



# MANIPULATING DATA WITH POWER QUERY

BY

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EXCELTV

## LAB 1: MERGING DATA.

You have been tasked to use Excel to manipulate data using Power Query

### MODULE REQUIREMENTS

- ▶ Creating an Excel Table
- ▶ Opening Power Query
- ▶ Manipulating Data Power Query
- ▶ Closing and Loading To...

### HINTS

Remember to play around with Power Queries different features.

### STEP-BY-STEP INSTRUCTIONS

Click Steps

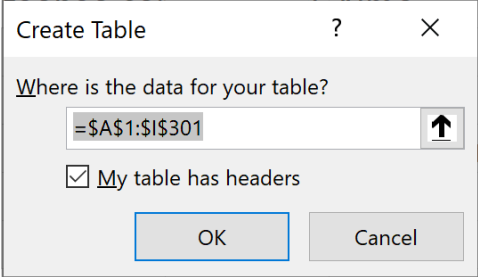
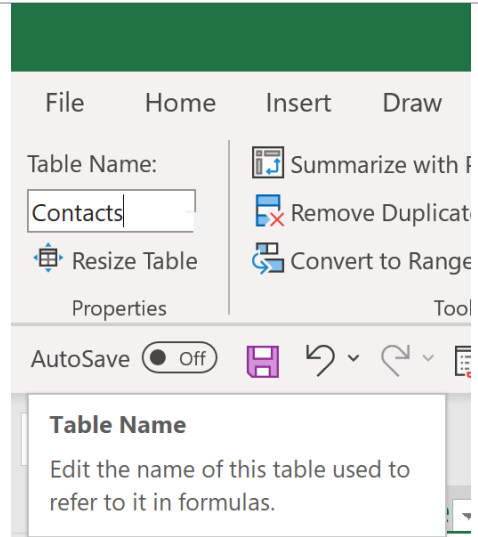
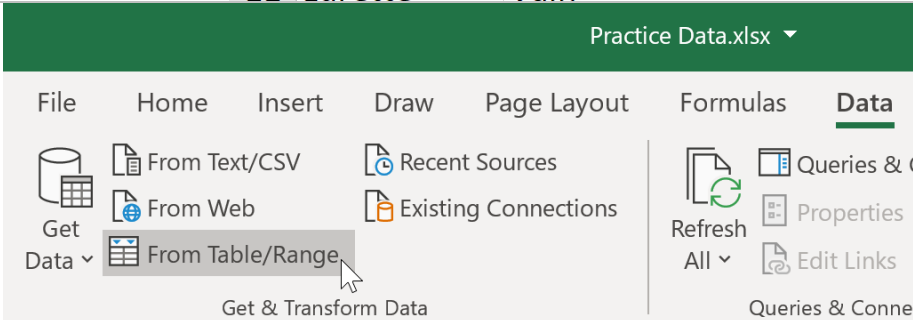
Screen Shots

1. Open Practice Data.xlsx

2. From on the Practice Data tab, place the selector anywhere inside the contiguous data region.

	A	B	C	D	E	F	G	H	I	J		
1	first_name	last_name	Email	City	Street	Nur	Street	Nar	Street	Suff	SSN	Telephone Number
2	Julio	Proffer	jproffer0@MosjÄ,en		8	Buena	Vist	Place			319-62-20	558-331-5918
3	Fianna	Aberchird	faberchird	Kozloduy	47	Briar	Crest	Place			112-39-34	365-960-6855
4	Doyle	Winfindin	dwinfindir	Hengli	53	Bellgrove		Point			597-59-65	414-127-8818
5	Thurstan	Swanger	tswanger3	Birigui	8551	Amoth		Parkway			355-32-83	984-534-6710
6	Saleem	Crowest	scrowest4	Nong Ki	7	Warbler		Crossing			690-60-61	948-660-9653
7	Darcee	Duff	dduff5@cc	Jiujianfang	96334	Redwing		Crossing			522-04-15	695-160-1859
8	Pen	Saffin	psaffin6@unblog.fr		5	Borchwood		Crossing			415-81-23	101-647-8844
9	Eilis	Roots	eroots7@r	Gelap	804	Victoria		Drive			426-70-33	919-393-0284
10	Bobbie	January	bjanuary8	Huayllo	3529	Corben		Junction			796-57-22	423-816-3767
11	Lurette	Vain	lvain9@bt	General Se	97	Sycamore		Trail			816-17-19	268-346-3659
12	Sallie	Saville	ssavillea@taobao.co		1	Almo		Crossing			520-02-07	825-767-6535
13	Regen	Downing	rdowningt	Energetic	59	Emmet		Circle			360-03-63	418-795-9799
14	Hunfredo	Colmore	hcolmorec	Bokino	17	Forest	Rur	Alley			401-44-49	489-873-9618
15	Elbertine	Buckle	ebuckleed	Motong	26	Carpenter		Drive			188-92-61	801-904-9977
16	Elise	Conti	econti@r	Gaopai	85509	Dayton		Circle			789-36-05	767-745-5114
17	Nydia	Shimuk	nshimukf@	Passos	67	Almo		Road			457-30-61	902-422-6181
18	Goldie	Fulep	gfulepg@	fotki.com	8	Scofield		Street			262-57-51	728-117-3415
19	Nanete	Caskey	ncaskeyh@	Condega	11	Monica		Parkway			155-22-10	361-649-1911
20	Ronda	Roffev	rroffevi@r	Panakura	6	Gravhawk		Park			423-29-35	196-577-1674

