



DAREDEVIL

blind

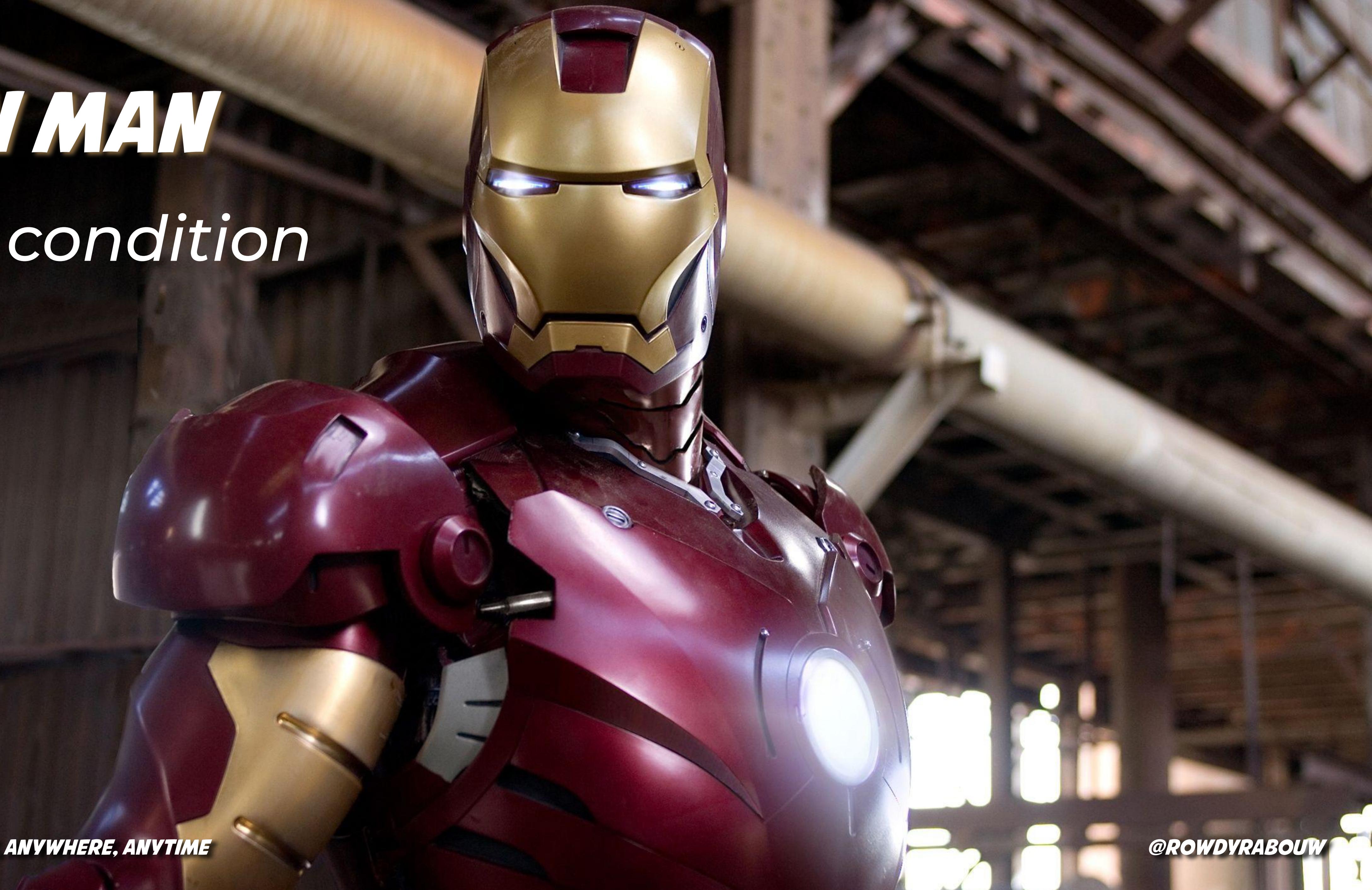


A WEB FOR ANYONE, ANYWHERE, ANYTIME

@ROWDVRABOUW

IRON MAN

heart condition



HAWKEYE

deaf



					
Permanent	Touch 	See 	Hear 	Speak 	Cognitive 
Temporary	One arm 	Blind 	Deaf 	Non-verbal 	ADHD/ concentration difficulties 
Situational	Carry a baby or a computer 	Sun on screen 	Noisy surroundings 	Heavy accent 	Fatigue / depression 

