

GEO MYAR USER MANUAL

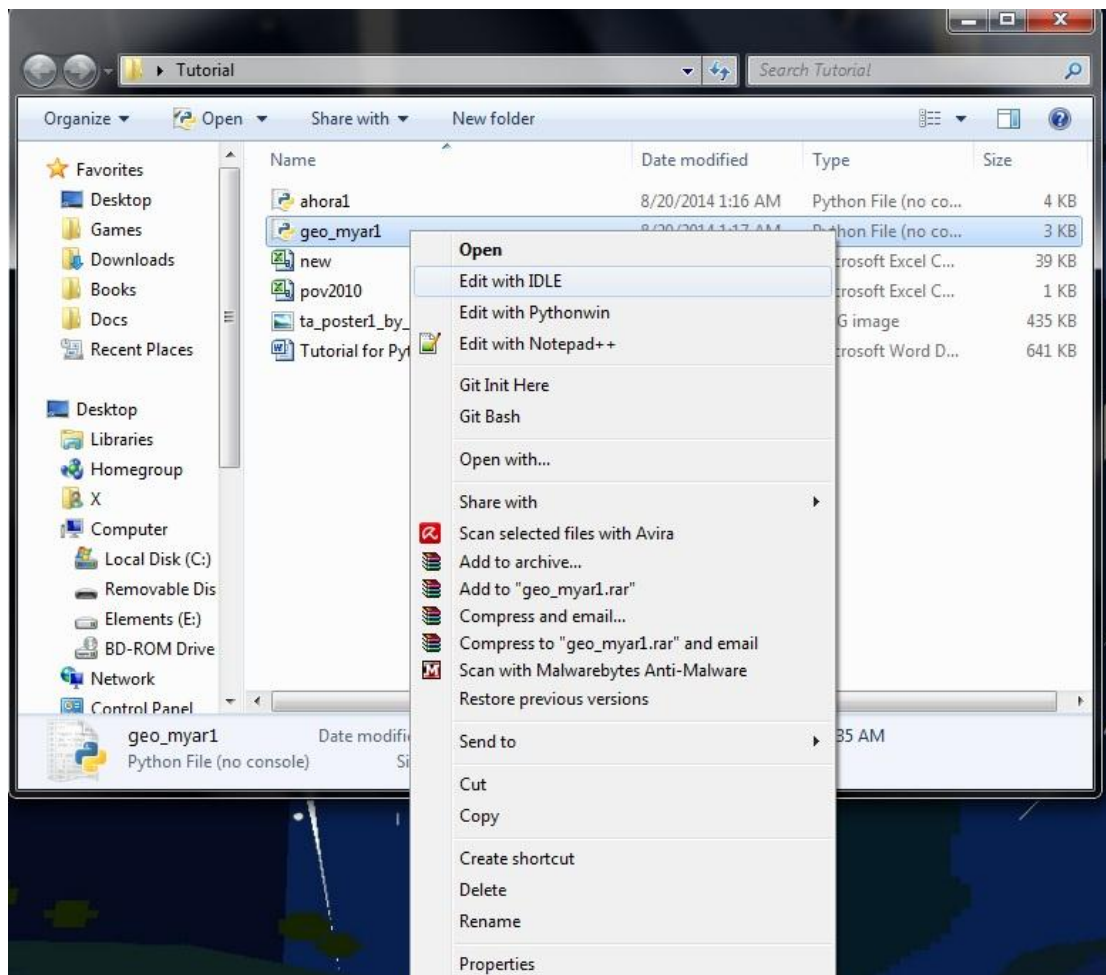
By Yanilda Peralta, Amos Addy, Rolando Diaz and Miguel Ben

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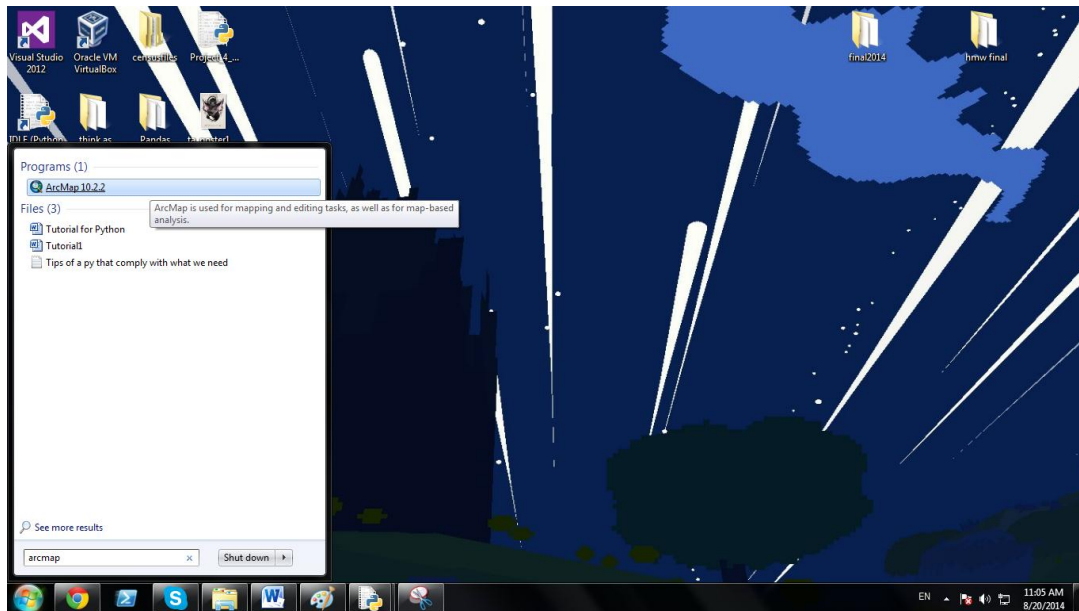
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I. Getting the Arcmap path

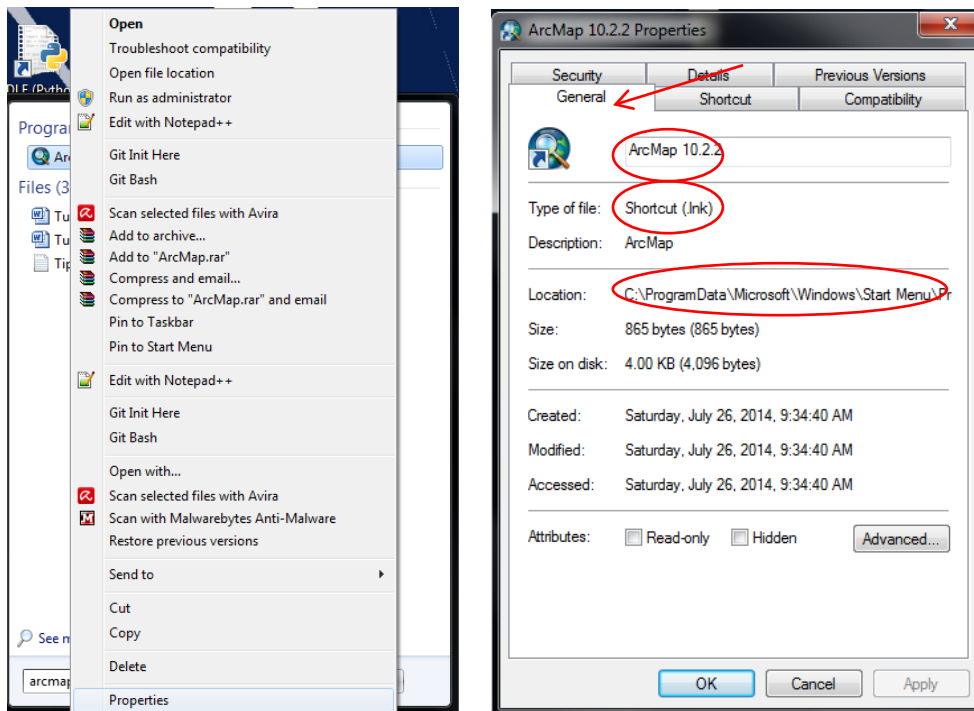
- a) Open the **geo_myar** by double clicking and click on **Open Arcmap** to verify that its path in the software is working. If Arcmap doesn't start it means that there is a different version installed in your computer. To modify the path right click on geo_myar program file and select the open in **IDLE** option in the context menu.



