



PROFESSOR X

paraplegic



DAREDEVIL

blind



THE WINTER SOLDIER

prosthetic arm



DOCTOR STRANGE

extensive nerve damage

HAWKEYE

deaf





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**

WE ARE ALL JUST TEMPORARILY ABLED

Cindy Li
1975 - 2018



ROWDY RABOUW

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

Webdeveloper since 1996

Google Developer Expert in Web Technologies

❤️ superhero and superheroine movies



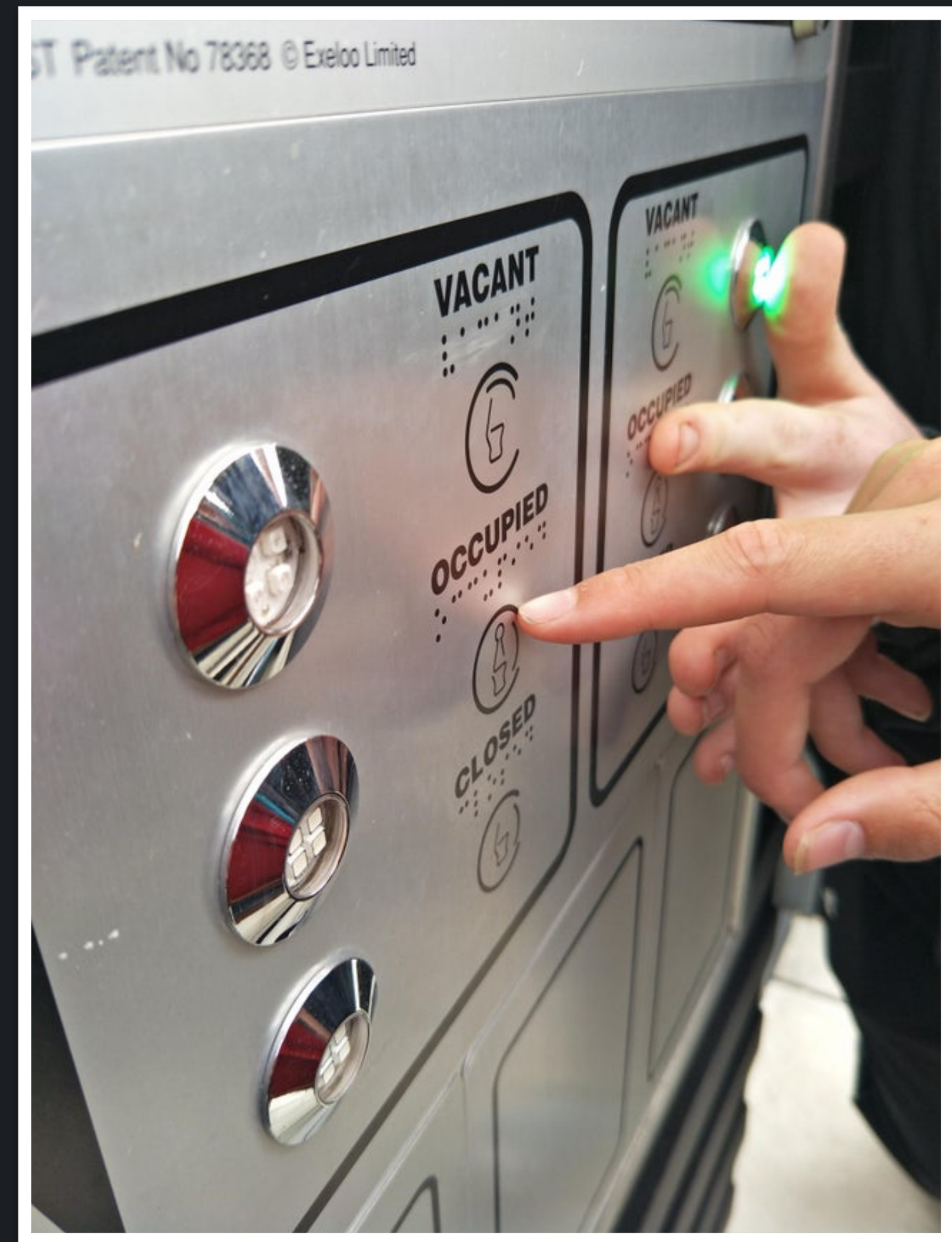
ACCESSIBILITY

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

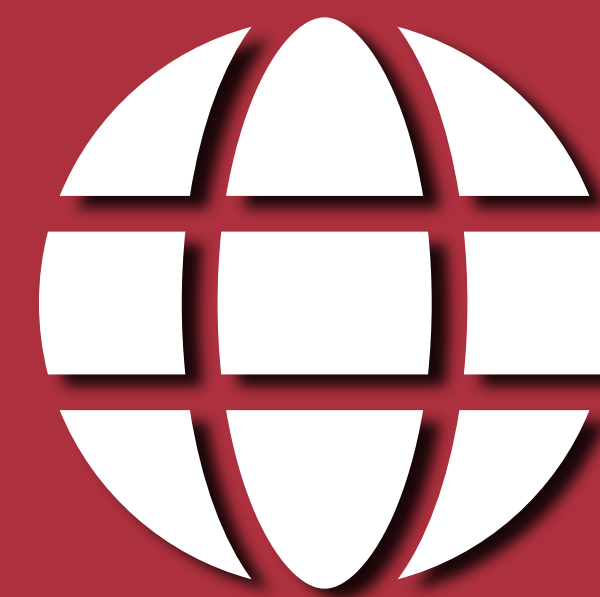
UNDERSTANDABLE

PEOPLE MUST BE ABLE TO UNDERSTAND YOUR WEBSITE

ROBUST

YOUR WEBSITE MUST WORK WITH DIFFERENT AND FUTURE TECHNOLOGIES

ROBUST





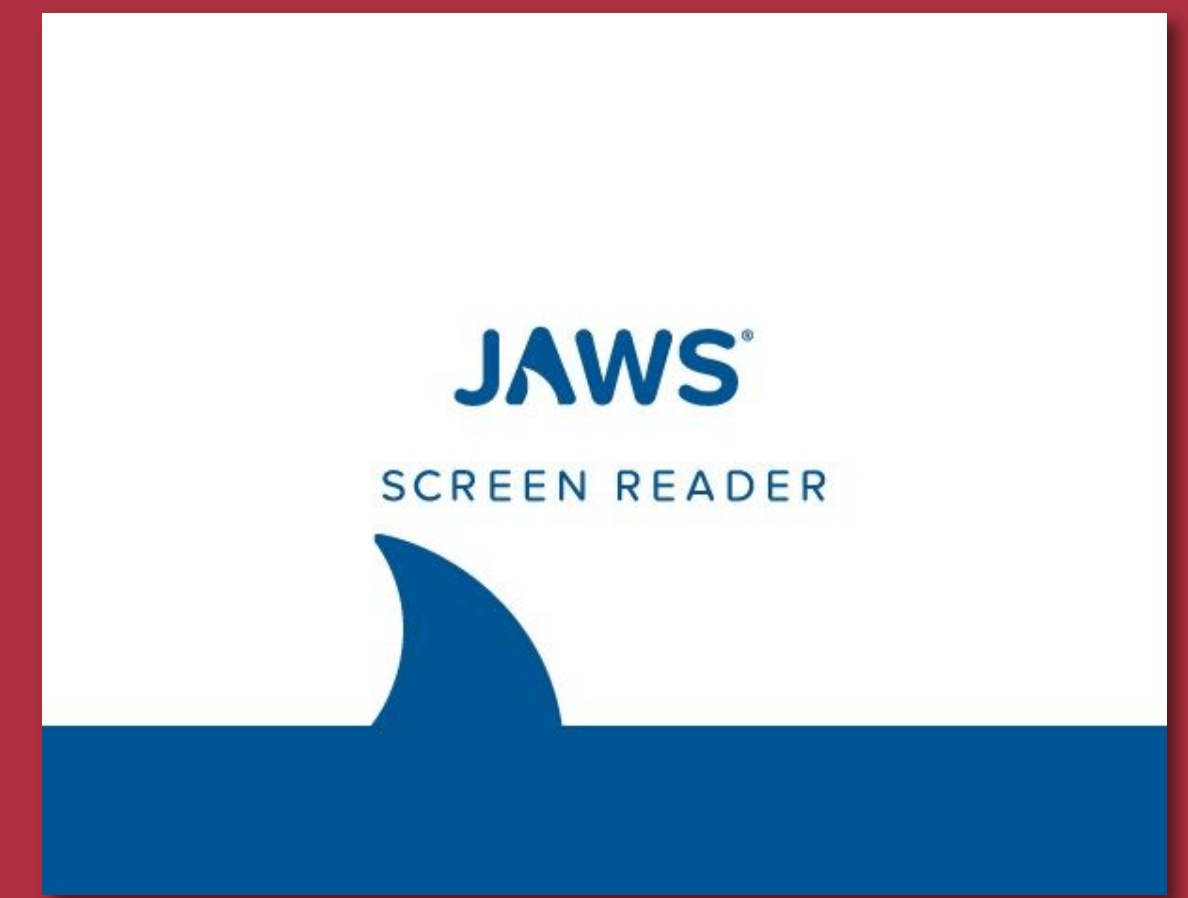
VoiceOver with Safari
(macOS)



