



Manuel Matuzović

 @mmatuzo

CSSConf Budapest 10/2017

Designed for Inclusion

Writing CSS with Accessibility in Mind

Manuel Matuzović

 @mmatuzo

MANGETAMERDE

Der StrikeNet.com - Client

Advanced Combat Terminal

besser als GameSpy!!!

KL

[-->MTM<--] (Mange Ta Merde) wurde von DHM (Dark Headshotman), ODW (O'1 Dirty Wutti), NBK (Natural Born Killer), MW (Methodwutti) gegründet und TA (The Anarchist), TCM (Texas Chainsaw Masacer) sind dazu gekommen. Wir haben auch noch zwei Testmembers: EPD (El Pollo Diablo), Devil.

News

Members

Wars

Join Us

FUN

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Screenshot

Gastebuch

Forum

Chat

Umfragen

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Links

Login

Home

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[News](#)

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KL

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gegründet und TA (The Anarchist), TCM (Texas Chainsaw Masacer) sind dazu gekommen. Wir haben auch noch
Diablo), Devil.

Webdesign by [-->MTM<--]*ODW* 2000/2001, Optimiert für 1024x768

MANGETAMERDE

Der StrikeNet.com - Client
Advanced Combat Terminal
GameServer-Suche

KLICKE HIER UM

[-->MTM<--] (Mange Ta Merde) wurde von DHM (Dark Headshotman), ODW (O'1 Dirty Wutti), NBK (Natural Born Killer), MW (Methodwutti) gegründet und TA (The Anarchist), TCM (Texas Chainsaw Masacer) sind dazu gekommen. Wir haben auch noch zwei Testmembers: EPD (El Pollo Diablo), Devil.

- News
- Members
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Navigation
Über Mich
Freunde
Wichtige Termine
Gästebuch
Forum
TOP 200
Links
Kontakt
News-Archive
Home

Special-Links
Emanuel
Jacki
Sam
Am Spitz

Über Mich	
Name:	Manuel Matuzovic
Alter:	16
Geboren am:	12.03.1987
Wohnort:	Wien 21
Schule:	AHS-Zirkusgasse
Geschwister:	2 Schwestern
Freundin:	Nein
Hobbies:	Fort gehen, feiern, spass haben, chilln, musik, pogen, kicken, schi fahren, rad fahrn
Musik:	Slipknot, Murderdolls, Megaherz, Rage A.T.M., Beastie Boys, Soulfly, Six Feet Under, System of a Down, Such A Surge, Ill Nino, Flogging Molly, Killswitch Engage, Wolfgang Ambros,
Filme:	From Dusk Till Dawn, American History X, The Shinning, Ring, Es I, Jay & Silent Bob schlagen zurück, Grease

Fotos
Arena
Bagage
Wiesen 03
Sj-Party I
Sj-Party II
Kub-Party
Schule
Sonstige
Sonstige II
Fight
Home

Pic der Woche


Navigation
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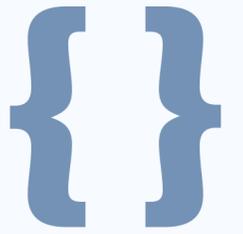
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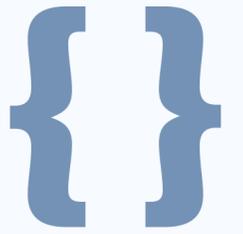
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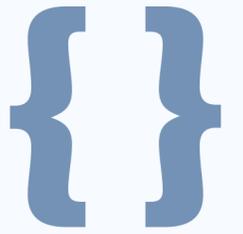


```
<frameset cols="17%,*,17%" border="0" noresize="" frameborder="0">
```

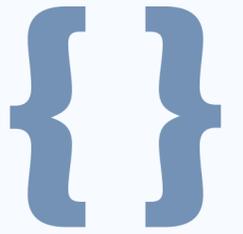
```
</frameset>
```



```
<frameset cols="17%,*,17%" border="0" noresize="" frameborder="0">  
  <frame noresize="" scrolling="auto" src="left.html">  
  <frame name="main" noresize="" scrolling="auto" src="start.html">  
  <frame noresize="" scrolling="auto" src="right.html">  
</frameset>
```

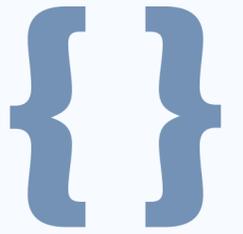


```
<table cellpadding="0" cellspacing="0" border="1" bordercolor="#004400" bgcolor="#006700" align="left" width="442%">
```



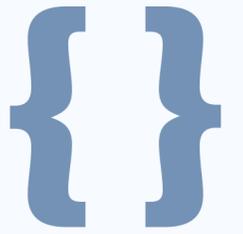
```
<table cellpadding="0" cellspacing="0" border="1" bordercolor="#004400" bgcolor="#006700" align="left" width="442%">
```



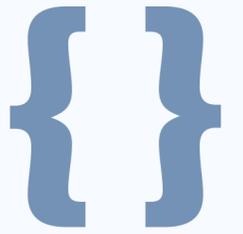


```
<table cellpadding="0" cellspacing="0" bordercolor="#004400"
border="1" bgcolor="#006700" align="left" width="442%">
  <tbody>
    <tr>
      <td width="23%">Name:</td>
      <td> Manuel Matuzovic</td>
    </tr>
  </tbody>
</table>
```





```
<body link="004600" text="ffffff" bgcolor="005600" alink="004600"  
vlink="004600">
```



```
<body link="004600" text="ffffff" bgcolor="005600" alink="004600"
vlink="004600">
  <font size="4" face="arial">
    <table>
      ...
    </table>
  </font>
</body>
```

CSS 2.1 ❤️

margin

overflow

text-align

float

position

font-size

visibility

color

CSS 2.1 

clip

max-height

background-repeat

line-height

border

display

CSS 3 

animation

border-radius

calc()

transform

box-shadow

column

CSS 3 

gradients

text-overflow

web fonts

background-size

transition

text-shadow

CSS 

blend-modes

**Feature queries
(@supports)**

:not()

Flexbox

Shapes

CSS 

Grid

Filters

sticky

**Custom properties
(CSS variables)**

Scroll Snap Points

***With great power comes
great responsibility***

Uncle Ben

```
.a11y_1 {
```

```
font-size
```

```
}
```

```
.a11y_1 {
```

```
  font-size
```

```
}
```

Zeit Online 20px

Martin Ho, geboren in Vietnam, aufgewachsen in Wien, ist gerade erst 31 Jahre alt geworden. An seiner eigenen Leistung lässt der Gastro- und Lifestyle-Unternehmer aber keinen Zweifel: Allein in den letzten drei Jahren habe er fast drei Millionen Euro investiert und weit über hundert Arbeitsplätze geschaffen, sagt er und lehnt sich, nunmehr wieder ganz ruhig und zufrieden, zurück. Mit 19 Jahren, fünf Monate nach seiner

CSS-Tricks 21px

As our expectations for mobile experiences change, so does our understanding of performance. People expect web apps to feel just as snappy and responsive as native apps, regardless of their current network coverage.

