
SWETUGG
STOCKHOLM
@ROWDYRABOUW

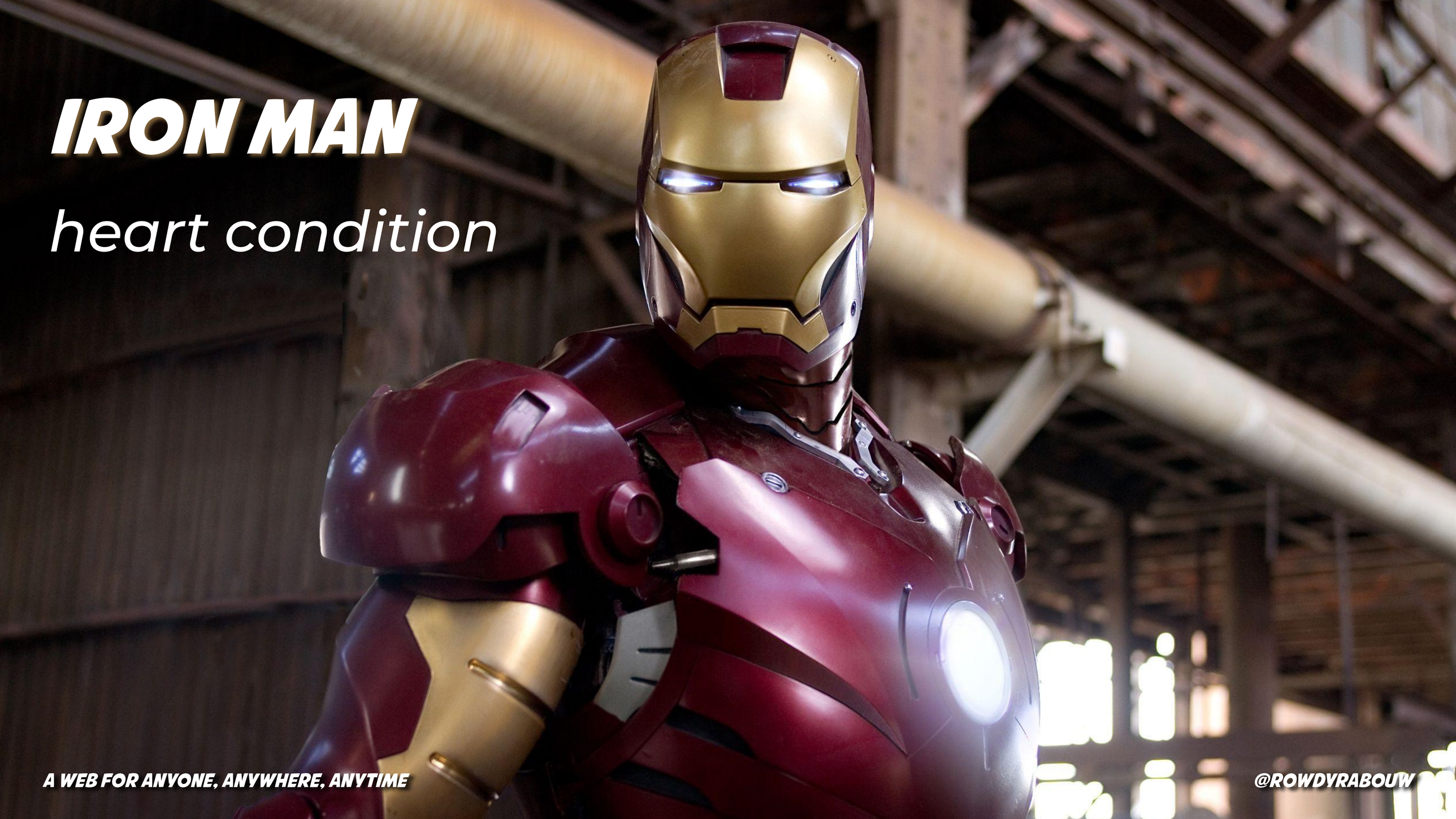
DAREDEVIL

blind



A WEB FOR ANYONE, ANYWHERE, ANYTIME

@ROWDYRABOUW


IRON MAN
heart condition
A WEB FOR ANYONE, ANYWHERE, ANYTIME
@ROWDYRABOUW

HAWKEYE

deaf



WE ARE ALL JUST TEMPORARILY ABLED



Cindy Li
1975 - 2018

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WE ARE ALL JUST TEMPORARILY ABLED

	Touch	See	Hear	Speak	Cognitive
Permanent	One arm	Blind	Deaf	Non-verbal	ADHD/ concentration difficulties
Temporary	Arm injury	Cataract	Ear-infection	Laryngitis	Fatigue / depression
Situational	Carry a baby or a computer	Sun on screen	Noisy surroundings	Heavy accent	Open office-landscape

Elisabeth Aguilera & Netta Korhonen / Modifierad från Microsoft inclusive design toolkit

ARBETSFÖRMEDLINGEN
SWEDISH PUBLIC EMPLOYMENT SERVICE

ROWDY RABOUW

Front-End Focused Senior DevOps Engineer
with special attention to usability and accessibility

Webdeveloper since 1996

Google Developer Expert in Web Technologies

❤️ superhero and superheroine movies



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ACCESSIBILITY

11 CHARACTERS

A11Y

NUMERONYM FOR ACCESSIBILITY

A11Y IRL


309


Patent No 78368 © Exeloo Limited
VACANT
OCCUPIED
CLOSED
VACANT
OCCUPIED


INŞAATA GIRMEK
TEHLİKELİ VE YASAKTIR.
AMBULANS


ALARM
STOP




ACCESSIBLE

WCAG 2.2

WEB CONTENT ACCESSIBILITY GUIDELINES

HOW TO MAKE WEB CONTENT MORE ACCESSIBLE FOR PEOPLE WITH DISABILITIES

4 PRINCIPLES

13 GUIDELINES — 86 SUCCESS CRITERIA

PERCEIVABLE

PEOPLE MUST BE ABLE TO FIND YOUR CONTENT

OPERABLE

PEOPLE MUST BE ABLE TO USE YOUR WEBSITE

UNDERSTANDABLE

PEOPLE MUST BE ABLE TO UNDERSTAND YOUR WEBSITE

ROBUST

YOUR WEBSITE MUST WORK WITH DIFFERENT AND FUTURE TECHNOLOGIES

ROBUST



A WEB FOR ANYONE, ANYWHERE, ANYTIME

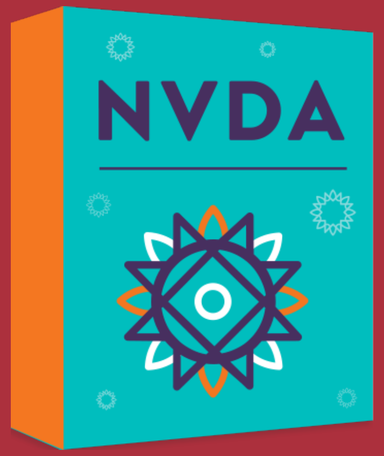
@ROWDYRABOUW



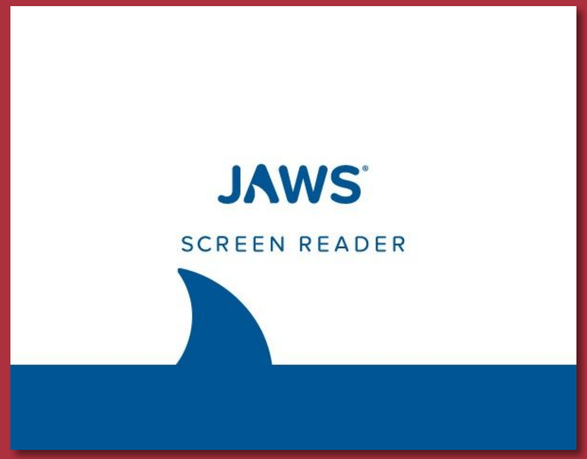
VoiceOver with Safari
(macOS)



Narrator with Edge
(Windows)



NVDA with Firefox
(Windows)



JAWS with Chrome
(Windows)



VoiceOver (iOS)



TalkBack (Android)



