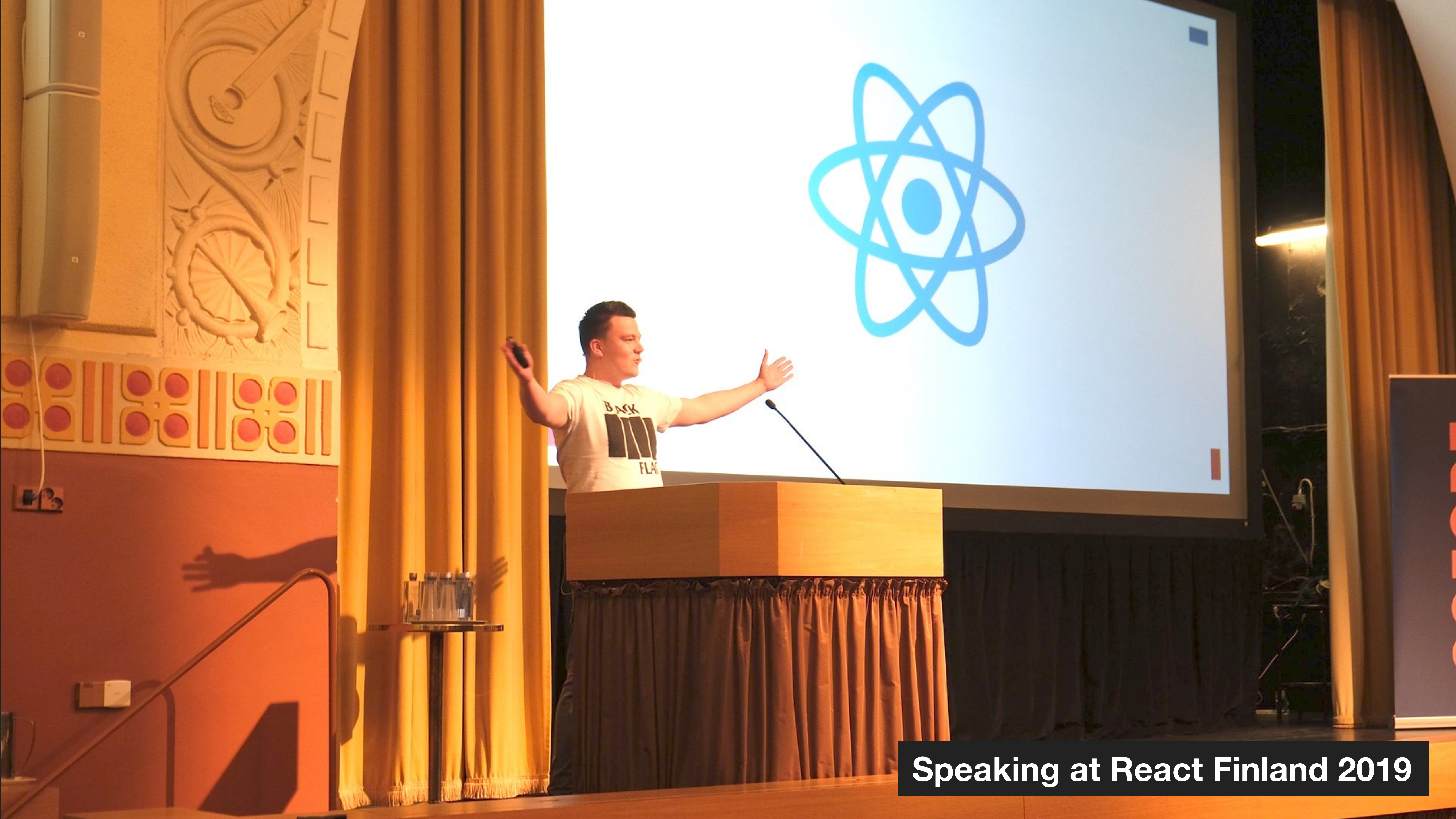


# Lost in Translation

Manuel Matuzović

Beyond Tellerrand, Düsseldorf 2022









Speaking at React Finland 2019



My Accessibility Journey: What I've Learned So Far

https://alistapart.com/article/my-accessibility-journey-what-ive-learned-so-far/133%

ARTICLESEVENTSTOPICSWRITE FOR USLANGUAGE (ENGLISH) 

# A LIST APART

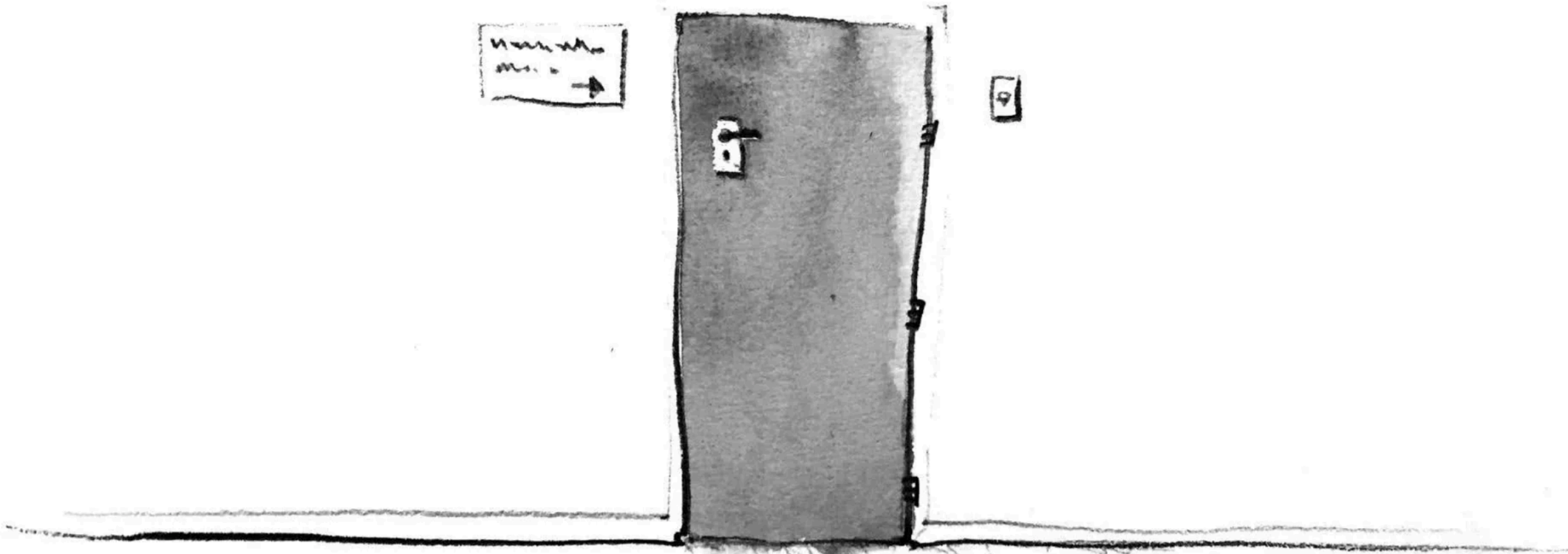


Illustration by [Dougal MacPherson](#)

## My Accessibility Journey: What I've Learned So Far

by [Manuel Matuzović](#) · February 06, 2018

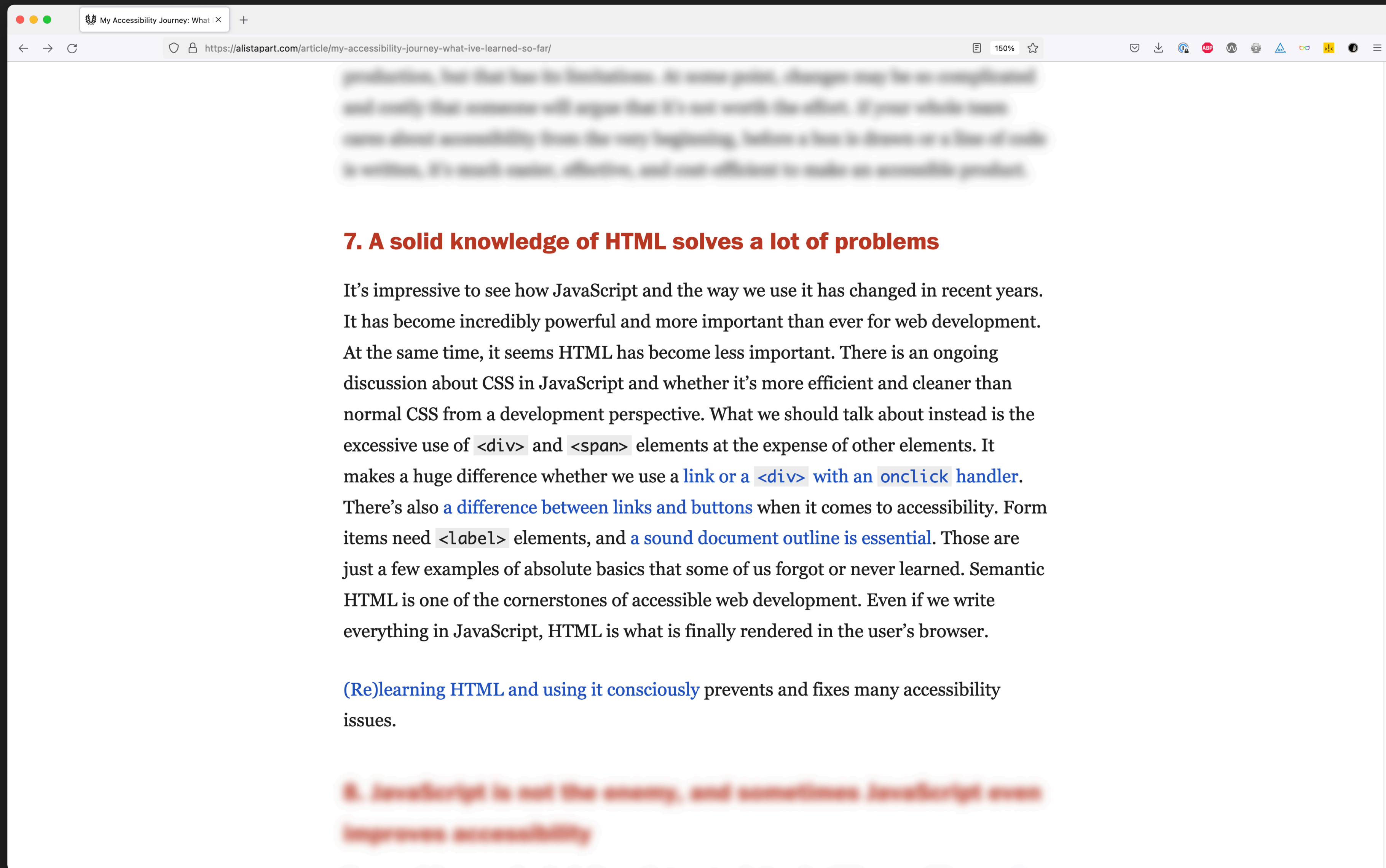
Published in [Accessibility](#), [Usability](#)

Last year I gave a talk about CSS and accessibility at the [stahlstadt.js meetup](#) in Linz, Austria. Afterward, an attendee asked why I was interested in accessibility: Did I or someone in my life have a disability?

I'm used to answering this question—to which the answer is no—because I get it all the time. A lot of people seem to assume that a personal connection is the only reason

16 Comments

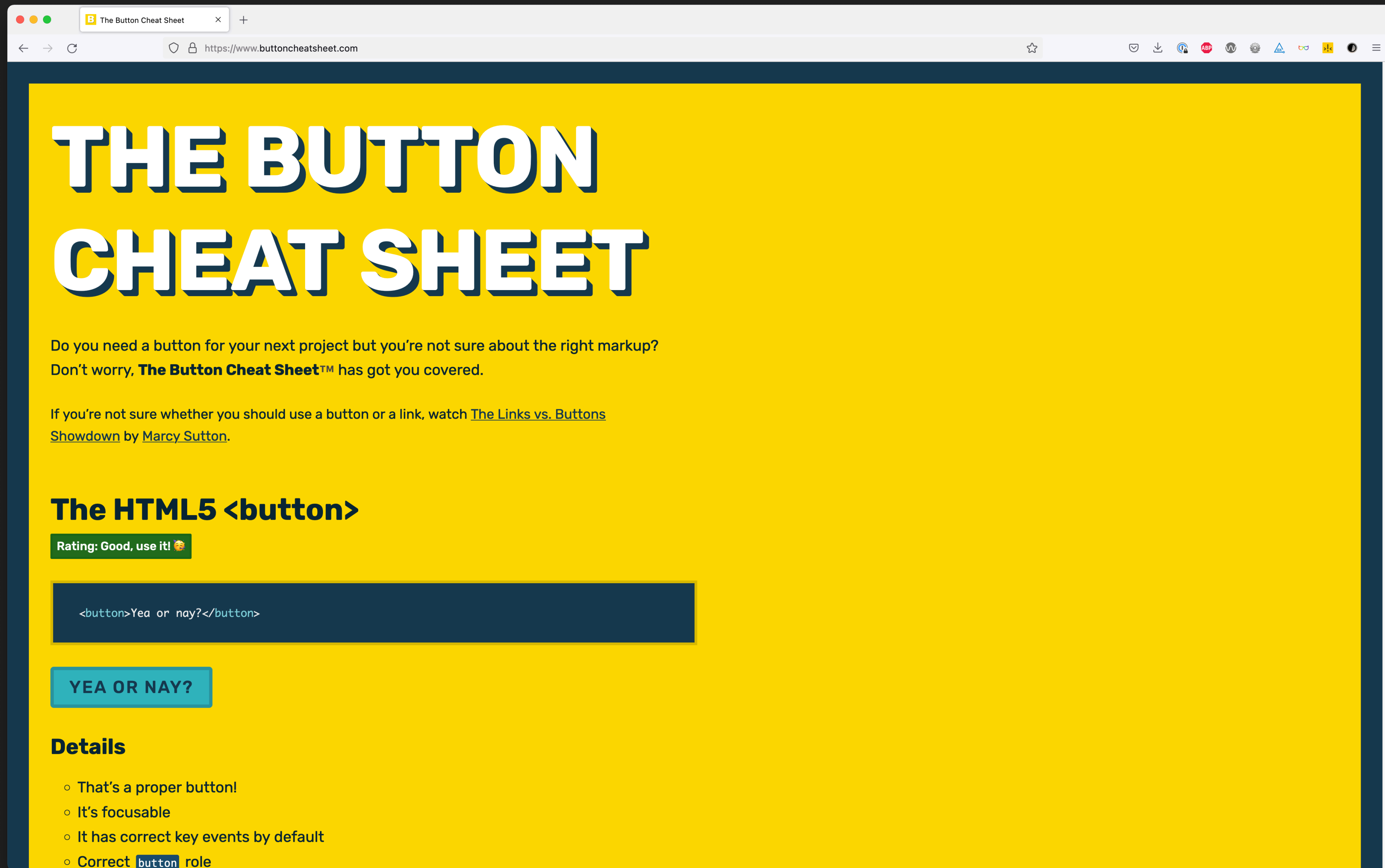














Tags used in HTML

info.cern.ch/hypertext/WWW/MarkUp/Tags.html

# HTML Tags

This is a list of tags used in the [HTML](#) language. Each tag starts with a tag opener (a less than sign) and ends with a tag closer (a greater than sign). Many tags have corresponding closing tags which identical except for a slash after the tag opener. (For example, the [TITLE](#) tag).

Some tags take parameters, called attributes. The attributes are given after the tag, separated by spaces. Certain attributes have an effect simply by their presence, others are followed by an equals sign and a value. (See the [Anchor](#) tag, for example). The names of tags and attributes are not case sensitive: they may be in lower, upper, or mixed case with exactly the same meaning. (In this document they are generally represented in upper case.)

Currently HTML documents are transmitted without the normal SGML framing tags, but if these are included parsers will ignore them.

## Title

The title of a document is given between title tags:

```
<TITLE> ... </TITLE>
```

The text between the opening and the closing tags is a title for the hypertext node. There should only be one title in any node. It should identify the content of the node in a fairly wide context, and should ideally fit on one line.

The title is not strictly part of the text of the document, but is an attribute of the node. It may not contain anchors, paragraph marks, or highlighting. the title may be used to identify the node in a history list, to label the window displaying the node, etc. It is not normally displayed in the text of a document itself. Contrast titles with [headings](#) .

## Next ID

Obsolete: NeXT Browser only. May be ignored. This tag takes a single attribute which is the number of the next document-wide numeric identifier to be allocated (not good SGML). Note that when modifying a document, old anchor ids should not be reused, as there may be references stored elsewhere which point to them. This is read and generated by hypertext editors. Human writers of HTML usually use mnemonic alpha identifiers. Browser software may ignore this tag. Example of use:

```
<NEXTID 27>
```

## Base Address

[Anchors](#) specify addresses of other documents, in a from relative to the address of the current document. Normally, the address of a document is known to the browser because it was used to access the document. However, is a document is mailed, or is somehow visible with more than one address (for example, via its filename and also via its library name server catalogue number), then the browser needs to know the base address in order to correctly deduce external document addresses.

The format of this tag is not yet specified. NOT CURRENTLY USED

## Anchors

The format of an anchor is as follows:

```
<A NAME=xxx HREF=XXX> ... </A>
```

The text between the opening tag and the closing tag is either the start or destination (or both) of a link. Attributes of the anchor tag are as follows.

**HREF**

If the HREF attribute is present, the anchor is sensitive text: the start of a link. If the reader selects this text, he should be presented with another document whose network address is defined by the value of the HREF attribute . The format of the network address is specified [elsewhere](#) . This allows for the form HREF=#identifier to refer to another anchor in the same document. If the anchor is in another document, the attribute is a [relative name](#) , relative to the documents address (or specified [base address](#) if any).

**NAME**

The attribute NAME allows the anchor to be the destination of a link. The value of the parameter is that part of a hypertext address which follows the [hash sign](#) .

**TYPE**

An attribute TYPE may give the relationship described by the hypertext link. The type is expressed by a string for extensibility. Strings for types with particular semantics will be registered by the W3 team. The default relationship if none other is given is void.

All attributes are optional, although one of NAME and HREF is necessary for the anchor to be useful.

## IsIndex

This tag informs the reader that the document is an index document. As well as reading it, the reader may use a keyword search.

Format:

```
<ISINDEX>
```

The node may be queried with a keyword search by suffixing the node address with a question mark, followed by a list of keywords separated by plus signs. See the [network address format](#) .