Medium 21px

There is a belief that React is fast out of the box and to some degree it is true—most of the time building user interfaces with React you may not think of optimizing for performance. Sometimes though, to achieve better performance (and better user experience) one has to think out of the box.

CSSConf Budapest 20px

CSSConf Budapest is a community conference dedicated to the designers and developers who love CSS. For the community, from the community. Part of the international CSSConf family.

Jeffrey Zeldman 24px

As in the past, writers who write public content will not be paid, but they will have access to a potentially large audience. Only writers who write members-only content will have the potential to earn.

Max Böck 22px

In the submit handler, we can include a simple connectivity check using the `navigator.onLine` property. [Browser support for it](#) is great across the board, and it's trivial to implement.



20



22



24



26



28



30

```
.a11y_2 {  
  line-height  
}
```

```
.a11y_2 {
```

```
  line-height
```

```
}
```

line-height: 1.2

Lorem ipsum dolor sit, amet consectetur adipiscing elit. Praesentium possimus repudiandae obcaecati, totam consequuntur nulla? Corporis, cum. Facilis ducimus illo, in harum maxime libero minus recusandae sunt inventore explicabo iure!

line-height: 1.5

Lorem ipsum dolor sit, amet consectetur adipiscing elit. Praesentium possimus repudiandae obcaecati, totam consequuntur nulla? Corporis, cum. Facilis ducimus illo, in harum maxime libero minus recusandae sunt inventore explicabo iure!

line-height: 1.2

Lorem ipsum dolor sit, amet consectetur adipisicing elit. Praesentium possimus repudiandae obcaecati, totam consequuntur nulla? Corporis, cum. Facilis ducimus illo, in harum maxime libero minus recusandae sunt inventore explicabo iure!

line-height: 1.5

Lorem ipsum dolor sit, amet consectetur adipisicing elit. Praesentium possimus repudiandae obcaecati, totam consequuntur nulla? Corporis, cum. Facilis ducimus illo, in harum maxime libero minus recusandae sunt inventore explicabo iure!

```
.a11y_3 {
```

```
text-align
```

```
}
```

text-align: left

Lorem ipsum dolor sit, amet consectetur adipiscing elit. Praesentium possimus repudiandae obcaecati, totam consequuntur nulla? Corporis, cum. Facilis ducimus illo, in harum maxime libero minus recusandae sunt inventore explicabo iure!

text-align: justify

Lorem ipsum dolor sit, amet consectetur adipiscing elit. Praesentium possimus repudiandae obcaecati, totam consequuntur nulla? Corporis, cum. Facilis ducimus illo, in harum maxime libero minus recusandae sunt inventore explicabo iure!

text-align: justify

Lorem ipsum dolor sit, amet consectetur adipiscing elit. Praesentium possimus repudiandae obcaecati, totam consequuntur nulla? Corporis, cum. Facilis ducimus illo, in harum maxime libero minus recusandae sunt inventore explicabo iure!

```
.a11y_4 {
```

```
  paragraph  
  width
```

```
}
```

paragraph width

Far far away, behind the word mountains, far from the countries Vokalia and Consonantia, there live the blind texts. Separated they live in Bookmarksgrove right at the coast of the Semantics, a large language ocean. A small river named Duden flows by their place and supplies it with the necessary regalia.

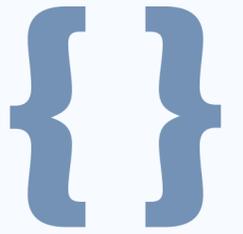
paragraph width

Far far away, behind the word mountains, far from the countries Vokalia and Consonantia, there live the blind texts. Separated they live in Bookmarksgrove right at the coast of the Semantics, a large language ocean. A small river named Duden flows by their place and supplies it with the necessary regelialia.

**45 - 75 characters
per line**

paragraph width

Far far away, behind the word mountains, far from the countries Vokalia and Consonantia, there live the blind texts. Separated they live in Bookmarksgrove right at the coast of the Semantics, a large language ocean. A small river named Duden flows by their place and supplies it with the necessary regelialia.



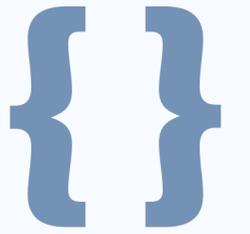
```
p {  
    max-width: 65ch;  
}
```

```
::a11y_5 {
```

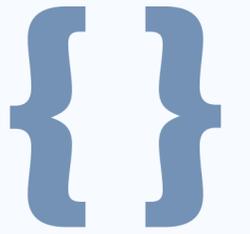
```
  content
```

```
}
```

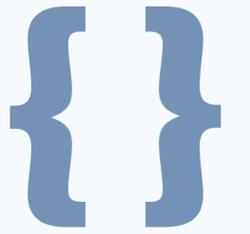
```
<div>  
  ::before  
  CONTENT  
  ::after  
</div>
```



```
h2::after {  
  content: "DON'T DO THIS";  
}
```



```
span::before {  
  content: "\00d7";  
}
```



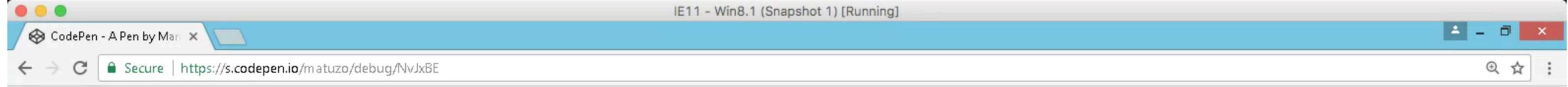
```
span::before {  
  content: "\00d7";  
}
```

→ ✘



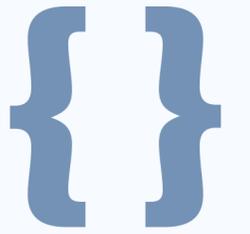
- × item 1
- × item 2
- × item 3
- × item 4