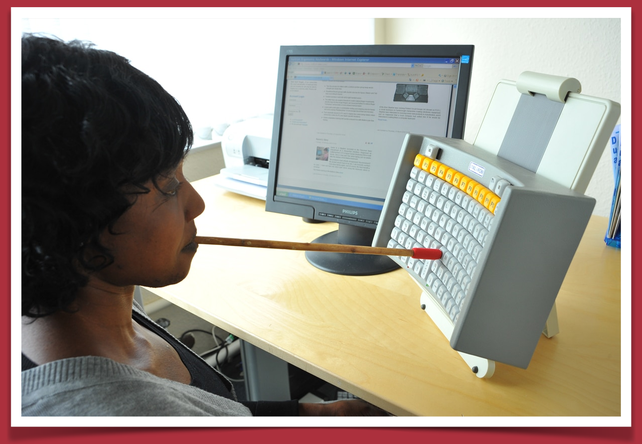
sip-and-puff



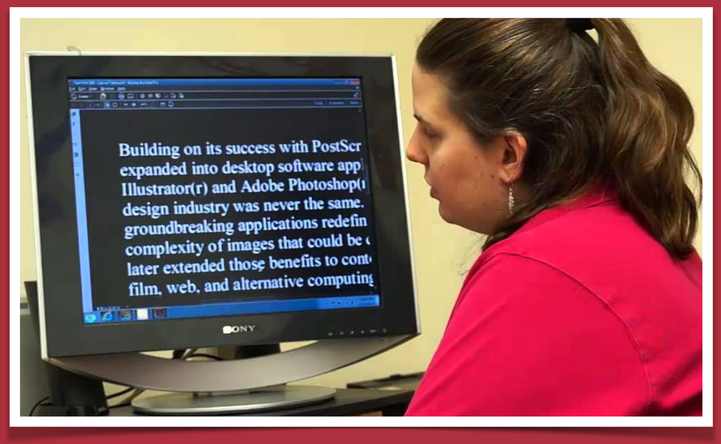
tubusOne



head pointer



mouth stick

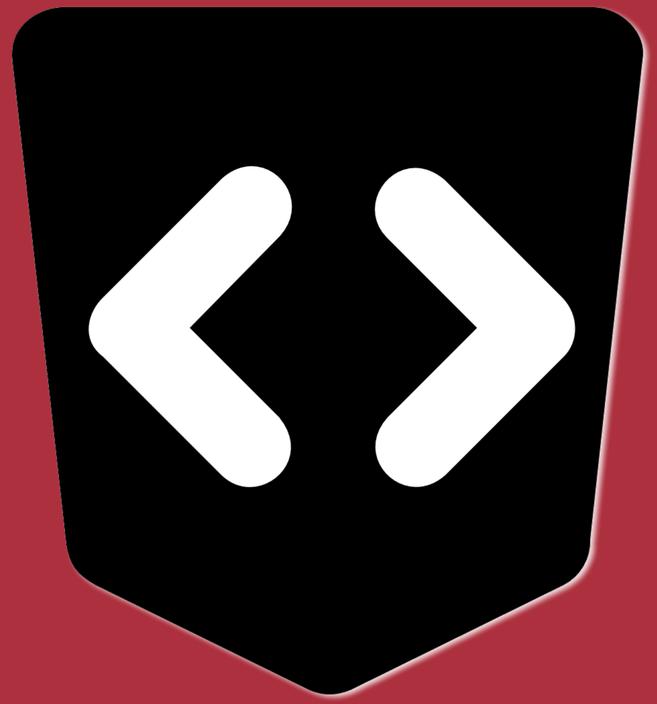


screen magnifier



eye tracking





SEMANTIC HTML

YOU'VE GOT 99+ HTML ELEMENTS AND THE DIV IS JUST ONE ...

HEADINGS

```
<h1>Hulk</h1>
<h2>Doctor Strange</h2>
<h3>Black Panther</h3>
<h4>Captain Marvel</h4>
<h5>Star-Lord</h5>
<h6>Ant-Man</h6>
```

Headings

1: Hulk
2: Doctor Strange
3: Black Panther
4: Captain Marvel
5: Star-Lord
6: Ant-Man

- ONLY USE ONE HEADING LEVEL 1 PER PAGE
- DON’T SKIP HEADING LEVELS
- DON’T USE HEADINGS FOR STYLING PURPOSES, USE CLASSES

SECTIONING ELEMENTS

```
<header>
  <nav>...</nav>
  <nav>...</nav>
</header>
<main>...</main>
<aside>...</aside>
<footer>
  <nav>...</nav>
</footer>
```

Landmarks

banner
navigation
navigation
main
complementary
content information
navigation

SECTIONING ELEMENTS

```
<header>
  <nav aria-label="main">...</nav>
  <nav aria-label="breadcrumbs">...</nav>
</header>
<main>...</main>
<aside>...</aside>
<footer>
  <nav aria-label="secondary">...</nav>
</footer>
```

Landmarks

banner
main navigation
breadcrumbs navigation
main
complementary
content information
secondary navigation

LINK VS. BUTTON

Links

Continue

CONTINUE

Form Controls

Continue button

```
<a href="/next-page.html" class="btn">Continue</a>

<button type="button" class="btn" onclick="someFunction()">Continue</button>
```



A WEB FOR ANYONE, ANYWHERE, ANYTIME



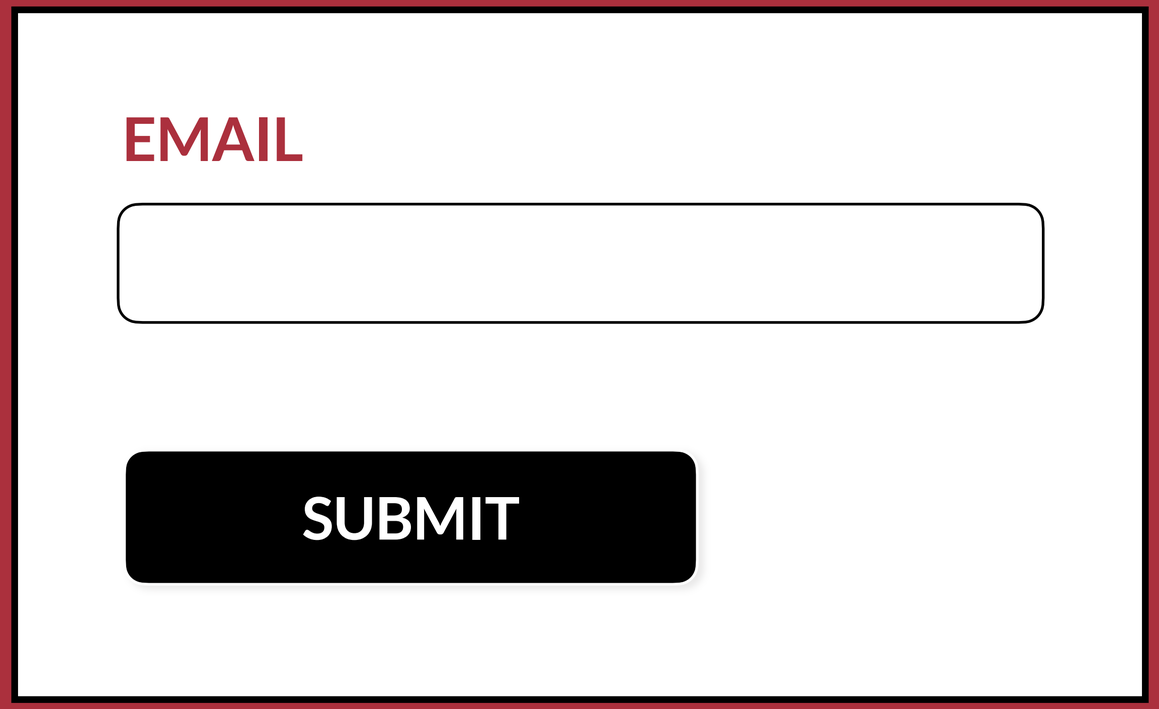
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@ROWDYRABOUW


A WEB FOR ANYONE, ANYWHERE, ANYTIME
@ROWDYRABOUW

A DIV IS NOT A BUTTON



```
<form                          >
  <label for="email">E-mail</label>
  <input id="email" name="email" />
  <div class="btn"                                        >Submit</div>
</form>

<script>









</script>
```

```
<form                          >
  <label for="email">E-mail</label>
  <input id="email" name="email" />
  <div class="btn" id="submitButton"
</form>                                                    >Submit</div>

<script>


  const el = document.getElementById("submitButton");

  el.addEventListener("click", (event) => {

  });









</script>
```

NEEDS TO LISTEN TO A CLICK EVENT

NEEDS TO SUBMIT THE FORM

```
<form id="newsletterForm">
  <label for="email">E-mail</label>
  <input id="email" name="email" />
  <div class="btn" id="submitButton"
</form>

<script>
```

```
  const el = document.getElementById("submitButton");

  el.addEventListener("click", (event) => {
    submitForm();
  });
```

```
  const submitForm = () => {
    document.getElementById("newsletterForm").submit();
  };
</script>
```

>Submit

NEEDS TO BE FOCUSABLE

```
<form id="newsletterForm">
  <label for="email">E-mail</label>
  <input id="email" name="email" />
  <div class="btn" id="submitButton" tabindex="0">Submit</div>
</form>

<script>

  const el = document.getElementById("submitButton");

  el.addEventListener("click", (event) => {
    submitForm();
  });

  const submitForm = () => {
    document.getElementById("newsletterForm").submit();
  };
</script>
```

NEEDS TO BE ACCESSIBLE

```
<form id="newsletterForm">
  <label for="email">E-mail</label>
  <input id="email" name="email" />
  <div class="btn" id="submitButton" tabindex="0" role="button">Submit</div>
</form>

<script>


  const el = document.getElementById("submitButton");

  el.addEventListener("click", (event) => {
    submitForm();
  });









  const submitForm = () => {
    document.getElementById("newsletterForm").submit();
  };
</script>
```