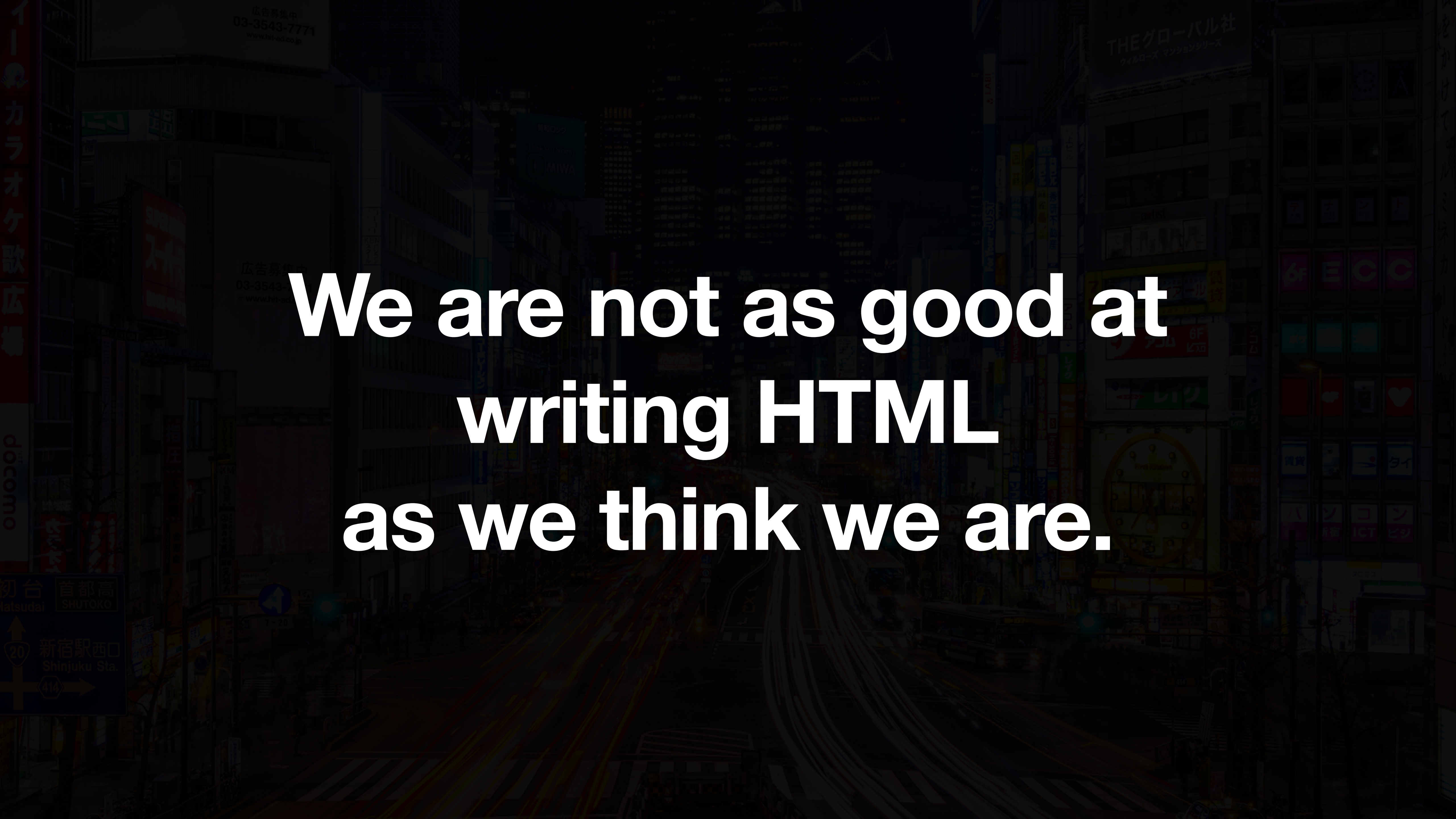
Source: [info.cern.ch/hypertext/WWW/MarkUp/Tags.html](http://info.cern.ch/hypertext/WWW/MarkUp/Tags.html)

@mmatuzo







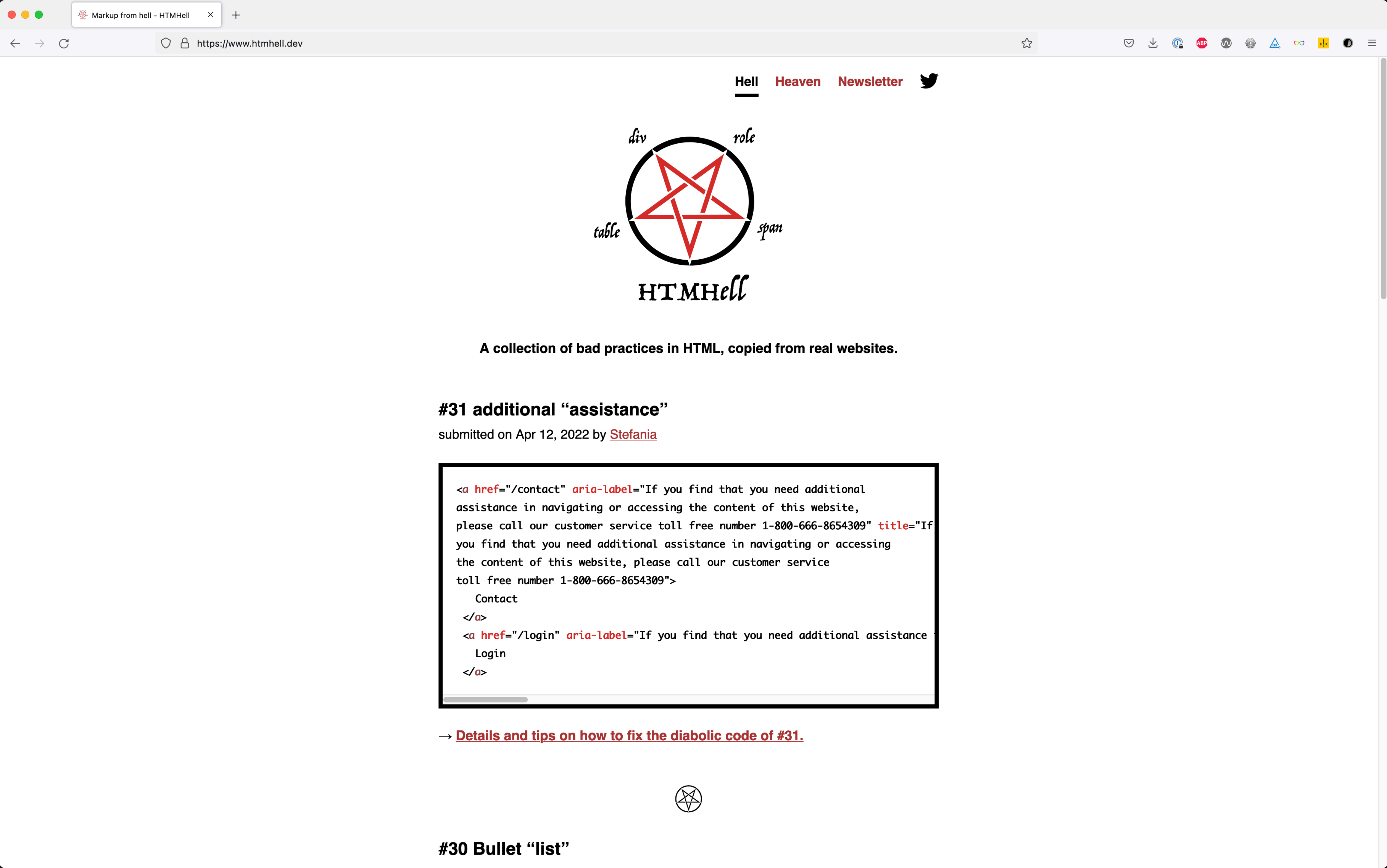


**We are not as good at  
writing HTML  
as we think we are.**



```
<main>
  <section id="main-content">
    <header id="main-header">
      <section class="container-fluid">
        <section class="row">
          <article class="content col-sm-12">
            <section class="content-inner">
              <div class="content__body">
                <article class="slider">
                  <section class="slide"> ... </section>
                </article>
              </div>
            </section>
          </article>
        </section>
      </section>
    </header>
  </section>
</main>
```







```
<p>
  • HTML
  <br>
  • CSS
  <br>
  • JavaScript
</p>
```







<div



<div

</div>



```
<div
```

```
>Click here!</div>
```



```
<div class="btn">Click here!</div>
```



# The Elements of HTML

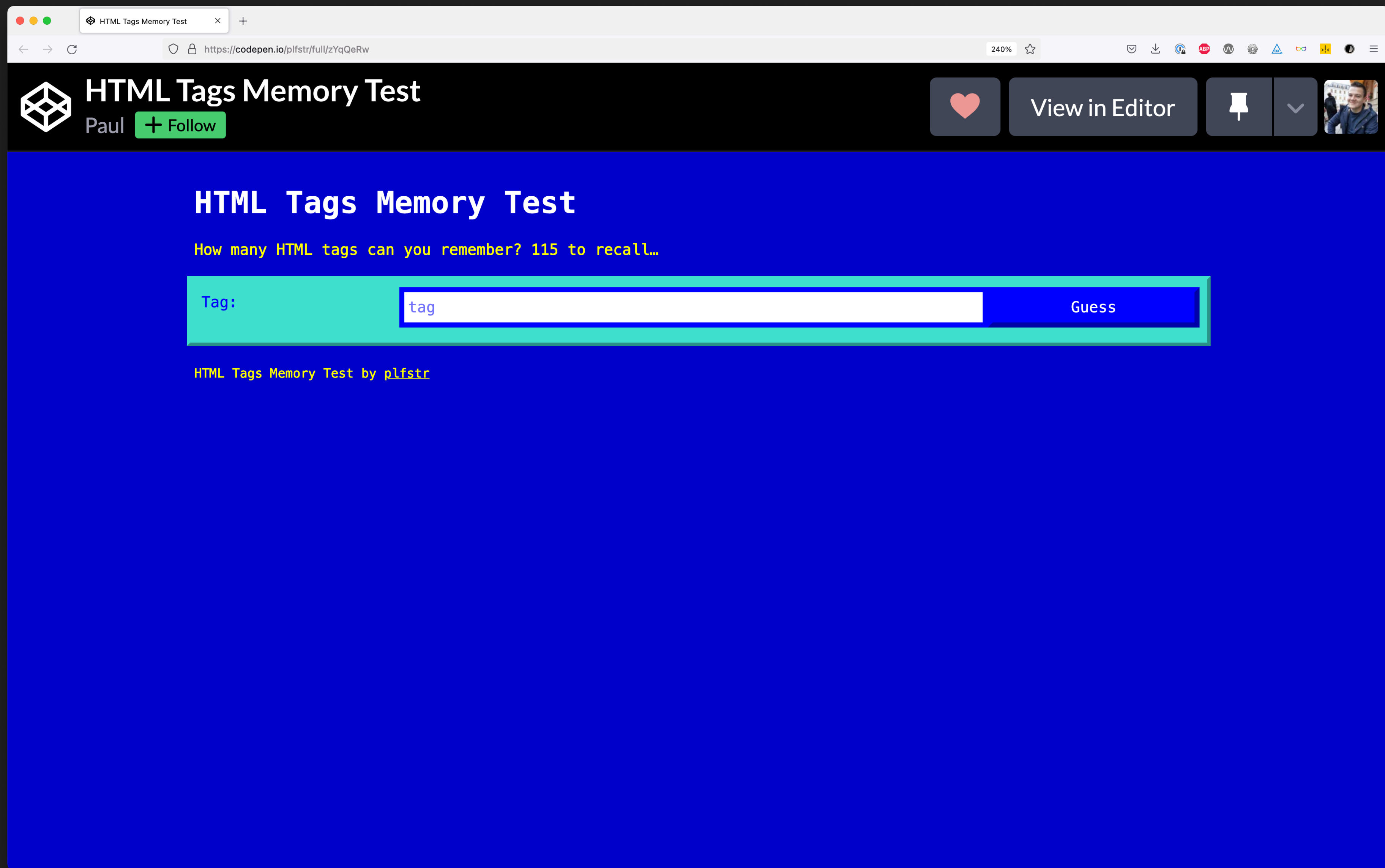
1. `<div>`
2. `<script>`


That's it, that's all. #yolo

# The Elements of HTML

- |               |                  |                |
|---------------|------------------|----------------|
| 1. <header>   | 10. <summary>    | 19. <ins>      |
| 2. <footer>   | 11. <dialog>     | 20. <caption>  |
| 3. <main>     | 12. <address>    | 21. <track>    |
| 4. <section>  | 13. <button>     | 22. <output>   |
| 5. <article>  | 14. <blockquote> | 23. <label>    |
| 6. <aside>    | 15. <abbr>       | 24. <fieldset> |
| 7. <progress> | 16. <kbd>        | 25. <textarea> |
| 8. <meter>    | 17. <mark>       | 26. <video>    |
| 9. <details>  | 18. <del>        | 27. ...        |







**Designers know too little  
about HTML.**





**Some people just don't care.**

```
<div class="nav">
  <div>
    <div>about</div>
    <div>thoughts</div>
  </div>
</div>
```



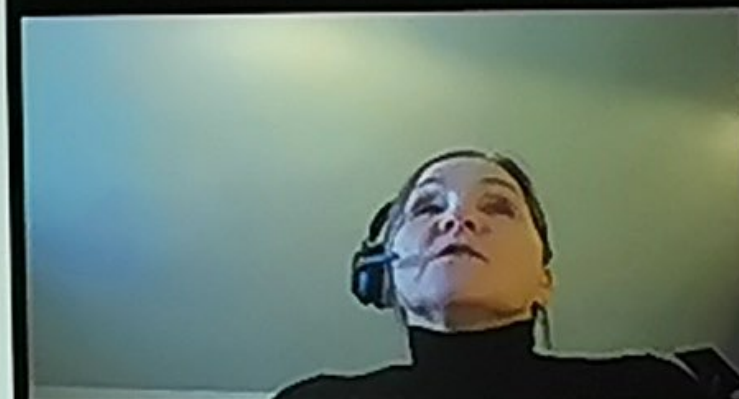
```
<div class="nav">  
  <a href="/about">  
    <button>about</button>  
  </a>  
  
  <a href="/thoughts">  
    <button>thoughts</button>  
  </a>  
</div>
```

Original Sound: Off



## Navigation

```
<nav aria-label="Website">  
<ul>  
<li><a aria-current="true" href="/">Home</a></li>  
<li><a href="/about/">About</a></li>  
...  
</ul>  
</nav>
```

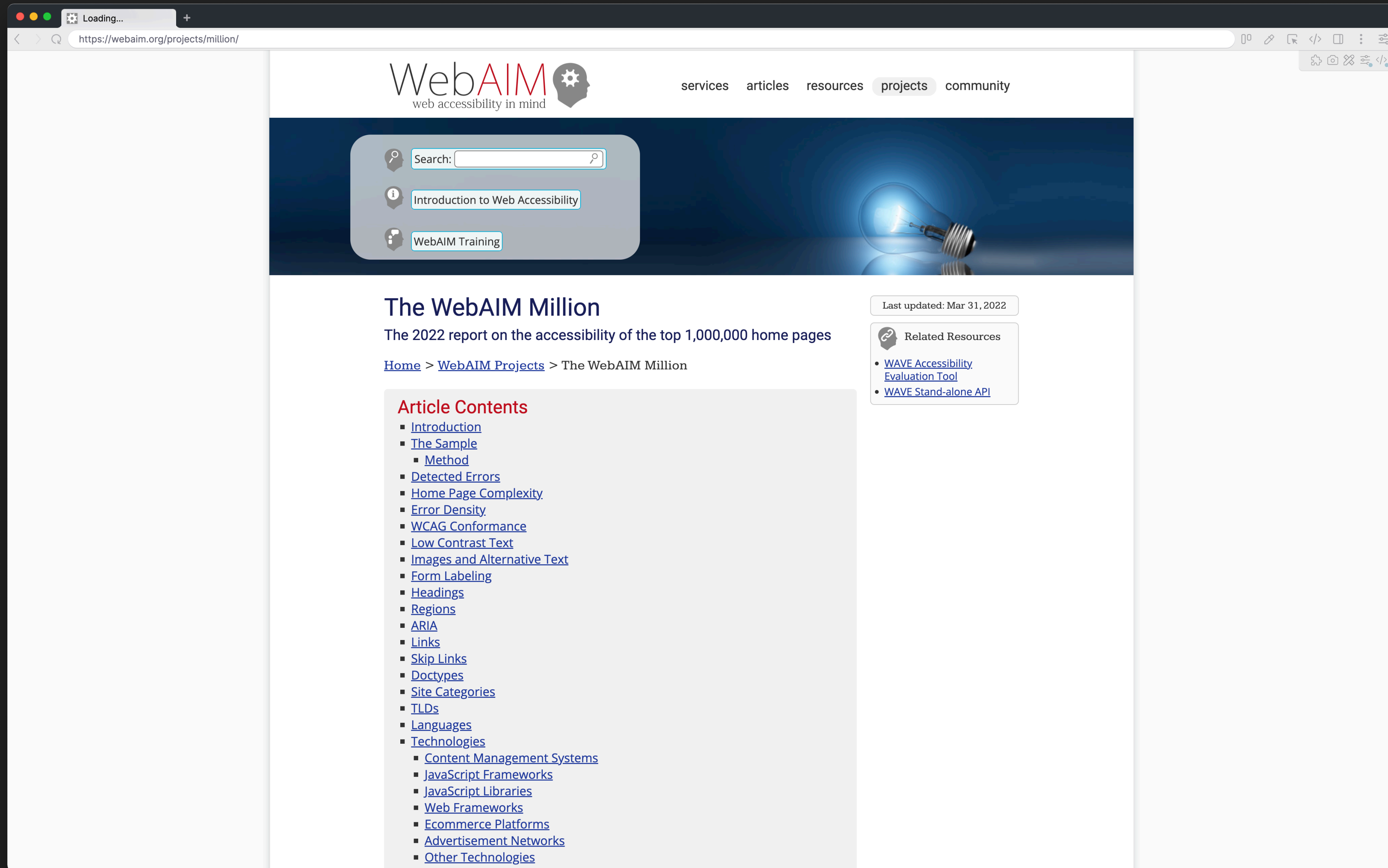






**We put too much trust  
and hope in ARIA.**





Source: [webaim.org/projects/million/](https://webaim.org/projects/million/)

@mmatuzo



***Home pages with ARIA present  
averaged 70% more detected  
errors than those without ARIA.***





***If you can use a native HTML element or attribute with the semantics and behavior you require already built in, instead of re-purposing an element and adding an ARIA role, state or property to make it accessible, then do so.***



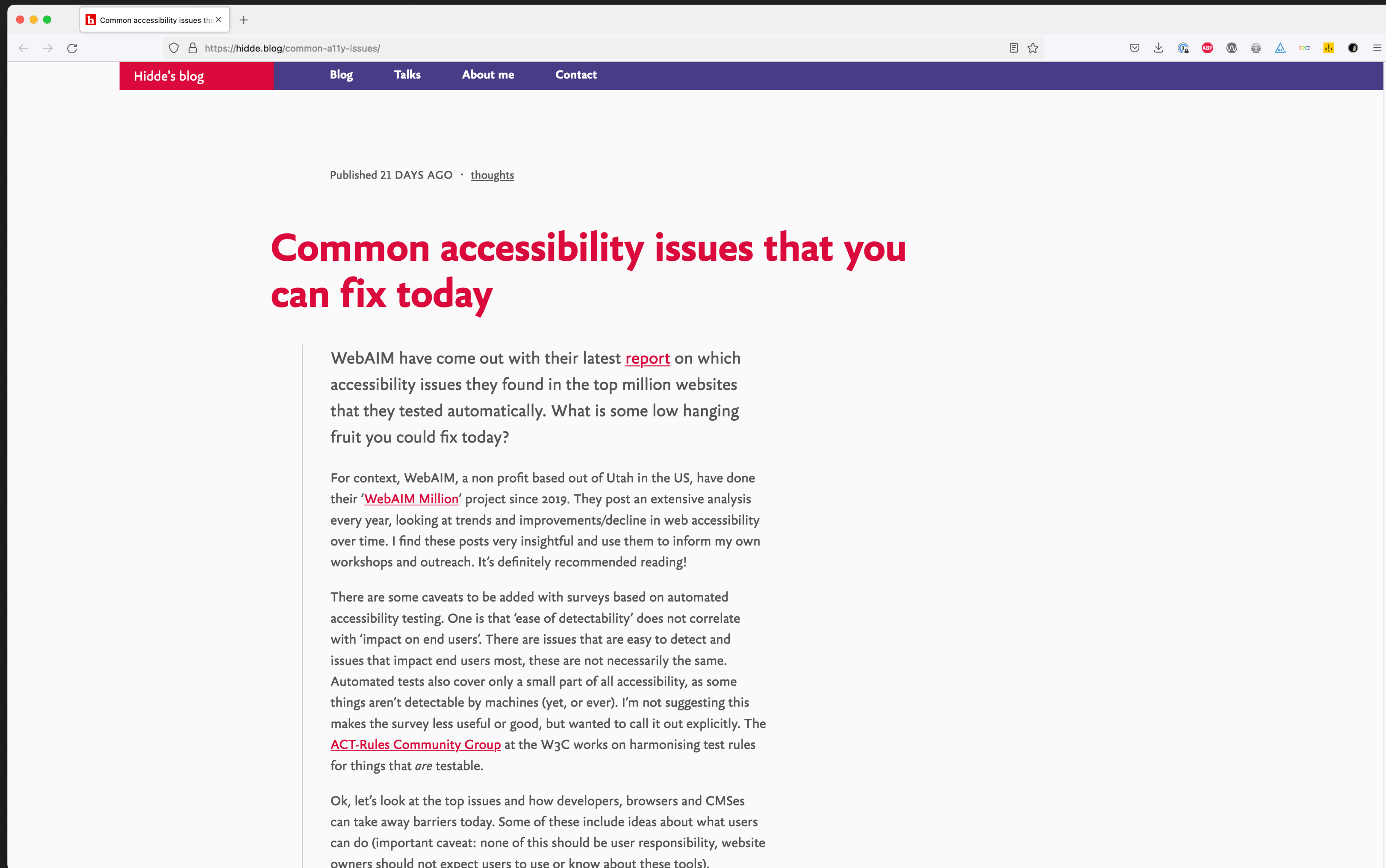






WCAG Failure Type	% of home pages in 2022	% of home pages in 2021	% of home pages in 2020	% of home pages in 2019
Low contrast text	83.9%	86.4%	86.3%	85.3%
Missing alternative text for images	55.4%	60.6%	66.0%	68.0%
Empty links	50.1%	51.3%	59.9%	58.1%
Missing form input labels	46.1%	54.4%	53.8%	52.8%
Empty buttons	27.2%	26.9%	28.7%	25.0%
Missing document language	22.3%	28.9%	28.0%	33.1%





Source: [hidde.blog/common-a11y-issues](https://hidde.blog/common-a11y-issues)

@mmatuzo

One million broken web sites - a X

← → ↺

https://christianheilmann.com/2022/04/12/one-million-broken-web-sites-and-a-way-to-prevent-that/

🔒

📄 ☆

📧 ⬇️ 🌐 🇧🇪 🇩🇪 🇪🇸 🇫🇷 🇮🇹 🇯🇵 🇰🇷 🇺🇸 🇻🇪 🇻🇳 🇾🇲 🇿🇼

Christian Heilmann

📄

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codepo8

@codepo8

## One million broken web sites – and a way to prevent that

Tuesday, April 12th, 2022 at 12:37 am

[Webaim.org](#) releases an annual report called the [WebAIM Million](#). This is a deep analysis of the one million most visited web sites how accessible they are. And every year the result is pretty grim.