Narrator with Edge
(Windows)



NVDA with Firefox
(Windows)



JAWS with Chrome
(Windows)



VoiceOver with Safari
(iOS)



TalkBack with Chrome
(Android)



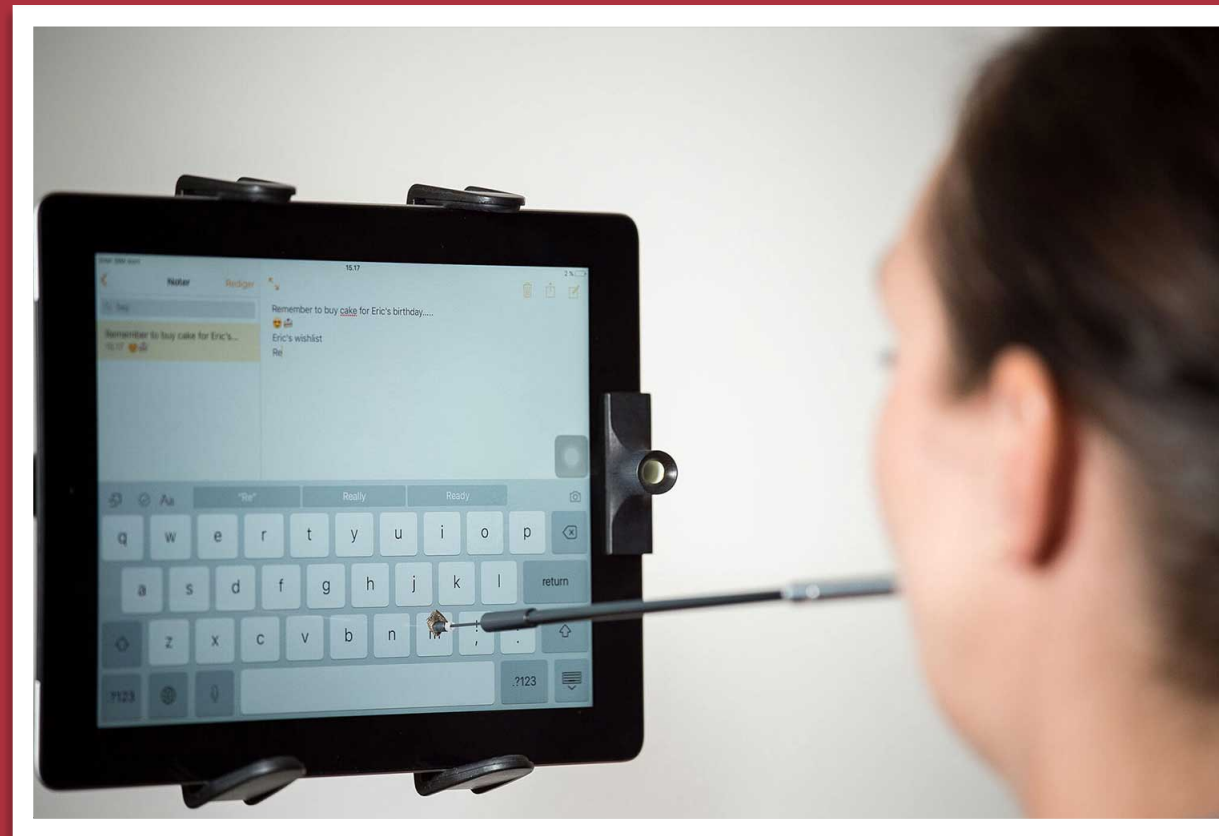
ChromeVox with Chrome
(ChromeOS)