- × item 1
- × item 2
- × item 3
- × item 4





```
<span aria-hidden="true"  
class="icon icon--times"></span>
```



```
.a11y_6 {
```

```
  color contrast
```

```
}
```

Colors & Color Contrast

Colors & Color Contrast

- ~285 million people are visually impaired

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- 39 million are blind and 246 million have low vision

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Colors & Color Contrast

- ◉ ~285 million people are visually impaired
- ◉ 39 million are blind and 246 million have low vision
- ◉ 7 to 12% of men and less than 1% of women have some form of color-vision deficiency
- ◉ People dim their screens

Colors & Color Contrast

- ◉ ~285 million people are visually impaired
- ◉ 39 million are blind and 246 million have low vision
- ◉ 7 to 12% of men and less than 1% of women have some form of color-vision deficiency
- ◉ People dim their screens
- ◉ People use their smartphones outside even when the sun is shining

***[...] enough contrast between text and
its background so that it can be read
by people with moderately low vision
[...]***

<https://www.w3.org/TR/UNDERSTANDING-WCAG20/visual-audio-contrast-contrast.html>

Contrast ratio

Contrast ratio

- **1:1** same color for text and background

Contrast ratio

- ◉ **1:1** same color for text and background
- ◉ **1:21** black text on white background and vice versa

Contrast ratio

- ◉ **1:1** same color for text and background
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- ◉ Minimum ratio for normal text less than 24px **4.5:1**

Contrast ratio

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- ◉ Minimum ratio for normal text less than 24px **4.5:1**
- ◉ Minimum ratio for bold text less than 19px **3:1**

Contrast ratio

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- ◉ Minimum ratio for normal text less than 24px **4.5:1**
- ◉ Minimum ratio for bold text less than 19px **3:1**
- ◉ Larger text: **3:1**

Contrast ratio

- ◉ **1:1** same color for text and background
- ◉ **1:21** black text on white background and vice versa
- ◉ Minimum ratio for normal text less than 24px **4.5:1**
- ◉ Minimum ratio for bold text less than 19px **3:1**
- ◉ Larger text: **3:1**
- ◉ Level AAA: At least **7:1** and **4.5:1**

contrast ratio

Background:

#F2F2F2

3.2

Text color:

#888888

How to use

Set as background color

As you type, the contrast ratio indicated will update. Hover over the circle to get more detailed information. When semi-transparent colors are involved as backgrounds, the contrast ratio will have an error margin, to account for the different colors they may be over.

This sample text attempts to visually demonstrate how readable this color combination is, for normal or **bold** text of various sizes and font styles.

Hint: Press the up and down keyboard arrows while over a number inside a functional color notation. Watch it increment/decrement. Try with the Shift or Alt key too!

By Lea Verou • WCAG 2.0 on contrast ratio

contrast ratio

Background:

#F2F2F2

3.2

Text color:

#888888

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Audits help you identify and fix common problems that affect your site's performance, accessibility, and user experience. [Learn more](#)

Perform an audit...



Audits to perform

- Progressive Web App**
Does this page meet the standard of a Progressive Web App
- Performance**
How long does this app take to show content and become usable
- Best practices**
Does this page follow best practices for modern web development
- Accessibility**
Is this page usable by people with disabilities or impairments

Run audit Cancel



Auditing your web page ...



Loading page & waiting for onload

Cancel

Accessibility

These checks highlight opportunities to [improve the accessibility of your app](#).



Elements Use Attributes Correctly

Screen readers and other assistive technologies require annotations to understand otherwise ambiguous content.

- ▶ Image elements do not have [alt] attributes. ✘

Elements Describe Contents Well

Screen readers and other assistive technologies require annotations to understand otherwise ambiguous content.

- ▶ <frame> or <iframe> elements do not have a title. ✘
- ▶ Form elements do not have associated labels. ✘

Color Contrast Is Satisfactory

Screen readers and other assistive technologies require annotations to understand otherwise ambiguous content.

- ▼ Background and foreground colors do not have a sufficient contrast ratio. ✘
Low-contrast text is difficult or impossible for many users to read. [Learn more](#).

▼ View failing elements

```

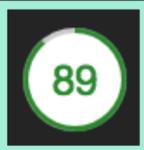
<div class="tito-ticket-description">
  <div class="tito-ticket-vat">
    <div class="tito-ticket-description">
      <div class="tito-ticket-vat">
        <button type="submit" class="tito-submit">
          <p>
            <p>

```

- ▶ 7 Passed Audits

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```

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  <div class="tito-ticket-vat">
    <div class="tito-ticket-description">
      <div class="tito-ticket-vat">
        <button type="submit" class="tito-submit">
          <p>
            <p>

```

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```

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<div class="tito-ticket-vat">
<div class="tito-ticket-description">
<div class="tito-ticket-vat">
<button type="submit" class="tito-submit">
<p>
<p>

```

- ▶ 7 Passed Audits

```
▼ <section>
... <h1 style="
      color: fuchsia;
">About</h1> == $0
```

```
<p>...</p>
<...
<...
<...
<...
</div>
<form>
</body>
</html>
```



Contrast Ratio ⓘ 6.02 ✓ ✕

- ✓ Passes AA (3.0)
- ✓ Passes AAA (4.5)

Background color: ● ✎



```
html bo
Styles E
Filter
element.
color: fuchsia;
}
```

```
ies Accessibility Shape
:hov .cls +
```

1. Use Chrome Canary
2. Enable experiments: `chrome://flags/#enable-devtools-experiments` (copy and paste this internal link into Canary)
3. From devtools, open settings (F1)
4. Open the experiments panel
5. Hit shift seven times (no, I'm not kidding)
6. Check the "Color contrast ratio line in color picker"

← Ease of Access



Narrator

Magnifier

High contrast

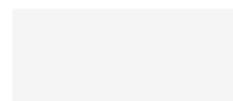
Keyboard

Mouse

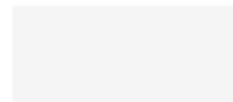
Other options

Choose a theme

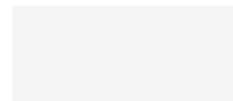
None



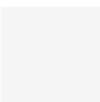
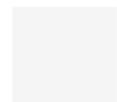
Text



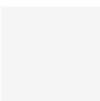
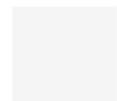
Hyperlinks