// Across the one million home pages, 50,829,406 distinct accessibility errors were detected—an average of 50.8 errors per page.

This is 1.1% fewer errors than last year, but at the same time home pages of sites have become more complex. On average, home pages have 955 elements and 5.3% of those have accessibility errors. This means that users with disabilities would expect to encounter errors on 1 in every 19 home page elements with which they engage.

The most disappointing part about this state of affairs is the type of problems.

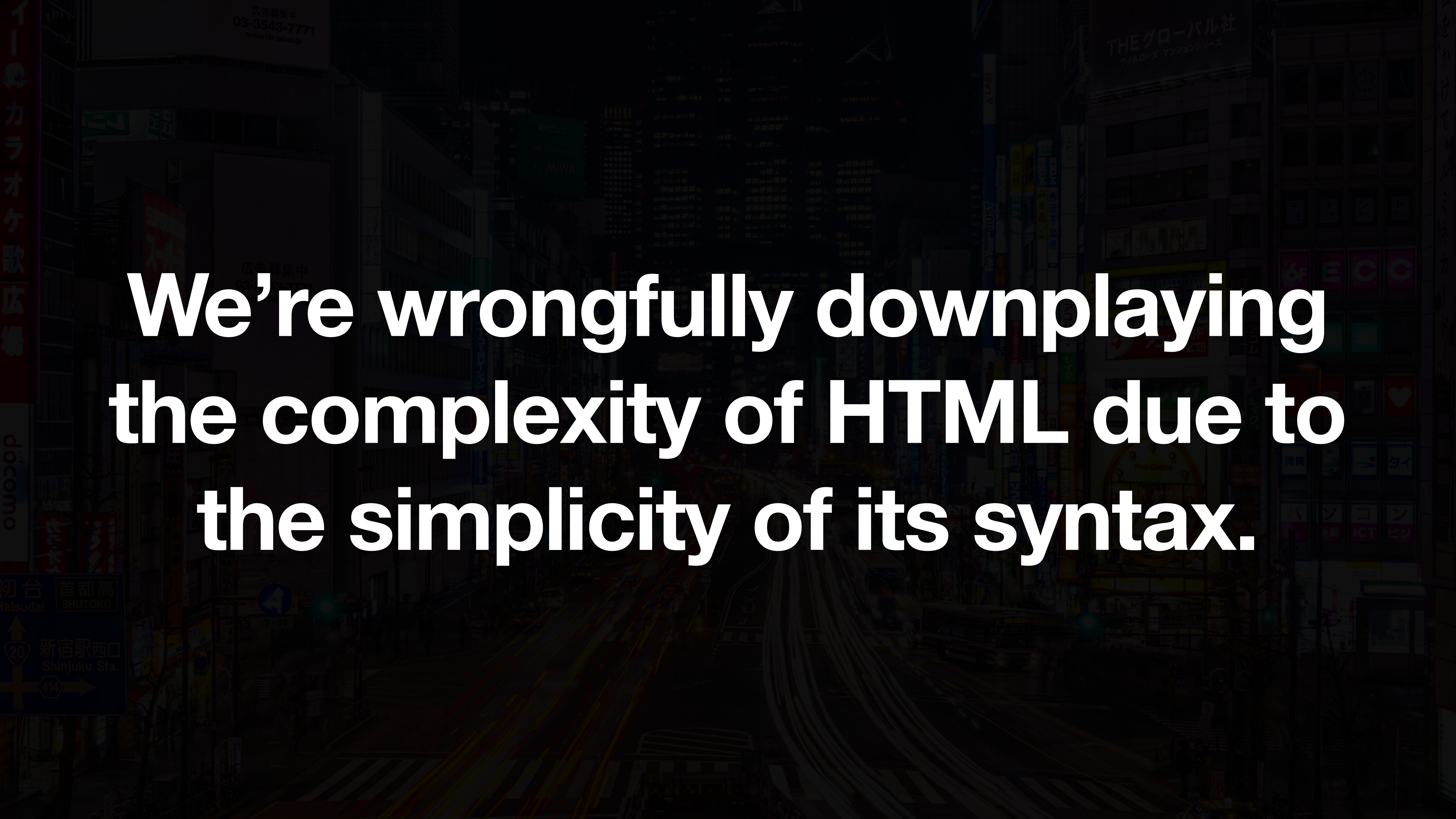
### Home pages with most common WCAG failures (% of home pages)

WCAG Failure Type	% of Home Pages
Single failure type	~82%



# Most common issues

- Low contrast text
- Missing alternative text for images
- Empty links
- Missing form input labels
- Empty buttons
- Missing document language



**We're wrongfully downplaying  
the complexity of HTML due to  
the simplicity of its syntax.**



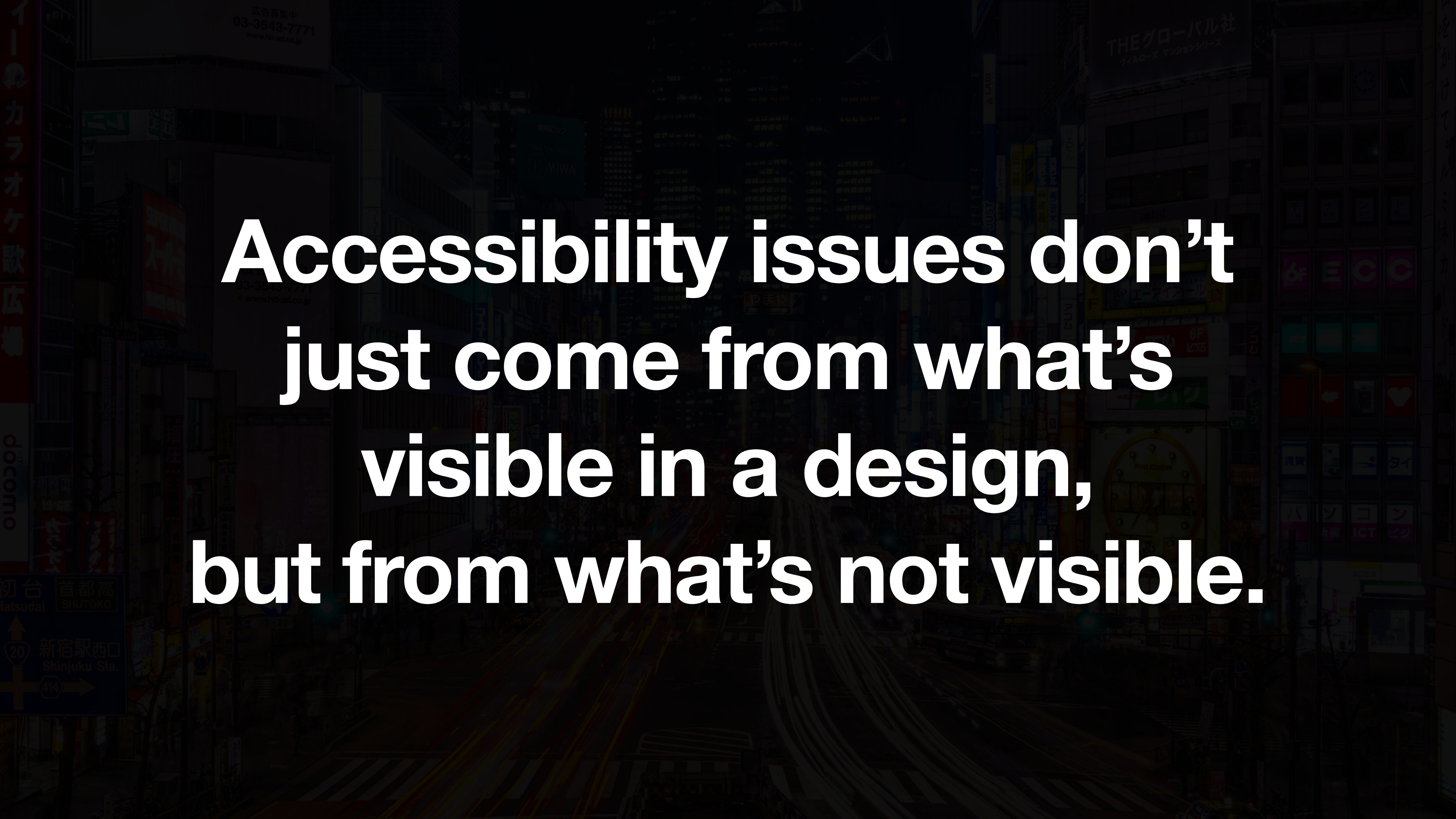


There's more to HTML than  
tags and attributes.

# Most common issues

- Low contrast text
- Missing alternative text for images
- Empty links
- Missing form input labels
- Empty buttons
- Missing document language





**Accessibility issues don't  
just come from what's  
visible in a design,  
but from what's not visible.**

# Design to Code Translation



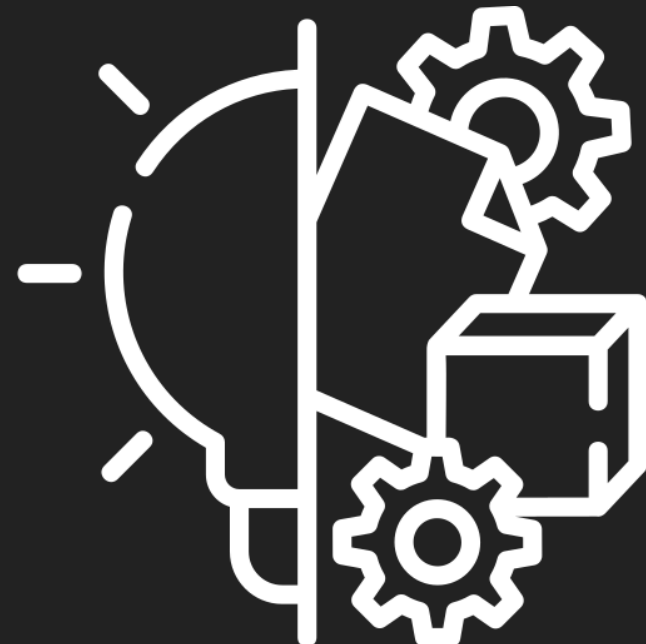
Exploration



# Design to Code Translation



Exploration

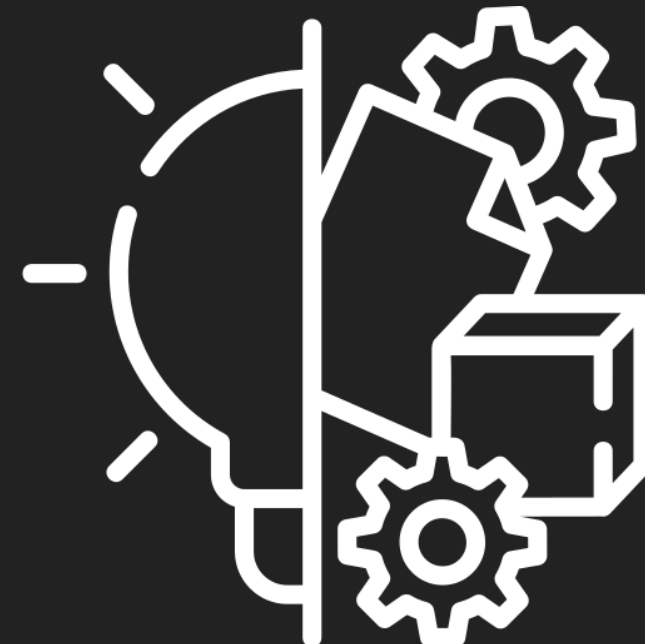


Understanding

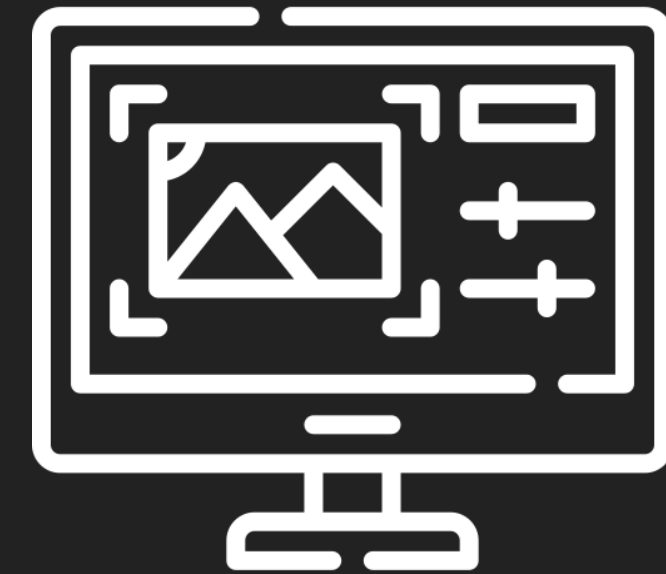
# Design to Code Translation



Exploration



Understanding



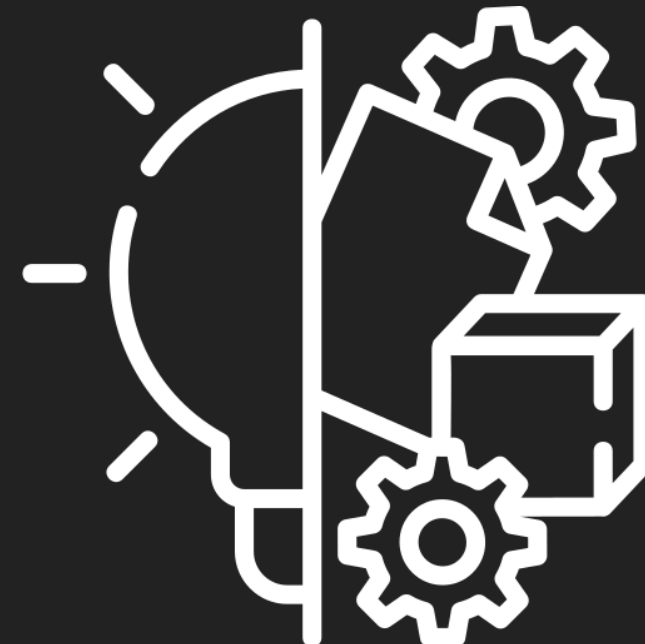
Development



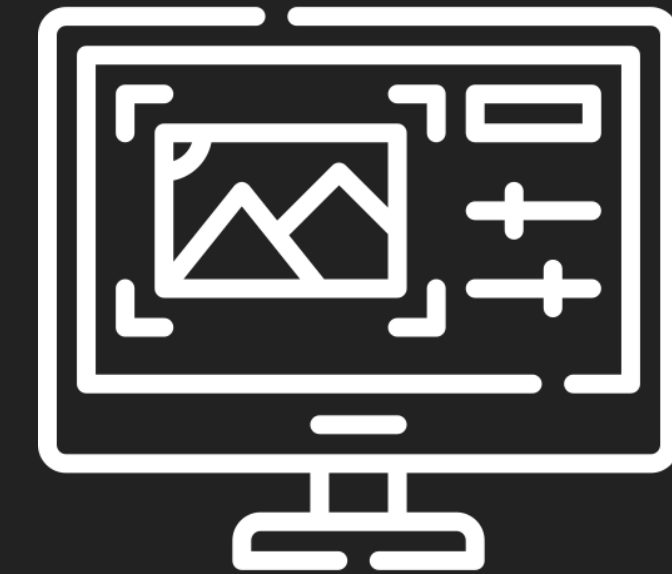
# Design to Code Translation



Exploration



Understanding

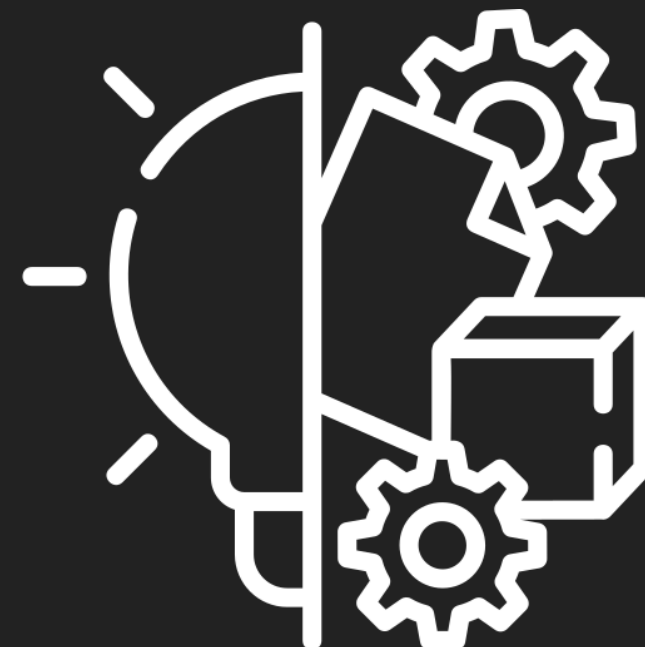


Development

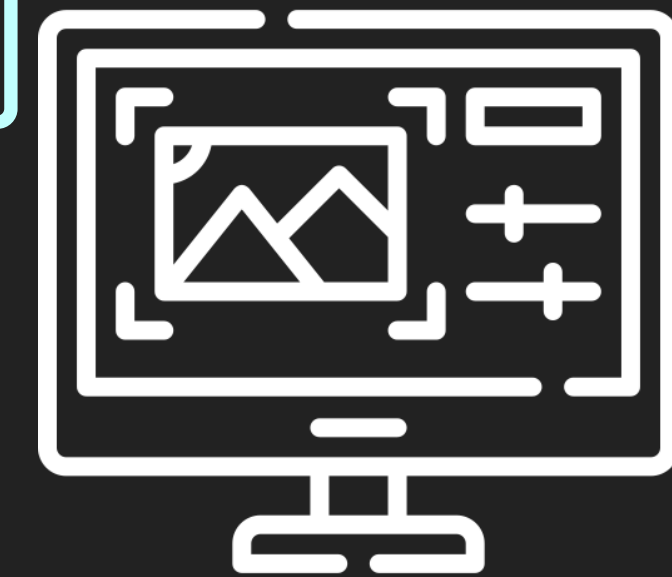
# Design to Code Translation



Exploration



Understanding



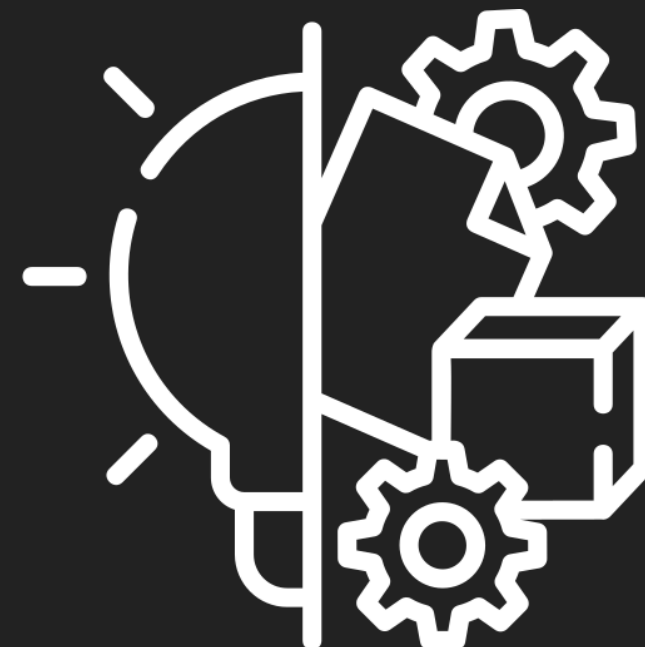
Development



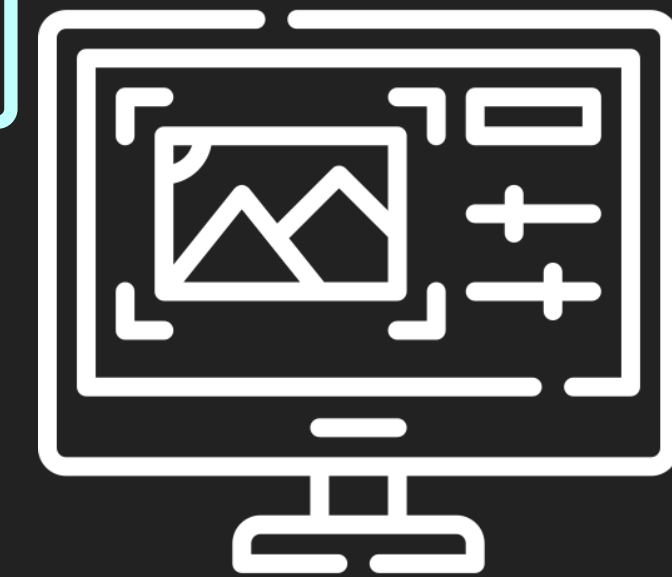
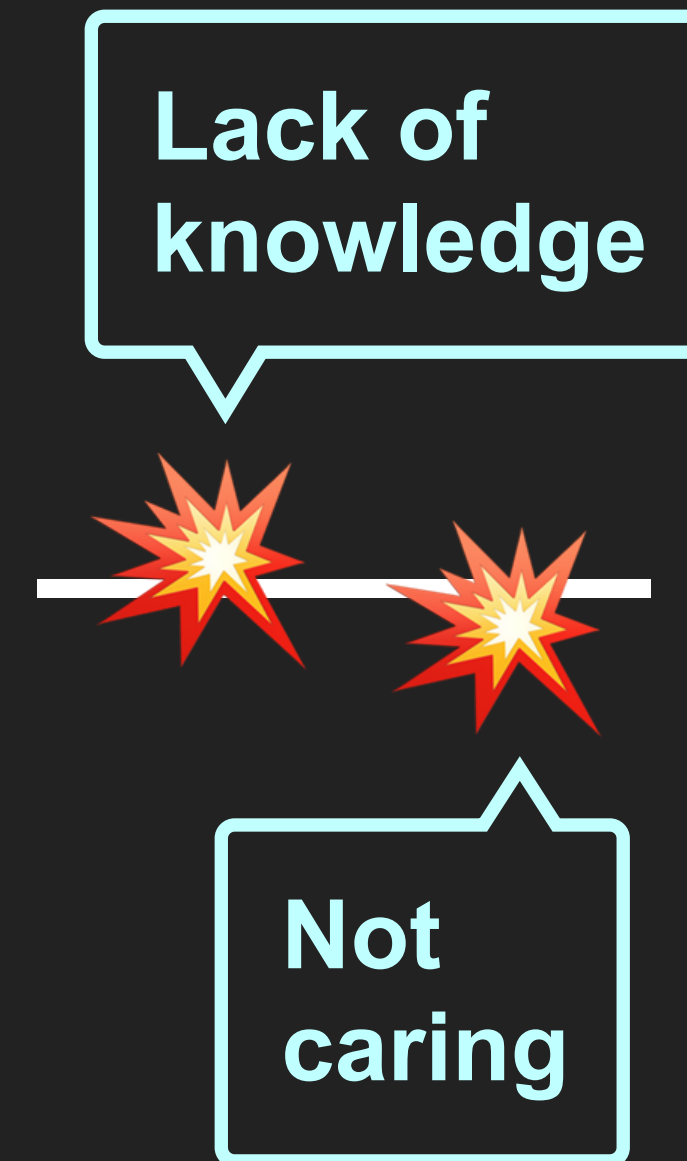
# Design to Code Translation