b) Go to Start then search for Arcmap.



c) Right click on the Icon that appears and select properties on the context menu. Then go to the General tab and copy the location on this format “C:\ProgramData\Microsoft\Windows\Start\Menu\Programs\ArcGIS\ArcMap 10.2.2.lnk” we take the location shown, we add two backslash (\\), add the name of the program plus the extension (.lnk)



- d) Paste the path that you just created in the function arcMap() that in IDLE window and Save the file.

```
74 *geo_myar1.pyw - C:\Users\X\Desktop\Tutorial\geo_myar1.pyw*
File Edit Format Run Options Windows Help

frameFolder.pack()
def makePath():
    if e.get()!="":
        np='C:\Users\Public\Documents\\'+ e.get()

        w1.insert(INSERT, np)

w1=Text(frameFolder, cursor="pencil",width=40, height=3)
w1.insert(INSERT, "")

w1.pack(side=BOTTOM)
b1=Button(frameFolder, text="Show path",width=10, command=makePath )
b1.pack(side=BOTTOM, pady=5)

###.....

#folderGUI()
def aprogram():
    os.startfile("ahora1.pyw")
def arcMap(): # Function that holds the Arcmap local path for the station.
    os.startfile("C:\ProgramData\Microsoft\Windows\Start Menu\Programs\ArcGIS\\ArcMap 10.2.2.lnk")

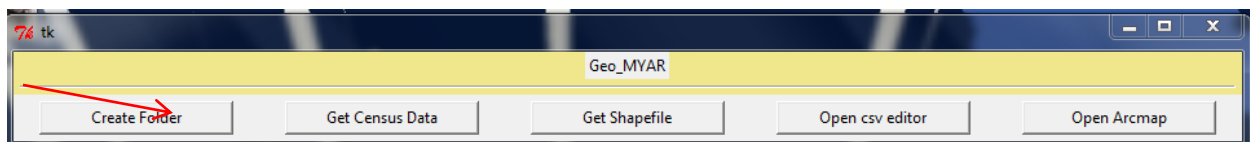
##

master = Tk()

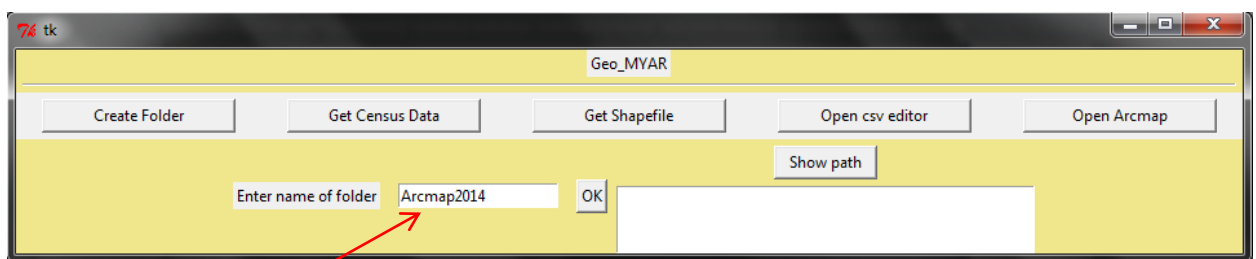
Label(text="Geo_MYAR").pack()
```

II. Create a folder for the Data and program:

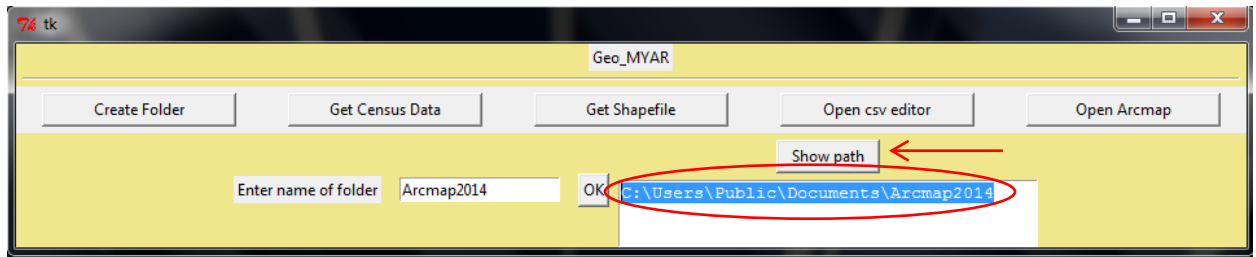
- a) Click on **Create a folder**



- b) Give a name to the folder then press **Ok**.

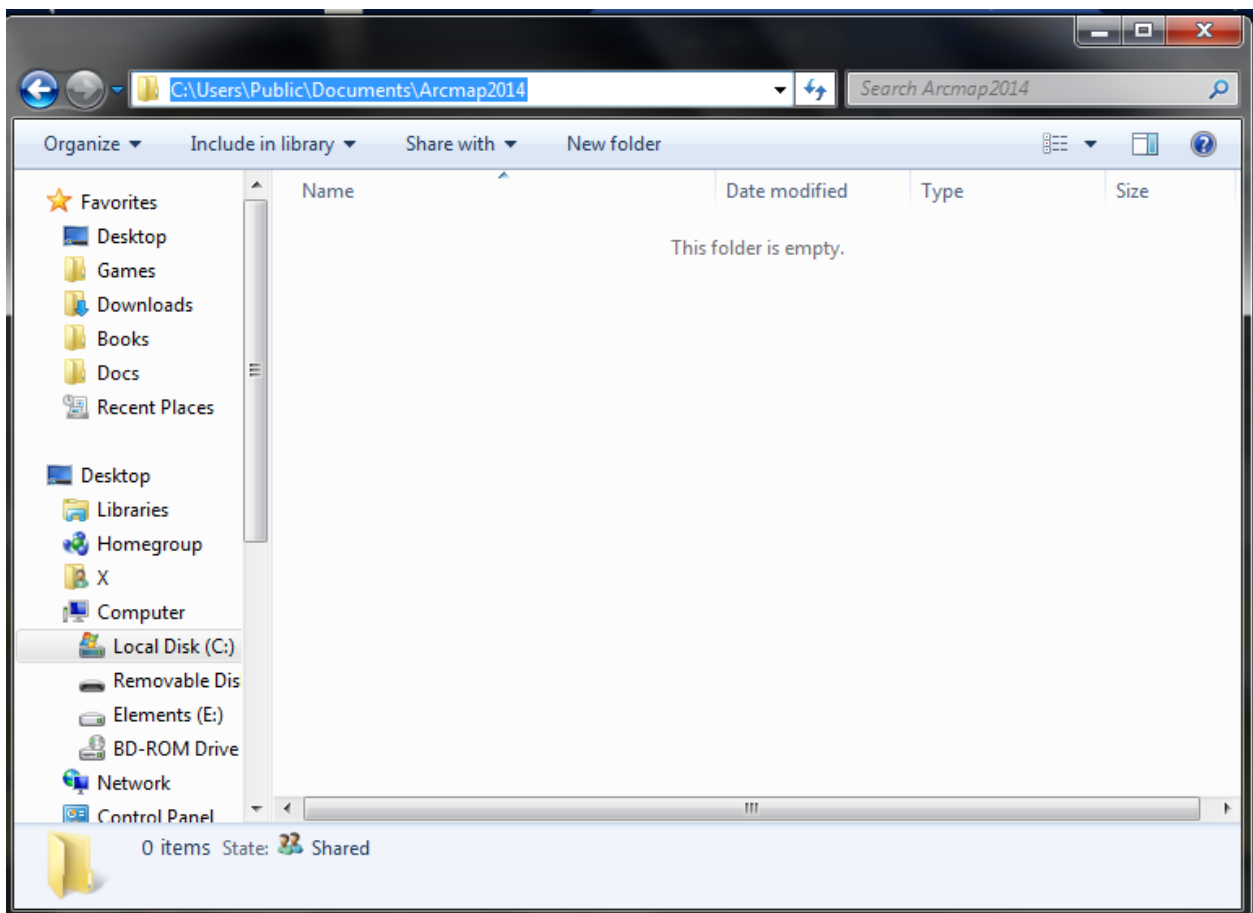


- c) Click on the **Show path** button to show the path. Double click on the path to highlight and press Ctrl+C to copy then open a text file to paste the copied path for reference later, save the text file.

