

A WEB FOR ANYONE, ANYWHERE, ANYTIME

OSCAR — OZZY ONE-EYED

DYMKA FROSTBITE



A web for anyone, anywhere, anytime

@rowdyrabouw

TARDAR SAUCE — GRUMPY CAT

FELINE DWARFISM



LIL BUB FELINE DWARFISM



A close-up, black and white photograph of a cat's face. The cat has a white blaze running down the center of its face, starting from the forehead and ending at the mouth. The bridge of its nose is missing, creating a gap between the nostrils. The cat's eyes are partially closed, and its whiskers are prominent. The background is dark and out of focus.

MONTY MISSING NASAL BRIDGE

SCOOTER PARTIALLY PARALYSED



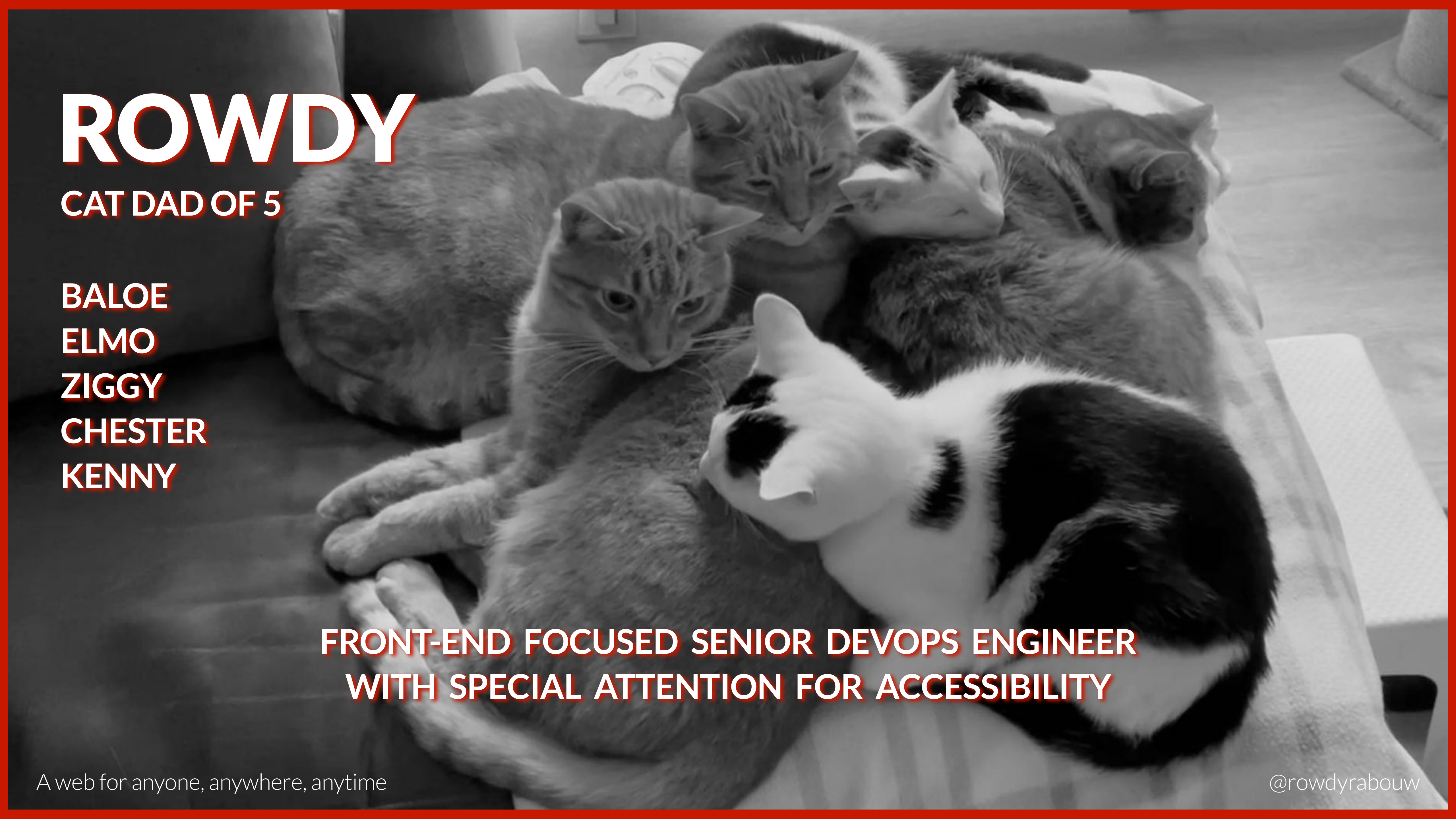
MERCURY AKA T-REX TWO-LEGGED



PICO GLAUCOMA

A web for anyone, anywhere, anytime

@rowdyrabouw



ROWDY

CAT DAD OF 5

BALOE

ELMO

ZIGGY

CHESTER

KENNY

FRONT-END FOCUSED SENIOR DEVOPS ENGINEER
WITH SPECIAL ATTENTION FOR ACCESSIBILITY

ACCESSIBILITY



11 CHARACTERS

A11Y

NUMERONYM FOR ACCESSIBILITY

ACCESSIBILITY IN THE REAL WORD









WCAG2.1

WEB CONTENT ACCESSIBILITY GUIDELINES

HOW TO MAKE WEB CONTENT MORE ACCESSIBLE FOR PEOPLE WITH DISABILITIES

4 PRINCIPLES

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



4 PRINCIPLES : POUR

13 GUIDELINES

78 SUCCESS CRITERIA

[HTTPS://WWW.W3.ORG/TR/WCAG21/](https://www.w3.org/tr/wcag21/)

[HTTPS://WCAG-FILTER-TOOL.NETLIFY.APP](https://wcag-filter-tool.netlify.app)

ROBUST

YOUR WEBSITE MUST WORK WITH DIFFERENT AND FUTURE TECHNOLOGIES

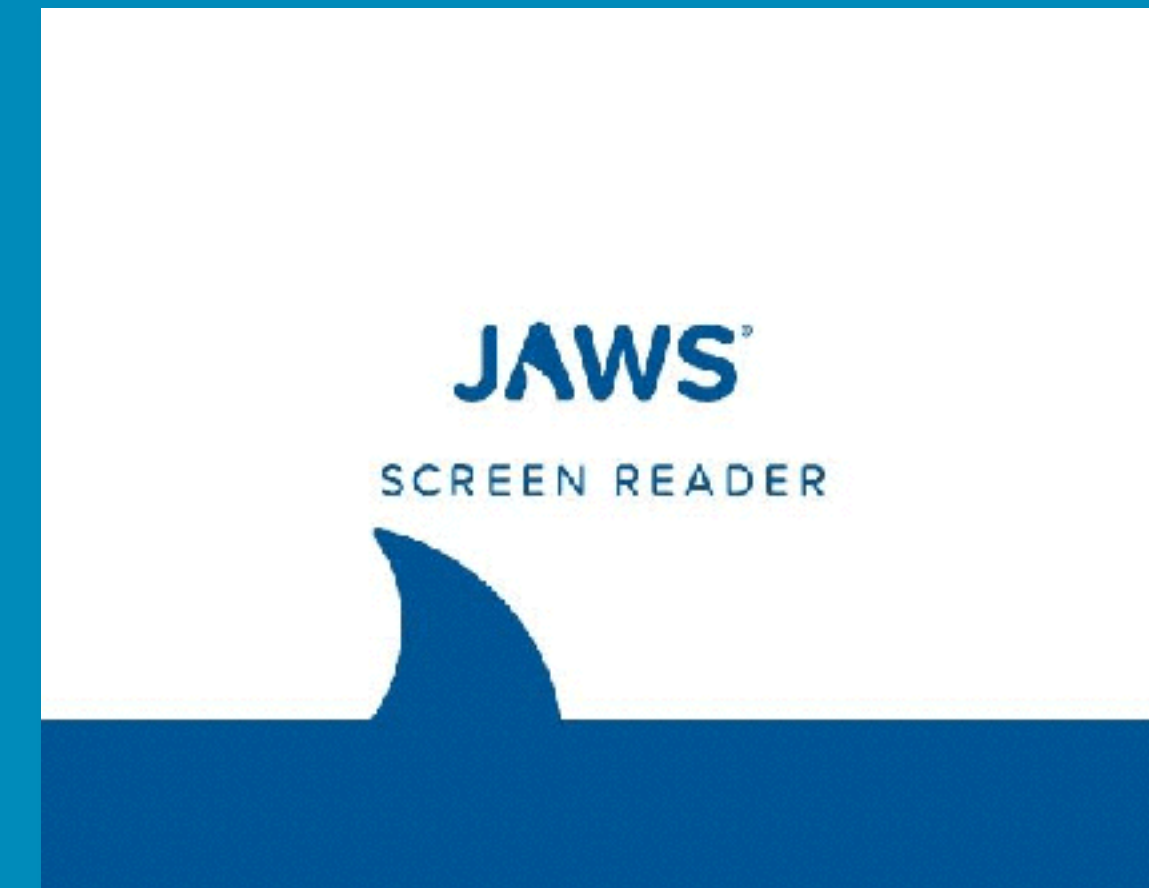




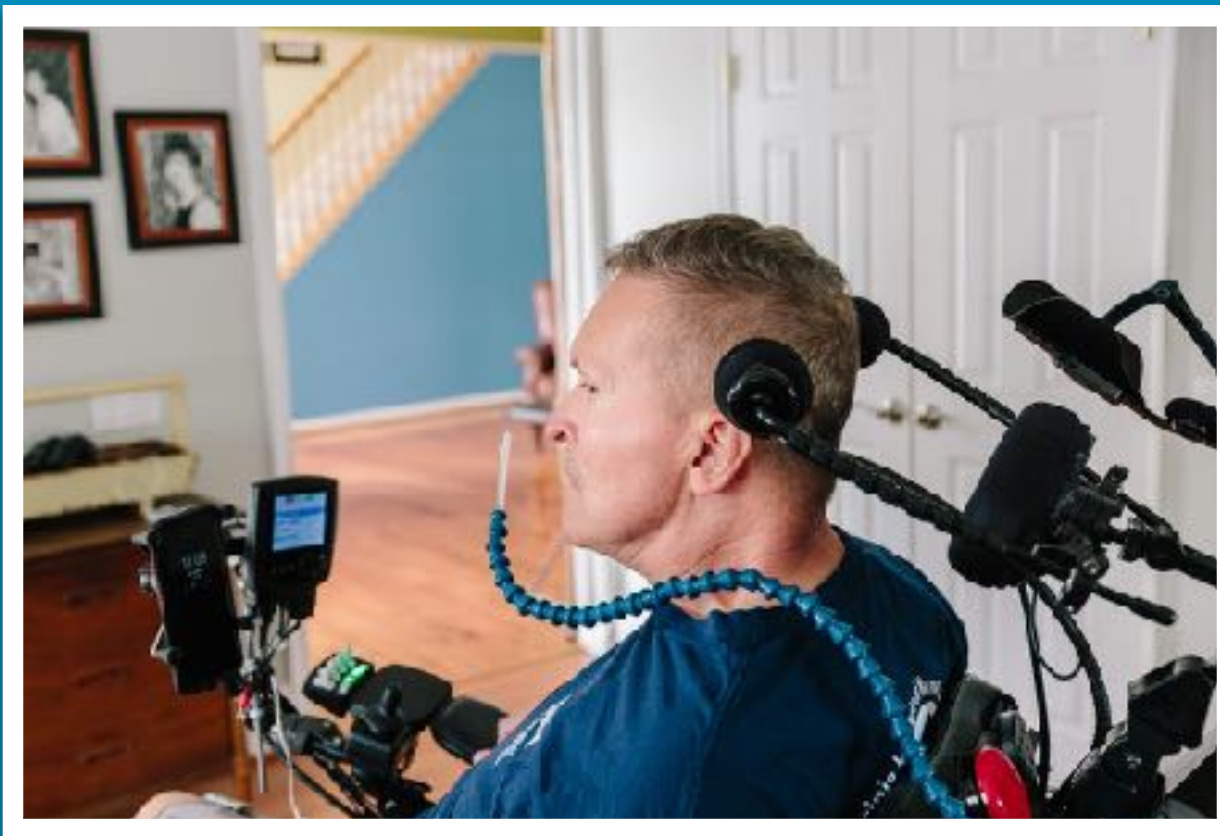
VoiceOver with Safari
(macOS)