NEEDS TO WORK WITH A KEYBOARD

```
<form id="newsletterForm">
  <label for="email">E-mail</label>
  <input id="email" name="email" />
  <div class="btn" id="submitButton" tabindex="0" role="button">Submit</div>
</form>

<script>
  const ENTER = 13;
  const SPACE = 32;

  const el = document.getElementById("submitButton");

  el.addEventListener("click", (event) => {
    submitForm();
  });

  el.addEventListener("keydown", (event) => {
    if (event.keyCode === ENTER || event.keyCode === SPACE) {
      event.preventDefault();
      submitForm();
    }
  });

  const submitForm = () => {
    document.getElementById("newsletterForm").submit();
  };
</script>
```

```
<form id="newsletterForm">
  <label for="email">E-mail</label>
  <input id="email" name="email" />
  <div class="btn" id="submitButton" tabindex="0" role="button">Submit</div>
</form>

<script>
  const ENTER = 13;
  const SPACE = 32;

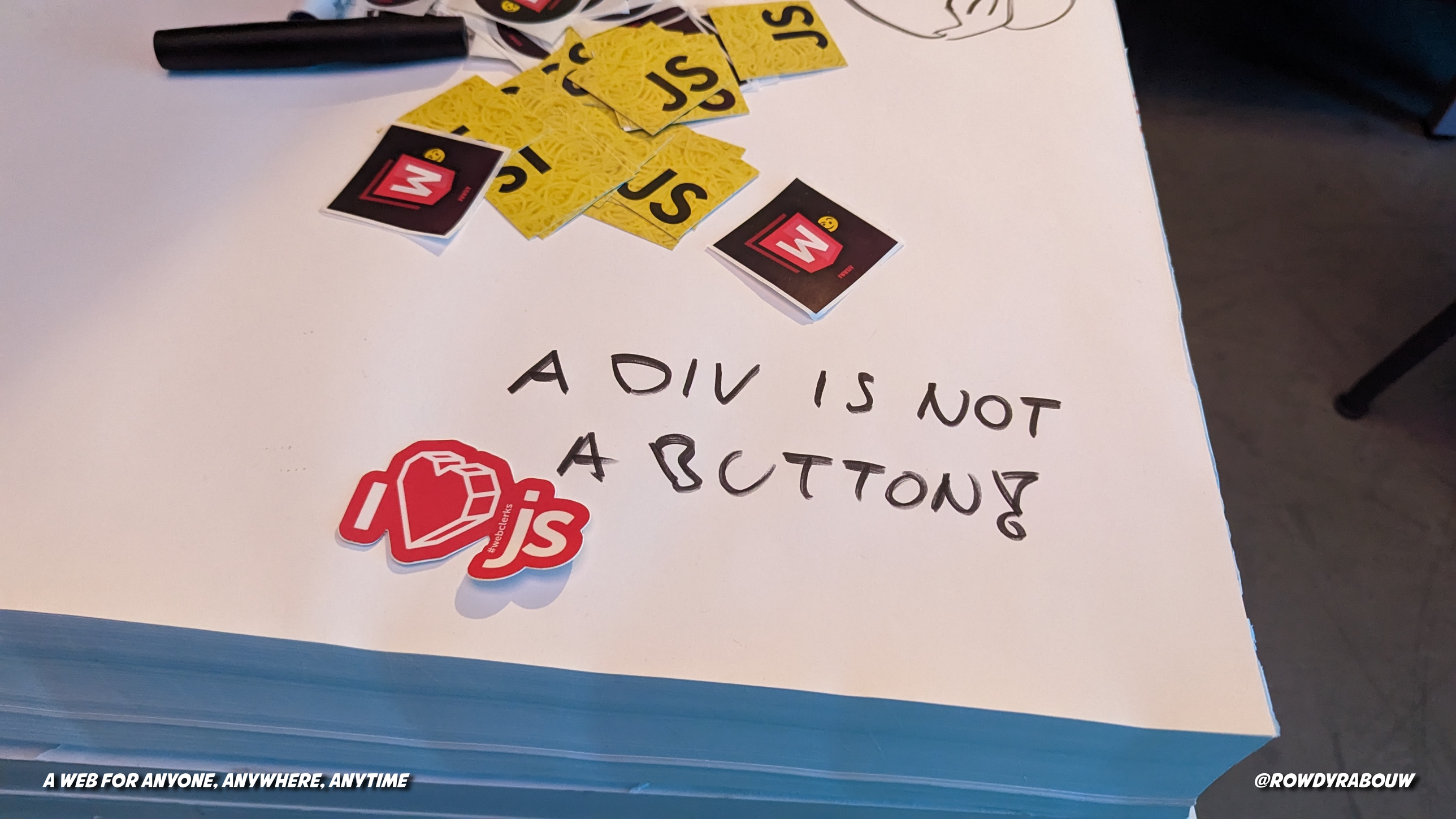
  const el = document.getElementById("submitButton");

  el.addEventListener("click", (event) => {
    submitForm();
  });

  el.addEventListener("keydown", (event) => {
    if (event.keyCode === ENTER || event.keyCode === SPACE) {
      event.preventDefault();
      submitForm();
    }
  });

  const submitForm = () => {
    document.getElementById("newsletterForm").submit();
  };
</script>
```

```
<form>
  <label for="email">E-mail</label>
  <input id="email" name="email" />
  <button class="btn">Submit</button>
</form>
```


A DIV IS NOT
A BUTTON?
#webclerks
js


A div is not
a button
5:25
Memory
Pause/ Cancel
M.Low
Med
M.High
Auto Defrost
High
Low
Clock
Preset
Deodorize
MM Grill
Combi.
Menu / Time / Gewicht
Start/ Quick Start

WAI - ARIA

WEB ACCESSIBILITY INITIATIVE - ACCESSIBLE RICH INTERNET APPLICATIONS

ROLES, STATES, AND PROPERTIES

alert
alertdialog
application
article
banner
button
cell
checkbox
columnheader
combobox
complementary
contentinfo
definition
dialog
directory
document
feed
figure
form
grid
gridcell
group
heading
img
link
list
listbox
listitem
log
main
marquee
math
menu
menubar
menuitem
menuitemcheckbox
menuitemradio
navigation
none
note
option
presentation
progressbar
radio
radiogroup
region
row
rowgroup
rowheader
scrollbar
search
searchbox
separator
slider
spinbutton
status
switch
tab
table
tablist
tabpanel
term
textbox
timer
toolbar
tooltip
tree
treegrid
treeitem

ROLES, STATES, AND PROPERTIES

aria-activedescendant
aria-atomic
aria-autocomplete
aria-busy
aria-checked
aria-colcount
aria-colindex
aria-colspan
aria-controls
aria-current
aria-describedby
aria-description
aria-details
aria-disabled
aria-dropeffect
aria-errormessage
aria-expanded
aria-flowto
aria-grabbed
aria-haspopup
aria-hidden
aria-invalid
aria-keyshortcuts
aria-label
aria-labelledby
aria-level
aria-live
aria-modal
aria-multiline
aria-multiselectable
aria-orientation
aria-owns
aria-placeholder
aria-posinset
aria-pressed
aria-readonly
aria-relevant
aria-required
aria-roledescription
aria-rowcount
aria-rowindex
aria-rowspan
aria-selected
aria-setsize
aria-sort
aria-valuemax
aria-valuemin
aria-valuenow
aria-valuetext


FIRST RULE OF ARIA
DO NOT USE ARIA
NATIVE HTML ELEMENTS OR ATTRIBUTES FIRST
A WEB FOR ANYONE, ANYWHERE, ANYTIME
@ROWDYRABOUW

SECOND RULE OF ARIA

DO NOT CHANGE NATIVE HTML SEMANTICS

```
<!-- don't do this -->
<div role="button" onClick="doSomething();">Click</div>

<!-- do this instead -->
<button type="button" onClick="doSomething();">Click</button>
```

THIRD RULE OF ARIA

ALL INTERACTIVE CONTROLS MUST BE ABLE TO RECEIVE KEYBOARD FOCUS

```
<marvelous-button tabindex="0">.....</marvelous-button>
```

0	INSERTS ELEMENT INTO THE NATURAL TAB ORDER
-1	REMOVES ELEMENT FROM THE NATURAL TAB ORDER
> 0	JUMPS ELEMENT TO THE FRONT OF THE NATURAL TAB ORDER

FOURTH RULE OF ARIA

FOR ALL FOCUSABLE ELEMENTS, NEVER ADD ROLE="PRESENTATION" OR ARIA-HIDDEN="TRUE"

```
<!-- don't do this -->
<button role="presentation">submit</button>

<!-- or this -->
<button aria-hidden="true">submit</button>

<!-- or even this -->
<div aria-hidden="true">
  <button>submit</button>
</div>
```

FIFTH RULE OF ARIA

GIVE ALL INTERACTIVE ELEMENTS AN ACCESSIBLE NAME

```
<!— don't do this —>
Search: <input type="text" />

<!— do this —>
Search: <input type="search" aria-label="Search" />

<!— or better, do this —>
<label for="search">Search</label>: <input type="search" id="search"/>
```

ARIA-LABEL

OVERRIDES ELEMENT'S NAME, REPLACING IT WITH TEXT YOU SPECIFY

```
<button>×</button>
```

ARIA-LABEL

OVERRIDES ELEMENT'S NAME, REPLACING IT WITH TEXT YOU SPECIFY

```
<button aria-label="Close">×</button>
```

ARIA-LABELLEDBY

OVERRIDES ELEMENT'S NAME, REPLACING IT WITH CONTENTS OF ANOTHER ELEMENT

```
<section aria-labelledby="mcu-heading">
  <h2 id="mcu-heading">Marvel Cinematic Universe movies</h2>
  <ul>
    <li>Captain America: The First Avenger</li>
    <li>Guardians of the Galaxy Vol. 2</li>
    <li>Shang-Chi and the Legend of the Ten Rings</li>
    <li>...</li>
  </ul>
</section>
```

ARIA-DESCRIBEDBY

SETS ELEMENT'S DESCRIPTION TO THE CONTENTS OF ANOTHER ELEMENT

```
<form>
  <label for="username">Username</label>
  <p>Username must be 6 to 15 characters.</p>
  <p>Username may contain alphanumeric characters.</p>
  <input id="username" type="text" />
</form>
```

ARIA-DESCRIBEDBY

SETS ELEMENT'S DESCRIPTION TO THE CONTENTS OF ANOTHER ELEMENT

```
<form>
  <label for="username">Username</label>
  <p id="length">Username must be 6 to 15 characters.</p>
  <p id="format">Username may contain alphanumeric characters.</p>
  <input id="username" type="text" aria-describedby="length format" />
</form>
```

DESCRIPTIVE LABELS

PROVIDE MORE INFORMATION ABOUT A USER INTERFACE ELEMENT

```
<!-- don't do this -->
<a href="/">Read more</a>

<!-- do this -->
<a aria-label="Read more about Ant-Man" href="/">Read more</a>

<!-- or better, do this -->
<a href="/">Read more<span class="sr-only"> about Ant-Man</span></a>
```

DESCRIPTIVE LABELS

CSS class to visually hide content, but not for screen readers

```css
.sr-only:not(:focus):not(:active) {
  clip: rect(0 0 0 0);
  clip-path: inset(50%);
  height: 1px;
  overflow: hidden;
  position: absolute;
  white-space: nowrap;
  width: 1px;
}
```

PERCEIVABLE

COLOR CONTRAST

COLOR CONTRAST BETWEEN BACKGROUND AND FOREGROUND

CONTENT SHOULD BE AT A MINIMUM LEVEL TO ENSURE LEGIBILITY

WebAIM
web accessibility in mind



LOW CONTRAST TEXT

81%

The WebAIM Million
https://webaim.org/projects/million/

CONTRAST RATIO

CAN RANGE FROM 1 TO 21 (COMMONLY WRITTEN 1 : 1 TO 21 : 1)

