

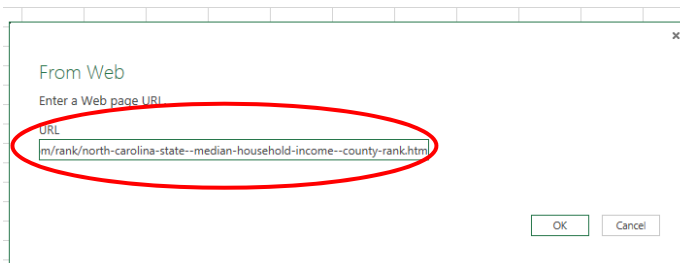
Power Query Supplemental Exercise

Data from the Web (with DEMO of merge)

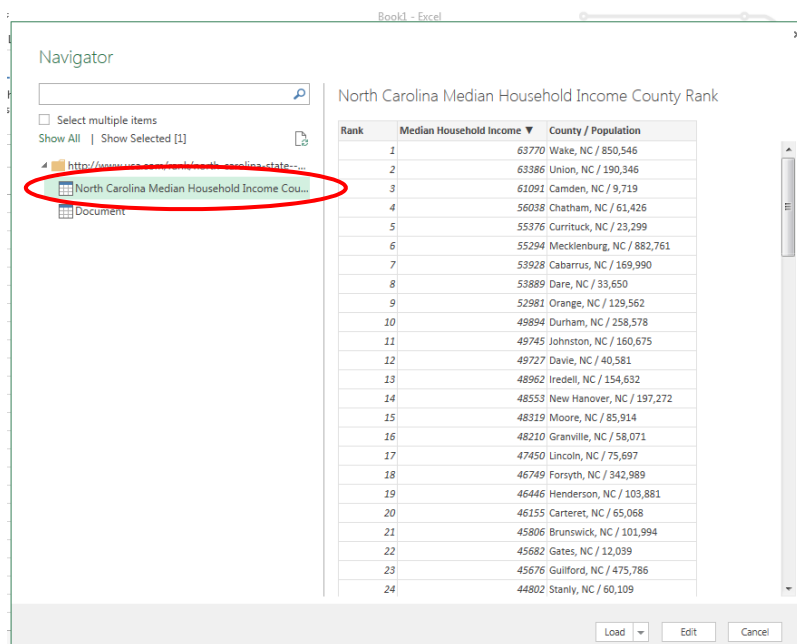
- 1) In Google, SEARCH: **“North Carolina Household Income by County”**
 - a. Click URL starting **www.USA.com**, highlight & copy URL



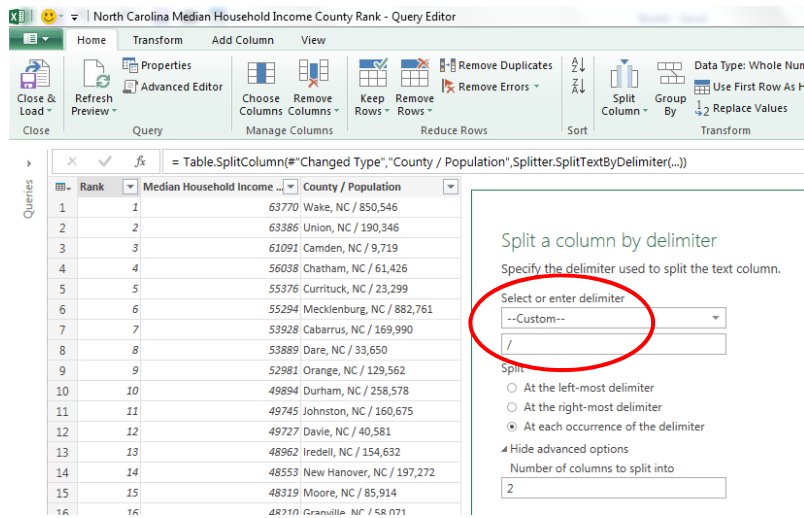
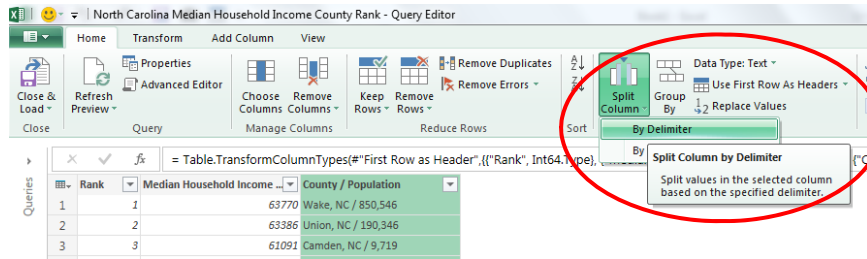
- b. In Excel, select the Power Query tab and click **‘From Web’**, paste URL, and click **“OK”**.