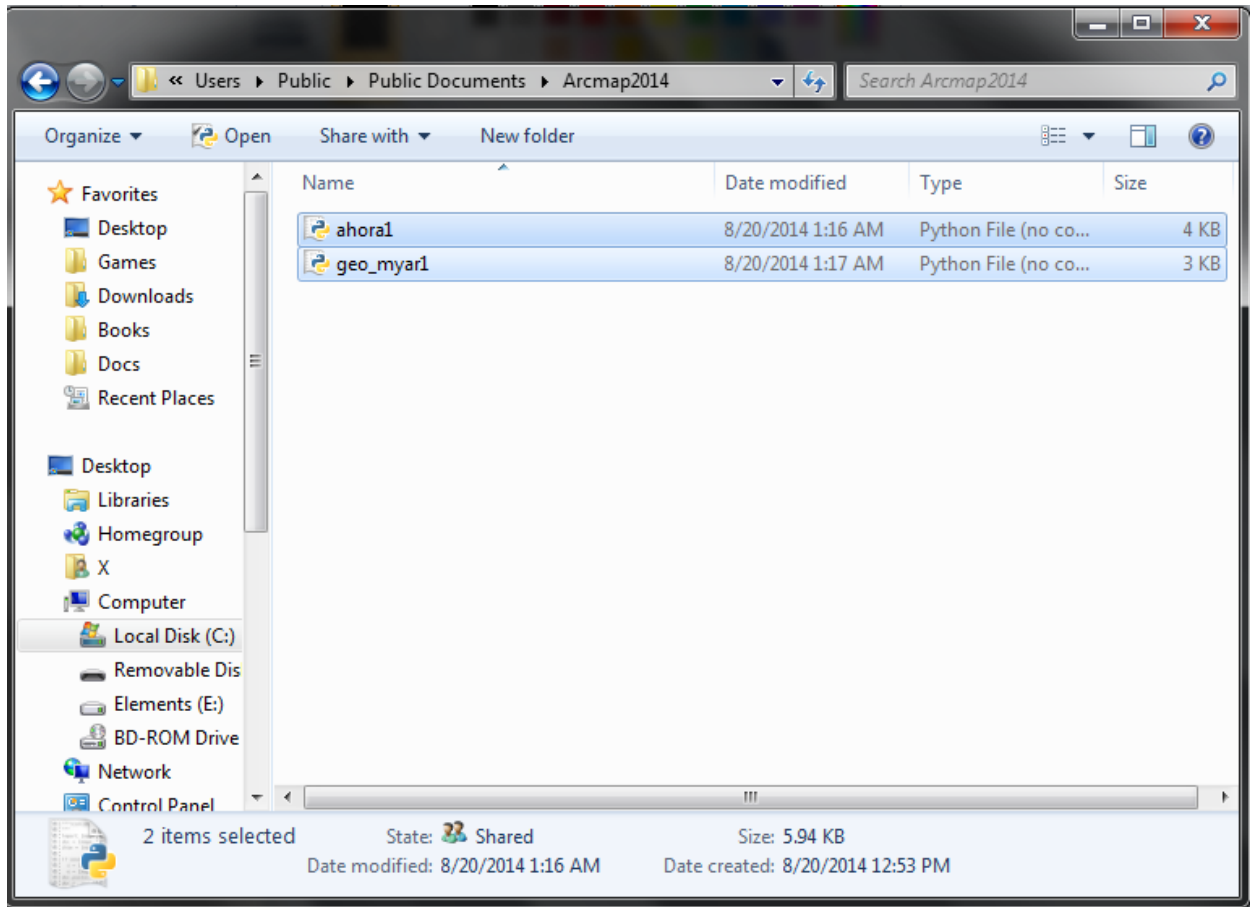


III. Putting the Files Together In The Created Folder:

- a) Go to start then click on documents, on the address bar and then paste the path of the folder that you created.

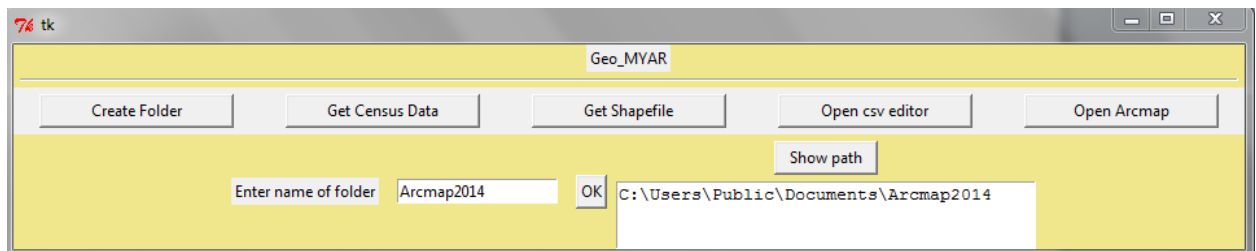


- b) Paste the program files **ahora1** and **geo_myar1** to your created folder.



IV. Getting the Census Data:

- Click on “**Get Census Data**” which will direct you to the census website.



Guided Search - Step-by-step access to Census Information

1 Start 2 Topics 3 Geographies 4 Race/Ethnic Groups 5 Search Results 6 Table Viewer

Choose from one of the following and click **Next**.

- ☒ I'm looking for information about **people**.
(age, sex, income, poverty, education, ...)
- ☐ I'm looking for information about **housing**.
(housing units, household type, value of home, ...)
- ☐ I'm looking for information about **businesses or industries**.
(annual payroll, sales and receipts, number of employees, ...)
- ☐ I'm looking for information from a specific **dataset**.
(2006-2010 American Community Survey 5-Year Estimates, 2007 Economic Census, 2010 Census Summary File 1, ...)
- ☐ I want to search for a **table number** or a **table title**.
(P1, EC0700A1, b04*, Social Characteristics, ...)

- b) Verify that your information is in check (e.g. **people**) then click next and select the topic under your previous choice which will be “**poverty**” (Note: Click on **poverty** for a second time and then next).

People

- + Basic Count/Estimate
- + Age & Sex
- + Age Group
- + Disability
- + Education
- + Employment
- + Income & Earnings
- + Insurance Coverage
- + Language
- + Marital & Fertility Status
- + Origins
- + Population Change
- **Poverty**
 - Food Stamps/SNAP (536)
 - Heating and Cooling Assistance (283)
 - Poverty (4,168)**
- + Relationship
- + Veterans

- c) In the **Geographies** section be assure to fill the following boxes as asked and proceed to click “**ADD TO YOUR SELECTIONS**” then next (e.g., geography type will always be Census Tract, the state, county and a specific geographic area or just all of them).

3 Geographies

Select a geographic type:
..... Census Tract

Select a state:
Michigan

Select a county:
Houghton

Select one or more geographic areas and click **Add to Your Selections**:
 All Census Tracts within Houghton County, Michigan
 Census Tract 0, Houghton County, Michigan
 Census Tract 1, Houghton County, Michigan
 Census Tract 2, Houghton County, Michigan
 Census Tract 3, Houghton County, Michigan
 Census Tract 4, Houghton County, Michigan
 Census Tract 5, Houghton County, Michigan
 Census Tract 6, Houghton County, Michigan
 Census Tract 7, Houghton County, Michigan
 Census Tract 8, Houghton County, Michigan

ADD TO YOUR SELECTIONS

- d) You can **Skip** the **Race/Ethnic Groups** section by clicking on next and choose the result that shows data from the past 12 months. If the given task asks you about a specific ethnic group from a basic or detailed category click either **Select from basic Groups** or **Select from detailed Groups**.

