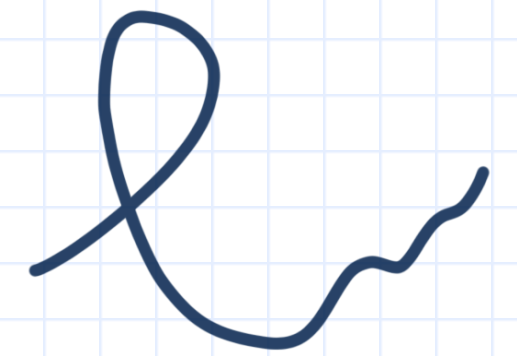


# WRITING EVEN MORE CSS WITH ACCESSIBILITY IN MIND



#ID24

September 17th, 2020

 matuzo.at

 @mmatuzo



# Manuel Matuzovic

HTML · CSS · a11y · performance

City of Vienna · WACA

webclerks · HTMHell · Frontend-Bookmarks

manuel@matuzo.at · @mmatuzo



Writing CSS with Accessibility in Mind


https://medium.com/@matuzo/writing-css-with-accessibility-in-mind-8514a0007939

Medium Programming

Become a member Sign in Get started

# Writing CSS with Accessibility in Mind

An introduction to web accessibility. Tips on how to improve the accessibility of your web sites and apps with CSS.

 Manuel Matuzovic Follow  
Sep 18, 2017 · 22 min read

[Twitter](#) [LinkedIn](#) [Facebook](#) [Bookmark](#)

This article is also available in [Russian](#), thanks to [Workafrolic](#), in [Portuguese](#), thanks to [Maujor](#), and in [Japanese](#), thanks to [Keita Nakanishi](#).

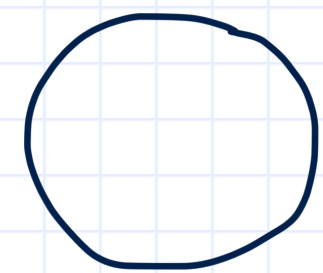
If you're not into reading, there's a [recording of me talking about most of the things](#) in this article at CSS Conf Budapest.

About a year ago I started to focus more on web accessibility. The most effective method of learning for me is teaching others. That's one of the reasons why I'm talking at [meetups and conferences](#) and why I'm writing articles about the topic. I wrote about [Progressive Enhancement](#) for [Smashing Magazine](#) and about accessibility basics here on Medium. This article is the third in a series of collections of accessibility tips. They're in no particular order, you can read [Writing HTML with accessibility in mind](#) and [Writing JavaScript with accessibility in mind](#) now or later if you're interested.

Writing even more CSS with accessibility in mind

- Progressive Enhancement
- Respecting User Preferences
- Improving Accessibility with CSS
- CSS and Semantics

# Progressive Enhancement



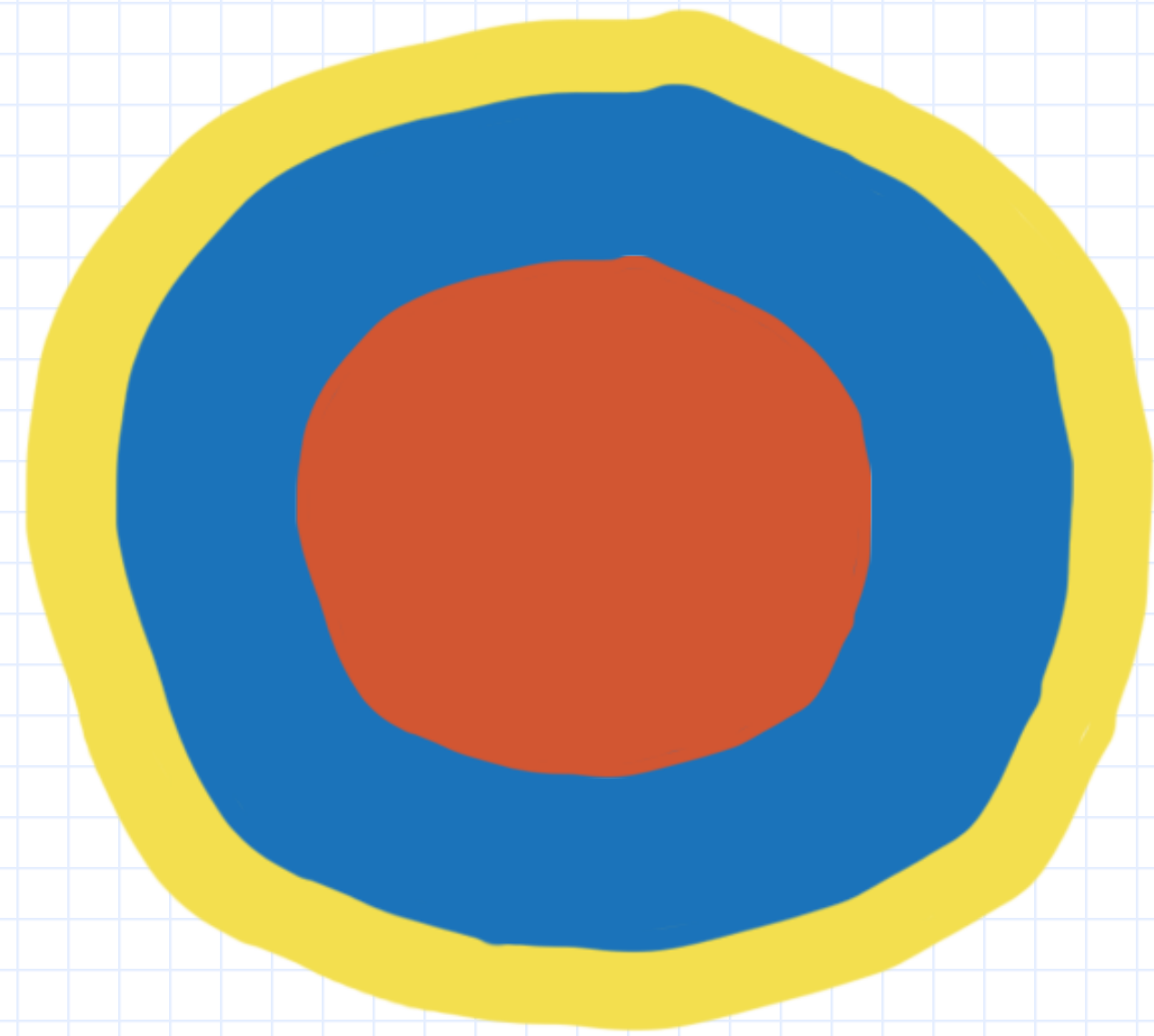
# Progressive Enhancement



# Progressive Enhancement



# progressive enhancement



**HTML: Foundation / Semantic markup**

**CSS: Design and visual improvements**

**JS: Enhanced experience**



progressive enhancement

```
div {  
  color: #FFFFFF;  
  css-is: amazing;  
  background: #000000;  
}
```