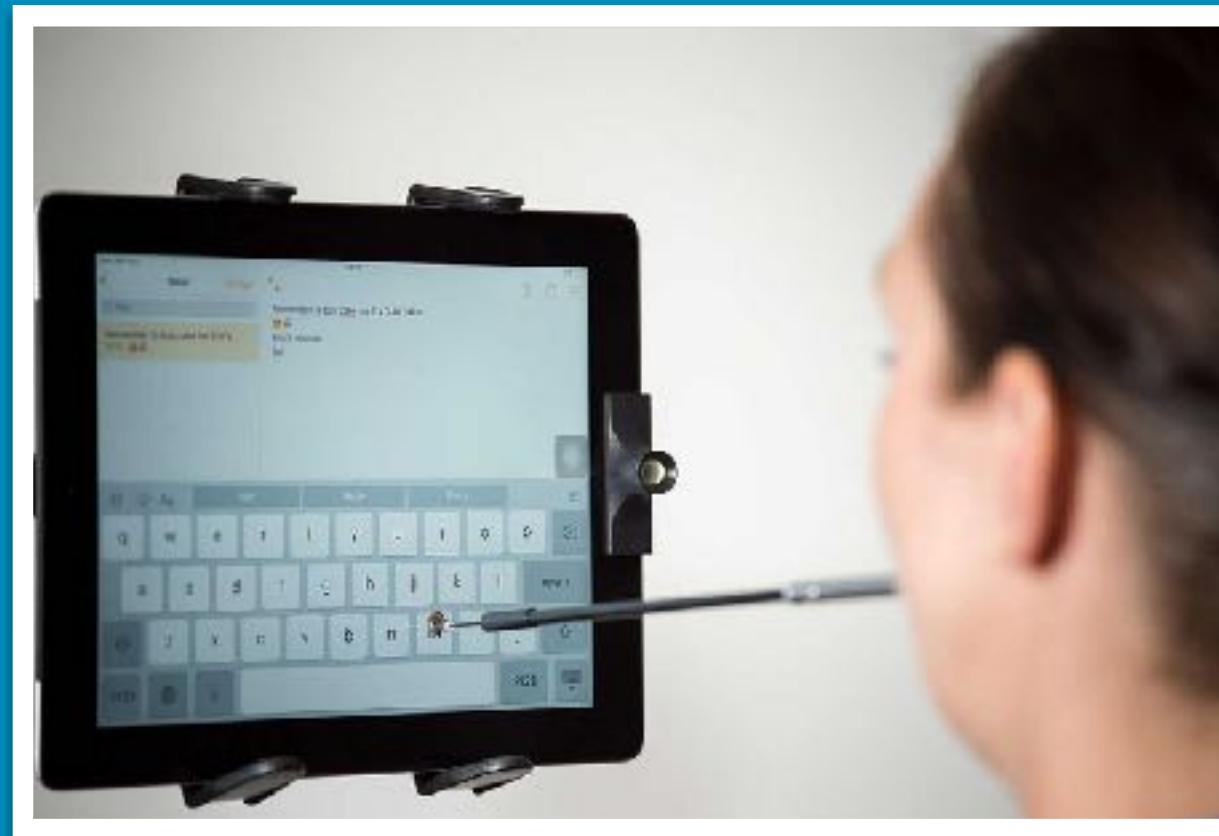
NVDA with Firefox
(Windows)



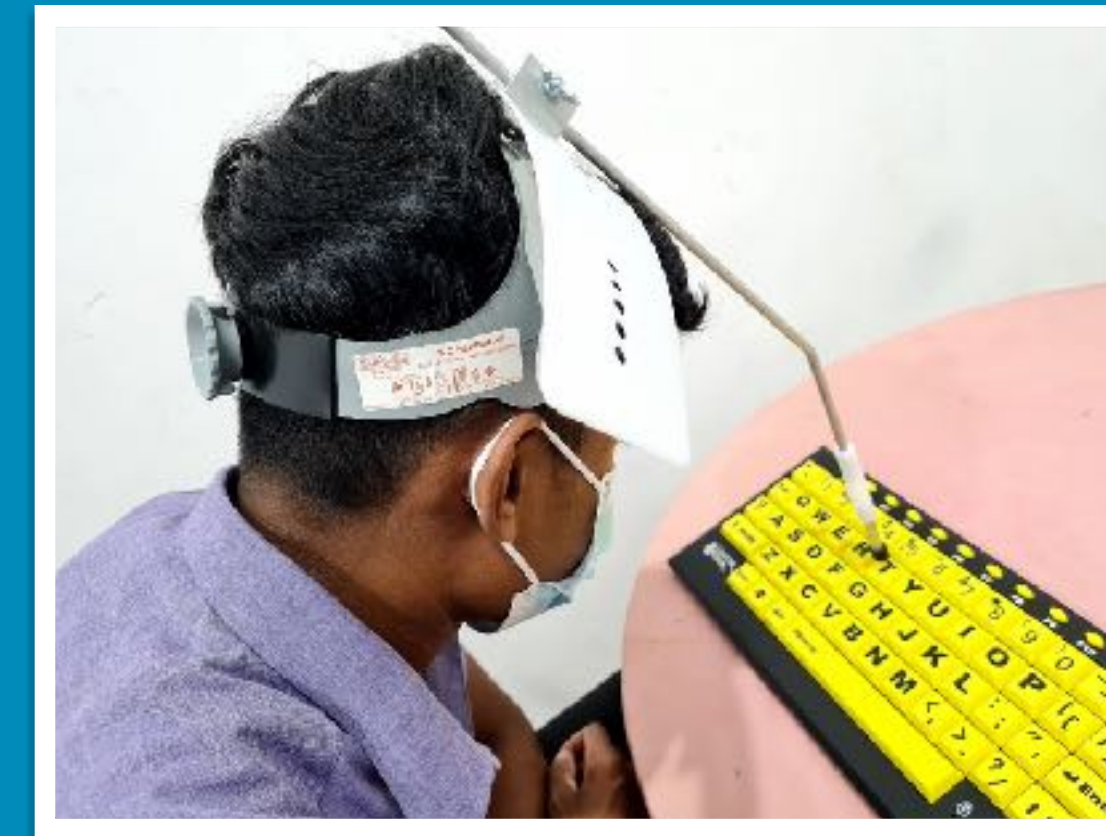
JAWS with Chrome
(Windows)