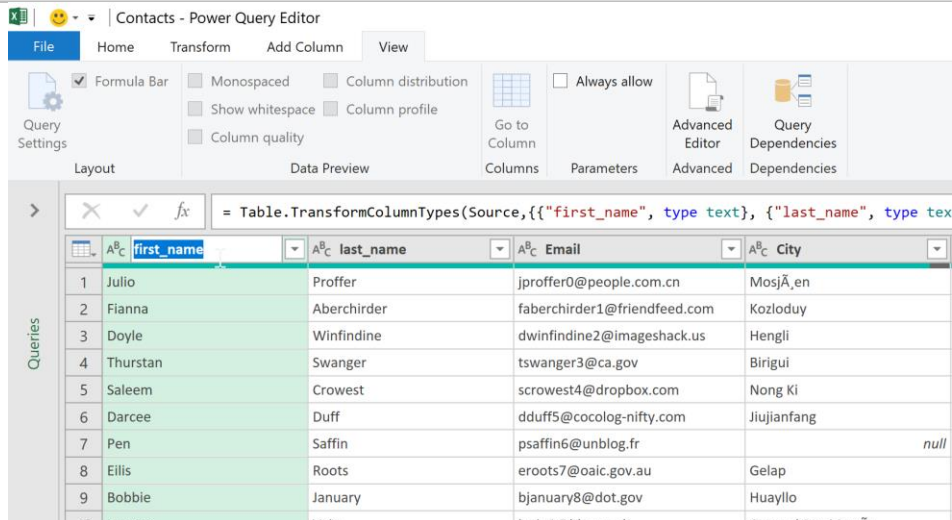


Click Steps	Screen Shots
<ol style="list-style-type: none"><li>1. Go to Insert &gt;&gt; Table or Press Ctrl + T to insert a Table.</li><li>2. Ensure My Table has Headers is checked.</li><li>3. Ensure the data region references is = \$A\$1:\$I\$301.</li><li>4. Press OK.</li></ol>	
<ol style="list-style-type: none"><li>5. Immediately after creating your table, change the Table Name to Contacts.</li></ol> <p>You can edit a Table's name from on the Table Design tab.</p>	
<ol style="list-style-type: none"><li>6. Pull the table into Power Query. Do this by going to Data &gt; Table/Range while the Excel cursor is in the Table.</li></ol>	

Click Steps

Screen Shots

7. Power Query will load.
8. Once complete we can begin making edits to table.
9. We will first edit the first\_name column. Double click into the column so all the text is highlight.
10. Replace this text with First Name.
11. Do the same for last\_name. Change it to Last Name.



Contacts - Power Query Editor

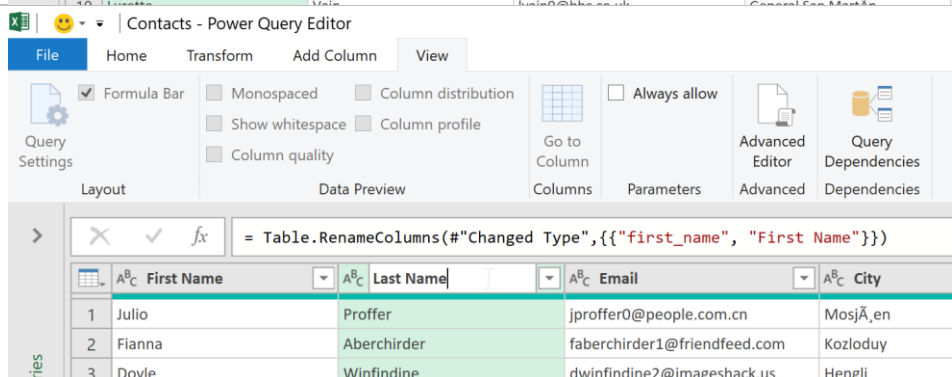
File Home Transform Add Column View

Query Settings

Layout Data Preview Columns Parameters Advanced Dependencies

fx = Table.TransformColumnTypes(Source,{{"first\_name", type text}, {"last\_name", type text}})

