Assignment #4: States2   **Due:** Wed. Sept. 27th **(midnight)**

Program files:
Code: state2.cpp
Input: state.txt
Output: a4.txt

Objective:
For this assignment you will reuse the **State** class you created for assignment #3. This time you will read a specified number of states from file and output (echo) each state to a separate file.

Program Overview:
This program will utilize the C++ **State** class from your previous assignment. If your class is working you will just need to include additional functionality to the program. You will be reading from an external text file during runtime of the program. There is NO user input for this program. The input data file (state.txt) will be provided to you.

Program Requirements:
First, your program may <u>NOT</u> contain any global variables. Main() will be responsible for calling functions. Therefore, main() will be a series of function calls along with any necessary variable declarations you will need for you program.

main()
Your main() function should perform the following tasks:
- Declare any variables you will need for your program
- Declare and open two filestreams (one for reading, one for writing)
- Loop x number of times
  - Read a state
  - Output a state
- Close both filestreams
- End program

- **void outputData(State s, fstream &outFile)** **This function is from assignment 3 with a modification
    o This function receives a single State object and outputs the object's private data members to the external file. The filestream is received by referenced.
    o This function will need to call each of the "get" member functions to gain access to the data so it can be output to the external file, **a4.txt**.
    o This function should format the data to look like the following:

    ```
    Name:      California
    Abbr.:     CA
    Capitol:   Sacramento
    Statehood: Sept. 9, 1850
    Population:37253956
    Nickname:  Golden State
    ```

    o Please make sure there is a **blank line** between each state in the output file
    o DO NOT close the file at the end of this function.

- **void readData(State &s, fstream &inFile)**
    o This function will accept an empty **State** object by reference and load it with the next state's information from file. The filestream is received by reference.
    o You will need to read one line at a time from file, and then call the appropriate member function to set the data member
    o DO NOT close the file

Your program output will look similar to the output for assignment #3, except the ordering of the states will follow the order of the input text file (state.txt).

```
Name:      California
Abbr.:     CA
Capitol:   Sacramento
Statehood: Sept. 9, 1850
Population:37253956
Nickname:  Golden State

.
.
.
.
```

Please make sure you include the appropriate program header information at the top of the first page of your program (see the department guidelines). When you are finished, compile, and then run the program. If it does not compile, fix any errors and try again. <u>When your program is working, submit your **state2.cpp** file along with your output file, **a4.txt** by midnight on **WEDNESDAY, SEP. 27TH.**</u>