4 Race/Ethnic Groups

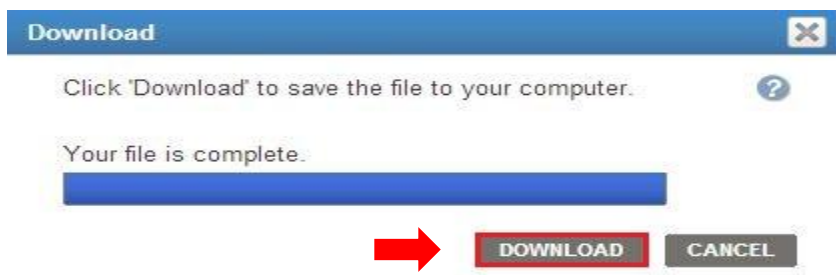
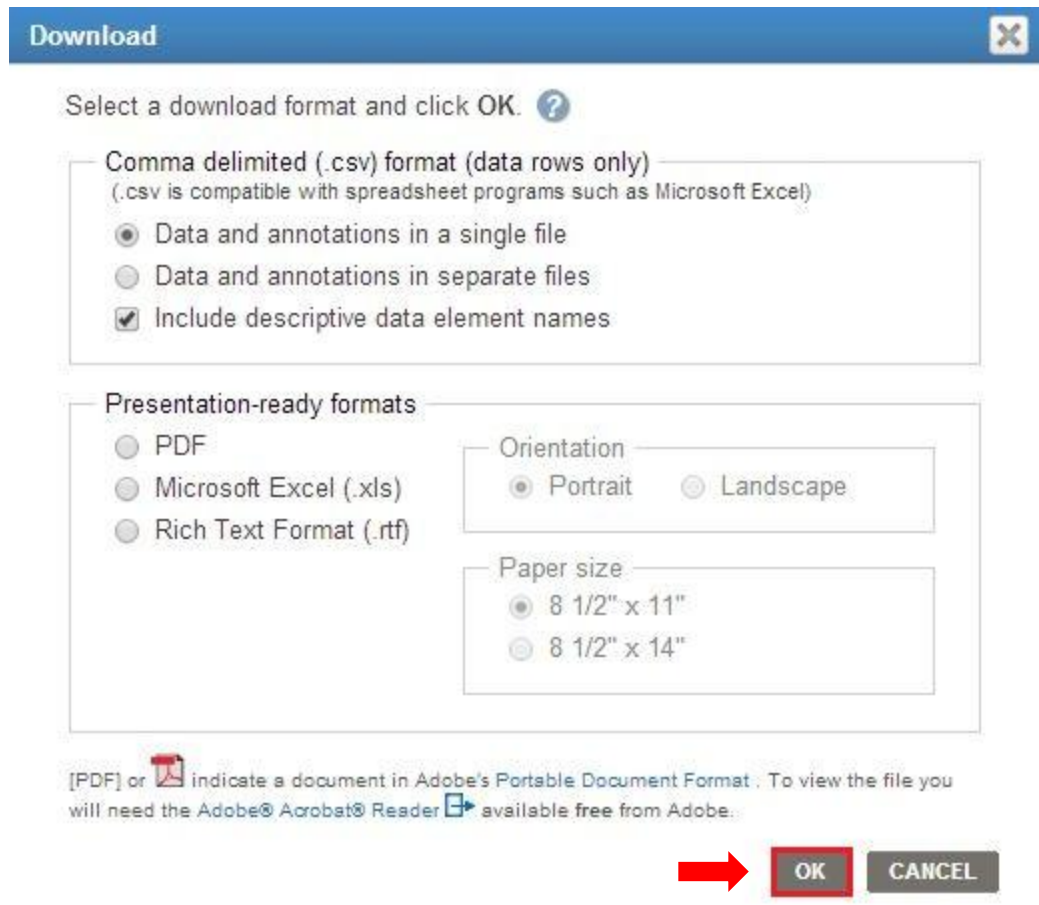
Are you looking for data for a race or ethnic group (race, ancestry, or tribe)?

SKIP THIS STEP No, I'm not looking for race or ethnic group data

SELECT FROM BASIC GROUPS I'm looking for general information about basic race groups, or basic counts of ancestries or tribes.
 Use "Basic Groups" to find more than one race groups within a single table for instance, the populations of the 57 race combinations.

SELECT FROM DETAILED GROUPS I am looking for detailed information about race groups.
 Use "Detailed Groups" to find detailed demographic data for one or more specific races (e.g. White and Black, Navajo alone, or Taiwanese alone). These tables come from the Decennial Census (SF 2, SF 4, and AIAN) and the American Community Survey (Selected Population Profiles and AIAN tables).

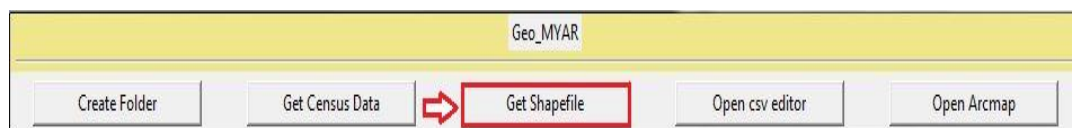
- e) Lastly download your data from the chosen result which will be displayed as a table (Click **Download** → **OK** → **Download**).



- f) Locate your downloaded file on your default Downloads folder, copy and extract the file in your previously created folder.

V. Getting the Shapefile :

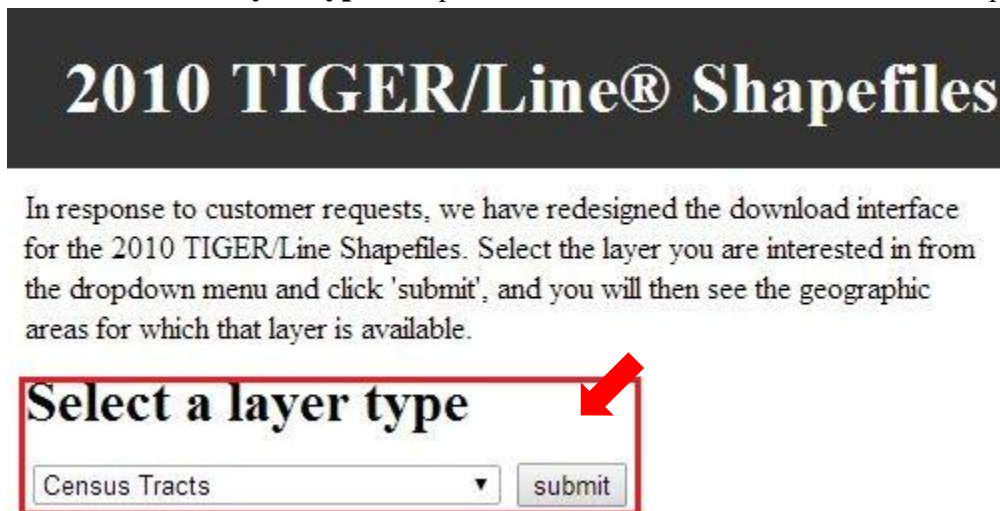
- a) Go back to the **geo_myar** window and click on “**Get Shapefile**” which will redirect you to the census site.



- b) Select the year of your shapefile data, click on **Download** and then “**Web Interface**”. This will take you to the download interface of **TIGER/Line® Shapefiles**.



- c) In the “**Select a Layer Type**” drop box menu choose “**Census Tracts**” then press submit.





- d) This will take you to the “**Census Tract**” section where you should select a state with its year from the drop menu then submit. The same should be done with the county but instead of submit you will see a Download button.