	first_name	last_name	Email	City
1	Julio	Proffer	jproffer0@people.com.cn	MosjÃ,en
2	Fianna	Aberchirder	faberchirder1@friendfeed.com	Kozloduy
3	Doyle	Winfindine	dwinfindine2@imageshack.us	Hengli
4	Thurstan	Swanger	tswanger3@ca.gov	Birigui
5	Saleem	Crowest	scrowest4@dropbox.com	Nong Ki
6	Darcee	Duff	dduff5@cocolog-nifty.com	Jiujianfang
7	Pen	Saffin	psaffin6@unblog.fr	null
8	Ellis	Roots	eroots7@oalc.gov.au	Gelap
9	Bobbie	January	bjanuary8@dot.gov	Huayllo



Contacts - Power Query Editor

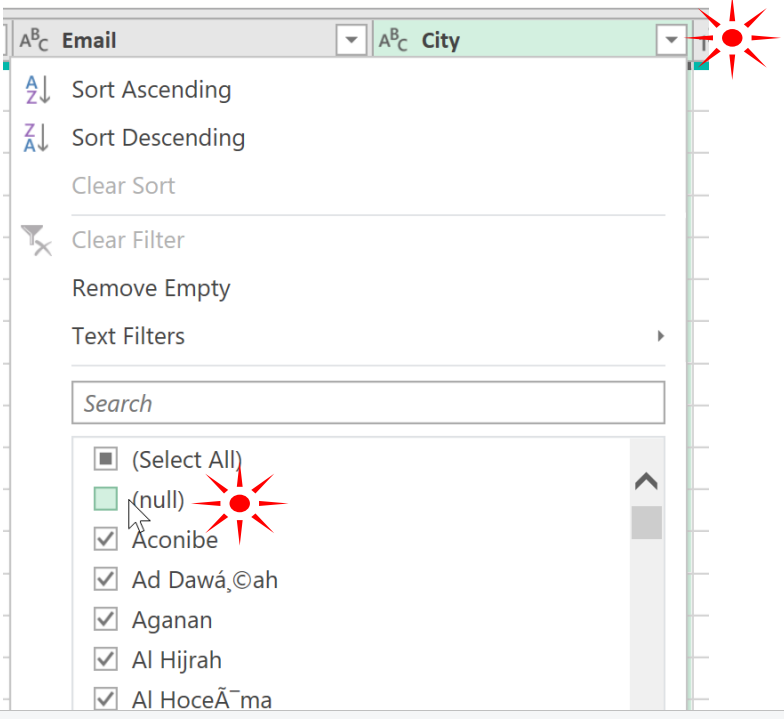
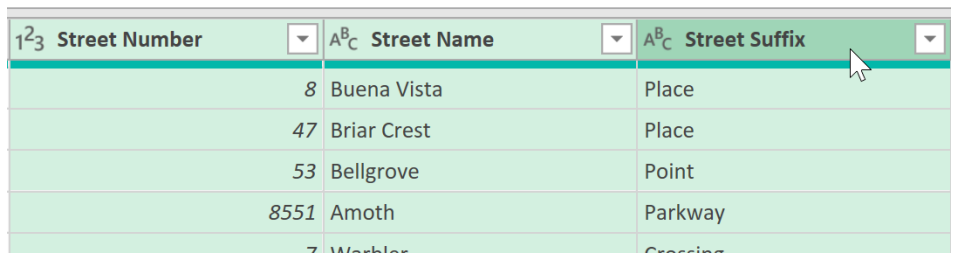
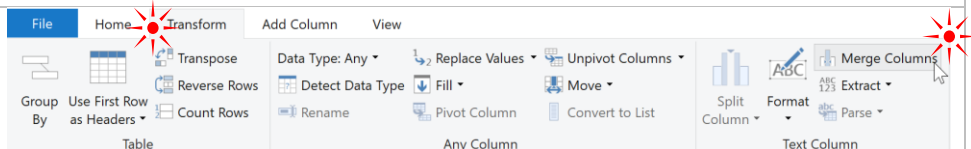
File Home Transform Add Column View