WE ARE ALL JUST TEMPORARILY ABLED



Cindy Li
1975 - 2018

ROWDY RABOUW

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

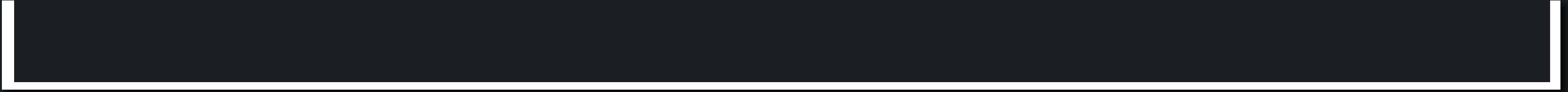
Webdeveloper since 1996

Google Developer Expert in Web Technologies

♥ superhero and superheroine movies



ACCESSIBILITY



11 CHARACTERS

A11Y

NUMERONYM FOR ACCESSIBILITY

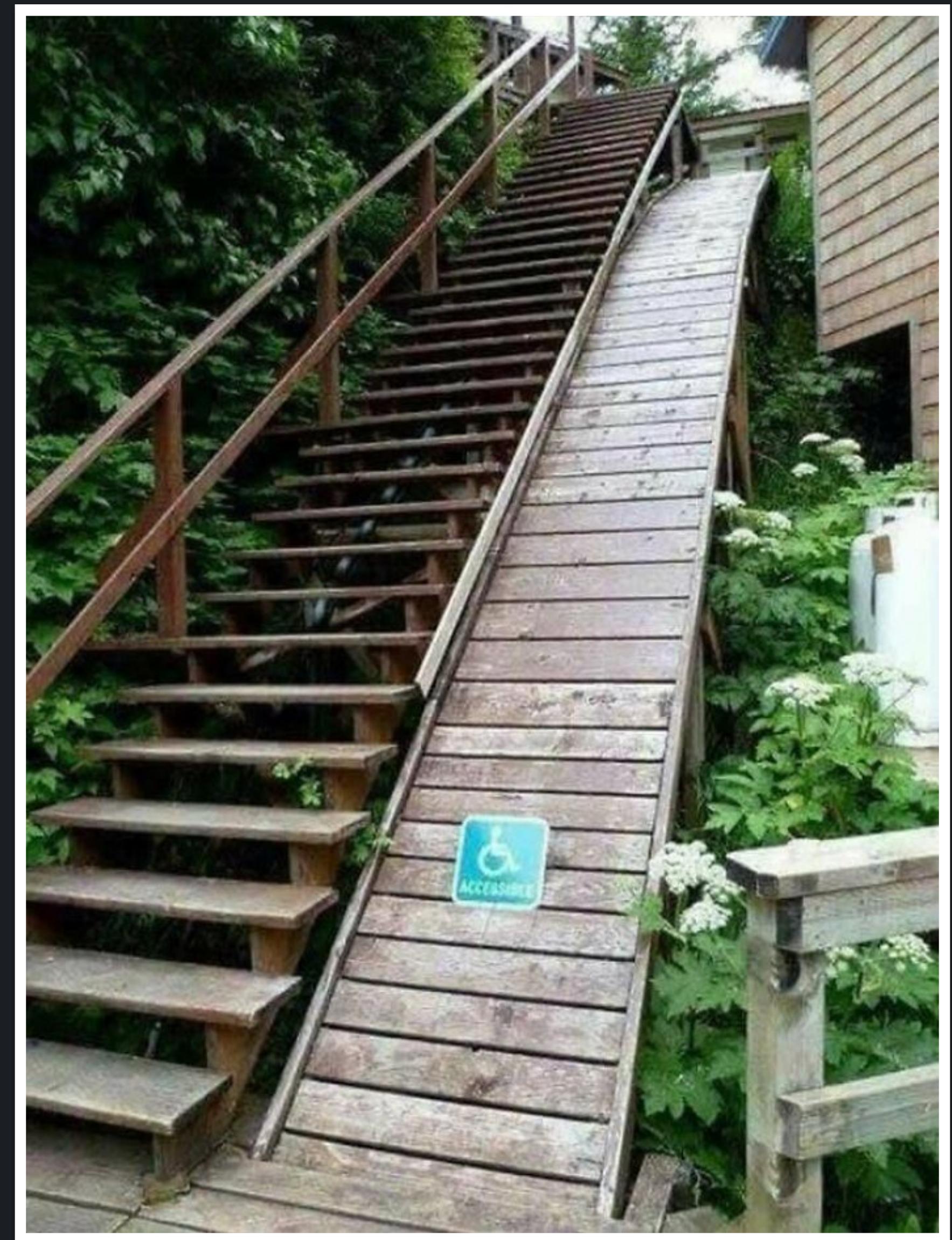
A1AV IRL

A WEB FOR ANYONE, ANYWHERE, ANYTIME

@ROWDVRABOUW







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

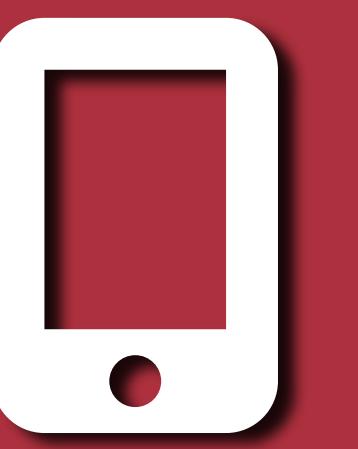
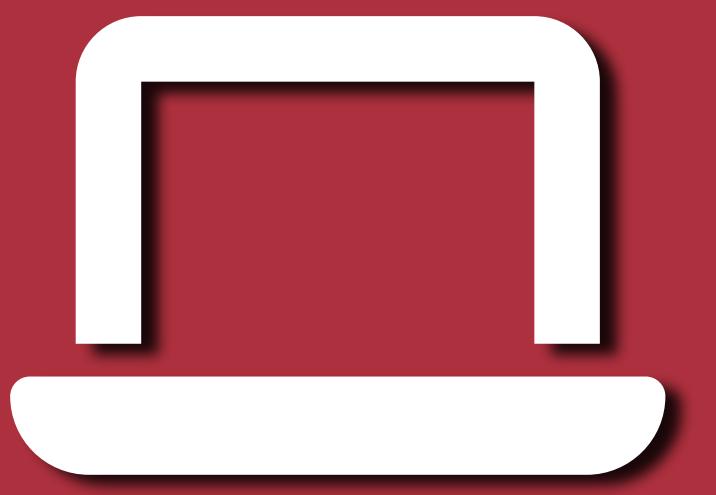
UNDERSTANDABLE