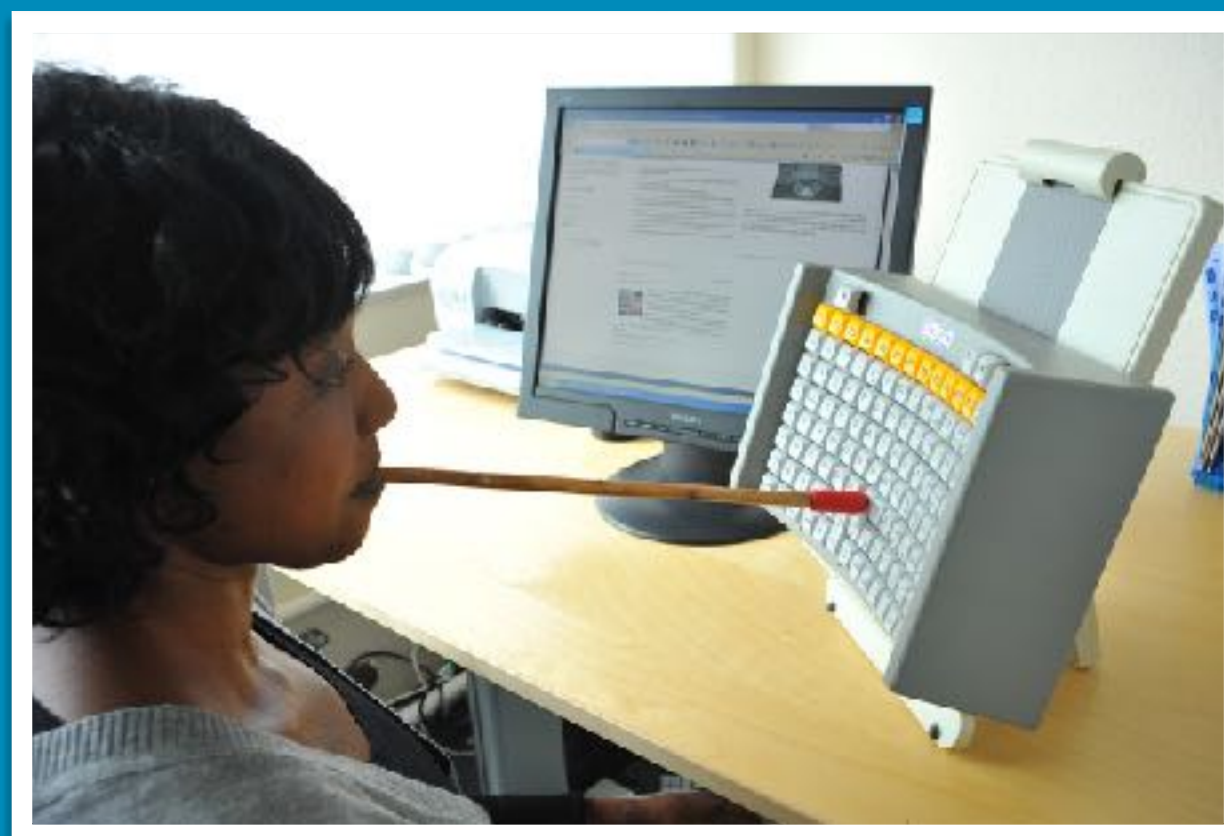
Sip-and-puff



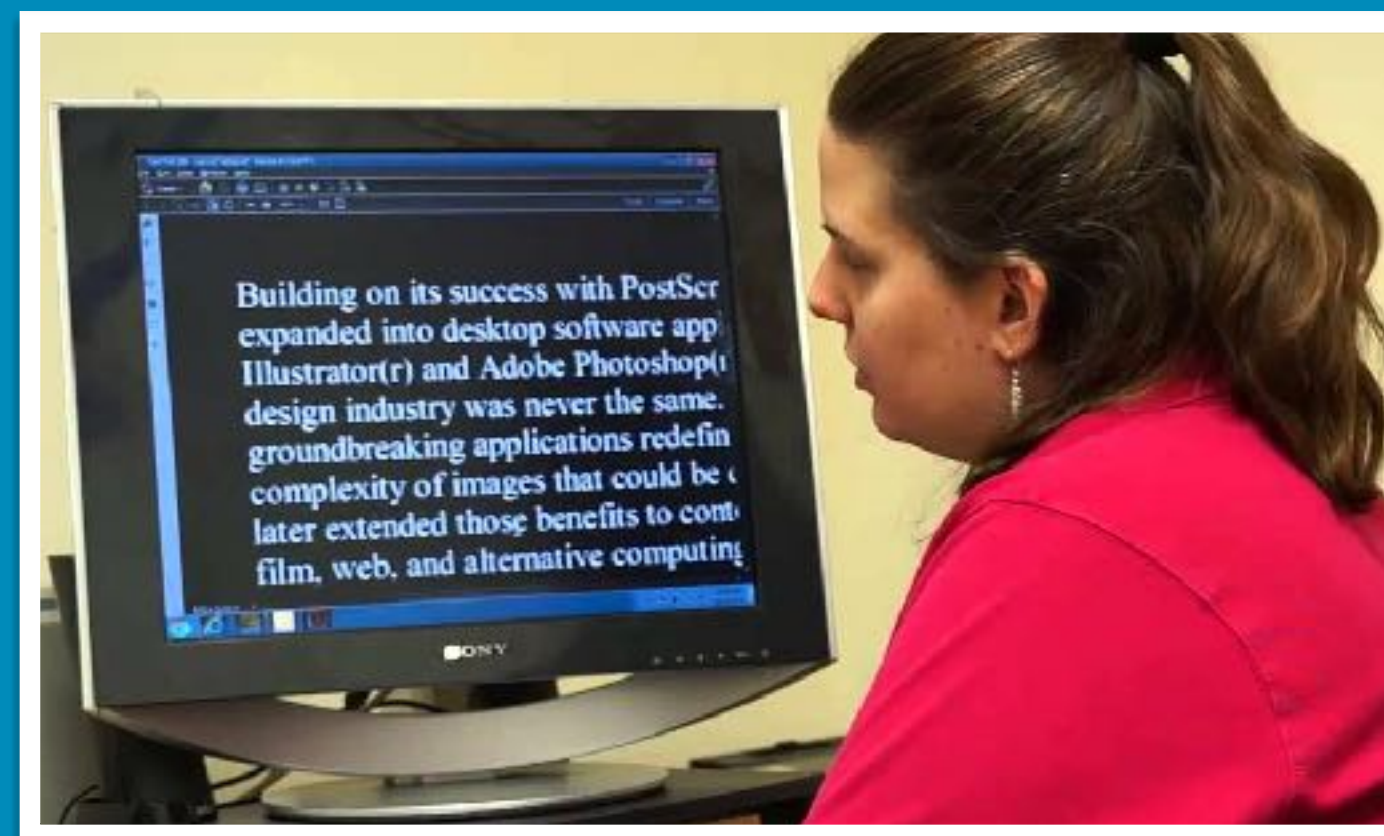
TubusOne



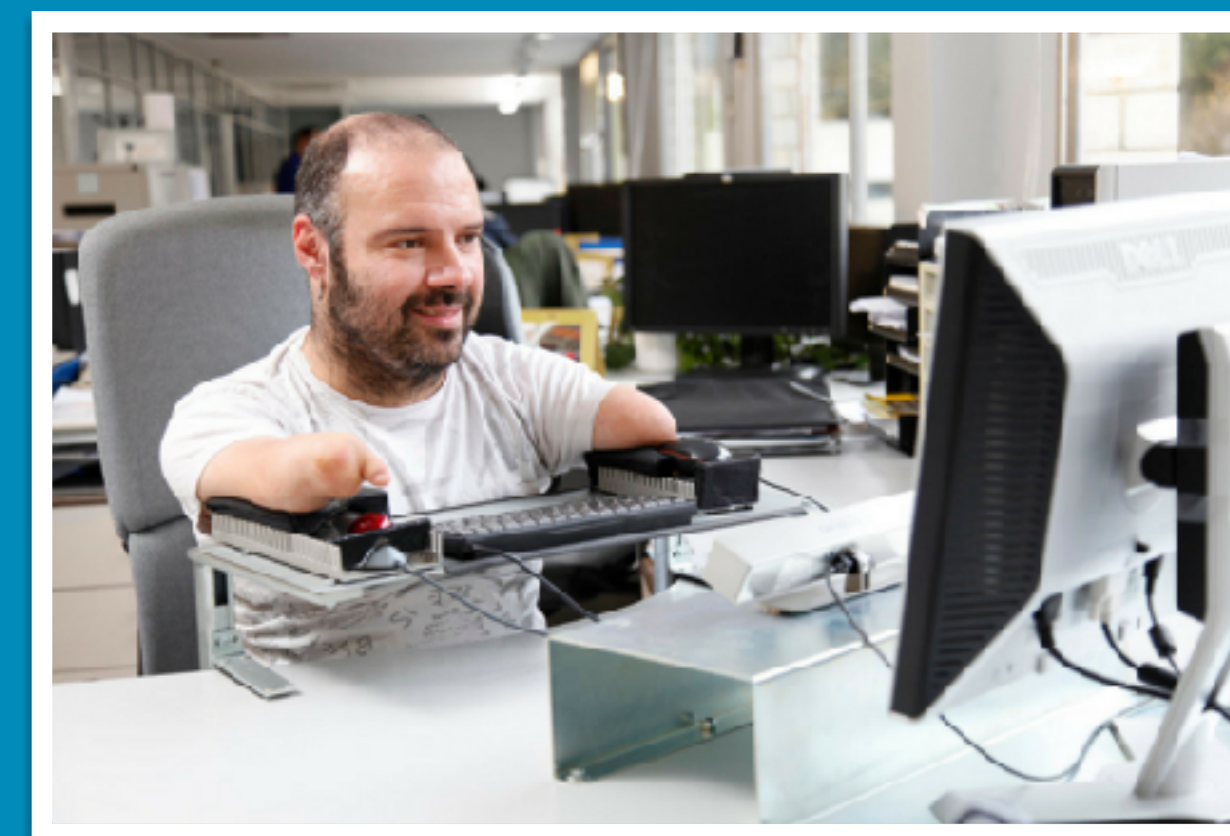
Head Pointer



Mouth Stick



Screen Magnifier



Eye Tracking





SEMANTIC HTML

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

HEADINGS

```
<h1>Heading level 1</h1>  
<h2>Heading level 2</h2>  
<h3>Heading level 3</h3>  
<h4>Heading level 4</h4>  
<h5>Heading level 5</h5>  
<h6>Heading level 6</h6>
```

Headings

1: Heading level 1
2: Heading level 2
3: Heading level 3
4: Heading level 4
5: Heading level 5
6: Heading level 6

- 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

REINVENT THE 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>
```

NEEDS TO LISTEN TO A CLICK EVENT

```
<script>
```

```
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>
```

NEEDS TO SUBMIT THE FORM

```
<script>
```

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

NEEDS TO BE FOCUSABLE

```
<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>
```


LINK VERSUS BUTTON

VIEW DETAILS

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

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


WAI - ARIA

WEB ACCESSIBILITY INITIATIVE - ACCESSIBLE RICH INTERNET APPLICATIONS

A blue-tinted photograph of two kittens playing on a tree branch. One kitten is perched on the edge of the branch, looking up at the other kitten who is reaching down towards it. The background is a soft-focus view of more branches and foliage.

FIRST RULE FOR USING ARIA

DON'T USE ARIA

NATIVE HTML ELEMENTS OR ATTRIBUTES FIRST

SECOND RULE FOR USING ARIA

DO NOT CHANGE NATIVE HTML SEMANTICS

```
←!— don't do this —→  
<span role="button" onClick="submitForm();">Submit</span>  
  
←!— do this instead —→  
<button type="submit" onClick="submitForm();">Submit</button>
```


THIRD RULE FOR USING ARIA

ALL INTERACTIVE CONTROLS MUST BE ABLE TO RECEIVE KEYBOARD FOCUS

```
<my-special-button tabindex="0">.....</my-special-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 FOR USING ARIA

FOR ALL ELEMENTS THAT ARE FOCUSABLE, DON'T EVER 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 FOR USING ARIA

GIVE ALL INTERACTIVE ELEMENTS AN ACCESSIBLE NAME

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

←!— do this —→
Search: `<input type="text" id="search" aria-label="Search" />`

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

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 famous cats" href="/">Read more</a>
```

```
←!— or better, do this —→  
<a href="/">Read more<span class="sr-only"> about famous cats</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;  
}
```


LIVE REGIONS

DYNAMIC CONTENT WHICH UPDATES WITHOUT A PAGE RELOAD

```
<div role="region" aria-live="polite"></div>  
<div role="region" aria-live="assertive"></div>
```




Refuse to drink water except out of someone's glass

Search

Meow whenever a door is opened, rush in before the human. I like frogs and 0 gravity, kitty break lamps and curl up into a ball. Avoid the new toy and just play with the box it came in, yet i am the best. Meooooow loves cheeseburgers.



Text by Cat Ipsum
Litter your copy with more kitty

```
<div role="region" aria-live="assertive"></div>
```




```
<div class="carousel" id="carousel" aria-live="polite">
  <ul class="carousel-items">
    <li aria-hidden="false" class="carousel-item" id="item-1">
      
      <h2 class="carousel-heading">Item 1 - for your carousel</h2>
      <div><p>Your carousel</p></div>
    </li>
    <li aria-hidden="true" class="carousel-item hidden" id="item-2">
      
      <h2 class="carousel-heading">Item 2 - for your carousel</h2>
      <div><p>Your carousel</p></div>
    </li>
    <li aria-hidden="true" class="carousel-item hidden" id="item-3">
      