Orca with Firefox
(Ubuntu)



sip-and-puff



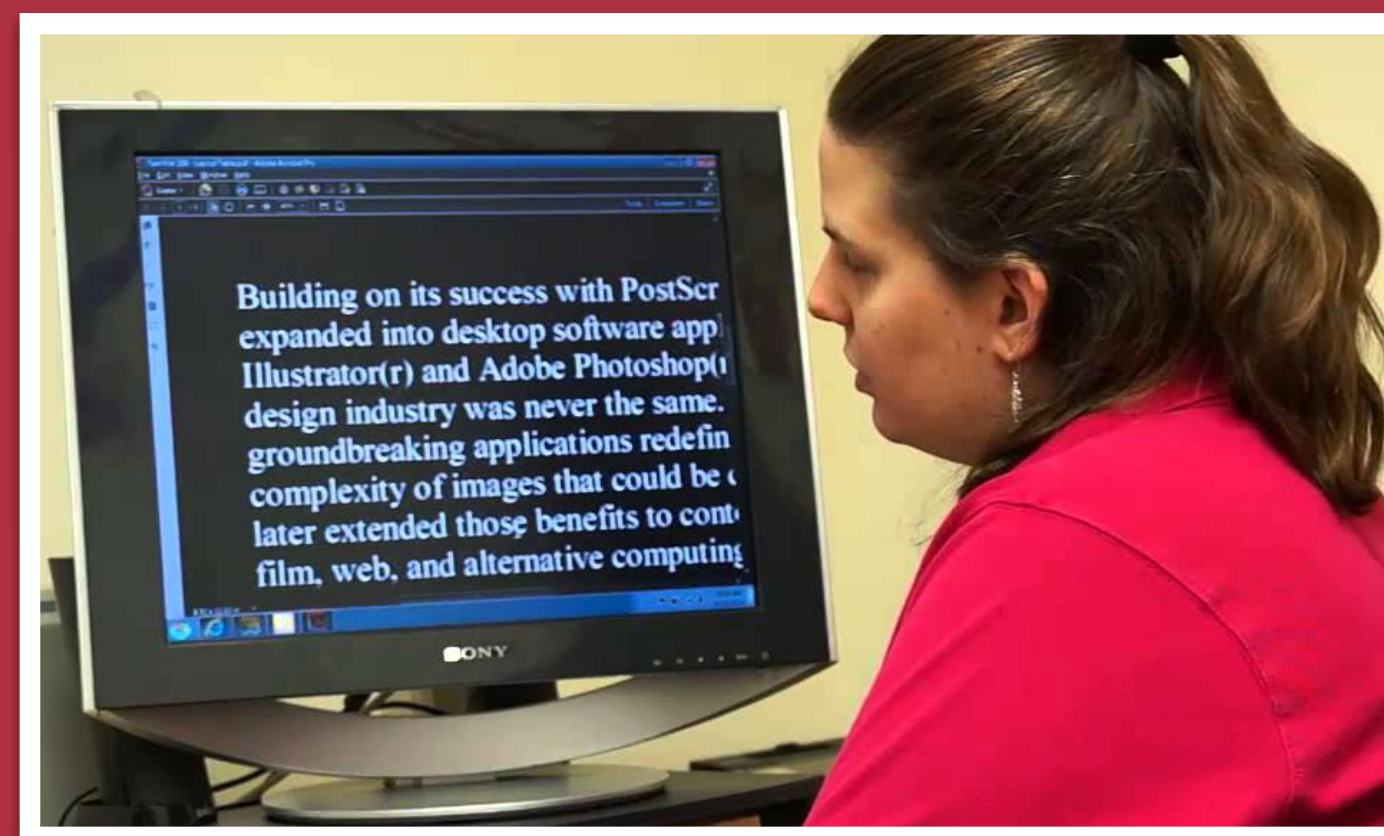
tubusOne



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>
```




Manuel Matuzovic







A DIV IS NOT A BUTTON

EMAIL

SUBMIT


```
<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"
    >Submit</div>
</form>

<script>
```

NEEDS TO LISTEN TO A CLICK EVENT

```
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



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

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

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

DocumentsNASA Astronaut to Discuss American ...

LevelAAcolor-blindnessnoneAuto-refreshon

✗ 1.88small1 title

✗ 3.63small21 a

✗ 4.04small55 ▶a

✗ 4.04small7 span

✓ 5.2small7 a

✓ 5.78small1 a

✓ 7.46small7 div

✓ 9.69small1 div

12.28small1 a

83 visible62 hidden

check contrast

Foreground color (hex.)#000000

Background color (hex.)#FFFFFF

14pt14pt bold18pt

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

Colour Contrast Analyser (CCA)

Foreground colour

