Learning Journal Guide
Unit 8

Here is a step by step guide for how to go about solving it.

Created a dictionary.txt file that looks something like this :

Teddy: dog,4 years old,male

Ninja: Cat,1 year old,female

Noelle: dog, 11 years old,female

... and the list goes on ...

Inside your python file, create two different methods:

- **add_values_to_pets()**
- **invert_dict(a_dictionary)**

From the main method, call **add_values_to_pets()** and store the result in a variable called "pets".

Inside the **add_values_to_pets()** method:

- Create an empty dictionary.

- Use python's built-in function called **open()** to open the dictionary.txt file.

Create a for-loop to loop through every line from the dictionary.txt file. Use python's built in methods: **strip()** and **split()** in order to separate and get the keys and values you need for the newly created dictionary.

Something like this -> line.strip().split(":")

At the end of the **add_to_pets()** method, Return the newly created dictionary. From the main method, call the **invert_dict(pets)** method and stored the result in a variable called "inverted_pets".

Inside of the i**nvert_dict(pets)** method:

- Create an empty dictionary.
- Create a for-loop that loops through each of the keys.
- Store the "key" in its own variable and its "values" in a separate variable.

Create another for-loop inside the current for-loop (this for-loop will loop through all the "values").

- Take each "value" and turn it into a "key" for the new dictionary. First, make sure the key doesn't already exist.

  Something like this -> if characteristic not in inverse.keys():

What you are doing here is taking the keys and values (from the original dictionary) and making the values into keys and the keys into values and inserting these into the new dictionary (see my output.txt example at the bottom).

- At the end of the method, return the new dictionary.

Inside the main method, call **open()** on the output.txt file and set the mode to write.

Something like this -> **open('output.txt', 'w')**

- Loop through each of the keys and values from "inverted_pets" dictionary. Be sure to use python's built-in method **lstrip()** to remove any spaces to the left of the string.
- "Write" the keys and values to the output.txt file.

  Something like -> new_file.write(f'"{key}":{value},\n')
- Now, you are going to "close" the file.

The output.txt file you "write to" should look something like this:

"dog":['Teddy', 'Pearl', 'Noelle', 'Major'],

"4 years old":['Teddy', 'Violet'],

"male":['Teddy', 'Chewy', 'Major'],

"Cat":['Ninja', 'Chewy', 'Violet'],

"1 year old":['Ninja', 'Chewy'],

"female":['Ninja', 'Violet', 'Pearl', 'Noelle'],

"1 years old":['Pearl'],

"11 years old":['Noelle'],

"8 years old":['Major'],

... and the list goes on …

As you can see, all of the pets that were listed as "*dogs*" from the dictionary.txt file got added together inside the output.txt file, such as Teddy, Pearl, Noelle, and Major. All of the pets that were listed as being "*4 years old*" got added together (Teddy, Violet).