PEOPLE MUST BE ABLE TO UNDERSTAND YOUR WEBSITE

ROBUST

YOUR WEBSITE MUST WORK WITH DIFFERENT AND FUTURE TECHNOLOGIES

ROBUST

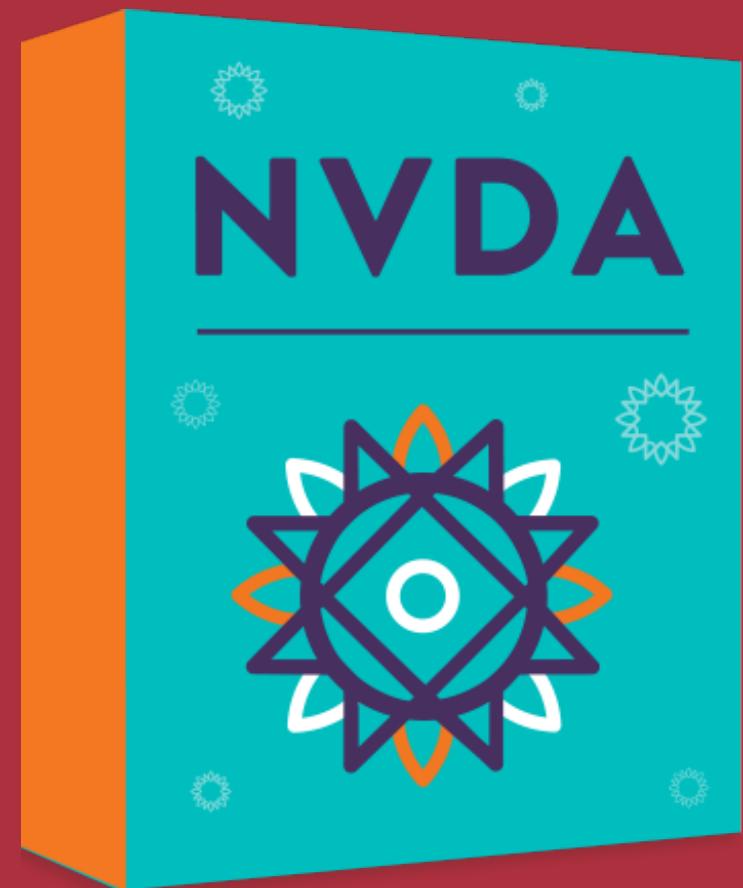




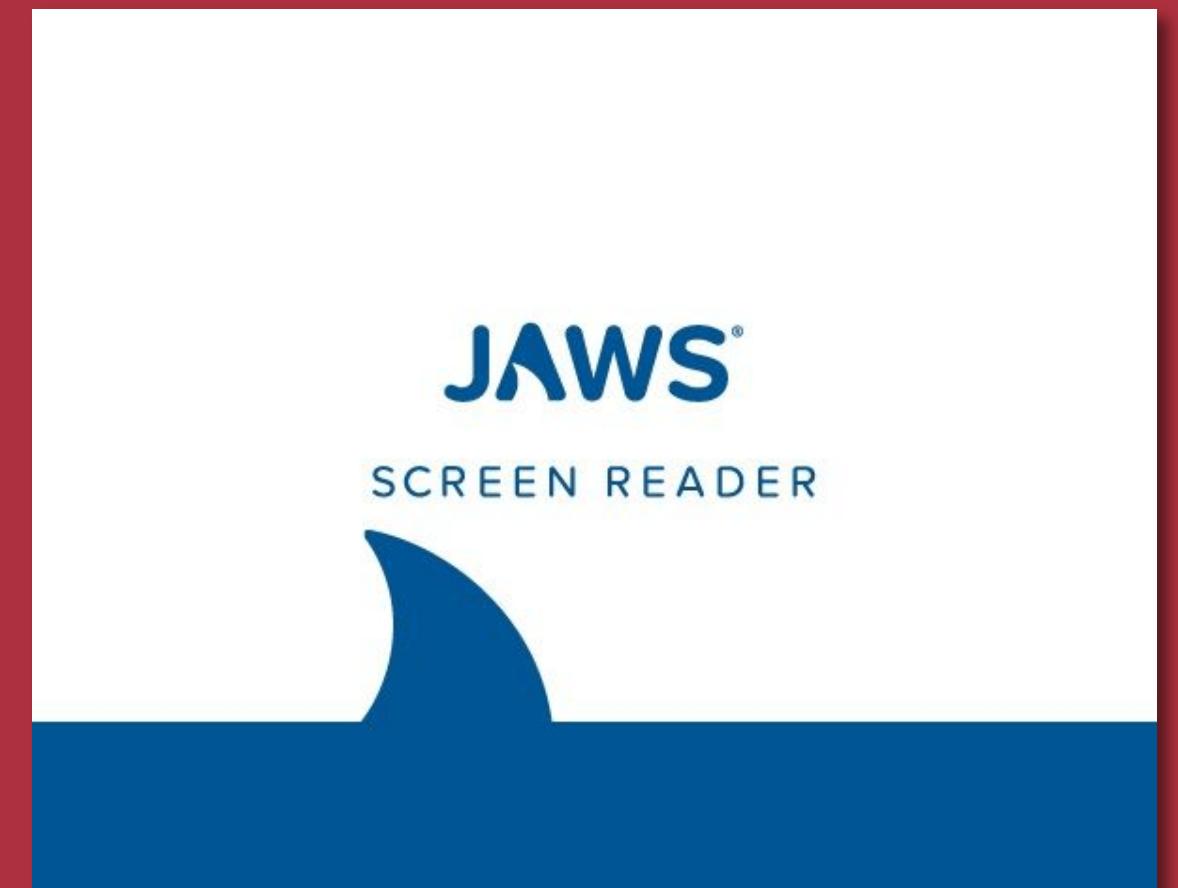
VoiceOver with Safari
(macOS)