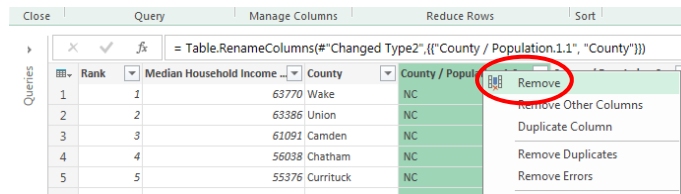
- c. In the Navigator pane, select the **‘North Carolina Median Household Income’** table, and click **‘Edit’**. A sample of the data will open in a Query Editor window.



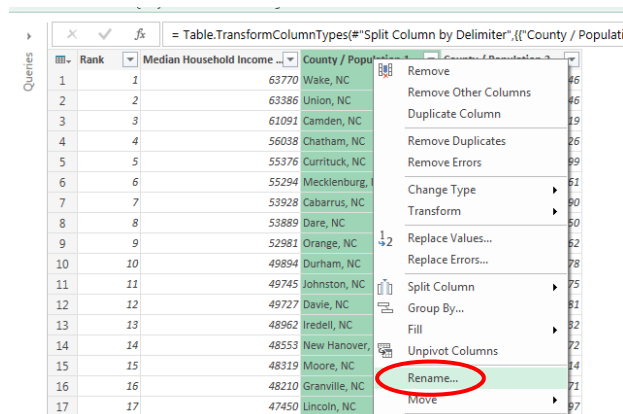
- d. In Query Editor, highlight **'County/Population'** column and select **'Split Column by Delimiter'** to split County from Population at the forward-slash, using the Custom delimiter box.



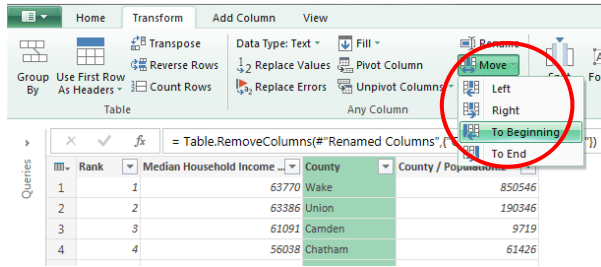
- e. Split 'County' into County and State; and remove the resulting State column by right-clicking on the column and selecting **'Remove'**.



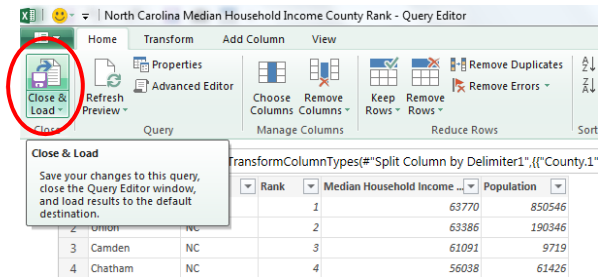
- f. Rename the split columns: Highlight column, right-click and select **'Rename'**



- g. Relocate the 'County' column to beginning, using the '**Move**' function on the '**Transform**' ribbon (or alternatively, you can click and drag the column to move it)