Exploration

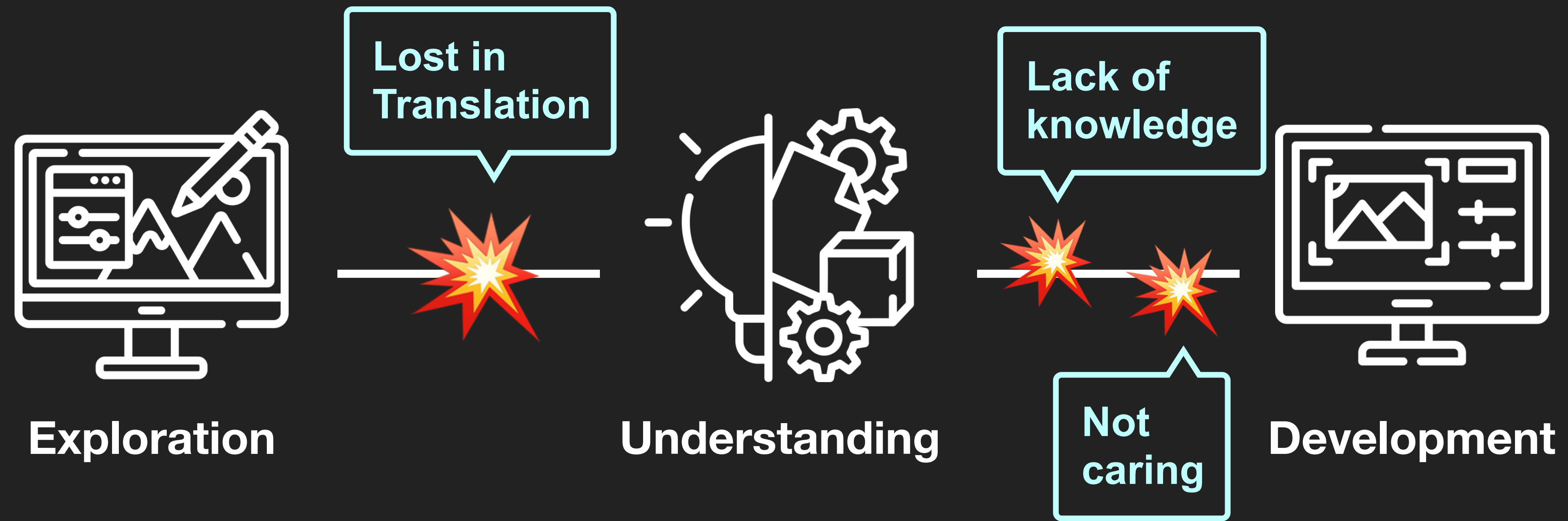


Understanding



Development

# Design to Code Translation





# **Our decisions have consequences**

- Basic understanding

# Our decisions have consequences

- Basic understanding
- Overview



# Our decisions have consequences

- Basic understanding
- Overview
- Orientation

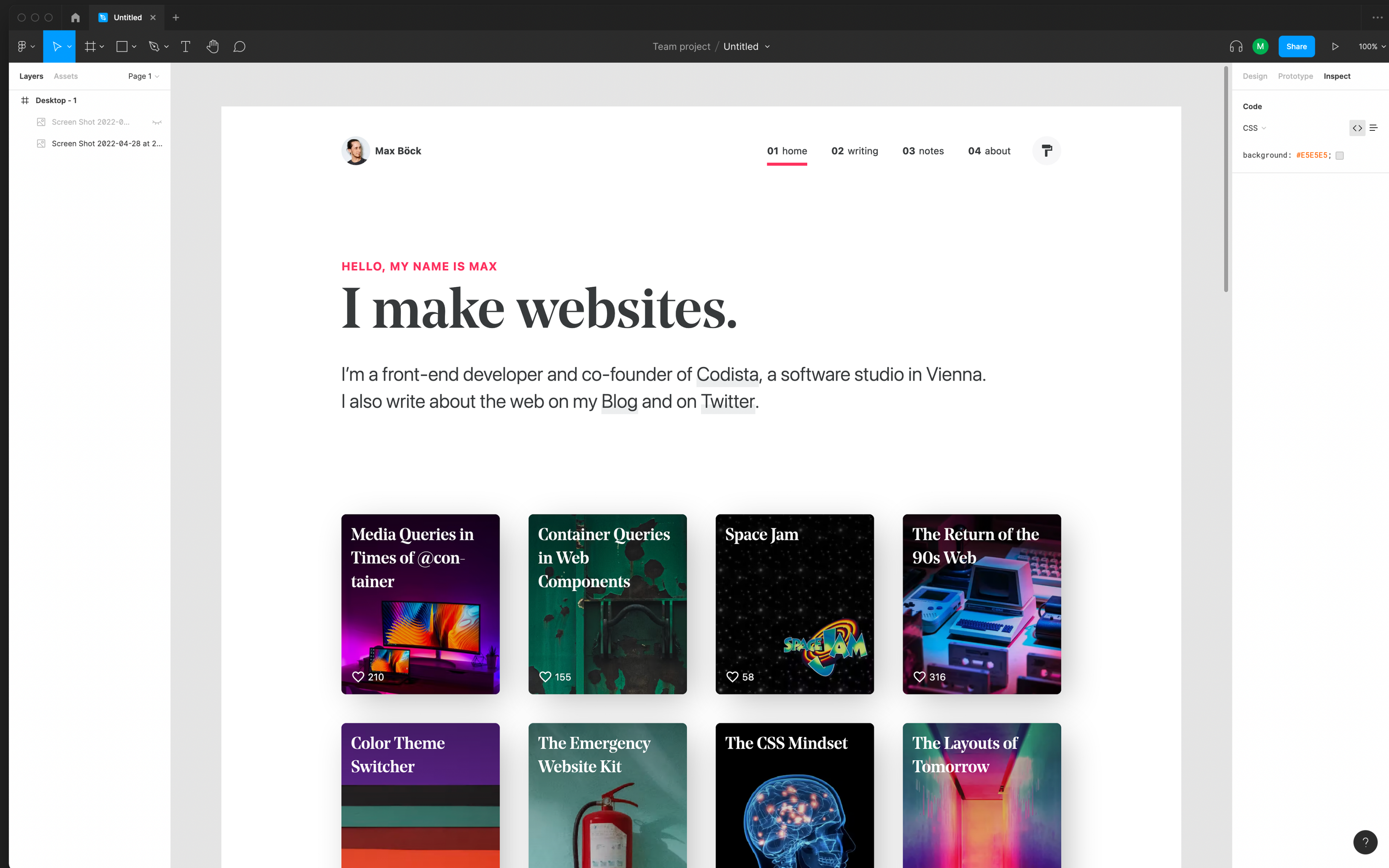
# Our decisions have consequences

- Basic understanding
- Overview
- Orientation
- Information

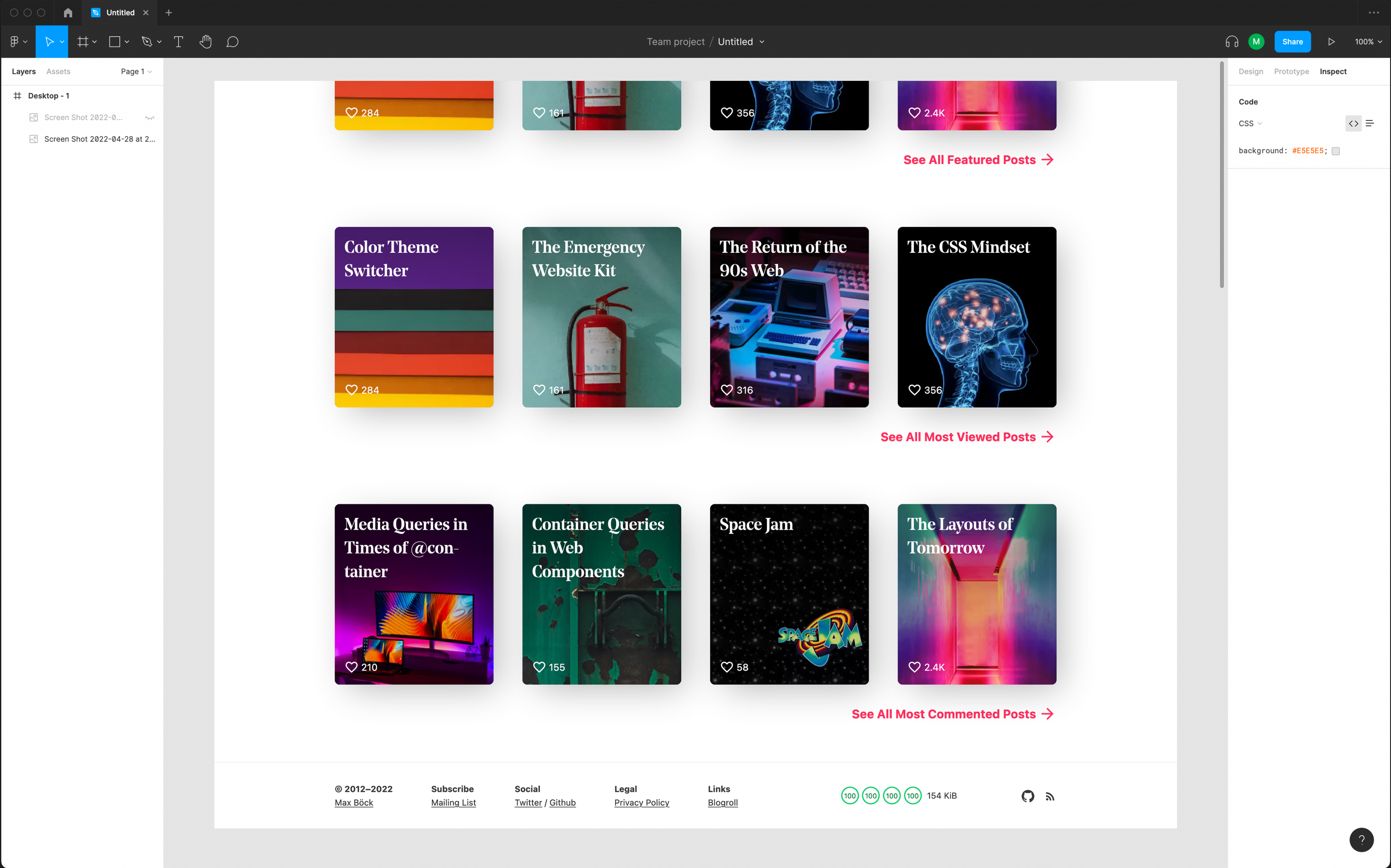


# Our decisions have consequences

- Basic understanding
- Overview
- Orientation
- Information
- Navigation











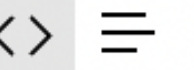
Design

Prototype

Inspect

Code

CSS ▾



background: #E5E5E5; ☐

**01** home

**02** writing

**03** notes

**04** about



# sites.

under of Codista, a software studio in Vienna.

og and on Twitter.





**Code**

CSS ▾



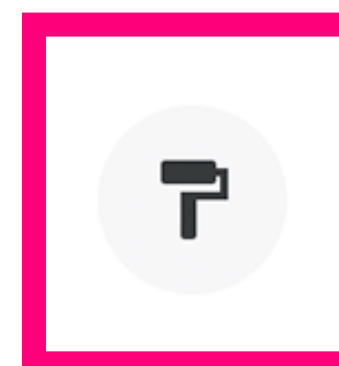
background: #E5E5E5; ☐

**01** home

**02** writing

**03** notes

**04** about



# sites.

under of Codista, a software studio in Vienna.

og and on Twitter.



```
<svg>  
  <path d="" />  
</svg>
```





```
<div class="btn">  
  <svg>  
    <path d="" />  
  </svg>  
</div>
```



```
<button>  
  <svg>  
    <path d="" />  
  </svg>  
</button>
```





```
<button aria-label="Change theme">  
  <svg aria-hidden="true">  
    <path d="" />  
  </svg>  
</button>
```



```
<button>  
  Change theme  
  <svg aria-hidden="true">  
    <path d="" />  
  </svg>  
</button>
```





```
<button>  
  <span class="sr-only">Change theme</span>  
  <svg aria-hidden="true">  
    <path d="" />  
  </svg>  
</button>
```



```
<button aria-expanded="false">  
  <span class="sr-only">Change theme</span>  
  <svg aria-hidden="true">  
    <path d="" />  
  </svg>  
</button>
```



```
<button aria-expanded="false" aria-controls="theme-panel">  
  <span class="sr-only">Change theme</span>  
  <svg aria-hidden="true">  
    <path d="" />  
  </svg>  
</button>
```



# The Perfect Button

- Focusable, interactive element (<button>)

# The Perfect Button

- Focusable, interactive element (<button>)
- Accessible name (a label)

# The Perfect Button

- Focusable, interactive element (<button>)
- Accessible name (a label)
- Correct role (button)

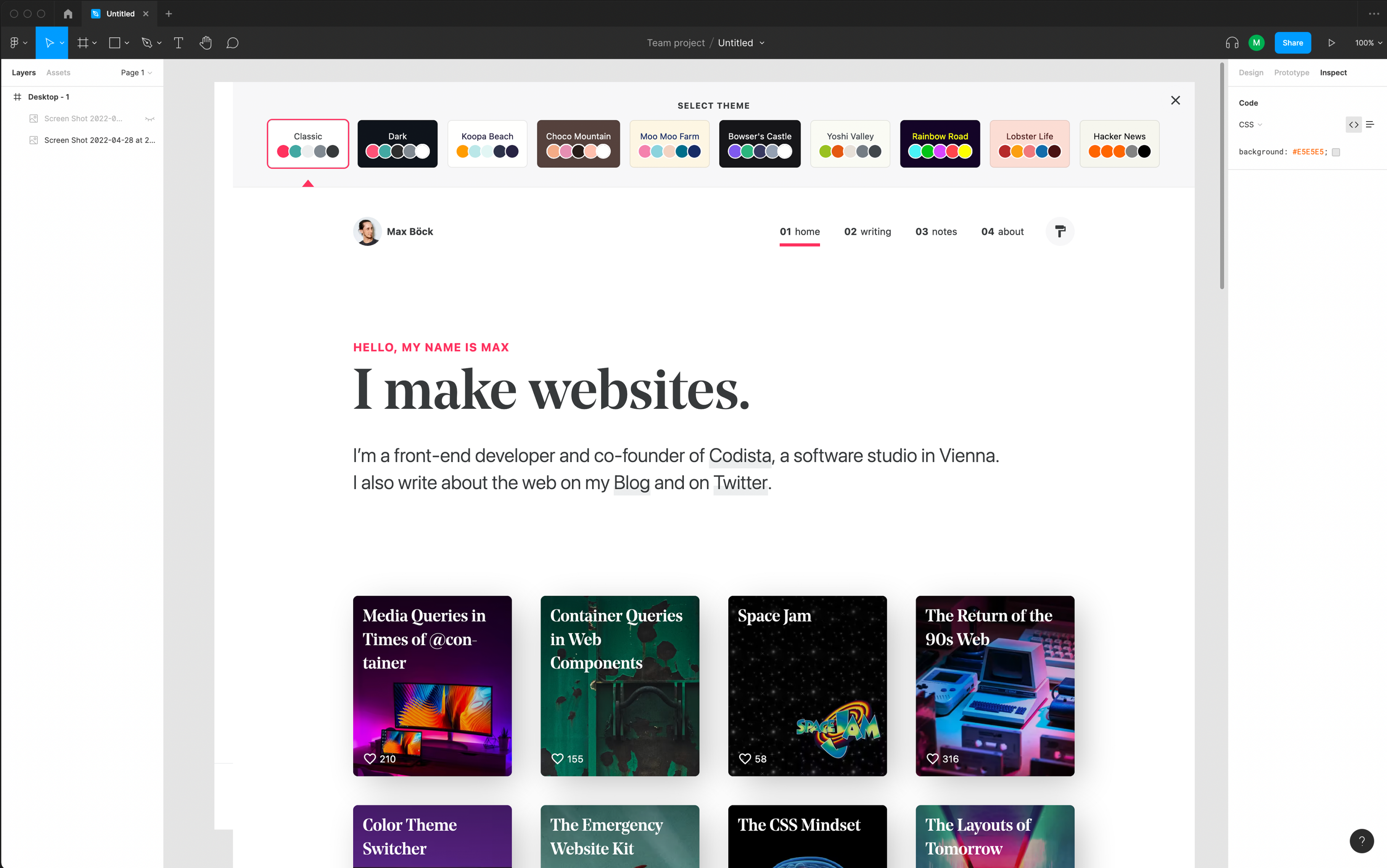


# The Perfect Button

- Focusable, interactive element (<button>)
- Accessible name (a label)
- Correct role (button)
- Communicate state ([aria-expanded])

# The Perfect Button

- Focusable, interactive element (<button>)
- Accessible name (a label)
- Correct role (button)
- Communicate state ([aria-expanded])
- Communicate relationship ([aria-controls])