Narrator with Edge
(Windows)



NVDA with Firefox
(Windows)



JAWS with Chrome
(Windows)



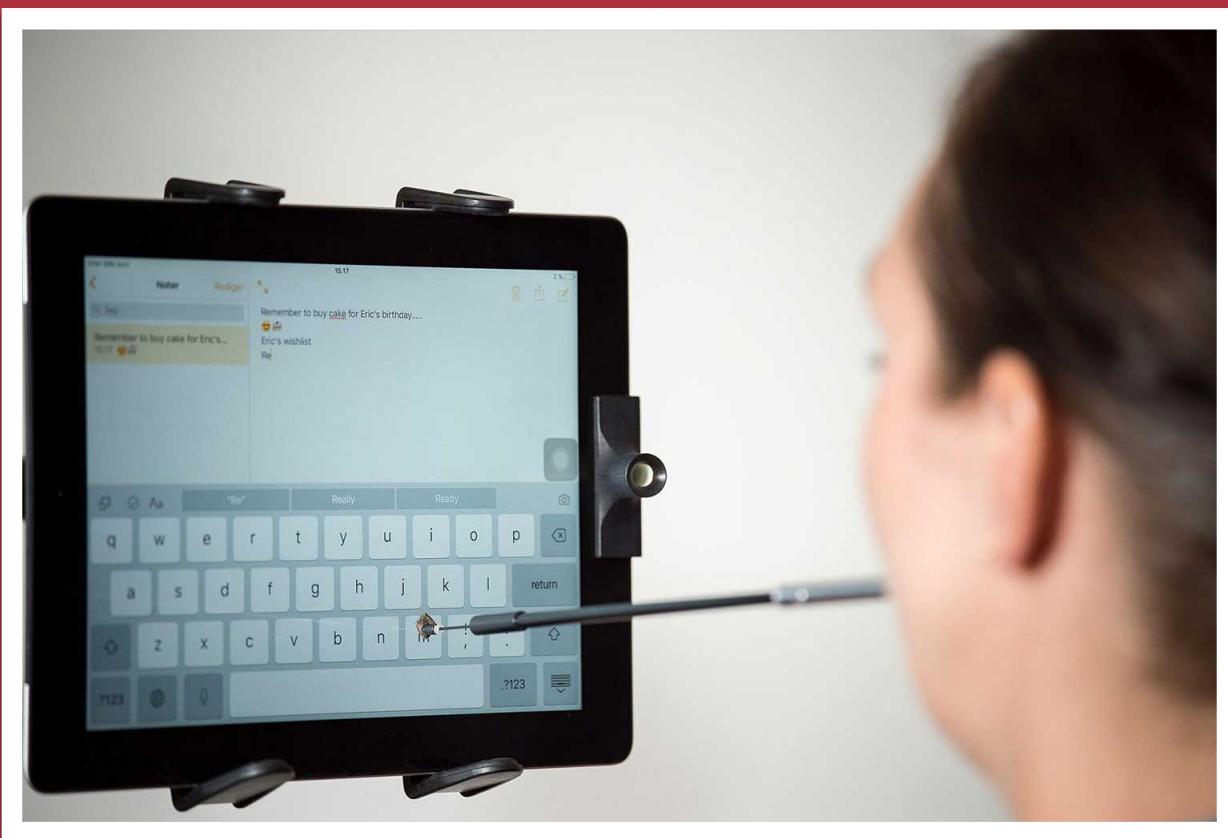
VoiceOver (iOS)



TalkBack (Android)