TEXT SHOULD HAVE A MINIMUM RATIO OF 4.5 : 1
LARGE TEXT OR BOLD TEXT SHOULD HAVE A MINIMUM RATIO OF 3 : 1

18PT ≈ 24PX
14PT BOLD ≈ 18.5PX

RELATIVE LUMINANCE

RELATIVE BRIGHTNESS OF ANY POINT IN A COLORSPACE



0 1

(L1 + 0.05) / (L2 + 0.05)

L1 is the relative luminance of the lighter of the two colors, and
L2 is the relative luminance of the darker of the colors

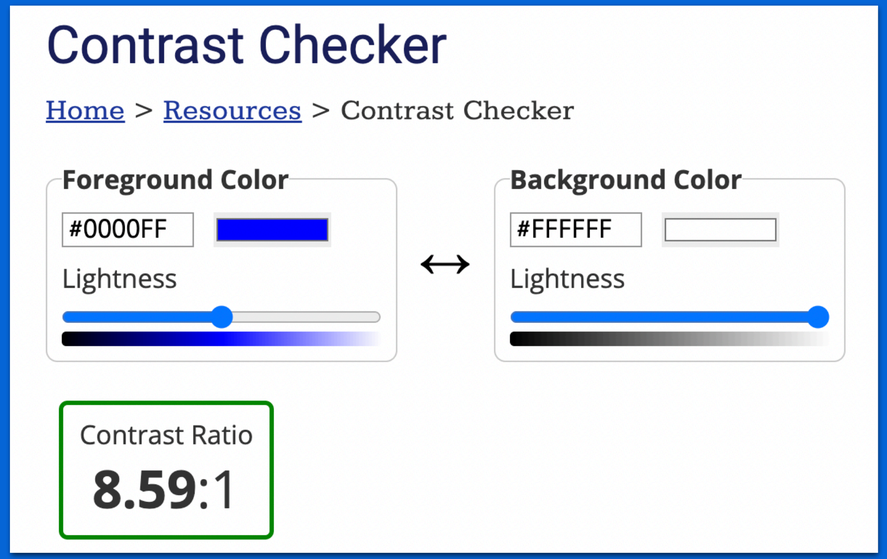
for the sRGB colorspace, the relative luminance of a color is defined as
L = 0.2126 * R + 0.7152 * G + 0.0722 * B

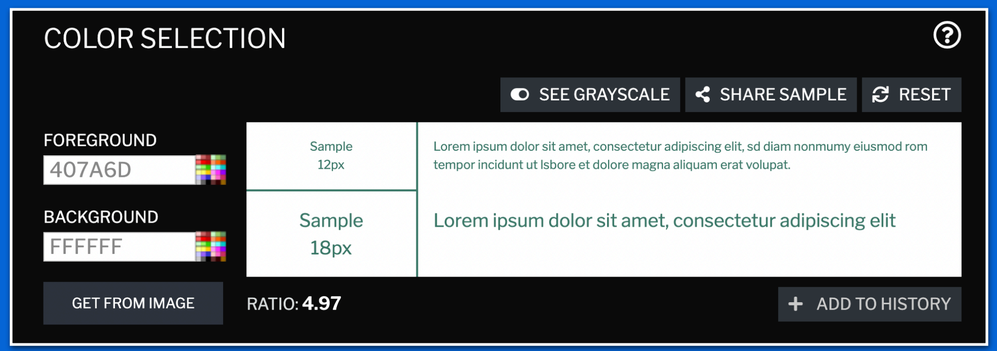
where R, G and B are defined as
if RsRGB <= 0.04045 then R = RsRGB/12.92 else R = ((RsRGB+0.055)/1.055) ^ 2.4
if GsRGB <= 0.04045 then G = GsRGB/12.92 else G = ((GsRGB+0.055)/1.055) ^ 2.4
if BsRGB <= 0.04045 then B = BsRGB/12.92 else B = ((BsRGB+0.055)/1.055) ^ 2.4

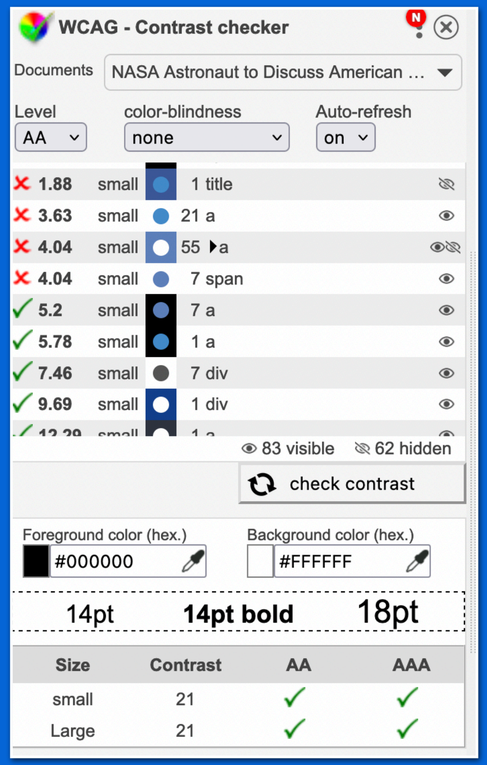
and RsRGB, GsRGB, and BsRGB are defined as
RsRGB = R8bit/255
GsRGB = G8bit/255
BsRGB = B8bit/255

