

Devin Dickson
Jon Aaron Paulsen
4/11/2011

VBA Project

Executive Summary

For this project, we worked with a small retailer that records several credit card transactions daily. The retailer downloaded a record of these transactions from the internet in an unorganized Excel file each day.

The first step of our project was to automate the downloading of this file from the web, and then to organize the data into columns including date, transaction number, amount, and type of card used. The retailer periodically received a bank statement listing all of the transactions during the period. The major challenge facing the retailer was that they had no way to verify that each credit card transaction appearing on the daily transaction list appeared on the bank statement. The retailer had to go through the bank statement and cross reference the daily transaction lists to ensure that each credit card had actually been charged. The second step of our project was to automate this process. All transactions appearing on the bank statement are highlighted.

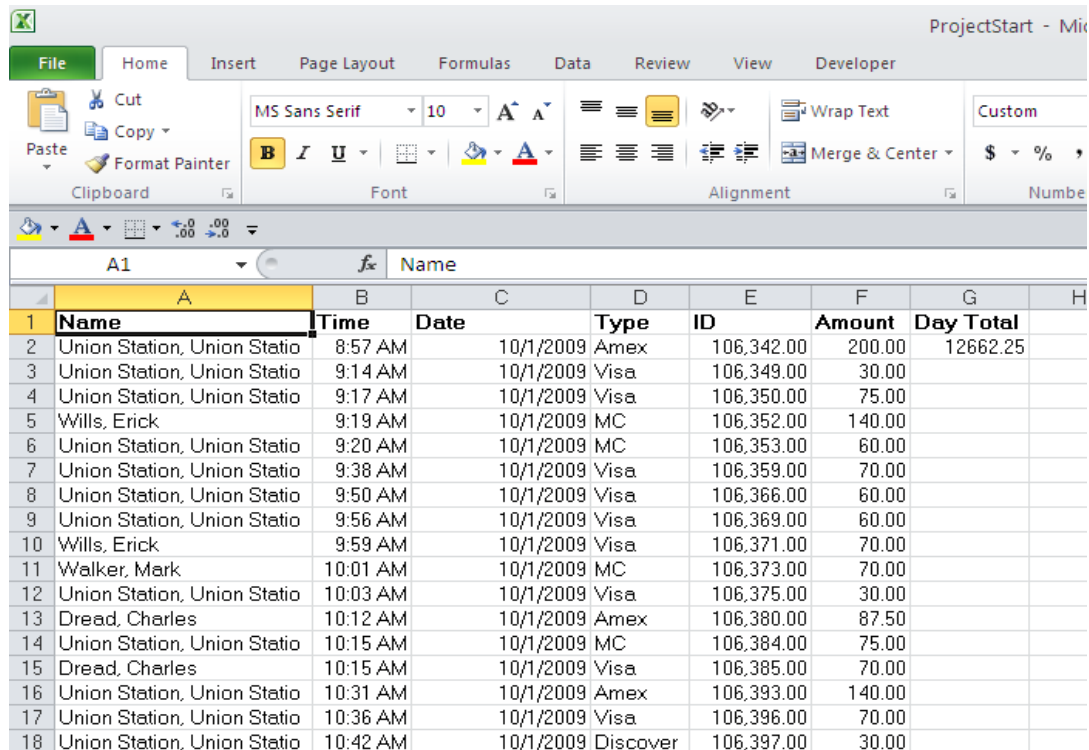
The last step of our project was to create a user form for the retailer to compare data from month to month. The user form asks the user to select a chart and choose which months to display on the graph.

Implementation Discussion

Step 1: User clicks on the first button, Get Data. A user form asks the user for user name and password. The program then downloads the data from an online banking website. The data is downloaded in an unorganized format in Excel.

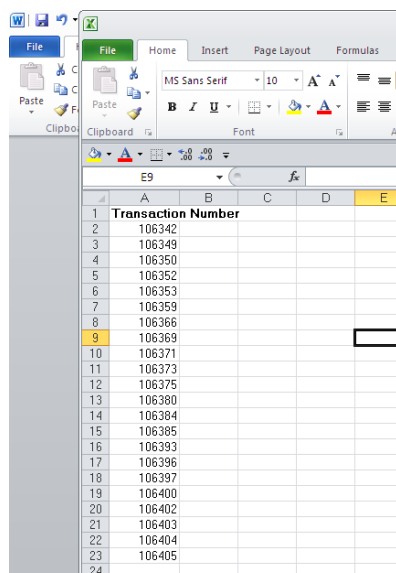
[illegible]

Step 2: The user clicks on the Organize button. The data is sorted by time and organized in the Organized tab with name, date, type, and ID. This information is also added to the Historic tab where previous day's transactions are stored. If the Organize button is clicked and this data has already been added to the Historic tab, the data is not re-added. This feature allows us to keep a running book of daily transactions.



