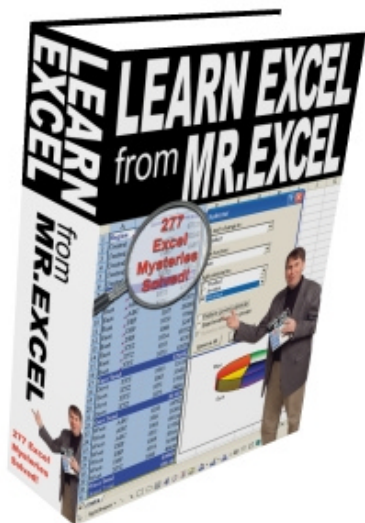




Free Preview – Week #23
Learn Excel from Mr Excel
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Encourage your friends to sign up at
<http://www.mrexcel.com/learn-excel.html>

This week – five cool topics. Learn how to use
Microsoft Query to get a unique set of records. Then,
using Web Queries to get data from the web.

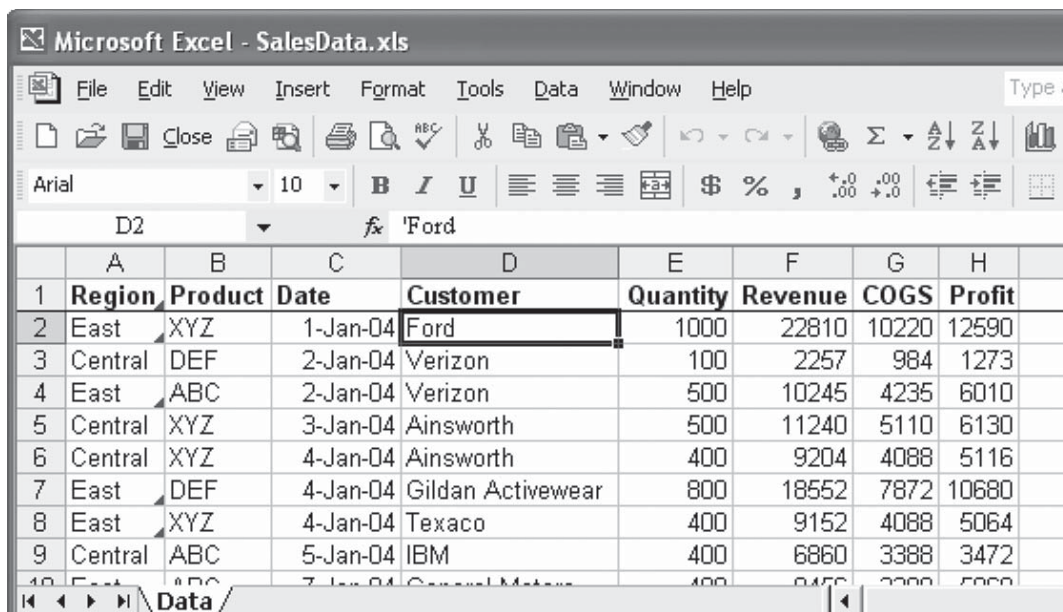
USE QUERY TO GET A UNIQUE SET OF RECORDS

Problem: You've seen many different ways to get a unique list of customers from a dataset in Excel. You are sitting back right now, thinking, couldn't Bill Jelen offer just one more way to get a unique list of customers?

Strategy: I have to bring this up, because it is fast and fairly cool. It is also a way to get a list of customers from a closed file. The trick is to use Microsoft Query. Now, Microsoft Query is not in the default install of Excel. So, if you didn't do a complete install, you are going to have to find the installation CDs to add Microsoft Query to your installation of Excel.

Basically, Microsoft Query is a way to run some SQL against an external file. I am sure that Microsoft envisioned this would be an Access table or an ODBC datasource, but, of course, someone figured out that the external file could be another Excel workbook. Here is how you would set this up.

- 1) Let's say you have a workbook called SalesData.xls. It has one worksheet called Data. The worksheet contains a bunch of records in columns A through H, as shown in Fig. 1003. Select the data in A:H. Give the table a range name of MyData.



Microsoft Excel - SalesData.xls

File Edit View Insert Format Tools Data Window Help

Arial 10 B I U

D2 fx 'Ford

	A	B	C	D	E	F	G	H
1	Region	Product	Date	Customer	Quantity	Revenue	COGS	Profit
2	East	XYZ	1-Jan-04	Ford	1000	22810	10220	12590
3	Central	DEF	2-Jan-04	Verizon	100	2257	984	1273
4	East	ABC	2-Jan-04	Verizon	500	10245	4235	6010
5	Central	XYZ	3-Jan-04	Ainsworth	500	11240	5110	6130
6	Central	XYZ	4-Jan-04	Ainsworth	400	9204	4088	5116
7	East	DEF	4-Jan-04	Gildan Activewear	800	18552	7872	10680
8	East	XYZ	4-Jan-04	Texaco	400	9152	4088	5064
9	Central	ABC	5-Jan-04	IBM	400	6860	3388	3472
10	East	ABC	7-Jan-04	General Motors	400	8450	3300	5000

Data

Fig. 1003

- 2) Save and Close SalesData.xls.

- 3) In a new workbook, select Data – Get External Data – New Database Query, as shown in Fig. 1004.

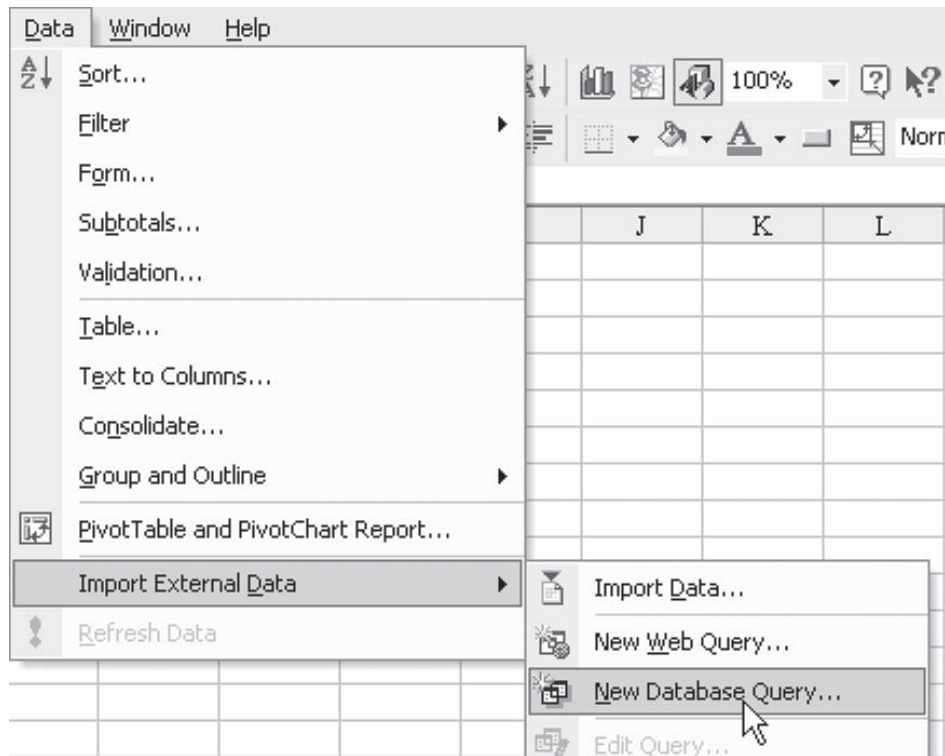


Fig. 1004

- 4) In the Choose Data Sources dialog, choose Excel Files, as shown in Fig. 1005. Choose OK.