CSS <3

# progressive enhancement



Lorem ipsum dolor sit amet consectetur adipisicing elit. Deserunt magnam cumque asperiores illo cum eius dolores iure voluptates maxime nulla laborum, fugit tempore nobis iusto vitae eligendi explicabo ut earum! Lorem ipsum dolor sit amet consectetur adipisicing elit. Deserunt magnam cumque asperiores illo cum eius dolores iure voluptates maxime nulla laborum, fugit tempore nobis iusto vitae eligendi explicabo ut earum! Lorem ipsum dolor sit amet consectetur adipisicing elit. Deserunt magnam cumque asperiores illo cum eius dolores iure voluptates maxime nulla laborum, fugit tempore nobis iusto vitae eligendi explicabo ut earum! Lorem ipsum dolor sit amet consectetur adipisicing elit. Deserunt magnam cumque

asperiores illo cum eius dolores iure voluptates maxime nulla laborum, fugit tempore nobis iusto vitae eligendi explicabo ut earum! Lorem ipsum dolor sit amet consectetur adipisicing elit. Deserunt magnam cumque asperiores illo cum eius dolores iure voluptates maxime nulla.

progressive enhancement

```
img {  
  float: left;
```

```
}
```

# progressive enhancement

```
img {  
  float: left;  
  shape-outside: polygon(0.23% 2px, 17.11% 0.84%, 61.14%  
21.01%, 69.91% 20.17%, 86.88% 27.73%, 90.64% 36.09%,  
86.53% 50.56%, 80.07% 79.29%, 86.55% 99.48%, 0px 100%);  
  shape-margin: 20px;  
}
```

# progressive enhancement



Lorem ipsum dolor sit amet consectetur adipisicing elit. Deserunt magnam cumque asperiores illo cum eius dolores iure voluptates maxime nulla laborum, fugit tempore nobis iusto vitae eligendi explicabo ut earum! Lorem ipsum dolor sit amet consectetur adipisicing elit. Deserunt magnam cumque asperiores illo cum eius dolores iure voluptates maxime nulla laborum, fugit tempore nobis iusto vitae eligendi explicabo ut earum! Lorem ipsum dolor sit amet consectetur adipisicing elit. Deserunt magnam cumque asperiores illo cum eius dolores iure voluptates maxime nulla laborum, fugit tempore nobis iusto vitae eligendi explicabo ut earum! Lorem ipsum dolor sit amet consectetur adipisicing elit. Deserunt magnam cumque asperiores illo cum eius dolores iure voluptates maxime nulla laborum, fugit tempore nobis iusto vitae eligendi explicabo ut earum! Lorem ipsum dolor sit amet consectetur adipisicing elit. Deserunt magnam cumque asperiores illo cum eius dolores iure voluptates maxime nulla laborum, fugit tempore nobis iusto vitae eligendi explicabo ut earum! Lorem ipsum dolor sit amet consectetur adipisicing elit. Deserunt magnam cumque asperiores illo cum eius dolores iure voluptates maxime nulla laborum, fugit tempore nobis iusto vitae eligendi explicabo ut earum!

# progressive enhancement

```
<head>  
  <script type="module">  
    // Add the `.js` class to the <html> element  
    document.documentElement.classList.add('js')  
  </script>  
</head>
```

# JavaScript modules via script tag - LS

Loading JavaScript module scripts using `<script type="module">` Includes support for the `nomodule` attribute.

Usage % of all users   
 Global 91.55% + 0.37% = 91.92%

Current aligned Usage relative Date relative Filtered All 

IE	Edge *	Firefox	Chrome	Safari	Opera	iOS Safari *	Opera Mini *	Android Browser *	Opera Mobile *	Chrome for Android	Firefox for Android	UC Browser for Android	Samsung Internet	QQ Browser	Baidu Browser	KaiOS Browser
	12-14															
	<sup>1</sup> 6 15	2-53	4-59	3.1-10	10-46	3.2-10.2										
	<sup>6</sup> 16-18	<sup>2</sup> 54-59	<sup>1</sup> 60	<sup>4</sup> 5 10.1	<sup>1</sup> 47	<sup>4</sup> 5 10.3							4-7.4			
6-10	79-83	60-79	61-84	11-13	48-69	11-13.3		2.1-4.4.4	12-12.1				8.2-11.2			
11	84	80	85	13.1	70	13.5	all	81	46	85	79	12.12	12.0	10.4	7.12	2.5
		81-82	86-88	14-TP		14.0										

# progressive enhancement

## **1., Parkring von Kreuzung Dr.-Karl-Lueger-Platz und Weiskirchnerstraße bis Kreuzung Zedlitzgasse**

### **Gleisbau von 10.06.2019 bis 08.09.2019**

Sperre von 2 Fahrstreifen am Ring von 22:00 Uhr bis 5:00 Uhr über die gesamte Bauzeit. Maßnahmen für 2 Wochen zwischen 1.7. bis 1.9.: - Der Bereich Weiskirchnerstraße von Dr.-Karl-Lueger-Platz und Parkring bis Ende des Fahrbahnteilers auf Seite des Stadtparkes wird für den Fahrzeugverkehr gesperrt.