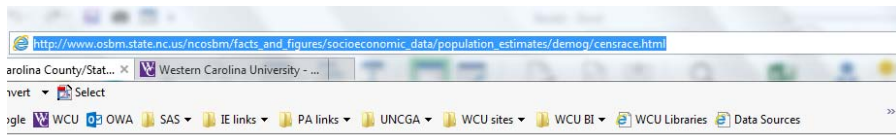


- h. Click '**Close and Load**' (the data will be added to the data model)



2) In Google, SEARCH "**North Carolina race by county**"

- a. Click URL starting **www.osbm.state.nc.us**, highlight & copy URL



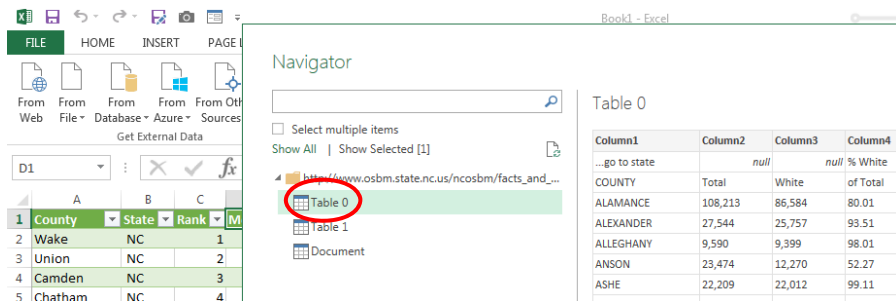
North Carolina County/State Race Data

(to open/download as Excel Spreadsheet, click [here](#))

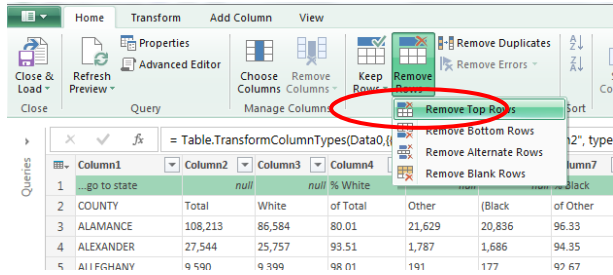
Race Totals and Percentages from 1990 Census MARS file

go to state			% White		% Black		
COUNTY	Total	White	of Total	Other (Black	of Other	Indian	Asian)
ALAMANCE	108,213	86,584	80.01	21,629	20,836	96.33	304
ALEXANDER	27,544	25,757	93.51	1,787	1,686	94.35	52
ALLEGHANY	9,590	9,399	98.01	191	177	92.67	8
ANSON	23,474	12,270	52.27	11,204	11,107	98.13	76

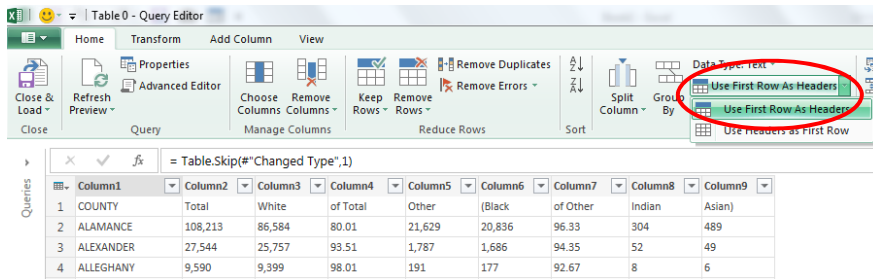
- b. In Excel, select '**From Web**', paste URL, select **Table 0**, and click '**Edit**'



- i. Use the '**Remove Rows**' function on the **HOME** ribbon to **REMOVE** the top row

