the V.P. of Accounting. Because of some circumstances within the company, they do not have a single accounting system that can store all necessary data and create desire reports. In order to prepare necessary reports for analysis my wife must import sales data from three different sources and compare it against what has been collected. By going back and forth between four different spreadsheets, searching for customer names and purchases, and copying data from the three sales spreadsheets onto the batch collections spreadsheet she is able to identify, categorize, and summarize the transactions needed for reporting.

This entire auditing process would take anywhere from 3-4 hours for each day when done manually, depending on the size of the batch. Using this program however, this process has been cut down to less than one minute.

II.   Implementation

To begin, each of the four separate worksheets used is imported from or compiled by a separate source. In order to get the data in the necessary format and eliminate any unwanted data my wife would have to perform sorts, delete lines with certain data, delete unwanted columns, etc. This process alone wouldn't take too long (a minute or two after you've done it several times), but was repeated several times a day. Each of the three spreadsheets that require this type of formatting contains a button that will do all necessary formatting automatically. For the sake of convenience I will refer to the files as Upsells, Enhancements, Total Sales, and Batches.
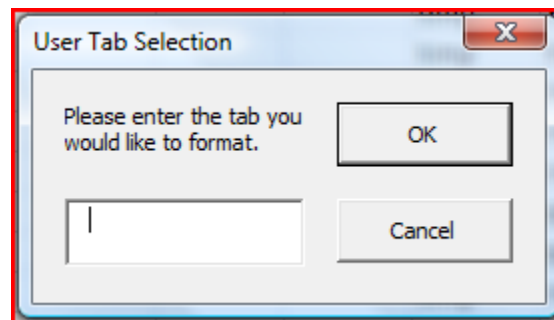
Auto Formatting

- Enhancements

In the Enhancements file there is a button on the Data Ribbon entitled 'Daily Enhancement'.
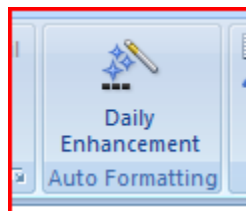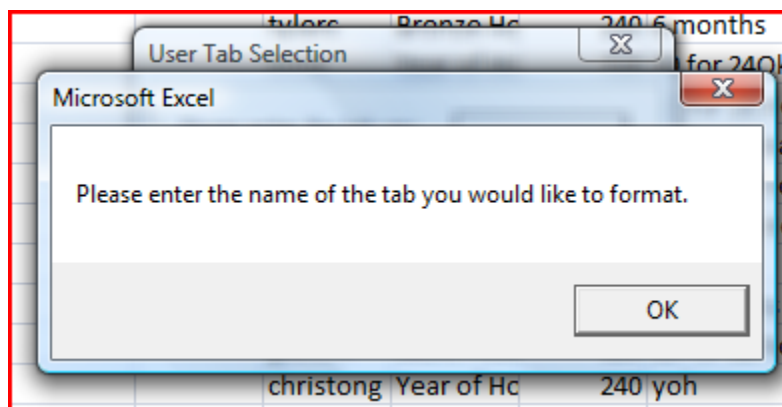
After you have imported the data for a tab in this spreadsheet and clicks this button a user form pops up asking you what tab you would like to format.

You then enter the name of the tab that you would like auto formatted. This is the date in DD-MM form. The macro will then remove unwanted data below the main data set, sort by department and company name, set desired font and ad borders. It will then read each line to determining what if any notes need to be added to the 'Paid' column based on the values in the Declined, EFT, Manual, Errored, Suspended, or Canceled columns. If there are values in these columns it will print the necessary note in the 'Paid' column. It will then move the Onetime column into the proper place and assign it a currency format.

If you click OK without entering a valid tab name you will be notified with a message box and reminded to enter a tab name.

