

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
3. What object does AJAX use to request data from the server?
 - AJAX uses a built-in browser 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 web pages to be updated asynchronously by exchanging data with a web server behind the scenes (?)
5. Explain the basic five steps involved in the execution of an AJAX XMLHttpRequest between the browser and the server.
 - a. An event occurs on the page, which means the page is loaded, or a button is clicked.
 - b. Create an XMLHttpRequest Object, which sends a request to the server.
 - c. The server sends a response back to the web page/browser that made

the request.

d. The response is read by using JavaScript.

e. JavaScript executes the page update.

6. What makes up the core of AJAX?

- The core of AJAX is the XMLHttpRequest() object.

7. What is the XMLHttpRequest Object used for?

- It's used to exchange data with a web server behind the scenes (asynchronously), which means that it's possible to update parts of a page instead of the whole page.

8. What is the syntax for XMLHttpRequest()?

- `variable = new XMLHttpRequest();`

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

- `const xhttp = new XMLHttpRequest();`

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

- The XMLHttpRequest() constructor initializes an XMLHttpRequest (object). This must be called before any other method calls.

11. In the OMDB Api project, even though the OMDB Api is served over http, we

use https. Why?

- On a live server, you can't use http anymore. Github gh-pages don't allow us to use http.

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

- The new keyword is used to initialize the XMLHttpRequest object.

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?

- a. It is used to create an object from a constructor function such as XMLHttpRequest().
- b. It sets the new object's internal, inaccessible (aka private), [[prototype]] property to be the constructor function's external, accessible, prototype object. Every function object automatically has a prototype property.
- c. It executes the constructor function, using the newly created object whenever this is mentioned.
- d. The new keyword makes this keyword point to the newly created object. The constructor function refers to the function that follows the new keyword.

e. 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.

- 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("year").innerHTML = data.Year;
- document.getElementById("released").innerHTML = data.Released;
- document.getElementById("runtime").innerHTML = data.Runtime;
- document.getElementById("director").innerHTML = data.Director;
- document.getElementById("writer").innerHTML = data.Writer;
- document.getElementById("actors").innerHTML = data.Actors;

- `document.getElementById("genre").innerHTML = data.Genre;`
- `document.getElementById("plot").innerHTML = data.Plot;`
- `document.getElementById("awards").innerHTML = data.Awards;`

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()`.

- An example: `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.

- a. The values passed to the `open ()` method are: `get`, `post`, `put`, `delete`, which resides in the "method" parameter
- b. The second parameter is the URL, a `DOMString`
- c. The third parameter is a boolean, which indicates whether to perform the operation asynchronously or synchronously.

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?

- There aren't any values passed to our `send()` method. The `send()` method accepts any parameter, which lets you specify the request's body. If the request method is "get" or "head", the body parameter is ignored, and the request body is set to null.