SUMMARY OF UDACITY COURSE

ASYNCHRONOUS JAVASCRIPT

RATINGS: /5

LESSON 1 – AJAX WITH XHR

UNIT 1: Course Intro

- AJAX is the concept of asynchronously requesting data
- XHR, Jquery and Fetch API

UNIT 2: Client Server Demonstration

- Internet can be seen as people sending data back and forth
- GET request: An internet request for data, sent from a client to a server
- Response: a server's response to a request, sent from a server to a client
- AJAX handles requests asynchronously (in the background, without stopping other code from running)

UNIT 3: Ajax Definition and Examples

- AJAX: Asynchronous JavaScript And XML
- AJAX response, data, xml, Json, html
- JSON data format is now very common compared to XML
- History lessons: Snap shots

UNIT 4: APIs

- API: Application Programming Interface
- We use API to interact with various data sources
- Most of the data-rich application get their data from 3rd party websites
- Checkout: Google APIs, https://www.programmableweb.com/apis/directory

UNIT 5: Create an Async Request with XHR

- XHR is provided by the JS environment and it is used to make AJAX request

UNIT 6: The XHR Object

- "XMLHttpRequest" object for making asynchronous HTTP requests
- "const asyncRequestObject = new XMLHttpRequest();"
- Snap shot

UNIT 7: XHR's ".open()" method

- Lot of methods available for the "XMLHttpRequest" object
- ".open(http_method, url)": the important paramters for this method are the HTTP method and URL to send the request
- "GET": to retrieve data
- "POST": to send data
- CORS helps us to circumvent same-origin policy and access information, snap shots
- ".open()" method does not actually send the request, it sets the stage, snap shot
- ".open( )" documentation: https://developer.mozilla.org/en-US/docs/Web/API/XMLHttpRequest/open

UNIT 8: XHR's ".send()" method

- ".send()" allows us to actually send the request
- To handle successful response of an XHR request we set ".onload" property on the object to a function that will handle it, snap shot
- To handle error we set the ".onerror" property to a function to handle it

UNIT 9: A Full Request

- Snap shot
- JSON.parse(this.responseText): used to convert JSON response into a JS object, snap shot

UNIT 10: Project Initial Walkthrough

- We will be using a starter project on GitHub: https://github.com/udacity/course-ajax
- Instructions: snap shots

UNIT 11: Settings a Request Header

- Snap shot
- Worked on folder "lesson-1-async-w-xhr"

UNIT 12: Project Final Walkthrough

UNIT 13: XHR Recap

- Snap shots
- Checkout https://www.html5rocks.com/en/tutorials/file/xhr2/

UNIT 14: XHR Outro

- Have learned to create and send Asynchronous Request
- We can use JQuery to make Async requests which involves less code

LESSON 2 – AJAX WITH JQUERY

UNIT 1: The jQuery Library & Ajax

- JQuery is a JS library that provides a lot of functionality right out of the box
- Snap shots, JQuery is not as necessary as it was several years ago
- JQuery's "ajax()" method is used to handle Asynchronous requests

UNIT 2: jQuery's "ajax()" Method

- Snap shots
- "$.ajax(<url-to-fetch> <a-configuration-object>)"
- A "configuration" object is just a plain JS object that is used to configure something, snap shots

UNIT 3: Handling The Returned Data

- In the "ajax()" method the response is handled by a function with a ".done()" method
- "$.ajax({ url: ********}).done(handleResponse)", snap shots

UNIT 4: Cleaning up the Success Callback

- Worked on folder "lesson-2-async-w-jQuery"

UNIT 5: Code Walkthrough

- JQuery "ajax()" method gives us less setup code to manage

UNIT 6: Peek inside $.ajax()

- ".ajax()" is still making use of xhr requests under the hood
- Debugger > Source on Mozilla to set breakpoint on source files

UNIT 7: Review the Call Stack

- DevTools has a ton of helpful information, try to get familiar with them, it will make developing and debugging websites a lot easier
- DevTools provide a JS Call Stack, the function at the bottom if the stack is the first one to run
- A function stays on the stack until the one above it returns, snap shots

UNIT 8: Walkthrough of ".ajaxTransport"

- JQuery's "ajax()" method does a lot of things XHR stuff under the hood, snap shot

UNIT 9: jQuery's Other Async Methods

- It is often considered good practice to use $.ajax() method over the jQuery provides convenience methods
- Snap shots

UNIT 10: Async with jQuery Outro

LESSON 3 – AJAX WITH FETCH

UNIT 1: Ajax call with the Fetch API

- Fetch API does not need us to install any special library like jQuery or write lots of code like in the case of xhr requests

UNIT 2: What is Fetch

- Fetch is the new way to make network requests
- Fetch is promised based

UNIT 3: Write the Fetch Request

- If you try running Fetch request on a console, you get a Promise returned to you
- Fetch request takes URL as first argument, the second argument is a configuration object
- Checkout: https://developer.mozilla.org/en-US/docs/Web/API/Fetch_API/Using_Fetch
- Snap shots

UNIT 4: Handle The Response

- ".then()"

UNIT 5: The Response Object

- ".json()" method on a Response object returns a Promise, so we need to chain on another ".then()"
- Snap shot
- ".json()" method takes the response and convert it to form JSON
- ".blob()" method will extraxt the image body from the response

UNIT 6: ES6 Arrow Function

- Arrow function help us to shrink our code

UNIT 7: Display Content & Handling Errors

- Snap shots
- ".catch()" method used to handle requests errors

UNIT 8: Project Wrap Up

- Worked on folder "lesson-3-async-w-fetch"
- They looped over all the articles instead of just one

UNIT 9: Fetch Outro

- With Fetch API things are now a lot easier

UNIT 10: Course Outro