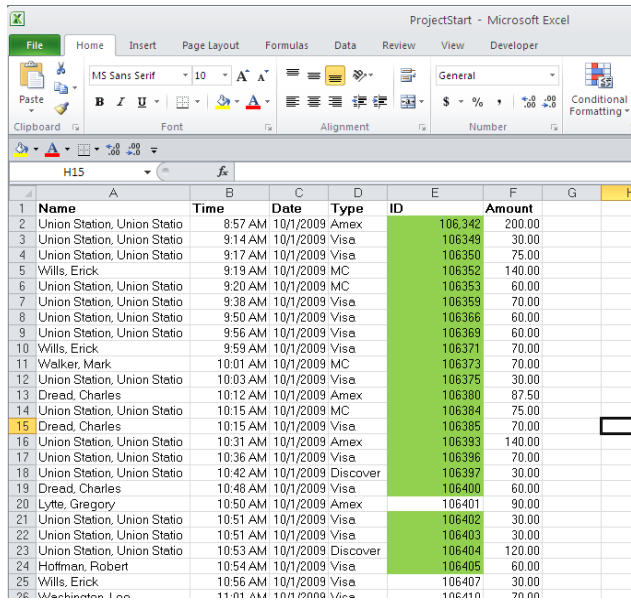
	A	B	C	D	E	F	G	H
1	Name	Time	Date	Type	ID	Amount	Day Total	
2	Union Station, Union Statio	8:57 AM	10/1/2009	Amex	106,342.00	200.00	12662.25	
3	Union Station, Union Statio	9:14 AM	10/1/2009	Visa	106,349.00	30.00		
4	Union Station, Union Statio	9:17 AM	10/1/2009	Visa	106,350.00	75.00		
5	Wills, Erick	9:19 AM	10/1/2009	MC	106,352.00	140.00		
6	Union Station, Union Statio	9:20 AM	10/1/2009	MC	106,353.00	60.00		
7	Union Station, Union Statio	9:38 AM	10/1/2009	Visa	106,359.00	70.00		
8	Union Station, Union Statio	9:50 AM	10/1/2009	Visa	106,366.00	60.00		
9	Union Station, Union Statio	9:56 AM	10/1/2009	Visa	106,369.00	60.00		
10	Wills, Erick	9:59 AM	10/1/2009	Visa	106,371.00	70.00		
11	Walker, Mark	10:01 AM	10/1/2009	MC	106,373.00	70.00		
12	Union Station, Union Statio	10:03 AM	10/1/2009	Visa	106,375.00	30.00		
13	Dread, Charles	10:12 AM	10/1/2009	Amex	106,380.00	87.50		
14	Union Station, Union Statio	10:15 AM	10/1/2009	MC	106,384.00	75.00		
15	Dread, Charles	10:15 AM	10/1/2009	Visa	106,385.00	70.00		
16	Union Station, Union Statio	10:31 AM	10/1/2009	Amex	106,393.00	140.00		
17	Union Station, Union Statio	10:36 AM	10/1/2009	Visa	106,396.00	70.00		
18	Union Station, Union Statio	10:42 AM	10/1/2009	Discover	106,397.00	30.00		

Step 3: The bank statement is downloaded into the Bank Statement tab and each of the transaction numbers is placed in column A.



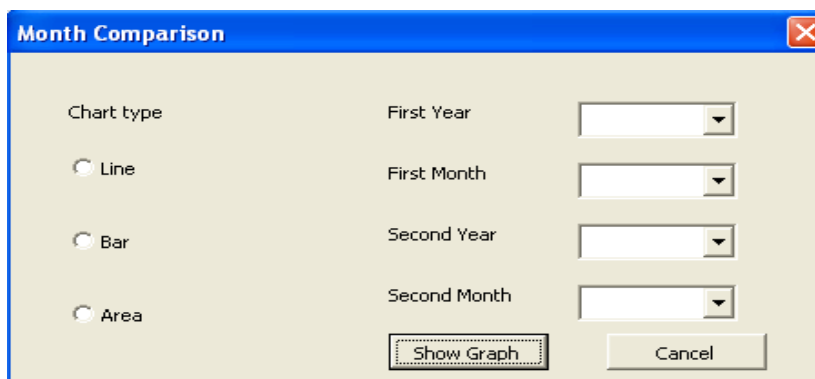
	A	B	C	D	E
1	Transaction Number				
2	106342				
3	106349				
4	106350				
5	106352				
6	106353				
7	106359				
8	106366				
9	106369				
10	106371				
11	106373				
12	106375				
13	106380				
14	106384				
15	106385				
16	106393				
17	106396				
18	106397				
19	106400				
20	106402				
21	106403				
22	106404				
23	106405				
24					

Step 4: The program references each transaction number from the Organized tab with the transaction numbers from the Bank Statement tab. If the transaction appears on the bank statement, it is highlighted in green. If it does not, it is left with no fill.



