



# **PROFESSOR X**

*paraplegic*

# ***DAREDEVIL***

*blind*



# ***THE WINTER SOLDIER***

*prosthetic arm*



# ***DOCTOR STRANGE***

*extensive nerve damage*

# **HAWKEYE**

deaf



# ***WE ARE ALL JUST TEMPORARILY ABLED***



*Cindy Li*  
*1975 - 2018*



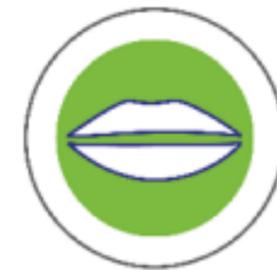
**Touch**



**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**

THIS IS FOR EVERYONE

# ROWDY RABOUW

Front-End Focused Senior DevOps Engineer  
with a focus on usability and accessibility

Webdeveloper since 1996

Google Developer Expert in Web Technologies

♥ superhero and superheroine movies



# ACCESSIBILITY

11 CHARACTERS

# A11Y

NUMERONYM FOR ACCESSIBILITY

# A11Y IRL







# **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

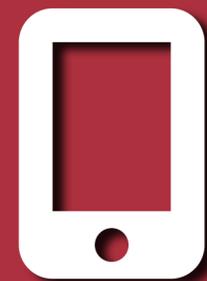
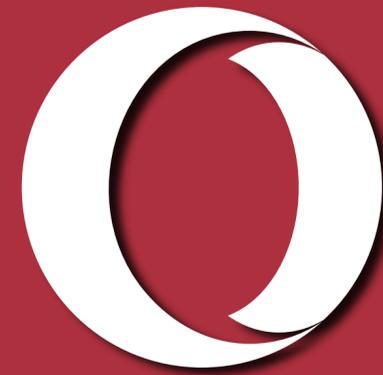
# ***UNDERSTANDABLE***

PEOPLE MUST BE ABLE TO UNDERSTAND YOUR WEBSITE

# ***ROBUST***

**YOUR WEBSITE MUST WORK WITH DIFFERENT AND FUTURE TECHNOLOGIES**

# ***ROBUST***

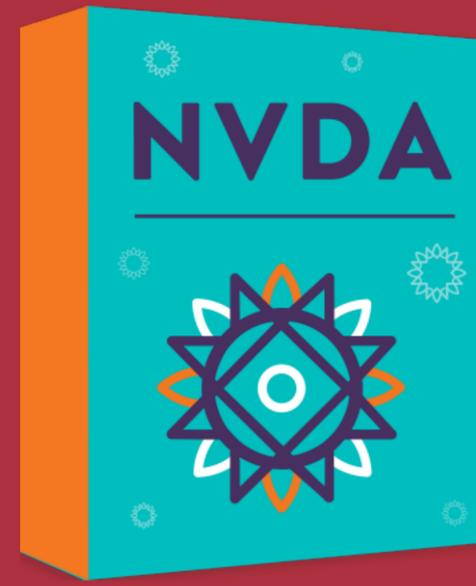




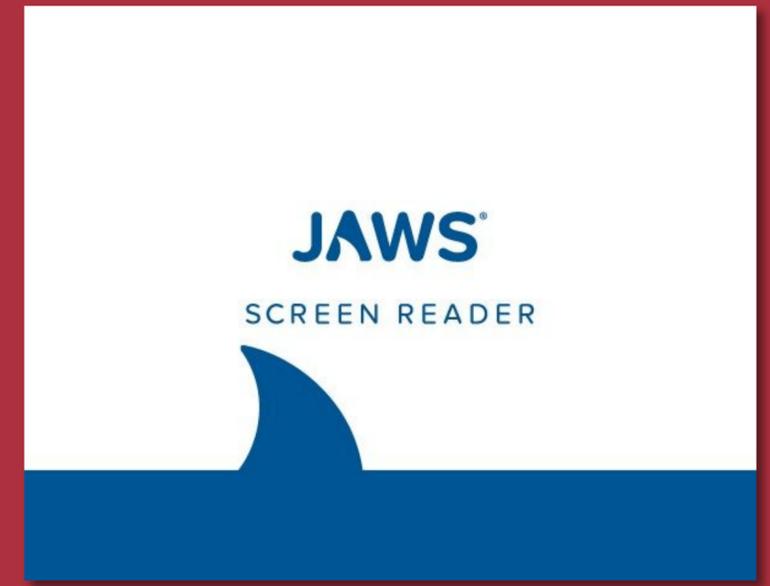
VoiceOver with Safari  
(macOS)