sip-and-puff



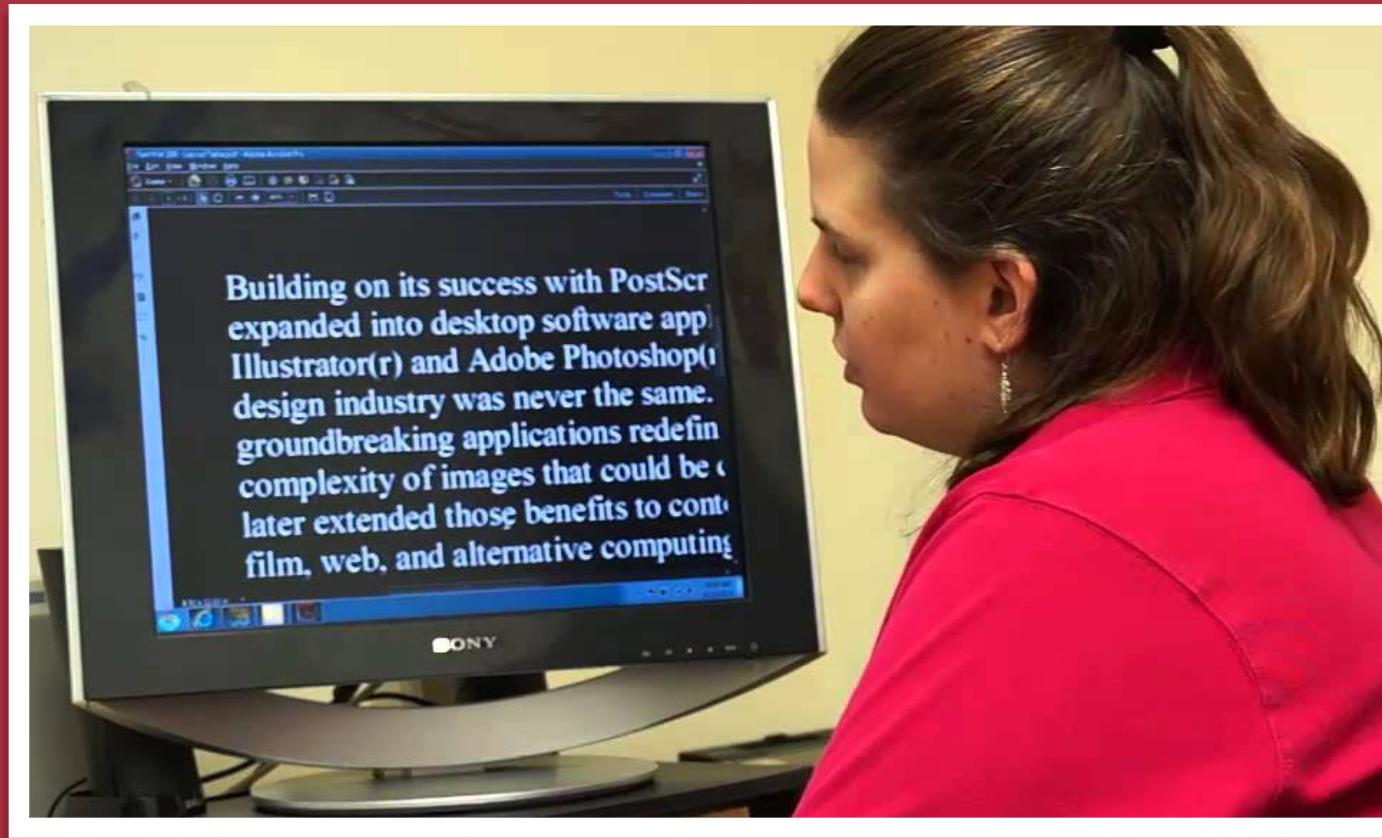
tubusOne



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 WEB FOR ANYONE, ANYWHERE, ANYTIME



@ROWDVRABOUW







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>
```

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

<script>
```

NEEDS TO SUBMIT THE FORM

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

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

NEEDS TO BE FOCUSABLE

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

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

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

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();
};
```

```
<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>
```

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

A DIV IS NOT
A BUTTON



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-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-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

```
.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

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

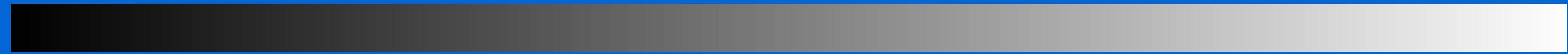
LARGE TEXT OR BOLD TEXT SHOULD HAVE A MINIMUM RATIO OF 3:1

18PT ≈ 24PX

14PT BOLD ≈ 18.5PX

RELATIVE LUMINANCE

RELATIVE BRIGHTNESS OF ANY POINT IN A COLORSPACE



0

$$(L_1 + 0.05) / (L_1 + 0.05)$$

1

**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

$$\text{if } RsRGB \leq 0.04045 \text{ then } R = RsRGB/12.92 \text{ else } R = ((RsRGB+0.055)/1.055)^{2.4}$$

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

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

and RsRGB, GsRGB, and BsRGB are defined as

$$RsRGB = R8bit/255$$

$$GsRGB = G8bit/255$$

$$BsRGB = B8bit/255$$



A WEB FOR ANYONE, ANYWHERE, ANYTIME

@ROWDYRABOUW

COLOR CONTRAST CHECKERS

Contrast Checker

Home > Resources > Contrast Checker

Foreground Color
#0000FF 
Lightness 

Background Color
#FFFFFF 
Lightness 

Contrast Ratio
8.59:1

COLOR SELECTION

FOREGROUND: #407A6D 
BACKGROUND: #FFFFFF 

Sample 12px: Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy 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.

Sample 18px: Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy 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.

SEE GRayscale  SHARE SAMPLE  RESET 

GET FROM IMAGE RATIO: 4.97 + ADD TO HISTORY

WCAG - Contrast checker

Documents: NASA Astronaut to Discuss American ...