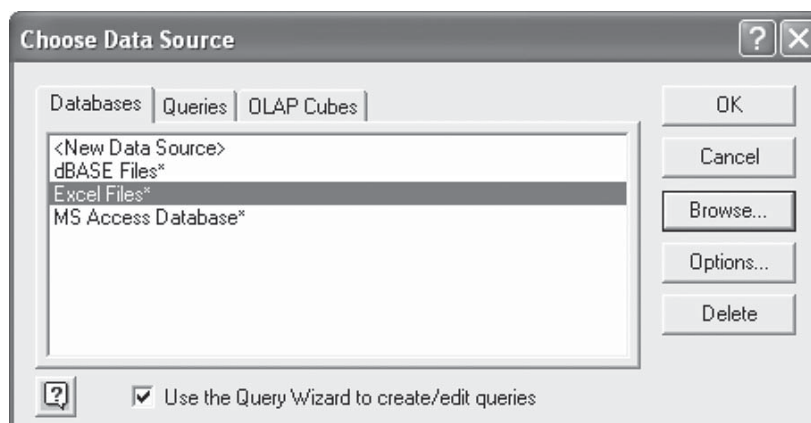


Fig. 1005

- 5) Laugh at the retro Select Workbook dialog. Then, browse to find SalesData.xls, as shown in Fig. 1006. Choose OK.

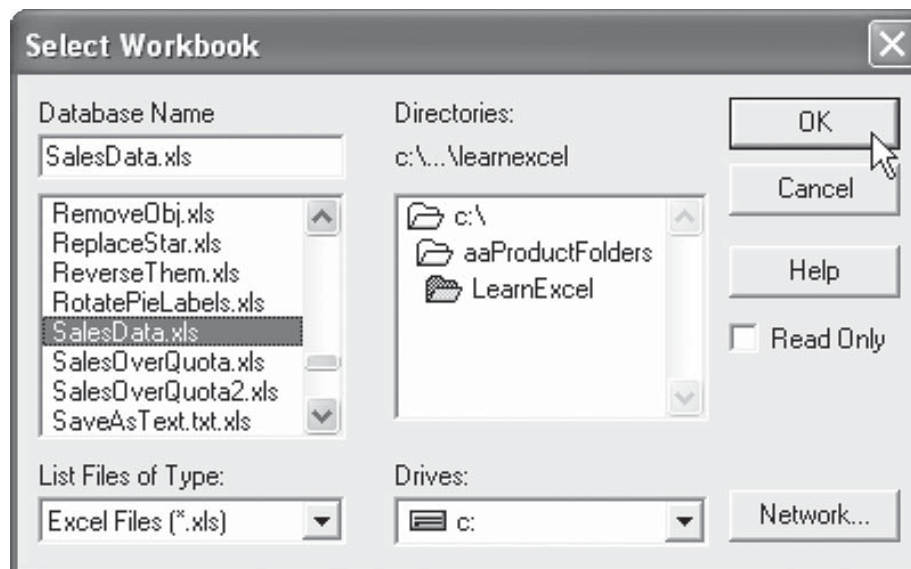


Fig. 1006

**Part
III**

- 6) As shown in Fig. 1007, select the Customer field in the left list and hit the Right Arrow button to move Customer over to the Query.

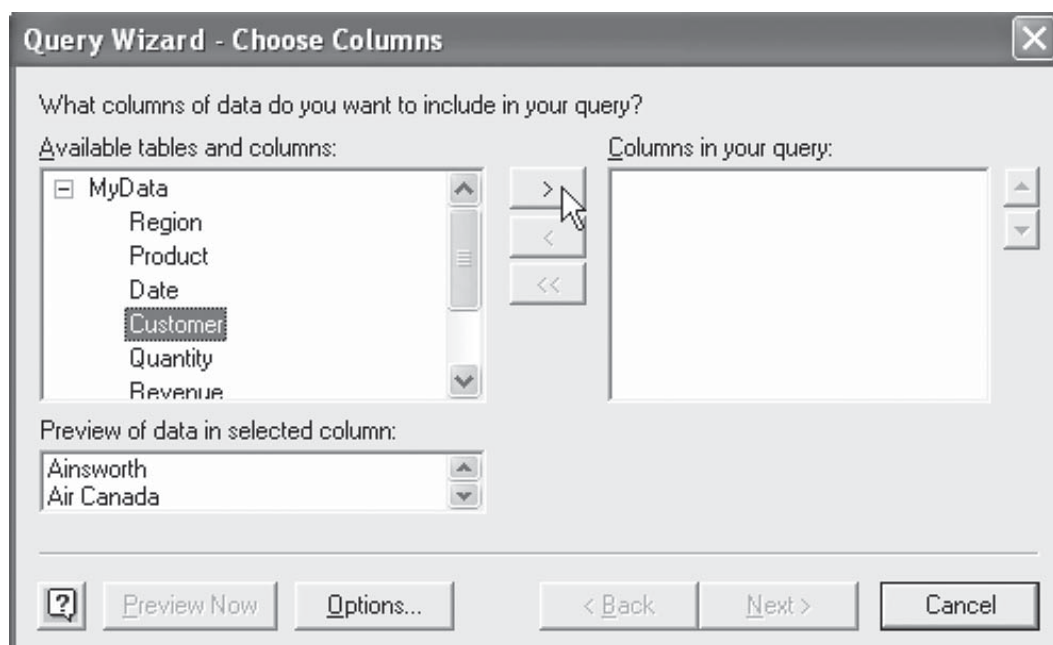


Fig. 1007

7) Choose the Next button, as shown in Fig. 1008.

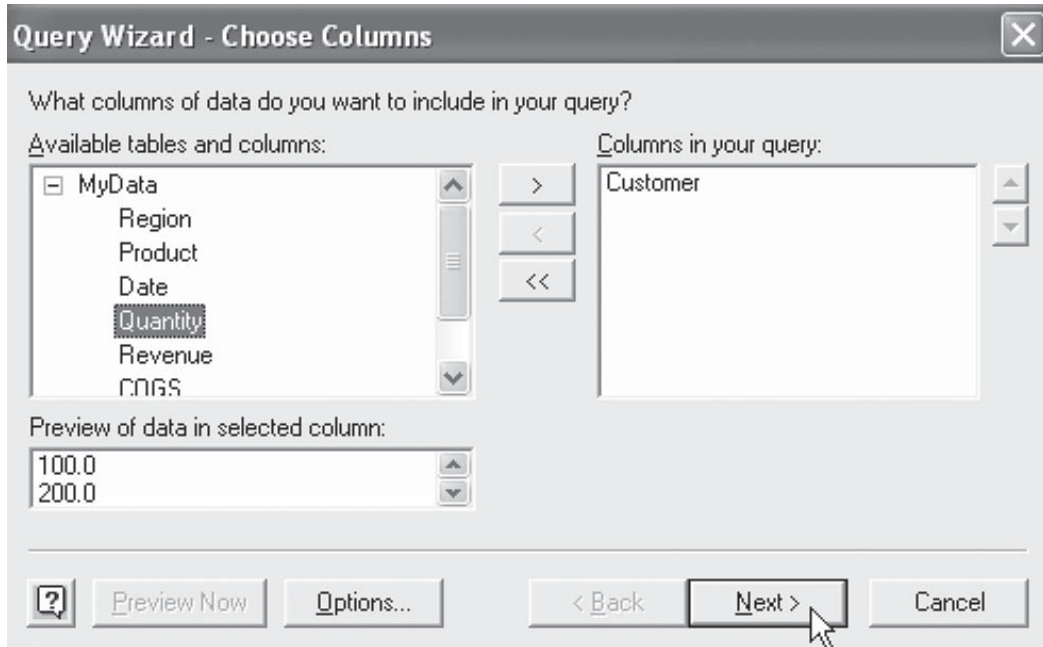


Fig. 1008

8) Choose Next to skip the Filter section. See Fig. 1009.