Before:

Took Pa ▼	MB# ▼	Company ▼	Paid ▼	Pushed ▼	Decline ▼	EFT ▼	Manual ▼	Errored ▼	Suspen ▼	Cancel ▼	Sold By ▼	Sold ▼	Onetim ▼	Note
	42449	Aaron Traylor	480								tylerc	Years of H	480	32 fo
	3047	Adcock & Associates	120	x							timp	Year of Ho	360	15 fo
	53860	Alex Ayati			60						garrettmc	Gold Host	60	15 fo
	24644	American Marine Express Inc	360								nanceem	Year of Ho	360	12 fo
	35283	Angelic Creations Inc	100								rickv	Year of Ho	100	10 fo
	41620	Ashley Mullins				100					rickv	Year of Ho	100	10 fo

After:

Took Pa ▼	MB# ▼	Company ▼	Onetim ▼	Paid ▼	Pushed ▼	Decline ▼	EFT ▼	Manual ▼	Errored ▼	Suspen ▼	Cancel ▼	Sold By ▼	Sold ▼	Note
	24644	American Marine Express Inc	$360.00	360								nanceem	Year of Ho	12 fo
	10113	Ann Made Candles	$65.00	65								jeffhi	Database	Reca
	10113	Ann Made Candles	$200.00	200								jeffhi	Shopping	This
	10113	Ann Made Candles	$350.00	350								jeffhi	HIT Design	4 pa
	16030	Creative Impact LLC	$50.00	50								andrewgr	Backup Ma	Burr
	43835	Daniel Wenger	$50.00	50								maritzac	TS Premie	Char
	51213	Justin Auciello #2	$50.00	50								nanceem	Domain N	Dom
	48502	Pacific Sun	$50.00	50								nanceem	TS Premie	Rem
	53444	Third Rock Entertainment	$400.00	400								maritzac	PHP Galle	galle
	19114	J Carnes Construction LLC	$50.00	Declined		50						waynesh	Site Map	Boug
	19114	J Carnes Construction LLC	$150.00	Declined		150						waynesh	Extra Page	2 ad

To see the 'Daily Enhancement' button work click the button and enter the name of a tab that has not already been formatted such as 11-11 or 11-12.

- Batches

The button for auto formatting the batch is located in the Data tab of the ribbon entitled 'Auto Batch Format.'
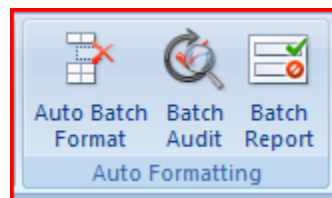
When you click this button the macro sorts by Response Code, and clear all response codes except for '1'. It then deletes a series of unwanted columns, sorts by Action Code and transfers all unwanted action codes into a separate section of the worksheet. The action code column is then deleted and new columns are inserted for Date and Type which are used in auditing the batch.

Before:

Response	Authoriza	Address V	Transactic	Submit Da	Card Num	Expiration	Invoice Nu	Invoice Da	Total Amc	Method	Action Co	Customer	Customer	Customer	Company	Address	City	State	ZIP	Country	Phone	Fax	Email
1	04501B		3.29E+09	16-Nov-20	XXXX3976	XXXX	518287	Invoice #!	360	M	AUTH_CAI	8552	Ken	Williams	Academy	82 Hoyts F	Bethel	CT		6801 US			heritag
1	1809		3.29E+09	17-Nov-20	XXXX3198	XXXX	516196	Invoice #!	240	V	AUTH_CAI	7417	John	Stocks		NW Roof I	30124 126	Auburn	WA	98092 US		2.54E+09	heritag
1	112326		3.29E+09	17-Nov-20	XXXX8330	XXXX	518288	Invoice #!	50	V	AUTH_CAI	9205	Bud	Konn		Konn Hosp	44 A Rocky	Dow	NH	3304 US		603-228-8585	heritag

After:

Submit Da	Invoice Nu	Date	Total Amc	Type	Method	Customer	Customer	Comp
16-Nov-20	518287		360		M	Ken	Williams	Acade
17-Nov-20	516196		240		V	John	Stocks	NW R
17-Nov-20	518288		50		V	Bud	Konn	Konn

To see the 'Auto Batch Format' button work select a tab containing a batch that has not already been formatted, named Unformatted Batch, and click button.