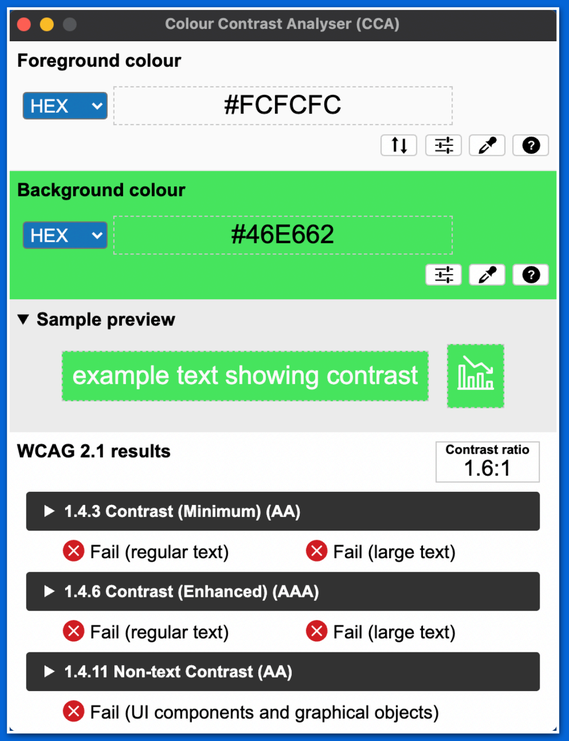

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COLOR CONTRAST CHECKERS

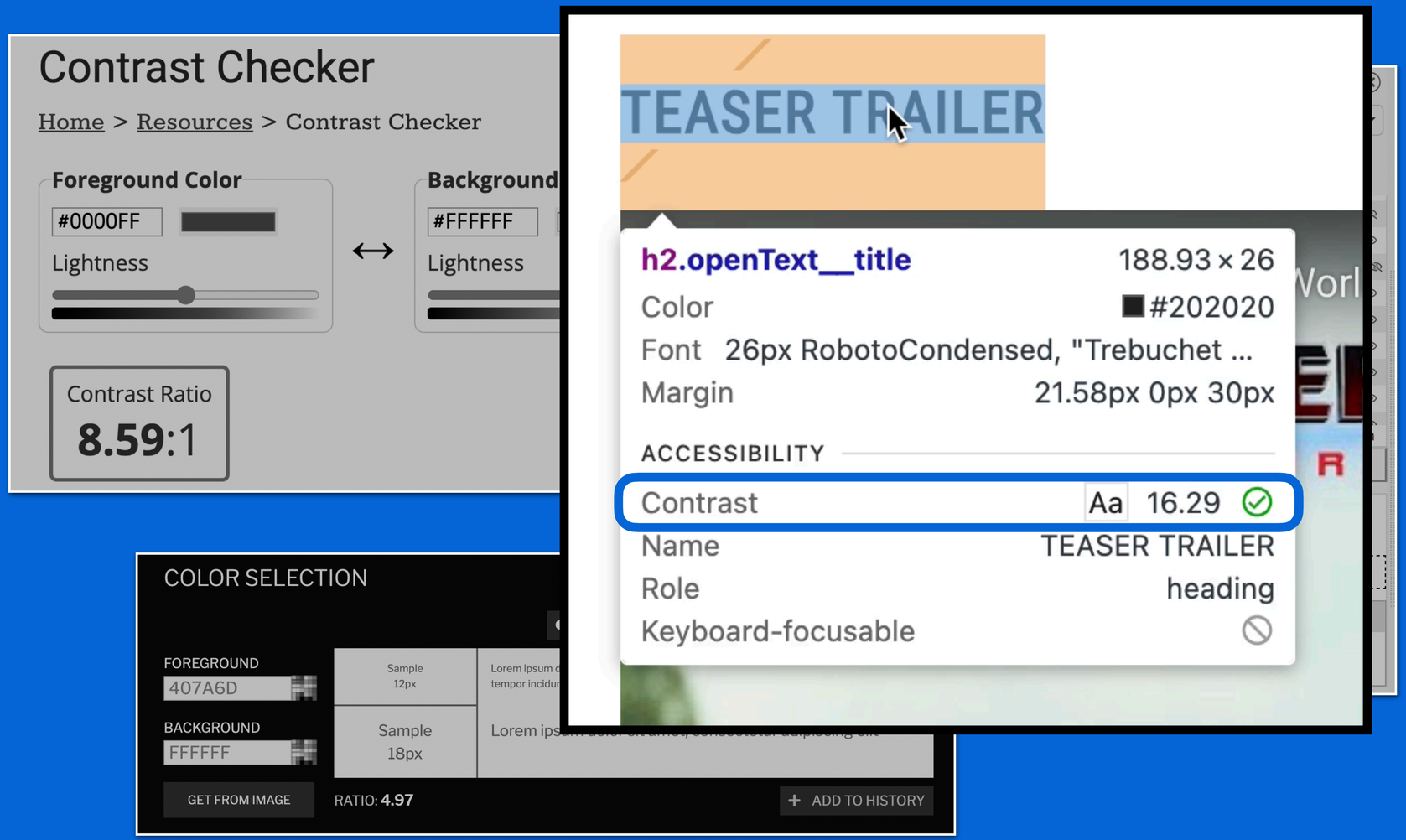








COLOR CONTRAST CHECKERS



A WEB FOR ANYONE, ANYWHERE, ANYTIME

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Captain America: Brave New

marvel.com/movies/captain-america-brave-new-world

TEASER TRAILER




FIFTY SHADES OF GREY
A WEB FOR ANYONE, ANYWHERE, ANYTIME
@ROWDYRABOUW

CONTRAST RATIO

BE CAREFUL WITH TEXT SHADOWS

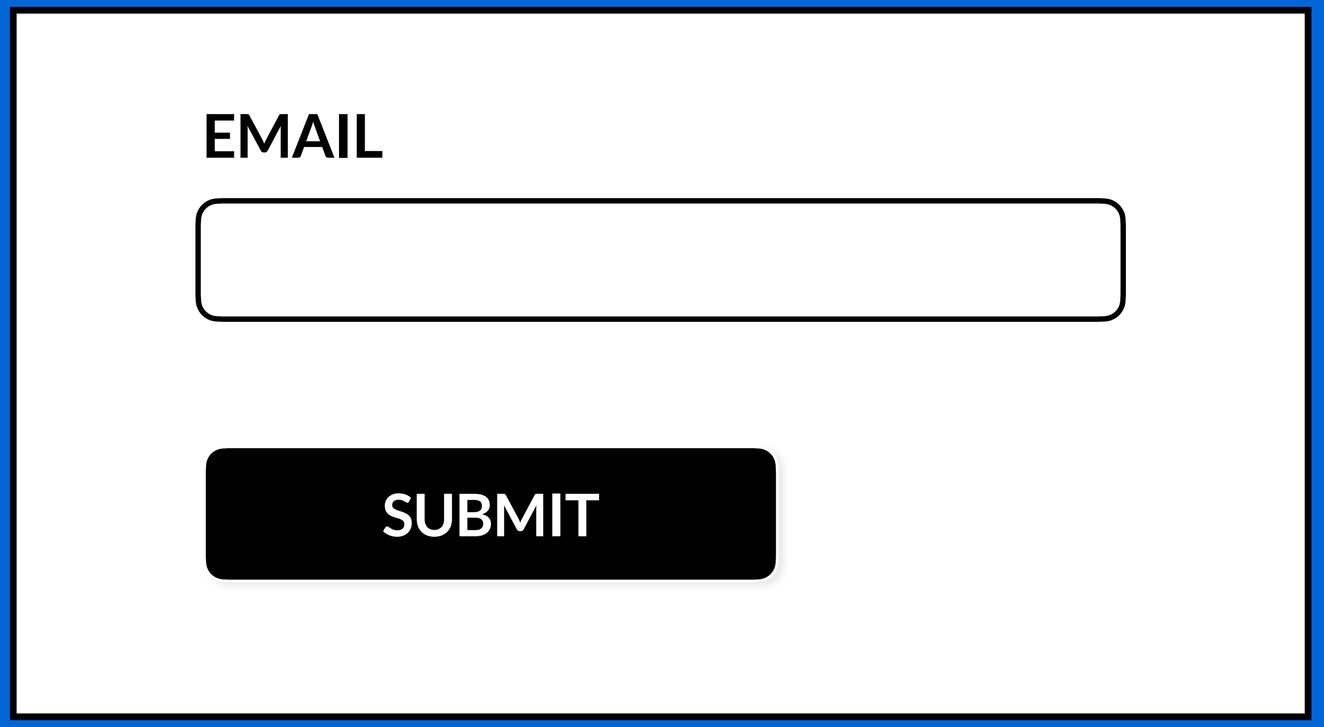
BE CAREFUL WITH TEXT OUTLINES



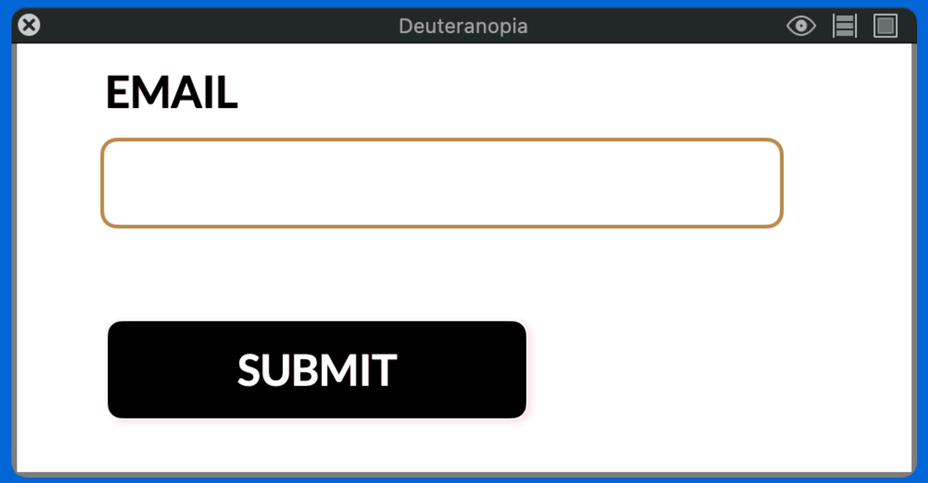
USE OF COLOR

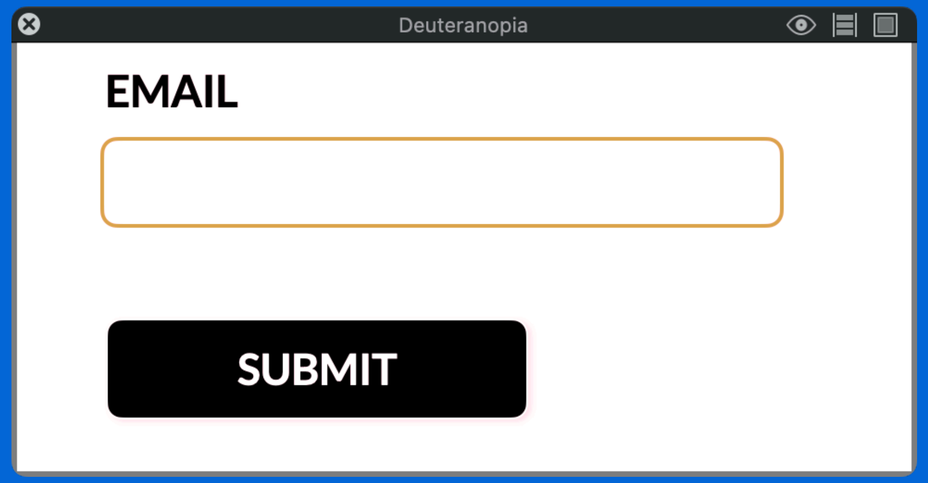
COLOR SHOULD NOT BE SOLELY RELIED UPON TO CONVEY INFORMATION

COLOR BLINDNESS

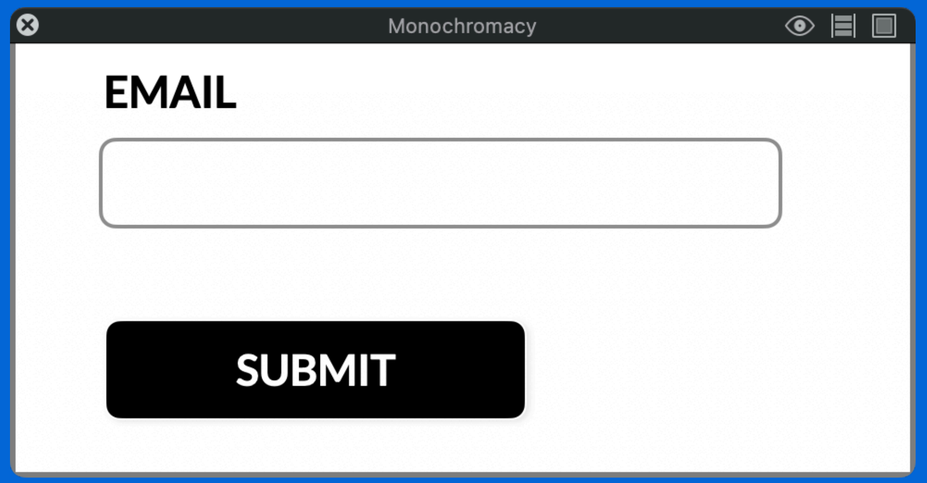