Narrator with Edge  
(Windows)



NVDA with Firefox  
(Windows)



JAWS with Chrome  
(Windows)



VoiceOver (iOS)



TalkBack (Android)



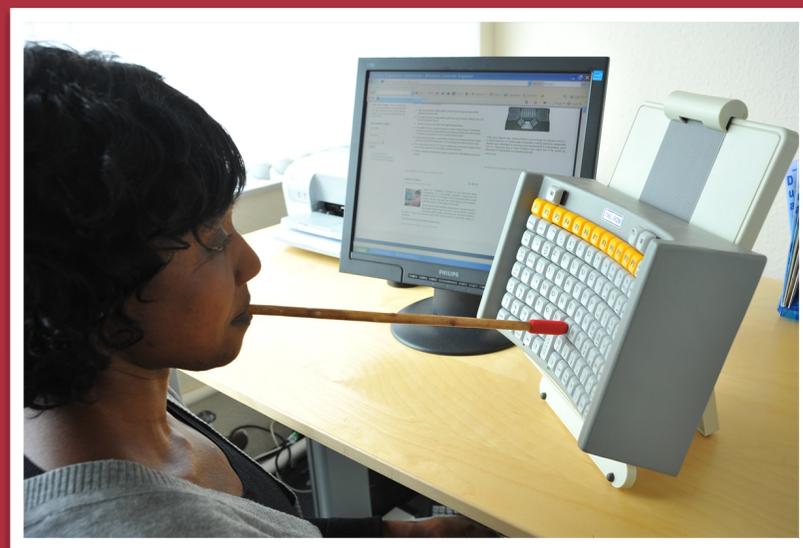
sip-and-puff



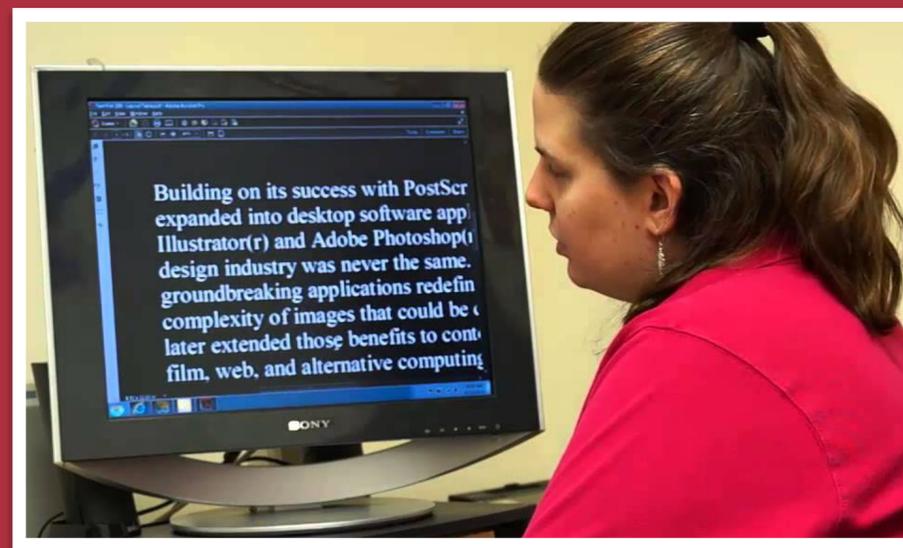
tubusOne



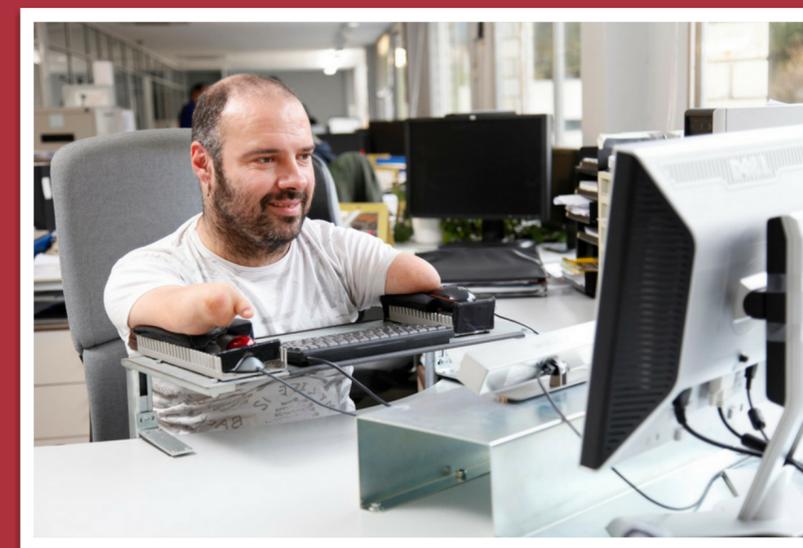
head pointer



mouth stick

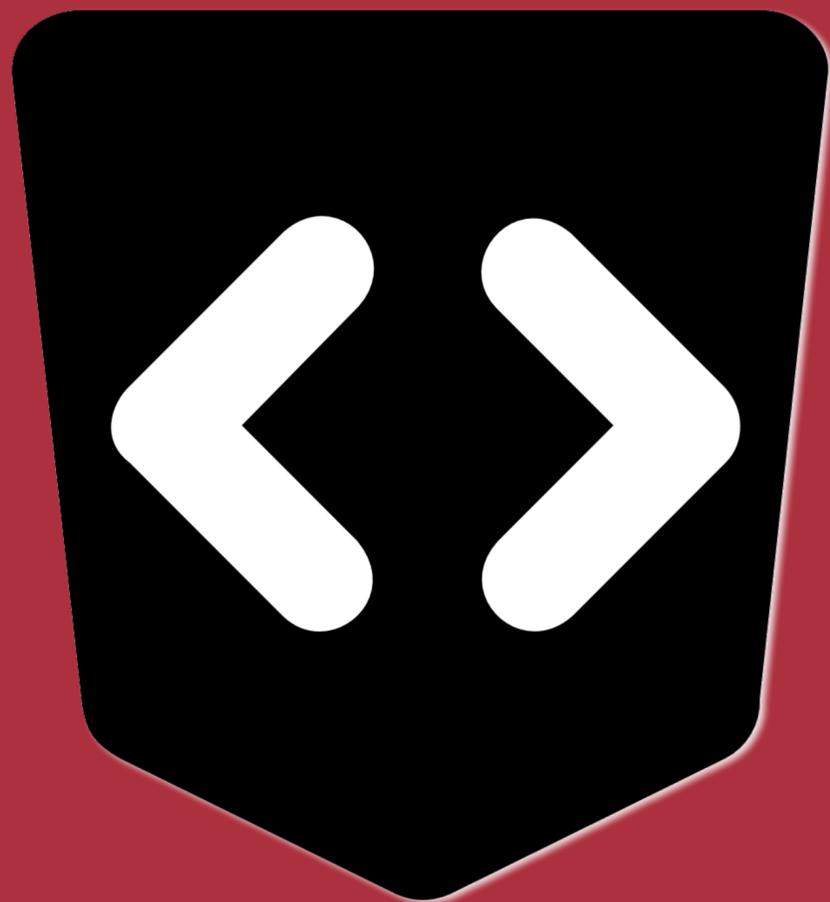


screen magnifier



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 DIV IS NOT A BUTTON***

**EMAIL**

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

```
<script>
```

```
</script>
```

NEEDS TO LISTEN TO A CLICK EVENT

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

```
<script>
```

```
const el = document.getElementById("submitButton");
el.addEventListener("click", (event) => {
});
```

```
</script>
```

## NEEDS TO SUBMIT THE FORM

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

```
<script>
```

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

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

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

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?