- Total Sales

The button named 'Auto Format Total Sales' is on the data tab in the Total Sales workbook. This button sorts by customer name and date, applies currency formatting and deletes unwanted columns.

Before:

	A	B	C	D	E	F
1	54168		Ediftying i	Setup	12/9/2010	200
2	54168		Ediftying i	Setup	1/9/2011	100
3	54168		Ediftying i	Setup	2/9/2011	100
4	54168		Ediftying i	Setup	3/9/2011	100
5	54160		Kevin Barı	Setup	12/6/2010	200

After:

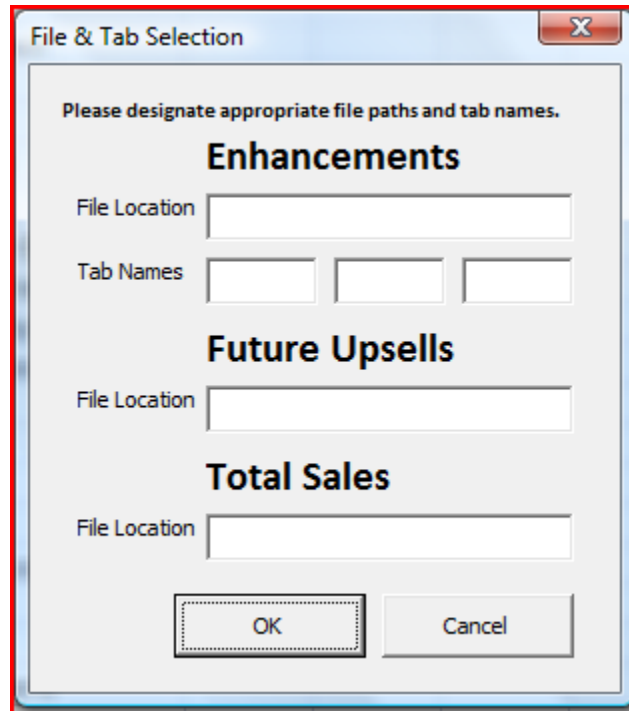|	A	B	C	D	E	F
1	54167	Ben Serrai	$100.00	12/6/2010	Credit Card	
2	54167	Ben Serrai	$99.99	1/5/2011	Credit Card	
3	54171	Concept K	$235.00	12/6/2010	Credit Card	
4	54171	Concept K	$234.99	1/5/2011	Credit Card	
5	54168	Ediftying i	$200.00	12/9/2010	Credit Card	

To see the 'Auto Format Total Sales' button work, select the tab named 12-5 Unedited and click the button.

Batch Audit

The batch audit functionality is where the true time is saved. The batch audit button is on the Data tab and is named 'Batch Audit.'
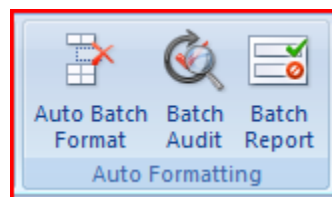

When this button is clicked the following form appears.

Here you have to enter the file names (i.e. C:\Users\Cam\Desktop\Enhancement Formatting) of each of the workbooks you want it to audit. You may enter just one, two, or all three of the files depending on your needs. If you are auditing the Enhancements file then you must designate 1-3 tab names you would like to audit. If you enter a file name into the Enhancements field but no batch name you will be given the follow alert:
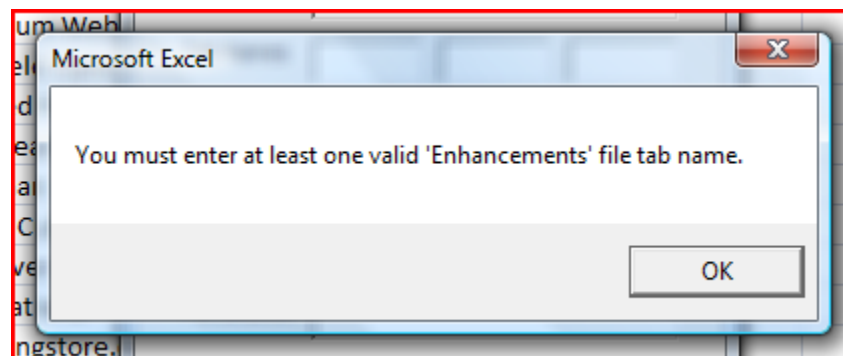
One you have entered the information for all of the files you would like to audit click OK. The macro will take the newly formatted batch and check for matching transactions in whatever workbooks you have specified. When it finds a matching transaction based on the company name and amount it fills the Date column with the date sold and Type column based on what type of sale it is.