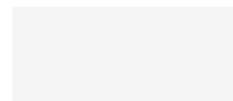
Disabled Text



Selected Text



Button Text



Background

Apply

Cancel

← Ease of Access



Narrator

Magnifier

High contrast

Keyboard

Mouse

Other options

Choose a theme

High Contrast #1



Text



Hyperlinks



Disabled Text



Selected Text



Button Text



Background

Apply

Cancel

Ease of Access

Narrator

Magnifier

High contrast

Keyboard

Mouse

Other options

Choose a theme

High Contrast White



Text



Hyperlinks



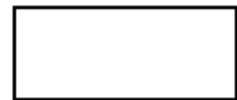
Disabled Text



Selected Text



Button Text



Background

Apply

Cancel

user name
password
Login

[Forgot password?](#)

user name
password
Login

[Forgot password?](#)

user name

password

Login

[Forgot password?](#)

user name
password

Login

[Forgot password?](#)

VENUE



Anker't is a cavernous garden in downtown Budapest, housed by the massive building of a former factory. The internal spaces are characterized by a minimalist design, while the whole place is made up of spacious, connecting courtyards, bringing the famous Budapest Ruinpub aesthetics to the mix.

[Show larger map](#)

VENUE



Anker't is a cavernous garden in downtown Budapest, housed by the massive building of a former factory. The internal spaces are characterized by a minimalist design, while the whole place is made up of spacious, connecting courtyards, bringing the famous Budapest Ruinpub aesthetics to the mix.

[Show larger map](#)

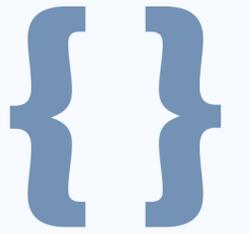
Though age has indeed taken its toll on my eyesight, it turns out that I was suffering from a design trend.

Kevin Marks

```
@media a11y_7 {
```

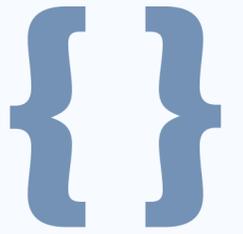
```
  print
```

```
}
```

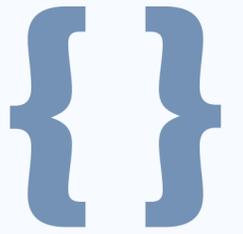


```
@media print {
```

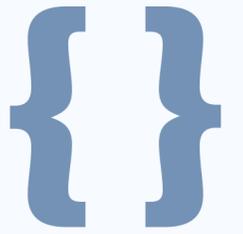
```
}
```



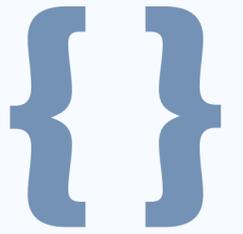
```
@media print {  
  .header {  
    position: static;  
  }  
  
}
```



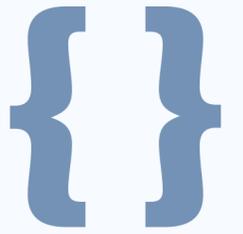
```
@media print {  
  .header {  
    position: static;  
  }  
  
  nav {  
    display: none;  
  }  
}
```



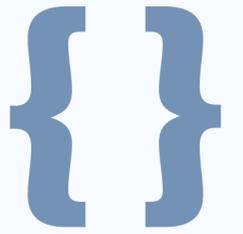
```
body > *:not(main) {  
  display: none;  
}
```



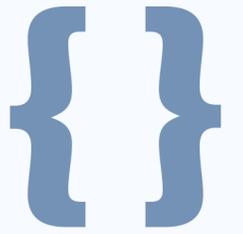
```
section {  
    margin-bottom: 2cm;  
    font-size: 14pt;  
    padding: 8mm;  
}
```



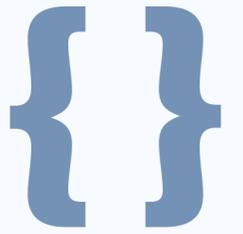
```
a[href^="http"]:not([href*="mywebsite.com"]):after {  
  content: "(" attr(href) " " ;  
}
```



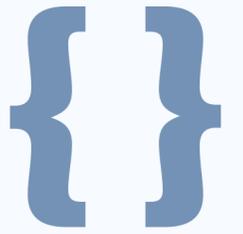
```
a[href^="http"]:not([href*="mywebsite.com"]):after {  
  content: "(" attr(href) " " ;  
}
```



```
a[href^="http"]:not([href*="mywebsite.com"]>::after {  
  content: " (" attr(href) ") ";  
}
```



```
a[href^="http"]:not([href*="mywebsite.com"]>::after {  
  content: "(" attr(href) " " ;  
}
```



```
a [href^="http"] :not ([href*="mywebsite.com"]) ::after {  
  content: " (" attr(href) ") ";  
}
```

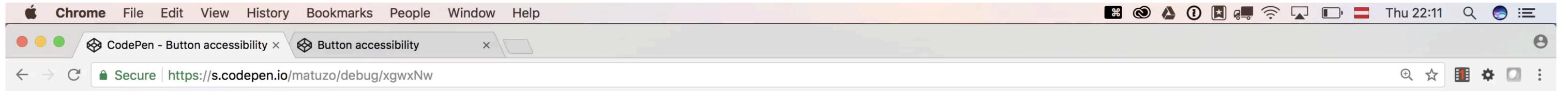
Far far away, behind the word mountains, far from the countries Vokalia and Consonantia, there live the blind texts. Separated they live in Bookmarksgrove right at the coast of the Semantics, a large language ocean. A small river named Duden flows by their place and supplies it with the necessary regelialia.

Far far away, behind the [word \(https://www.youtube.com/watch?v=aPrtFxd9u9Y\)](https://www.youtube.com/watch?v=aPrtFxd9u9Y) mountains, far from the countries Vokalia and Consonantia, there live the blind texts. Separated they live in Bookmarksgrove right at the coast of the Semantics, a large language ocean. A small river named Duden flows by their place and supplies it with the necessary regelialia.

```
:a11y_8 {
```

```
  focus
```

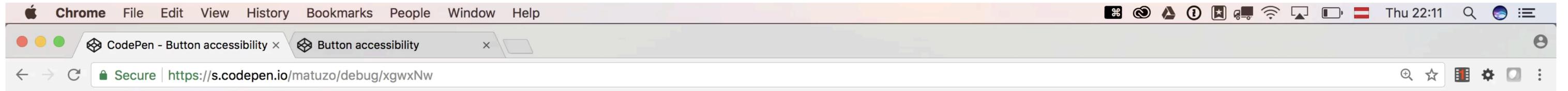
```
}
```



Button accessibility

Tab through this page and try to click the buttons. Then try to „click“ the buttons by using the *space* and/or *enter key*.

