Hypermedia as the engine of application state

An Introduction

Atridad Lahiji - December 7, 2023

The Problem

JSON

- JSON is slow

  - Limited data types

- JSON requires overhead before rendering

  - Browsers don't just render JSON as HTML... Developers need to do this with JS

The Solution

HTMX

- HTMX (Hypermedia driven UI)

  - Allows minimal front-end JS

  - The backend returns HTML, not JSON

  - HTMX handles swapping returned HTML, AJAX, WebSockets, etc.

  - It plays well with libraries such as Alpine.js

Examples

Example #1
Fetch and Swap

```html
<h2 class="text-xl sm:text-2xl">Fetch and Swap Demo:</h2>


<button
  class="btn btn-secondary"
  hx-get="/api/htmx/hello"
  hx-trigger="click"
  hx-target="#hello"
  hx-swap="outerHTML"
>
  Click Me!
</button>


<p id="hello"></p>
```

Example #1
Fetch and Swap

```html
<h2 class="text-xl sm:text-2xl">Fetch and Swap Demo:</h2>


<button

  class="btn btn-secondary"

  hx-get="/api/htmx/hello"          ← Get HTML

  hx-trigger="click"

  hx-target="#hello"

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>

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<p id="hello"></p>
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    class="btn btn-secondary"
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    hx-swap="outerHTML"          ← Swap Whole
>                                    Element
    Click Me!
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</button>


<p id="hello"></p>            ⬅  Swap this
```

Example #2
Websockets

```html
<h2 class="text-xl sm:text-2xl">Websocket Counter Demo:</h2>

<div class="flex-row flex gap-2 justify-center items-center text-center">
  <button
    class="btn btn-secondary"
    hx-post="/api/htmx/count/decrementCount"
    hx-trigger="click"
    hx-swap="none"
  >
    -
  </button>

  <button
    class="btn btn-secondary"
    hx-post="/api/htmx/count/incrementCount"
    hx-trigger="click"
    hx-swap="none"
  >
    +
  </button>
</div>
```

```html
<div hx-ext="ws" ws-connect="/ws">
  <p
    hx-get="/api/htmx/count/getCount"
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    hx-target="this"
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  >
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← Post Request

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Trigger on Click

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    hx-trigger="click"
    hx-swap="none"            ← No Swapping
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Post Request

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</div>
```

← No Swapping

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```

Websocket Connect ➡️

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    id="countfromserver"
  >
    0
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</div>
```

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```

Get Request →

```html
<div hx-ext="ws" ws-connect="/ws">
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  >
    0
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  >
    0
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```

Trigger on Load

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  </button>
</div>
```

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<div hx-ext="ws" ws-connect="/ws">
  <p
    hx-get="/api/htmx/count/getCount"
    hx-trigger="load"
    hx-target="this"          ← Target Itself
    hx-swap="outerHTML"
    id="countfromserver"
  >
    0
  </p>
</div>
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  </p>
</div>
```

Swap Whole Element ←

Live Demo

Demo
https://go.darius.atri.dad

- Includes:
  - The Swap demo
  - The Counter demo
  - Go Fiber for the backend
  - Repo: https://github.com/atridadl/darius-go
  - Alternate version with Elysia + Bun: https://github.com/atridadl/darius-ts

Contact Me

- Github: atridadl

- Email: me@atri.dad

- Dev Edmonton slack!

Questions?