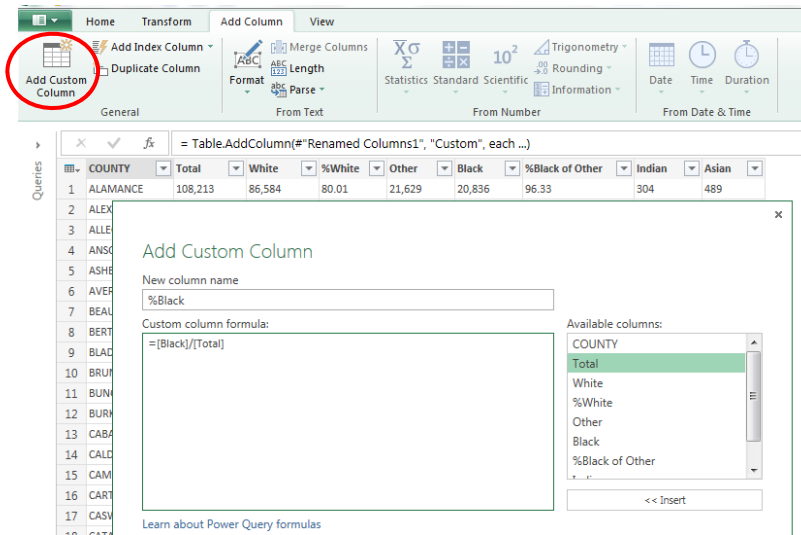


ii. Use **First Row as Headers**

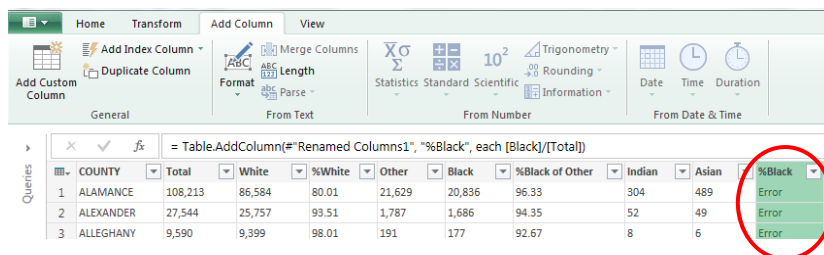


iii. **RENAME** 'of Total' to '%White' and 'of Other' to '%Black of Other'

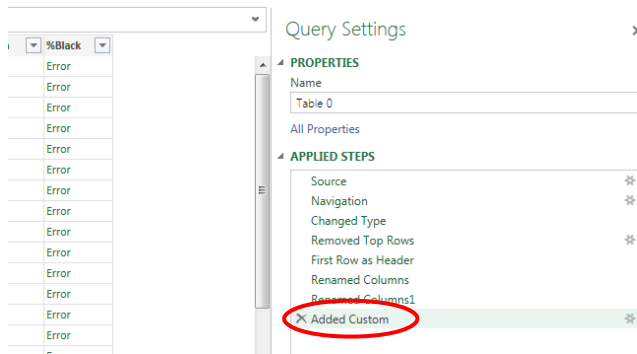
- iv. Click **'Add Custom Column'** (name: % Black), and create a custom formula (using the available columns showing to the right of the formula box) to calculate the percent Black of the total county population. Click **'OK'**.



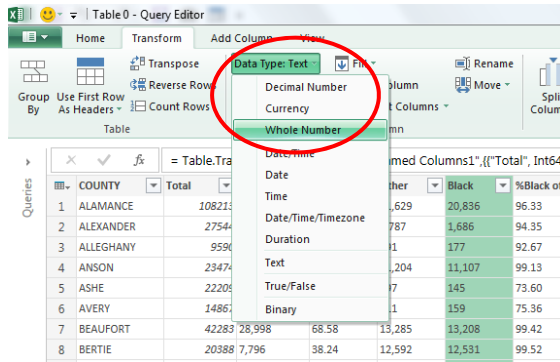
v. Why do you think an 'Error' returned?