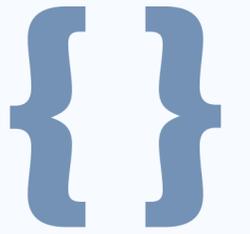




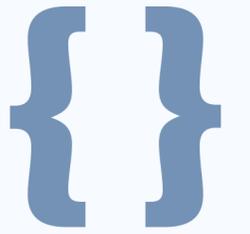
Button accessibility

Tab through this page and try to click the buttons. Then try to „click“ the buttons by using the *space* and/or *enter key*.



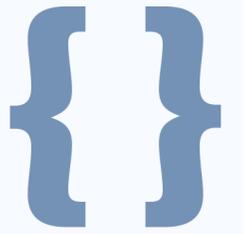


```
<button>Button</button>
```



```
<button>Button</button>
```

```
<div class="btn">Button</div>
```



```
<button>Button</button>
```

```
<div class="btn">Button</div>
```

```
<div class="btn" tabindex="0">Button</div>
```

Name

Email

T-Shirt Size

SUBMIT FORM

Read [more about this here.](#)

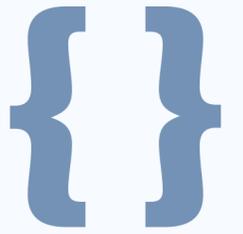
Name

Email

T-Shirt Size

SUBMIT FORM

Read [more about this here.](#)



```
*:focus {  
  outline: none;  
}
```

Name

Email

T-Shirt Size

SUBMIT FORM

Read [more about this here.](#)

Name

Email

T-Shirt Size

SUBMIT FORM

Read [more about this here.](#)

Name

Email

T-Shirt Size

SUBMIT FORM

Read [more about this here.](#)

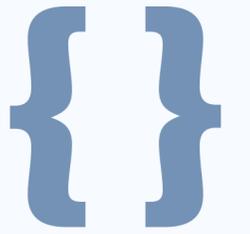
Name

Email

T-Shirt Size

SUBMIT FORM

Read [more about this here.](#)



```
input:focus {  
  outline: 2px solid #000000;  
}
```

Name

Email

T-Shirt Size

Small



SUBMIT FORM

Read [more about this here.](#)

Name

Email

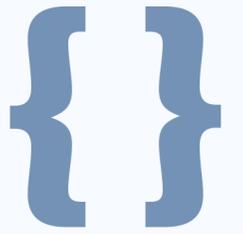
T-Shirt Size

Small



SUBMIT FORM

Read [more about this here.](#)



```
form:focus-within {  
  box-shadow: 0 0 4px 6px #000000;  
}
```


TAB 1

TAB 2

TAB 3

Tab panel 1

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.



TAB 1

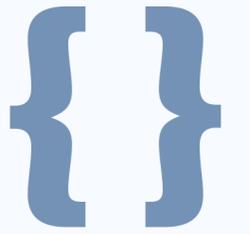
TAB 2

TAB 3

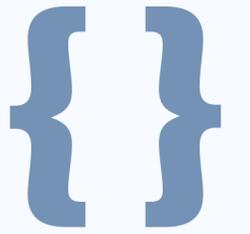
Tab panel 1

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.





```
:focus {  
  outline: none;  
}
```



```
:focus {  
  outline: none;  
}
```

```
:focus-ring {  
  outline: 2px solid blue;  
}
```

https://github.com/WICG/focus-ring

WICG/focus-ring: Polyfill for `focus-ring`

GitHub, Inc. [US] | <https://github.com/WICG/focus-ring>

```
npm install --save wicg-focus-ring
```

Usage

We suggest that users selectively disable the default focus style by selecting for the case when the polyfill is loaded and `.focus-ring` is *not* applied to the element:

```
.js-focus-ring :focus:not(.focus-ring) {
  outline-width: 0;
}
```

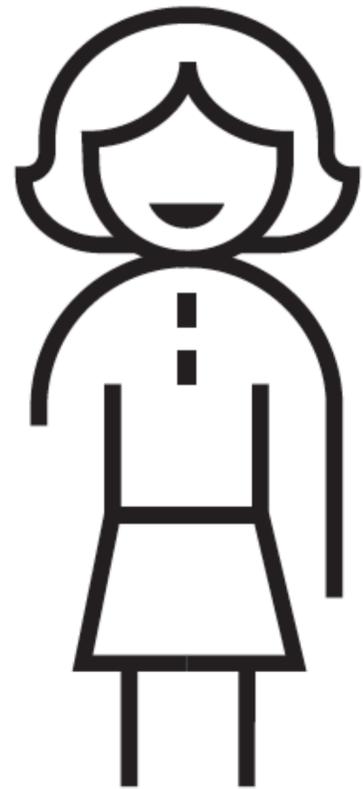
If there are elements which should always have a focus ring shown, authors may explicitly add the `focus-ring` class. If explicitly added, it will not be removed on `blur`.

Rationale

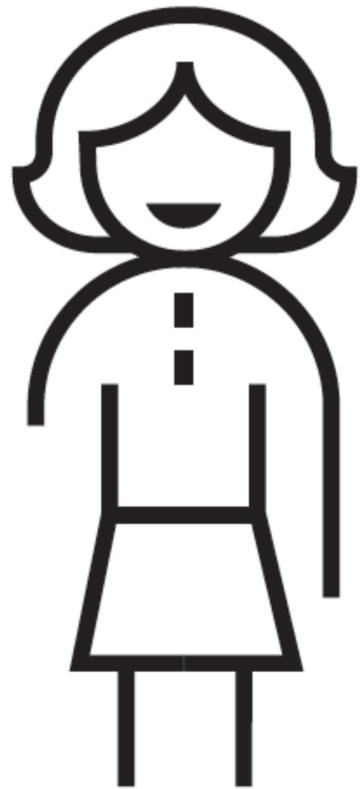
The status quo, `:focus`, is quite problematic:

- Many developers disable the default focus ring in their CSS styles, others attempt to style it in concert with their design. The former often seems to be a result of finding the default focus ring both aesthetically unpleasant and confusing to users when applied after a mouse or touch event and introduces accessibility problems. The latter inevitably creates considerably more of the kind of problem that the former was trying to solve.
- Some native elements in some browsers, notably `<button>` in Chrome, have a "magic" focus style which does *not* apply unless focus was received via a keyboard interaction.