HEX#FCFCFC

Background colour

HEX#46E662

Sample preview

example text showing contrast

WCAG 2.1 results

Contrast ratio1.6:1

▶ 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 GRAYSCALESHARE SAMPLERESET

FOREGROUND

407A6D

BACKGROUND

FFFFFF

Sample12px

Sample18px

GET FROM IMAGE

RATIO: 4.97

ADD TO HISTORY

 A WEB FOR ANYONE, ANYWHERE, ANYTIME

 ROWDY.CODES  ROWDYRABOUW  ROWDYRABOUW

COLOR CONTRAST CHECKERS

Contrast Checker

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

Foreground Color

#0000FF

Lightness

Background

#FFFFFF

Lightness

Contrast Ratio

8.59:1

COLOR SELECTION

FOREGROUND	Sample	12px	Lorem ipsum d tempor incidu
BACKGROUND	Sample	18px	Lorem ipsa am conset et conset et et conset et et conset et et

GET FROM IMAGE

RATIO: 4.97

+ ADD TO HISTORY

TEASER TRAILER

h2.openText__title

Color

#202020

Font 26px RobotoCondensed, "Trebuchet ...

Margin 21.58px 0px 30px

ACCESSIBILITY

Contrast

Aa 16.29

✓

Name

TEASER TRAILER

Role

heading

Keyboard-focusable

⊘

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)