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

Result	Type	Value	Label	Details
✗ 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	
✓ 12.29	small	1	div	

83 visible, 62 hidden

check contrast

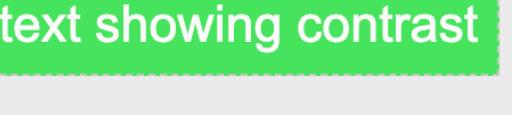
Foreground color (hex.): #000000  Background color (hex.): #FFFFFF 

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

Colour Contrast Analyser (CCA)

Foreground colour: #FCFCFC 

Background colour: #46E662 

Sample preview: example text showing contrast 

WCAG 2.1 results: Contrast ratio 1.6:1

Test	Result
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 CONTRAST CHECKERS

Contrast Checker

Home > Resources > Contrast Checker

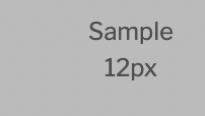
Foreground Color
#0000FF 
Lightness 

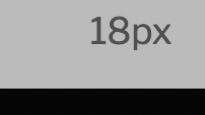
Background
#FFFFFF 
Lightness 

Contrast Ratio
8.59:1

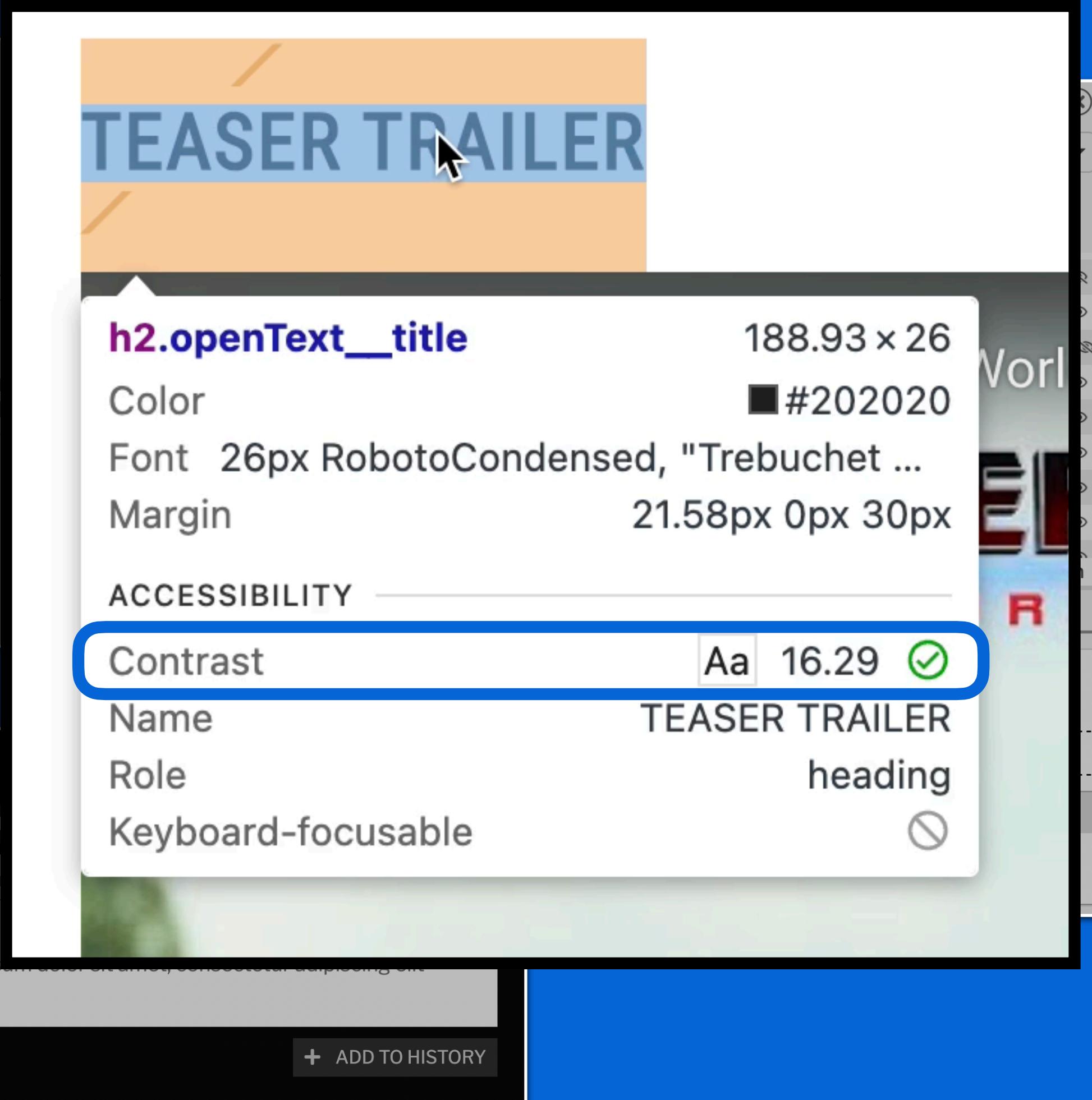
COLOR SELECTION

FOREGROUND: #407A6D 
BACKGROUND: #FFFFFF 

Sample 12px 
Lorem ipsum dolor sit amet, consectetur adipiscing elit.

Sample 18px 
Lorem ipsum dolor sit amet, consectetur adipiscing elit.