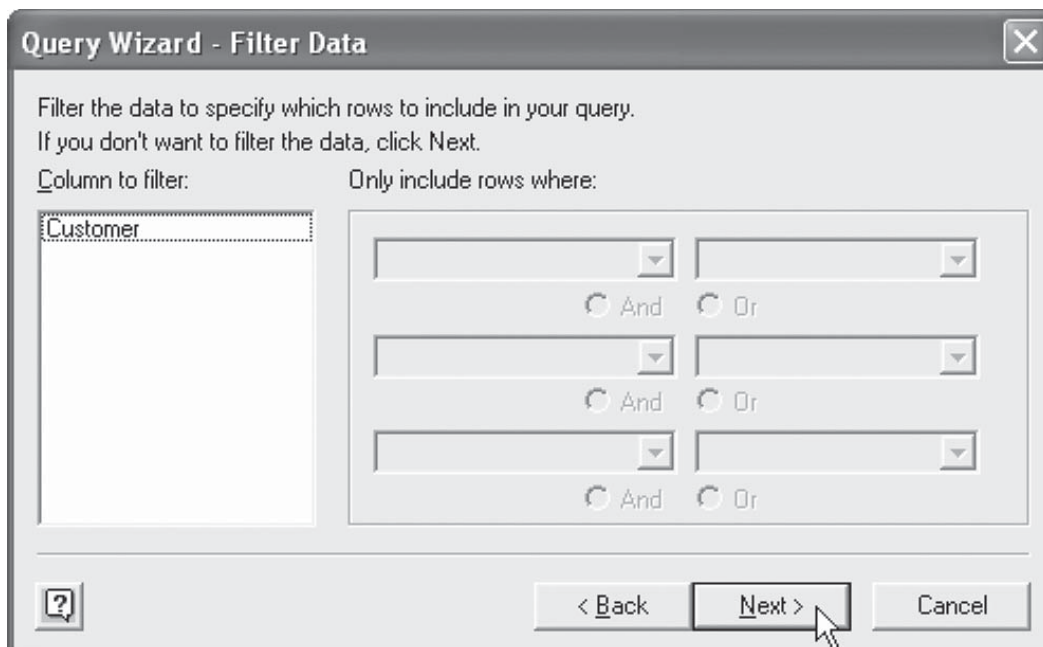


Fig. 1009

- 9) Choose to Sort Ascending by Customer, as shown in Fig. 1010. Click Next.

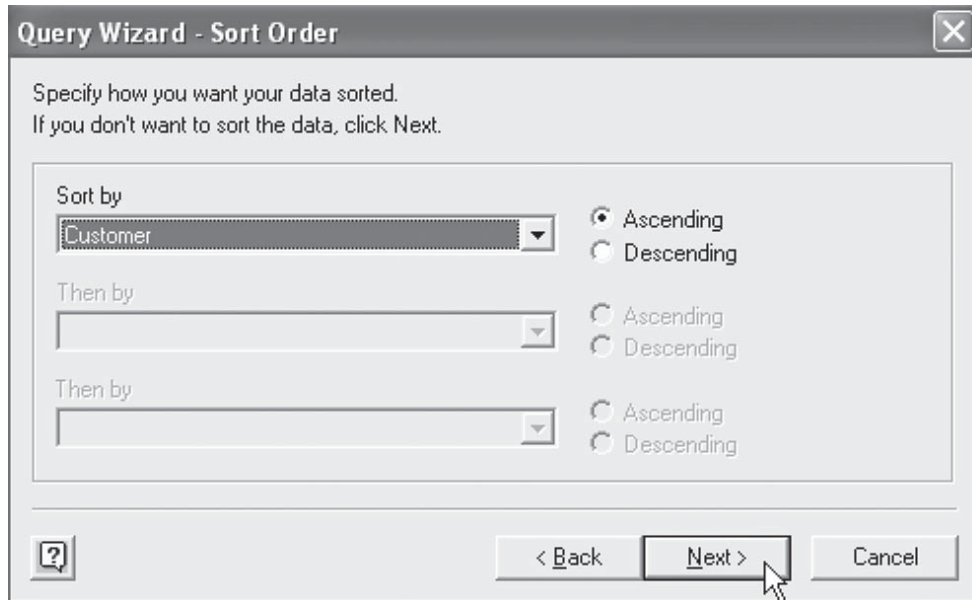


Fig. 1010

- 10) Since you want unique records only, you need to edit the query in Microsoft Query. As shown in Fig. 1011, choose this option and then choose Finish.

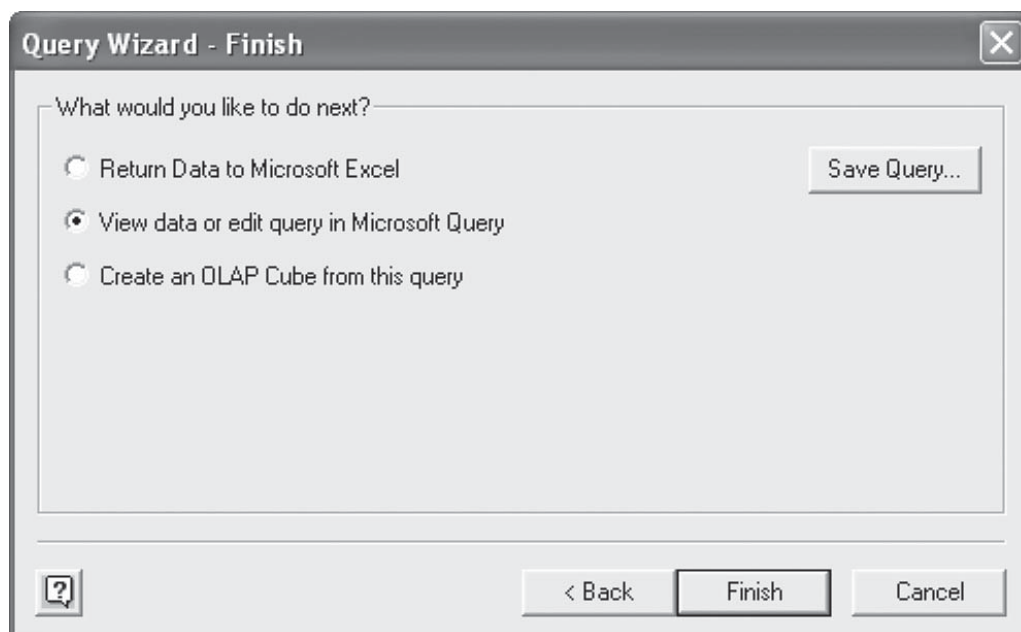


Fig. 1011

- 11) The Microsoft Query window opens. From the Microsoft Query menu, select View – Tables – Query Properties, as shown in Fig. 1012.

