



Project Write-up

Prepared for: IS 520 / FiveStar North America

Prepared by: Brady Walker

April 14, 2015

EXECUTIVE SUMMARY

OBJECTIVE

Create a fast, dynamic, and user-friendly daily sales report, without the use of a template.

COMPANY OVERVIEW

FiveStar North America is a Five Guys Burgers and Fries franchisee. They own and operate all stores in Canada. Recently, they have grown from a couple stores to almost 70. This rapid growth has seen many changes to procedures within the company as well as opportunities for automation.

GOALS

FiveStar North America wants a Macro that can generate a Daily Sales Report for each of their franchise stores. Currently, the time it takes to create this report is ~2 hours per week, or, ~8 hours a month, per store. They need to create this report much faster and at a fraction of the proposed cost given by MICROS systems. This report should include the following:

- (1) Daily transaction totals for cash, Visa, MasterCard, and AMEX transactions.
- (2) Daily RBC account deposits for each transaction type (i.e. Cash, AMEX, etc.)
- (3) Calculated tax liabilities and total over/under cash amounts.

The report also needs to be very dynamic. A report should be made available by store location and any month/year specified by the user.

SOLUTION

Create a simple, user-friendly form in VBA that will create a excel report, format that report, and then fill the same with relevant info from both Micros and RBC entities. The project will be created in these four steps:

- (1) Create a form that is easy to use and will accept login, date, and location information from the user.
 - (2) Write code to label the new report and create a basic outline.
 - (3) Write code to format the new report including colors, row and column size, fonts, and number formats.
 - (4) Write code to fill the newly created report with relevant information from Micros and RBC.
-

IMPLEMENTATION

OVERVIEW

I interned at FiveStar for two summers. During that time, I was asked to create similar reports for various projects. As a result, I had experienced how time consuming a manual report could be without the help of software. One of the other employees had been trying to create something similar, but completely by hand, each day. When This project came up in class, I immediately thought this would be a good candidate.

Given the size of the project, I wasn't sure how long everything would take, or if I would even be able to finish. Overall, this was a good learning experience and really opened my eyes to how much (and how relatively easy) you could do in a real company with excel.

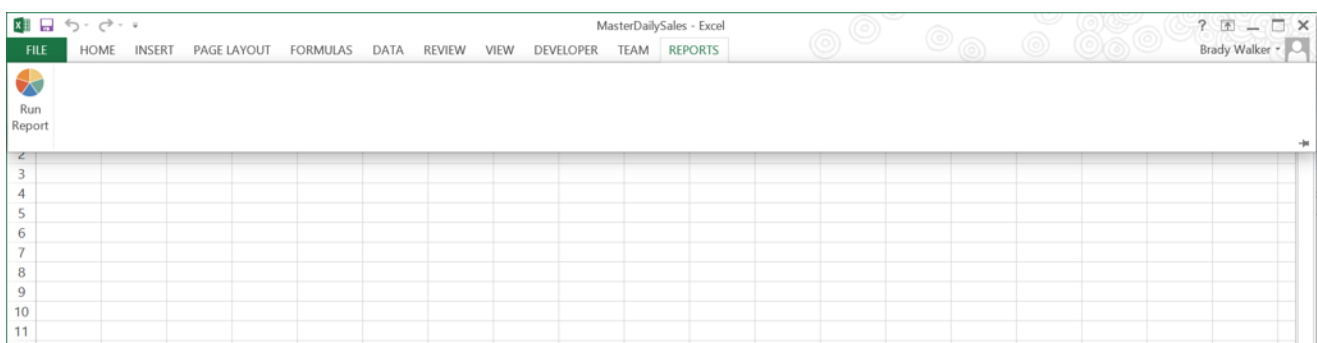
From start to finish the project had ~4 different phases.

- Creating and using a form
- Deciding how the report should work
- Creating a good layout and code that would write the whole report, without a template
- Filling the report with data

These next few sections will go over how I started, approached, and refined each of these areas.

CREATING A FORM

The form didn't change a whole lot from the first design. It did take me a while to find the right picture for what I wanted to accomplish, but for the most part creating the form was very straightforward. To get the the form, I placed a new tab at the top of the ribbon.