A d i v i s n o t

a b u t t o n

5:25

# ***WAI - ARIA***

**WEB ACCESSIBILITY INITIATIVE - ACCESSIBLE RICH INTERNET APPLICATIONS**

# ***ROLES, STATES, AND PROPERTIES***

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

# ***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**

# ***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>x</button>
```



# ARIA-LABEL

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

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



# ARIA-LABELLED BY

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

```
.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**



**LOW CONTRAST TEXT**

**79,1%**

**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  $\approx$  24PX

14PT BOLD  $\approx$  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  $R_{sRGB} \leq 0.04045$  then  $R = R_{sRGB}/12.92$  else  $R = ((R_{sRGB}+0.055)/1.055) ^ 2.4$

if  $G_{sRGB} \leq 0.04045$  then  $G = G_{sRGB}/12.92$  else  $G = ((G_{sRGB}+0.055)/1.055) ^ 2.4$

if  $B_{sRGB} \leq 0.04045$  then  $B = B_{sRGB}/12.92$  else  $B = ((B_{sRGB}+0.055)/1.055) ^ 2.4$

and  $R_{sRGB}$ ,  $G_{sRGB}$ , and  $B_{sRGB}$  are defined as

$$R_{sRGB} = R_{8bit}/255$$

$$G_{sRGB} = G_{8bit}/255$$

$$B_{sRGB} = B_{8bit}/255$$

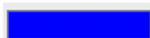


# COLOR CONTRAST CHECKERS

## Contrast Checker

[Home](#) > [Resources](#) > Contrast Checker

**Foreground Color**

#0000FF 

Lightness 

↔

**Background Color**

#FFFFFF 

Lightness 

Contrast Ratio

**8.59:1**

## WCAG - Contrast checker

Documents: NASA Astronaut to Discuss American ...

Level: AA | color-blindness: none | Auto-refresh: on

✗ 1.88	small	1	title	
✗ 3.63	small	21	a	
✗ 4.04	small	55	a	
✗ 4.04	small	7	span	
✓ 5.2	small	7	a	
✓ 5.78	small	1	a	
✓ 7.46	small	7	div	
✓ 9.69	small	1	div	
12.28	small	1		

83 visible | 62 hidden

check contrast

Foreground color (hex.): #000000 | Background color (hex.): #FFFFFF

Size	Contrast	AA	AAA
small	21	✓	✓
Large	21	✓	✓

## Colour Contrast Analyser (CCA)

Foreground colour: #FCFCFC

Background colour: #46E662

example text showing contrast 

WCAG 2.1 results | Contrast ratio: 1.6:1

- ▶ 1.4.3 Contrast (Minimum) (AA)
  - ✗ Fail (regular text)
  - ✗ Fail (large text)
- ▶ 1.4.6 Contrast (Enhanced) (AAA)
  - ✗ Fail (regular text)
  - ✗ Fail (large text)
- ▶ 1.4.11 Non-text Contrast (AA)
  - ✗ Fail (UI components and graphical objects)

## COLOR SELECTION

SEE GRAYSCALE | SHARE SAMPLE | RESET

FOREGROUND: 407A6D | Sample 12px

BACKGROUND: FFFFFFFF | Sample 18px

GET FROM IMAGE | RATIO: 4.97 | ADD TO HISTORY

# COLOR CONTRAST CHECKERS

## Contrast Checker

Home > Resources > Contrast Checker

**Foreground Color**  
#0000FF

**Background**  
#FFFFFF

Lightness

Contrast Ratio  
**8.59:1**

**h2.openText\_\_title** 188.93 x 26

Color #202020

Font 26px RobotoCondensed, "Trebuchet ...

