AJAX Basics

AJAX is an important front-end web technology that lets JavaScript communicate with a web server. It lets you load new content without leaving the current page, creating a better, faster experience for your web site's visitors. In this course, you'll learn how AJAX works and how you can use JavaScript to communicate with a web server. We'll use plain JavaScript as well as jQuery to create AJAX requests and use the response to dynamically update your web pages. Along the way, you'll build mini-projects to reinforce your learning. We wrap up the course with a small project, showing you how to apply what you've learned to pull images from Flickr and display them on your web site.

What you'll learn

* AJAX Concepts
* How to use JavaScript to make AJAX requests
* How to use jQuery to make AJAX requests
* How to process JSON with jQuery and JavaScript
* How to use a 3rd party API with AJAX and jQuery

AJAX Concepts

You'll learn the basics of AJAX, see how Google, Twitter and Reddit use AJAX to make their sites more responsive and interactive, and master the four steps of an AJAX request.

Introducing AJAX

Introducing Asynchronous JavaScript and XML, or AJAX. How it works, who uses it and why you should learn it.

How AJAX Works

Learn about the XMLHttpRequest Object, what AJAX stands for, and the four steps to creating and sending a XHR request.

A Simple AJAX Example

Program your first AJAX request using JavaScript. You'll use AJAX to load HTML into a div tag on a web page.

GET and POST

Learn about the two most common methods for sending requests to a web server. What is the difference between the two and when to use GET, when to use POST?

Key Points

There are two common methods for sending HTTP requests:

* GET. Used for most requests. Browser uses the GET method whenever it requests a new web page, CSS file, image, and so on. Use GET when you want to "get" something from the server.
* POST. Used frequently with web forms to send data to store in a database. Use POST when sending data that will store, delete or update information from a database.

AJAX Response Formats

In this video, you'll learn which formats web servers commonly send as a response to an AJAX request: as plain text, HTML and XML. Learn the basics of XML.

AJAX Security Limitations

Web browsers prevent certain types of AJAX requests, such as requests to other web sites. Learn the rules of a web browser's "same-origin" policy and ways to work around these limitations.

Programming AJAX

Learn to use callbacks to respond to server responses, how the JSON format works and how to use JavaScript to parse JSON data. Build a simple "employees status" widget for a company intranet.

Introducing the Project

In this stage, you'll be building a useful page element for a company intranet. Using AJAX you'll display a list of employees who are in or out of the office.

AJAX Callbacks

Dig deeper into AJAX callbacks -- how they work and ways to check for errors from the server.

Introducing JSON

Learn about JSON, or, JavaScript Object Notation. JSON is a simple data format that uses sets of key/value pairs to store information.

Parsing JSON Data

JSON is transmitted over the web as plain text. To make it useful for a JavaScript program, you need to parse it, or convert it from a string to JavaScript.

Chrome Console Keyboard Shortcuts

* Windows: Ctrl + Shift + J
* Mac: Cmd + Option + J

Firefox Console Keyboard Shortcuts

* Windows: Ctrl + Shift + K
* Mac: Cmd + Option + K

Internet Explorer Console Keyboard Shortcuts

* F12 key

Safari Console Keyboard Shortcuts

* Cmd + Option + C

Processing JSON Data

In this video, we'll continue with our intranet project. Now that we have a JSON response from the server and parsed it, we need to turn it into HTML and add it to the web page.

jQuery and AJAX

Learn how jQuery makes programming AJAX faster and more fun. You'll learn the many different jQuery shorthand methods as well as other useful jQuery methods like $.each()

Introducing jQuery

jQuery is the world's most popular JavaScript library. It makes JavaScript programming fast and simplifies AJAX programming.

Treehouse Courses

* [jQuery Basics](http://teamtreehouse.com/library/jquery-basics)

Resources

* [jQuery.com](http://jquery.com/)
* [Download jQuery](http://jquery.com/download/)
* [jQuery CDN](http://code.jquery.com/)
* [.load()](http://api.jquery.com/load/) documentation

jQuery’s AJAX Shorthand Methods

Learn about the jQuery's "shorthand" AJAX methods. These utility functions each provide a simple solution to making different types of AJAX requests.

The Office Status Project Revisited

In this stage, we'll re-create the intranet project from the last stage. This time, we'll use jQuery to simplify the programming.

Posting Data with jQuery

jQuery also makes posting form data to a server very simple. In this video, you'll learn how to retrieve form input, encode it and send it to a web server.

The jQuery AJAX Method

All of jQuery's shorthand AJAX methods are built on a more complex AJAX method -- $.ajax. Learn the basics of this powerful and complete AJAX tool.

Handling Errors

Sometimes servers don't behave how we expect them to. Learn how to use jQuery to handle server errors that arise during AJAX requests.