The user clicks on the REPORTS tab then RUN REPORT. Once the user clicks run report, they should then see something like this:

The screenshot shows a web application window titled "Report Generator" with a red background. The window contains the following elements:

- MICROS LOGIN:** Two input fields for "Micros Username:" and "Micros Password:".
- RBC LOGIN:** Two input fields for "RBC Username:" and "RBC Password:".
- SELECT STORE:** A dropdown menu.
- SELECT YEAR:** A dropdown menu.
- SELECT MONTH:** A dropdown menu.
- RUN REPORT:** A button located in the bottom right area.
- FIVE GUYS BURGERS and FRIES:** The company logo in the bottom right corner.
- Decorative border:** A row of alternating white and red squares at the bottom of the form.

This is the report generator user form.

The form allows the user to input both their Micros Systems and Royal Bank of Canada login information. The three dropdown menus on the left are for report specifics. The user can select the location they wish to view, the year, and date.

I didn't just want a standard button on my form, so I turned the logo at the bottom of the background picture into a button. I just made a standard button but made it transparent and larger. Once the user has filled in the appropriate fields, just click the logo on the bottom right and the report should run.

Report Generator

MICROS LOGIN

Micros Username: Example@example.com

Micros Password: Password

RBC LOGIN

RBC Username: Example@example.com

RBC Password: Password

SELECT STORE

DEERFOOT

SELECT YEAR

2013

SELECT MONTH

January

RUN REPORT

FIVE GUYS
BURGERS and FRIES



Once the report has been run, the user should see a new tab with the filtered report. This tab will be labeled in this format: DailySales[Month][Year]

30	1/26/2013	\$13,383.66	\$13,383.66	\$ 637.14	\$12,746.5:
31	1/27/2013	\$ 8,423.12	\$8,423.12	\$ 400.99	\$8,022.1:
32	1/28/2013	\$12,322.85	\$12,322.85	\$ 586.64	\$11,736.2:
33	1/29/2013	\$12,078.25	\$12,078.25	\$ 574.99	\$11,503.2:
34	1/30/2013	\$10,102.18	\$10,102.18	\$ 480.92	\$9,621.2:
35	1/31/2013	\$10,045.31	\$10,045.31	\$ 478.21	\$9,567.1:
36					

Home
DailySalesJanuary2013
+

READY

LOOK AND FEEL

Trying to decide how the report should be laid out and how it could be used took a long time. First, I had to decide what a general layout would be. Then, I had to decide what would be some good features within the report. After changing the overall look a few times, and messing with code a lot. The final layout looks something like this:

MasterDailySales - Excel																									
FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW DEVELOPER TEAM REPORTS																									
DATE																									
DEERFOOT DAILY RECONCILIATION																									
JOURNAL ENTRY ACCOUNTS		GL 40100		GL 40300		GL 70410		GL 70410		GL 11000		GL 11000		GL 11000		GL 11000		GL 11000		GL 11000		GL 11000			
		Micros Total Revenue	Gross Food Sales	Sales Tax Liability	NET SALES	TAX % CALC	Gift cards	Micros manager payout	Micros manager pay-in	Percent	Micros CASH	RBC Cash Deposits	Difference	Micros INTERAC	RBC INTERAC	Difference	Micros VISA	RBC VISA	Difference	Micros MC	RBC MC	Difference	RBC MC		
DATE																									
1	1/1/2013	\$12,791.61	\$12,791.61	\$608.95	\$12,182.66	5.00%	\$ -	\$ -	\$ -		\$11,500.68	\$11,846.39	\$345.71	\$ 383.54	\$ 399.51	\$15.97	\$1,009.41	\$ 28.08	(\$981.33)	\$ 991.33	\$1,060.69				
2	1/2/2013	\$13,969.65	\$13,969.65	\$665.04	\$13,304.61	5.00%	\$ -	\$ -	\$ -		\$13,428.60	\$10,301.52	(\$3,127.08)	\$1,250.92	\$1,134.17	(\$116.75)	\$ 82.55	\$1,234.93	\$1,152.38	\$ 479.58	\$ 687.08				
3	1/3/2013	\$11,015.25	\$11,015.25	\$524.39	\$10,490.86	5.00%	\$ -	\$ -	\$ -		\$ 9,736.24	\$12,170.23	\$2,433.99	\$ 845.69	\$ 350.29	(\$495.40)	\$ 370.35	\$1,080.44	\$710.09	\$1,073.74	\$ 770.02				
4	1/4/2013	\$12,713.37	\$12,713.37	\$605.23	\$12,108.14	5.00%	\$ -	\$ -	\$ -		\$14,850.02	\$ 9,329.49	(\$5,520.53)	\$ 698.70	\$ 147.22	(\$551.48)	\$1,299.24	\$ 882.27	(\$416.97)	\$ 30.26	\$ 751.99				
5	1/5/2013	\$ 9,633.60	\$ 9,633.60	\$458.61	\$ 9,174.99	5.00%	\$ -	\$ -	\$ -		\$ 7,842.37	\$ 9,718.30	\$1,875.93	\$ 502.79	\$ 398.25	(\$104.54)	\$1,233.66	\$1,273.98	\$40.32	\$ 527.77	\$ 368.98				
6	1/6/2013	\$10,575.55	\$10,575.55	\$503.46	\$10,072.09	5.00%	\$ -	\$ -	\$ -		\$10,595.75	\$12,845.48	\$2,249.73	\$ 430.81	\$ 826.80	\$395.99	\$ 277.75	\$ 249.96	(\$27.79)	\$ 762.53	\$114.12				
7	1/7/2013	\$13,389.09	\$13,389.09	\$637.40	\$12,751.69	5.00%	\$ -	\$ -	\$ -		\$10,341.77	\$ 9,672.49	(\$669.28)	\$1,196.00	\$ 824.95	(\$371.05)	\$ 819.66	\$ 562.71	(\$256.95)	\$ 136.39	\$ 733.74				
8	1/8/2013	\$ 7,669.72	\$ 7,669.72	\$365.12	\$ 7,304.60	5.00%	\$ -	\$ -	\$ -		\$11,575.20	\$14,371.23	\$2,796.03	\$ 565.04	\$ 884.55	\$319.51	\$ 658.17	\$ 672.72	\$14.55	\$ 607.24	\$ 465.98				