[Baustelle im Stadtplan](#)

## **1., Tuchlauben von Kreuzung Bognergasse bis 2**

### **Rohrlegung von 27.05.2019 bis 31.07.2019**

Während der Bauarbeiten verbleibt immer eine lichte Durchfahrts- bzw. Durchgangsbreite von mind. 3,50 m. Außerhalb der Arbeitszeit ist die Künette im Fahrbahnbereich verkehrssicher überbrückt.



progressive enhancement

```
.js .accordion__panel {  
  display: none;  
}
```

# progressive enhancement

**1., Parkring von Kreuzung Dr.-Karl-Lueger-Platz und Weiskirchnerstraße bis Kreuzung Zedlitzgasse**

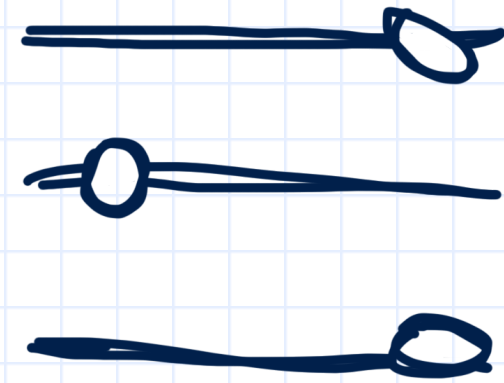


**1., Tuchlauben von Kreuzung Bognergasse bis 2**



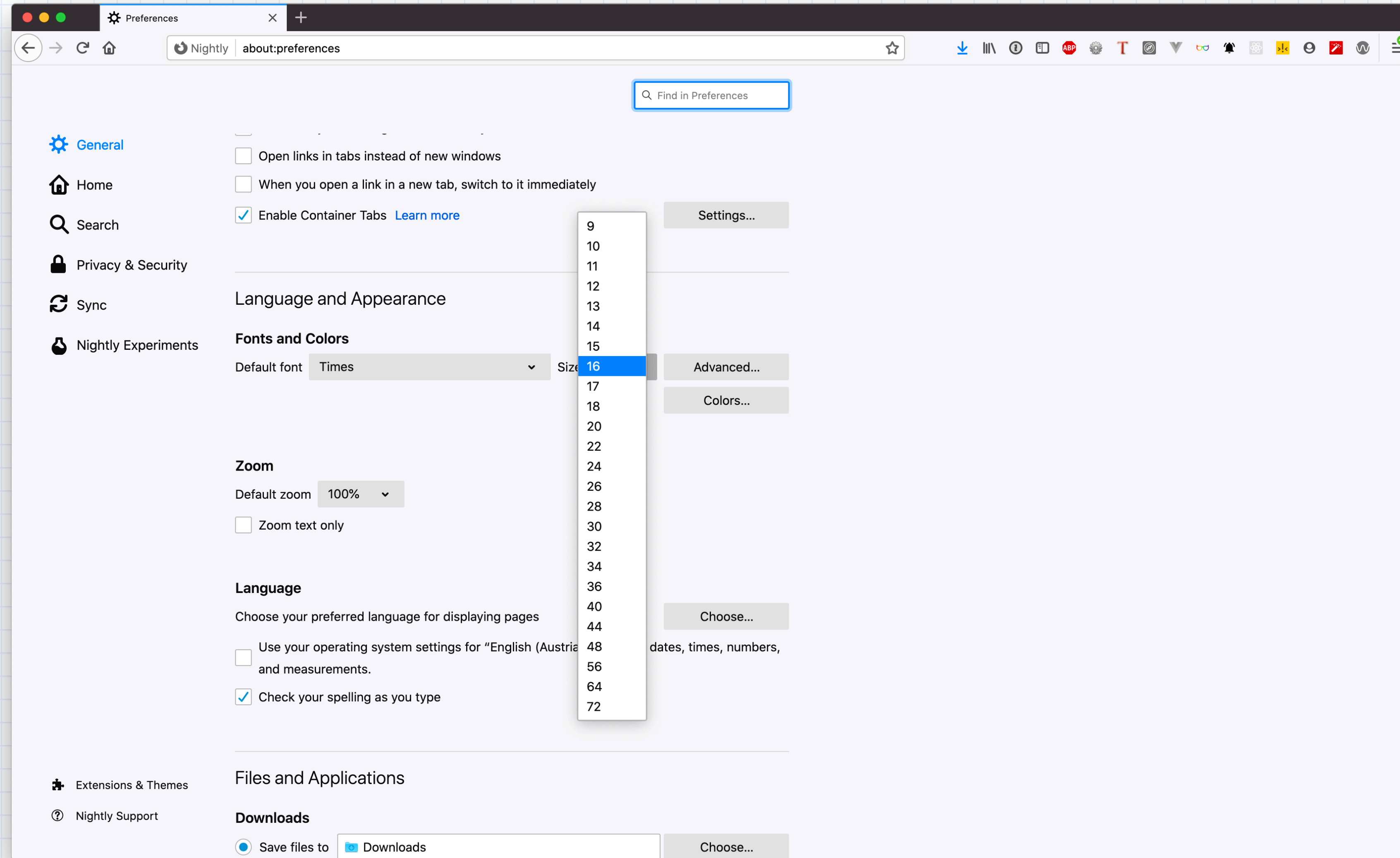


# Respecting User Preferences



# Font Size

font size



font size

```
body {  
  /* Don't use px for font sizes */  
  font-size: 18px;  
}
```

font size

$$\frac{\text{target font size}}{\text{base font size}} = \text{rem size}$$

$$\frac{18\text{px}}{16\text{px}} = 1.125\text{rem}$$



font size

```
body {  
  font-size: 1.125rem; /* 16 * 1.125 = 18px */  
}
```

# Motion and Animation

motion and animation

The screenshot shows a web browser window with the URL <https://alistapart.com/article/accessibility-for-vestibular/>. The page features the A List Apart logo at the top, followed by a navigation menu with links for ARTICLES, EVENTS, TOPICS, WRITE FOR US, and LANGUAGE (ENGLISH). The main heading is "Accessibility for Vestibular Disorders: How My Temporary Disability Changed My Perspective" by Facundo Corradini, dated April 04, 2019. The article text begins with "Accessibility can be tricky. There are plenty of conditions to take into consideration, and many technical limitations and weird exceptions that make it quite hard to master for most designers and developers." The page also includes a sidebar with three promotional boxes: "Wireframe is a podcast all about how UX can help technology fit into our lives.", "A Book Apart: Brief books for people who make websites.", and "AN EVENT APART SINCE 2008". On the right side, there are social sharing icons for Facebook and Twitter, and a red "Become a patron" button.

*Really, there are no words to describe just how bad a simple parallax effect, scrolljacking, or even background-attachment: fixed would make me feel. I would rather jump on one of those 20-G centrifuges astronauts use than look at a website with parallax scrolling.*

**Facundo Corradini**

*The extreme, conscious, focused effort it took to read would make it such that anything moving on the screen would instantly break my focus, and force me to start the paragraph all over.  
And I mean anything.*

**Facundo Corradini**

# motion and animation

```
@keyframes walk {  
  0% {  
    transform: translateX(100vw);  
  }  
}  
  
img {  
  animation: walk 10s linear infinite;  
}  
  
@media (prefers-reduced-motion: reduce) {  
  img {  
    animation: none;  
  }  
}
```

# motion and animation

```
<picture>  
  <source srcset="moonwalk.jpg" media="(prefers-reduced-motion: reduce)" />  
    
</picture>
```


Designing With Reduced Motion

https://www.smashingmagazine.com/2020/09/design-reduced-motion-sensitivities/

SMASHING MAGAZINE

Articles Guides Books Events Membership Jobs Newsletter More

Search articles...