GET FROM IMAGE RATIO: 4.97 + ADD TO HISTORY



The screenshot shows a web-based color contrast checker interface. On the left, there's a preview of a section with the heading "TEASER TRAILER". A tooltip or analysis box is overlaid on the heading text, providing detailed information:

- h2.openText__title**
- Color: #202020
- Font: 26px RobotoCondensed, "Trebuchet ..."
- Margin: 21.58px 0px 30px
- ACCESSIBILITY**
- Contrast:** Aa 16.29 (checkmark)
- Name: TEASER TRAILER
- Role: heading
- Keyboard-focusable: 

The "Contrast" entry in the accessibility table is highlighted with a blue border.

Colour Contrast Analyser (CCA)

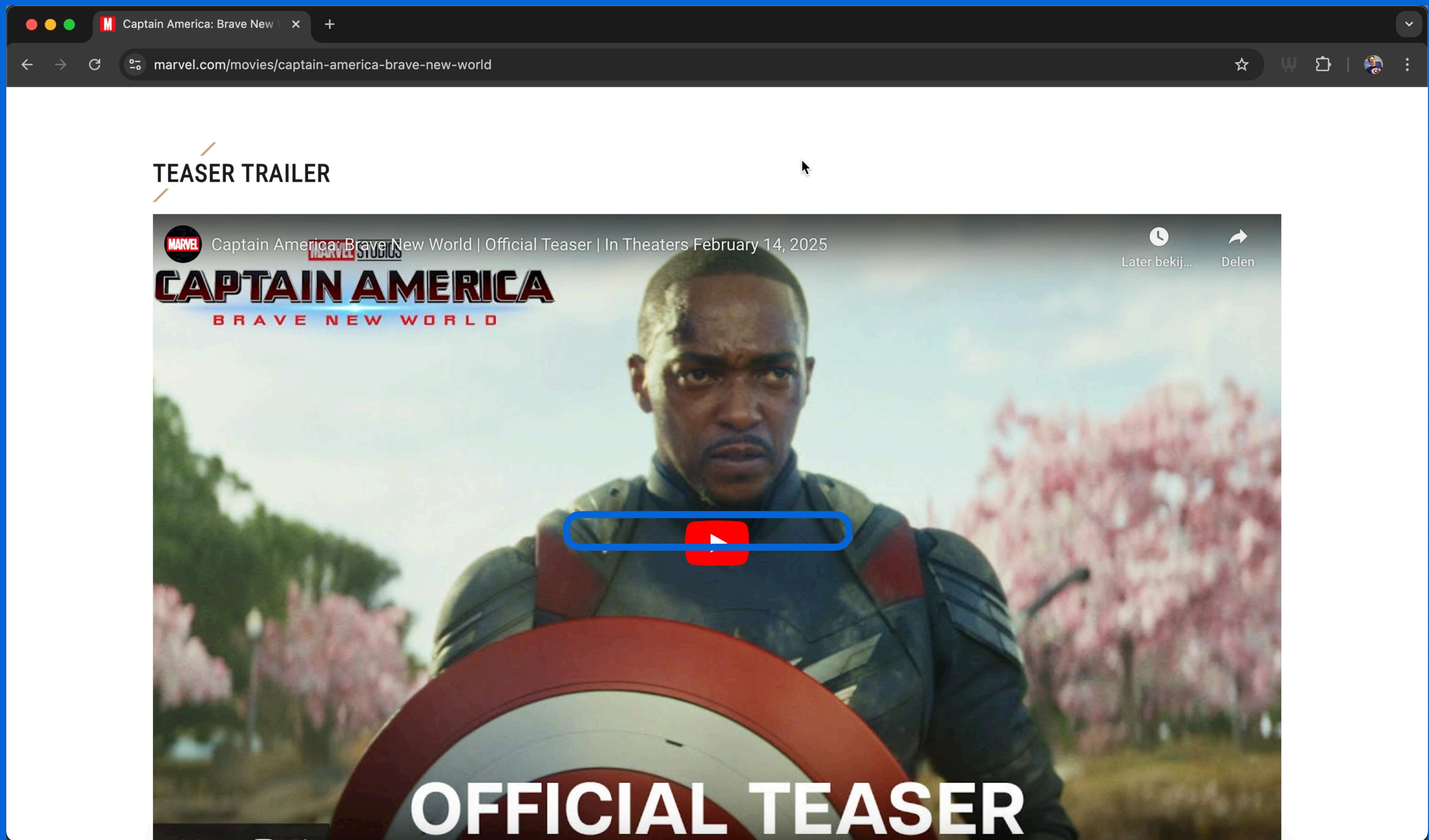
Foreground colour: #FCFCFC
Background colour: #46E662

▼ 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

A screenshot of a web browser window titled "Deuteranopia". The interface includes a "EMAIL" label above a text input field with a gold border, and a "SUBMIT" button below it.

MONOCHROMACY

A screenshot of a web browser window titled "Monochromacy". The interface includes a "EMAIL" label above a text input field with a grey border, and a "SUBMIT" button below it.

A screenshot of a web browser window titled "Deuteranopia". The interface includes a "EMAIL" label above a text input field with a gold border, and a "SUBMIT" button below it. This version uses color-coded UI elements to aid users with color vision deficiencies.

A screenshot of a web browser window titled "Monochromacy". The interface includes a "EMAIL" label above a text input field with a grey border, and a "SUBMIT" button below it. This version uses color-coded UI elements to aid users with color vision deficiencies.

DEUTERANOPIA

A screenshot of a web browser window titled "Deuteranopia". The page contains a form with a label "EMAIL" and a text input field. To the right of the input field is a red triangle icon containing a white exclamation mark. Below the input field is a large black button labeled "SUBMIT".