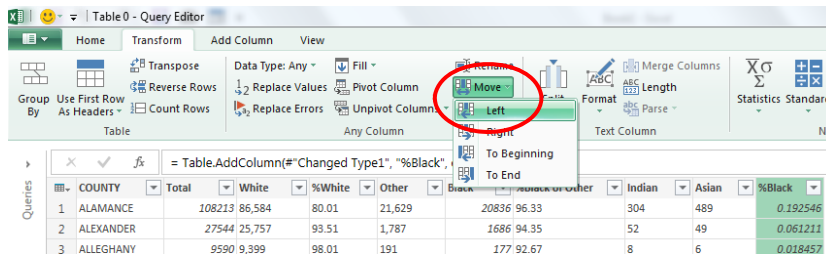
- vi. Remove **'Added Custom'** in **APPLIED STEPS** box of **Query Settings**



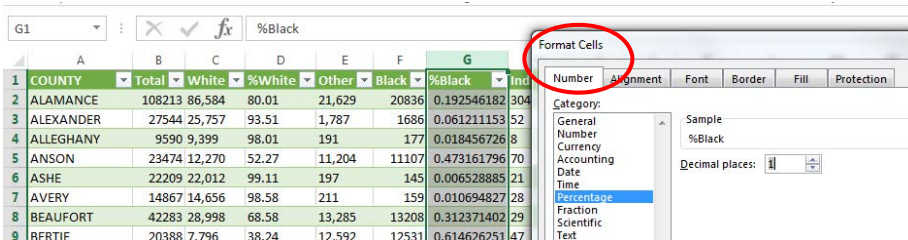
- vii. On the **Transform** ribbon, change **Data Type** from **Text** to **Whole Numbers** for **'Total'** and **'Black'** columns



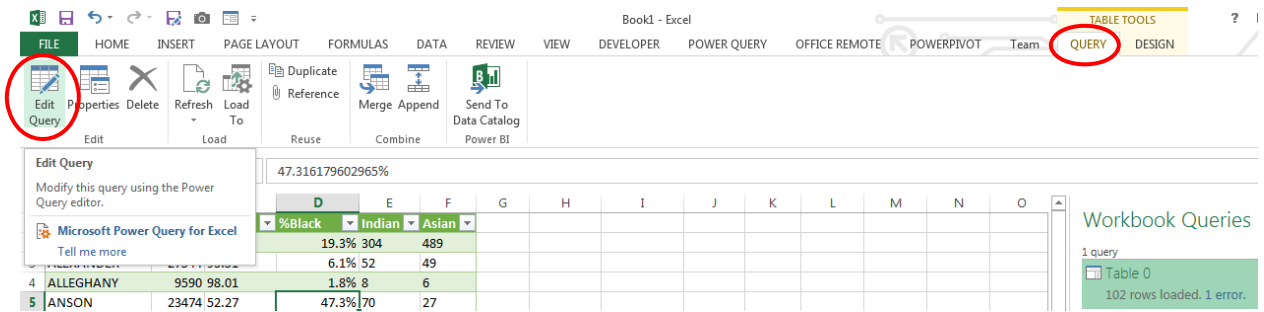
- viii. Repeat Insert custom column (name: %Black); and use the 'Move' function on the **TRANSFORM** ribbon to move the **'%Black'** column next to the **'%White'** column.



- c. **REMOVE** original **'Black'** column (does not impact calculated %Black column), and **'%Black of Other'** column. Click **'Close and Load'**.
- d. Change **%Black** to percentage formatting by right-clicking on the column, selecting **'Format Cells'**, and then **'Number'** and **'Percentage'**