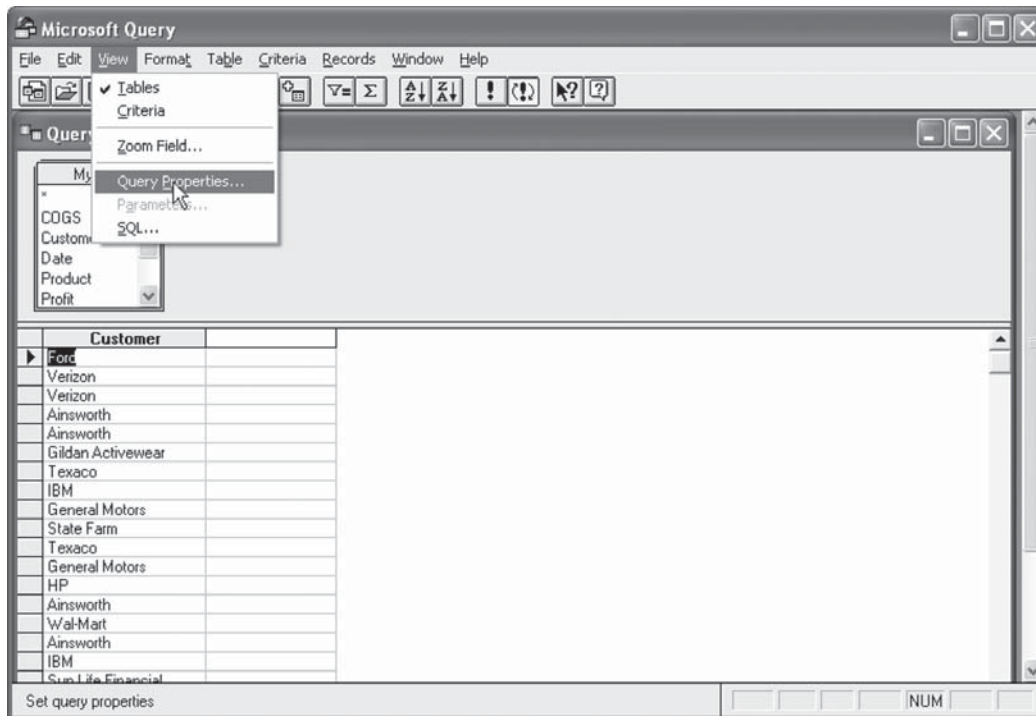


Fig. 1012

- 12) As shown in Fig. 1013, choose Unique Values Only and then OK.



Fig. 1013

- 13) As shown in Fig. 1014, select File – Return Data to Microsoft Excel.

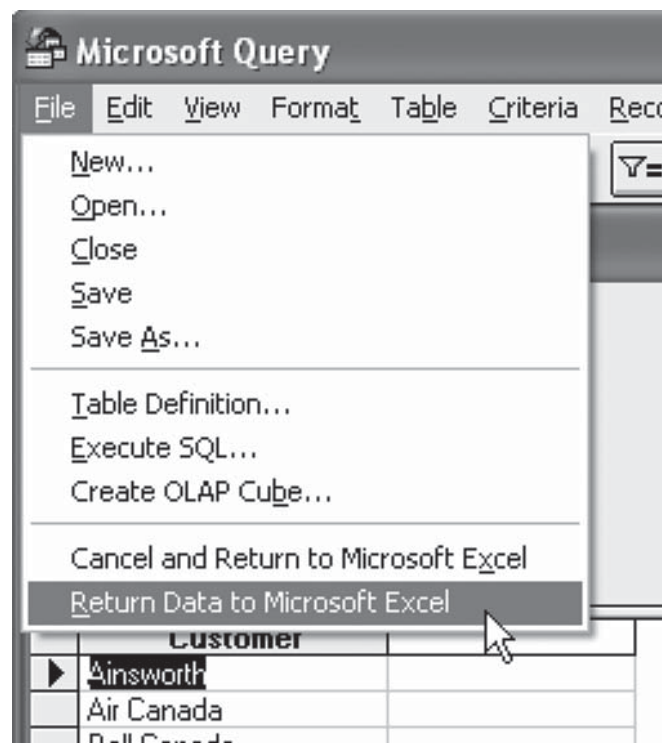


Fig. 1014

**Part
III**

- 14) Choose where you would like to place the imported data, as shown in Fig. 1015. Choose OK.

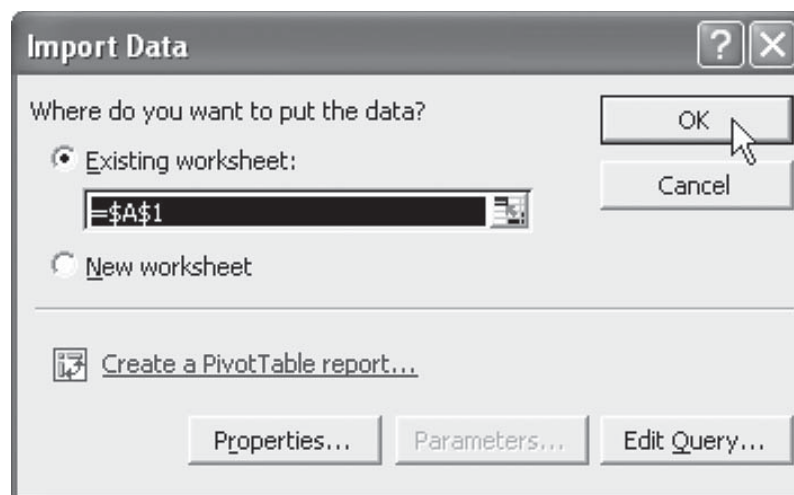


Fig. 1015

Result: You have a unique list of customers from the closed Excel file. See Fig. 1016.

	A	B
1	Customer	
2	Ainsworth	
3	Air Canada	
4	Bell Canada	
5	Chevron	
6	Compaq	
7	Compton Petroleum	
8	Exxon	
9	Ford	
10	General Motors	
11	Gildan Activewear	
12	HP	
13	IBM	
14	Kroger	
15	Lucent	
16	Molson, Inc	
17	Nortel Networks	
18	P&G	
19	Phillip Morris	
20	SBC Communications	
21	Sears	
22	Sears Canada	
23	Shell Canada	
24	State Farm	
25	Sun Life Financial	
26	Texaco	
27	Verizon	
28	Wal-Mart	
29		

Fig. 1016

Additional Details: Under Data – Import External Data – Data Range Properties, you can set this query up to update every time the workbook is opened, as shown in Fig. 1017.