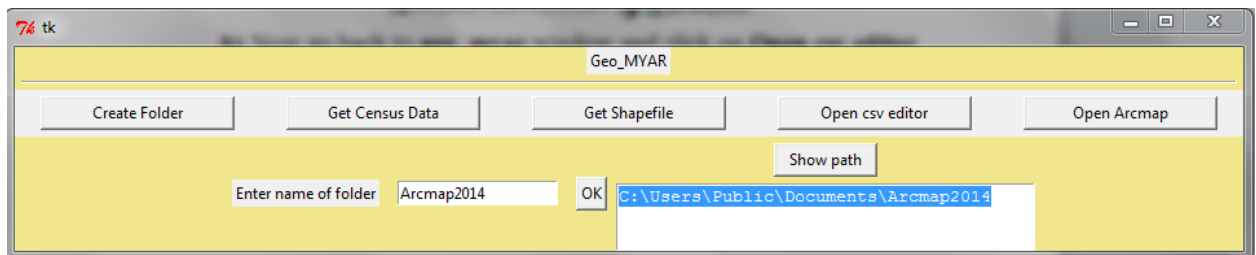
- e) Retrieve the downloaded file from your local downloads folder then copy and paste it to your working folder. **Note:** *This file should be extracted in the folder for it to work later on.*

VI. Editing the Excel.csv file:

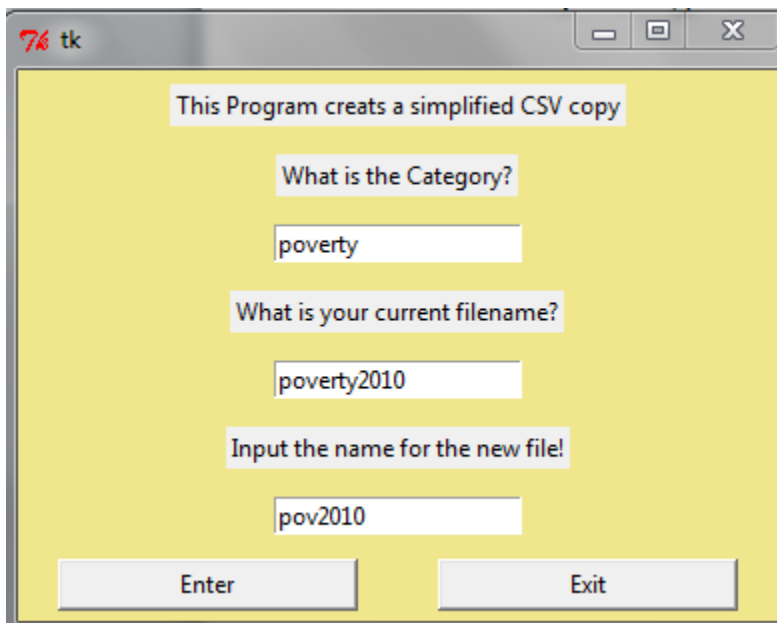
- a) Go to your downloaded data from census tract, find an excel file in your working folder with a name that ends as **ann** then change it to a simple name such as (e.g “poverty2010”). **Note:** For renaming a file in windows you should just right click the file and select **Rename**.

 ACS_12_5YR_S1701_with_ann →  poverty2010

- b) Now go back to **geo_myar** window and click on **Open csv editor**.

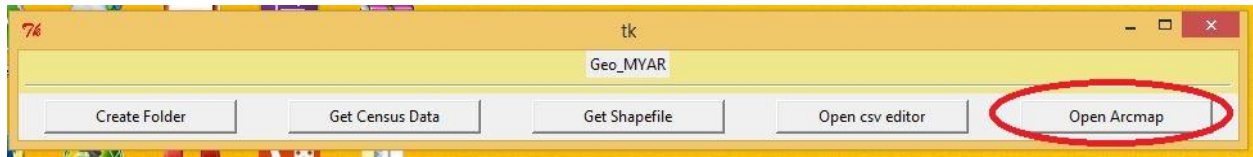


- c) On the first field put the category (e.g. **Poverty**), on the second field put the name of the file and on the third field type the name of the new file that will contain the data that you will need to make the map.



VII. OPENING ARCMAP

Click on the Open ArcMap button of the Geo_MYAR toolbar.



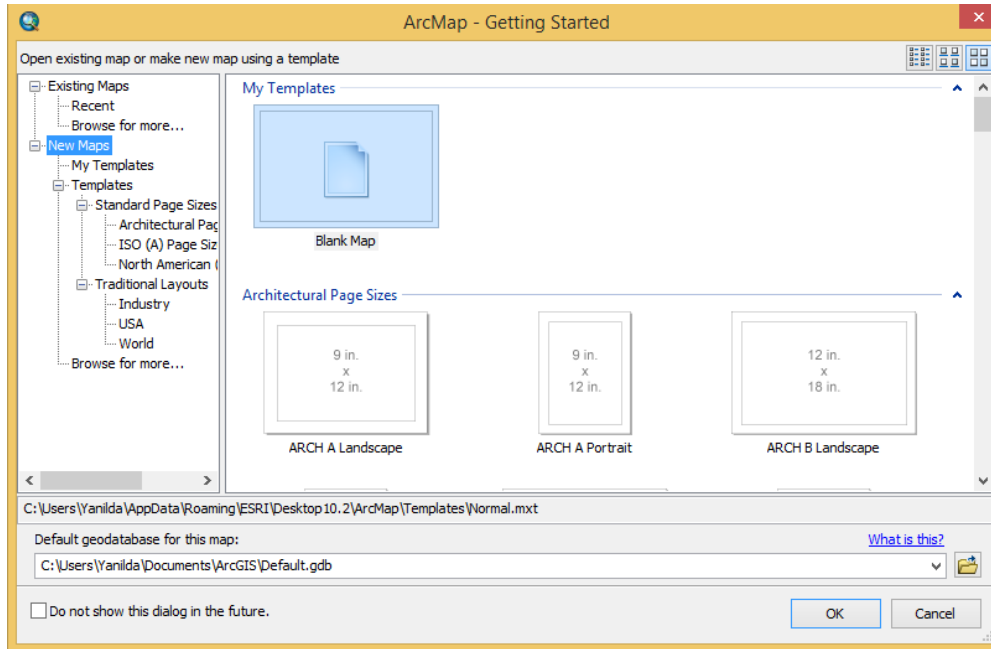
Wait a few seconds (30 seconds).

Note:

If program doesn't start redo only step 1. Repeat step 7 after.

VIII. CREATING MAP IN ARCMAP

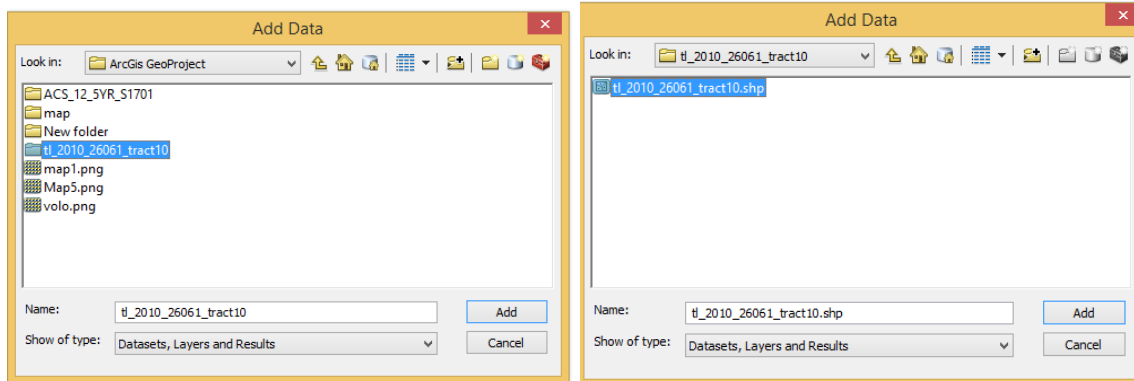
- a. On the “Getting Started” popup window, click on “New Maps” on the left, and then click on “Blank Map” on the right. You can change to location of the map. Click “OK”.