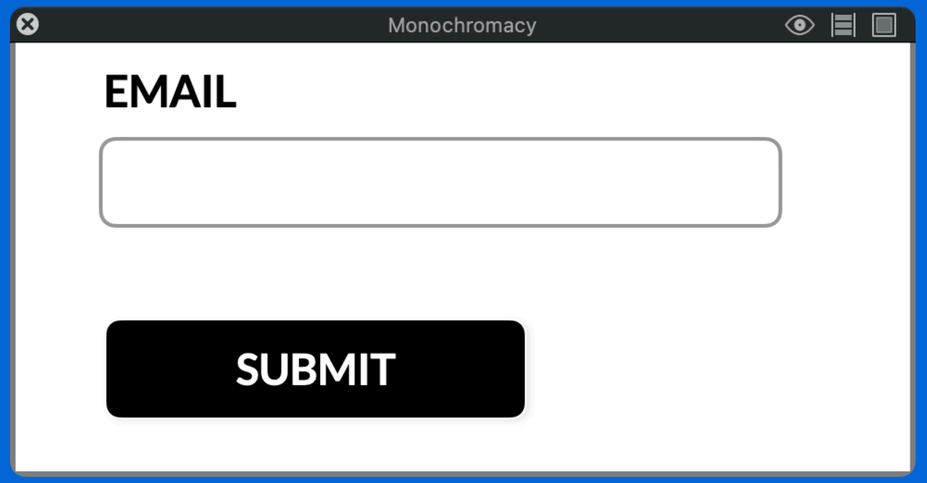
DEUTERANOPIA



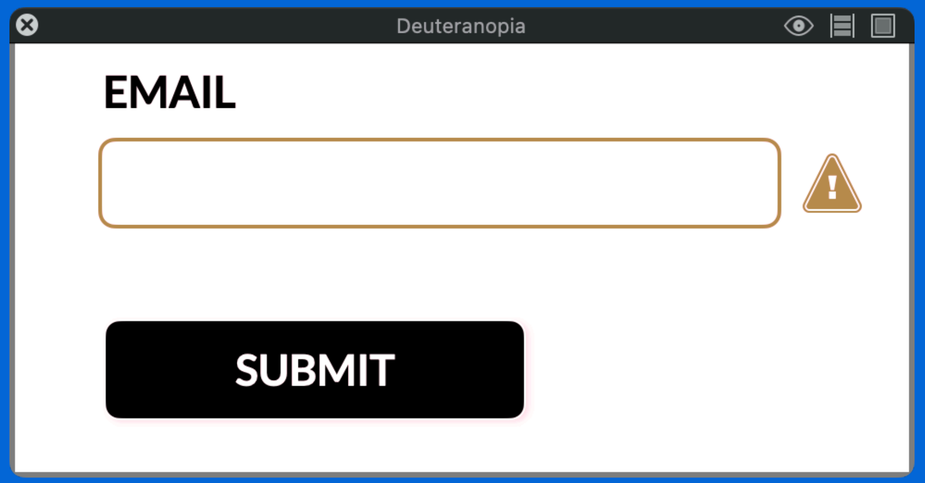


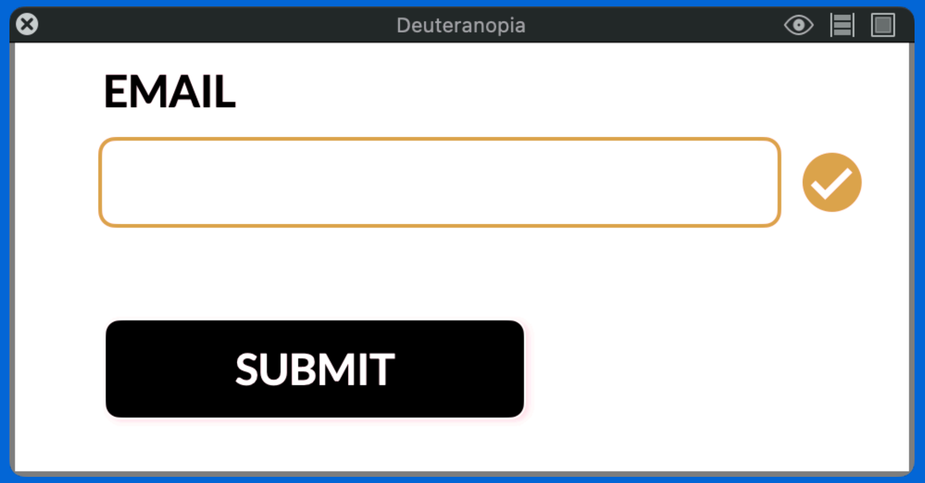
MONOCHROMACY



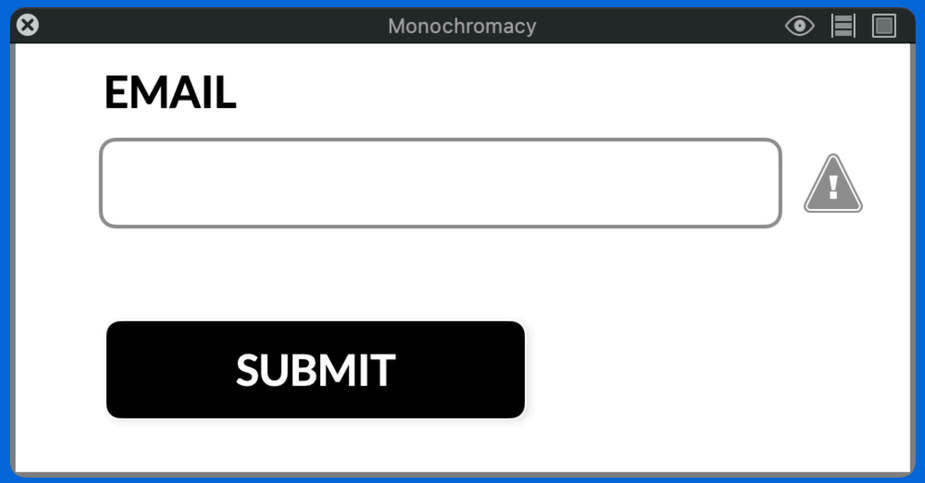


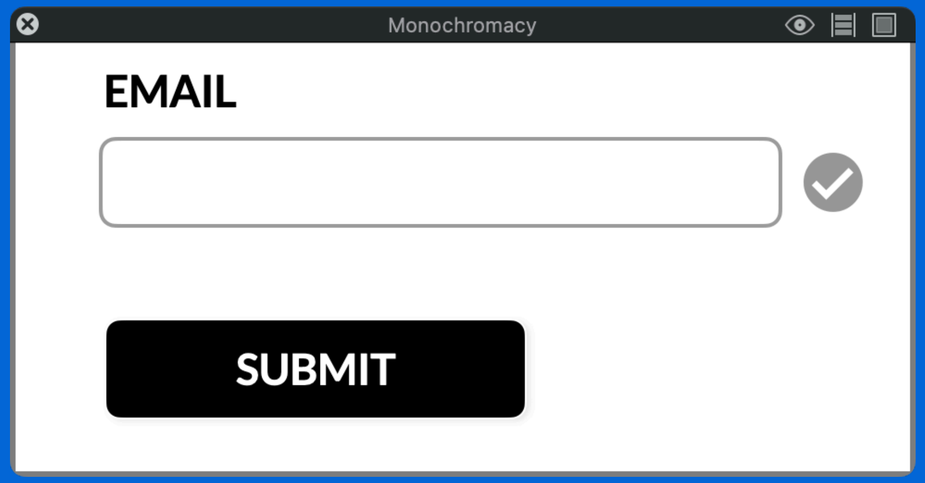
DEUTERANOPIA





MONOCHROMACY





ALT TEXT

ALL IMAGES THAT CONVEY MEANINGFUL CONTENT
SHOULD BE GIVEN SUITABLE ALTERNATIVE TEXT


WebAIM
web accessibility in mind
MISSING ALTERNATIVE TEXT
54,5%
The WebAIM Million
https://webaim.org/projects/million/

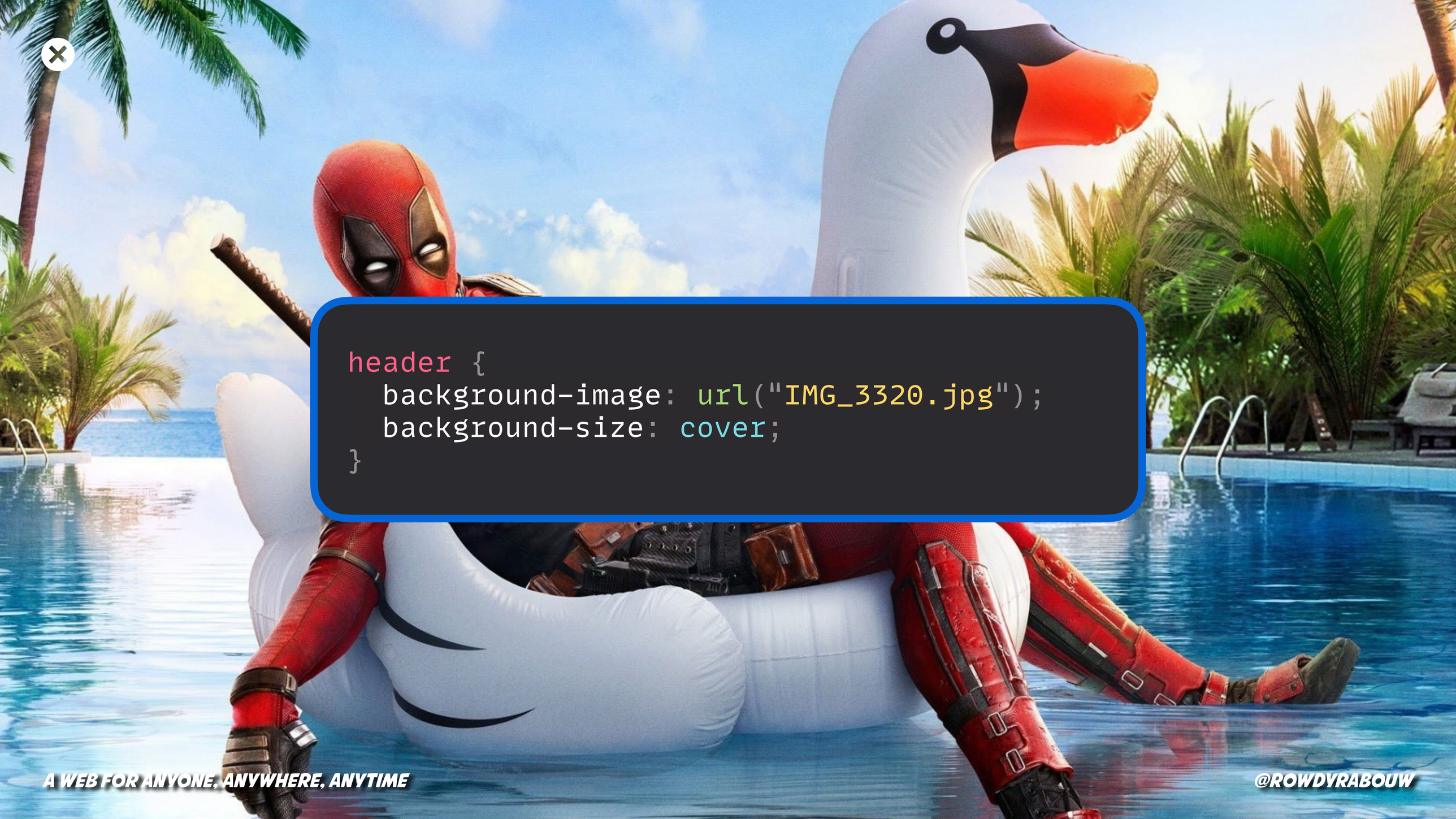


```
<img src="-mg-9370-1.jpg" />
```



```
<img
  src=“-mg-9370-1.jpg"
  alt="Nick Fury is holding Goose the Flerken. Multiple tentacles extend
  from Goose's mouth in order to swallow the Tesseract. Captain Marvel
  (seen from the back) is holding the Tesseract." />
```