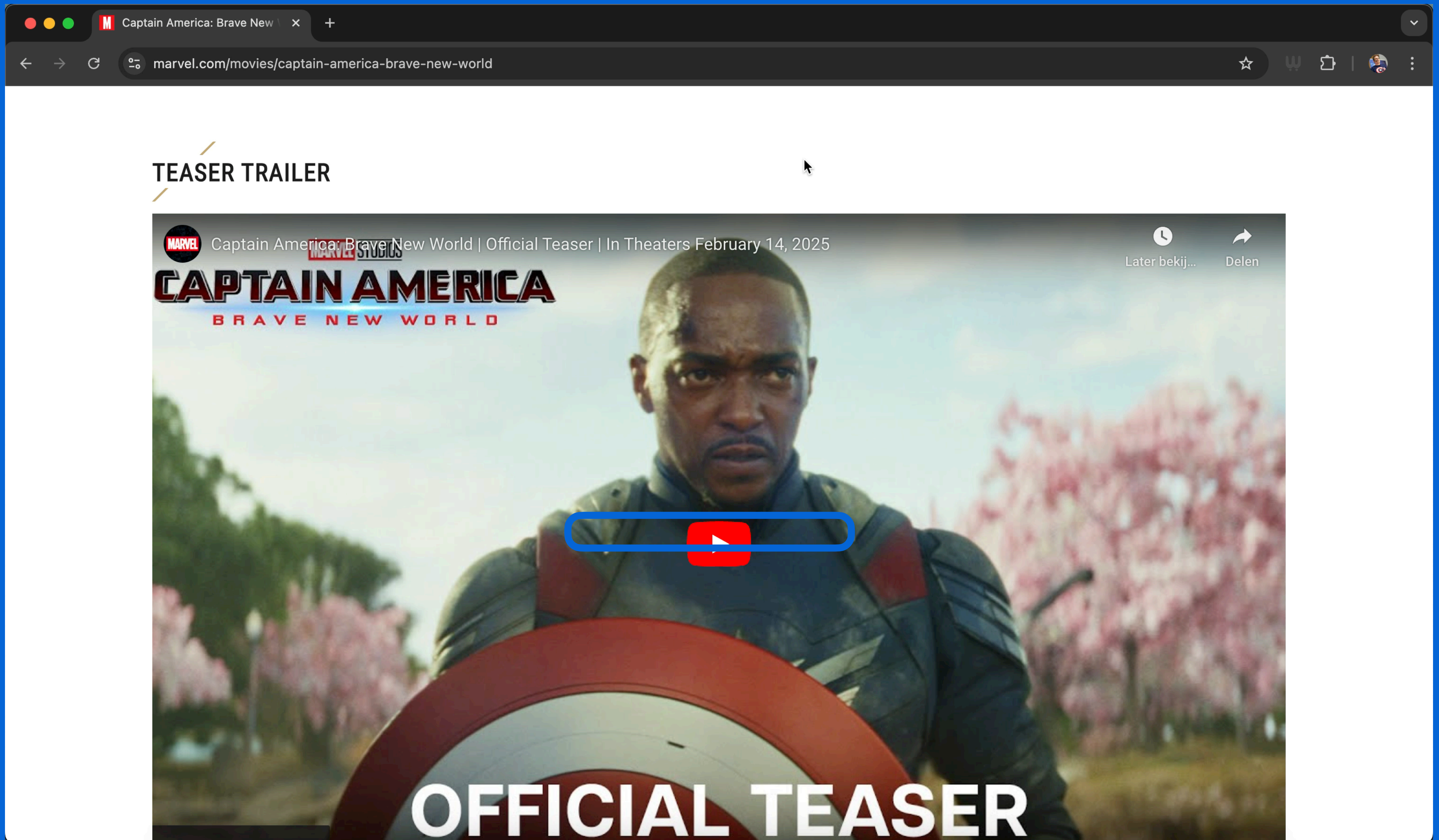
✗ Fail (regular text) ✗ Fail (large text)

▶ 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)