Margin 21.58px 0px 30px

ACCESSIBILITY

**Contrast** Aa 16.29 ✓

Name TEASER TRAILER

Role heading

Keyboard-focusable

## COLOR SELECTION

FOREGROUND  
407A6D

BACKGROUND  
FFFFFF

Sample 12px

Sample 18px

GET FROM IMAGE

RATIO: 4.97

+ ADD TO HISTORY

## Colour Contrast Analyser (CCA)

Foreground colour  
HEX #FCFCFC

Background colour  
HEX #46E662

Sample preview  
example text showing contrast

WCAG 2.1 results  
Contrast ratio 1.6:1

- ▶ 1.4.3 Contrast (Minimum) (AA)
  - ✗ Fail (regular text)
  - ✗ Fail (large text)
- ▶ 1.4.6 Contrast (Enhanced) (AAA)
  - ✗ Fail (regular text)
  - ✗ Fail (large text)
- ▶ 1.4.11 Non-text Contrast (AA)
  - ✗ Fail (UI components and graphical objects)



## TEASER TRAILER

MARVEL Captain America: Brave New World | Official Teaser | In Theaters February 14, 2025

MARVEL STUDIOS  
**CAPTAIN AMERICA**  
BRAVE NEW WORLD

Later bekij... Delen

**OFFICIAL TEASER**

# ***FIFTY SHADES OF GREY***



# ***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***

EMAIL

**SUBMIT**

# DEUTERANOPIA

A screenshot of a web browser window titled "Deuteranopia". The page contains the word "EMAIL" at the top, followed by a text input field with a yellow border, and a black "SUBMIT" button below it.

A second screenshot of the same "Deuteranopia" browser window, showing the "EMAIL" form with a yellow border and a "SUBMIT" button.

# MONOCHROMACY

A screenshot of a web browser window titled "Monochromacy". The page contains the word "EMAIL" at the top, followed by a text input field with a grey border, and a black "SUBMIT" button below it.

A second screenshot of the same "Monochromacy" browser window, showing the "EMAIL" form with a grey border and a "SUBMIT" button.