- b. Click on Add Data on Standard toolbar.



- c. Add desired shape file. (.shp)



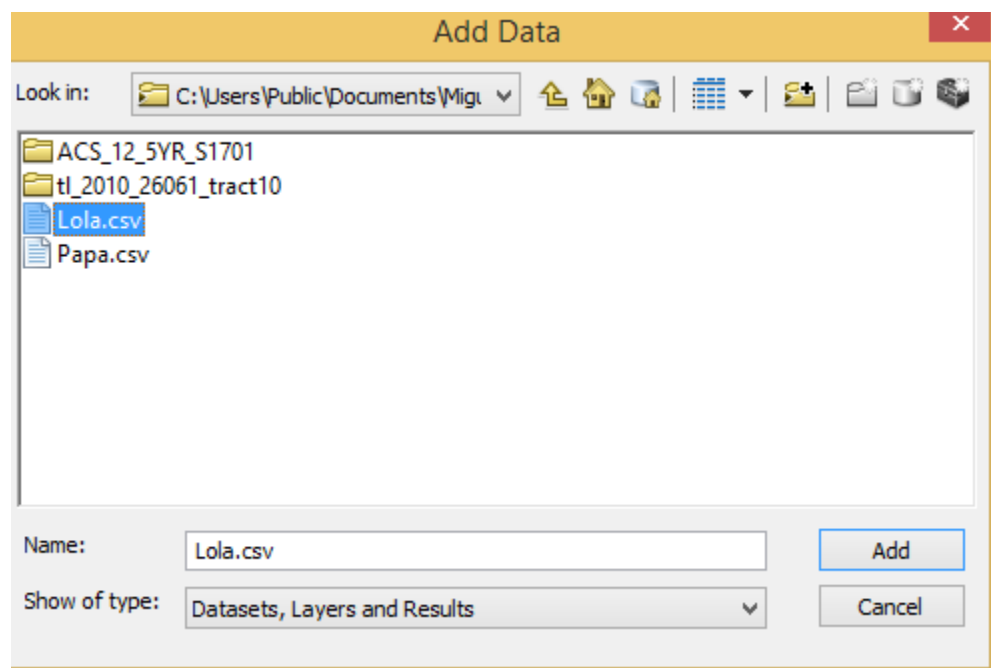
Note:

If you can't find the correct folder click on “Connect To Folder” on the Add Data popup window.

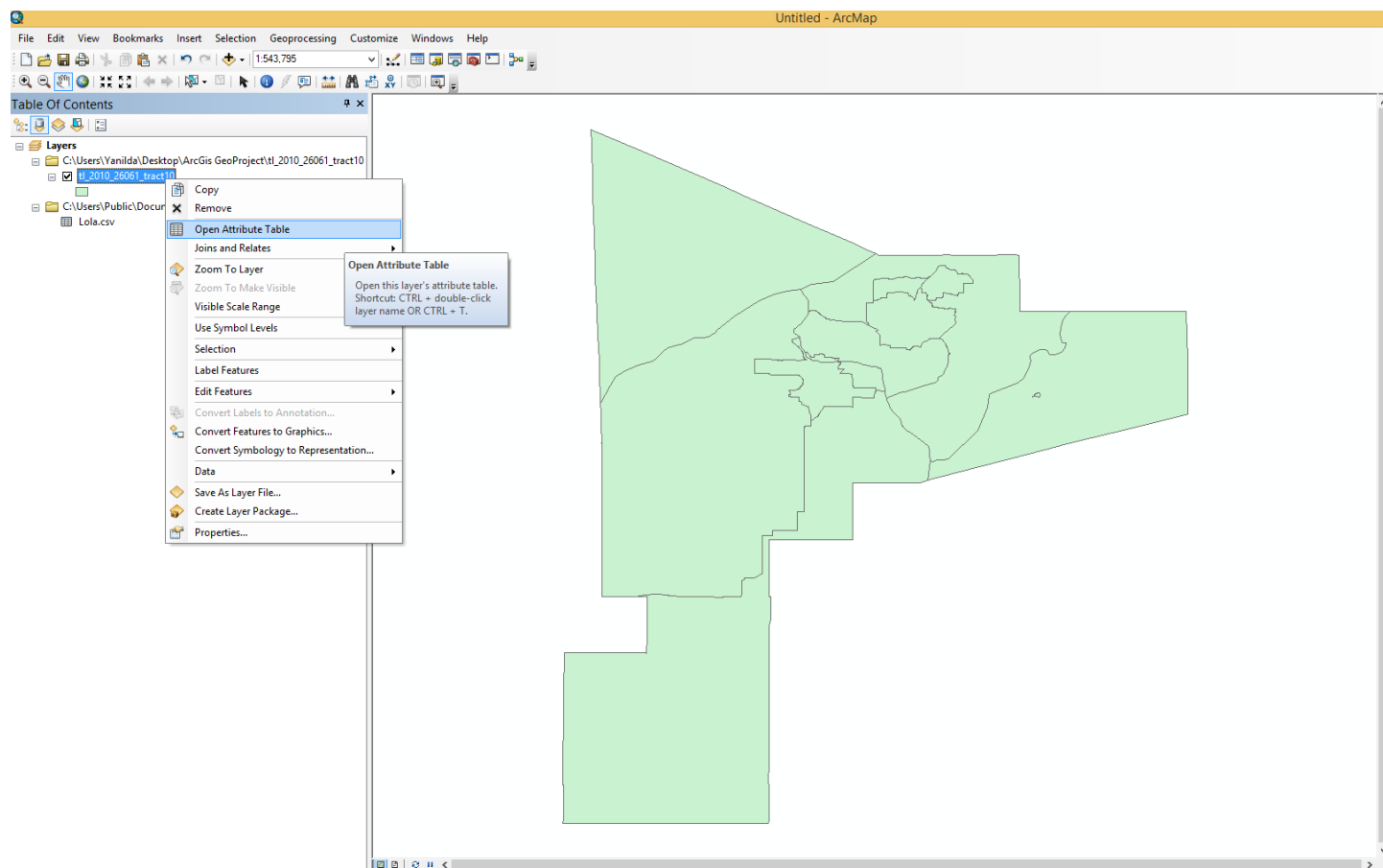
- d. Click on Add Data on Standard toolbar.



