CSC 212   **Data Structures**

Project 2 -- Help File

Given the attached file of the 50 states and capitals, Project 2 is to create a game that will help your user learn the capital name of each state (Phase 1) and build a quizlet to test the learning (Phase 2).

The following is offered as a guide to help you develop your program.   Verify your results at the end of each step.

1. Create your dictionary from the text file. DO NOT just type the state and city names to create your dictionary with an assignment statement.
   a. Read each line of the text file as a string. Note that each data line is in the format "city, state".   Each line is terminated with a '\n' that needs to be stripped. *[hint: rstrip( )]*
   b. With the comma as separator, you have to find the position of the comma and separate the string into city name and state name. *[hint: split( )]*
   c. Add each state-capital pair to your dictionary with the state as the key and the capital as the value.

2. After your dictionary is set up, you are ready to create Phase 1 of your game, which is to help your user learn the capital of each state. Your program will ask the user to input a state, and using the dictionary, your program will output the capital of that state.   Your program will loop to allow user to have as many tries as desired but will allow the user to opt out to enter Phase 2 of the game.

3. From the dictionary, create a list of the keys (state names).   *[hint: keys( ) returns the keys as dict_keys type. Function list( ) will convert / cast them into a list.]*

4. Phase 2 of the game is to build a quizlet to ask user to give the name of the capital for a randomly chosen state.
   a. Generate a random number (1 to 50) to select a random state from the list.
   b. Prompt user to type in capital's name for that state. Match user's input to see if the response is correct or incorrect.
   c. Keep count for correct and incorrect responses
   d. Repeat for a total of 5 tries. Display game result.