# DEUTERANOPIA

Deuteranopia

EMAIL

⚠

SUBMIT

Deuteranopia

EMAIL

✓

SUBMIT

# MONOCHROMACY

Monochromacy

EMAIL

✓

SUBMIT

Monochromacy

EMAIL

⚠

SUBMIT

# ***ALT TEXT***

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



**MISSING ALTERNATIVE TEXT**

**18,5%**

**The WebAIM Million**

<https://webaim.org/projects/million/>



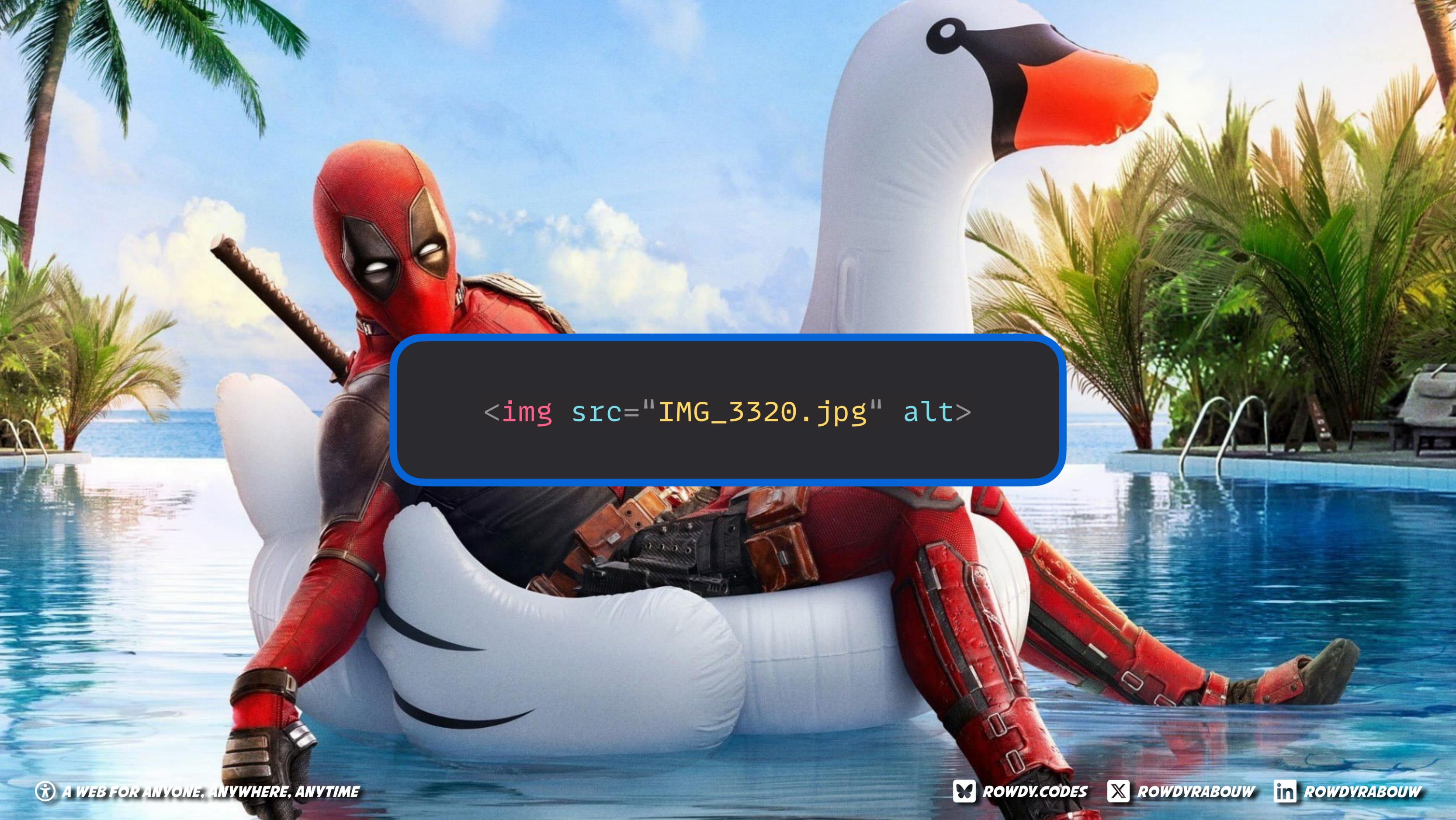
```

```



```

```



```

```



```
header {  
  background-image: url("IMG_3320.jpg");  
  background-size: cover;  
}
```

# ***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



Y And (S) M I A S H E I N G C A S O U N D (S) y n e e !

# **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

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

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

```
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

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>
```

```
.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;  
}
```

```
.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;  
}
```

# ***REDUCE MOTION***

**STOP MAKING PEOPLE WITH MOTION SENSITIVITIES SICK**

unicef [Donate to support families affected by the war in Ukraine](#)

# MacBook Air

Supercharged by 

Available next month

[Learn more >](#) [View pricing >](#)



```
.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>
```

# ***UNDERSTANDABLE***

# ***LANG ATTRIBUTE***

SPECIFIES THE NATURAL LANGUAGE OF THE CONTENT



**MISSING DOCUMENT LANGUAGE**

**14,9%**

**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***



## MISSING FORM INPUT LABELS

**34,2%**

**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***

**DATE OF BIRTH**

DD-MM-YYYY

- HARD TO READ
- HARD TO REMEMBER

# PLACEHOLDER ATTRIBUTE

**DATE OF BIRTH**

Format: DD-MM-YYYY



# PLACEHOLDER ATTRIBUTE

CREDIT CARD NUMBER

XXXX XXXX XXXX XXXX



Sara Soueidan

*Uncle Ben*  
*Benjamin "Ben" Parker*





Stan LEE  
1922 - 2018

rowdy.codes/a11y



**MERCI BEAUCOUP**