Share



100% ▾



Valley

Rainbow Road

Lobster Life

Hacker News

02 writing

03 notes

04 about



Design

Prototype

Inspect

Code

CSS ▾



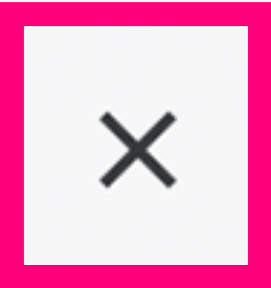
background: #E5E5E5; ☐



Share



100% ▾



Valley

Rainbow Road

Lobster Life

Hacker News

02 writing

03 notes

04 about



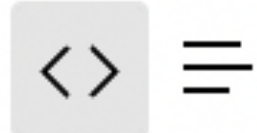
Design

Prototype

Inspect

Code

CSS ▾



background: #E5E5E5; ☐

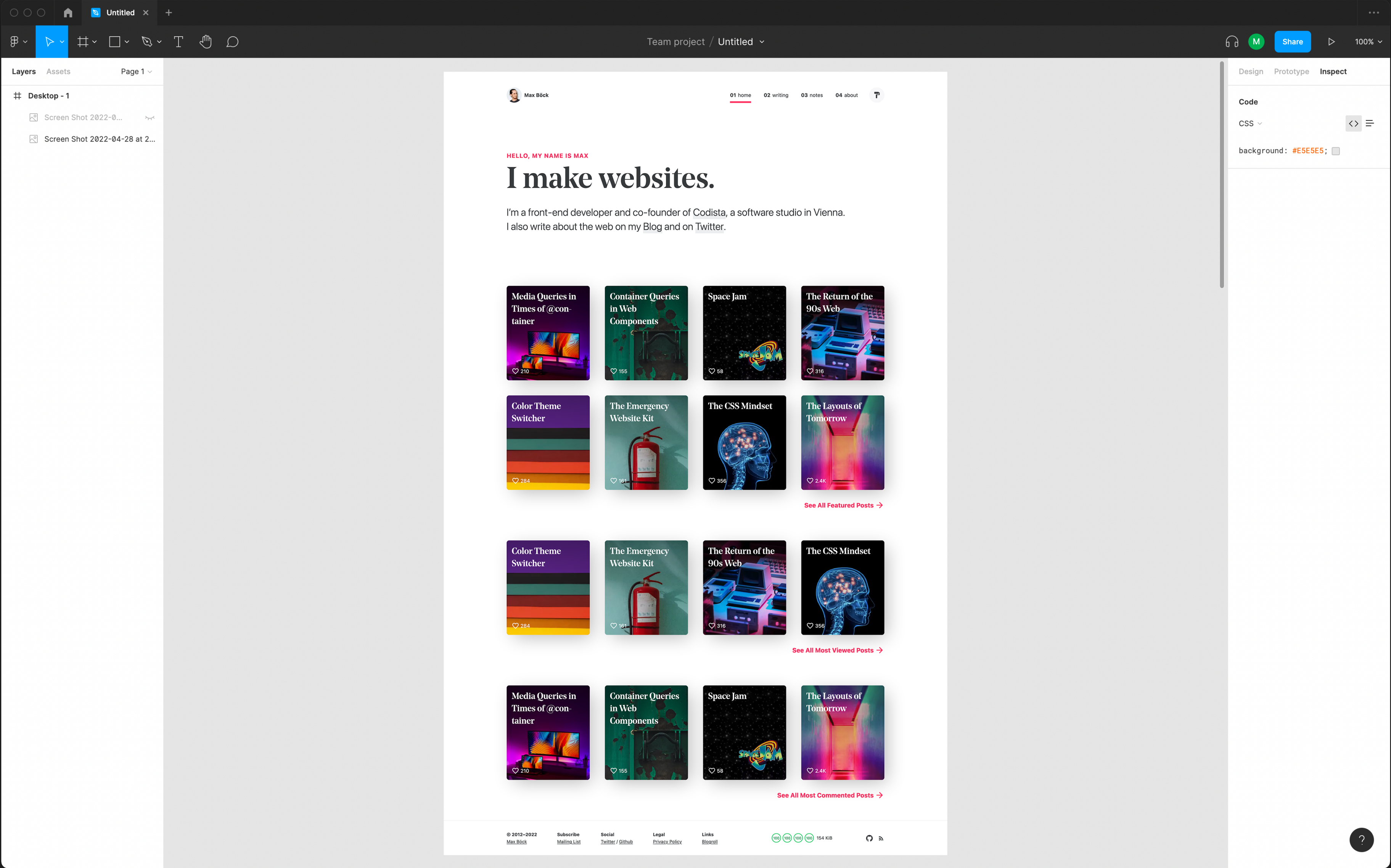


```
<button aria-expanded="true" aria-controls="theme-panel">  
  ×  
</button>
```





```
<button aria-expanded="true" aria-controls="theme-panel">  
  <span class="sr-only">Close</span>  
  <span aria-hidden="true">  
    ×  
  </span>  
</button>
```







Source: [nordbayern.de](http://nordbayern.de)

@mmatuzo





Source: [natur-im-siedlungsraum.ch](http://natur-im-siedlungsraum.ch)

@mmatuzo





Source: [nabu-hadamar.de](https://nabu-hadamar.de)

@mmatuzo







## INHALT

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beyond tellerrand

Events

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Newsletter

I had a great time at beyond tellerrand. I was impressed by the quality of speakers, the lovely venue and most of all by the friendly and welcoming atmosphere [...]

Eva-Lotta Lamm, @evalottchen

Next coming event

Düsseldorf, Germany

02 - 03 May 2022

Get tickets >

Headings

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2: Upcoming Events

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3: Hamburg, Germany 2022

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3: beyond tellerrand Düsseldorf 2022 – Part II of th...

2: New on the Job Board

2: Stay up to Date!

Hello and good morning!

beyond tellerrand is a community of people who love to meet. Taking place in Düsseldorf, Berlin and Hamburg, we offer a friendly and welcoming atmosphere.

The last two years have been challenging for us. We have been in Düsseldorf for ten years, where I worked for a long time. We have been in Düsseldorf. Nevertheless, we have moved to Berlin in 2021 and it has started a new chapter. We are now in a safe and healthy environment. Bellow you will find all the information about this, please do not miss it.

Upcoming Events

Düsseldorf, Germany 2022

02 - 03 May 2022 Capitol Theater

Get tickets >

Hamburg, Germany 2022

19 May 2022 Mojo Club

Get tickets >

× You are currently in a VoiceOver Menu. This is a list of VoiceOver menu options. To navigate up and down the list, use the arrow keys. To choose a menu item, press

@mmatuzo



mx.b.dev

HELLO, MY NAME IS MAX

I make websites.

I'm a front-end developer and co-founder of Codista, a software studio in Vienna. I also write about the web on my [Blog](#) and on [Twitter](#).

Media Queries in Times of @container

210

Headings

1: I make websites.

Components

155

The Return of the 90s Web

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Color Theme Switcher

284

The Emergency Website Kit

161

The CSS Mindset

356

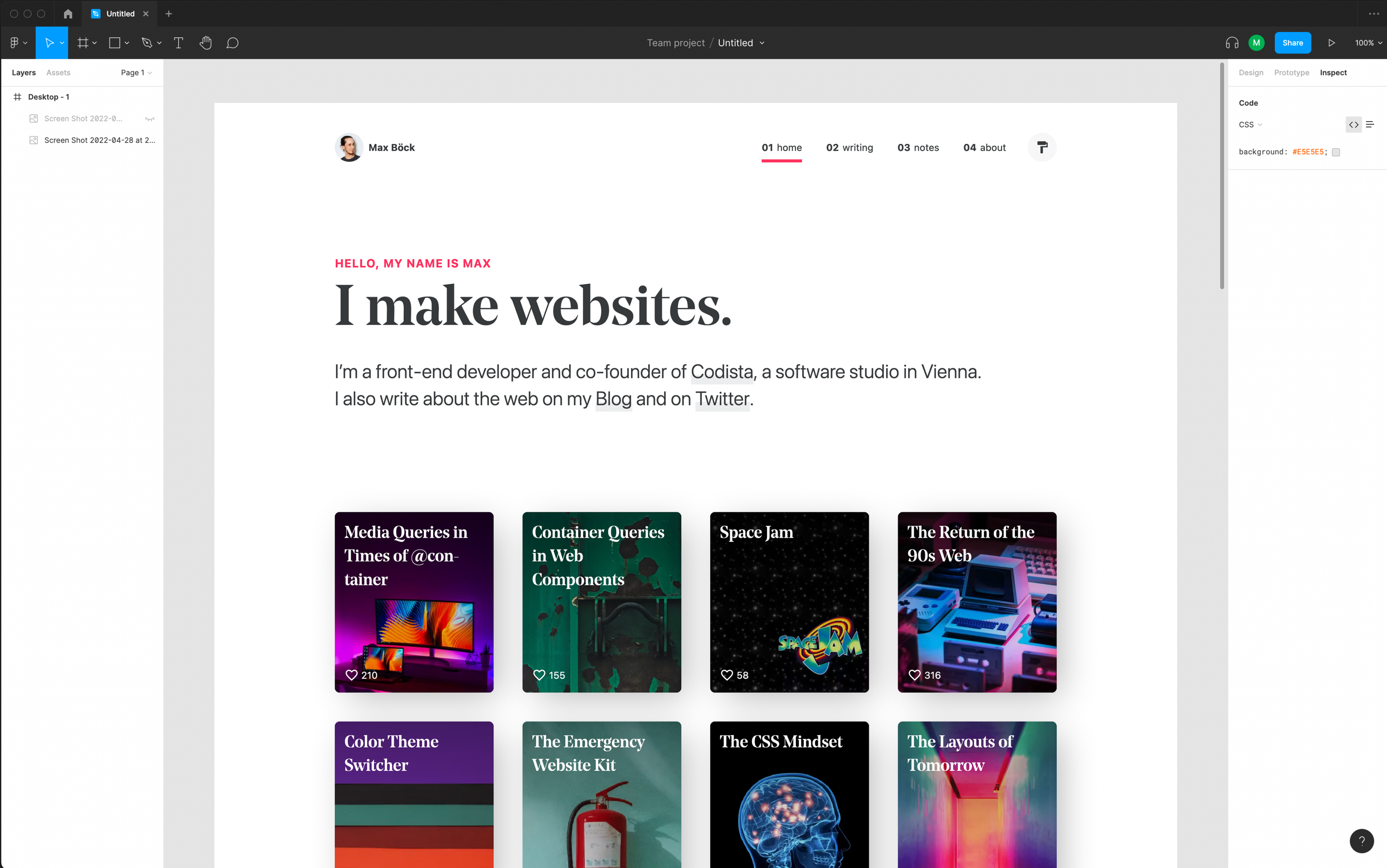
The Layouts of Tomorrow

2.4K

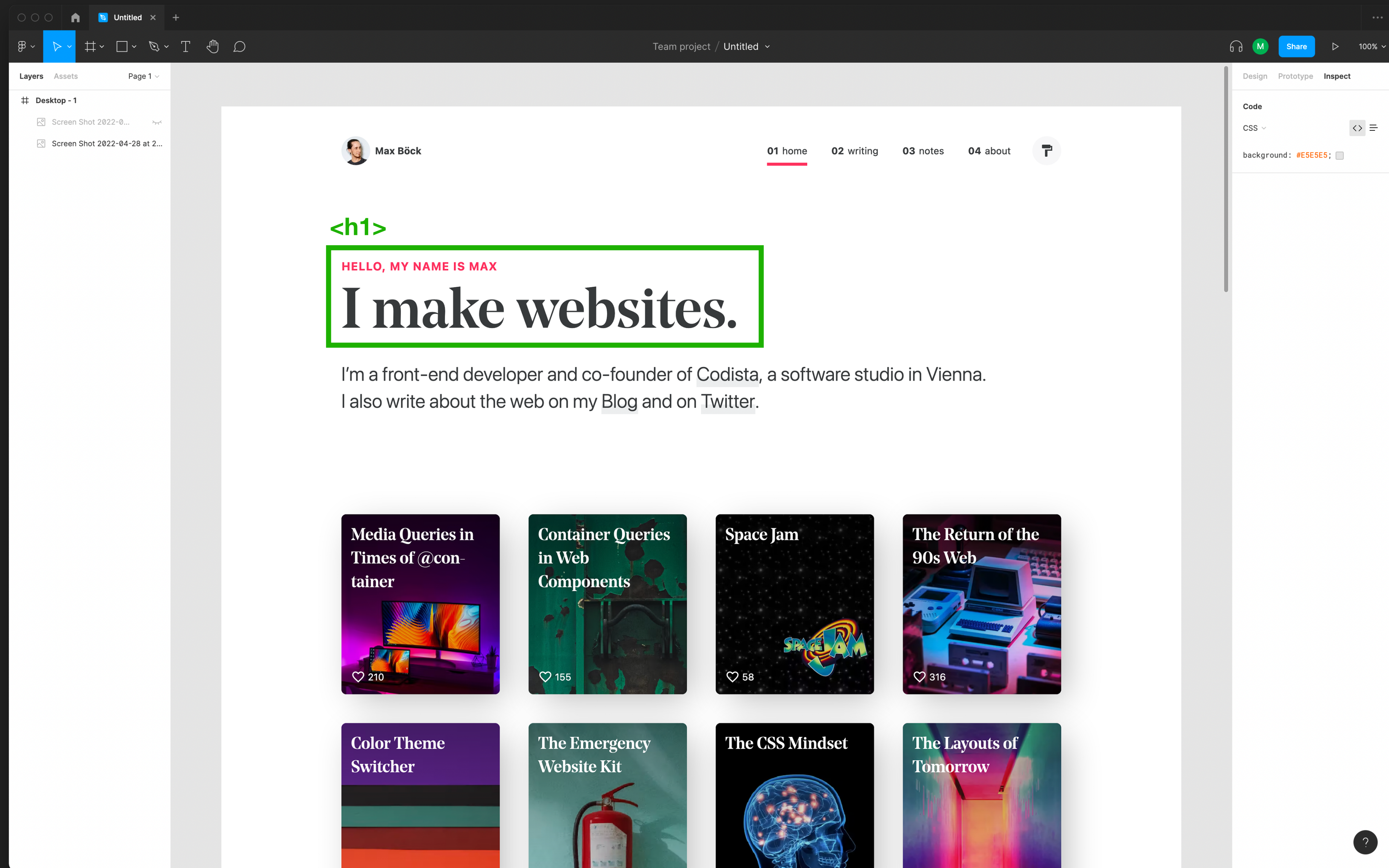
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× You are currently in a VoiceOver Menu. This is a list of VoiceOver menu options. To navigate up and down the list, use the arrow keys. To choose a menu item, press