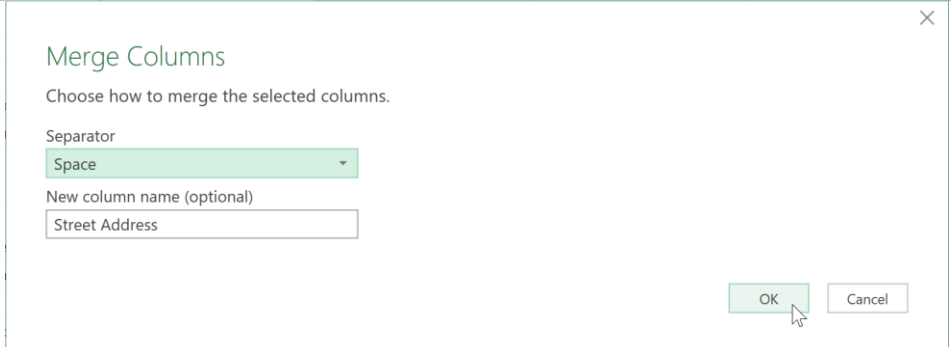
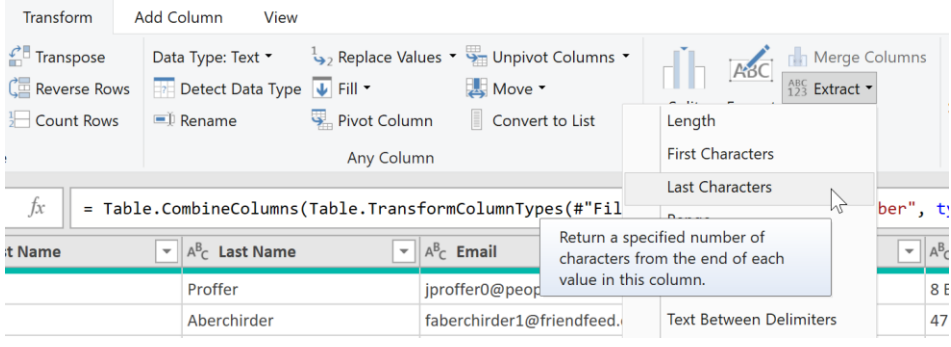
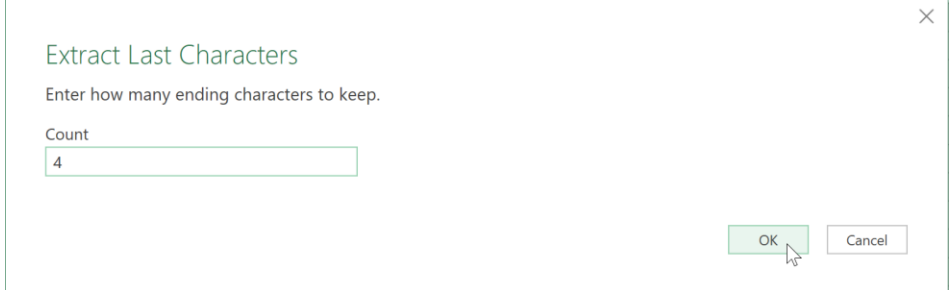
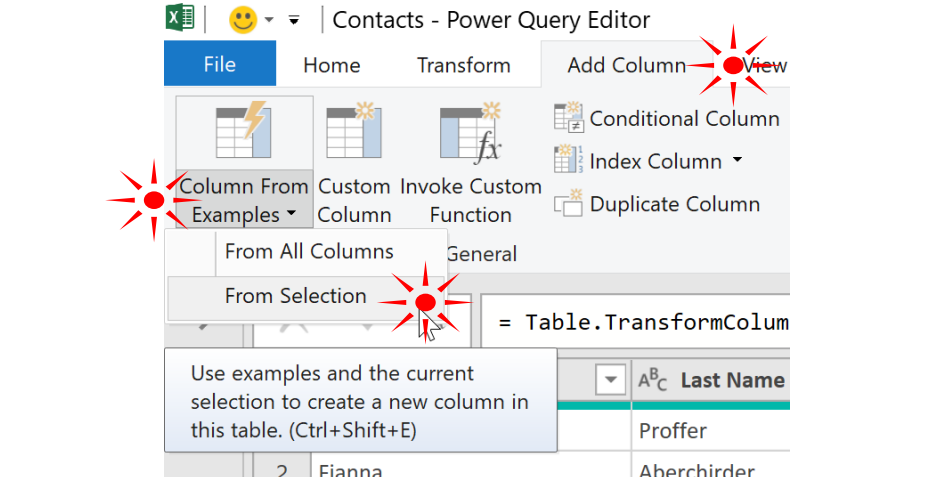
Query Settings