9	1/9/2013	\$ 9,328.84	\$ 9,328.84	\$444.11	\$ 8,884.73	5.00%	\$ -	\$ -	\$ -		\$14,843.08	\$ 7,956.87	(\$6,886.21)	\$ 513.48	\$ 480.84	(\$32.64)	\$ 641.96	\$ 210.81	(\$431.15)	\$ 622.05	\$ 341.88				
10	1/10/2013	\$14,539.09	\$14,539.09	\$692.14	\$13,846.95	5.00%	\$ -	\$ -	\$ -		\$12,408.75	\$11,295.66	(\$1,113.09)	\$ 513.71	\$ 148.51	(\$365.20)	\$1,021.35	\$ 602.94	(\$418.41)	\$ 982.26	\$ 778.96				
11	1/11/2013	\$ 8,054.65	\$ 8,054.65	\$383.45	\$ 7,671.20	5.00%	\$ -	\$ -	\$ -		\$ 8,290.89	\$ 9,987.71	\$1,696.82	\$ 175.44	\$ 10.31	(\$165.13)	\$ 702.46	\$ 857.60	\$155.14	\$ 711.78	\$1,077.36				
12	1/12/2013	\$10,906.56	\$10,906.56	\$519.21	\$10,387.35	5.00%	\$ -	\$ -	\$ -		\$10,177.67	\$ 8,624.86	(\$1,552.81)	\$ 918.67	\$1,208.13	\$289.46	\$ 693.97	\$ 125.64	(\$568.33)	\$ 987.47	\$ 528.38				
13	1/13/2013	\$ 9,973.02	\$ 9,973.02	\$474.77	\$ 9,498.25	5.00%	\$ -	\$ -	\$ -		\$ 8,215.72	\$11,923.44	\$3,707.72	\$ 229.14	\$1,206.63	\$977.49	\$ 136.33	\$ 582.58	\$446.25	\$ 362.10	\$1,135.59				
14	1/14/2013	\$ 9,424.72	\$ 9,424.72	\$448.67	\$ 8,976.05	5.00%	\$ -	\$ -	\$ -		\$ 8,174.22	\$ 7,732.13	(\$442.09)	\$ 426.31	\$1,029.27	\$602.96	\$ 393.46	\$ 313.51	(\$79.95)	\$ 629.81	\$ 338.44				
15	1/15/2013	\$ 9,045.13	\$ 9,045.13	\$430.60	\$ 8,614.53	5.00%	\$ -	\$ -	\$ -		\$13,984.01	\$11,914.71	(\$2,069.30)	\$ 983.83	\$1,206.97	\$223.14	\$ 437.01	\$ 710.39	\$273.38	\$ 114.09	\$ 828.34				
16	1/16/2013	\$14,425.84	\$14,425.84	\$686.75	\$13,739.09	5.00%	\$ -	\$ -	\$ -		\$12,151.57	\$10,107.95	(\$2,043.62)	\$ 202.53	\$ 629.17	\$426.64	\$ 293.04	\$1,291.91	\$998.87	\$ 178.24	\$ 47.26				
17	1/17/2013	\$11,536.85	\$11,536.85	\$549.22	\$10,987.63	5.00%	\$ -	\$ -	\$ -		\$10,548.16	\$13,854.34	\$3,306.18	\$1,075.83	\$ 877.43	(\$198.40)	\$ 941.24	\$1,295.84	\$354.60	\$ 448.35	\$ 648.82				
18	1/18/2013	\$10,671.89	\$10,671.89	\$508.04	\$10,163.85	5.00%	\$ -	\$ -	\$ -		\$11,573.83	\$13,609.98	\$2,036.15	\$ 707.78	\$ 561.52	(\$146.26)	\$ 666.70	\$ 303.84	(\$362.86)	\$ 808.75	\$ 641.88				
19	1/19/2013	\$ 9,768.73	\$ 9,768.73	\$465.05	\$ 9,303.68	5.00%	\$ -	\$ -	\$ -		\$ 9,696.50	\$ 8,627.33	(\$1,069.17)	\$ 693.47	\$ 298.01	(\$395.46)	\$ 764.04	\$ 478.86	(\$285.18)	\$1,140.01	\$ 626.64				
20	1/20/2013	\$12,104.51	\$12,104.51	\$576.24	\$11,528.27	5.00%	\$ -	\$ -	\$ -		\$13,366.04	\$ 8,713.08	(\$4,652.96)	\$1,052.04	\$ 271.38	(\$780.66)	\$1,244.22	\$ 94.95	(\$1,149.27)	\$ 89.36	\$1,033.22				