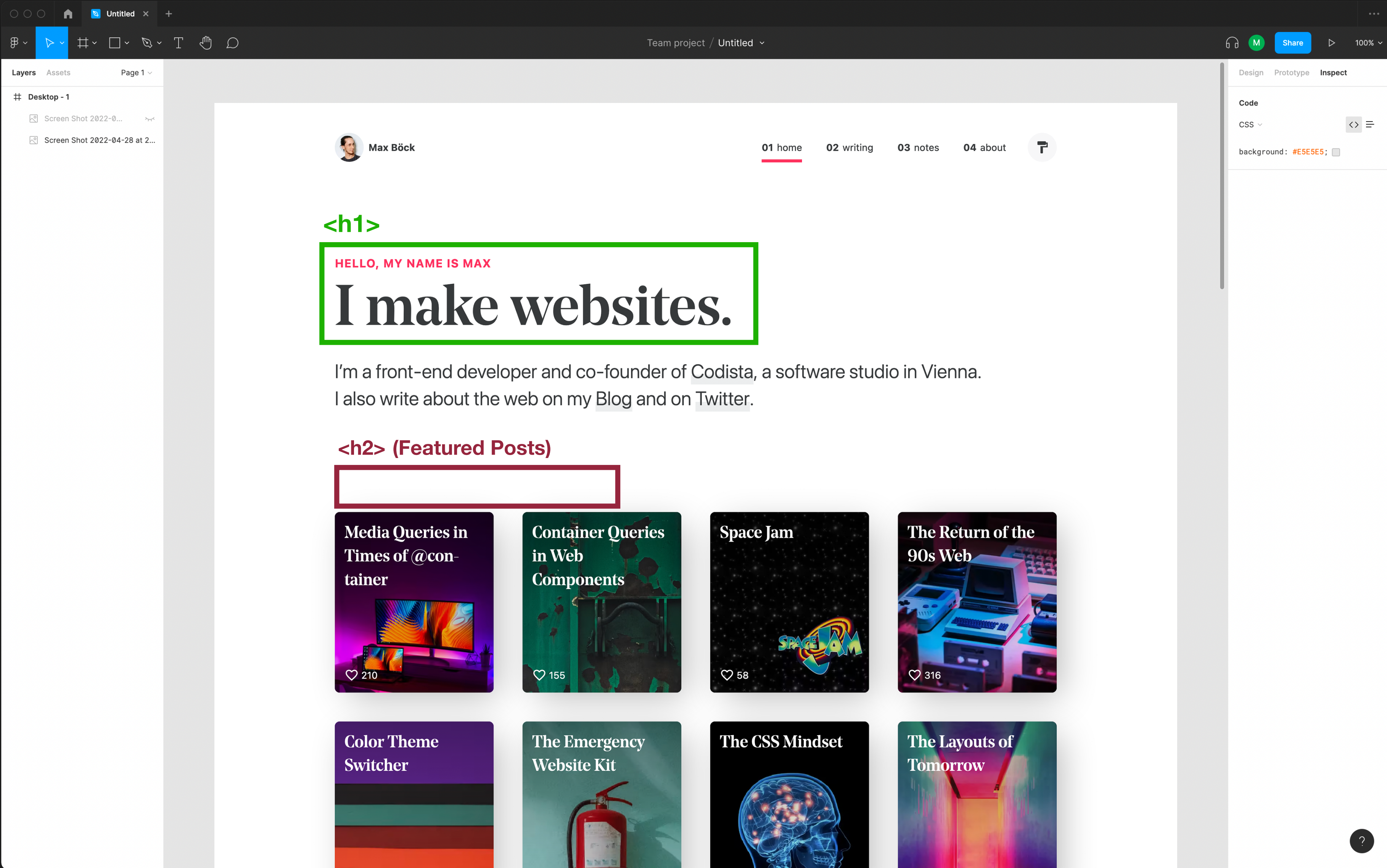




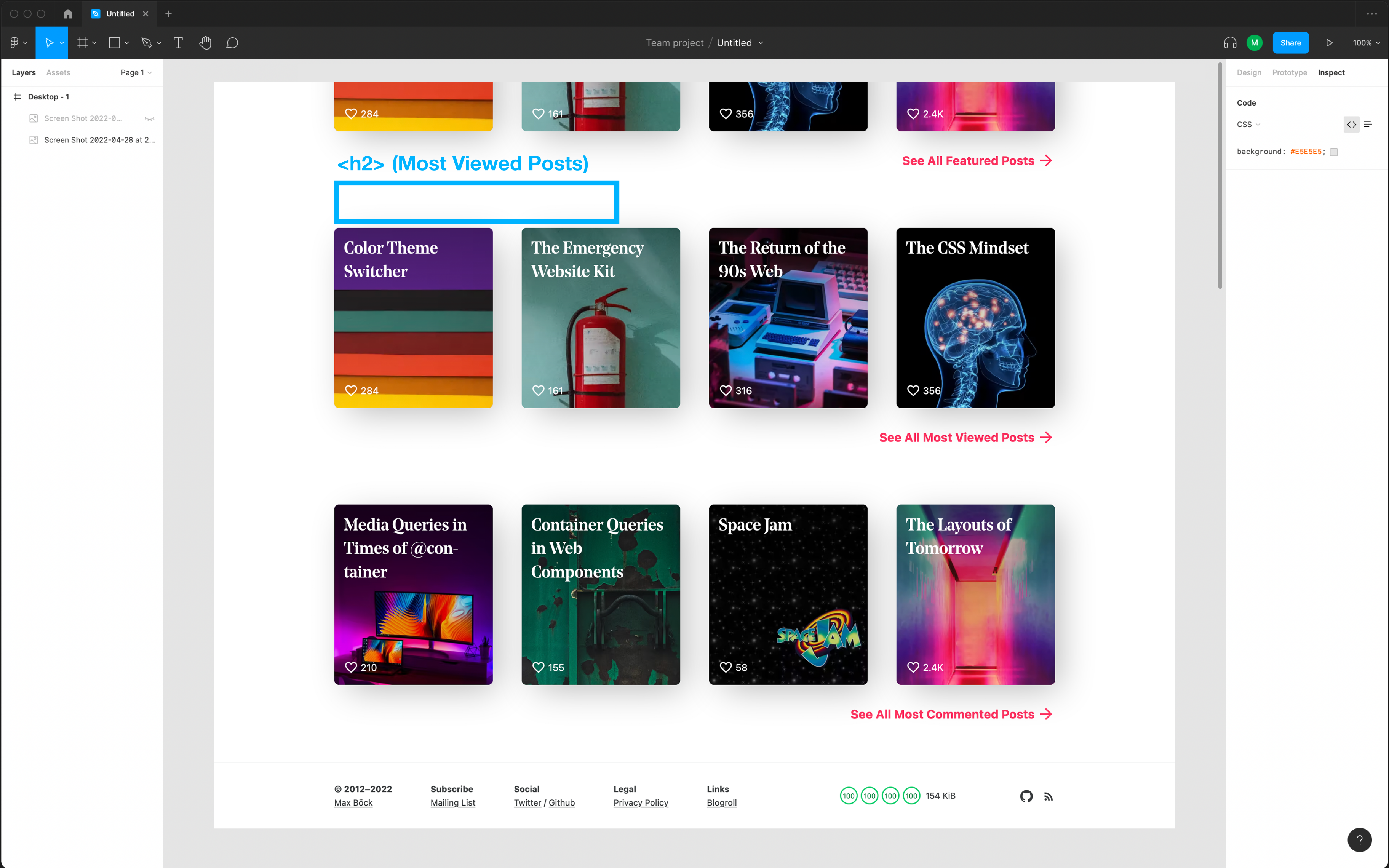




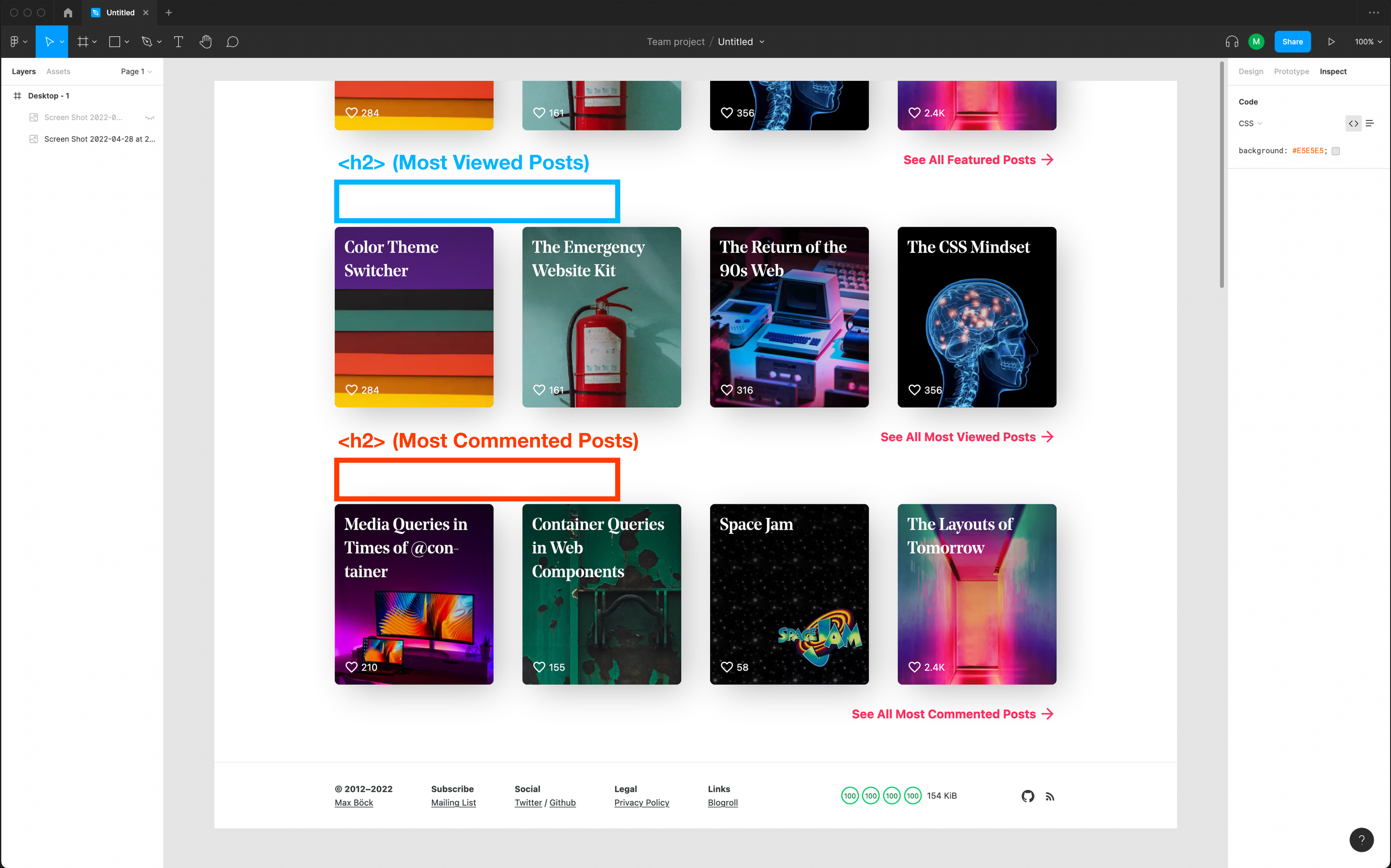




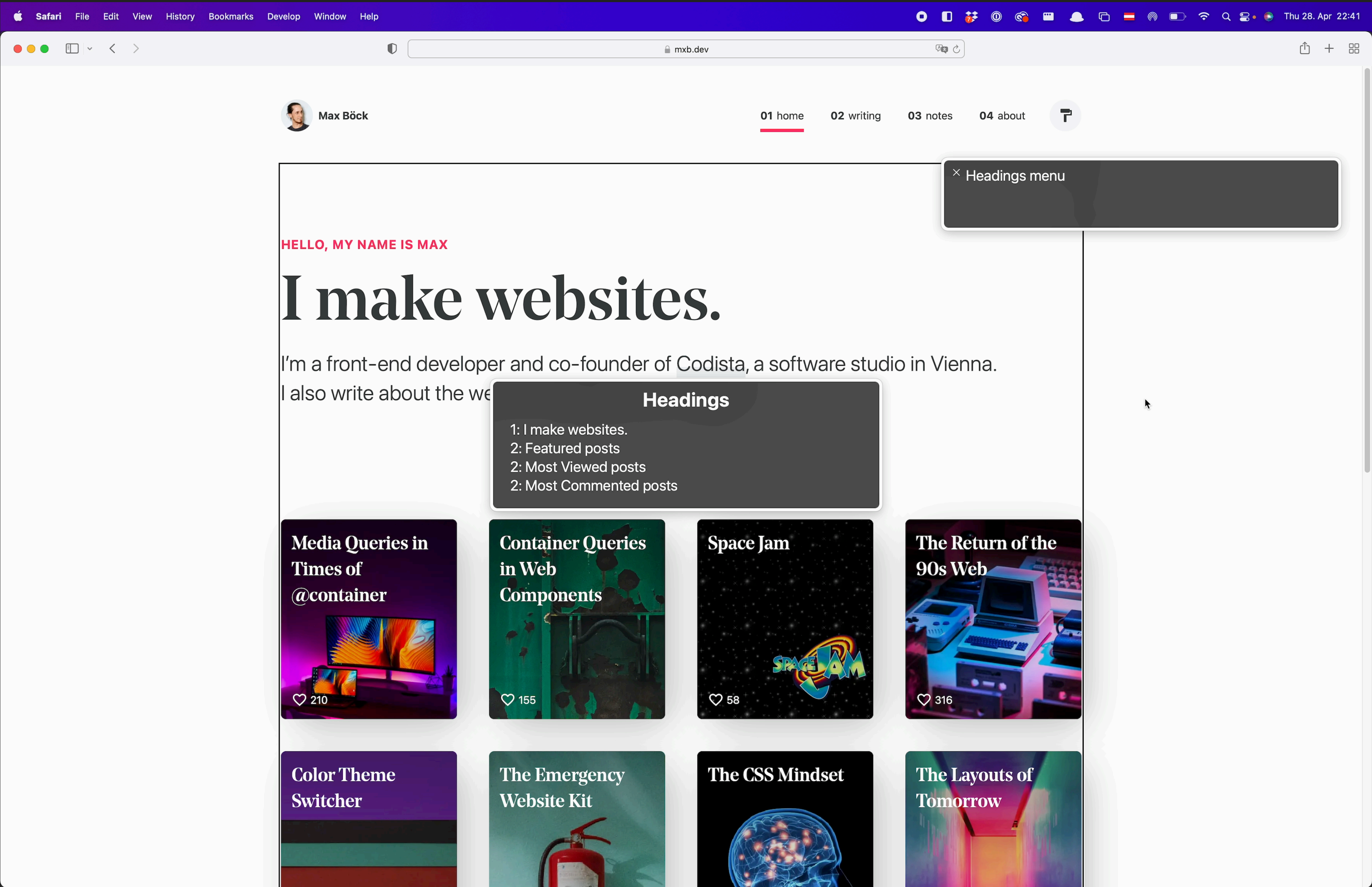




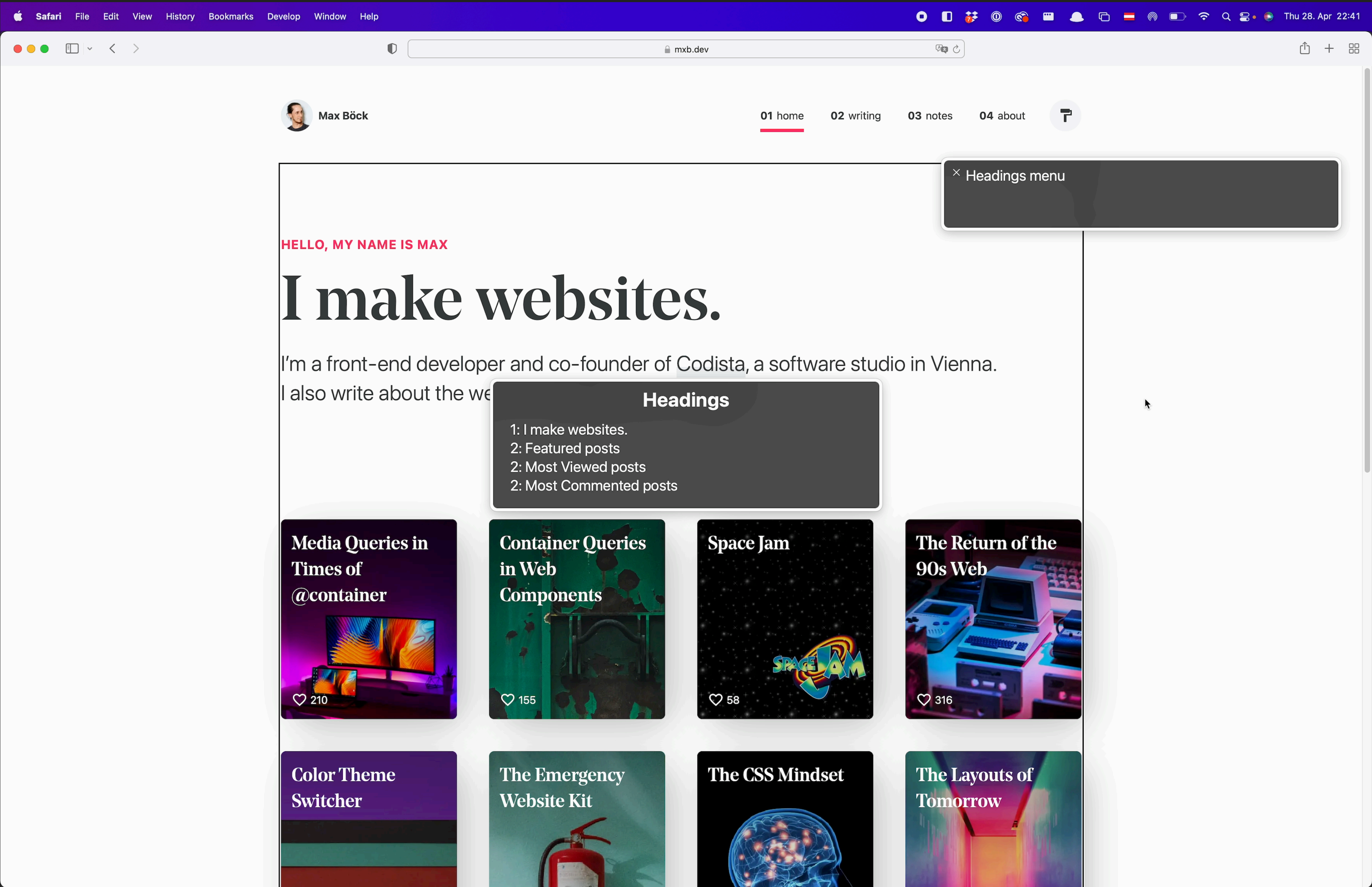












# A Sound Document Outline

- Meaningful labels



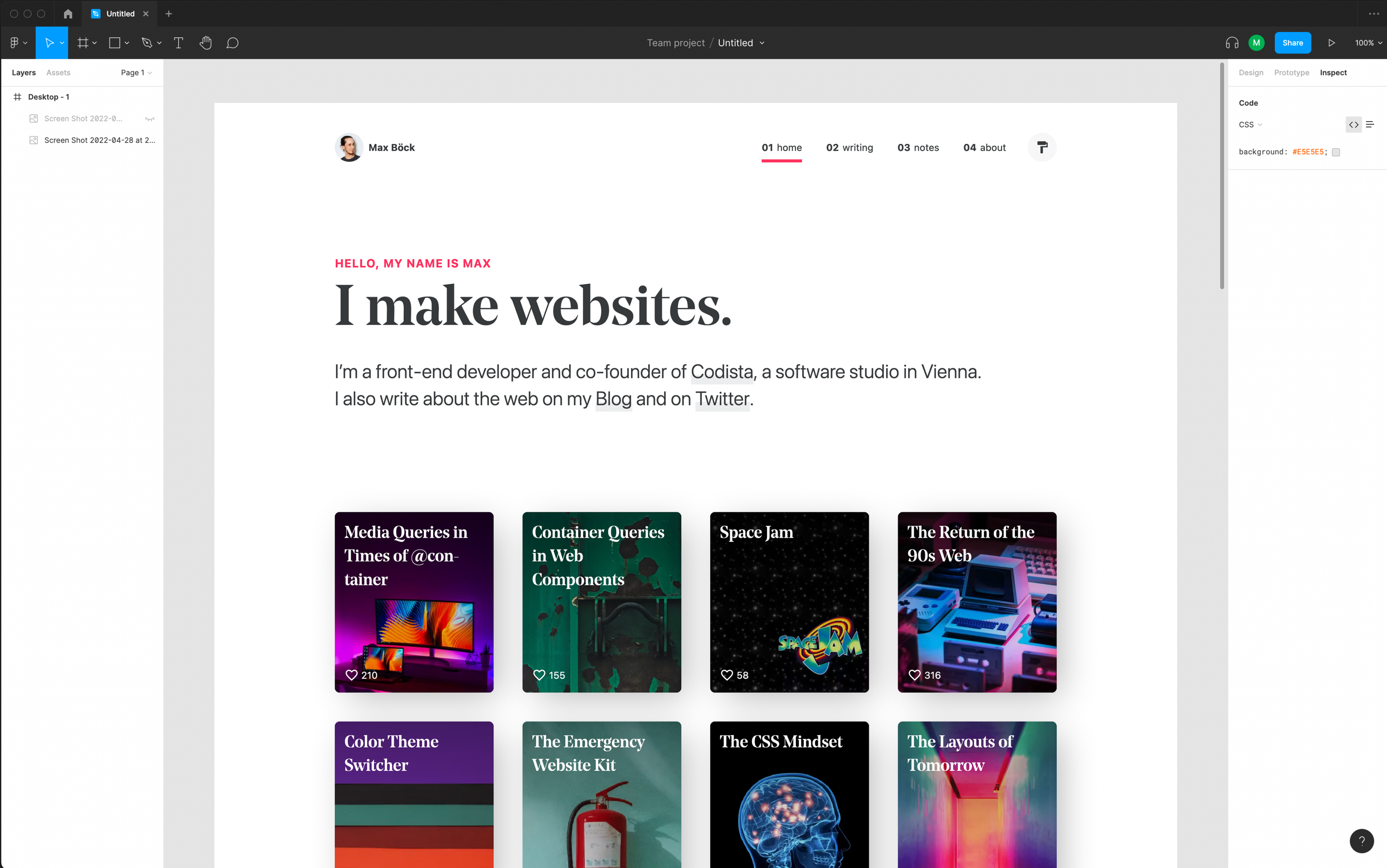
# A Sound Document Outline

- Meaningful labels
- Clean hierarchy (Avoid skipping levels)

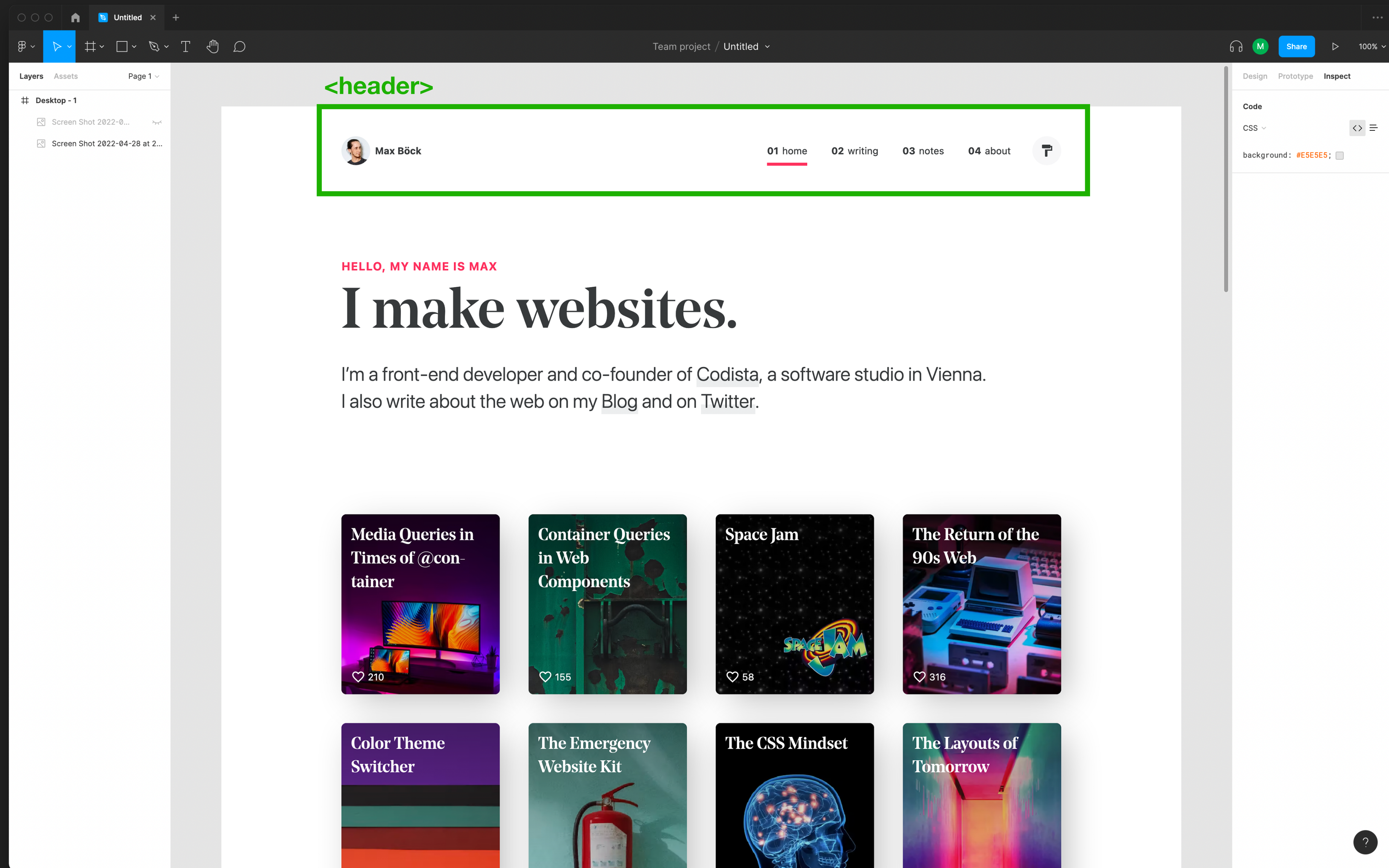
# A Sound Document Outline

- Meaningful labels
- Clean hierarchy (Avoid skipping levels)
- Enough but not too many headings

