



AN INTRODUCTION TO

< / > HTMX

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ADVANCED TOPICS - WEB DEV

RESEARCH PROJECT



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WHO ARE WE?

Gustavo Lins

Native from Brazil with a background in engineering, now an IT Student at NBCC Moncton!

I will be leading the POST portion of our demo.



Sacha Davidson

Some call me Sacha. Some call me 'efficiency Pete'. Call me whatever, just don't call me late for dinner!

I will be leading the GET portion of our demo.



WHAT IS HTMX?

HTMX is a Library

HTMX is a compact library that provides developers with direct access to AJAX, CSS Transitions, WebSockets, and Server-Sent Events within HTML.

Hypermedia As The Engine Of Application State

HTMX emphasizes one of the four principles of the *Uniform Interface* constraint of **REST Architecture**: **Hypermedia as the Engine of Application State (HATEOAS)**

HTMX expects hypermedia (like HTML) as a response from the server.

Generalizing Hypermedia

In HTML, the two major hypermedia controls are anchor tags and form tags. These elements allow us to issue GET or POST requests from our HTML.

With HTMX, we are now able to issue AJAX requests from almost any HTML element.

We achieve this using special attributes, like `hx-get` and `hx-post`. It also allows us to replace specific elements instead of reloading our entire page

WHY USE HTMX?



Allows all the business logic, HTML construction, and data fetching to be managed by the server-side language and backend framework of your choice.

FLEXIBILITY



HTMX simplifies development with declarative attributes in HTML, reducing boilerplate code and eliminating the need for complex JavaScript frameworks

SIMPLICITY



By dynamizing only specific parts of a webpage, HTMX provides a smoother user experience, faster load times, and enhanced overall performance.

USER EXPERIENCE

HOW TO INSTALL HTMX?

Easiest Way to Add HTMX to a Project

- Using a CDN! You can simply add this to your head tag and get going

```
<script
  src="https://unpkg.com/htmx.org@1.9.10"
  integrity="sha384-D1Kt99CQMDuVetoL1lrYwg5t+9QdHe7NLX/SoJYkXDFFX37iInKRy5xLSi8n07UC"
  crossorigin="anonymous"
>/script>
```

Note: While using a CDN is the easiest way to get started, they are not recommended for production

More Ways of Adding HTMX to a Project

- For npm-style build systems, you can install HTMX via npm
- You can also download HTMX and copy it into your project ~47kb
- Another method for installing is to use Webpack

HTMX ATTRIBUTES

HTMX Attributes

An HTMX tag, or attribute, is an HTML attribute that enables dynamic updates and interactions in web pages through AJAX requests.

Common HTMX Attributes

hx-get:

Specifies the URL for GET requests.

hx-target:

Defines the HTML element where the response will be inserted.

hx-trigger:

Specifies the event that triggers the request.

hx-post:

Specifies the URL for POST requests.

hx-swap:

Determines how the response replaces the content of the target element.

hx-indicator:

Specifies the HTML element used to indicate loading or processing status during a request

DEMO: INTRO TO HTMX

Overview

- The demo will be two parts:
 - GET and POST
- We will cover some fundamental HTMX attributes and their uses/use cases
- We have chosen to use Node.js + Express for this project
- It is worth noting that you are not required to use Node.js.
- Any server or REST API that responds with HTML markup should work.
- HTMX is often used with GO

Part One: GET

- Part One focuses on making GET requests to our server using HTMX
- HTMX Attributes Used:
 - hx-get
 - hx-trigger
 - hx-swap
 - hx-target
 - hx-confirm
 - hx-vals
- This portion of the demo will introduce students to common mistakes and use cases for working with HTMX.
- We'll work with attributes, using some of the server-side code as a reference.

Part Two: POST

- Part Two focuses on working with POST requests using HTMX
- HTMX Attributes Used:
 - hx-get
 - hx-post
 - hx-trigger
 - hx-target
 - hx-indicator
- This portion will teach the users how to do post operations in HTMX
- We will work with several attributes, representing different cases of posting to a back-end.

EXERCISE: YOUR TURN

Mission

Using what you've learned, implement the following:

- An input that issues a POST request to the server to add a name to the list
- An unordered list that displays all the names stored in the server via a GET request

Steps:

1. Add the HTMX CDN to the `exercise.html` page
2. Add the required HTMX attributes to get the nav when the form loads
3. Add the required HTMX attributes to post names when the form submits
 - a. Use an `hx-indicator` for while the request processes
 - b. Target the div with an id of `result`
4. Add the required HTMX attributes to get the names
 - a. When the page loads
 - b. When the page loads & every two seconds (Challenge 1)
 - c. When the page loads & every two seconds & when the form submits (Challenge 2)

Tips

- All of the server-side code has been written for you.
- To implement the POST functionality, you will need to issue a request to "post-name"
- To implement the GET functionality, you will need to issue a request to "get-names"
- To complete Challenge 1 and Challenge 2, you will need to go to htmx.org and research
 - "polling" and
 - "standard event modifiers"

WHERE TO LEARN MORE?

Here are some links that were really helpful throughout our journey:



Another great source has been ThePrimeagen on YouTube

Q&A SESSION