MONOCHROMACY

A screenshot of a web browser window titled "Monochromacy". The page contains a form with a label "EMAIL" and a text input field. To the right of the input field is a red triangle icon containing a white exclamation mark. Below the input field is a large black button labeled "SUBMIT".

A screenshot of a web browser window titled "Deuteranopia". The page contains a form with a label "EMAIL" and a text input field. To the right of the input field is a green circle icon containing a white checkmark. Below the input field is a large black button labeled "SUBMIT".

A screenshot of a web browser window titled "Monochromacy". The page contains a form with a label "EMAIL" and a text input field. To the right of the input field is a grey circle icon containing a white checkmark. Below the input field is a large black button labeled "SUBMIT".

ALT TEXT

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



MISSING ALTERNATIVE TEXT

54,5%

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



```

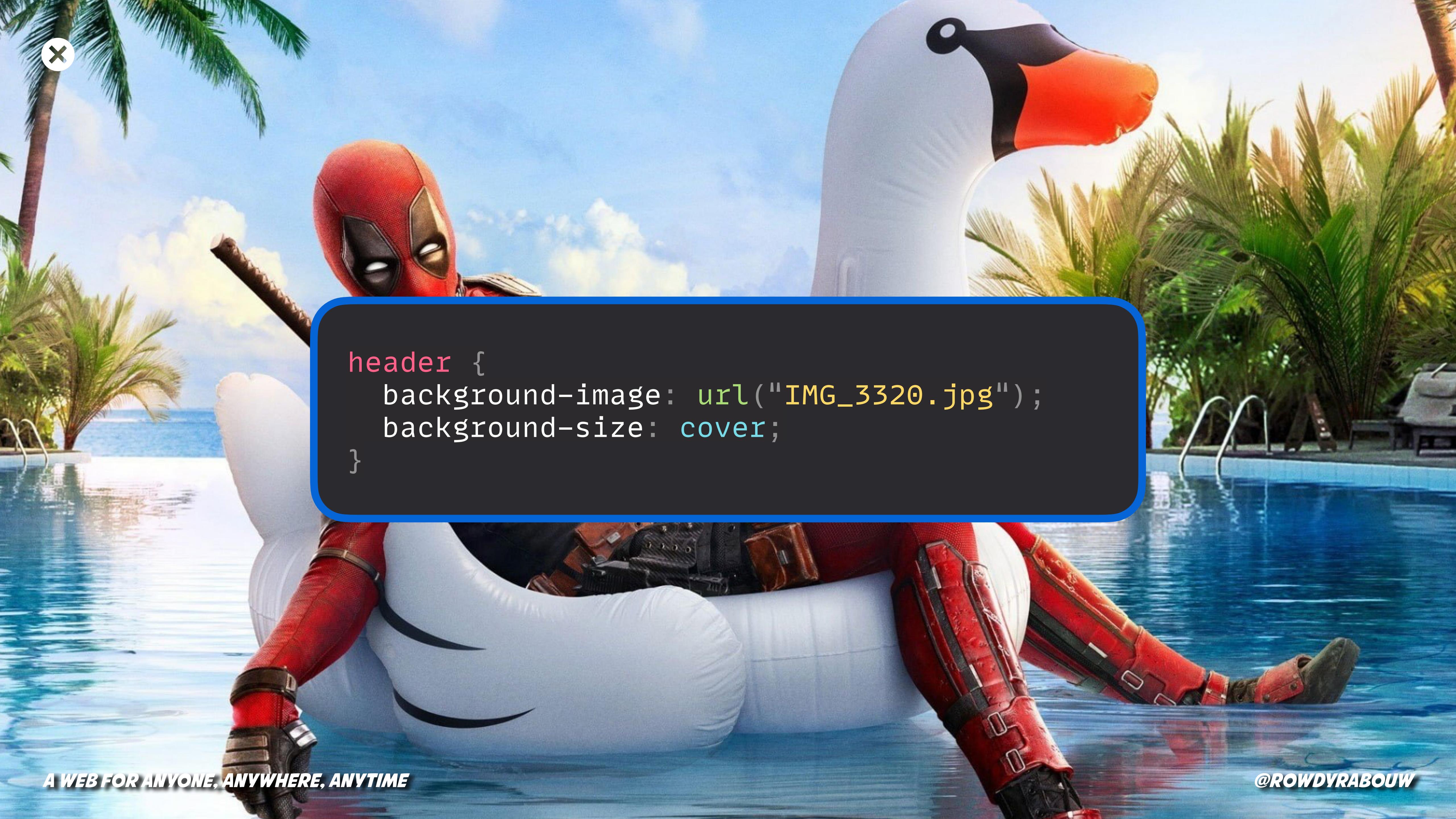
```



```

```





```
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



YIAm(SMASHINGASOUND)Yree!

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



A WEB FOR ANYONE, ANYWHERE, ANYTIME

@ROWDVRABOUW

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](#)



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pick up Mjölnir

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



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- 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

search...

Comics

Movies

Merchandise



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

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 العلي سهر الليالي

<blockquote lang="ar">من طلب العلي 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 العلي 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

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

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





WITH GREAT POWER COMES
GREAT RESPONSIBILITY

Stan Lee

1922 - 2018

rowdy.codes/webdev



DANK JE WEL!