ABOUT THE AUTHOR

Val Head is a Senior Design Advocate at Adobe, author, and web animation expert. She is the author of [Designing Interface Animation](#) on Rosenfeld Media, teaches ... [More about Val...](#)

SQUARESPACE

BEAUTIFUL WEBSITE TEMPLATES FOR CREATIVE ENTREPRENEURS

START YOUR FREE TRIAL

14-DAY TRIAL. TERMS APPLY.

Start free website trial

SEPTEMBER 8, 2020 • [Leave a comment](#)

# Designing With Reduced Motion For Motion Sensitivities

**QUICK SUMMARY** ↔ Thanks to the wide support of the prefers-reduced-motion-media feature, we now have more advanced ways to design motion that can be creative and innovative while also being safer for those with motion sensitivities. This article is all about the how and why of making that happen.

**CSS HAS RECENTLY ADDED FEATURES THAT ALLOW US TO RECOGNIZE** certain user preferences and qualities of the user's current environment. One of those new features, specifically the prefers-reduced-motion media feature, can be especially useful for designing more inclusive motion on the web.


A few years back, I wrote an article about [designing safer web animation for motion sensitivity](#) and the limited options we had at the time to design safe motion on the web. Some things have remained the same since that original article, like the types of motion effects that can be triggering, and the importance of context and user expectations. But what has changed is the existence and support of the prefers-

16 min read

UI, Design, Animation, Accessibility

Share on [Twitter](#) or [LinkedIn](#)

Saved for offline reading



Smashing Newsletter



# motion and animation

```
img {  
  animation: walk 10s linear infinite;  
}
```

```
div {  
  transition: transform 1s ease-in;  
}
```

```
/* has no effect in browsers that don't support prefers-reduced-motion */
```

```
@media (prefers-reduced-motion: reduce) {  
  * {  
    animation: none !important;  
    transition: none !important;  
  }  
}
```

# prefers-reduced-motion media query - WD

Usage % of all users  ?  
Global 89.68%

CSS media query based on a user preference for preferring reduced motion (animation, etc).

Current aligned Usage relative Date relative Filtered All

IE	Edge *	Firefox	Chrome	Safari	Opera	iOS Safari *	Opera Mini *	Android Browser *	Opera Mobile *	Chrome for Android	Firefox for Android	UC Browser for Android	Samsung Internet	QQ Browser	Baidu Browser
	12-18	2-62	4-73	3.1-10	10-63	3.2-10.2							4-10.1		
6-10	79-83	63-79	74-84	10.1-13	64-69	10.3-13.3		2.1-4.4.4	12-12.1				11.2		
11	84	80	85	13.1	70	13.5	all	81	46	85	79	12.12	12.0	10.4	7.12
		81-82	86-88	14-TP		14.0									

## motion and animation

```
/* has no effect in browsers that don't support prefers-reduced-motion */  
@media (prefers-reduced-motion: no-preference) {  
  img {  
    animation: walk 10s linear infinite;  
  }  
  
  div {  
    transition: transform 1s ease-in;  
  }  
}
```

## motion and animation

```
@media (prefers-reduced-motion: no-preference) {  
  html {  
    scroll-behavior: smooth;  
  }  
}
```

Improving `a{}` with CSS

# Explaining user interfaces

## Explaining user interfaces

```
<a href="menu.html">
```

Our Menu

```
</a>
```

```
<a href="menu.pdf" download>
```

Our Menu

```
</a>
```

Our Menu

Our Menu

## Explaining user interfaces

[attribute] { }

```
a[download]::after {  
  background-image: url('icons/download.svg');  
  content: "";  
  display: inline-block;  
  background-size: contain;  
}
```



# Explaining user interfaces

```
<a href="menu.html">
```

Our Menu

```
</a>
```

```
<a href="menu.pdf" download>
```

Our Menu

```
</a>
```

Our Menu


Our Menu ↓

# Explaining user interfaces

Tips on Making Sure Hidden Content is Accessible (or Not!)

Showing and hiding dynamic or non-visible content has its own set of accessibility considerations! Let's review.

May 10, 2019





Hi, I'm Scott. I am a web accessibility consultant and front end engineer from Toronto, Canada.

I [write](#), [speak](#), [instruct workshops](#), [tweet tips](#), and [share code](#) about accessibility development and design.

EARN YOUR MASTER'S IN  
**Information Systems**  
Northwestern

Learn from leading industry experts. Customize your study in one of 8 specializations. Online and on campus. ADS VIA CARBON

**All 1y Swag!** 



HTML & CSS & JS & A11Y.

# Explaining user interfaces

```
<!-- screen reader sprite sheet -->
```

```
<div hidden>
```

```
  <span id="new-window-0">Opens in a new window</span>
```

```
  <span id="new-window-1">Opens an external site</span>
```

```
  <span id="new-window-2">File download</span>
```

```
</div>
```

# Explaining user interfaces

```
<a href="https://css-irl.info/">  
  Michelle Barker's website  
</a>
```

“Michelle Barker's website, link”

## Explaining user interfaces

```
<a href="https://css-irl.info/">  
  Michelle Barker's website  
</a>
```

“Michelle Barker’s website, link”

```
<a href="https://css-irl.info/" aria-describedby="new-window-1">  
  Michelle Barker's website  
</a>
```

“Michelle Barker’s website, Opens an external site, link”

