

## Lab 4

### Introduction

This lab will have you implement some of the JavaScript syntax and basic DOM manipulation similar to what we discussed in class. It will also be the first introduction to using AJAX and working with JSON data.

### Objective

Create a single HTML5 file that includes some CSS and JavaScript embedded on the page. This single file will have some basic JavaScript functionality that queries a server for JSON data with AJAX and displays it on the page.

### Requirements

- All HTML tags and page structure should be **HTML5** compliant
- CSS and JavaScript need to be embedded in the HTML page. I only want one HTML file turned in, it should be zipped.
- You may use a CSS framework like Bootstrap if you like. Just link to CDN version instead of a local file. Again, only want the **one html** file turned in.
- Do not put any spaces in your file name
- **Do not use jQuery for this lab.** Pure JavaScript for DOM manipulation and AJAX. You may use DOM element functions or innerHTML but no jQuery.
- You need to make sure you do a new AJAX request each time you run the lab. I will be pulling a different set of data randomly.
- You may use plain XMLHttpRequest, XMLHttpRequest with Events, Axios Library, or the Fetch API
- The html page should never refresh. **Do not trigger a refresh of the browser with javascript to reset the page.**
- JSON data URL: [http://libertyville.rice.iit.edu/scripts/4565\\_lab4.php](http://libertyville.rice.iit.edu/scripts/4565_lab4.php)

### Steps

1. Make a single HTML 5 compliant web page and save it as described in the submission format specification section. It must have an .html extension, be plain text, and follow the HTML5 skeleton as discussed in class.
2. Embed any CSS in the HEAD section on that same page.
3. Place all JavaScript in an embedded script tag at the bottom of the body section.
4. The JSON data consists of an array of objects. Each object has the following keys: active, email, first\_name, gender, id, last\_name, title
5. Your html page should generally look like the mockup provided. Use whatever CSS you like. You may use a CSS framework like bootstrap. Undergraduate students do not need

to match the table exactly like the mockup, but please use some CSS so it doesn't look like plain HTML and so you can tell the cells and rows in the table. Graduate students need to style the table similar to the mockup or in a way similar so it is easy to read and looks nice and professional.

6. When the "Load Data" button is pushed the page should do an AJAX request to get the JSON data from the provided server URL. You then need to build the table completely with JavaScript using the JSON data provided. I want the header row to always be there but before data loads just don't have any rows below that. Once the data loads disable the load button and enable the reset button. You can completely build the table and header row each time if you like and clear out the old results. Just make sure when the page first loads we have the empty table with header row only.
7. When the "reset" button is pushed the rows from the table should be removed. Keep the table headers on the page but just no data rows. HINT. It might be easier to delete everything then add just the headers back in vs trying to delete just the data rows. Once you hit the reset button enable the load button and disable the reset button. The reset button should also start disabled.
8. You should have the reset button disabled before you load the data and then once there is data loaded you should enable the reset button and disable the load data button. When reset is clicked you should then disable the reset button and enable the load button again.

### Graduate Additional Requirements

If you are involved in **any section of 565** you need to complete the additional requirements listed here.

Table and page needs to be styled nicely with CSS and look professional. 565 Students will be graded harder on CSS presentation. Please use a CSS framework with some custom modifications or completely custom styles. I want the active cell in the table highlighted in green somehow if the user has a true value and in red if the value is false. Still show the word true or false but also highlight with color. Can be a background, border, text color. However you want to clearly highlight the cell.

### README File

Not Required for this Lab

### Due Date / Late Policy

This assignment is due **Sunday October 27, 2019 11:59 PM Chicago Time. No Extensions.**

### Submission Guidelines

You must upload your submission, to the blackboard assignment by the due date. The submission must be in the following format and structure. If you do not submit your assignment exactly as specified, you will receive an immediate 5% deduction.

*Submission Format Specification:*

**YourUsername\_lab4.zip**

**|-----YourUsername\_lab4.html**