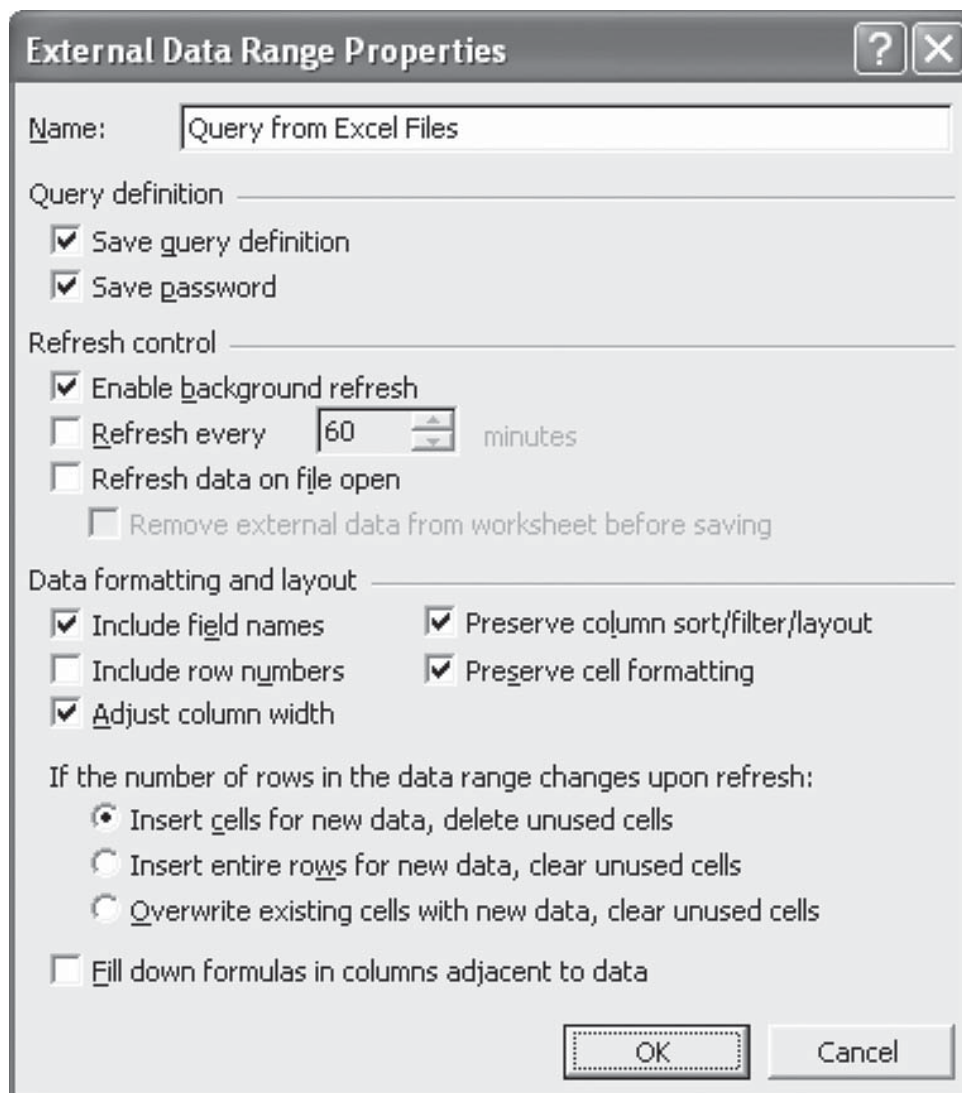


Fig. 1017

Summary: The Data Query tool provides a way to import data from Access, Excel, or ODBC data sources.

Commands Discussed: Data – Import External Data – New Database Query

IMPORT A TABLE FROM A WEB PAGE INTO EXCEL

Problem: Every day, you open a browser and check on the prices of your stock portfolio. You manually copy and paste this data to Excel. Or, possibly, the Web site offers a Download to Spreadsheet option, as shown in Fig. 1018. There is an easier way to get this data into Excel.

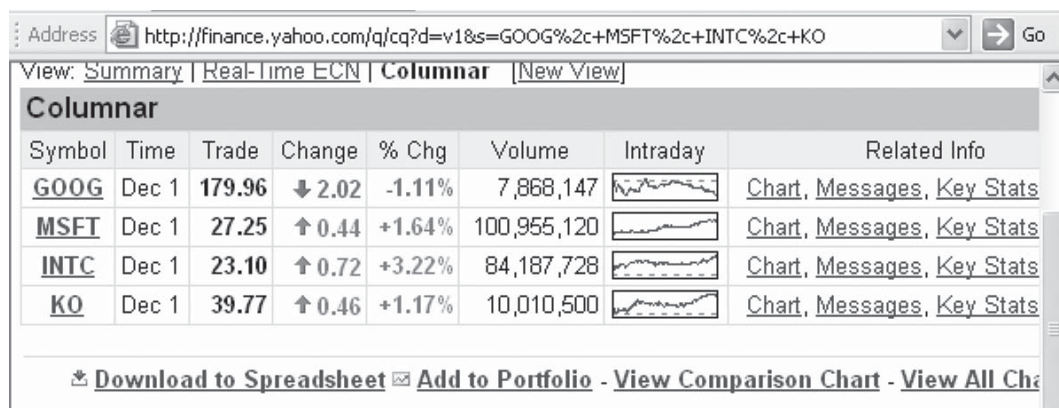


Fig. 1018

Strategy: Web queries make importing tables from Web pages easy. Follow these steps:

- 1) First, open a browser and browse to the Web page that you want to import. In the browser above, I have already entered the four stock symbols that I want to import. The address bar in the browser contains the URL for this view of the data.
- 2) Start with a new Workbook. From the menu, select Data – Import External Data – New Web Query, as shown in Fig. 1019.



Fig. 1019

The New Web Query dialog box will appear with your usual home page in the browser. See Fig. 1020.

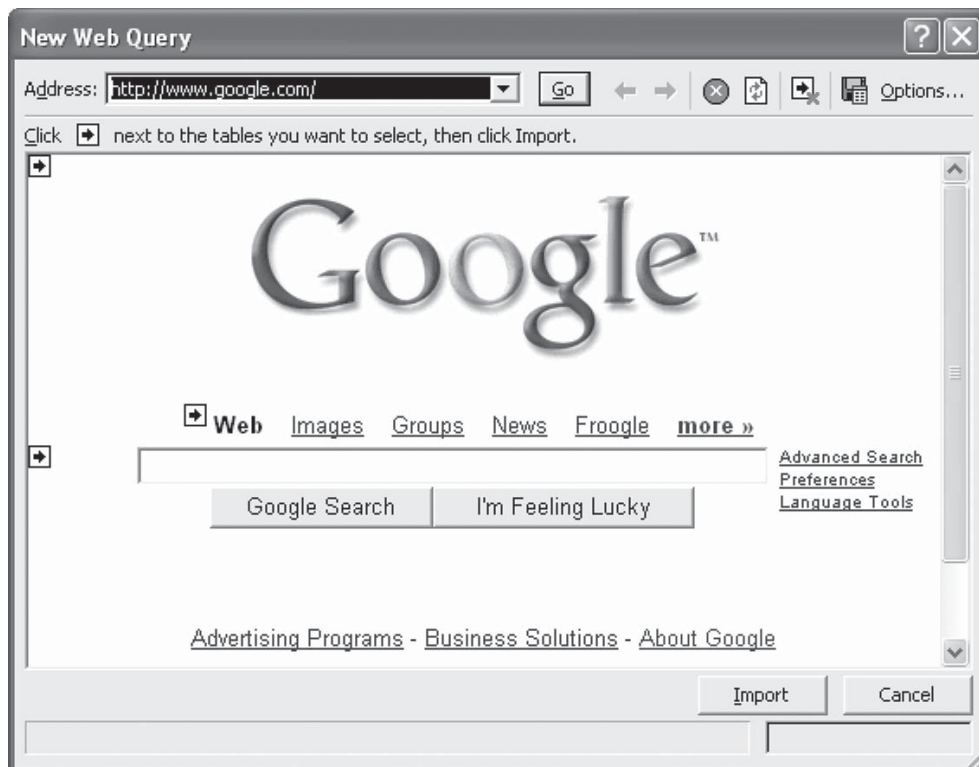


Fig. 1020

- 3) Switch to your regular browser with Alt+Tab. Highlight the correct address in the address bar and hit Ctrl+C to copy this address to the clipboard, as shown in Fig. 1021.



Fig. 1021

- 4) Switch back to Excel with Alt+Tab. Hit Ctrl+V to paste the address into the formula bar, as shown in Fig. 1022. Choose the Go button.

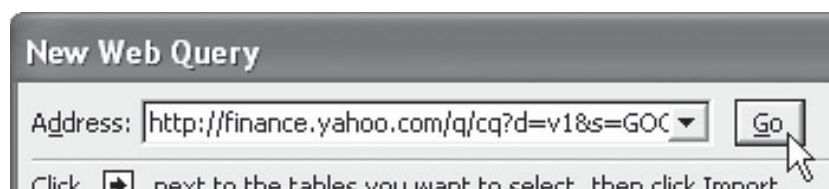


Fig. 1022

The desired Web page will appear in the dialog box. There will be a yellow box with a black arrow next to each table on the Web page. If you have ever designed Web pages, it is interesting to see just how many tables the designer used to create the page.

- 5) Scroll down to find the desired table. Choose the yellow arrow next to that table. As you choose the arrow, the table will be temporarily outlined. The yellow arrow changes to a green checkmark, as shown in Fig. 1023.