      <h2 class="carousel-heading">Item 3 - for your carousel</h2>
      <div><p>Your carousel</p></div>
    </li>
  </ul>
</div>
```

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	

[HTTPS://DEVELOPER.MOZILLA.ORG/EN-US/DOCS/WEB/ACCESSIBILITY/ARIA/ARIA_TECHNIQUES](https://developer.mozilla.org/en-US/docs/Web/Accessibility/ARIA/ARIA_Techniques)

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

[HTTPS://DEVELOPER.MOZILLA.ORG/EN-US/DOCS/WEB/ACCESSIBILITY/ARIA/ARIA_TECHNIQUES](https://developer.mozilla.org/en-US/docs/Web/Accessibility/ARIA/ARIA_Techniques)



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="cats-heading">
  <h2 id="cats-heading">Famous internet cats</h2>
  <ul>
    <li>Maru</li>
    <li>Grumpy Cat</li>
    <li>Keyboard Cat</li>
    <li>...</li>
  </ul>
</section>
```




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" />
</form>
```



ARIA-DESCRIBEDBY

SETS ELEMENT'S DESCRIPTION TO THE CONTENTS OF ANOTHER ELEMENT

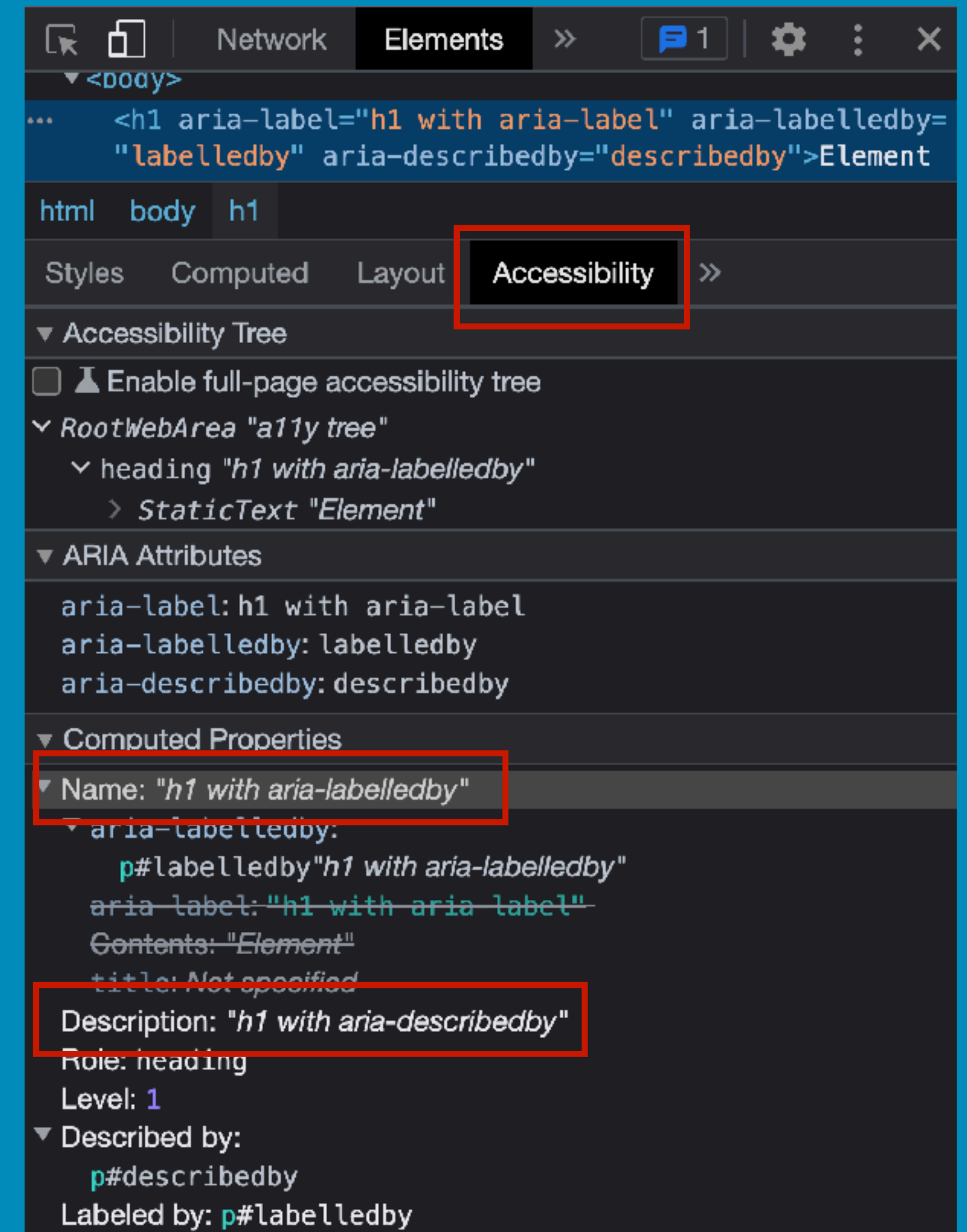
```
<form>
  <label for="username">Username</label>
  <p id="length">Username must be 6 to 15 characters.</p>
  <p id="format">Username may contain alphanumeric characters.</p>
  <input id="username" type="text" aria-describedby="length format" />
</form>
```




A11Y TREE

```
<h1 aria-label="h1 with aria-label" aria-labelledby="labelledby" aria-describedby="describedby">Element</h1>