21	1/21/2013	\$ 8,366.03	\$ 8,366.03	\$398.27	\$ 7,967.76	5.00%	\$ -	\$ -	\$ -		\$ 8,803.30	\$ 7,860.89	(\$942.41)	\$ 932.11	\$ 697.60	(\$234.51)	\$ 733.70	\$ 289.59	(\$444.11)	\$ 613.73	\$ 972.80				
22	1/22/2013	\$13,095.05	\$13,095.05	\$623.40	\$12,471.65	5.00%	\$ -	\$ -	\$ -		\$ 8,164.20	\$12,259.28	\$4,095.08	\$ 929.81	\$ 30.23	(\$899.58)	\$ 566.18	\$ 528.56	(\$37.62)	\$ 365.13	\$1,281.13				
23	1/23/2013	\$13,008.66	\$13,008.66	\$619.29	\$12,389.37	5.00%	\$ -	\$ -	\$ -		\$ 9,578.76	\$10,174.40	\$595.64	\$ 569.16	\$1,229.01	\$659.85	\$ 166.80	\$ 843.28	\$676.48	\$ 458.70	\$ 144.72				
24	1/24/2013	\$14,694.53	\$14,694.53	\$699.54	\$13,994.99	5.00%	\$ -	\$ -	\$ -		\$11,565.22	\$11,207.83	(\$357.39)	\$1,265.13	\$ 290.96	(\$974.17)	\$ 498.90	\$ 520.64	\$21.74	\$ 373.14	\$ 659.35				
25	1/25/2013	\$11,681.26	\$11,681.26	\$556.10	\$11,125.16	5.00%	\$ -	\$ -	\$ -		\$13,319.03	\$12,429.42	(\$889.61)	\$ 579.04	\$ 903.96	\$324.92	\$ 93.19	\$ 985.36	\$892.17	\$ 913.66	\$ 651.22				
26	1/26/2013	\$13,383.66	\$13,383.66	\$637.14	\$12,746.52	5.00%	\$ -	\$ -	\$ -		\$ 7,876.97	\$11,385.12	\$3,508.15	\$ 986.57	\$1,042.86	\$56.29	\$ 429.52	\$1,264.82	\$835.30	\$1,047.50	\$ 880.53				
27	1/27/2013	\$ 8,423.12	\$ 8,423.12	\$400.99	\$ 8,022.13	5.00%	\$ -	\$ -	\$ -		\$14,656.18	\$13,479.73	(\$1,176.45)	\$ 908.21	\$ 528.07	(\$380.14)	\$ 31.02	\$ 226.41	\$195.39	\$ 221.86	\$ 667.54				
28	1/28/2013	\$12,322.85	\$12,322.85	\$586.64	\$11,736.21	5.00%	\$ -	\$ -	\$ -		\$13,868.25	\$11,234.77	(\$2,633.48)	\$ 252.23	\$1,166.64	\$914.41	\$ 490.93	\$ 427.39	(\$63.54)	\$1,004.37	\$ 291.22				
29	1/29/2013	\$12,078.25	\$12,078.25	\$574.99	\$11,503.26	5.00%	\$ -	\$ -	\$ -		\$10,308.24	\$10,421.26	\$113.02	\$1,120.16	\$ 765.86	(\$354.30)	\$1,211.71	\$ 677.18	(\$534.53)	\$ 436.09	\$1,130.31				
30	1/30/2013	\$10,102.18	\$10,102.18	\$480.92	\$ 9,621.26	5.00%	\$ -	\$ -	\$ -		\$ 7,518.79	\$13,067.57	\$5,548.78	\$1,094.74	\$ 369.38	(\$725.36)	\$ 916.83	\$ 532.28	(\$384.55)	\$1,056.93	\$ 966.90				
31	1/31/2013	\$10,045.31	\$10,045.31	\$478.21	\$ 9,567.10	5.00%	\$ -	\$ -	\$ -		\$12,829.16	\$ 9,842.16	(\$2,987.00)	\$1,040.42	\$ 205.77	(\$834.65)	\$ 774.96	\$1,243.55	\$468.59	\$ 323.66	\$1,222.56				
Home DailySales/January2013																									

