




How 2 Webassembly

Henry Rovnyak

Go to TODO: PUT GITHUB LINK HERE and follow the setup
instructions if you want to follow along



What am I talking about?

- What is webassembly?
- How can I use it?
- But I'm a crazy person! How do I **really** use it?

What am I not talking about?

- Leptos
- Yew
- Blazor
- Vugu
- etc.

```
// Stolen from the Leptos book
#[component]
fn App() -> impl IntoView {
    let (count, set_count) =
        create_signal(0);

    view! {
        <button
            on:click=move |_| {
                set_count(3);
            }
        >
            "Click me: "
            {move || count()}
        </button>
    }
}
```

How do websites work?

- HTML: Hypertext Markup Language
 - What to show
 - Requests resources
- CSS: Cascading Style Sheets
 - How the website should look
- Javascript
 - What the website should do

index.html:

```
<!doctype html>

<html>
  <head>
    <title>Mandelbrot</title>
  </head>

  <body>
    <canvas id="canvas" width="800"
height="600"></canvas>
    <script type="module" src="sketch.js"></
script>
  </body>
</html>
```

What problems does Webassembly solve?

- Javascript is a bad language
 - Cursed
 - No type checking
 - Slow
- Running stuff on the web that was not meant for the web



```
"0" == 0 // true
0 == [] // true
"0" == [] // false???
```

What is Webassembly?

- Similar to assembly/machine code
- Compilation target for other languages
- Small instruction set
- Interfaces with Javascript
- Needs Javascript glue code
- No access to the standard library

How do I use it?

- Mandelbrot set
 - Assuming you already have everything set up