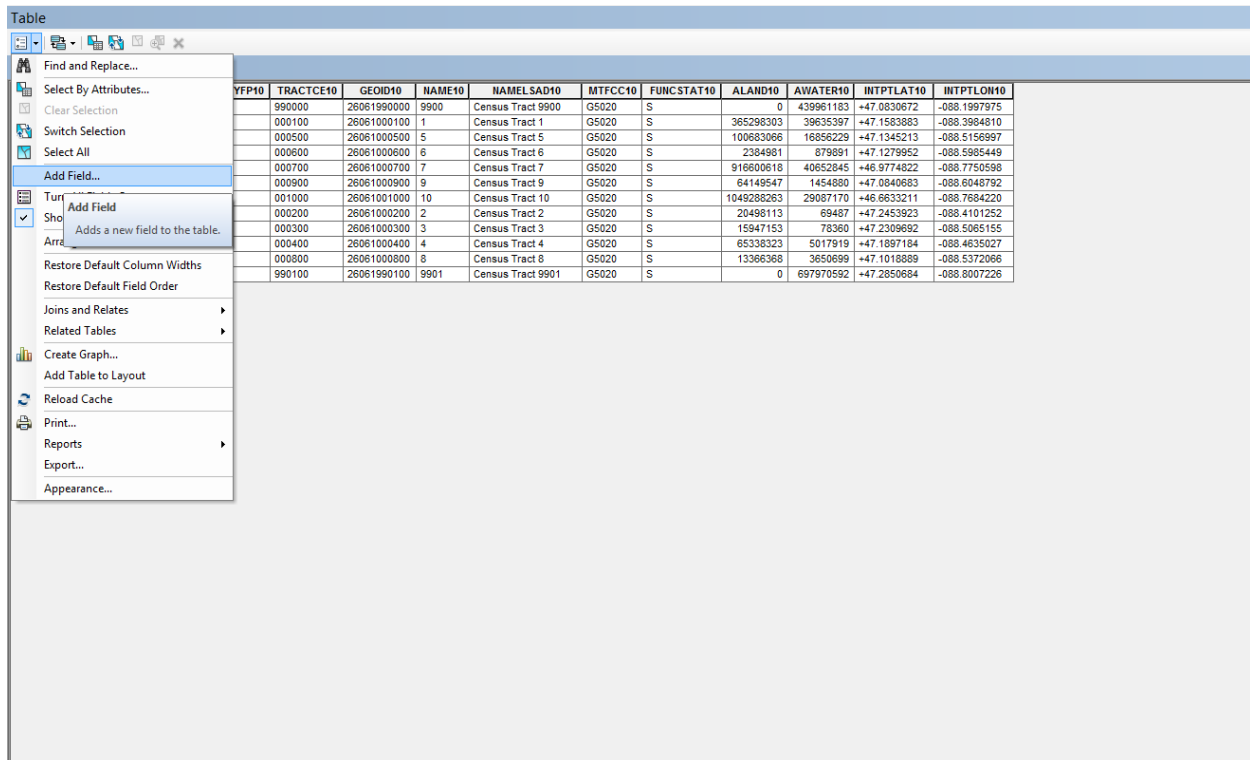
- e. Add corresponding csv file



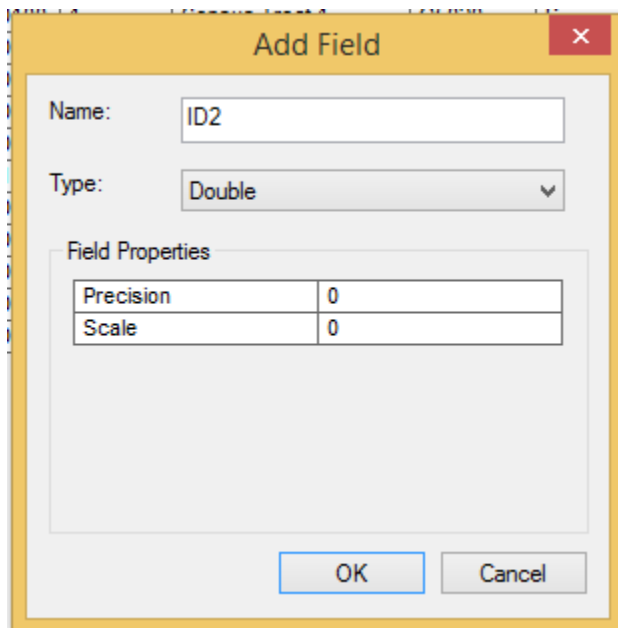
- f. Right click on title of shape file, click on “Open Attribute Table” on content menu.



g. Click on Table Option and click on Add Field



h. Input Name of Field and Type and click OK.



- i. Right click on created Field and select “Field Calculator”

Table

ti_2010_26061_tract10

FID	Shape *	STATEFP10	COUNTYFP10	TRACTCE10	GEOID10	NAME10	NAMLSAD10	MTFCC10	FUNCSTAT10	ALAND10	AWATER10	INTPTLAT10	INTPTLON10	ID2
0	Polygon	26	061	990000	26061990000	9900	Census Tract 9900	G5020	S	0	439961183	+47.0830672	-088.1997975	
1	Polygon	26	061	000100	26061000100	1	Census Tract 1	G5020	S	365298303	39635397	+47.1583883	-088.3984810	
2	Polygon	26	061	000500	26061000500	5	Census Tract 5	G5020	S	100683066	16856229	+47.1345213	-088.5156997	
3	Polygon	26	061	000600	26061000600	6	Census Tract 6	G5020	S	2384981	879891	+47.1279952	-088.5985449	
4	Polygon	26	061	000700	26061000700	7	Census Tract 7	G5020	S	916600618	40652845	+46.9774822	-088.7750598	
5	Polygon	26	061	000900	26061000900	9	Census Tract 9	G5020	S	64149547	1454880	+47.0840683	-088.6048792	
6	Polygon	26	061	001000	26061001000	10	Census Tract 10	G5020	S	1048288263	29087170	+46.6633211	-088.7684220	
7	Polygon	26	061	000200	26061000200	2	Census Tract 2	G5020	S	20498113	69487	+47.2453923	-088.4101252	
8	Polygon	26	061	000300	26061000300	3	Census Tract 3	G5020	S	15947153	78360	+47.2309992	-088.5985155	
9	Polygon	26	061	000400	26061000400	4	Census Tract 4	G5020	S	65338323	5017919	+47.1897184	-088.4635027	
10	Polygon	26	061	000800	26061000800	8	Census Tract 8	G5020	S	13366368	3650699	+47.1018889	-088.5372066	
11	Polygon	26	061	990100	26061990100	9901	Census Tract 9901	G5020	S	0	697970592	+47.2850684	-088.8007226	

Sort Ascending
Sort Descending
Advanced Sorting...
Summarize...
Statistics...
Field Calculator...
Calculate Geometry...
Field Calculator
Populate or update the values of this field by specifying a calculation expression. If any of the records in the table are currently selected, only the values of the selected records will be calculated.

- j. Select the field of calculation and click OK.

Field Calculator

Parser
☒ VB Script ☐ Python

Fields:
FID
Shape
STATEFP10
COUNTYFP10
TRACTCE10
GEOID10
NAME10
NAMLSAD10
MTFCC10

Type:
☒ Number
☐ String
☐ Date

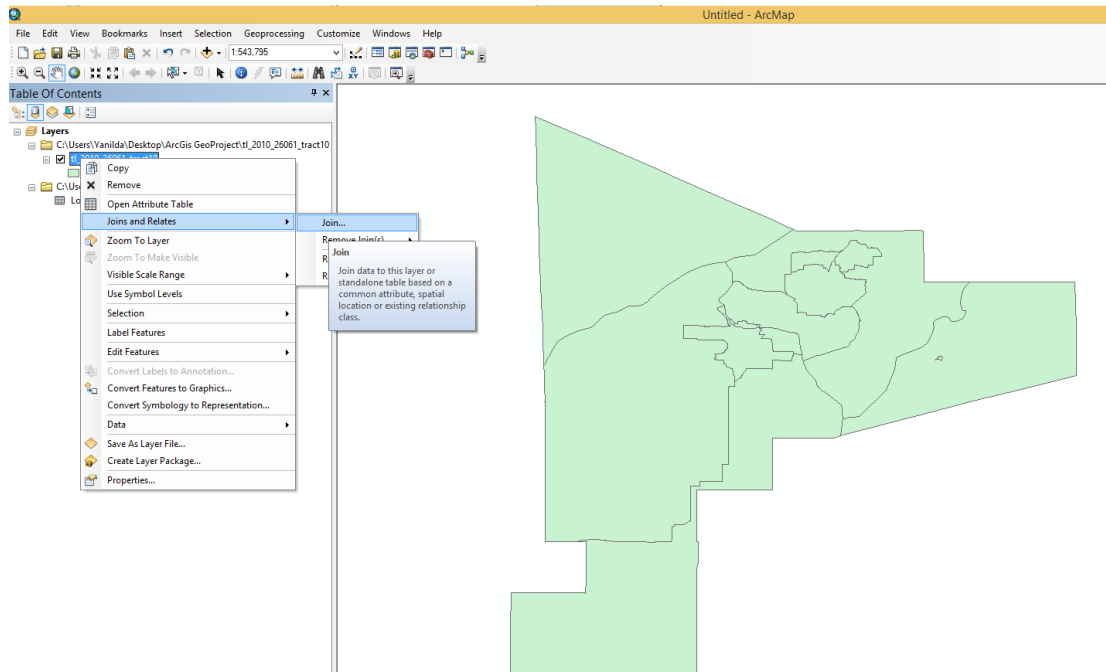
Functions:
Abs ()
Atn ()
Cos ()
Exp ()
Fix ()
Int ()
Log ()
Sin ()
Sqr ()
Tan ()