MasterDailySales - Excel																														
FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW DEVELOPER TEAM REPORTS																														
DATE																														
O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM						
1	GL 11000		GL 11000		GL 11000		GL 72700		GL 11000		Debit 25200		GL 70400																	
2	RBC INTERAC		Difference		Micros VISA		Difference		Micros MC		Difference		Micros AMEX		AMEX Fee		RBC AMEX		Post Date		Gift Card									
3																														
4																					Micros Cash + Credit - NetSalesTax		Cash/Credit Over/Under							
5	\$ 399.51		\$15.97		\$1,009.41		\$ 28.08		(\$981.33)		\$ 991.33		\$1,060.69		\$69.36		\$ 924.66		\$856.15		\$ 68.51		12/6/2010		\$ 544.10		\$2,562.11		\$2,907.82	
6	\$1,134.17		(\$116.75)		\$ 82.55		\$1,234.93		\$1,152.38		\$ 479.58		\$ 687.08		\$207.50		\$ 999.57		\$920.55		\$ 79.02		12/6/2010		\$ 774.27		\$3,045.84		(\$81.24)	
7	\$ 350.29		(\$495.40)		\$ 370.35		\$1,080.44		\$710.09		\$1,073.74		\$ 770.02		(\$303.72)		\$1,282.06		\$96.92		\$1,185.14		12/6/2010		\$ 302.66		\$2,595.49		\$5,029.48	
8	\$ 147.22		(\$551.48)		\$1,299.24		\$ 882.27		(\$416.97)		\$ 30.26		\$ 751.99		\$721.73		\$ 139.07		(\$3.83)		\$ 142.90		12/6/2010		\$1,040.56		\$5,344.48		(\$176.05)	
9	\$ 398.25		(\$104.54)		\$1,233.66		\$1,273.98		\$40.32		\$ 527.77		\$ 368.98		(\$158.79)		\$ 216.97		(\$3.07)		\$ 220.04		12/6/2010		\$ 844.10		\$1,534.06		\$3,409.99	
10	\$ 826.80		\$395.99		\$ 277.75		\$ 249.96		(\$27.79)		\$ 762.53		\$114.12		(\$648.41)		\$ 600.78		(\$577.61)		\$1,178.39		12/6/2010		\$ 347.17		\$2,439.24		\$4,688.97	
11	\$ 824.95		(\$371.05)		\$189.67		\$ 672.72		(\$256.95)		\$ 136.39		\$ 733.74		\$597.35		\$ 905.89		(\$282.81)		\$1,188.70		12/6/2010		\$1,086.91		\$1,097.53		\$428.25	
12	\$ 884.55		\$319.51		\$ 558.17		\$ 672.72		\$14.55		\$ 607.24		\$465.98		(\$141.26)		\$ 532.24		\$174.29		\$ 357.95		12/6/2010		\$ 81.72		\$6,349.89		\$9,145.92	
13	\$ 480.84		(\$32.64)		\$ 641.96		\$ 210.81		(\$431.15)		\$ 622.05		\$ 341.88		(\$280.17)		\$ 821.09		\$111.82		\$ 709.27		12/6/2010		\$ 211.63		\$8,324.45		\$1,438.24	
14	\$ 148.51		(\$365.20)		\$1,021.35		\$ 602.94		(\$418.41)		\$ 982.26		\$ 778.96		(\$203.30)		\$1,084.22		\$1,050.02		\$ 34.20		12/6/2010		\$ 281.38		\$1,752.58		\$639.49	
15	\$ 10.31		(\$165.13)		\$ 702.46		\$ 857.60		\$155.14		\$ 711.78		\$1,077.36		\$365.58		\$ 115.64		(\$141.94)		\$ 257.58		12/6/2010		\$ 885.80		\$2,827.36		\$4,524.18	
16	\$1,208.13		\$289.46		\$ 693.97		\$ 125.64		(\$568.33)		\$ 987.47		\$ 528.38		(\$459.09)		\$ 605.82		(\$39.07)		\$ 644.89		12/6/2010		\$ 277.84		\$2,754.88		\$1,202.07	
17	\$1,206.63		\$977.49		\$ 136.33		\$ 582.58		\$446.25		\$ 362.10		\$1,135.59		\$773.49		\$ 978.39		\$616.29		\$ 362.10		12/6/2010		\$ 879.00		\$2,827.66		\$4,535.38	
18	\$1,029.27		\$602.96		\$ 393.46		\$ 313.51		(\$79.95)		\$ 629.81		\$ 338.44		(\$291.37)		\$ 449.38		\$381.42		\$ 67.96		12/6/2010		\$ 632.33		\$1,280.79		\$838.70	