	Name	Time	Date	Type	ID	Amount
2	Union Station, Union Statio	8:57 AM	10/1/2009	Amex	106342	200.00
3	Union Station, Union Statio	9:14 AM	10/1/2009	Visa	106349	30.00
4	Union Station, Union Statio	9:17 AM	10/1/2009	Visa	106350	75.00
5	Wills, Erick	9:19 AM	10/1/2009	MC	106352	140.00
6	Union Station, Union Statio	9:20 AM	10/1/2009	MC	106353	60.00
7	Union Station, Union Statio	9:38 AM	10/1/2009	Visa	106359	70.00
8	Union Station, Union Statio	9:50 AM	10/1/2009	Visa	106366	60.00
9	Union Station, Union Statio	9:56 AM	10/1/2009	Visa	106369	60.00
10	Wills, Erick	9:59 AM	10/1/2009	Visa	106371	70.00
11	Walker, Mark	10:01 AM	10/1/2009	MC	106373	70.00
12	Union Station, Union Statio	10:03 AM	10/1/2009	Visa	106375	30.00
13	Dread, Charles	10:12 AM	10/1/2009	Amex	106380	87.50
14	Union Station, Union Statio	10:15 AM	10/1/2009	MC	106384	75.00
15	Dread, Charles	10:15 AM	10/1/2009	Visa	106385	70.00
16	Union Station, Union Statio	10:31 AM	10/1/2009	Amex	106393	140.00
17	Union Station, Union Statio	10:36 AM	10/1/2009	Visa	106396	70.00
18	Union Station, Union Statio	10:42 AM	10/1/2009	Discover	106397	30.00
19	Dread, Charles	10:48 AM	10/1/2009	Visa	106400	60.00
20	Lytte, Gregory	10:50 AM	10/1/2009	Amex	106401	90.00
21	Union Station, Union Statio	10:51 AM	10/1/2009	Visa	106402	30.00
22	Union Station, Union Statio	10:51 AM	10/1/2009	Visa	106403	30.00
23	Union Station, Union Statio	10:53 AM	10/1/2009	Discover	106404	120.00
24	Hoffman, Robert	10:54 AM	10/1/2009	Visa	106405	60.00
25	Wills, Erick	10:56 AM	10/1/2009	Visa	106407	30.00
26	Washington, Lee	11:01 AM	10/1/2009	Visa	106410	70.00

Step 5: We created a user form so that the retailer could analyze the data. When the user clicks on the compare months button on the Raw_Data tab he will see the following user form.



Month Comparison

Chart type

☐ Line

☐ Bar

☐ Area

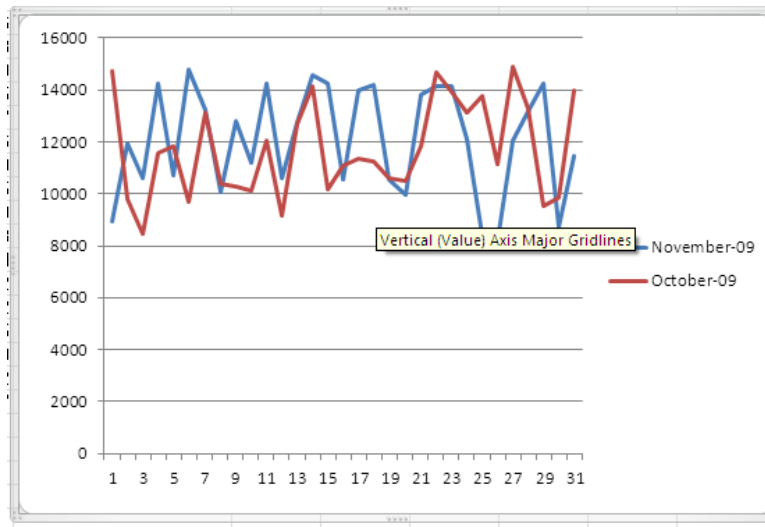
First Year

First Month

Second Year

Second Month

Step 6: The user chooses a chart type and the year and month he would like to display. The graph appears in the Graph_Data tab.



Discussion of learning and conceptual difficulties encountered

Due to the fact that there was a lot of reconciliation and cross-referencing, we had to learn a lot about how to use the Instr function. In the daily transaction list, some of the transactions were for cash and some were for credit. We had to write the code so that it would remove all the cash transactions but still allow us to use those numbers for our daily sales total. We also used this function with the graph. When the user entered a specific month and year on the user form, the code had to select the appropriate data that corresponded to that selection.

Another thing we learned is that it's difficult to go through the code of a website and find the username and password fields because they can vary so much from one website to another. For our program, we had to go through two different websites. Because of our limited knowledge of VBA and code in general, it was difficult to find these fields and other pertinent data.