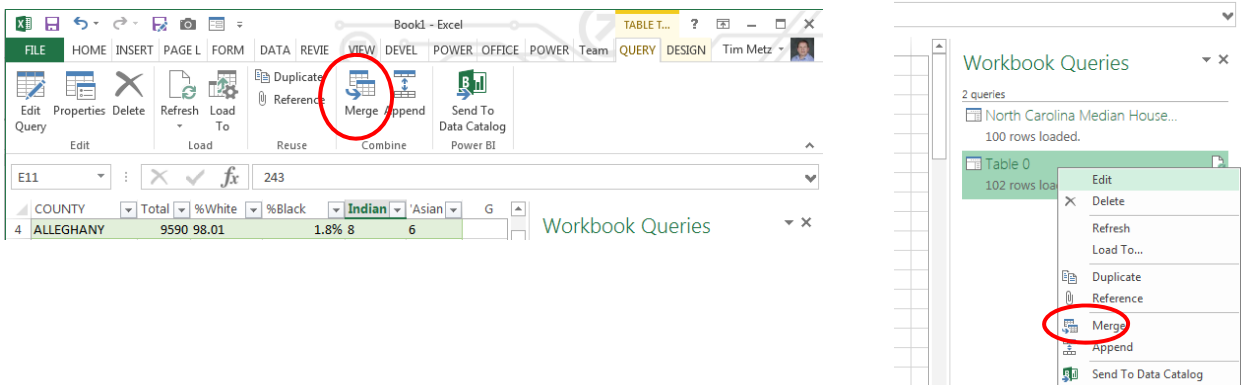


3) Re-open the Query Editor by clicking **'Edit Query'** on the **'Query'** ribbon.

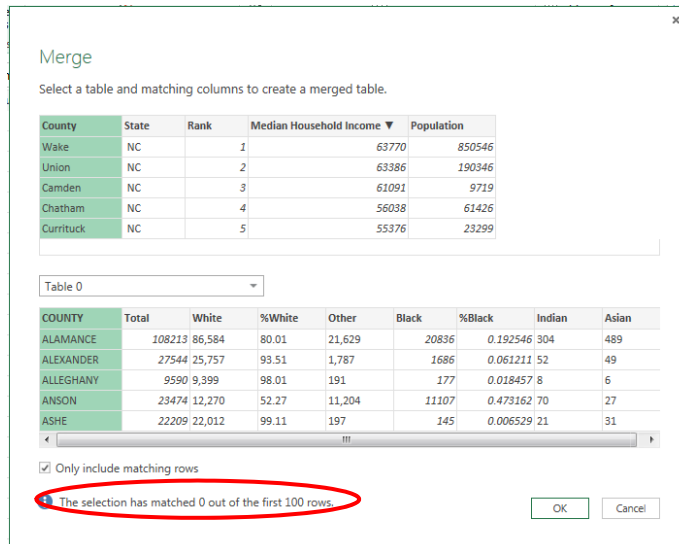


a. Repeat Add Custom Column to insert a **'% Asian'** (of total) column, move it next to the **'%Black'** column, and remove the **'Indian'** and **'Asian'** columns. Click **'Close and Load'**.

4) Perform a merge of these two tables using the common **'County'** column from each. A merge can be performed in the Excel workbook from the **'Query'** ribbon, or by right clicking a table in the **'Workbook Queries'** pane, or from the **'Home'** ribbon of the Query Editor

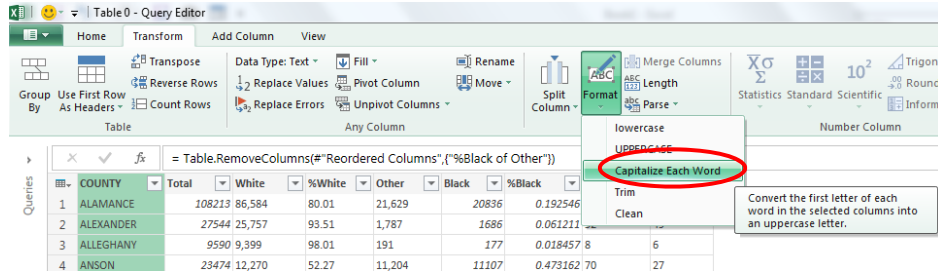


a. Merge the **'North Carolina Median Household Income'** table with **'Table 0'** (Race by County)