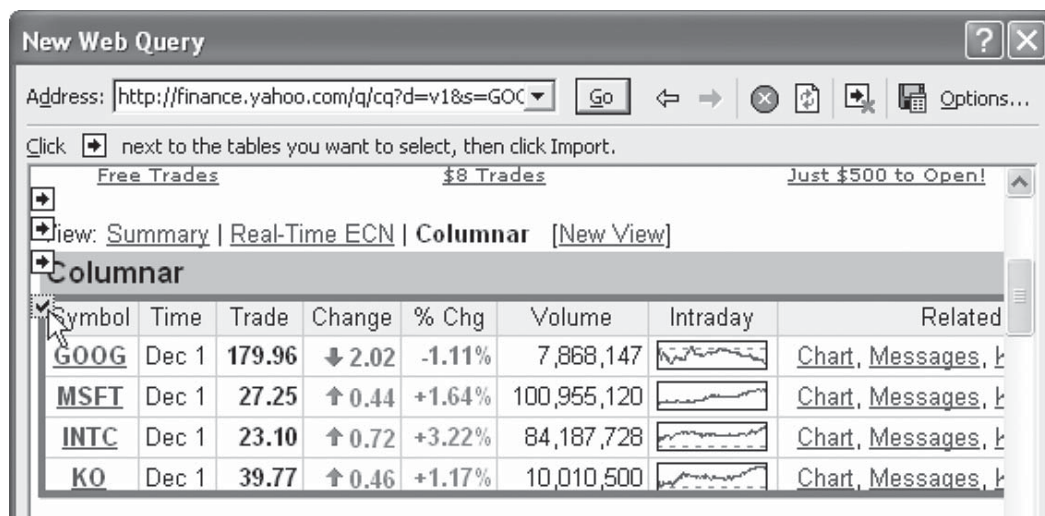


Fig. 1023

- 6) Choose the Import button. Excel will ask where you want the data imported, as shown in Fig. 1024.

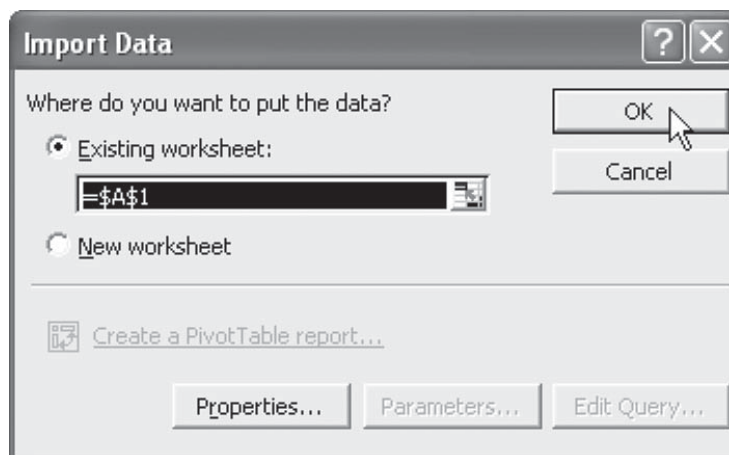


Fig. 1024

The dialog box disappears. For a few seconds, you see a strange value in cell A1, followed by “Getting Data...”. In 1-10 seconds, the spreadsheet will redraw with a current version of the data from the Web page, as shown in Fig. 1025.

	A	B	C	D	E	F	G	H
1	Symbol	Time	Trade	Change	% Chg	Volume	Intraday	Related Info
2	GOOG	1-Dec	179.96	Down 2.02	-1.11%	7,868,147		Chart, Messages, Key Stats, More
3	MSFT	1-Dec	27.25	Up 0.44	1.64%	100,955,120		Chart, Messages, Key Stats, More
4	INTC	1-Dec	23.1	Up 0.72	3.22%	84,187,728		Chart, Messages, Key Stats, More
5	KO	1-Dec	39.77	Up 0.46	1.17%	10,010,500		Chart, Messages, Key Stats, More

Fig. 1025

- 7) To refresh the data at any time, return to this worksheet. Use Data – Refresh Data, as shown in Fig. 1026.

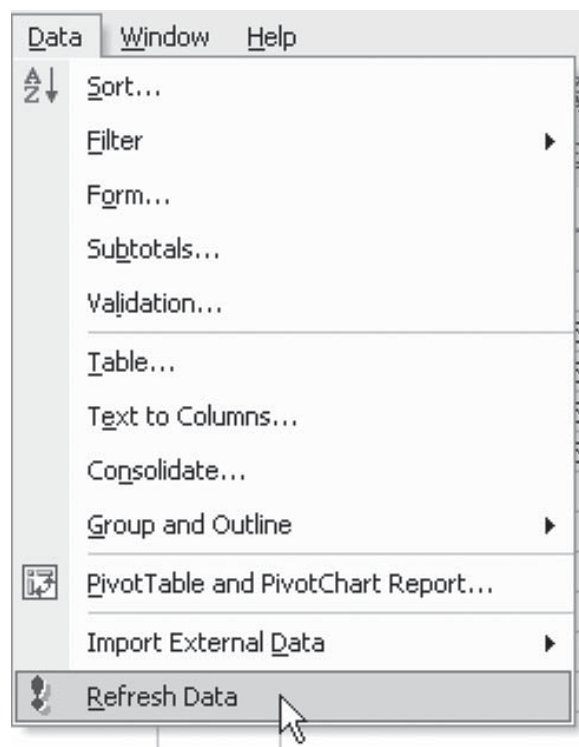


Fig. 1026

Additional Information: You can add numbers and formulas adjacent to the Web query. For example, you might add a column for the number of shares you hold and then calculate a value, as shown in Fig. 1027.

	J2		fx		=I2*C2			
	C	D	E	F	G	H	I	J
1	Trade	Change	% Chg	Volume	Intraday	Related Info	My Share	Value
2	179.96	Down 2.02	-1.11%	7,868,147		Chart, Messages, Key Stats, More	10	1799.6
3	27.25	Up 0.44	1.64%	100,955,120		Chart, Messages, Key Stats, More	100	2725
4	23.1	Up 0.72	3.22%	84,187,728		Chart, Messages, Key Stats, More	100	2310
5	39.77	Up 0.46	1.17%	10,010,500		Chart, Messages, Key Stats, More	100	3977
6							Total:	10811.6

Fig. 1027

Summary: Web queries offer an easy way to regularly import data from a Web page into Excel.

Commands Discussed: Data – Import External Data – New Web Query; Data – Refresh Data

HAVE WEB DATA UPDATE AUTOMATICALLY WHEN YOU OPEN WORKBOOK

Problem: Every day you open a spreadsheet with a Web page query and use Data – Refresh Data. Is there a way to have the Web Query refresh automatically?

Strategy:

- 1) Set up a Web query, as discussed in the last chapter. After you hit the Import button and before you close the Import Data dialog, choose the Properties button in the lower left, as shown in Fig. 1028. Choose the option to Update When the Spreadsheet Opens.

