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For my program, I wanted to answer the question if water-bordered counties purchase more fishing licenses and if inland counties purchase more hunting licenses. I think this is interesting because it makes me wonder if location and accessibility are factors in license purchases. My program will give me the number of hunting and fishing licenses bought in a county each year from 2010 to 2019. A problem I faced was getting my program to read my data correctly. Because of this, I had to remodel the data into new files that could be read more easily by my program.

For my program to work, it needed to read multiple data sets and recognize which data belonged to which county. It should ask for a county and take that input and put out the license data from all ten years for that specific county. For my program to do what I intended it to do, it needed to read multiple data sets and recognize which data belonged to which county. The csv files of each year will be converted into a dictionary so that the program recognizes the what data belongs to which type of license. It should ask for a county and take that input, look through the dictionaries and find the county and how many licenses purchased during each year. Once that data is found, the program will add the answer from each separate dictionary to a list. Once all the answers are found and added to a list, that list will be printed in order from 2010 to 2019. I have double checked and gone through all the data I remodeled in order to assure myself that the correct data is being displayed for each county, year, and license type.

In order for the program to work correctly, the data had to be separated by year. Each year’s data had to be imported individually and turned into its own dictionary. This means that I had ten dictionaries in total that my program needed to read from. The dictionaries were all made to be read by the program based on a county. Then, the program needed to be able to read and hold on to the answers found in each dictionary based on what county was input by the user. This was done by creating a list in a loop. When the program would read the county the user chose, it would loop through all ten dictionaries and add the answers found into the list. The program would then print out the data found in chronological order, starting with the data from 2010 and ending with the data from 2019.

A limitation that I faced was how to determine which counties were considered inland or water bordered. I separated the counties based on if they bordered the four major Virginia rivers and lake Anna or not. If they bordered any of these waterways, they were considered water bordered. Then, I took a randomly selected sample of half of the counties in each category and ran them through my program. If a water county purchased more fishing licenses during at least five of the ten years, it was considered a success. Same for the inland counties and hunting licenses.

I found that 8 out of the 31 water counties sampled were considered successes. However, for inland counties, 32 out of the 36 counties sampled were considered a success. This answered my question that yes, inland counties purchase more hunting licenses, but water-bordered counties do not purchase more fishing licenses. My original limitation was knowing where counties are in Virginia and I solved that by looking at a map and if a county bordered one of the five waterways I specified. The need to remodel my data also made it easier for mistakes to be made and incorrect data to be given. I have gone through and double checked that all my data is correct, but I’m still human and can miss a data point or two.