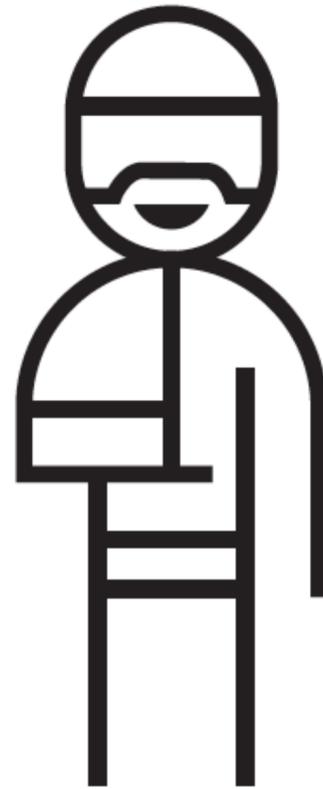
To deal with this:



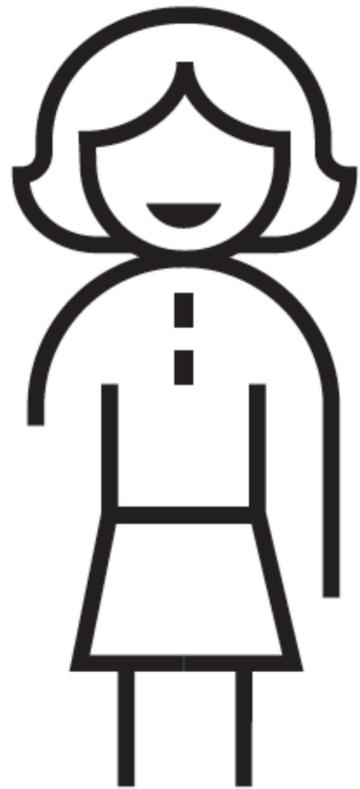
One arm



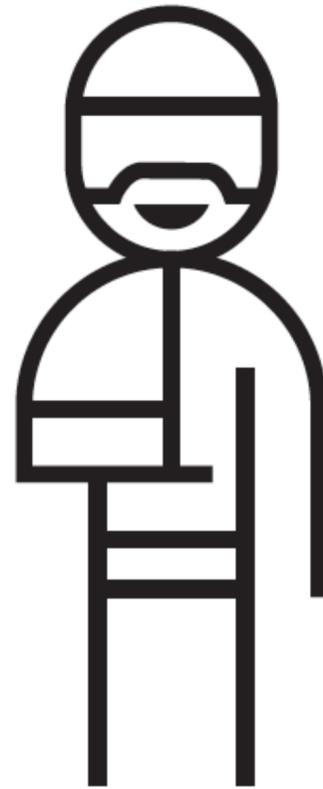
One arm



Arm injury



One arm

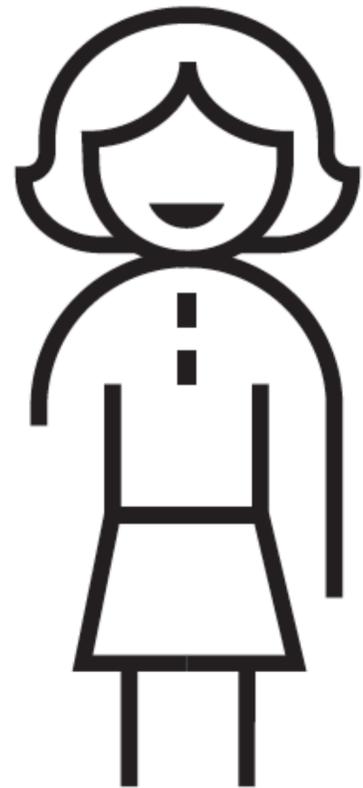


Arm injury



New parent

Permanent



One arm

Temporary



Arm injury

Situational



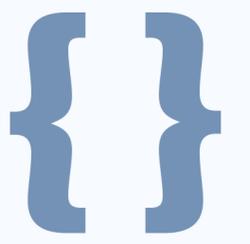
New parent

```
.a9y_11 {
```

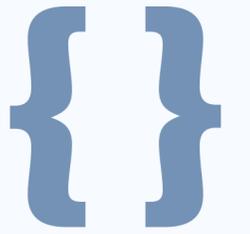
```
  derro
```

```
}
```

```
.a11y_9 {  
  order  
}
```

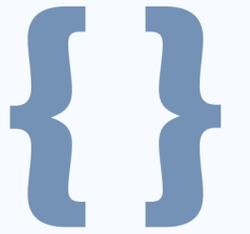


```
<ul>
  <li>
    <a href="#">
      
    </a>
  </li>
  ...
</ul>
```

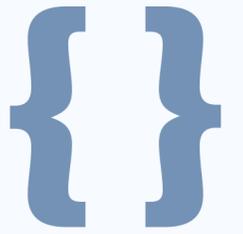


```
ul {
```

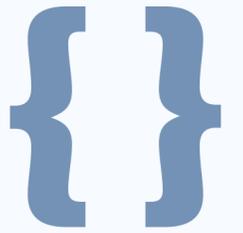
```
}
```



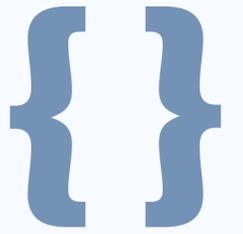
```
ul {  
  display: grid;  
  
}
```



```
ul {  
  display: grid;  
  grid-template-columns: repeat(auto-fill, minmax(180px, 1fr));  
  
}
```



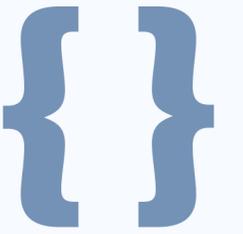
```
ul {  
  display: grid;  
  grid-template-columns: repeat(auto-fill, minmax(180px, 1fr));  
  grid-gap: 20px;  
}
```



```
ul {  
  display: grid;  
  grid-template-columns: repeat(auto-fill, minmax(180px, 1fr));  
  grid-gap: 20px;  
  grid-auto-rows: 180px;  
}
```

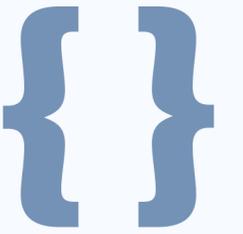


```
.long {  
  grid-row: span 2;  
}
```



```
.long {  
  grid-row: span 2;  
}
```

