Homework 5: Arrays

- Due Oct 28 by 11:59pm
- Points 15
- Submitting a text entry box or a website url
- Available Oct 8 at 5am - Dec 13 at 11:59pm

Homework 5 - Arrays

What you will do:

- You will create a main web page for Homework 5 with:
  - a heading such as Homework 5 - Arrays
  - a hyperlink for part 1 with a short description of the part 1
  - a hyperlink for part 2 with a short description of the part 2
  - a hyperlink to the main page of the course - Homework 1 web page

DO NOT USE ALERT BOXES FOR ERROR MESSAGES OR OUTPUTS/RESULTS!

For Part 1:

- Create a web page for part 1 with:
  - a heading
  - a hyperlink to go back to the main Homework 5 page
  - a form that will contain:
  - an input text box so the user will enter his/her full name
  - a group of radio buttons so the user will select his age group (less than 21; between 21 and 50; older than 50)
  - a group of checkboxes so the user will select the browsers he/she has used (Firefox, Edge, Chrome, Safari)
    TIP: when building **radio buttons** and **checkboxes** in HTML, make sure that the **name** attribute **has the same value** to all radio buttons in the group and **the same value to all checkboxes** in the group but, of course, the **id** attribute should have a different value for each element
  - a select element or datalist (to produce a drop-down list of choices) so the user will select which type of movie he/she prefers (Action, Comedy, Drama, Documentary, Science Fiction)
  - a button to submit the form
  - a button to clear the form
  - a div or paragraph element that will serve as the output/result area (it can be outside the form)
- For that page, you will code a script that:
  - Will validate whether the user has entered data in the input text box, **AND** has checked one of the radio buttons, **AND** has checked at least one checkbox, **AND** has selected an option from the list of options in the select (or datalist) element.
  - If one of the data, from the user, is missing, you will show an error message in the output area
    TIP: Make sure that if you display an error message because of a single field, you do not clear out the whole entire form unless all the fields would have error messages associated to them! It's horrible to have the user fill out all the form again when there was only one field with error, right? Remember about this type of detail that is related to user experience!
  - If ALL the requested data was input by the user, you will write a message in the output area such as "***Thanks, your data was submitted!***"

For Part 2:

The web page for part 2 and the script will be based on the table you see below that shows data about several of our states from the ***July/2024 census***!

- You will create a web page for part 2 with:
  - a heading
  - a hyperlink so the user can go back to the main page of Homework 5
  - a form with an input text box - the user will use that input box to type:
    - either the full name of the state or
    - the two-letter abbreviation of the state
  - a button to submit the data
  - a button to clear the form
  - a textarea inside the form or a different element (div or paragraph) where you will write the output/result
- You will write a script that:
  - The user will type the **FULL NAME** or **ABBREVIATION** of the state he/she desires to get information not following any type of pre-determined capitalization. After the user clicks the button to get "State Info", you will verify if the state typed by the user exists in your database - **only the states listed in the table above will exist in your database**!
    INFORMATION: It should not matter if the user typed the state or abbreviation using capital letters or lowercase or a mix of those.
    TIP: Transform the input of the user and the data you are comparing either to uppercase or to lowercase so you can compare "banana with banana"! You can do that by using the ***toLowerCase()*** or ***toUpperCase()*** methods.
  - If the state does not exist, write a message in the output area saying something as "**Sorry, we do not have information about this state! We only have information about.....**" - remember to be clear in your error message to guide the user!
  - If the state exists, you should present in the output/result area the information from the state required - think about presenting the information in a nice readable way!

More Tips:

- Solving this problem involves a two-dimensional array.
- Make sure you validate the input for a correct state abbreviation or state name. If the input is invalid then display an error message.
- If the user enter a state that is not part of the list, show a message to the user but if the user retypes the state and click the Submit button and the state is valid, then the "error" message should not be shown and, instead, you should show the information that is coming from the table below

For example, suppose the user typed "**caliFORNIA**" (a mix or lower and uppercase), your script will consider this state valid, would find the state in your list and would present an output message looking something as:
Thanks for your inquiry, here is the information you requested:
State abbr = CA
State Name = California
Capital = Sacramento
Population = 39,431,263

Here is the table with the information for this part 2!

Census data

State Abbr	State Name	Capital	Population
AL	Alabama	Montgomery	5,157,699
AK	Alaska	Juneau	740,133
AZ	Arizona	Phoenix	7,582,384
AR	Arkansas	Little Rock	3,088,354
CA	California	Sacramento	39,431,263
CO	Colorado	Denver	5,957,493

To submit your homework:

1. Create the web pages for this assignment
2. Modify the Homework 1 web page to include the hyperlink to Homework 5 main page
3. Upload all the created and modified pages to the web server
4. Open the browser and test the URL of the Homework 1 page and you should be able to go to the Homework 5 page with the hyperlink you coded. Test also the hyperlinks to all the parts of your assignment that you coded on the Homework 5 web page.
5. If everything is ok, submit the URL of Homework 1 in the space provided and I should be able to go to Homework 5 page to evaluate all your work

Checklist for grading:

1. All your pages are showing in the browser with no error of NOT FOUND or FORBIDDEN, you submitted the URL of Homework 1 page with the link updated to this homework - **1 point**
2. The scripts of all the pages are working and producing the results requested, including validation requested - **12 points** (6 points for each)
3. There is good user experience/user interface in all the parts requested - **1 point**
4. The HTML and CSS of all your pages are valid - **1 point**