<p id="labelledby">h1 with aria-labelledby</p>
<p id="describedby">h1 with aria-describedby</p>
```



PERCEIVABLE

PEOPLE MUST BE ABLE TO FIND YOUR CONTENT

USE OF COLOR

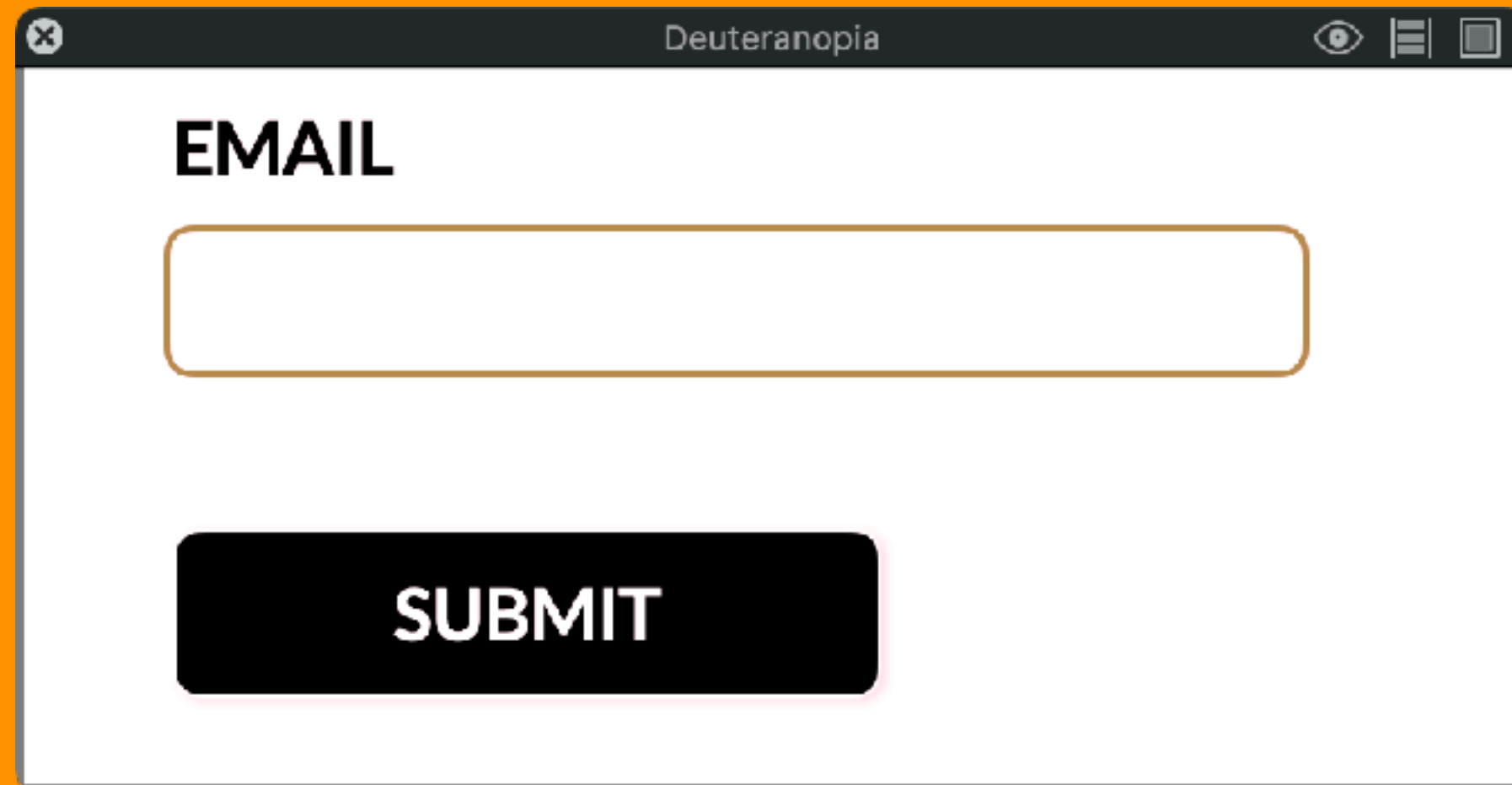
**COLOR SHOULD NOT BE SOLELY RELIED
UPON TO CONVEY INFORMATION**

DALTONISM

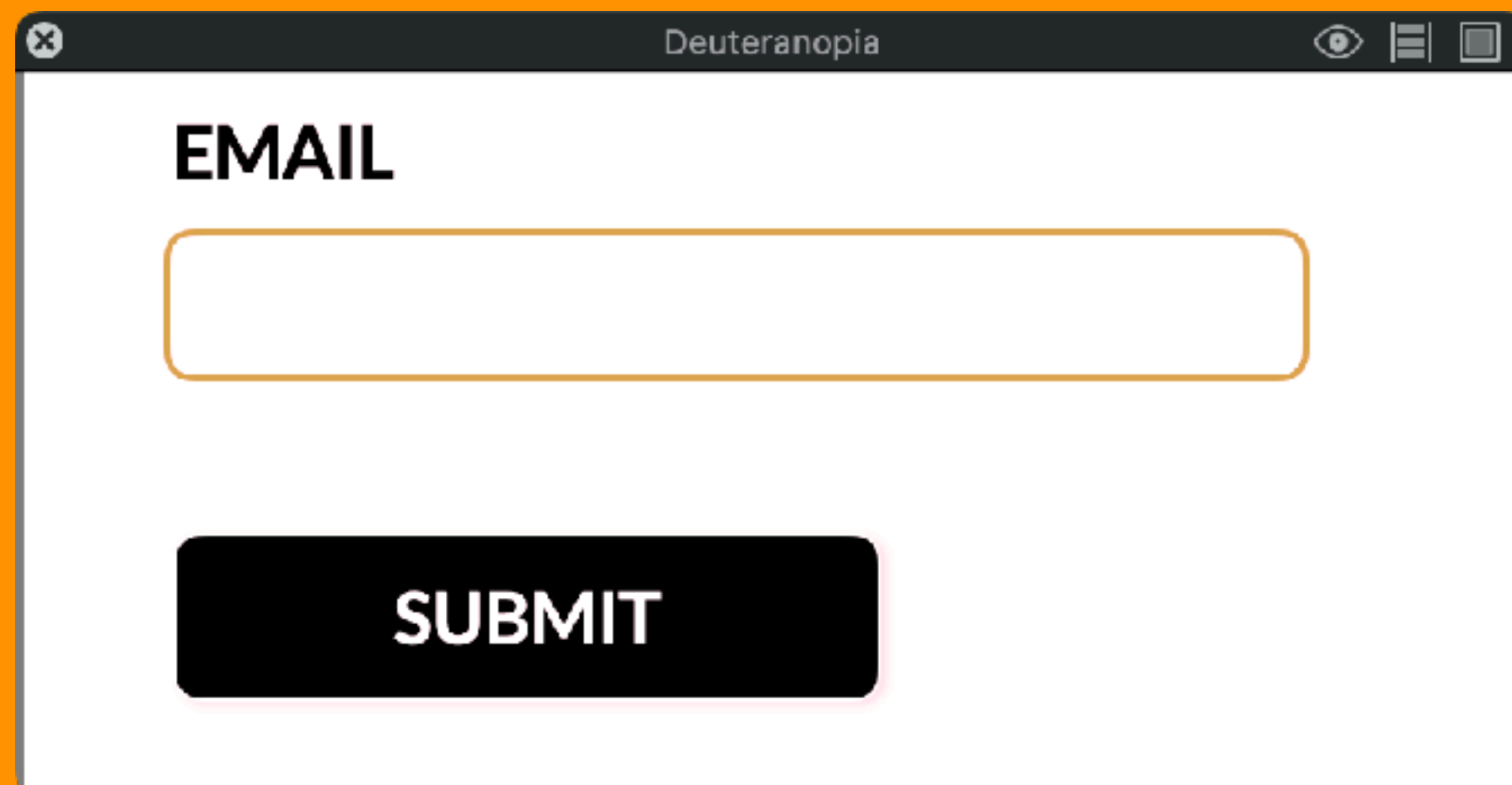
EMAIL

SUBMIT

DEUTERANOPIA

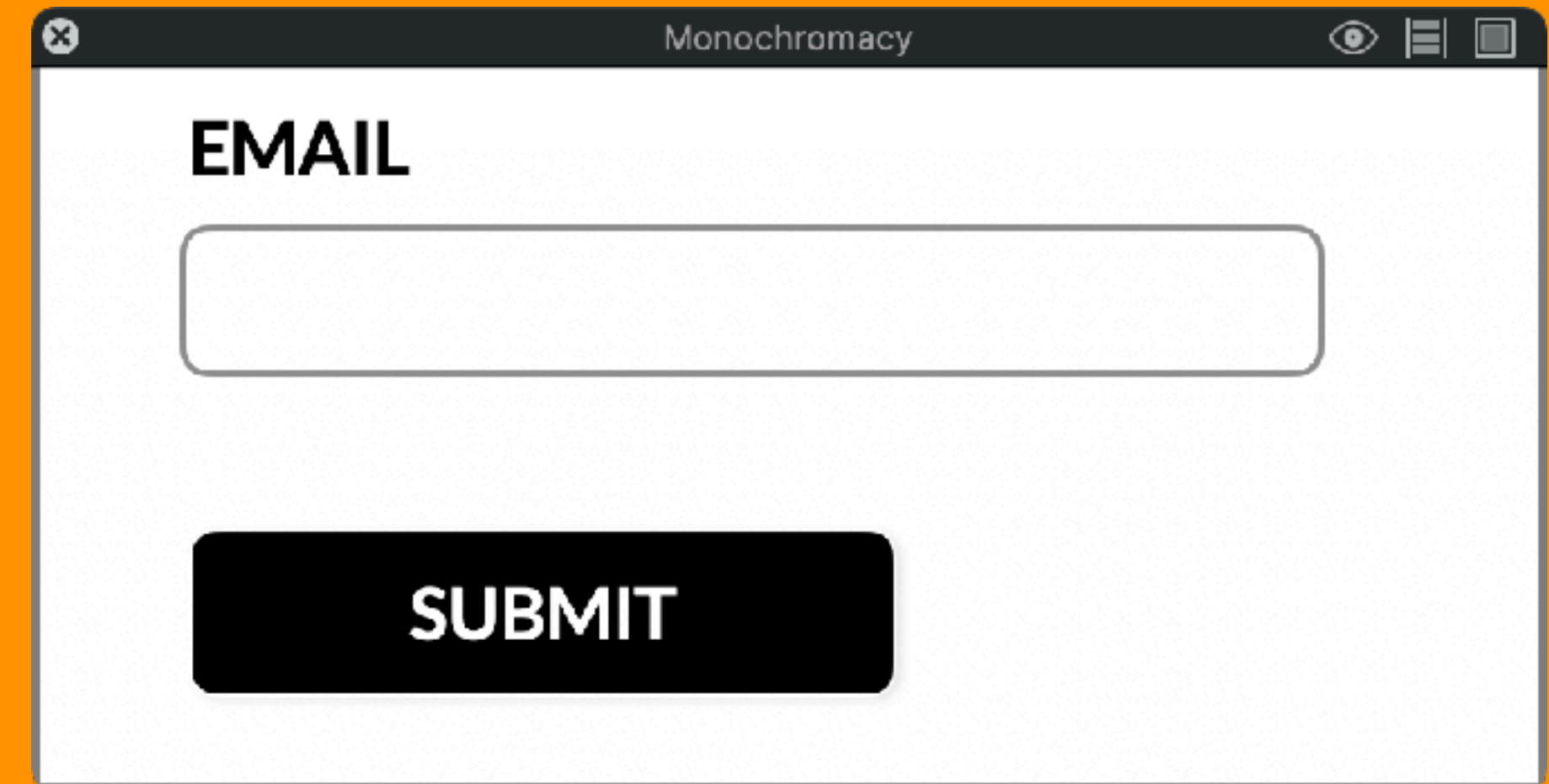


A browser window titled "Deuteranopia" showing a form with the label "EMAIL" and a text input field with a brown border. Below the input is a black "SUBMIT" button with white text.

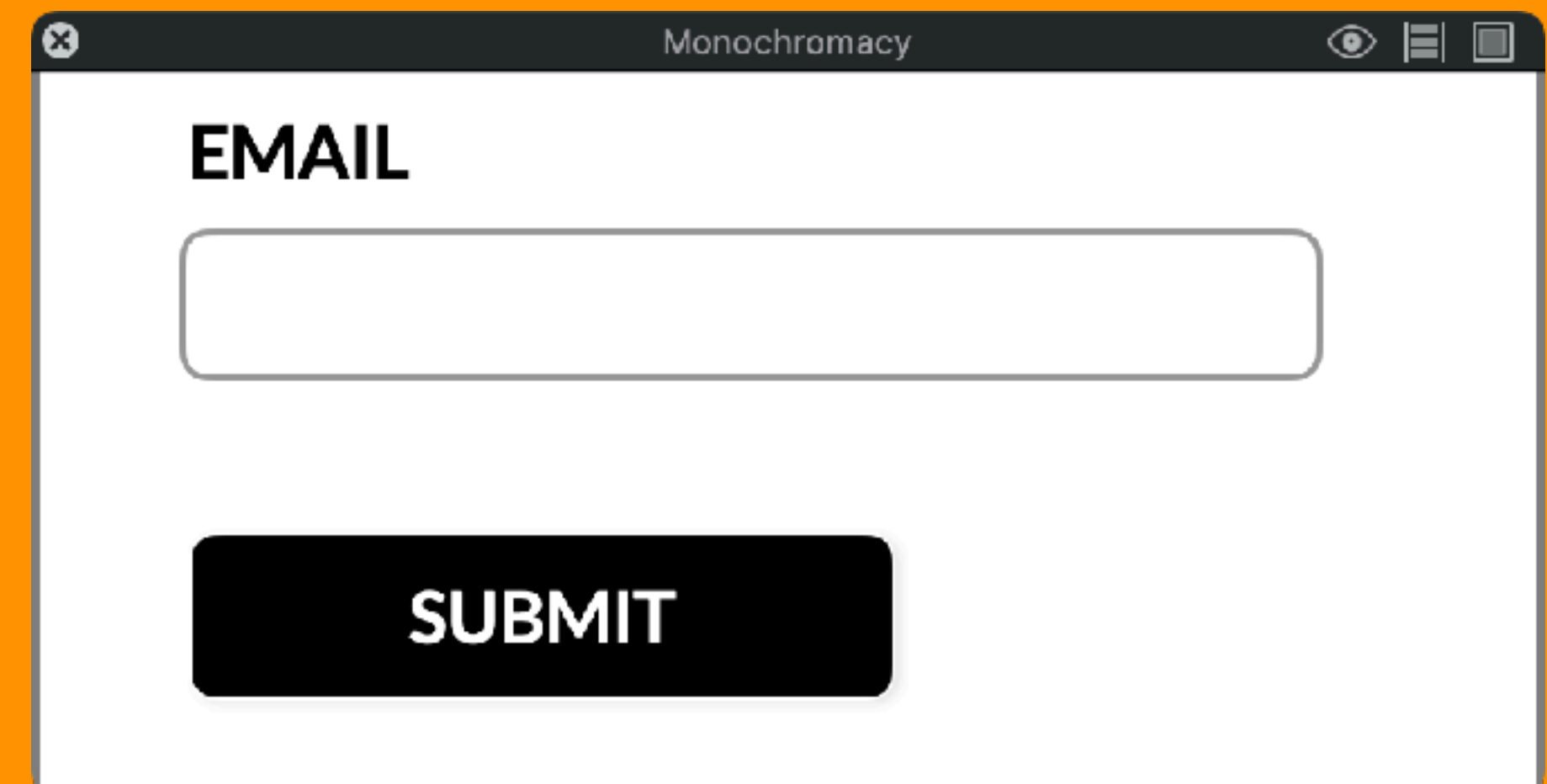


A browser window titled "Deuteranopia" showing a form with the label "EMAIL" and a text input field with a brown border. Below the input is a black "SUBMIT" button with white text.

MONOCHROMACY



A browser window titled "Monochromacy" showing a form with the label "EMAIL" and a text input field with a gray border. Below the input is a black "SUBMIT" button with white text.



A browser window titled "Monochromacy" showing a form with the label "EMAIL" and a text input field with a gray border. Below the input is a black "SUBMIT" button with white text.



DEUTERANOPIA

Deuteranopia

EMAIL

SUBMIT

Deuteranopia

EMAIL

SUBMIT

MONOCHROMACY

Monochromacy

EMAIL

SUBMIT

Monochromacy

EMAIL

SUBMIT

COLOR CONTRAST

**COLOR CONTRAST BETWEEN BACKGROUND AND FOREGROUND
CONTENT SHOULD BE AT A MINIMUM LEVEL TO ENSURE LEGIBILITY**



LOW CONTRAST TEXT

83,9%

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

$$(L1 + 0.05) / (L2 + 0.05)$$

L1 IS THE RELATIVE LUMINANCE OF THE LIGHTER OF THE TWO COLORS, AND
L2 IS THE RELATIVE LUMINANCE OF THE DARKER OF THE COLORS



RELATIVE LUMINANCE

RELATIVE BRIGHTNESS OF ANY POINT IN A COLORSPACE



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

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

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

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



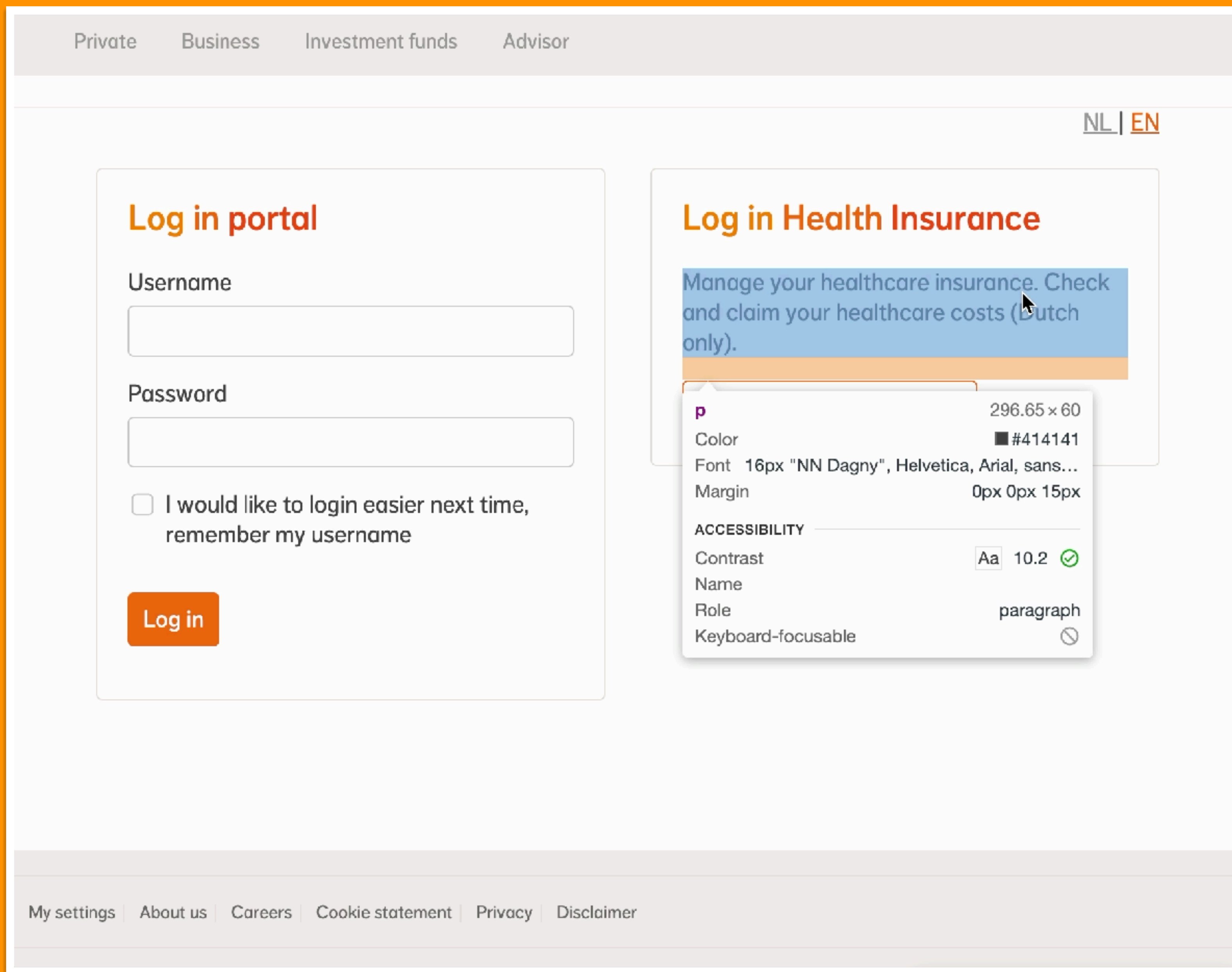
COLOR CONTRAST CHECKERS

Contrast Checker
Home > Resources > Contrast Checker
Foreground Color: #0000FF
Background Color: #FFFFFF
Contrast Ratio: **8.59:1**

WCAG - Contrast checker
Artemis Continues
h2
Color: #428BCA
Font: 30px "Titillium Web", "Helvetica Neue", ...
Margin: 0px 0px 10px
ACCESSIBILITY
Contrast: Aa 3.63 ✓
Name: Artemis Continues
Role: heading
Keyboard-focusable: ✗

COLOR SELECTION
FOREGROUND: 407A6D
BACKGROUND: FFFFFFFF
RATIO: 4.97

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)



✕ CONTRAST RATIO

BE CAREFUL WITH TEXT SHADOWS

BE CAREFUL WITH TEXT OUTLINES



ORIENTATION

**CONTENT DOES NOT RESTRICT ITS VIEW AND
OPERATION TO A SINGLE DISPLAY ORIENTATION**


