ITMD 465/565

Lab 5

Introduction

In this lab you will create a basic NodeJS managed project, use the http-server module to create a development server, and build and use a basic ES Module file. The ES Module file will export a function that will be bound to the click event of a button and using AJAX fetch some data and create and append a table to the HTML page to show that data.

Requirements/Process

Create a NodeJS managed project called **`yourusername-lab5`**
Create a folder and run **`npm init`** in folder to create project with npm defaults

Install http-server node module to your project as shown in lecture video
`npm i http-server`

Create a subdirectory for your source code in the project called **`src`**

Edit your package.json file to add a npm script named **`server`** to run http-server and serve files from the src directory as shown in class.

In the src directory create an **`index.html`** file and add the standard HTML5 page skeleton contents as described in class.

Change the page title to "yourusername – Lab 5" and add an H1 tag to the body with "yourusername-Lab 5" as the contents.

Add a button to the page under the H1 that says "Get Data". You should also add an id to the button since you will need to select it in the DOM.

Under the button add an empty DIV element with an id of "results". This is where you will insert some data when the button is clicked.

Run the npm server script to start the development server and open the index.html page in a browser.
`npm run server`
Browse to http://localhost:8080

Now you will create a JavaScript ES module to contain and export the event handler function that will be bound to the button.

In the src folder create a file called **`yourusername-module.js`**

In the module file create a function named **`getData`** and export that function either as a named export or as the default export. At this point all the function should do is print a line to the console.log so we will know it is working. Print "yourusername – Lab 5" to the console.

Back in your **`index.html`** file add an embedded script section to the bottom of the body. In this script section I want you to import your function from your module and bind it to the click event on the button using the **`addEventListener`** method. Remember since this is using modules you need to add the type attribute with a value of module to the script tag.

Test to make sure you see the console message when you click the button before moving on.

Now you will go back to your module file and add code to the **`getData`** function to do an AJAX call, get some JSON data, build a table, and insert it into the results DIV.

You will be using the "users" test data API from https://jsonplaceholder.typicode.com/
The api endpoint is: https://jsonplaceholder.typicode.com/users

Use either the Fetch API or XMLHttpRequest to get the JSON user data from the API endpoint in your **`getData`** function. You will need to build an HTML table with the resulting data and append the table to the page in the results DIV.

The table you create should use only the following data properties from the JSON objects to create the table columns: **id, name, username, email, phone**

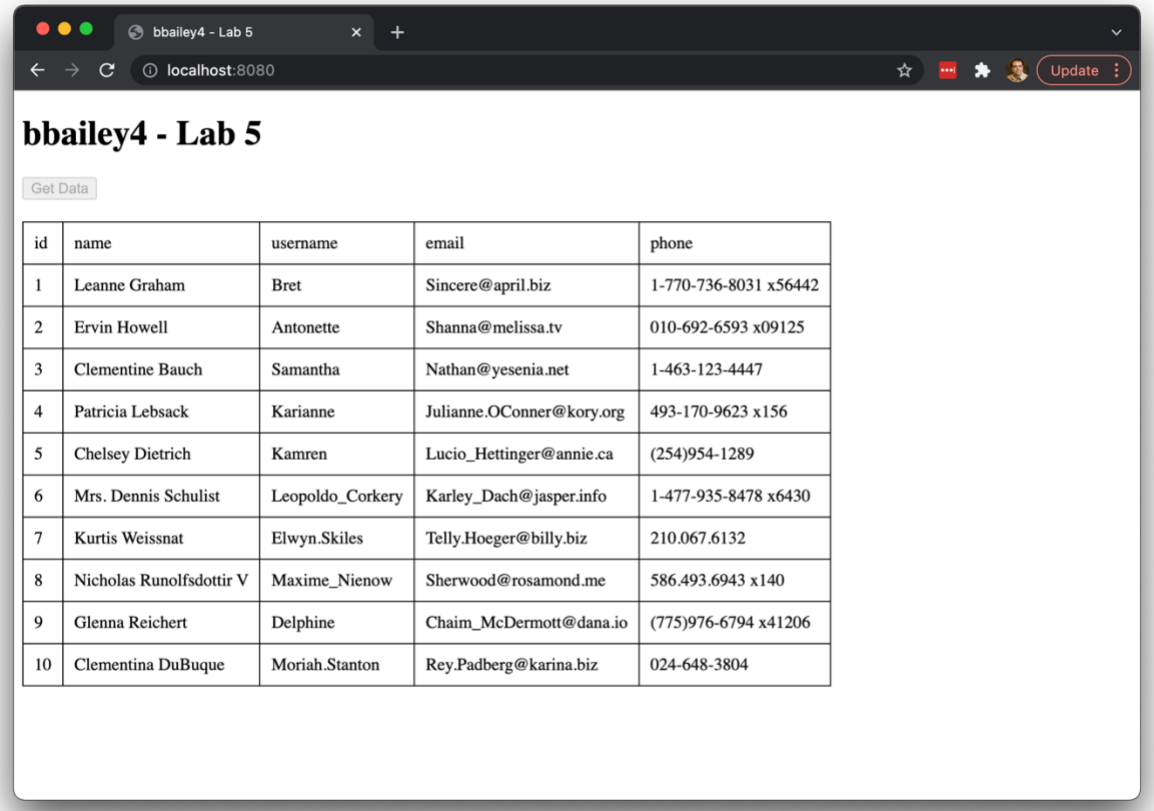
Make sure you add a first row to the table that shows the headers for each column so the user knows what data is in that column.

Once you have received the data, built the table, and appended the table to the HTML page disable the Get Data button so it cannot be clicked again.

At this point when you click the button you should see some basic data in an unformatted table.

In you **`index.html`** file in the head section add an embedded CSS style tag. Add a few basic CSS rules so your table has a little formatting on it. Styling is up to you but there should be some borders between cells and padding in each cell around the data at a minimum. Also add some margin at the top of your table so it isn't touching the button.

At a minimum you should have something like below after clicking the button.



id	name	username	email	phone
1	Leanne Graham	Bret	Sincere@april.biz	1-770-736-8031 x56442
2	Ervin Howell	Antonette	Shanna@melissa.tv	010-692-6593 x09125
3	Clementine Bauch	Samantha	Nathan@yesenia.net	1-463-123-4447
4	Patricia Lebsack	Karianne	Julianne.OConner@kory.org	493-170-9623 x156
5	Chelsey Dietrich	Kamren	Lucio_Hettinger@annie.ca	(254)954-1289
6	Mrs. Dennis Schulist	Leopoldo_Corkery	Karley_Dach@jasper.info	1-477-935-8478 x6430
7	Kurtis Weissnat	Elwyn.Skiles	Telly.Hoeger@billy.biz	210.067.6132
8	Nicholas Runolfsdottir V	Maxime_Nienow	Sherwood@rosamond.me	586.493.6943 x140
9	Glenna Reichert	Delphine	Chaim_McDermott@dana.io	(775)976-6794 x41206
10	Clementina DuBuque	Moriah.Stanton	Rey.Padberg@karina.biz	024-648-3804

Graduate Additional Requirements

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

No additional 565 requirements. Lab will be graded to higher standard.

README File

Not Required for this Lab

Due Date / Late Policy

The due date of this assignment will be posted in blackboard

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 10% deduction.

Submission Format Specification:

YourIITUsername-lab5.zip

Zip your entire project folder before submitting to blackboard. Make sure to delete the node_modules folder before you zip your project folder. Test you zip file before submitting. Unzip it to a different location on your computer. Install all the node dependencies with "npm i" and try running the server again. If everything works then you are safe to submit.