☐ Show Codeblock

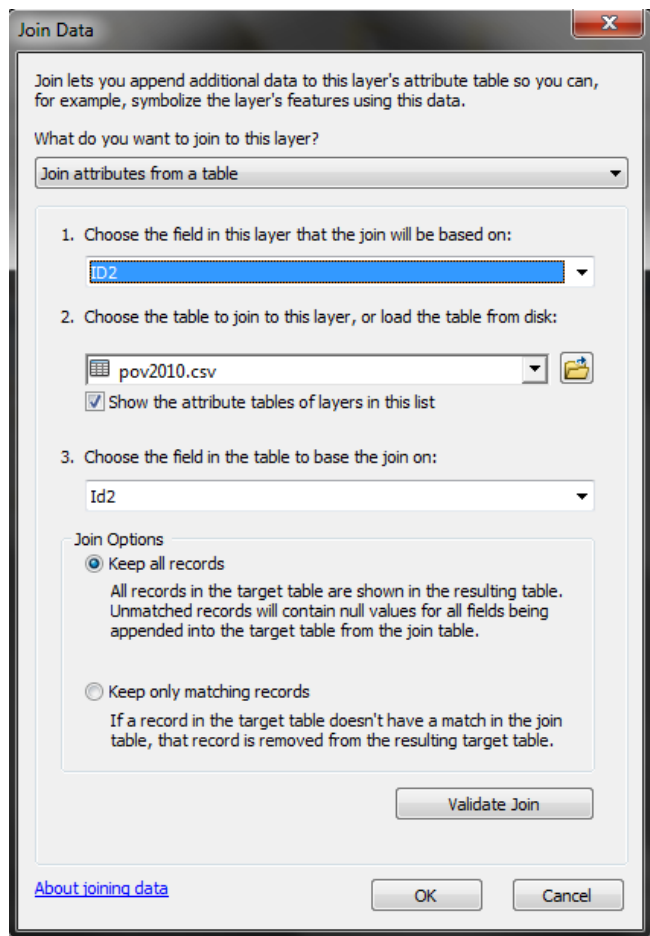
ID2 =
[GEOID10]

[About calculating fields](#)

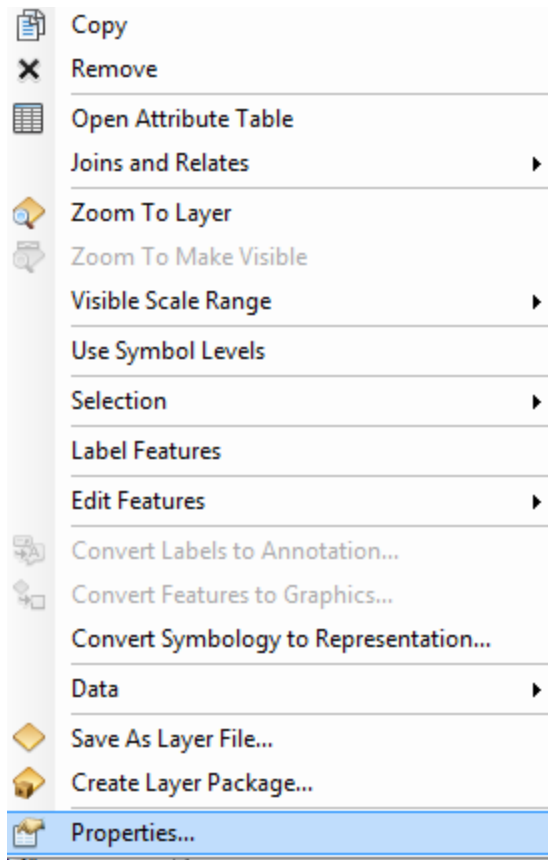
- k. Right click on the Shape file and select Joins and Relates



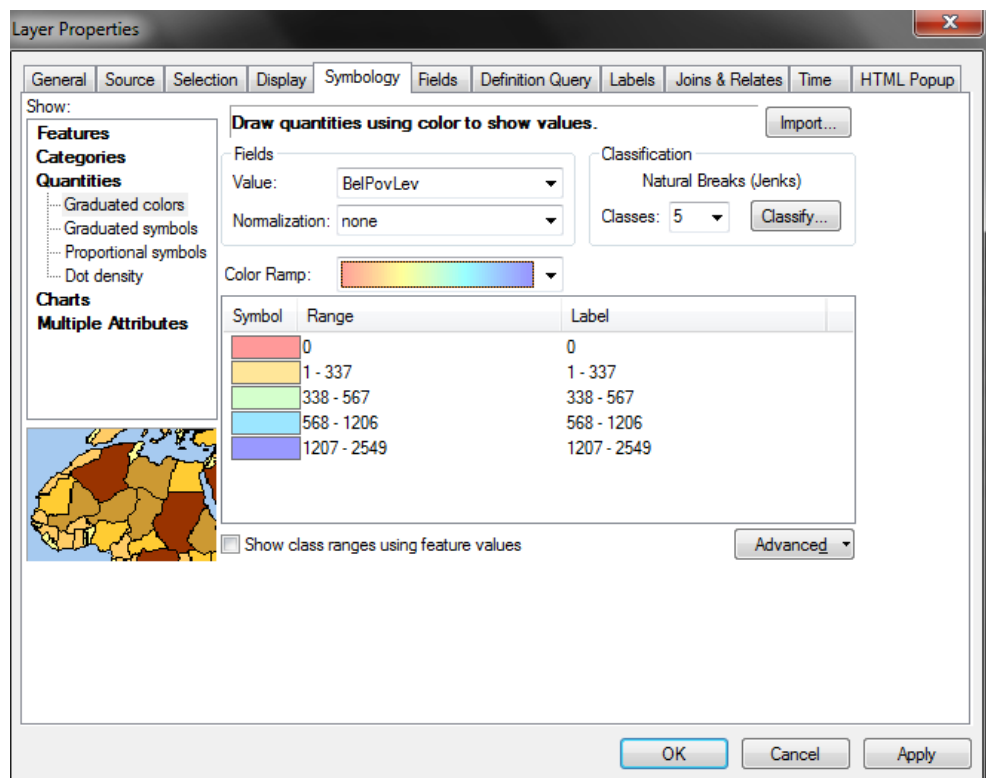
1. Choose the corresponding fields (e.g., ID2, id2) and click OK.



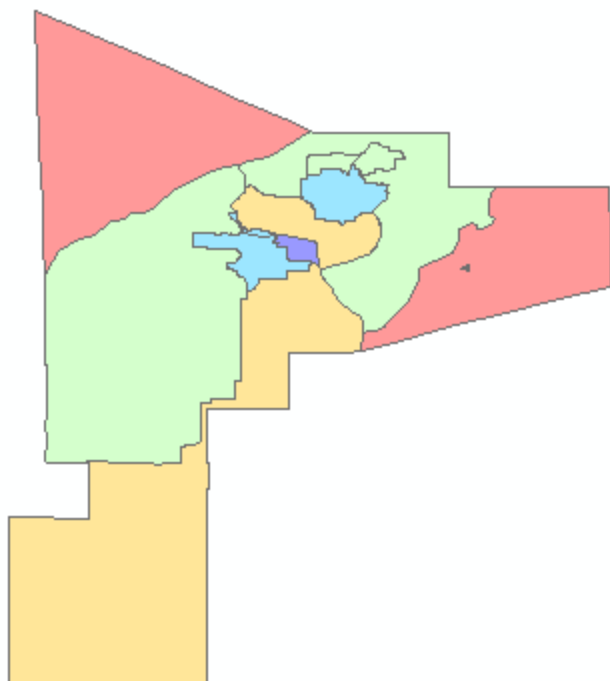
- m. Right click on the Shape file and select Properties



- n. Click on Symbology tap, then quantity and finally graduated college Click apply and then OK



Here it is the final product:



Thank you!