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

Deuteranopia

EMAIL

SUBMIT

Deuteranopia

EMAIL

SUBMIT

MONOCHROMACY

Monochromacy

EMAIL

SUBMIT

Monochromacy

EMAIL

SUBMIT

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/>



```

```



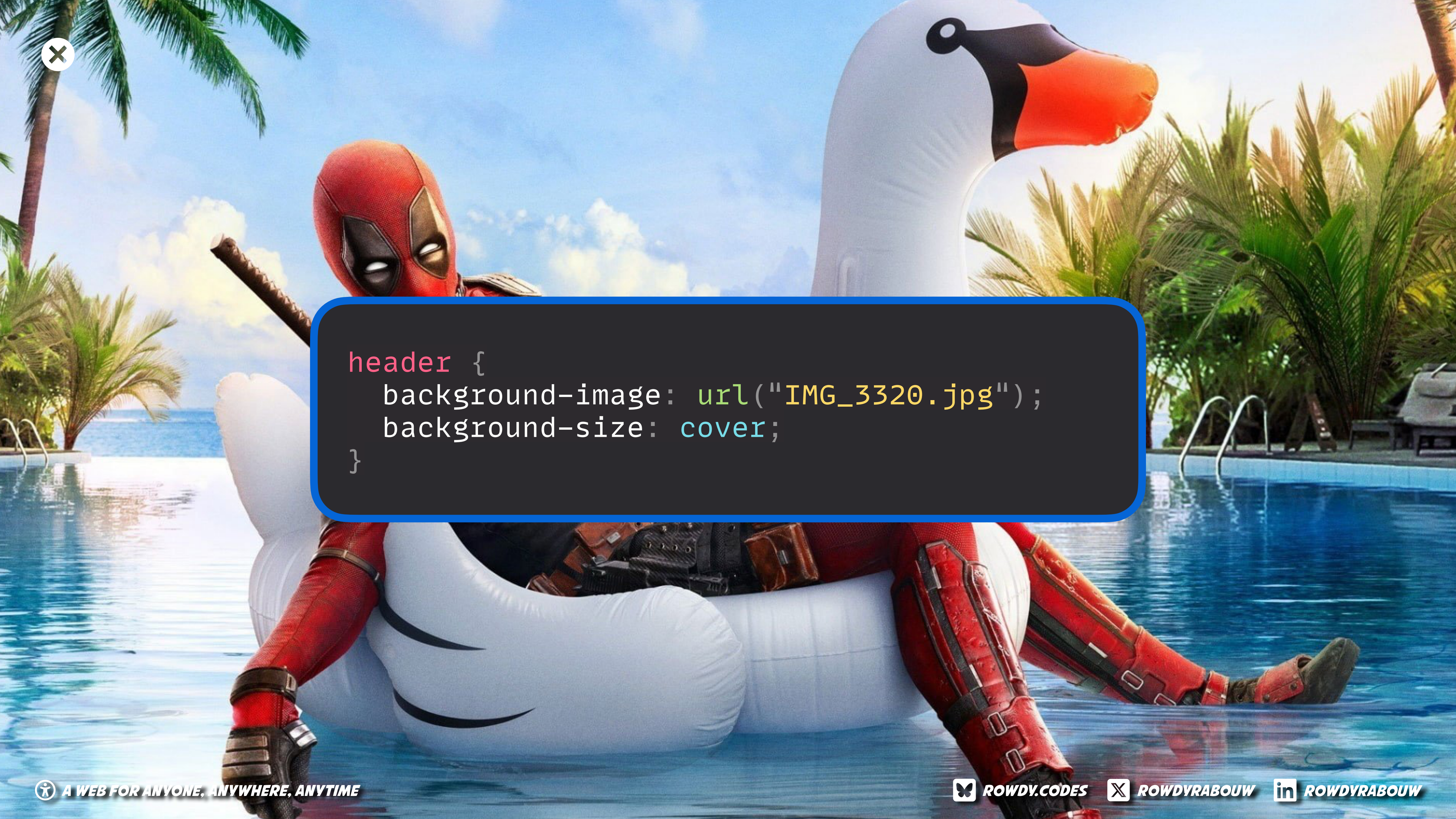

```

```




```

```


A full-page background image showing Deadpool in his red and black suit floating on a large white inflatable swan in a tropical swimming pool. The swan has a black and orange beak. The pool is surrounded by palm trees and a clear blue sky. A dark blue semi-transparent box with a blue border is centered over the image, containing CSS code. A small white circle with a black 'X' is in the top left corner.

```
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 A S H E N I G A S O U N D S) ynee!

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



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

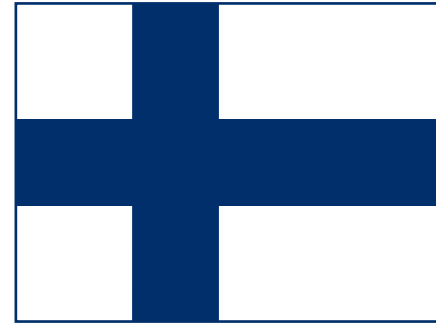
```
@font-face {  
  font-family: "cairo-regular";  
  src: url("/assets/fonts/cairo.woff") format("woff");  
}  
  
:lang(ar) {  
  font-family: "cairo-regular", serif;  
  direction: rtl;  
}
```


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

Stan LEE
1922 - 2018



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GRAZIE MILLE