Layout Data Preview Columns Parameters Advanced Dependencies

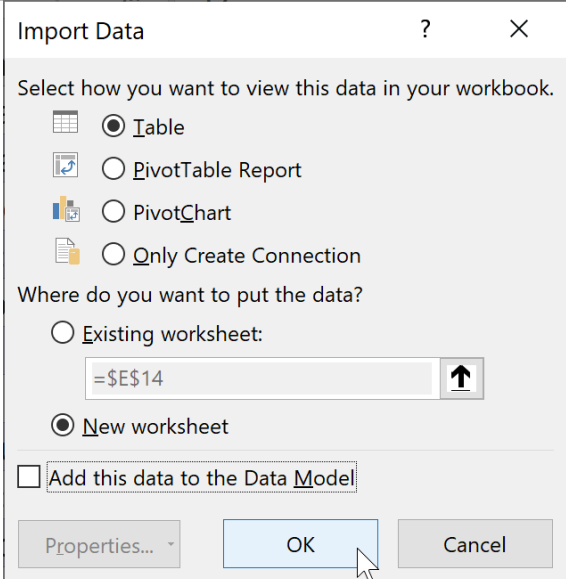
fx = Table.RenameColumns(#"Changed Type",{{"first\_name", "First Name"}})

	First Name	Last Name	Email	City
1	Julio	Proffer	jproffer0@people.com.cn	MosjÃ,en
2	Fianna	Aberchirder	faberchirder1@friendfeed.com	Kozloduy
3	Doyle	Winfindine	dwinfindine2@imageshack.us	Hengli

Click Steps	Screen Shots
<p>12. Let's filter out the null values from City.</p> <p>13. Click on the dropdown arrow to the right of the City column.</p> <p>14. Uncheck (null)</p> <p>15. Then click the OK button at the bottom of the dropdown popup.</p>	
<p>16. Let's merge the columns Street Number, Street Name, and Street Suffix into one column called Street Address.</p> <p>17. While holding shift click Street Number, Street Name, and Street Suffix</p>	
<p>18. From on the Transform tab select Merge Columns.</p>	

Click Steps	Screen Shots
<p>19. In the Merge Columns dialog box, select Space as the separator. Renamed the new column to be Street Address.</p> <p>20. Click OK.</p>	 <p>The screenshot shows the 'Merge Columns' dialog box. The 'Separator' is set to 'Space'. The 'New column name (optional)' is 'Street Address'. The 'OK' button is highlighted.</p>
<p>21. Let's only show the last for digits of the social security numbers provided.</p> <p>22. Click on SSN column header.</p> <p>23. From the Transform tab select Extract &gt; Last Characters.</p>	 <p>The screenshot shows the 'Transform' tab in the Power Query Editor. The 'Extract' dropdown menu is open, and 'Last Characters' is selected. A tooltip explains: 'Return a specified number of characters from the end of each value in this column.'</p>
<p>24. In the Extract Last Characters dialog box set the count to 4.</p> <p>25. Press OK to have it take effect.</p>	 <p>The screenshot shows the 'Extract Last Characters' dialog box. The 'Count' is set to '4'. The 'OK' button is highlighted.</p>
<p>26. Let's adjust the telephone number format to (###) ###-####.</p> <p>27. First select the Telephone Number column header.</p> <p>28. From on the Add Column ribbon, select Column From Examples &gt; From Selection</p>	 <p>The screenshot shows the 'Add Column' ribbon in the Power Query Editor. The 'Column From Examples' dropdown is open, and 'From Selection' is selected. A tooltip explains: 'Use examples and the current selection to create a new column in this table. (Ctrl+Shift+E)'. Red starburst markers highlight the 'Column From Examples' dropdown and the 'From Selection' option.</p>

Click Steps	Screen Shots
<p>29. While referencing the Telephone Number rewrite the first two entries in the correct format.</p> <p>Use the screenshot to the right as a reference.</p> <p>The dark black font represents the first two entries I retyped. The grey font reflects what Excel learned through my efforts.</p> <p>Press OK.</p>	
<p>30. We're now finished data wrangling.</p> <p>31. Click File &gt; Close &amp; Load To...</p>	

Click Steps	Screen Shots
<p>32. Select Table in the top half. New worksheet in the bottom half.</p> <p>33. Click OK.</p>	
<p>34. Congratulations! You have created a new query with Power Query.</p> <p>35. Remember, you can have the query refresh any time by pressing the Refresh button from on the Table Design tab.</p>	