19	\$1,206.97		\$223.14		\$ 437.01		\$ 710.39		\$273.38		\$ 114.09		\$ 828.34		\$714.25		\$ 538.95		(\$710.00)		\$1,248.95		12/6/2010		\$ 157.86		\$7,170.62		\$5,101.32	
20	\$ 629.17		\$426.64		\$ 293.04		\$1,291.91		\$998.87		\$ 178.24		\$ 47.26		(\$130.98)		\$ 455.56		(\$280.93)		\$ 716.49		12/6/2010		\$1,200.61		\$55.71		(\$1,987.91)	
21	\$ 877.43		(\$198.40)		\$ 941.24		\$1,295.84		\$354.60		\$ 448.35		\$ 648.82		\$200.47		\$ 542.73		(\$364.18)		\$ 906.91		12/6/2010		\$ 241.03		\$2,260.49		\$5,566.67	
22	\$ 561.52		(\$146.26)		\$ 860.76		\$ 303.84		(\$362.86)		\$ 808.75		\$ 641.88		(\$166.87)		\$ 888.26		(\$285.45)		\$1,153.71		12/6/2010		\$ 487.96		\$4,461.39		\$6,497.54	
23	\$ 298.01		(\$395.46)		\$ 764.04		\$ 478.86		(\$285.18)		\$1,140.01		\$ 626.64		(\$513.37)		\$ 255.92		(\$636.52)		\$ 892.44		12/6/2010		\$ 974.17		\$3,755.38		\$2,686.21	
24	\$ 271.38		(\$780.66)		\$1,244.22		\$ 94.95		(\$1,149.27)		\$ 89.36		\$1,033.22		\$943.86		\$ 499.69		(\$108.33)		\$ 608.02		12/6/2010		\$ 164.21		\$4,311.05		(\$341.91)	
25	\$ 697.60		(\$234.51)		\$ 733.70		\$ 289.59		(\$444.11)		\$ 613.73		\$ 972.80		\$359.07		\$ 980.48		\$455.86		\$ 524.62		12/6/2010		\$1,175.00		\$4,872.29		\$3,929.88	
26	\$ 80.29		(\$689.58)		\$ 566.18		\$ 528.56		(\$37.62)		\$ 365.13		\$1,281.13		\$916.00		\$ 1,045.34		\$137.37		\$ 907.97		12/6/2010		\$ 548.70		(\$1,475.89)		\$2,619.39	
27	\$1,229.01		\$659.85		\$ 166.80		\$ 843.28		\$676.48		\$ 458.70		\$ 144.72		(\$313.98)		\$ 249.17		\$138.96		\$ 110.21		12/6/2010		\$ 568.26		(\$4,417.81)		(\$822.17)	
28	\$ 290.96		(\$974.17)		\$ 498.99		\$ 520.64		\$21.74		\$ 373.14		\$ 659.35		\$286.21		\$ 188.96		(\$488.30)		\$ 677.26		12/6/2010		\$1,255.32		\$452.14		\$94.75	
29	\$ 93.96		\$324.92		\$ 91.90		\$ 95.36		\$892.17		\$ 913.66		\$ 651.22		(\$262.44)		\$ 210.51		(\$88.11)		\$ 298.62		12/6/2010		\$ 430.73		\$4,864.90		\$2,975.29	
30	\$1,042.86		\$56.29		\$ 429.52		\$1,264.82		\$835.30		\$1,047.50		\$ 880.53		(\$166.97)		\$1,177.62		\$37.86		\$1,139.76		12/6/2010		\$ 547.48		(\$1,318.00)		\$2,190.15	
31	\$ 528.07		(\$380.14)		\$ 310.2		\$ 226.41		\$195.39		\$ 221.86		\$ 667.54		\$445.68		\$ 533.82		\$386.91		\$ 146.91		12/6/2010		\$ 366.20		\$28,294.17		\$17,117.72	
32	\$1,166.64		\$914.41		\$ 490.93		\$ 427.39		(\$63.54)		\$1,004.37		\$ 291.22		(\$718.15)		\$ 586.62		\$272.14		\$ 314.48		12/6/2010		\$1,143.12		\$5,022.67		\$2,389.19	
33	\$ 765.86		(\$354.30)		\$1,211.71		\$ 677.18		(\$534.53)		\$ 436.09		\$1,130.31		\$694.22		\$ 344.19		(\$50.62)		\$ 344.81		12/6/2010		\$ 240.51		\$1,582.65		\$1,695.67	
34	\$ 369.38		(\$725.36)		\$ 916.83		\$ 532.28		(\$384.55)		\$1,056.93		\$ 966.90		(\$90.03)		\$ 574.59		\$464.00		\$ 110.59		12/6/2010		\$ 539.71		\$1,599.41		\$7,148.19	
35	\$ 205.77		(\$834.65)		\$ 774.96		\$1,243.55		\$468.59		\$ 323.66		\$1,222.56		\$898.90		\$ 157.49		(\$1,122.20)		\$1,279.69		12/6/2010		\$ 826.54		\$5,906.92		\$2,919.92	
36																														
37																														
Home DailySalesJanuary2013																														
READY																														