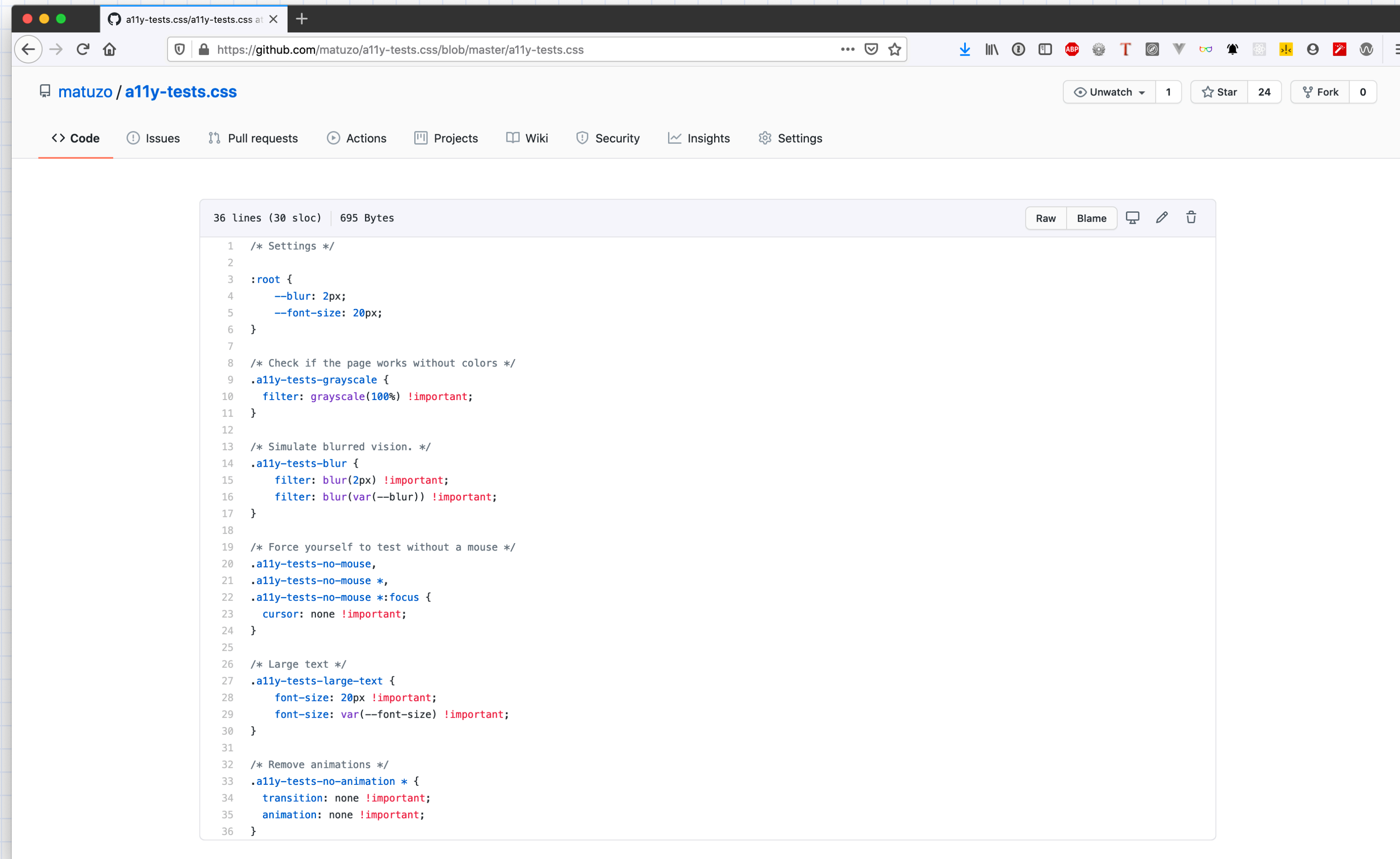
# Explaining user interfaces

```
[aria-describedby="new-window-1"] {  
  background-image: url('icons/external.svg');  
  ...  
}
```

```
a[href^="http://"],  
a[href^="https://"] {  
  background-image: url('icons/external.svg');  
  ...  
}
```

# Testing accessibility

# Testing accessibility



The screenshot shows a web browser displaying a GitHub repository page for 'matuzo/a11y-tests.css'. The page title is 'matuzo / a11y-tests.css'. The browser's address bar shows the URL 'https://github.com/matuzo/a11y-tests.css/blob/master/a11y-tests.css'. The repository page includes navigation links for Code, Issues, Pull requests, Actions, Projects, Wiki, Security, Insights, and Settings. The main content area displays the CSS code for 'a11y-tests.css', which is 36 lines long (30 sloc) and 695 bytes. The code includes various utility classes for testing accessibility, such as grayscale, blur, no-mouse, large-text, and no-animation.

```
36 lines (30 sloc) | 695 Bytes
1  /* Settings */
2
3  :root {
4    --blur: 2px;
5    --font-size: 20px;
6  }
7
8  /* Check if the page works without colors */
9  .a11y-tests-grayscale {
10   filter: grayscale(100%) !important;
11 }
12
13 /* Simulate blurred vision. */
14 .a11y-tests-blur {
15   filter: blur(2px) !important;
16   filter: blur(var(--blur)) !important;
17 }
18
19 /* Force yourself to test without a mouse */
20 .a11y-tests-no-mouse,
21 .a11y-tests-no-mouse *,
22 .a11y-tests-no-mouse *:focus {
23   cursor: none !important;
24 }
25
26 /* Large text */
27 .a11y-tests-large-text {
28   font-size: 20px !important;
29   font-size: var(--font-size) !important;
30 }
31
32 /* Remove animations */
33 .a11y-tests-no-animation * {
34   transition: none !important;
35   animation: none !important;
36 }
```



## Testing accessibility

```
/* Force yourself to test without a mouse */  
.a11y-tests-no-mouse,  
.a11y-tests-no-mouse *,  
.a11y-tests-no-mouse *:hover {  
  cursor: none !important;  
  pointer-events: none !important;  
}  
  
<html class="a11y-tests-no-mouse" lang="en">  
  ...  
</html>
```

## Testing accessibility

```
/* Check if the page works without colors */  
.a11y-tests-grayscale {  
  filter: grayscale(100%) !important;  
}
```

```
<html class="a11y-tests-grayscale" lang="en">  
  ...  
</html>
```

Testing accessibility

The screenshot shows a web browser window with the URL <https://inclusivedesign24.org/2020/schedule/>. The page features the 'inclusive design 24' logo in the top left and a navigation menu with 'Home', 'Schedule', 'Team', and 'Supporters'. The main content area is titled 'Schedule' and includes the following text: 'No sign-up. No registration. All sessions are streamed live and publicly on the [Inclusive Design 24 YouTube channel](#). All times shown for your local time (UTC +2)'. Below this, there is a list of sessions:

