Lab 2 Instructions for Group A –JavaScript Functions
CS 133JS, Beginning Programming: JavaScript

Overview
The objective of this lab is to give you practice:

- Writing functions
- Calling functions
- Linking to a JavaScript file
- Interacting with HTML elements

Part 1: Exercises

- Do the exercises listed on the <u>Function Exercises</u> page.
- Don't clear the console keep everything.
- When you are done, copy the contents of the console by right-clicking on one of the lines of code, clicking on "select all" and then copying everything to the clipboard. Next, paste the code into a Word (.docx) document with your name, lab number and date at the top.
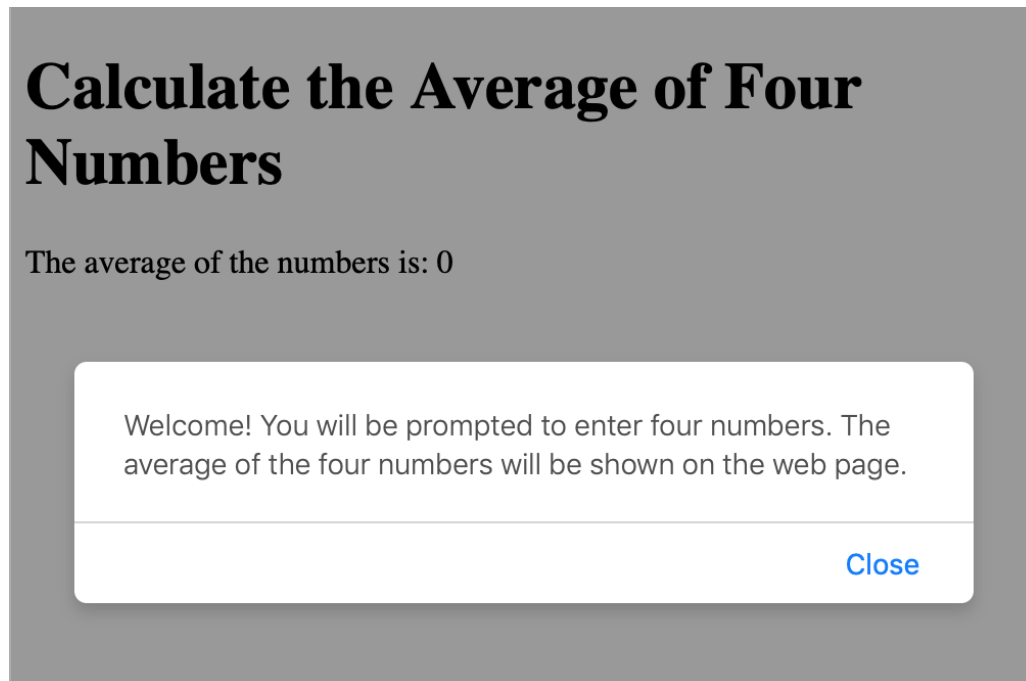
Part 2: Web Pages

For part 2, you will create two web pages.

I. <u>A web page for calculating an average</u>

Create a web page that a person can use to calculate the average of four values.

Here is an example of what the page might look like when you first open it:

Calculate the Average of Four Numbers

The average of the numbers is: 0

Welcome! You will be prompted to enter four numbers. The average of the four numbers will be shown on the web page.

Close

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1. Create a .js file and put the function you wrote in part 1 for calculating averages in it.
2. Modify the function for calculating averages so that it will calculate the average of four values (instead of three).
3. Create a web page and add code to the head element so that this page can use your js file.
4. Add HTML code to the web page to:
   a. Give the page a title and a heading.
   b. Provide some brief instructions to the user.
   c. Get the numbers to be averaged using JavaScript prompts and convert the strings to numbers.
   d. Call the function to calculate the average and display the average on the web page.

Implementation notes:

- Use prompts to get the user's input.
- Use `parseFloat()` to convert the string values from the prompts to numbers. See [this tutorial](#) to learn how and why to use `parseFloat()`.
- Use `getElementById` and `innerHTML` to show the result on the web page.

II. A multiple-choice quiz web page

Create a web page that presents seven multiple-choice questions on any topic you choose. An example topic might be actors. You could ask questions like, who played the character of _____ in the movie _____?

Your web page could look something like this after you've answered the first question and the second dialog has popped up:

Written by Brian Bird, Lane Community College, spring 2020, updated spring 2022.

TV and Movie Actor Quiz

1. Who played Captain Picard in Star Trek Next Generation? A. Patrick Stewart B. Bill Bixby C. Tom Hanks

    Your answer: A, Right

> Who played Queen Elizabeth II in The Queen?
> A. Cate Blanchett
> B. Meryl Streep
> C. Helen Mirren
>
> [   ]
>
> Cancel   OK

1. Create a .js file, and in it write a function that:
    a. Has two parameters
        i. The user's answer (a, b, or c).
        ii. The right answer.
    b. Checks to see if the answer is right.
    c. Returns ether the word "right" or the word "wrong".
        Hint: use the ternary operator to do this.
2. Create a web page with seven questions, each with three choices for an answer.
3. Add one or more script elements to the body of the page that:
    a. Use JavaScript prompts to ask the user for an answer
    b. Calls the function you wrote.
    c. Put the right answer, and "right" or "wrong", in an HTML element under the question on the web page.

Submitting your lab work on Moodle

<u>Beta Version</u>

Post the following in the *Lab Beta forum*:

1. The web pages you created for part 2.
    (Zip the files for you web pages and attach them to the post.)
2. A code review of your lab partner's web page for part 2.
    (Review one of your lab partners' web pages using the Code Review Form provided.)

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Code Review

1. Submit a copy of the code review above to the *Lab Code Review assignment*.

Production Version

Based on the review and helpful advice from your lab partner, you may revise your web page. On the code review from your lab partner, complete the "Production" column to show what you revised. Upload the following to the *Lab Production Version* assignment:

1. The Word document containing all the code you ran for part 1.
2. The web pages you created for part 2.
3. The code review <u>from</u> your lab partner with the <u>"Prod" column filled in by you</u>.