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Data Structures & Algorithms I: Assignment – Array Soring and Hashmaps

*Leave comments in code to explain the design*

**Pseudocode -** Develop a program that:

50 states and their capitals are stored in a two-dimensional array in order by state name.

Asks the user to enter a capital for a U.S. state.

Upon receiving the user input, the program reports whether the user input is correct.

Display the current contents of the array then use a bubble sort to sort the content by capital.

Prompt the user to enter answers for all the state capitals and then display the total correct count. The user's answer is not case-sensitive.

[X] Build the two-dimensional array of states and their capitals, in order by state name

[X] Ask the user to enter a capital for a state. Inform the user if their guess is correct or not (not be case-sensitive.

[X] Print out your two-dimensional array.

[X] Implement a bubble sort to instead sort the array by capital, rather than state

[X] Ask the user to enter as many state capitals as they can, and display how many they get correct. Answers should not be case-sensitive.

[X] Instead of using a two-dimensional array, now store those pairs in a new way, in a Map by using HashMap.

[X] Print the Map.

[X] Use the TreeMap class to sort the map while storing it.

[X] Ask your user to enter a state, and then display that state's capital.