To do this it will open each of the three files you specify, copy the appropriate tab and paste it into a new temporary tab on the Batches worksheet. It can then go back and forth between the batch sheet and the temporary sheet with the data from the other files. When matching transactions are identified it highlights the company name in green on the Batches worksheet as well as the on the appropriate tab of the Enhancements file so that you may quickly identify which ones have been matched. When line items are matched from the Upsells and Total Sales files they are deleted from the temporary tab and subsequently the respective file. When the audit is complete the temporary tab is copied and pasted into the original workbook which is then automatically saved and closed. Line items not matched from the batch sheet are then highlighted in red so that you can clearly see which line items have not been accounted for.

To determine the date from the Enhancements file it uses the tab name you have specified since each tab is its own day's worth of enhancement sales. To find it on both the Upsells and Total Sales workbooks it copies the date from the column with the date sold information. To determine the type of the line items from each of the three workbooks, it searches the notes columns of each for the word 'hosting.' If it finds it then it fills in hosting as the type, otherwise it fills in the type as upsell.

There are some lines that need to be identified as a 'Due Upon Completion' sale. These are identified by a 'DUC' in a notes field, or a '0000-00-00' date in the date due field depending on the workbook. The macro identifies if either of these conditions are present and if so prints 'DUC' in the date column on the Batch sheet.

After you have run the program once, when you bring it up again it will still show the three file names so you don't have to continually re-enter the same information. The only information that will be cleared out are the tab names since those are likely to change each time the program is run.

Before:

	A	B	C	D	E	F	G	H	
1	Submit ▾	Invoice ▾	Date ▾	Total A ▾	Type ▾	Method ▾	Custom ▾	Custom ▾	Com
2	17-Nov-20	79133		4.99		M	Aleksanda	Cuk	Fair
3	17-Nov-20	79138		259.97		V	Constance	E Hackbar	Con
4	17-Nov-20	79140		299.98		D	Joan	Morehead	Joar
5	17-Nov-20	514704		110		V	Robbin	Conner	Rob
6	17-Nov-20	518589		100		V	Beulah	Young	Win
7	17-Nov-20	518590		50		V	Beulah	Young	Win
8	17-Nov-20	518591		300		V	Valerie	Kelley	Capt
9	17-Nov-20	518592		480		V	Daniel	Naimoli	Dan

Filled Form:

File & Tab Selection

Please designate appropriate file paths and tab names.

Enhancements

File Location: op\Enhancement Formatting For Edit

Tab Names: 11-17   11-16   11-15

Future Upsells

File Location: am\Desktop\New Files\Future Upsells

Total Sales

File Location: s\Cam\Desktop\New Files\Total Sales

OK   Cancel

After – Match line items highlighted in green, still unaccounted highlighted in red:

	A	B	C	D	E	F	G	H	
1	Submit ▼	Invoice ▼	Date ▼	Total A ▼	Type ▼	Metho ▼	C ▼	C ▼	Compa
2	17-Nov-20	79133		4.99		M	Alel	Cuk	Fairwa
3	17-Nov-20	79138	11/17/10	259.97	Setup	V	Con	E Ha	Consta
4	17-Nov-20	79140	11/17/10	299.98	Setup	D	Joar	More	Joan M
5	17-Nov-20	514704		110		V	Rob	Conr	Robbir
6	17-Nov-20	518589	08/27/10	100	Setup	V	Beu	Your	Winter
7	17-Nov-20	518590		50		V	Beu	Your	Winter
8	17-Nov-20	518591	11/17/10	300	Upsell	V	Vale	Kelle	Captur
9	17-Nov-20	518592	11/17/10	480	Hosting	V	Dan	Nain	Daniel
10	17-Nov-20	518595		200		V	Gec	Mutu	Congo
11	17-Nov-20	518596	11/17/10	45	Upsell	V	Bro	Tom	Appria
12	17-Nov-20	518597	11/17/10	240	Hosting	A	Der	Avile	Bounce
13	17-Nov-20	518599	11/17/10	50	Upsell	A	Nav	Ham	United
14	17-Nov-20	518600	11/17/10	60	Hosting	V	Enic	Gort	Spectr
15	17-Nov-20	518600		30		V	Enic	Gort	Spectr

Enhancements After – Matched line items marked in green:

B	C	D	E	F	G	H	I	J	K	L	O	P	
MB# ▾	Con ▾	Onetim ▾	Paid ▾	Pushed ▾	Decline ▾	EFT ▾	Manual ▾	Errored ▾	Suspen ▾	Cancele ▾	Sold By ▾	Sold ▾↑	Note
44210	Monur	$100.00		x							cpage	Year of Ho	12 fo
12018	Hayley	$20.00	20								carlosk	Domain N	Dom
47263	Tom Ed	$50.00	50								maritzac	TS Premie	TS p
53360	Trung I	$20.00	20								andrewgr	Domain N	Dom
51770	Erica G	$10.00	Manual				10				cvuyk	Domain N	Dom
51398	Lowery	$100.00	100								cvuyk	Adore	Ado
33705	Royce	$400.00	Manual				400				brandong	HIT Design	400

Upsells & Total Sales After – Matched lines are deleted…can't really show that in a picture.

Report

Once the audit has been performed you can click on the Batch Report button which automatically generates the following report based on the batch data

Batch Report

Date:	17-Nov-10	
Type	**Value**	**Transactions**
Setups	6317.75	22
Upsells	4571.5	41
Hosting	6849.91	32
Unaccounted	10363.22	121
Total	28102.38	216
Method	**Value**	**Transactions**
Visa	15473.84	129
MasterCard	5798.69	53
AmEx	5204.89	27
Discover	1624.96	7
Total	28102.38	216

- **Time Savings**

Each batch averages between 200-400 lines with slow days (weekends) averaging about 75 lines and busy days upwards of 700+ lines which when audited manually averages 3-4 hours each day. Comparing each line of the Batch worksheet to 20,000 lines in the Total Sales spreadsheet, 9000 lines in the Upsells spreadsheet and about 100 lines for each day in the Enhancements spreadsheet requires a great deal of time. Because of this huge time requirement it has been nearly impossible to keep up with the process and reporting and as a result reports are months behind. This entire process is now cut down to less than 1 minute.

III.   Learning & Difficulties

Doing this project I learned that I generally know, at least to some degree, what can be done with VBA and that basically I could do anything I want to, I would just have to figure it out. My familiarity with many of the objects and methods was reinforced. Where before I would have to look up something to remember how a certain method or object is used, I now remember many of them and am able to quickly code it how it needs to be.

I also learned the value of splitting the project into smaller pieces then using another sub procedure to call out all the individual pieces.

I definitely noticed myself getting quicker in recalling and coding different processes that I wanted to use throughout completion of this project.

Some of the things I struggled with was figuring out how to search a string from the Batch file in a different file and copying data from the second file into the original file and how to refer back and forth between different workbooks.

Future Improvements

I would like to change the Batch Audit user form to allow the user to browse in order to identify the files rather than requiring them to enter the entire file path manually. I also plan to add more reporting capability. This will include a sales vs collected report for various time frames (e.g. 0-30 days, 31-60 days, etc.). I also plan to add capability for the user to just push a button and enter a little information about what they want in order to import the various data sets from company databases rather than requiring them to do it manually.