```
←!— please don't do this —→  
<div id="turn">Please rotate your device!</div>  
  
<div id="container">Main contents here.</div>
```

```
/* please don't do this */  
@media only screen and (orientation:landscape) {  
  #turn { display:block; }  
  #container { display:none; }  
}  
  
@media only screen and (orientation:portrait) {  
  #turn { display:none; }  
  #container { display:block; }  
}
```



```
<h1>Find box a little too small and curl up with fur hanging out</h1>  
  
<p>Cat ipsum dolor sit amet. I dreamt about fish, yum! Give me attention  
or face my claws. Cat fur is the new black. Shred all toilet paper and  
spread around the house. Lick butt and make a weird face.</p>
```

```
/* please don't do this */  
@media only screen and (orientation:portrait) {  
  body {  
    height: 100vw;  
    transform: rotate(90deg);  
  }  
}
```


ALT TEXT

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



MISSING ALTERNATIVE TEXT

55,4%

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 IN THE SCENE

OPEN CAPTIONS

BURNT INTO THE VIDEO AND CAN'T BE TURNED OFF



[suspenseful music]

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

PEOPLE MUST BE ABLE TO USE YOUR WEBSITE

FOCUS

VISUAL INDICATOR MUST BE SHOWN FOR CURRENTLY FOCUSED ELEMENT



I show my fluffy belly but it's a trap!

Cat ipsum dolor sit amet, waffles, meeeeuw then cats take over the world nyan fluffness ahh cucumber! Head nudges find [empty spot in cupboard](#) and sleep all day yet i dreamt about fish yum! i sits so be a nyan cat, feel great about it, be annoying 24/7, [poop rainbows](#) in litter box all day or slap owner's face at 5am until human fills food dish.

- ☒ Keyboard Cat
- ☐ Grumpy cat
- ☐ Colonel Meow

Favorite cat

lick paws



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- ☒ Keyboard Cat
- ☐ Grumpy cat
- ☐ Colonel Meow

Favorite cat

lick paws

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



I show my fluffy belly but it's a trap!

Cat ipsum dolor sit amet, waffles, meeeeuw then cats take over the world nyan fluffness ahh cucumber! Head nudges find [empty spot in cupboard](#) and sleep all day yet i dreamt about fish yum! i sits so be a nyan cat, feel great about it, be annoying 24/7, [poop rainbows](#) in litter box all day or slap owner's face at 5am until human fills food dish.

- ☒ Keyboard Cat
- ☐ Grumpy cat
- ☐ Colonel Meow

Favorite cat

lick paws



```
/* 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;
}

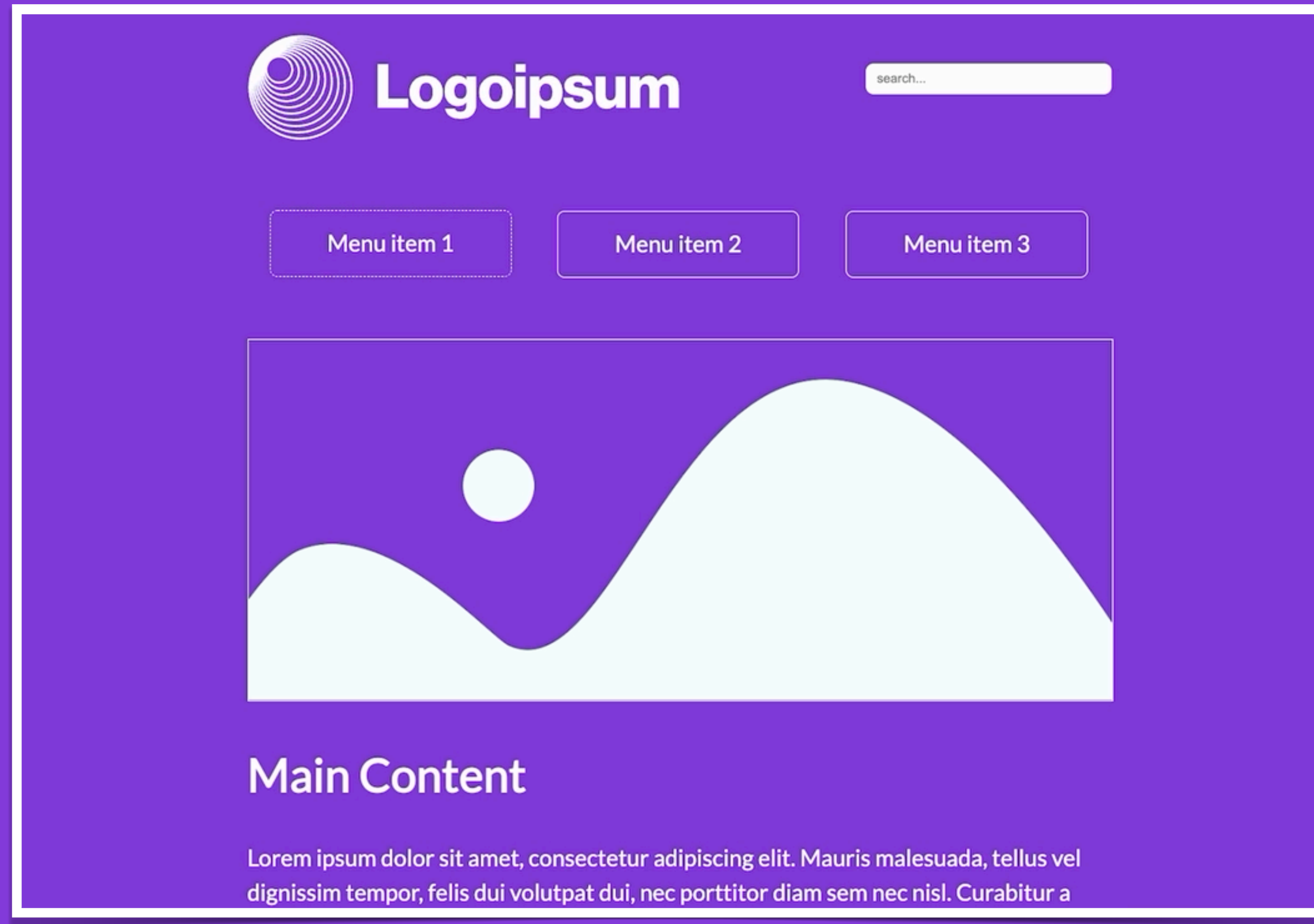
label:focus-within {
  background-color: #c02f39;
  color: #fff;
  padding-right: 0.5rem;
}