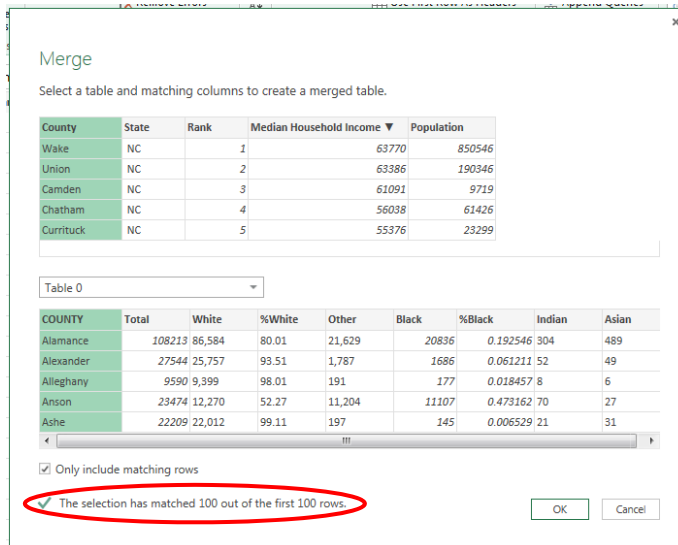


i. Why does the merge display 0 (zero) matching rows?

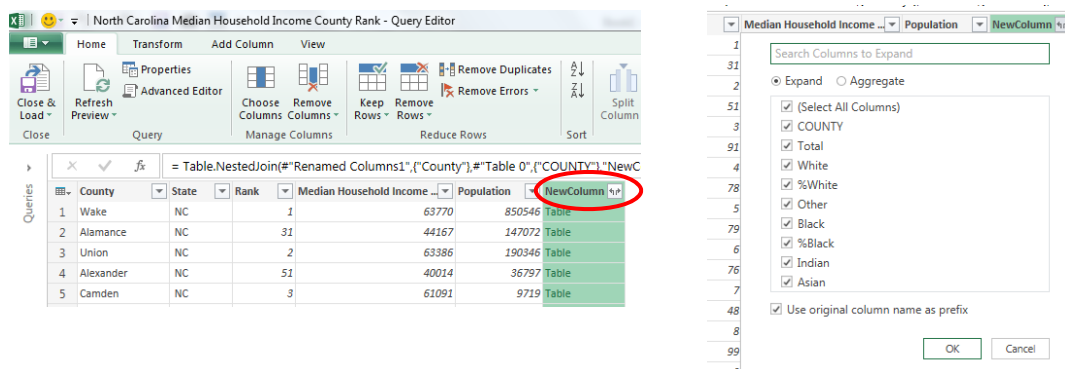
- b. Select 'Table 0', click 'Edit' to enter the Query Editor, and either right click or use the TRANSFORM ribbon to change the text format to 'Capitalize Each Word' (in order to match the case of the county column in the household income table).



- c. Repeat the merge as described above (note that all 100 rows were matched). Click OK.



- d. Click the icon next to the header text '**NewColumn**' to choose which columns to pull into the merge from Table 0. Select '**Total**', '**%White**' and '**%Black**'. Click OK.



- i. The merged table displays the new columns added from Table 0 (rename, if desired).

North Carolina Median Household Income County Rank - Query Editor

Home Transform Add Column View

Close & Load Refresh Preview Properties Advanced Editor Choose Columns Remove Columns Keep Rows Remove Rows Remove Duplicates Remove Errors Split Column Group By Data Type: Text Use First Row As Headers Replace Values

Close Query Manage Columns Reduce Rows Sort Transform

Queries

= Table.ExpandTableColumn(Merge, "NewColumn", ["Total", "%White", "%Black"], ["NewColumn.Total", "NewColumn.%White", "Ne

County	State	Rank	Median Household Income	Population	NewColumn.Total	NewColumn.%Wh...	NewColumn.%Black
1 Wake	NC	1	63770	850546	426364	76.36	0.208599
2 Alamance	NC	31	44167	147072	108213	80.01	0.192546
3 Union	NC	2	63386	190346	84210	83.38	0.159648
4 Alexander	NC	51	40014	36797	27544	93.51	0.061211
5 Camden	NC	3	61091	9719	5904	74.41	0.250847
6 Alleghany	NC	91	30845	11084	9590	98.01	0.018457

Developed by:

The Office of Institutional Planning and Effectiveness
 Western Carolina University

<http://oipe.wcu.edu>