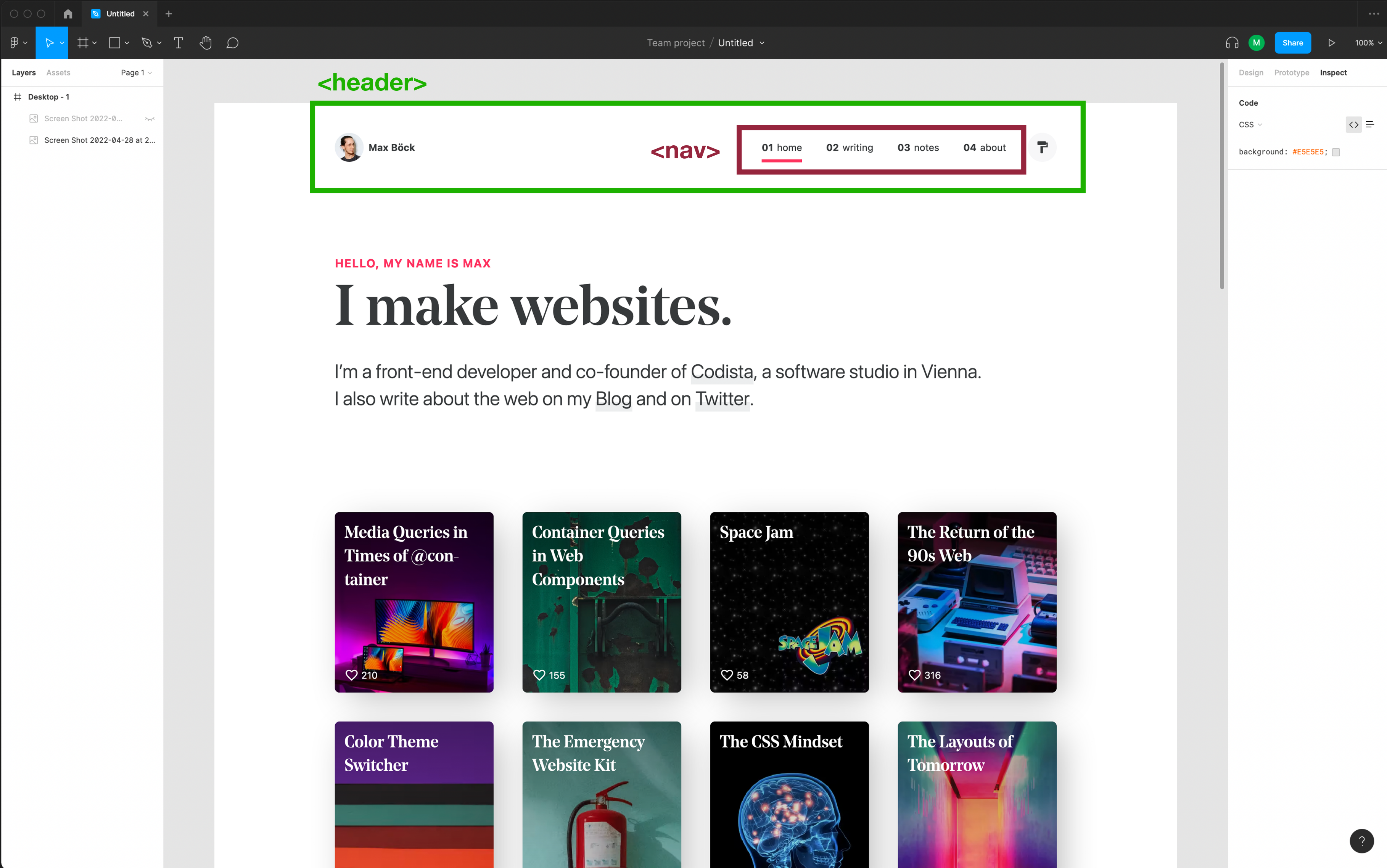




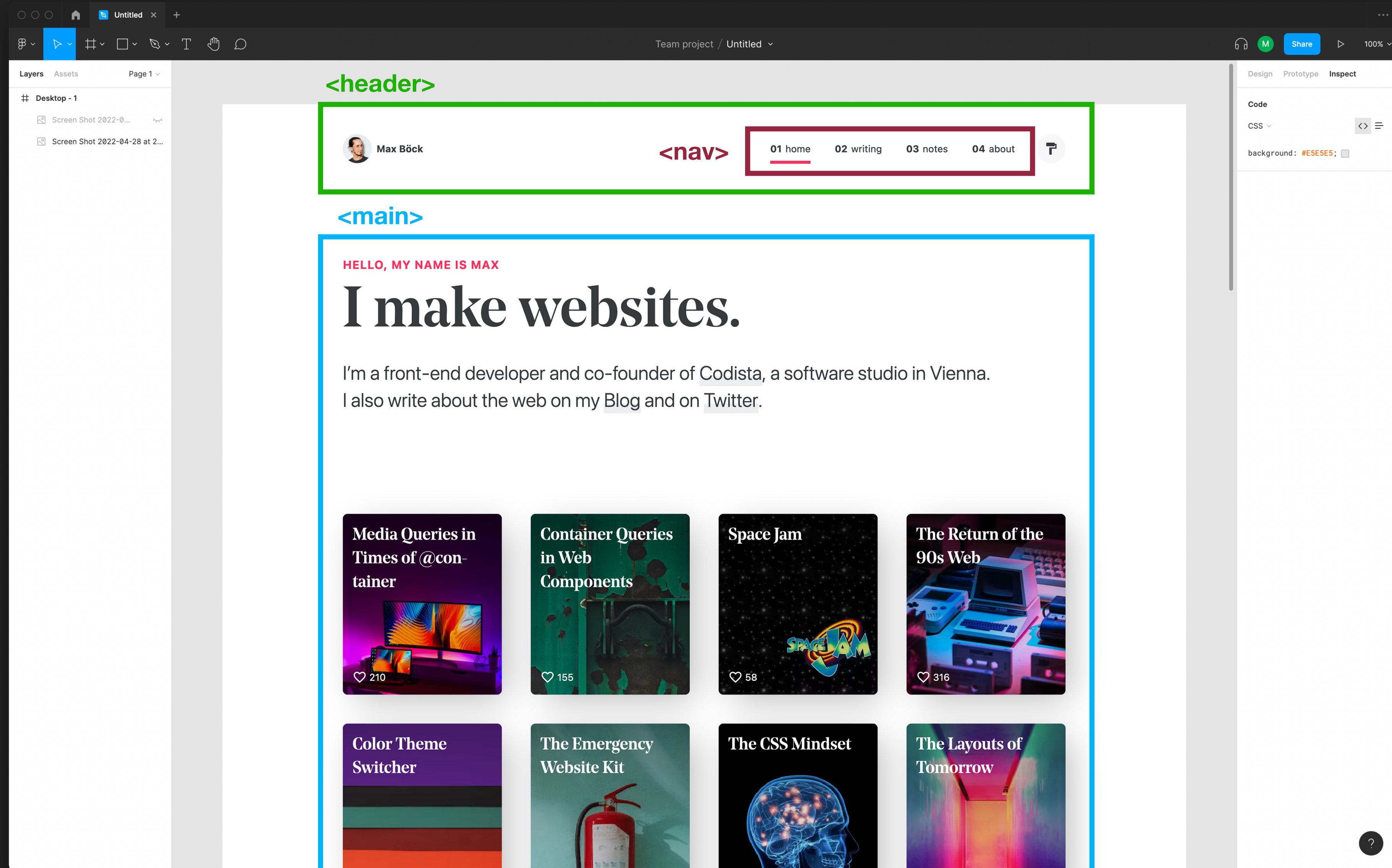




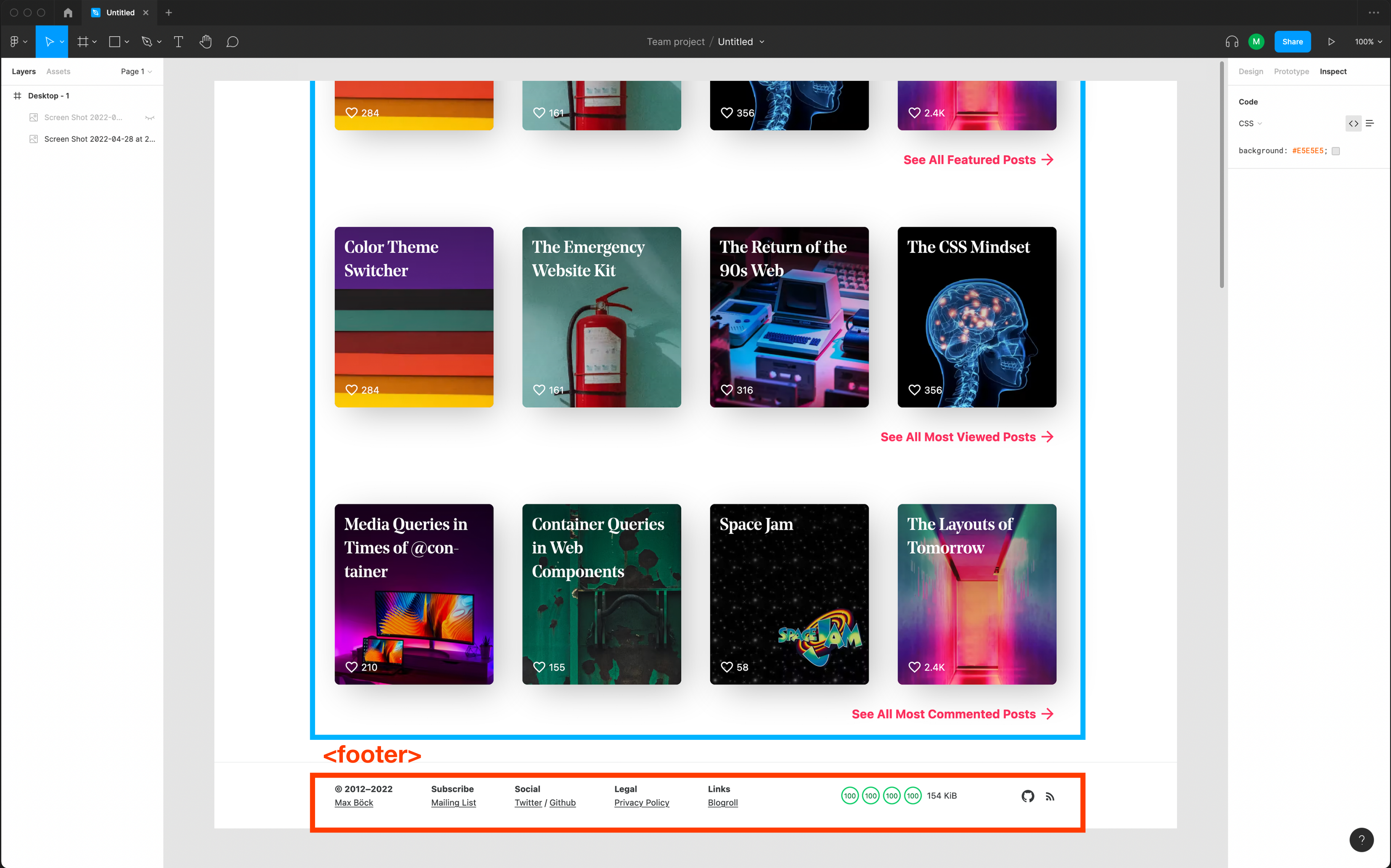




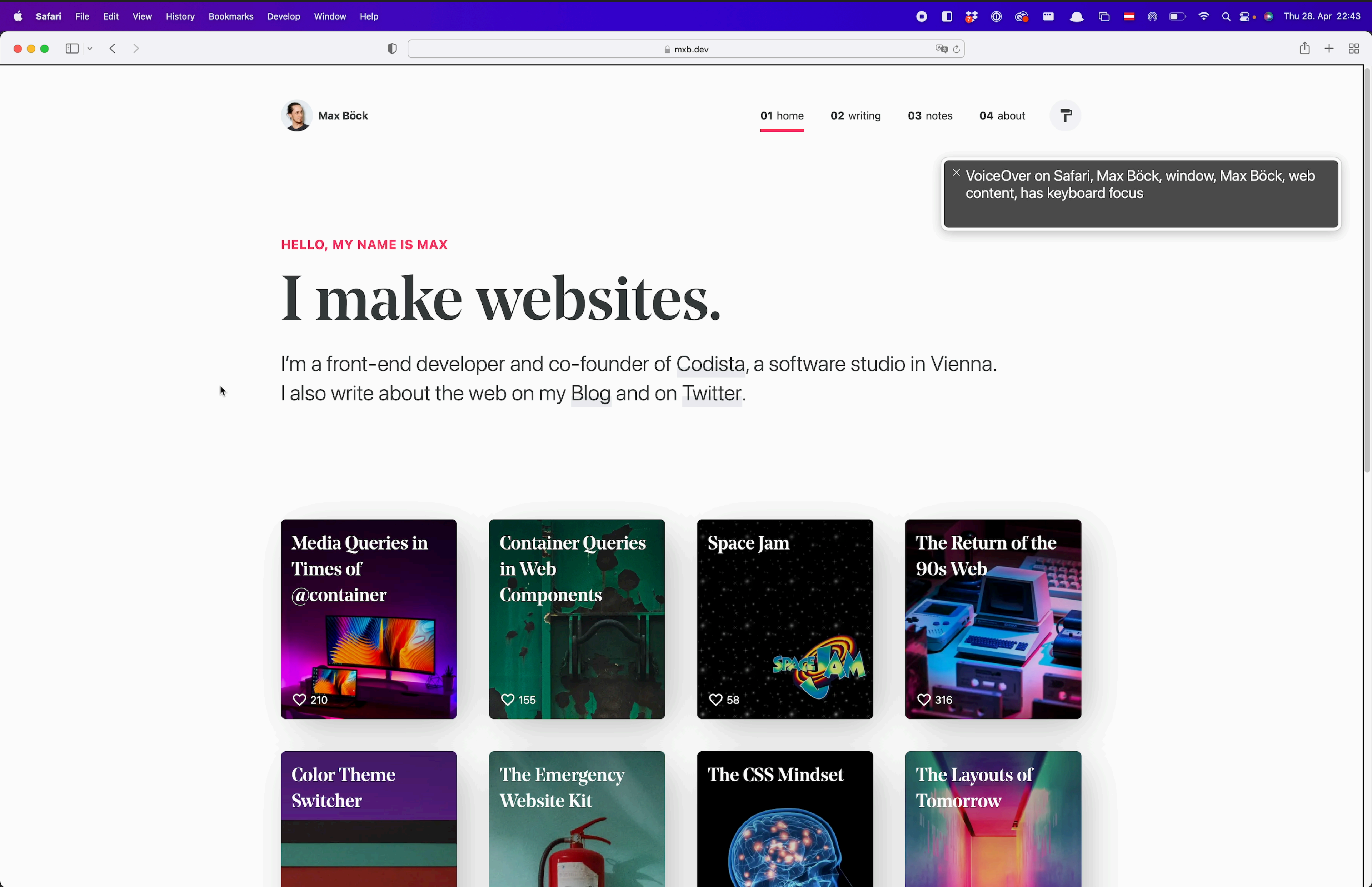




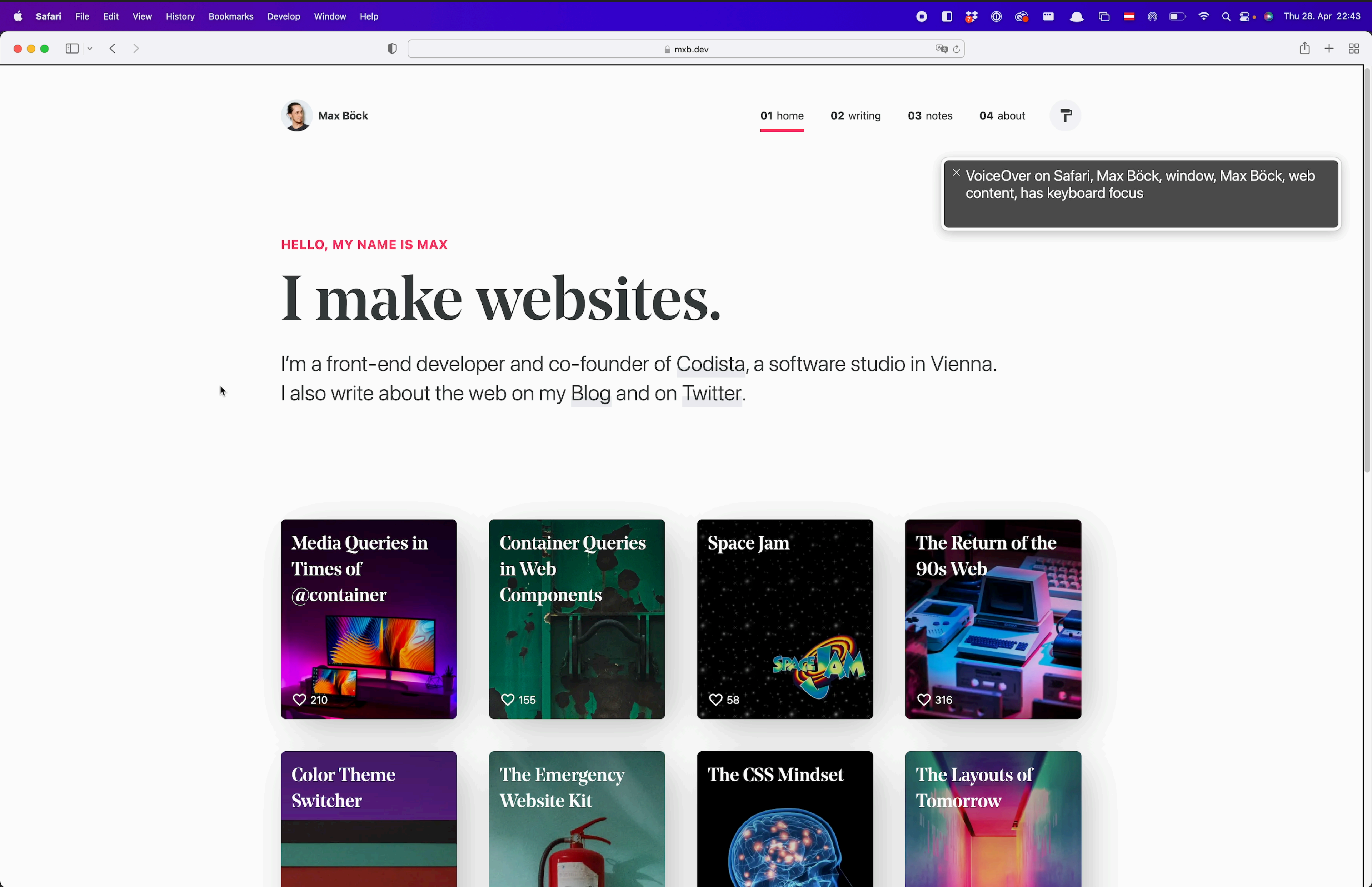




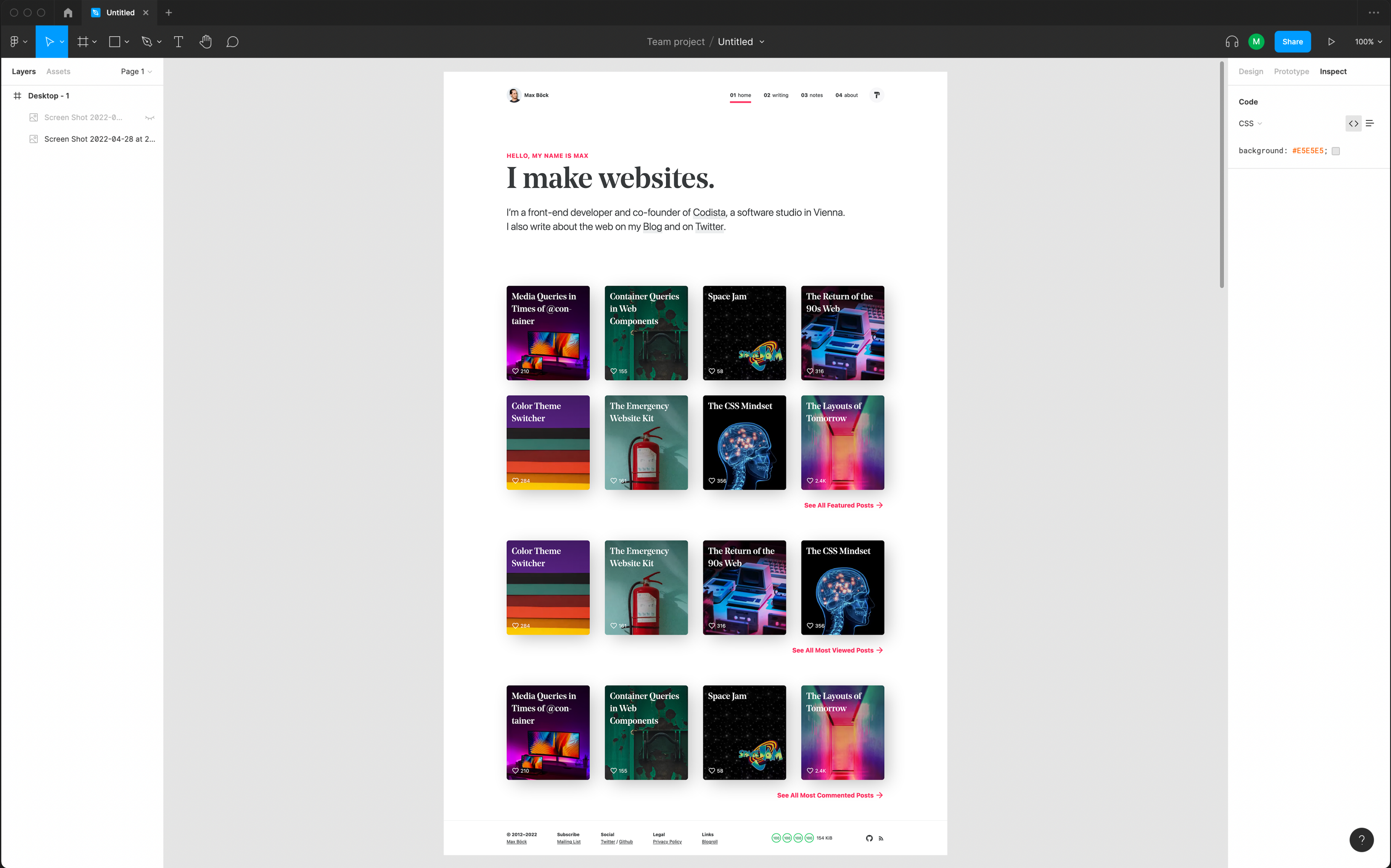














```
<!DOCTYPE html>
<html lang="de">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <title>Neue Helvetica</title>
</head>
<body>
  <h1>Neue Helvetica</h1>

</body>
</html>
```

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```



# The lang Attribute

- Screen readers

# The lang Attribute

- Screen readers
- Hyphenation



# The lang Attribute

- Screen readers
- Hyphenation
- Quotation marks

# The lang Attribute

- Screen readers
- Hyphenation
- Quotation marks
- Translation



# The lang Attribute

- Screen readers
- Hyphenation
- Quotation marks
- Translation
- Spell checking

# The lang Attribute

- Screen readers
- Hyphenation
- Quotation marks
- Translation
- Spell checking
- The default font selection for CJK languages



Loading...

https://orf.at/wahlergebnisse/wien20/ergebnisse


FernsehenTVthekeRadiothekDebatteÖsterreichWetterSportNewsORF.at im Überblick

newsORF.atWAHL20WIEN

Ergebnis GemeinderatErgebnisseErgebniskartenMotiveWählerströme

Wien

1., Innere Stadt2., Leopoldstadt3., Landstraße4., Wieden5., Margareten6., Mariahilf7., Neubau8., Josefstadt9., Alsergrund10., Favoriten11., Sieden12., Meidling13., Hietzing14., Penzing15., Rudolfsheim-Fünfhaus16., Ottakring17., Hernals18., Währing19., Döbling20., Brigittenau21., Floridsdorf22., Donaustadt23., Lügen



Wahl. Briefwahl

ahl und der Bezirksvertretungswahlen sind inklusiveetroffen.