<img src="IMG_3320.jpg" alt>


header {
background-image: url("IMG_3320.jpg");
background-size: cover;
}
A WEB FOR ANYONE, ANYWHERE, ANYTIME
@ROWDYRABOUW

CAPTIONS

PROVIDE CAPTIONS FOR VIDEO PRESENTED ON THE WEB FOR THE BENEFIT OF PEOPLE WHO CAN'T HEAR THE AUDIO PART OF THE VIDEO



SUBTITLES

TRANSLATION FOR VIEWERS WHO MAY NOT SPEAK THE LANGUAGE

CLOSED CAPTIONS

NOT ONLY SHOW WHAT'S BEING SAID BUT ALSO DESCRIBE OTHER SOUNDS

OPEN CAPTIONS

BURNT INTO THE VIDEO AND CAN'T BE TURNED OFF


Yeah! (SMASHING SOUNDS)
And stay gone!

AUDIO DESCRIPTIONS

AUDIO DESCRIPTIONS SHOULD BE PROVIDED IF THE EXISTING AUDIO DOES NOT CONVEY THE FULL MEANING EXPRESSED BY THE VIDEO

ORIGINAL VIDEO HIDDEN ON PURPOSE



AUDIO DESCRIBED VIDEO HIDDEN ON PURPOSE



OPERABLE

FOCUS

VISUAL INDICATOR MUST BE SHOWN FOR CURRENTLY FOCUSED ELEMENT

I'm the strongest Avenger, okay?

Okay, so the "how" works. Now we gotta figure out the when and the where. Almost all of us has had an encounter with at least one of the six Infinity Stones. Look, us sitting here staring at that thing is not gonna bring everybody back. I'm the strongest Avenger, okay?
So this responsibility falls upon me. It's my duty.

- (•) Iron man
- ( ) Captain America
- ( ) Black Widow

Favorite Avenger

[ ]

[pick up Mjölnir]

I'm the strongest Avenger, okay?

Okay, so the "how" works. Now we gotta figure out the when and the where. Almost all of us has had an encounter with at least one of the six Infinity Stones. Look, us sitting here staring at that thing is not gonna bring everybody back. I'm the strongest Avenger, okay?
So this responsibility falls upon me. It's my duty.

- (•) Iron man
- ( ) Captain America
- ( ) Black Widow

Favorite Avenger

pick up Mjölnir

```
/* don't do this */
*:focus {
  outline: 0;
}
```

I'm the strongest Avenger, okay?

Okay, so the "how" works. Now we gotta figure out the when and the where. Almost all of us has had an encounter with at least one of the six Infinity Stones. Look, us sitting here staring at that thing is not gonna bring everybody back. I'm the strongest Avenger, okay?
So this responsibility falls upon me. It's my duty.

- (•) Iron man
- ( ) Captain America
- ( ) Black Widow

Favorite Avenger

[ ]

[pick up Mjölnir]

```css
/* you can do this */
*:focus {
  outline: 0;
}

/* if you also do this */
```

```css
a:focus {
  color: #fff;
  box-shadow: inset 250px 0 0 0 #c02f39;
  transition: color 0.3s ease-in-out,
              box-shadow 0.3s ease-in-out;
}

label:focus-within {
  background-color: #c02f39;
  color: #fff;
  padding-right: 0.5rem;
}

input[type="text"]:focus {
  border: 2px dashed #c02f39;
  color: #c02f39;
}

button:focus {
  background-color: #c02f39;
  color: rgb(255, 255, 255);
}
```

SKIP TO CONTENT

MAKE IT EASY TO SKIP SEGMENTS

MARVEL

search...

Comics

Movies

Merchandise



```
<body>
   <a href="#main-content" class="skip-link">Skip to content</a>
   <header>
```



```
   <main id="main-content">
      <h1>Avengers Endgame Ipsum</h1>
```

```css
.skip-link {
  clip: rect(1px, 1px, 1px, 1px);
  display: block;
  height: 1px;
  overflow: hidden;
  position: absolute;
  width: 1px;
  top: 1rem;
  left: 1rem;
  z-index: 999;
  outline: 0;
  text-decoration: none;
}
```

```css
.skip-link:focus {
  clip: auto;
  height: auto;
  overflow: visible;
  width: auto;
  color: #fff;
  background-color: #282828;
  border: 4px solid #fff;
  border-radius: 0.5em;
  padding: 0.75rem 1.5rem;
}
```

UNDERSTANDABLE

LANG ATTRIBUTE

SPECIFIES THE NATURAL LANGUAGE OF THE CONTENT



MISSING DOCUMENT LANGUAGE

17,1%

The WebAIM Million
https://webaim.org/projects/million/

```
<!DOCTYPE html>
<html lang="en">
  <head>
```

- SCREEN READERS
- BROWSER AUTO-TRANSLATE
- SEARCH ENGINES

Un sourire coûte moins cher que l’électricité, mais donne autant de lumière.

```
<blockquote>Un sourire coûte moins cher que
l’électricité, mais donne autant de lumière.</blockquote>

<!—
  A smile costs less than electricity, but gives as
  much light. — Abbé Pierre
—>
```



Un sourire coûte moins cher que l’électricité, mais donne autant de lumière.

```
<blockquote lang="fr">Un sourire coûte moins cher que
l’électricité, mais donne autant de lumière.</blockquote>

<!—
  A smile costs less than electricity, but gives as
  much light. — Abbé Pierre
—>
```

من طلب العلى سهر الليالي

```
<blockquote lang="ar">من طلب العلى سهر الليالي</blockquote>
<!--
  He who desires the top must sit up many nights
  aka The road to success is paved with hard work
  — Arabic proverb
-->
```

من طلب العلى سهر الليالي

```
@font-face {
  font-family: "cairo-regular";
  src: url("/assets/fonts/cairo.woff") format("woff");
}

:lang(ar) {
  font-family: "cairo-regular", serif;
  direction: rtl;
}
```

Joke can tell us a joke.
joke@example.com

```
<!DOCTYPE html>
<html lang="en">

...

<p>Joke can tell us a joke.</p>
<p>joke@example.com</p>
```



Vitsi voi kertoa meille vitsin.
vitsi@example.com



Joke kann uns einen Witz erzählen.
witz@beispiel.com



Een grap kan ons een mop vertellen.
grap@voorbeeld.com



Joke ons een mop kan vertellen.

joke@example.com

```
<!DOCTYPE html>
<html lang="en">

...

<p><span translate="no">Joke</span> can tell us a joke.</p>
<p translate="no">joke@example.com</p>
```

FORMS

WebAIM
web accessibility in mind

MISSING FORM INPUT LABELS

48,6%

The WebAIM Million
https://webaim.org/projects/million/

FORM INPUT LABEL

```
<!-- please don't do this -->
<form>
  <input name="email" placeholder="E-mail" />
  <button class="btn">Submit</button>
</form>
```

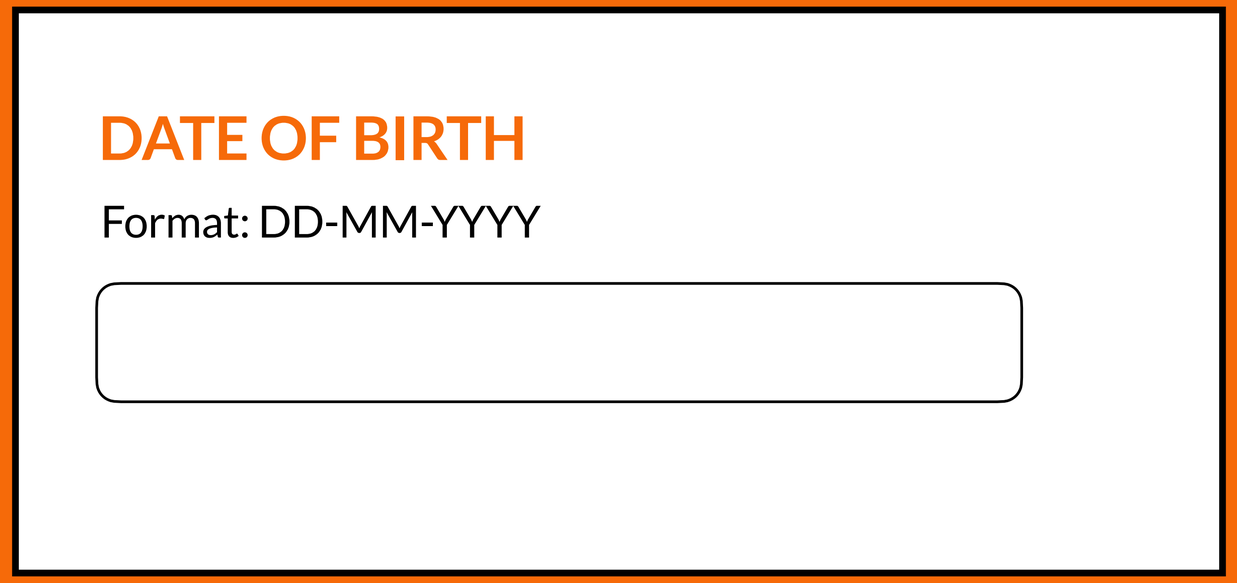
```
<!-- do this -->
<form>
  <label for="email">E-mail</label>
  <input id="email" name="email" />
  <button class="btn">Submit</button>
</form>
```