Time	Session Title	Speaker(s)	Details
1:45 AM 17 September ( 23:45 UTC 16 Sep )	The pre-show		<a href="#">Show details</a>
2:00 AM 17 September ( 0:00 UTC 17 Sep )	Everyone here spoke sign language	Claudio Luís Vera	<a href="#">Show details</a>
3:00 AM 17 September ( 1:00 UTC 17 Sep )	Why Everyone Should Design For Chiari Malformation	Veronica Lewis	<a href="#">Show details</a>
4:00 AM		Lainey Feingold, Lucy Greco and Stewart Hay	

# Debugging accessibility



# Debugging accessibility

Root element with empty or missing lang attribute.

```
html:not([lang]),  
html[lang=" "],  
html[lang=""],  
html:not(:lang(en)) {  
    border: 10px solid red;  
}
```

## Debugging accessibility

Images without alt attribute or alt attribute with an empty string as value.

```
img:not([alt]),  
img[alt="" ] {  
  border: 10px solid red;  
}
```

# Debugging accessibility

Elements with the class `.btn` or `.button` that are not real HTML buttons.

```
.btn
```

```
.button
```

```
  outline: 2px dashed red;
```

```
  outline-offset: 2px;
```

```
}
```

# Debugging accessibility

Elements with the class `.btn` or `.button` that are not real HTML buttons.

```
.btn:not(button)  
.button:not(button)  
  outline: 2px dashed red;  
  outline-offset: 2px;  
}
```



## Debugging accessibility

Elements with the class `.btn` or `.button` that are not real HTML buttons.

```
.btn:not(button):not([type="button"])  
.button:not(button):not([type="button"])  
  outline: 2px dashed red;  
  outline-offset: 2px;  
}
```

## Debugging accessibility

Elements with the class `.btn` or `.button` that are not real HTML buttons.

```
.btn:not(button):not([type="button"]):not([type="submit"]),  
.button:not(button):not([type="button"]):not([type="submit"]) {  
  outline: 2px dashed red;  
  outline-offset: 2px;  
}
```

# Debugging accessibility

TabIndex higher than 0.

```
[tabindex]:not([tabindex="0"]):not([tabindex="-1"]) {  
  outline: 2px dashed orange;  
  outline-offset: 2px;  
}
```

# Debugging accessibility

Buttons nested in links or links nested in buttons.

```
a button,  
button a {  
  border: 10px solid red;  
}
```

HTMHell - htmhell.dev

HTMHell supports [Black Lives Matter](#). 🗣️ Code is always political.

[Contribution](#) [Github](#) [Feed](#)

**HTMHell**

A collection of bad practices in HTML, copied from real websites.

### #21 Legendary legend!

submitted on Jul 24, 2020 by [vavroom](#)

```
<button class="panel-heading" tabindex="0" href="#collapse0" aria-expanded="tru
  <legend> Industries Served </legend>
</button>
```

→ [Details and tips on how to fix the diabolic code of #21.](#)

ally.css - github.com/ffoodd/ally.css

ffoodd/a11y.css: This CSS file in X

https://github.com/ffoodd/a11y.css

+ 8 contributors

README.md

## a11y.css

Pronounced *AliX*. Because it's simpler.

version 5.0.3 build passing

### Introduction

Pronounced "AliX".

This CSS file intends to warn developers about *possible risks and mistakes* that exist in HTML code. It can also be used to roughly evaluate a site's quality by simply including it as an external stylesheet.

When activating the stylesheet, a tip should appear beside each incriminated elements, displaying what's going on.

*This file is not a replacement to a complete tool such as [aXe](#), [Tanaguru](#) or [Tenon](#). It only intends to show possible weaknesses. You should obviously do some manual check by hand to know whether the code should or should not be fixed.*

### How to use?

### WebExtension

Either you're using [Firefox](#) or [Chrome](#), you're invited to install and use a11y.css's webextension.

It provides some nice features not included in the main CSS file (for now), such as:

- force focus visibility;
- show lang attributes;
- check images' alternatives by displaying them;
- increase text spacings.

As a WebExtension, it also enables to:

- toggle CSS and change level on the fly,
- remember settings for each tab,
- automatically update in the background.