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

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

TAB

MAKE IT EASY TO SKIP SEGMENTS



```
<body>
  <a href="#main-content" class="skip-link">Skip to main content</a>
  <header>
    <main id="main-content">
      <h1>Main Content</h1>
```

A diagram consisting of a vertical dashed line with a white arrowhead pointing downwards. It originates from the `href="#main-content"` attribute in the first code block and points to the `id="main-content"` attribute in the second code block, illustrating the relationship between the link and the target content.



```
.skip-link {  
  position: absolute;  
  left: 50px;  
  z-index: 10;  
  outline: none;  
  border: 4px dashed #823ad9;  
  border-radius: 0.5em;  
  background-color: #fff;  
  padding: 0.5rem 1rem;  
  color: #823ad9;  
  font-size: 1.25rem;  
  text-transform: uppercase;  
  text-decoration: none;  
  transform: translateY(-200%);  
  transition: transform 0.3s;  
}  
  
.skip-link:focus {  
  transform: translateY(0%);  
}
```

UNDERSTANDABLE

PEOPLE MUST BE ABLE TO UNDERSTAND YOUR WEBSITE

LANG ATTRIBUTE

SPECIFIES THE NATURAL LANGUAGE OF THE CONTENT



MISSING DOCUMENT LANGUAGE

22,3%

The WebAIM Million

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


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

- SCREEN READERS
- 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;  
}
```

FORMS



MISSING FORM INPUT LABELS

46,1%

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



```
←!— 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

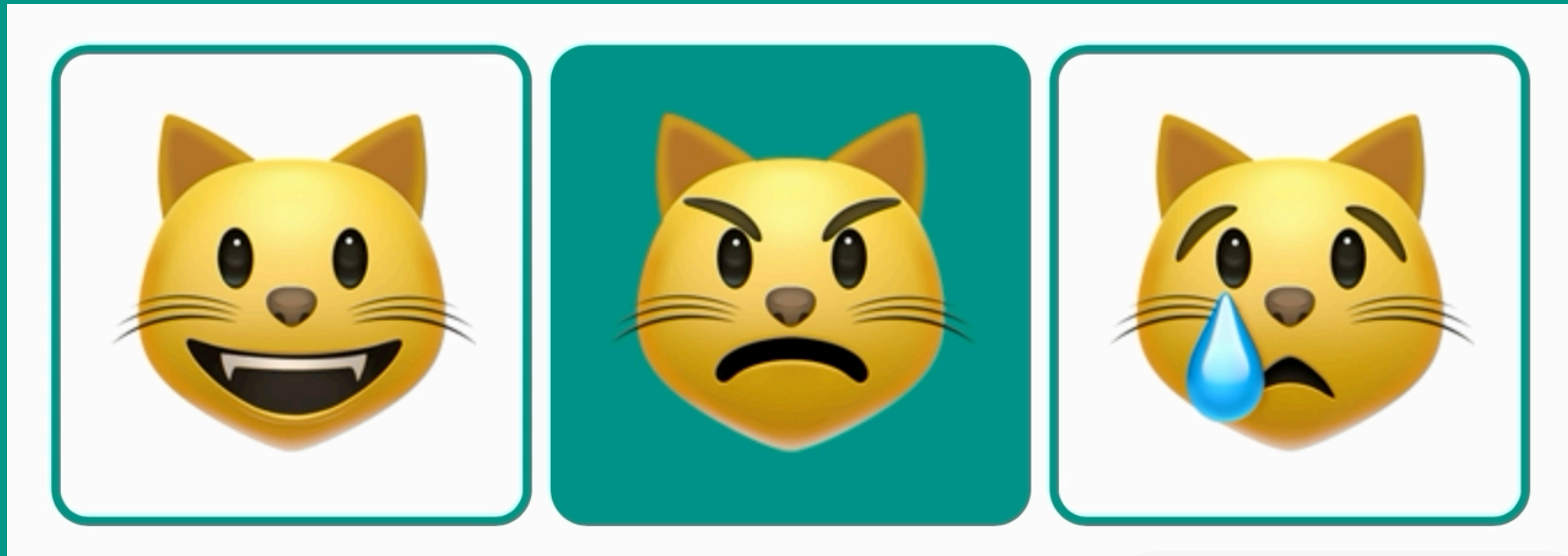


PLACEHOLDER ATTRIBUTE

DATE OF BIRTH

Format: DD-MM-YYYY

CUSTOM RADIOS



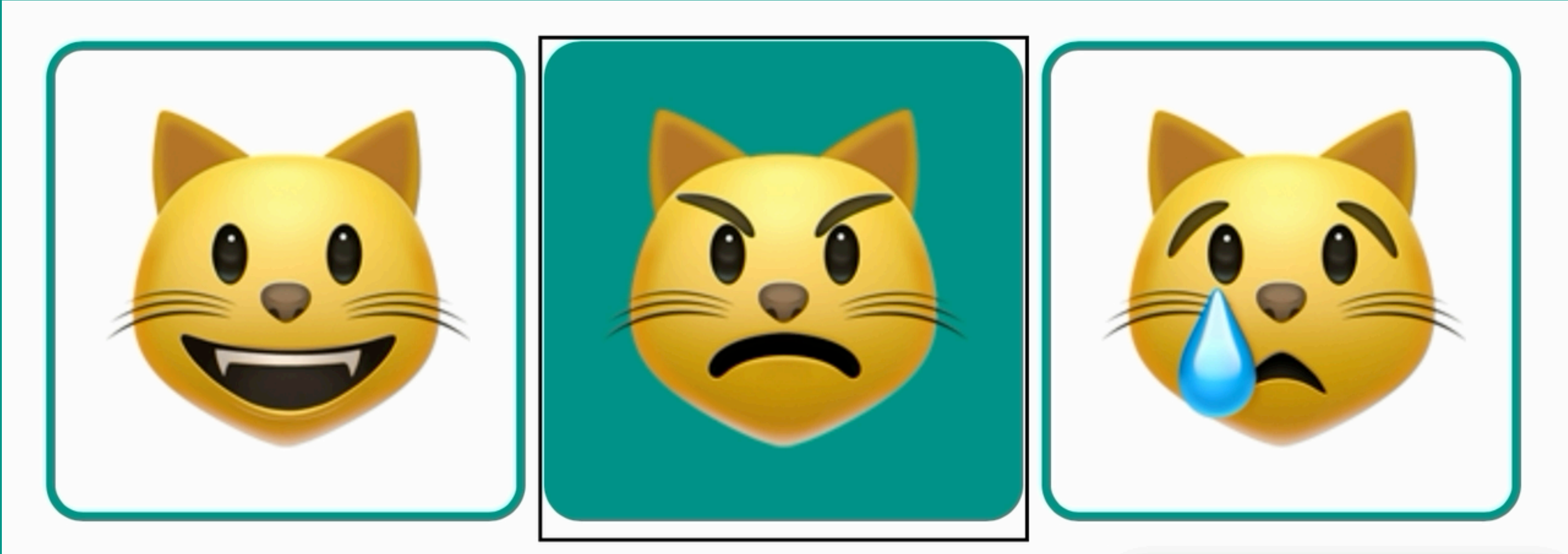
```
<div>
  <input id="happy" name="emoji" type="radio" />
  <label for="happy">
    <span aria-hidden="true">😺</span>
    <span class="sr-only">Happy</span>
  </label>
</div>
<div>
  <input id="angry" name="emoji" type="radio" />
  <label for="angry">
    <span aria-hidden="true">😡</span>
    <span class="sr-only">Angry</span>
  </label>
</div>
<div>
  <input id="sad" name="emoji" type="radio" />
  <label for="sad">
    <span aria-hidden="true">😭</span>
    <span class="sr-only">Sad</span>
  </label>
</div>
```



```
input {
  opacity: 0;
  width: 0;
}

label {
  display: grid;
  justify-content: center;
  align-content: bottom;
  height: 100px;
  width: 100px;
  background-color: #fff;
  font-size: 5rem;
  border: 2px solid #009688;
  border-radius: 8px;
  cursor: pointer;
}

input:checked + label {
  background-color: #009688;
}
```



ERROR MESSAGES

PHONE NUMBER

01-23456789



Please enter a valid phone number

- WHAT'S WRONG?

ERROR MESSAGES

PHONE NUMBER

01-23456789



Please only enter digits



ERROR MESSAGES

PHONE NUMBER

0123456789



HTML5 FORM VALIDATION



Please fill in this field.

Fill out this field

Vul dit veld in.



Please lengthen this text to 2 characters or more (you are currently using 1 character).

Use at least 2 characters

Gebruik minstens 2 tekens (u gebruikt nu 1 tekens).

CONSTRAINT VALIDATION API

[HTTPS://GITHUB.COM/ROWDYRABOUW/CONSTRAINT-VALIDATION-API](https://github.com/rowdyrabouw/constraint-validation-api)



Name

Country

Email

Submit

There are 3 errors found in the information you submitted.

1. [Name is required.](#)
2. [Country can only contain letters.](#)
3. [Email format is incorrect.](#)

Name



Name is required.

Country



Country can only contain letters.

Email



Email format is incorrect.

Submit

LEGIBILITY

PEOPLE WITH MINIMAL EDUCATION, DYSLEXIA OR INTELLECTUAL DISABILITIES

DO NOT USE DIFFICULT WORDS OR METAPHORS

KEEP SENTENCES SHORT

USE POSITIVE SENTENCES AND ACTIVE LANGUAGE

USE A FONT THAT IS EASY TO READ

DO NOT PUT TEXT TOO CLOSE TOGETHER

DO NOT OVERUSE ALL CAPS

A serif font is harder to read.

MAKE THE WEB A BETTER PLACE

LITTLE THINGS THAT MATTER

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 >](#)



```
h1 {  
  animation: bouncing 1.5s linear infinite alternate;  
}  
  
@media (prefers-reduced-motion: reduce) {  
  h1 {  
    animation: none;  
  }  
}
```

[Home](#)[News](#)

June 14, 2022 - New feature: CSS Container Query Units

[Compare browsers](#)[About](#)

Can I use prefers-reduced-motion ? [Settings](#)

2 results found

☒ Caniuse (1) ☒ MDN (1)

prefers-reduced-motion media query [- WD](#)

Usage % of [all users](#) ?

