Web Development and Programming
CSCI-UA 61
AJAX
Asynchronous JavaScript and XML
AJAX

AJAX is not a new programming language but a newer way to work with existing standards.

It’s a technique for loading data into part of a page without having to refresh the entire page.

AJAX stands for Asynchronous JavaScript and XML.
AJAX
Asynchronous

 AJAX uses an “asynchronous” processing model

When a browser comes across a script tag, it usually stops processing the rest of the page until the script is executed

This is a “synchronous” model

With AJAX, the browser can request some data from the server and continue to load the rest of the page

When the server responds with the data, an event is fired that can call a function to process the data
AJAX
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W3Schools: AJAX Introduction
www.w3schools.com/ajax/ajax_intro.asp
AJAX

The keystone of AJAX is the XMLHttpRequest object

All modern browsers support the XMLHttpRequest object

The XMLHttpRequest object is used to exchange data with a server with the open() and send() methods

To get the response from a server, we will use the responseText or responseXML property of the XMLHttpRequest object
AJAX

Events

When a request is sent to the server, we want to evaluate the response it gives before proceeding.

`readyState` holds the status of the XMLHttpRequest:
- 0: request not initialized
- 1: server connection established
- 2: request received
- 3: processing request
- 4: request finished and response ready

The `onreadystatechange` event is triggered when `readyState` changes.

After the request, a status of 200, “OK” or 404, “Page not found” will be given.
In many cases, AJAX can be employed to improve user experience. There are, however, drawbacks to using AJAX on your site:

- Your back and refresh buttons will not work for that portion of the page.
- Search engines will not be able to catalog sections of content that are updated with AJAX.
- Users with JavaScript disabled will not be able to access this content.
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