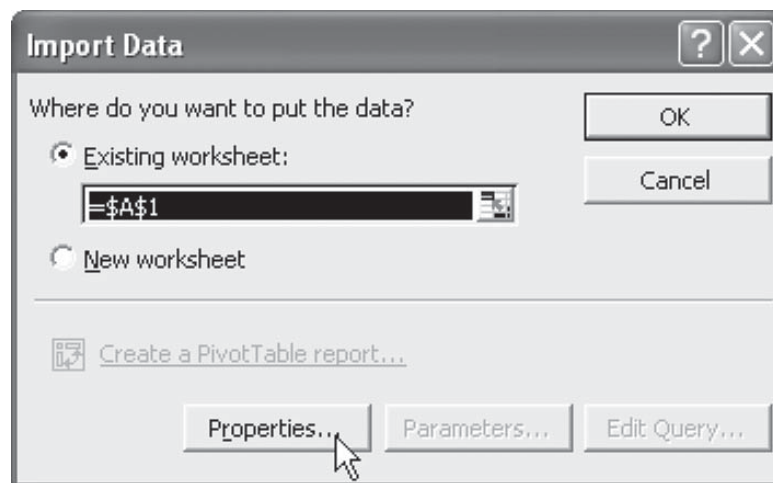


Fig. 1028

- 2) The External Data Range Properties dialog will display. In the Refresh Control section, choose the option to Refresh Data on File Open, as shown in Fig. 1029.

**Part
III**

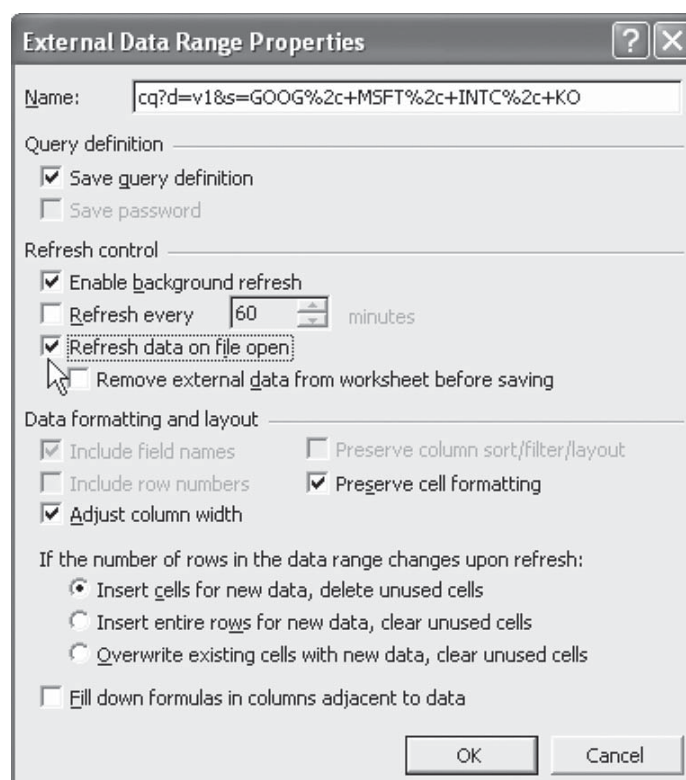


Fig. 1029

Additional Details: If you have a Web query set up and you need to access the Properties dialog to change a setting after the query has been defined, follow these steps.

- 1) Select one cell in the returned Web page.
- 2) As shown in Fig. 1030, from the menu, select Data – Import External Data – Data Range Properties.

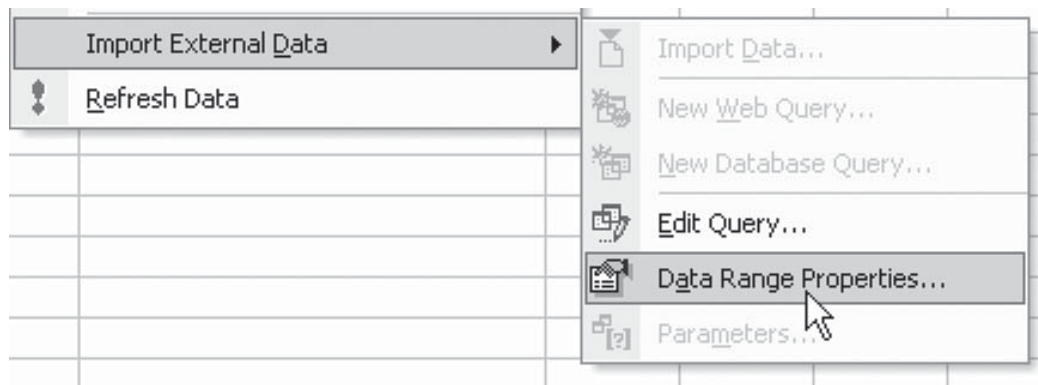


Fig. 1030

Summary: A Web query can be defined to update automatically every time the spreadsheet opens. This could allow you to set up a management dashboard with current information from various Web pages.

Commands Discussed: Data – Import External Data – Data Range Properties

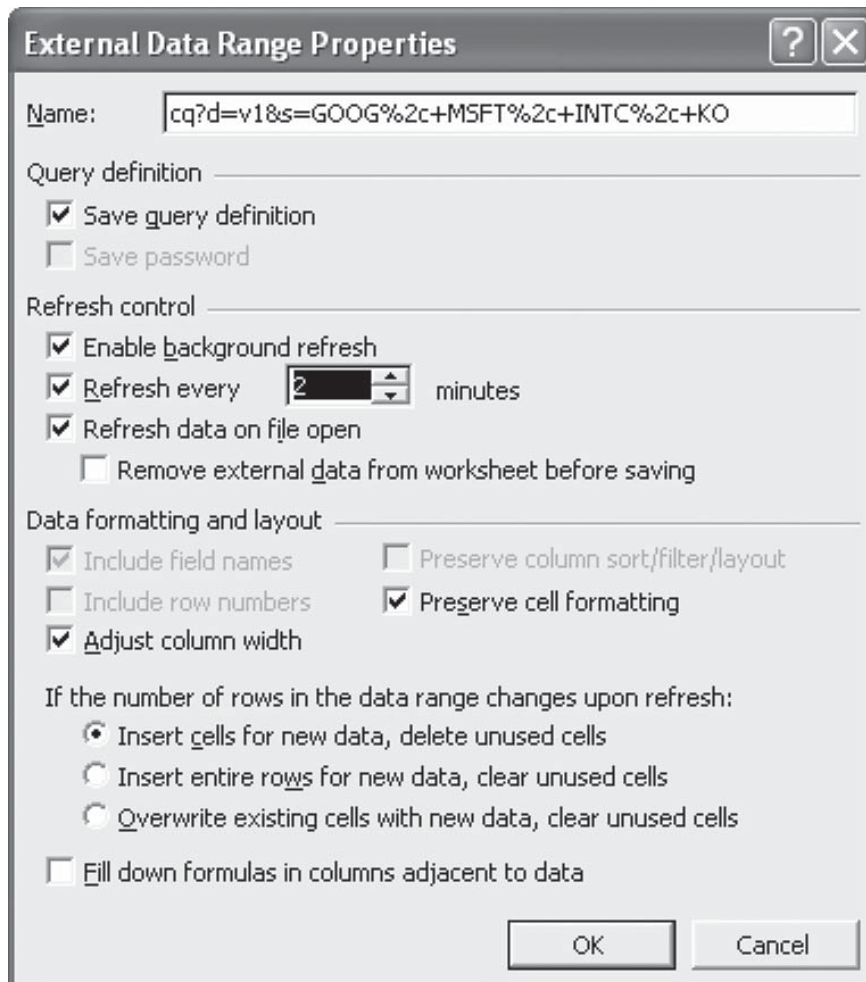
HAVE WEB DATA UPDATE AUTOMATICALLY EVERY TWO MINUTES

Problem: You have a Web query inserted in your spreadsheet that updates automatically when you open the spreadsheet. You would like the Web information to update automatically every two minutes.

Strategy:

- 1) Select a cell in the Web Query table. From the menu, select Data – Import External Data – Data Range Properties.

- 2) From the External Range Properties dialog box, in the Refresh Control section, select the Refresh Every option. Change the spin button to 2 minutes, as shown in Fig. 1031.