### Languages

80.9% CSS, 17.3% JavaScript, 1.6% HTML, 0.2% Ruby

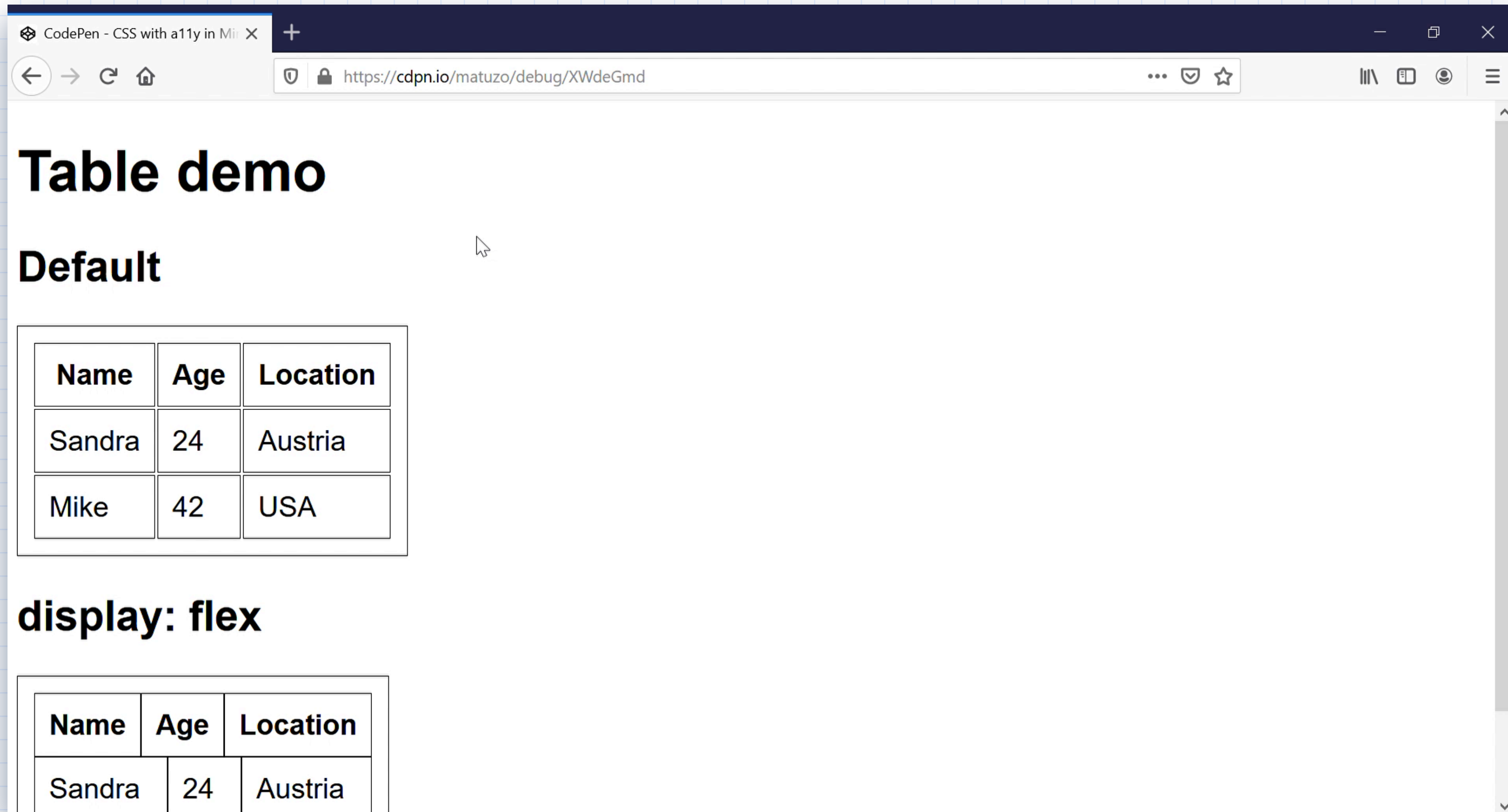
# <CSS> and Semantics

## CSS and semantics - display: flex

```
<table>
  <tr>
    <th>Name</th>    <th>Age</th>    <th>Location</th>
  </tr>
  <tr>
    <td>Sandra</td> <td>24</td>    <td>Austria</td>
  </tr>
  <tr>
    <td>Mike</td>   <td>42</td>    <td>USA</td>
  </tr>
</table>
```



# CSS and semantics - display: flex



The screenshot shows a browser window with the URL <https://cdpn.io/matuzo/debug/XWdeGmd>. The page content includes a title "Table demo" and two sections: "Default" and "display: flex".

**Default**

Name	Age	Location
Sandra	24	Austria
Mike	42	USA

**display: flex**

Name	Age	Location
Sandra	24	Austria

## CSS and semantics - display: flex

```
tr {  
  display: flex;  
}
```

# CSS and semantics - display: flex

The screenshot shows a web browser window with the URL `https://adrianroselli.com/2018/02/tables-css-display-properties-and-aria.html`. The browser's address bar and navigation icons are visible at the top. The website's header is dark with navigation links for 'Blog', 'Bio', 'Books', and 'Contact', along with a search bar. The main content area features the author's name 'Adrian Roselli' and the subtitle 'Natural Language Processed Neural Network Platform MVP'. The article title 'Tables, CSS Display Properties, and ARIA' is displayed in a large, blue, outlined font. Below the title, the date 'February 20, 2018' and '17 Comments' are shown. The article text begins with 'This post has two separate but related things going on. One is an example of one of my responsive tables with ARIA added, and the other is the Twitter conversation that started this along with some generalized responses.' A bulleted list follows, containing three items: 'Responsive Table with Semantics Retained by ARIA', 'The Tweet', and 'What You Can Do'. At the bottom of the article, there is a hashtag '# Responsive Table with Semantics Retained by ARIA'. The footer of the browser window includes tabs for 'HTML', 'CSS', and 'JS', a 'Result' button, and the 'EDIT ON CODEPEN' logo.

Tables, CSS Display Properties, and ARIA

February 20, 2018 ; [17 Comments](#)

This post has two separate but related things going on. One is an example of one of my responsive tables with ARIA added, and the other is the Twitter conversation that started this along with some generalized responses.

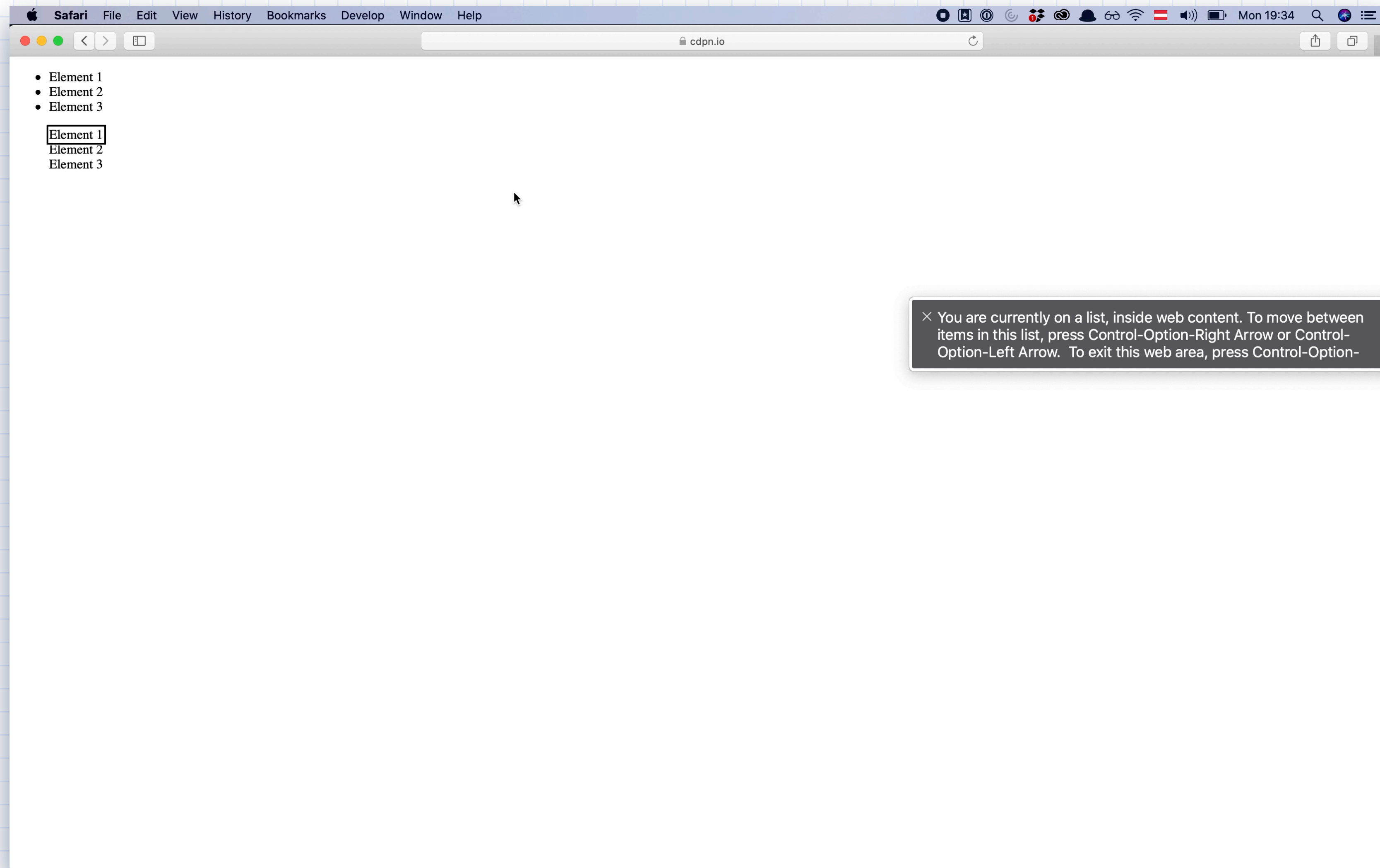
- [Responsive Table with Semantics Retained by ARIA](#)
- [The Tweet](#)
- [What You Can Do](#)

