PLSCS 2200: Mapping & Spatial Analysis with GIS
Fall 2021

Assignment Sheet for Lab 3: Attribute Tables

Directions:

1) Create a folder on the desktop of your lab computer called "Lab3."
2) From Canvas, download the zipped file called "Lab3Data.zip" to your new Lab2 folder.
3) After it's downloaded, right-click on the file and "Extract All…" . Make sure it is going into your Lab3 folder!
4) Within Canvas, access the textbook (Instant Access – Vital Source) and find **Module 2**.
5) Proceed through the software instructional steps that the chapter provides.
6) Complete the questions below and submit this document to Canvas when it is complete.
7) **IF you have not completed your lab exercise by the end of the lab period**, then save your project and **upload a Project Package (.ppkx) to your ArcGIS Online Account**. Reference Smartbox 1.10 if you need a reminder for how to do this.

Question 1. During the lab when you are conducting a "join" process, you are making a connection between the attribute table of the Ohio Counties (Censuscounties Ohio) and a separate data table (DEC_10_SF1_G001). Each of the two tables has one field with the same information in it, **STATEFP** in the attribute table and **State** in the data table. Why can those two fields **NOT** be used as the key when joining the data table of population values to the Ohio Counties feature class's attribute table?

The key is a field that two tables have in common. That includes the unique values in both columns. You initially join the geospatial layer and add the non-spatial attributes. You cannot join State from the data table to the Ohiocounties table because they do not have the same unique values. Although both are numerical data columns, they do not have similar values to join together.

Question 2. How many Ohio counties had a population of more than 150,000 in the year 2010? In general, what parts of the state are those counties located?

There are 19 counties that had a population of more than 150,000 in the year 2010. The part of the state these counties are in northeast and southwest part of Ohio.

Question 3. How many Ohio counties had a population of more than 150,000 and also have more than 100,000 housing units?

11 Ohio counties

Question 4. Create (and write out below) your own compound SQL query that uses **both** an "and" and an "or" for the joined data. Apply the query and provide its solution/answer below too.

Where Population is greater than 150000 and Housing is greater than 100000.
(Population > 150000) AND (Housing > 100000)
Solution: a total of 11 counties that satisfy both conditions true.

Where Population is greater than 150000 and Housing is less than 100000.
(Population > 150000) AND (Housing < 100000)
Solution: There are 8 counties that satisfy both conditions

Where Population is greater than 150000 or Housing is greater than 100000.
(Population > 150000) OR (Housing > 100000)

Solution: There are 19 counties that satisfy either condition.

Question 5. What were the mean (average) and the median county population values in 2010? How would you define what the median county population value means (in simple terms, and referencing the fact that there are 88 counties in Ohio)? -2 points

The average county population in 2010 is 131,096.6
The median county population in 2010 is 58,185.5

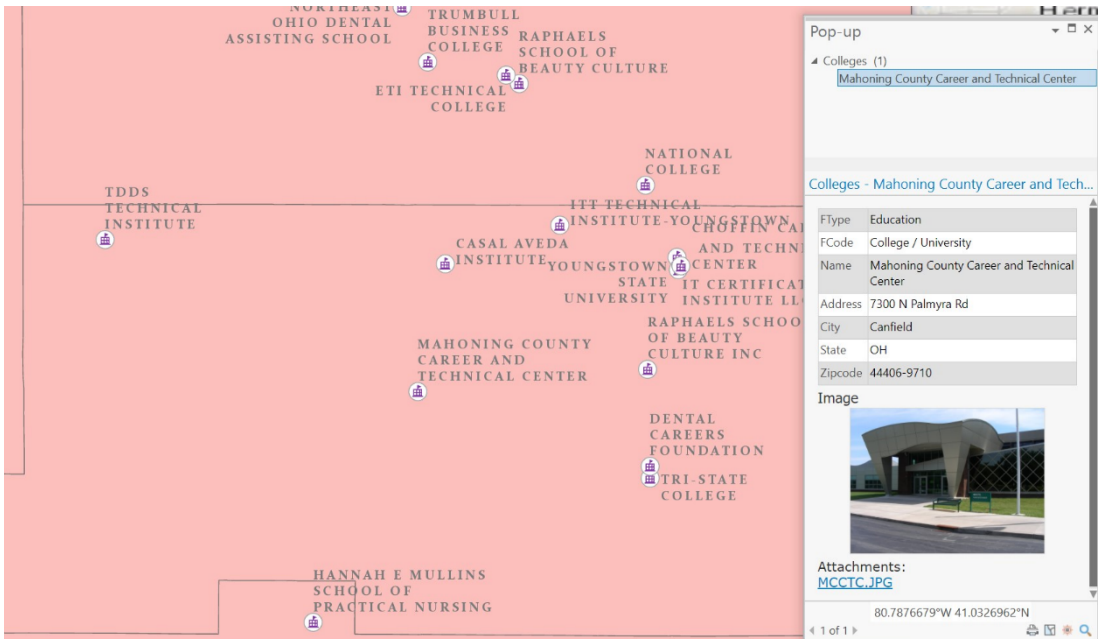
Question 6. How many colleges are in the city of Canton, and in what county is Canton located? Describe how you reached your answers (there are multiple valid ways).