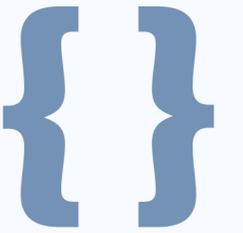
```
.large {  
  grid-row: span 2;  
}
```

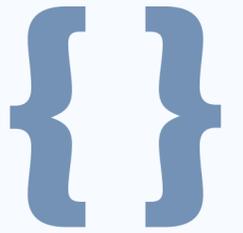


```
.long {  
  grid-row: span 2;  
}
```

```
.large {  
  grid-row: span 2;  
}
```

```
.large1 {  
  grid-column: span 2 / -1;  
}
```





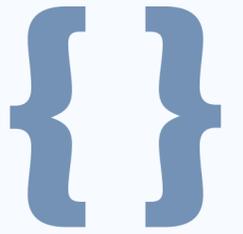
```
.long {  
  grid-row: span 2;  
}
```

```
.large {  
  grid-row: span 2;  
}
```

```
.large1 {  
  grid-column: span 2 / -1;  
}
```

```
.large2 {  
  grid-column: 1 / span 2;  
}
```





```
ul {  
  display: grid;  
  grid-template-columns: repeat(auto-fill, minmax(180px, 1fr));  
  grid-gap: 20px;  
  grid-auto-rows: 180px;  
  grid-auto-flow: dense;  
}
```






Properties that affect order

- ◉ Flexbox (flex-direction, order,...)
- ◉ position
- ◉ float
- ◉ Negative margins
- ◉ Grid (order, grid-auto-flow, grid-row, grid-column,...)

.a11y_10 {

progressive

enhancement

}

```
.a11y_10 {
```

```
  progressive  
  enhancement
```

```
}
```

```
.a11y_10 {
```

```
  progressive
```

```
  enhancement
```

```
}
```


Enhance!



Basic, but ok!

Use Grid today!

[Home](#)

About this demo

Gridbyexample

Progressive Enhancement

Grid Garden

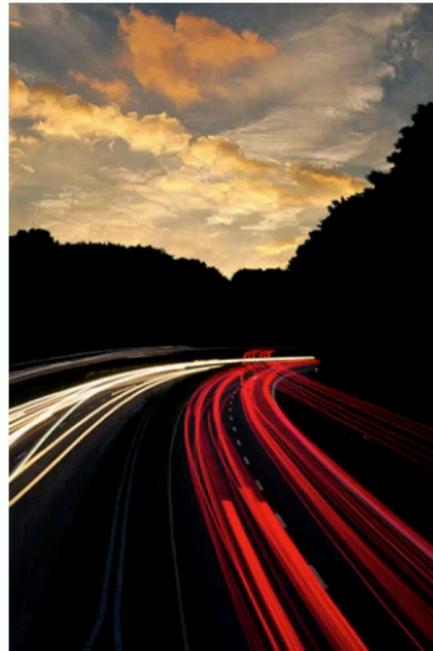
Progressive Enhancement Demo

Leverage the power of CSS Grid Layout!

Read [this article](#) for details on how to use CSS Grid Layout today.

Four levels of enhancement

No Positioning



Floated Layout



Enhance!



Basic, but ok!

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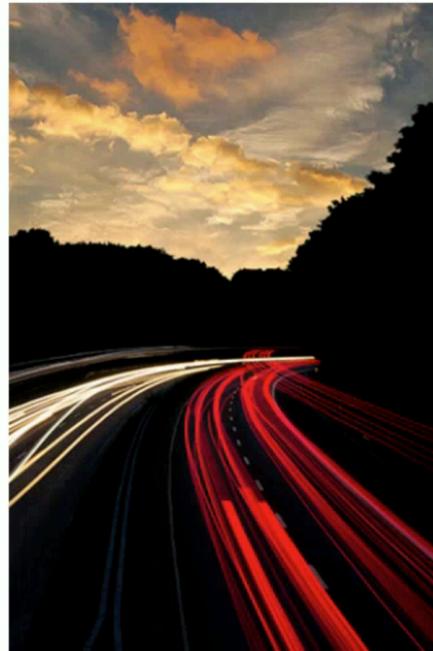
Progressive Enhancement Demo

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Four levels of enhancement

No Positioning



Floated Layout



You Don't Have To Overwrite Everything

- ◉ display: inline-block
- ◉ display: table-cell
- ◉ vertical-align
- ◉ column-* properties
- ◉ float

...have no effect on grid- or flex-items

```
.a11y_11 {
```

```
  flat structures
```

```
}
```

Heading

Element 1

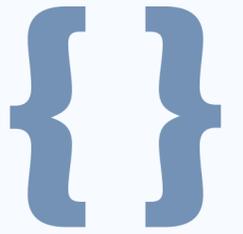
Element 2

Element 3

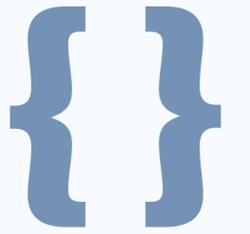
Element 4

Element 5

Element 6



```
<div class="wrapper">  
  <h2>Heading</h2>  
  <ul>  
    <li>Element 1</li>  
    <li>Element 2</li>  
    <li>Element 3</li>  
    <li>Element 4</li>  
    <li>Element 5</li>  
    <li>Element 6</li>  
  </ul>  
</div>
```



```
.wrapper {  
  display: grid;  
  grid-template-columns: 120px repeat(2, 1fr);  
  grid-gap: 20px;  
}  
  
h2 {  
  grid-column: 2 / -1;  
}
```

Heading

Element 1

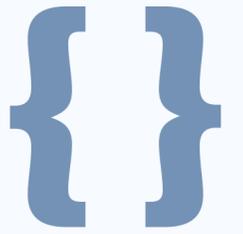
Element 2

Element 3

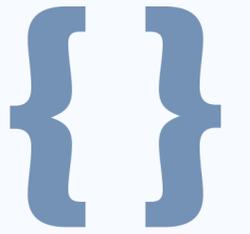
Element 4

Element 5

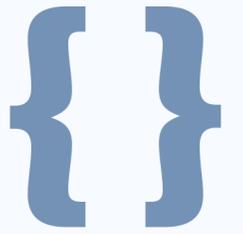
Element 6



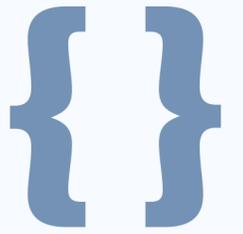
```
<div class="wrapper">  
  <h2>Heading</h2>  
  
  <div>Element 1</div>  
  <div>Element 2</div>  
  <div>Element 3</div>  
  <div>Element 4</div>  
  <div>Element 5</div>  
  <div>Element 6</div>  
</div>
```