There is a title at the top, assigned by the user with the form in the beginning of the process. The next row is for General Ledger accounts, each showing where the transactions within the column can be found.

The Red and Blue represent what micros says happened that day (Red) and what we actually saw hit the bank account (Blue).

Black is the difference between Red and Blue. These could be charges from the card companies or mistakes in the deposits. Gray is similar, showing the fees AMEX will always take from each of the transactions.

At the end there is also a column for the Journal Entry Number (JE #). This could be used to verify that an entry was made for the day on the books or as a check list for the user. Either way, this column could be very helpful for finding missing transactions.

Micros Cash + Credit - NetSales+Tax+	Cash/Credit Over/Under	JE #
\$2,562.11	\$2,907.82	
\$3,045.84	(\$81.24)	
\$2,595.49	\$5,029.48	
\$5,344.48	(\$176.05)	
\$1,534.06	\$3,409.99	
\$2,439.24	\$4,688.97	
\$1,097.53	\$428.25	
\$6,349.89	\$9,145.92	
\$8,324.45	\$1,438.24	
\$1,752.58	\$639.49	
\$2,827.36	\$4,524.18	
\$2,754.88	\$1,202.07	
\$827.66	\$4,535.38	
\$1,280.79	\$838.70	
\$7,170.62	\$5,101.32	

The best part about this report is that it doesn't use a template. The entire thing is written in VBA and the user can rerun the whole report if they erase something, or if they mess with the formatting and loose data integrity.

REPORT WRITTEN IN CODE

As mentioned before, the entire report is written in VBA. There is no need for a master template or losing days of data from a formatting issue. The whole report can be generated over and over again without finding a template and filling out the columns and rows with the correct data. I wanted the user to be able to customize the report if they need to, without needing to make a copy first so if they mess up, they didn't just lose hours of work.

To do this, I need to write a report, line by line, in code. At first this took me a long time. As the overall look of the report changed and I decided I needed additional features, I would have to go back and rewrite the code to follow suit. But, I then found a better way.

Instead of writing code over and over again, I stopped writing the code, and just focused on the layout and what the report should do. Then, after getting a finalized template (almost finalized, it still changed a good amount) I rewrote the entire thing (a few different times) and recorded myself as I went.

After recording a handful of macros, I picked apart each one so that I would have all the code I would need to run a script from scratch. Once I finished there were three main sections of code:

- (1) Labeling the whole report, cell by cell.
- (2) Formatting the report, including rows, columns, and font, bolding, etc.
- (3) Filling the report with data.

I also have the code divided into multiple Sub Procedures. These include:

```
RunReport()  
PopulateReport()  
LabelReport()  
FormatReport()  
GetData()
```

as well as two functions, including:

```
RandGen()
```

and

```
RandGen2()
```

These each perform various tasks. Some Subs are very small, and others are very long and could have been broken down even further.

Once this code was all compiled and placed (and a lot of errors fixed), I could push a button and the entire report I had designed could be seen on a new labeled tab.

DATA

Getting the right data was the most daunting part of this project. But after how we saw it done in class with a 'web scraper' demo, easy. The problem I ran into was FiveStar keeping (understandably) their login information to themselves. To get around this, I needed to create functions that would populate each Blue column and a few Red columns with dummy data. This took a LOT longer than it should have.

The biggest issue with my functions were I couldn't use them on every machine. I had been using RandBetween() but each individual machine I worked on would have to be configured within the macros settings to make the function work. So after messing around with the code forever I wrote a simple function that would generate doubles with .00s and not need configuration on each machine.

After I finished code to populate the report with dummy data. I then had to write individual lines of code for each cell that needed to be calculated based on the amounts provided. Then, once those worked correctly, I could put the whole thing into a loop and populate each row with different transactions for the day. Weew!

LEARNING

WHAT I LEARNED

One of the biggest things I learned in the project is how useful VBA can be. Instead of creating documents over and over again, whether they be for a report like this or something as simple as a table for personal use, using VBA to write the whole thing for you can save a lot of cut and paste errors or formatting mistakes.

Another big help was the recording feature. I had used that feature in the past, but only following along with a professor. This tool was *extremely* helpful for this assignment and I don't think I would have been able to finish had I not remembered that you can have excel write code as you go. Using record multiple times helped me compile a huge section of code that would have taken me much longer to try and write myself.

EXTRAS

I really wanted to get the web crawler going in this project. This summer I'm going to try and show them what I have done (if at all still relevant for them) and see if I can't sell it to them, even for just a hundred bucks the code would save them a ton of time.

ASSISTANCE

INTERNET

The only help I received on this project was googling syntax and form usage on the web. Every line of code I wrote myself.