There are 8 colleges in the city of Canton (including North Canton), six in Canton alone. Canton is located in Stark County. I found this by loading the attributes of the colleges dataset. From there, I selected the city column and used CTRL + F to search for Canton. That was where I was able to locate the colleges in the city of Canton and find the county the city is located in.

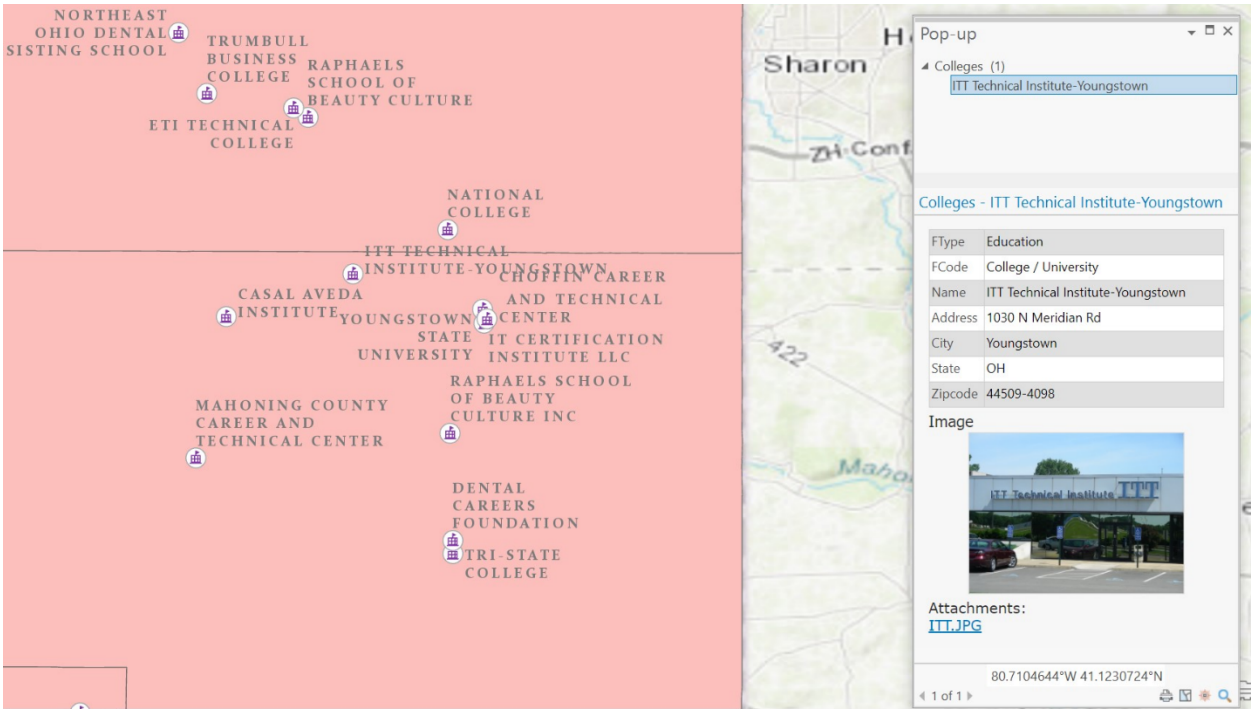
Question 7. By the end of the lab, you will have 1) created a new feature class of polygons that includes only 5 counties; 2) labeled a set of colleges that are located within those 5 counties; and 3) have attached images to 3 of the colleges.

1. Add an educationally-appropriate symbol to the point icon of each college, if you haven't already.
2. Then zoom in to one of the colleges that has an associated image,
3. And use the explore tool to have its pop-up window displayed, and place the pop-up window near the college on the map,
4. And take a screen-shot of the map that shows the pop-up.
5. Insert that screenshot here for Question 7.

Mahoning County Career and Technical Center



IT Technical Institute- Youngstown



Youngstown State University