	301.967 Stimmen	+2,03 %
FPÖ	51.603 Stimmen	-23,67 %
GRÜNE	107.397 Stimmen	+2,96 %
ÖVP	148.238 Stimmen	+11,19 %
NEOS	54.173 Stimmen	+1,31 %
HC	23.688 Stimmen	+3,27 %
LINKS	14.919 Stimmen	+2,06 %





**Developers,  
prioritise HTML!**





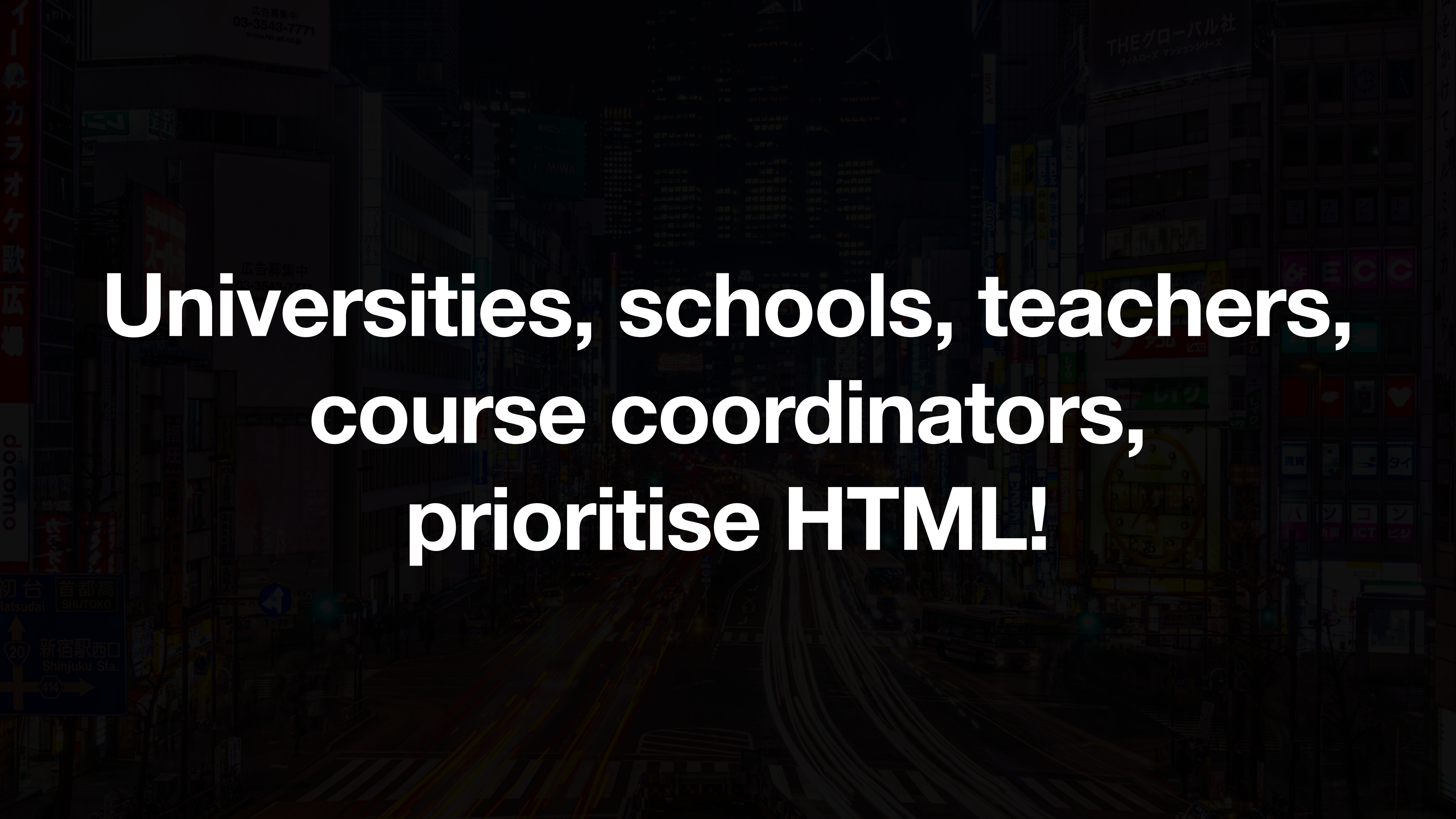
**Learn who your users are and  
how they're using the web.**





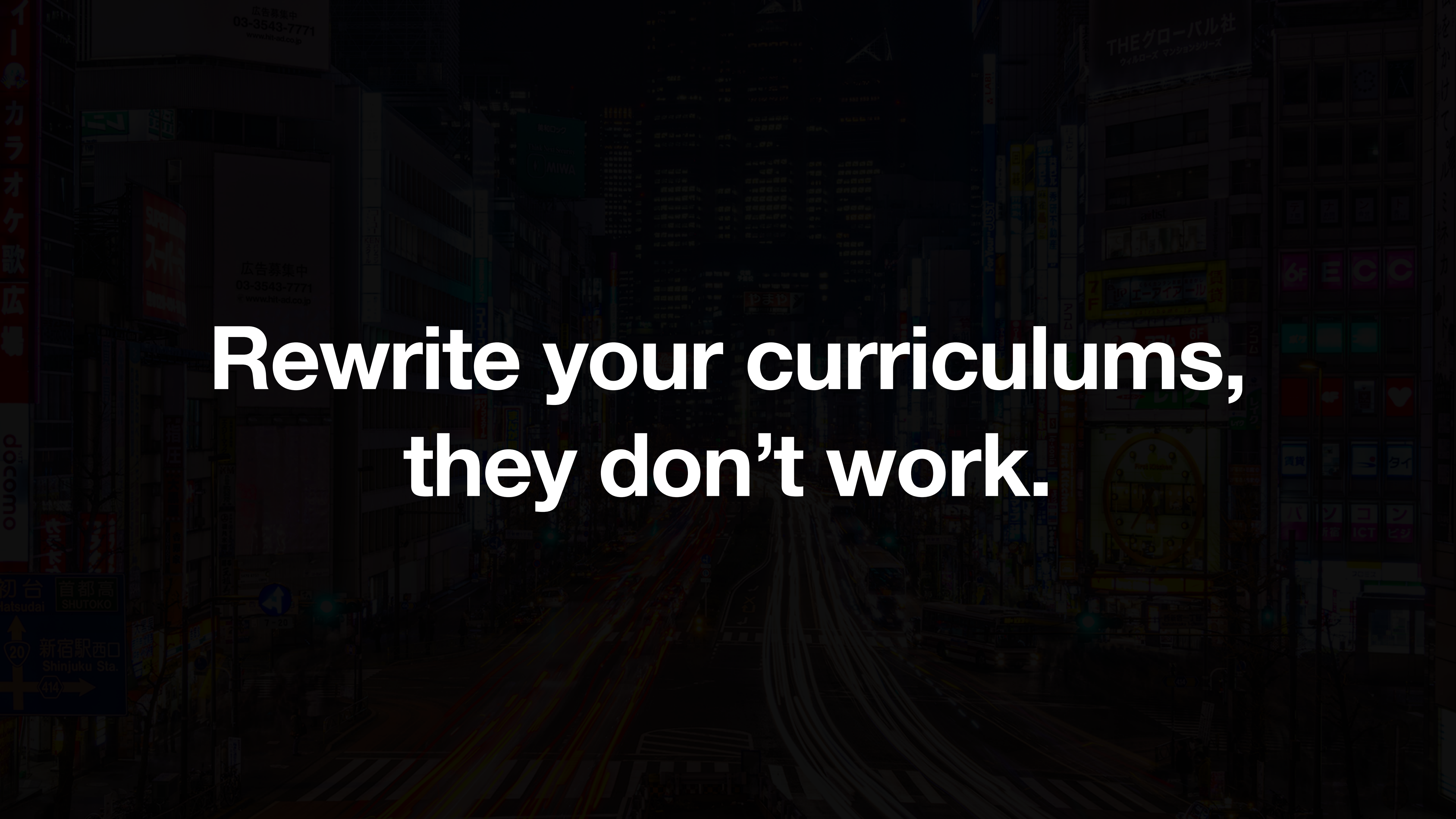
Stop belittling HTML.





**Universities, schools, teachers,  
course coordinators,  
prioritise HTML!**





**Rewrite your curriculums,  
they don't work.**





**Authors,  
prioritise HTML!**





**Write and speak more  
about HTML.**



Markup is your <friend>

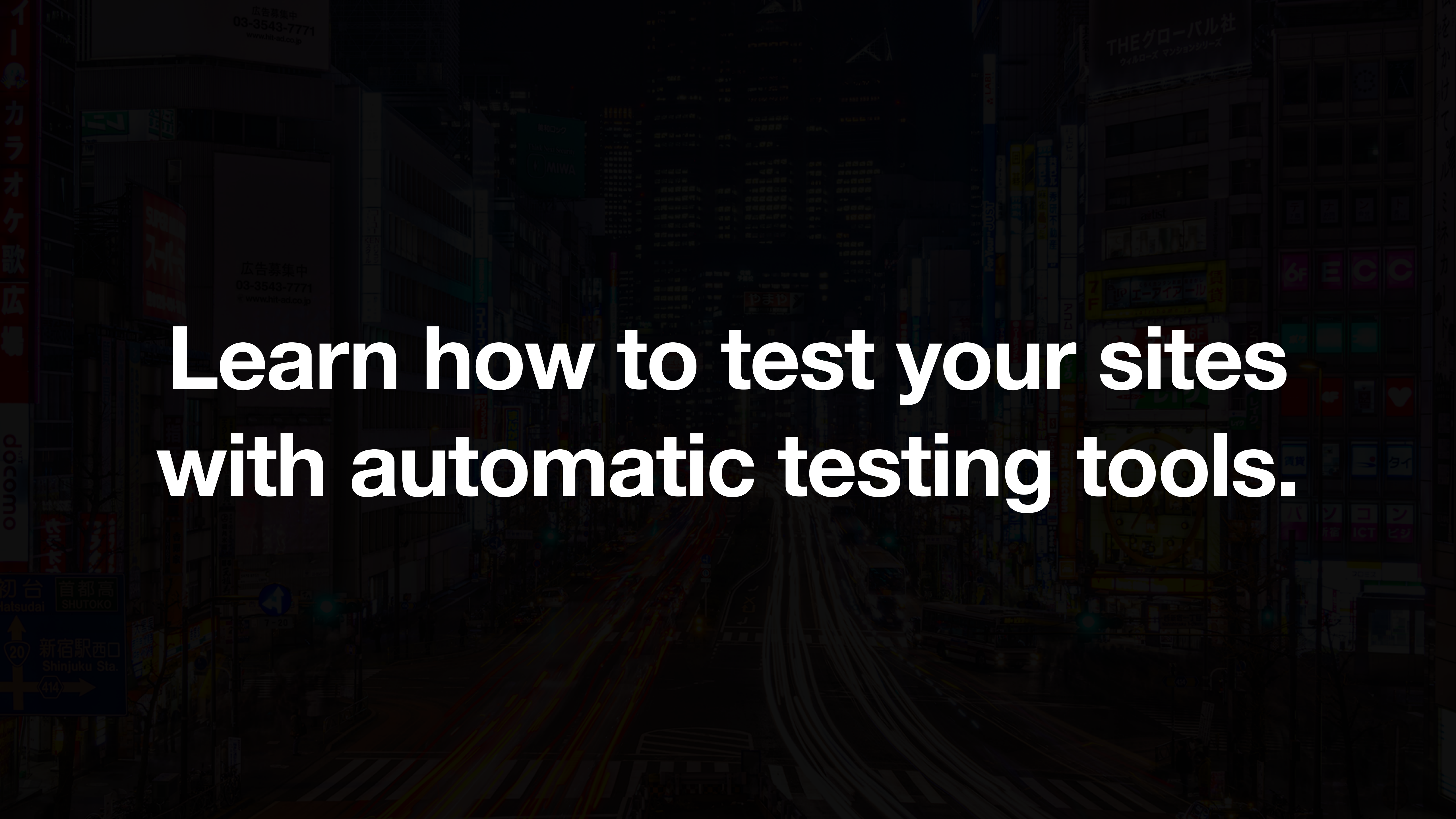
ond teller and





**Use accessible HTML in your  
demos.**





**Learn how to test your sites  
with automatic testing tools.**

***96.8% of home pages had detected  
WCAG 2 failures!***





**Learn how to test your sites  
with the keyboard and screen  
readers.**





<https://noti.st/matuzo/Y1Lgvc>

@mmatuzo





*Thank you!*

<https://noti.st/matuzo/Y1Lgvc>

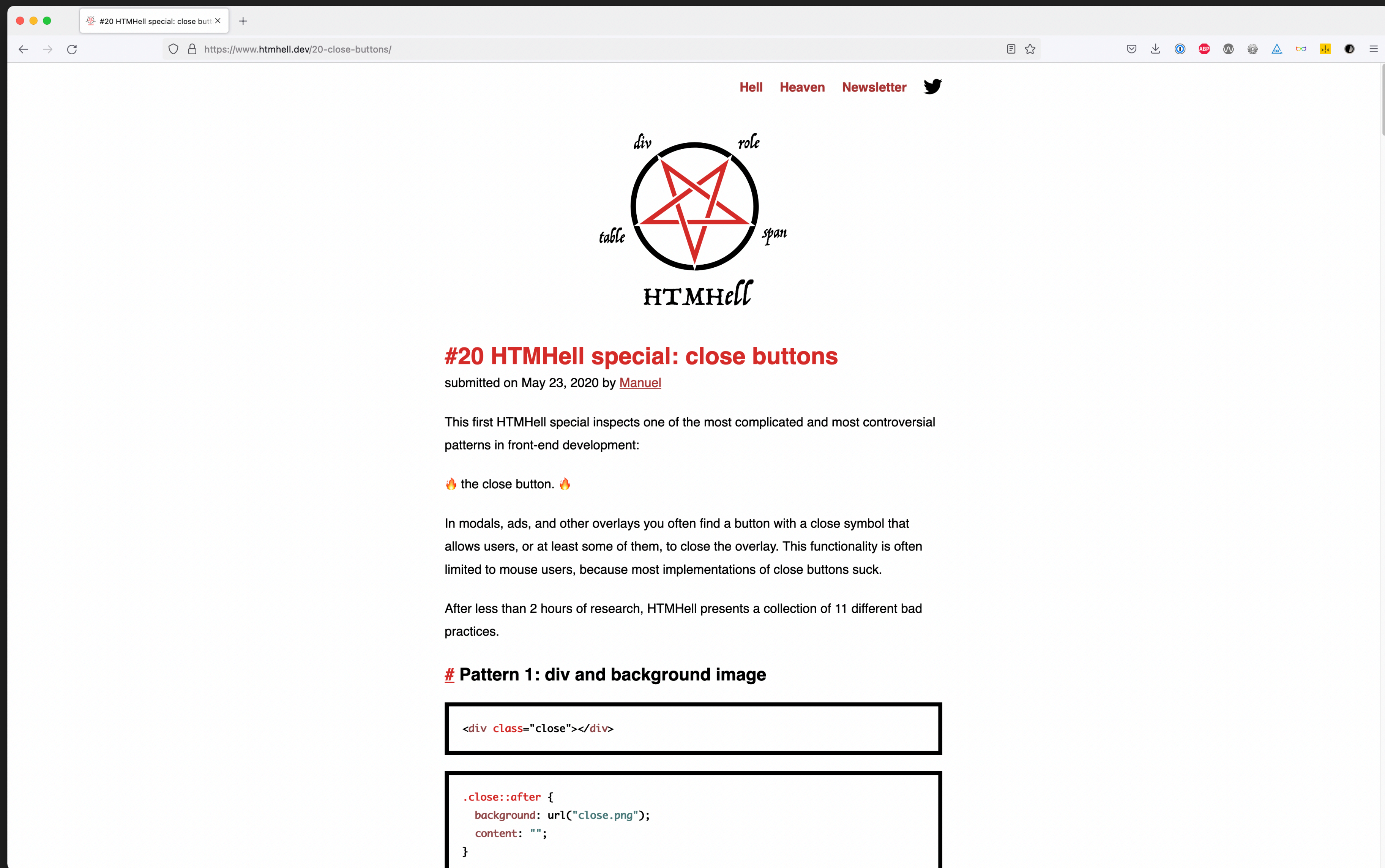
@mmatuzo



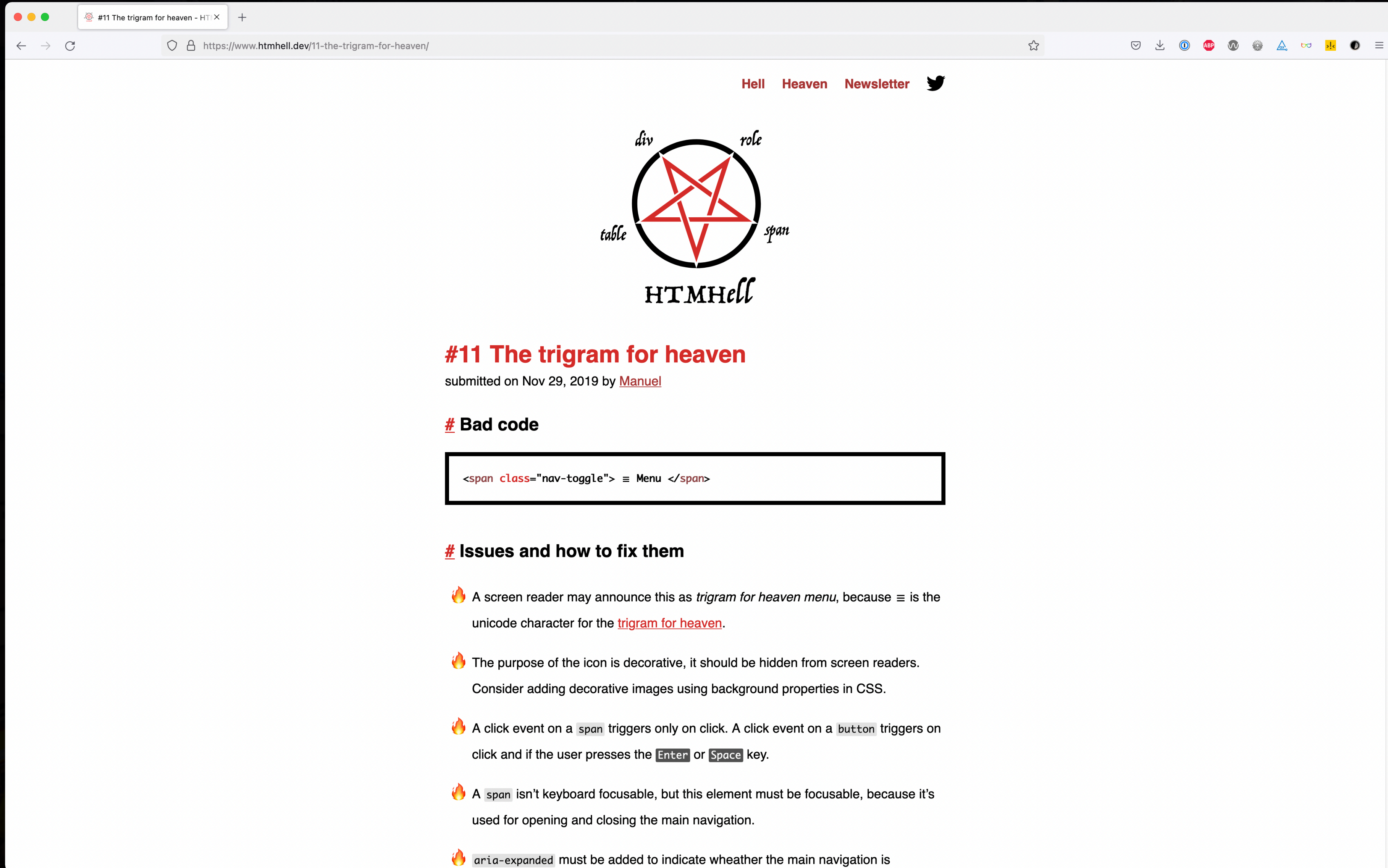


# Additional Resources











#26 HTMHell special: tasty butt...X

https://www.htmhell.dev/26-tasty-buttons/

Hell Heaven Newsletter

divrole

tablespan

HTMHell

#26 HTMHell special: tasty buttons

submitted on Oct 25, 2021 by Manuel

The second HTMHell special focuses on another highly controversial pattern in front-end development:

the burger button.

The burger button and his tasty friends (kebab, meatball and bento) usually reveal a list of links when activated. According to our studies, these buttons are highly optimized for mouse and touch users, but lack support for keyboard and screen reader users in most cases.

After less than 1 hours of research, HTMHell presents a collection of 18 different bad practices found on real websites.

# Pattern 1: the unsemantic burger

```
<div class="burger">
  <span></span>
  <span></span>
  <span></span>
</div>
```