PLACEHOLDER ATTRIBUTE



- HARD TO READ
- HARD TO REMEMBER

PLACEHOLDER ATTRIBUTE



PLACEHOLDER ATTRIBUTE

CREDIT CARD NUMBER

XXXX XXXX XXXX XXXX



MAKE THE WEB A BETTER PLACE

REDUCE MOTION

STOP MAKING PEOPLE WITH MOTION SENSITIVITIES SICK

Apple

https://www.apple.com

Store Mac iPad iPhone Watch AirPods TV & Home Only on Apple Accessories Support

unicef Donate to support families affected by the war in Ukraine ↗

MacBook Air

Supercharged by M2

Available next month

Learn more › View pricing ›



https://www.apple.com/macbook-air-m2/

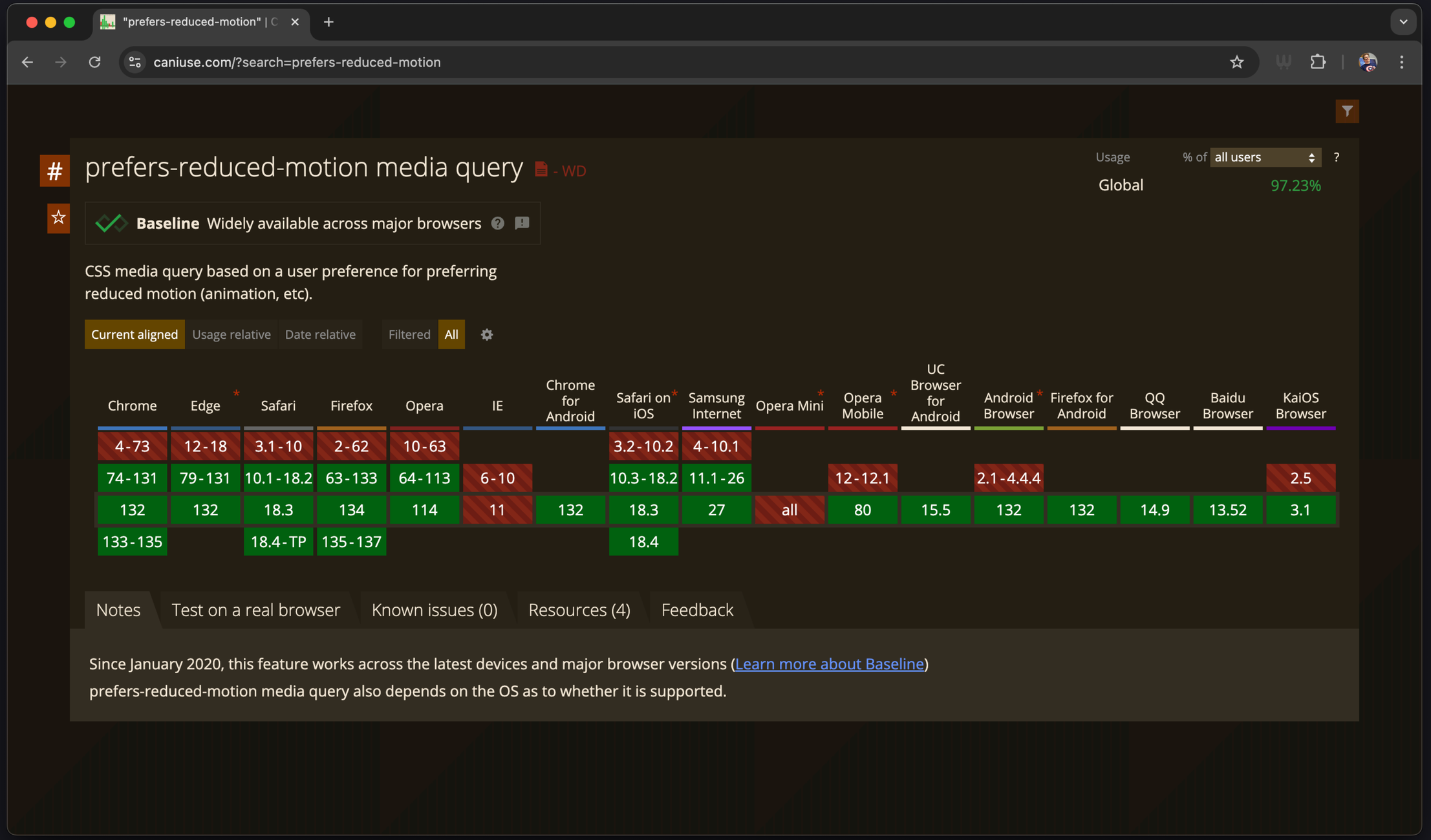
```css
.animation {
  animation-iteration-count: infinite;
}

@media (prefers-reduced-motion: reduce) {
  .animation {
    animation: none;
  }
}
```

```
<script>
  const video = document.querySelector(“video");

  const prefersMotion =
            window.matchMedia("(prefers-reduced-motion: no-preference)");

 if (prefersMotion.matches) {
    video.play();
 }
</script>
```



A WEB FOR ANYONE, ANYWHERE, ANYTIME

@ROWDYRABOUW

REDUCE DATA

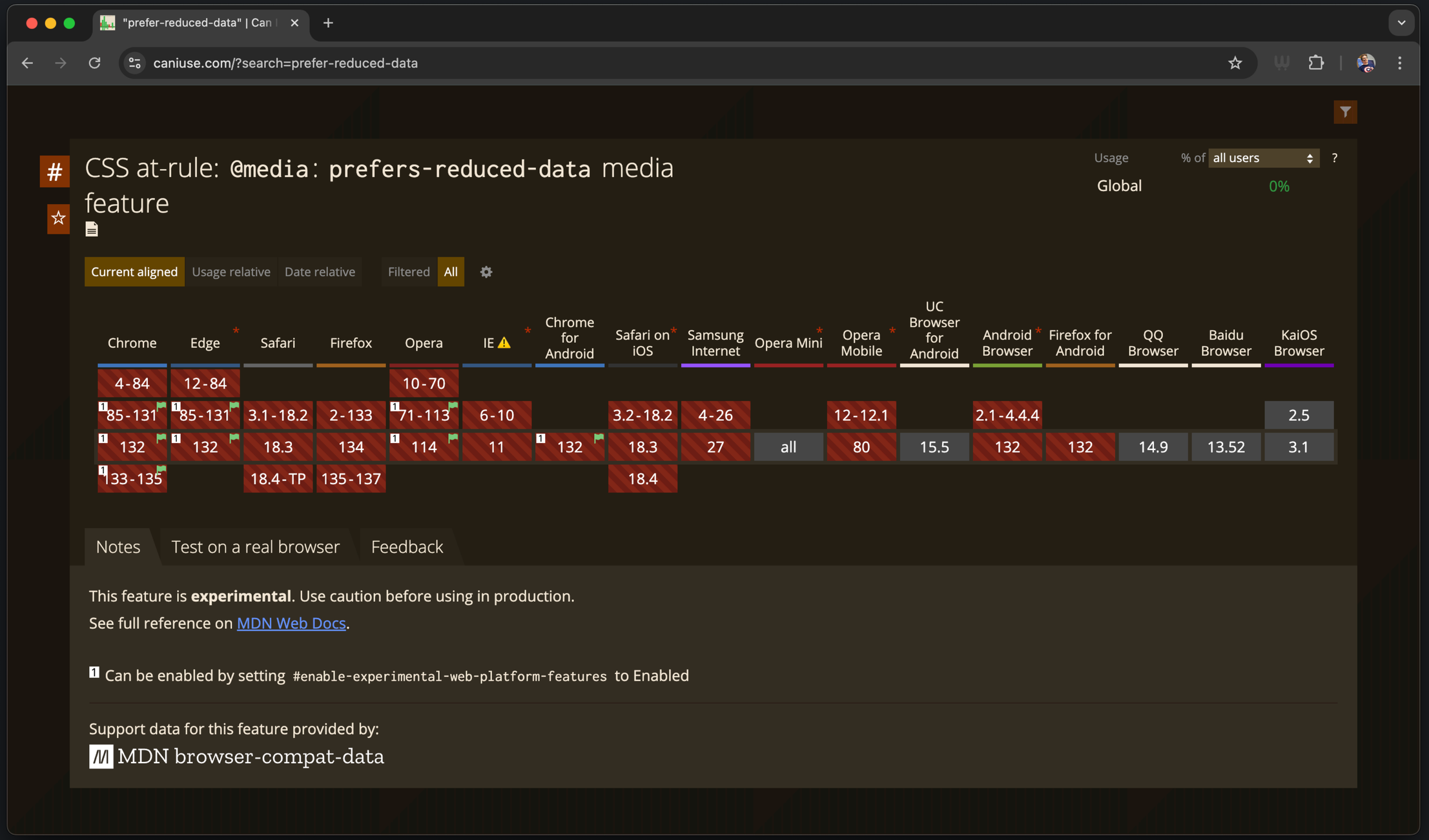
LIMITED DATA PLANS AND/OR SLOW CONNECTIONS

```css
@media (prefers-reduced-data: no-preference) {
  @font-face {
    font-family: 'FancyFont';
    src: url('FancyFont.woff2') format('woff2');
  }
}

body {
  font-family: FancyFont, Arial, Helvetica, sans-serif;
}
```

```css
body {
  background: #df1044;
}

@media (prefers-reduced-data: no-preference) {
  body {
    background-image: url("big-background.png");
  }
}
```



A WEB FOR ANYONE, ANYWHERE, ANYTIME

@ROWDYRABOUW

```
/* Chromium browsers */

if ("connection" in navigator) {
  if (navigator.connection.saveData === true) {
    // prevent loading resources and other data saving measures
  }
}
```


WITH GREAT POWER COMES
GREAT RESPONSIBILITY
A WEB FOR ANYONE, ANYWHERE, ANYTIME
@ROWDYRABOUW


Stan Lee
1922 - 2018
rowdy.codes/s5g
TACK SA MYCKET !
A WEB FOR ANYONE, ANYWHERE, ANYTIME
@ROWDYRABOUW