# Responsive Table with Semantics Retained by ARIA

## CSS and semantics - `list-style: none`

```
ul {  
  list-style-type: none;  
}
```

# CSS and semantics - list-style: none



WRITINGS  
CODE  
TALKS

# "Fixing" Lists

Published: Jan 12, 2019 | Updated: 2019.11.15  
Tag(s): accessibility, Webkit, CSS

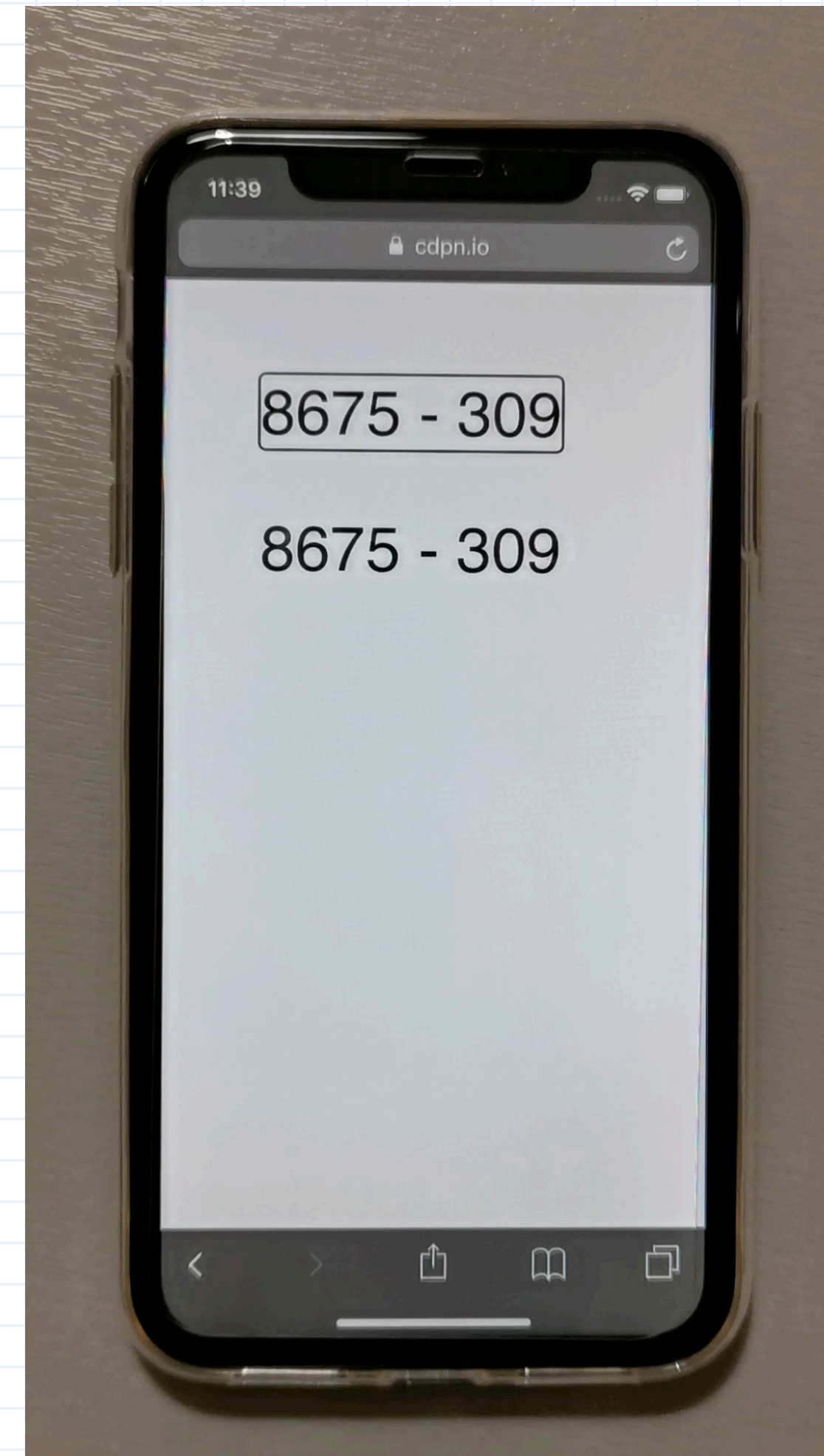
In September of 2017 [Gerard K. Cohen](#) of Unfettered Thoughts posted an article on the how [VoiceOver and Safari \(Webkit\) \(macOS and iOS\) remove list element semantics when `list-style: none` is used](#). It's not just using `list-style: none`, but any CSS that would remove the bullet or number indicators of a list's items will also remove the semantics.


This isn't the only instance of CSS modifying how elements are exposed to assistive technologies, such as screen readers. Modifying `display` and `visibility` to "none" or "hidden", respectively, will not only visually hide content, but remove the elements from being exposed to accessibility APIs. However, where those properties will consistently hide and show content to all browsers and screen reader pairings, this example of changing the list style is unique to Safari/WebKit.

Why is Webkit the only browser engine that behaves this way?

# CSS and semantics - speak-as

```
span {  
  speak-as: digits;  
}
```



Thank you! 

 matuzo.at

 @mmatuzo