*Fig. 1031*

Gotcha: A refresh cannot happen if you are in Edit mode. If you start to enter a cell in the worksheet, get a telephone call, and head off to a meeting without completing the cell, Excel cannot update the query.

Gotcha: You may want to open a second instance of Excel and have the AutoRefresh query retrieved above in its own window. If you are trying to work in the same instance of Excel, the pause that occurs every two minutes while Excel refreshes is maddening.

Summary: To have a web query automatically update periodically, use the properties box and select the AutoRefresh button.

Commands Discussed: Data – Get External Data – Data Range Properties

THE SPACES IN THIS WEB DATA WON'T GO AWAY

Problem: As shown in Fig. 1032, you imported this data from a Web page. After many attempts to remove the internal spaces, you are still unable to do so.

	A
1	AJ 335 986
2	AV 797 147
3	CJ 541 149
4	CR 846 746
5	CZ 137 324
6	FD 605 706
7	JM 615 876

Fig. 1032

You tried highlighting column A and using Edit – Replace to replace every occurrence of a space with nothing. The blanks remain.

You tried the SUBSTITUTE function, as shown in Fig. 1033. The blanks remain.

	B1		fx =SUBSTITUTE(A1," ","")			
	A	B	C	D	E	
1	AJ 335 986	AJ 335 986				
2	AV 797 147	AV 797 147				
3	CJ 541 149	CJ 541 149				
4	CR 846 746	CR 846 746				
5	CZ 137 324	CZ 137 324				

Fig. 1033

If you go to cell A1 and type AJ Space 335 Space 986, the formula in column B will work, as shown in Fig. 1034.

	B1		fx =SUBSTITUTE(A1," ","")			
	A	B	C	D	E	
1	AJ 335 986	AJ335986				
2	AV 797 147	AV 797 147				

Fig. 1034

What is going on? Why won't the formula work on numbers pasted from the Web page?

Strategy: You can do some investigative work. Every character in the alphabet is assigned a number. A capital letter “A” is really character code 65. Normally, a space is character code 32.

In order to find the character code for a character, you can use the CODE function. To isolate the third character in cell A1, you would use =MID(A2,3,1). To find the character code for that value, you would use =CODE(MID(A2,3,1)).

**Part
III**

As shown in Fig. 1035, this formula confirms that the value typed into cell A1 contains a space (character code 32) in the third position.

	C1		fx =CODE(MID(A1,3,1))			
	A	B	C	D	E	
1	AJ 335 986	AJ335986	32			
2	AV 797 147	AV 797 147				
3	CJ 541 149	CJ 541 149				
4	CR 846 746	CR 846 746				

Fig. 1035

Now, copy that formula down to the other cells. As shown in Fig. 1036, all of the other cells have a character code 160 in the third position!

	C2		fx =CODE(MID(A2,3,1))			
	A	B	C	D	E	
1	AJ 335 986	AJ335986	32			
2	AV 797 147	AV 797 147	160			
3	CJ 541 149	CJ 541 149	160			
4	CR 846 746	CR 846 746	160			
5	CZ 137 324	CZ 137 324	160			
6	FD 605 706	FD 605 706	160			

Fig. 1036

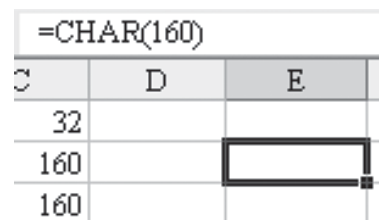
This explains why your attempts to change a space to nothing wouldn't work. The cells in A don't contain spaces.

A little research shows that character 160 is a non-breaking space. This is a space where you do not want the browser to start a new line between those words. The Nbsp character is very common on Web pages.

So, how can you use Character 160 in Edit – Replace? Here is one method.

Method 1:

- 1) Go to a blank cell in the worksheet and use the =CHAR(160) formula, as shown in Fig. 1037. You won't see anything in the cell, but the formula bar will show that you have a formula hidden there.



C	D	E
32		
160		
160		

Fig. 1037

- 2) Copy this cell.
- 3) Select your range of Web data. From the menu, choose Edit – Replace, as shown in Fig. 1038.

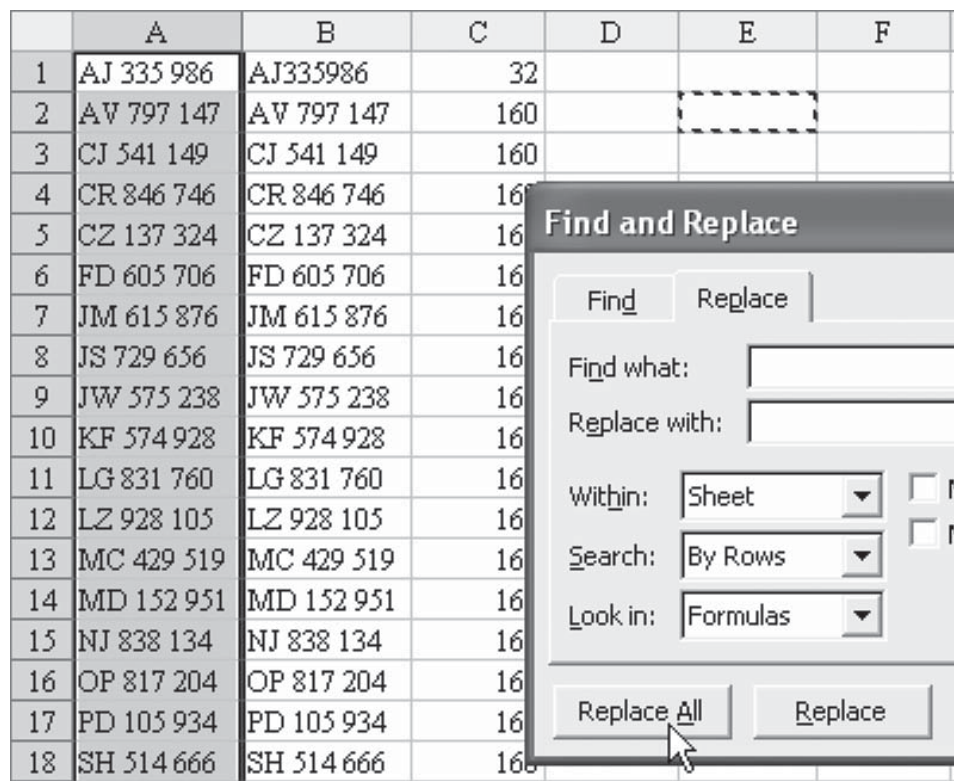


Fig. 1038

- 4) In the Find what box, hit Ctrl+V to paste the non-breaking space. Again, you won't see anything that is there. Leave the Replace with box blank. Choose Replace All.

Result: As shown in Fig. 1039, the unwanted spaces are removed.

2	AV797147
3	CJ541149
4	CR846746
5	CZ137324
6	FD605706
7	JM615876
8	JS729656
9	JW575238
10	KF574928
11	LG831760
12	LZ928105
13	MC429519

**Part
III**

Fig. 1039

Method 2: The other solution is to use the SUBSTITUTE function, as shown in Fig. 1040.

	B2		fx =SUBSTITUTE(A2,CHAR(160),"")			
	A	B	C	D	E	F
1	AJ 335 986	AJ335986	32			
2	AV 797 147	AV797147	160			
3	CJ 541 149	CJ541149	160			
4	CR 846 746	CR846746	160			
5	CZ 137 324	CZ137324	160			
6	FD 605 706	FD605706	160			

Fig. 1040

Summary: Although character 160 is the usual culprit for this problem, using the CODE function will allow you to find the character code for any such offending character.

Functions Discussed: =CODE(); =CHAR(); =SUBSTITUTE()