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## **Week 8 Homework Part 2:**

1. What does *AJAX stand* for?

AJAX stands for Asynchronous Javascript and XML

2. What does *XML stand* for?

XML stands for eXtensible Markup Language.

3. What object does *AJAX use* to request data from the server?

AJAX uses built-in browsers XMLHttpRequest object to request data from the server.

4. What is the special feature of *AJAX* that makes developers *like* to work with it?  
Hint: It has to do with enhancing the User Experience (UX).

AJAX allows the web page to make changes asynchronously, meaning it can update parts of the website without reloading the whole page. AJAX does this by exchanging data with the server behind the scenes.

5. Explain the basic five steps *involved* in the execution of an *AJAX XMLHttpRequest* between the browser and the server.

- An event can occur on the web page when the page is loaded or when a button is clicked.

- An XMLHttpRequest() object sends a request to the server.

- The server sends back a response to the web page that made the request.

- The response is read by JavaScript.

- JavaScript executes the page update.

6. What makes up the core of *AJAX*?

The XMLHttpRequest() object makes the core of AJAX.

7. What is the XMLHttpRequest object *used* for?

The XMLHttpRequest object is used to exchange data with a web server asynchronously.

8. What is the syntax for XMLHttpRequest()?

```
variable = new XMLHttpRequest( );
```

9. Give me an *example* of XMLHttpRequest(). Use your project code, please.

```
const xhttps = new XMLHttpRequest();
```

10. What *must be* called before *any other* method calls and *why*?

XMLHttpRequest() constructor initializes an XMLHttpRequest() object. It must be called before other methods can be called.

11. In the OMDB Api project, even though the OMDB Api is *served* over http, we use https. Why?

On live servers, you can't use HTTP anymore because Github gh-pages doesn't allow us to use HTTP.

12. What keyword is used to initialize the XMLHttpRequest object?

The keyword is new.

13. What does new XMLHttpRequest() *create*?

The new XMLHttpRequest( ) creates an object from a constructor function such as XMLHttpRequest( )

14. What are the 5 things that the new keyword does?

- It creates an object from constructor function like XMLHttpRequest().
- It sets the new object's internal, inaccessible/ private, a property of prototype to constructor function's external; accessible, prototype object. Every object has a prototype property.
- It executes the constructor function, using the newly created object whenever this is mentioned.

- The new keyword makes this keyword point to the newly created object. The constructor function refers to the function that follows the new keyword.
- It returns this if the function does not return its own object.

15. *Using code* from your project, give me an example of this being returned due to the use of the new keyword with XMLHttpRequest() to *create* an instance of the XMLHttpRequest Object.

```
xhttps.onreadystatechange = function () {  
    if (this.readyState === 4 && this.status === 200) {  
        console.log(this.responseText);  
        console.log(JSON.parse(this.responseText));  
        const data = JSON.parse(this.responseText);  
        document.getElementById("movie-title").innerHTML = data.Title;  
        document.getElementById("poster").src = data.Poster;  
        document.getElementById("director").innerHTML = data.Director;  
        document.getElementById("writer").innerHTML = data.Writer;  
        document.getElementById("genre").innerHTML = data.Genre;  
        document.getElementById("plot").innerHTML = data.Plot;  
    }  
}
```

16. Describe what the XMLHttpRequest.open() method *does*.

XMLHttpRequest.open() initializes a newly-created request or re-initializes an existing one.

17. *Using code* from your project, give me an example of XMLHttpRequest.open().

XMLHttpRequest.open() code example from my project:

```
xhttps.open("GET", url, true);
```

18. Tell me what the values *passed* to the `open()` method are for, and give me the parameters they *represent* the values (aka arguments) of. Hint: *part* of the answer may *reside* in the `slide` deck and *inside* the Related Resources links at the end of the deck, and part will *reside* in the `README.md` of the week 8 homework repository. You *will have* come across the information while *reading* the instructions for going through the steps of *building* your project.

- The values passed to the `open ( )` method are: `get`, `post`, `put`, `delete`, which resides in the “method” parameter

- The second parameter is the URL, a `DOMString`

- The third parameter is a boolean, which indicates whether to perform the operation asynchronously

19. Using code from your project, give me an example of `XMLHttpRequest.send()`.

```
xhttps.send( );
```

20. Tell me if there are *any* values *passed* to our `send()` method. What *optionally* could be *passed* to the method, and why do we NOT have to pass this optional parameter/argument to *our* `send()` method?

No values are passed to our `XMLHttpRequest.send()` method. You can pass the body(optional) as a parameter. This is used with the method `PUT` and it modifies the body content. If the request is `GET` or `HEAD` it will be ignored and the request body is set to null.