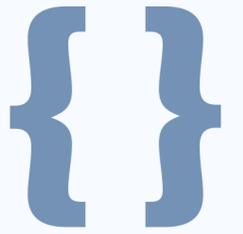
```
ul {  
  display: subgrid;  
}
```



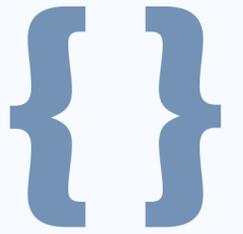
```
ul {  
  display: contents;  
}
```

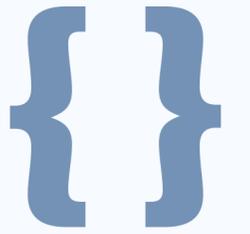
```
ul {  
  display: grid;  
  grid-template-columns: 120px repeat(2, 1fr);  
  grid-gap: 20px;  
}
```



```
ul {  
  grid-column: 1 / -1;  
  
  display: inherit;  
  grid-template-columns: inherit;  
  grid-gap: inherit;  
  
  display: contents;  
}
```



```
<div class="wrapper">  
  <h2>Heading</h2>  
  
  <div>Element 1</div>  
  <div>Element 2</div>  
  <div>Element 3</div>  
  <div>Element 4</div>  
  <div>Element 5</div>  
  <div>Element 6</div>  
</div>
```

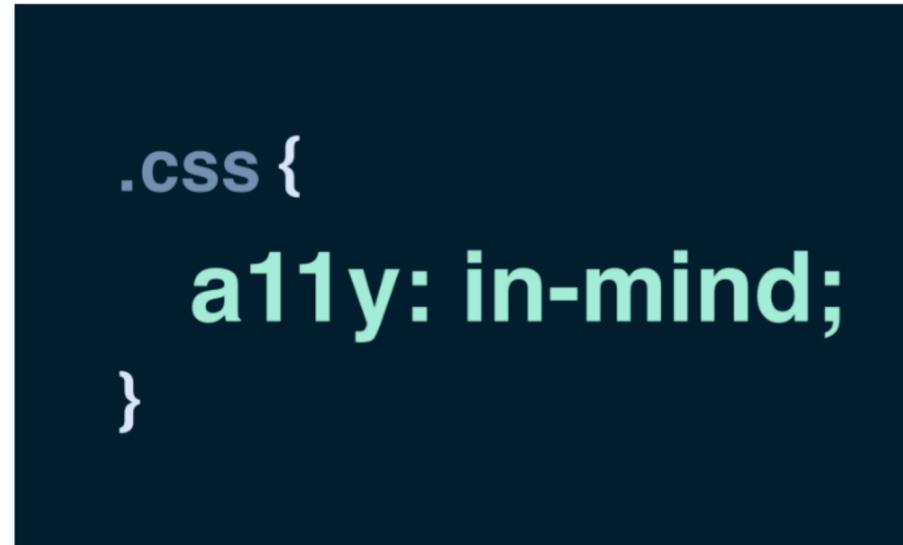


Don't flatten the structure of your document and compromise on semantics!

***Designing with constraints in mind
is simply designing well.***

Aaron Gustafson

5K



Writing CSS with Accessibility in Mind

While this wide range of properties and endless ways of solving tasks with CSS makes our lives easier, it also creates the potential to worsen the experience for our users. It's actually possible to make a website inaccessible in just three lines of CSS.

In this post I've collected techniques, considerations and approaches that will help you write more accessible CSS. The collection starts with basic concepts and well-known properties and covers some of the newer stuff at the end.

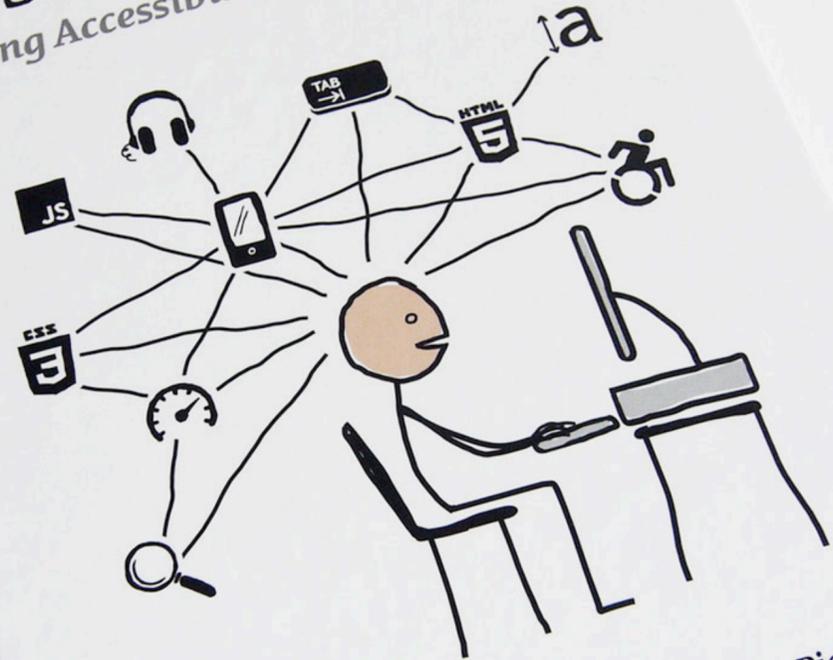
In the end it got way bigger than expected, so here's a handy menu so you can jump directly to a section that interests you the most:

- [From legible to readable text](#)
- [Using content in pseudo elements cautiously](#)
- [The screen is not the only medium](#)
- [Fallback for property values with incomplete support](#)
- [There are many ways to hide content](#)
- [You can't trust bad contrast](#)
- [Color alone should not be the only source of information](#)
- [Taking care of order](#)

<https://medium.com/@matuzo/>

INCLUSIVE DESIGN PATTERNS

Coding Accessibility Into Web Design



by Heydon Pickering

 SMASHING
MAGAZINE



Manuel Matuzović

 @mmatuzo

CSSConf Budapest 10/2017

Thank you! 