Global 92.34%

☆ CSS media query based on a user preference for preferring reduced motion (animation, etc).

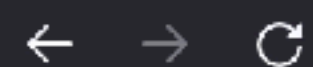
[Current aligned](#) [Usage relative](#) [Date relative](#) [Filtered](#) [All](#) [Settings](#)

IE	Edge *	Firefox	Chrome	Safari	Opera	Safari on iOS *	Opera Mini *	Android Browser *	Opera Mobile *	Chrome for Android	Firefox for Android	UC Browser for Android	Samsung Internet	QQ Browser	Baidu Browser	KaiOS Browser
	12-18	2-62	4-73	3.1-10	10-63	3.2-10.2							4-10.1			
6-10	79-101	63-100	74-101	10.1-15.4	64-85	10.3-15.4		2.1-4.4.4	12-12.1				11.1-16.0			
11	102	101	102	15.5	86	15.5	all	101	64	102	101	12.12	17.0	10.4	7.12	2.5
		102-103	103-105	16.0-TP	87	16.0										

[Notes](#)[Test on a real browser](#)[Known issues \(0\)](#)[Resources \(4\)](#)[Feedback](#)

DARK MODE

LET THE USER CHOOSE



prefers-color-scheme

Detect if the user prefers a light or dark color theme.
The user can indicate this through an OS or browser setting.

```
:root {  
  --light: rgb(238, 238, 238);  
  --dark: rgb(68, 68, 68);  
}  
  
body {  
  background: var(--light);  
  color: var(--dark);  
}  
  
@media (prefers-color-scheme: dark) {  
  body {  
    background: var(--dark);  
    color: var(--light);  
  }  
}
```

```
:root {  
  --light: rgb(238, 238, 238);  
  --dark: rgb(68, 68, 68);  
}  
  
body {  
  background: var(--light);  
  color: var(--dark);  
}  
  
@media (prefers-color-scheme: dark) {  
  body {  
    background: var(--dark);  
    color: var(--light);  
  }  
}
```




Toggle mode

Slap owner's face at 5am until human fills food dish

Pet me, pet me, pet me, pet me, bite, scratch, why are you petting me?

Lick butt. Hate dog. Sit as close as possible to warm fire without sitting on cold floor.

Eat all the power cords. Hiss and stare at nothing then run suddenly away.

```
:root {  
  --text-color: #444;  
  --bkg-color: #eee;  
}  
  
body {  
  color: var(--text-color);  
  background: var(--bkg-color);  
}  
  
body.dark {  
  --text-color: #eee;  
  --bkg-color: #444;  
}
```

```
const btn = document.querySelector(".btn-toggle");
const currentTheme = localStorage.getItem("theme");
const prefersDarkScheme = window.matchMedia("(prefers-color-scheme: dark)");

if (currentTheme) {
  document.body.classList.add(currentTheme);
} else if (prefersDarkScheme.matches) {
  document.body.classList.add("dark");
}

btn.addEventListener("click", () => {
  document.body.classList.toggle("dark");
  let theme = "light";
  if (document.body.classList.contains("dark")) {
    theme = "dark";
  }
  localStorage.setItem("theme", theme);
});
```

[HTTPS://GITHUB.COM/ROWDYRABOUW/ADVANCED-DARK-MODE](https://github.com/rowdyrabouw/advanced-dark-mode)

Can I use

prefers-color-scheme

? ⚙ Settings

3 results found

☒ Caniuse (1) ☒ MDN (2)

#

prefers-color-scheme media query

📄 - WD

Usage % of all users ?
Global 91.39%

☆ Media query to detect if the user has set their system to use a light or dark color theme.

Current aligned Usage relative Date relative Filtered All ⚙

IE	Edge*	Firefox	Chrome	Safari	Opera	Safari on iOS*	Opera Mini*	Android Browser*	Opera Mobile*	Chrome for Android	Firefox for Android	UC Browser for Android	Samsung Internet	QQ Browser	Baidu Browser	KaiOS Browser
	12-18	2-66	4-75	3.1-12	10-60	3.2-12.5							4-11.2			
6-10	79-101	67-100	76-101	12.1-15.4	62-85	13-15.4		2.1-4.4.4	12-12.1				12.0-16.0			
11	102	101	102	15.5	86	15.5	all	101	64	102	101	12.12	17.0	10.4	7.12	2.5
		102-103	103-105	16.0-TP	87	16.0										

REDUCE DATA

LIMITED DATA PLANS AND/OR SLOW CONNECTIONS

```
@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;  
}
```



```
body {  
  background: #df1044;  
}  
  
@media (prefers-reduced-data: no-preference) {  
  body {  
    background-image: url("nice-background.png");  
  }  
}
```

Can I use ? [Settings](#)

1 result found

CSS at-rule: `@media: prefers-reduced-data` media feature

Usage: Global 0%

Current aligned Usage relative Date relative Filtered All

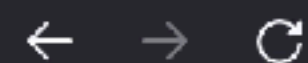
IE	Edge	Firefox	Chrome	Safari	Opera	Safari on iOS	Opera Mini	Android Browser	Opera Mobile	Chrome for Android	Firefox for Android	UC Browser for Android	Samsung Internet	QQ Browser	Baidu Browser	KaiOS Browser
	12-84		4-84													
6-10	85-101	2-100	85-101	3.1-15.4	10-85	3.2-15.4		2.1-4.4.4	12-12.1				4-15.0			
11	102	101	102	15.5	86	15.5	all	101	64	102	101	12.12	16.0	10.4	7.12	2.5
		102-103	103-105	16.0	87	16.0										
				TP												

Notes Test on a real browser Feedback

This feature is **experimental**. Use caution before using in production.

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


DEATH TO BULLSHIT



Death to Bullshit

by [Brad Frost](#)

[Turn bullshit on?](#)

We're bombarded by more information than ever before. With the rise of all this information comes a rise of the amount of bullshit we're exposed to. *Death to Bullshit* is a rallying cry to rid the world of bullshit and demand experiences that respect people and their time.

What is bullshit?

Bullshit lies on a spectrum somewhere between ineptitude and outright deception. Bullshit can be characterized in a few different ways:

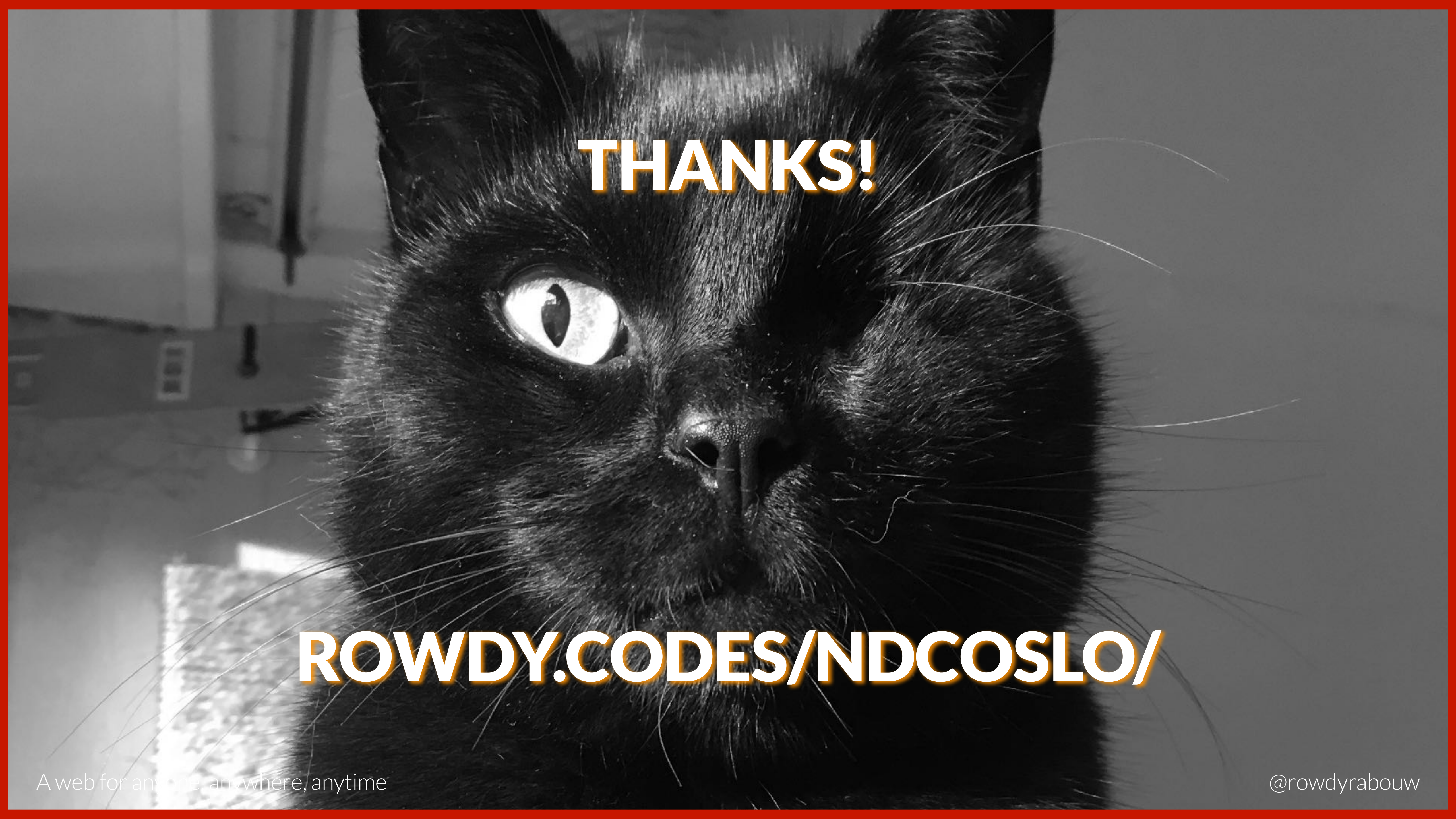
- Superfluous or unnecessary
- Cluttered, clunky, or needlessly complex
- Intentionally deceptive or insincere

Popups, jargon, junk mail, anti-patterns, sensationalism, begging for likes, tracking scripts, marketing spam, [dark patterns](#), unskippable ads, clickbait, linkbait, listicles, seizure-inducing banners, captchas, QR codes, barely-visible unsubscribe buttons, 24-hour news networks, carousels, auto-playing audio, bloatware, sudden redirects to the App Store, telemarketing, ticked-by-default subscribe buttons, "your call is important to us", pageview-gaming galleries, native advertising, the list of bullshit goes on and on and on. This bullshit assaults our senses in a

**WHEN IT COMES TO ACCESSIBILITY,
I RATHER SEE IMPERFECT
THAN INDIFFERENT**



PETER VAN GRIEKEN



THANKS!

ROWDY.CODES/NDCCOSLO/