

# Accessibility Overview

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Semantic HTML and Best Practices



# Types of Accessibility

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## Keyboard Accessibility

- Often used with screenreaders
- Tab between controls
- Keyboard shortcuts



## Voice Accessibility

- Speak to perform actions
- Hands-free calls, etc



## Auditory Accessibility

- Include closed captions
- Improves availability in quiet environments
- Might help search engines understand the content

# Legal Reasons

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- Business sites must be accessible by law
  - Section 508 of the Rehabilitation Act of 1973 (Europe)
  - American Disability Act (ADA)
- Required for use by the government
  - <https://www.justice.gov/crt/software-accessibility-checklist>
- Lawsuits have set precedent
  - Netflix
  - Winn-Dixie
  - Five Guys
  - Nike
  - Domino's Pizza
  - U of CA, Berkeley



Structure

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Headers – h1, h2, h3, etc.

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Navigation

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HTML5 semantic  
elements – nav, header,  
footer

# Headers

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- Headers add structure
- Use a single h1 tag
  - Usually wraps the site logo
  - Like a book title
- h2 tags are for major site sections
  - Like book chapters
- Other tags for subsections





# Headers - Wrong vs Right

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`<a href="/">WeatherTech</a>`

`<h1>`

`<a href="/">WeatherTech</a>`

`<div class="h2">Weather  
Forecast</div>`

`</h1>`

`<h2>Weather Forecast</h2>`

# Navigation

## Don't use

- Don't use popups
  - It can be difficult to tell popups from navigation
  - Use modals instead

## Mark

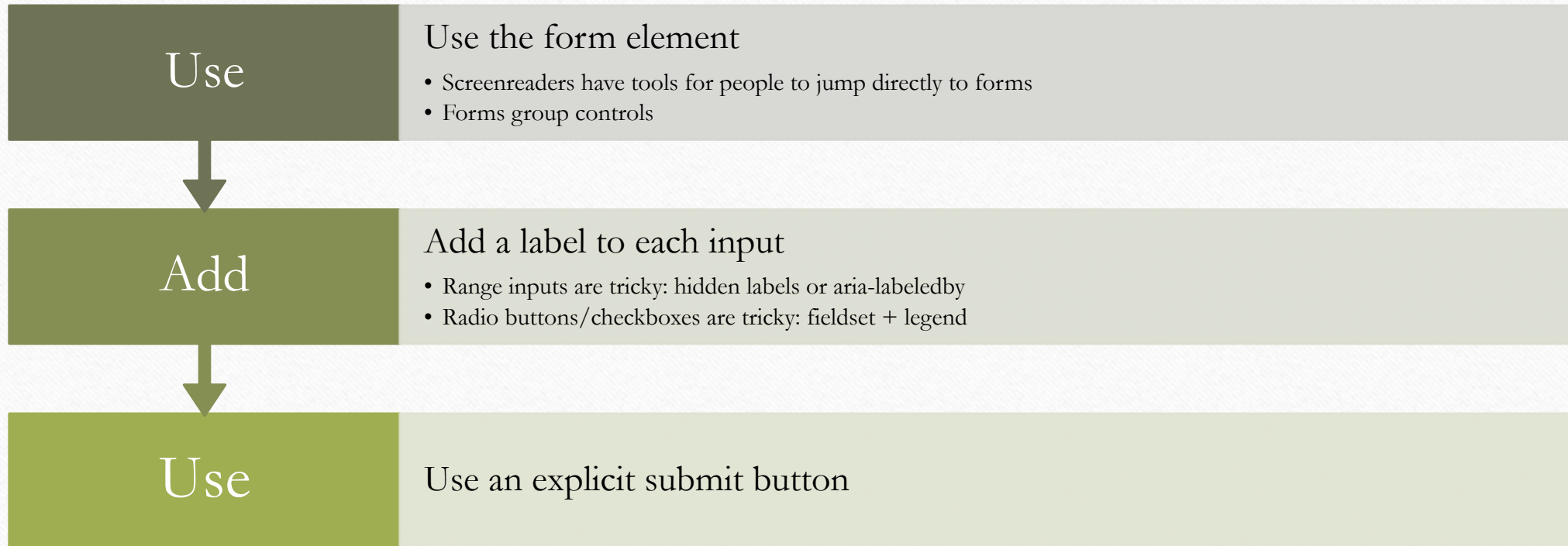
- Mark navigation to external sites clearly

## Use

- Use skip links where necessary
  - To skip to site content—see GitHub for an example
  - To skip past large chunks of data



# Forms





# Forms – Wrong vs Right

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`<div>...</div>`

`<button type="button" onclick="...">Submit</button>`

`<div onclick="...">Submit</div>`

`<label>Name</label>`

`<input name="name" />`

`<form>...</form>`

`<button type="submit">Submit</button>`

`<label for="name">Name</label>`

`<input id="name" name="name" />`

# ARIA-\* States and Properties

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- **aria-labelledby**
  - Specifies another element by id as the label
  - Use aria-label if label is invisible
- **aria-disabled**
  - Marks an element disabled
- **aria-hidden**
  - Marks an element invisible
- **role**
  - Set an elements role
  - Button, menu, document, etc.
- **required (HTML5)**
  - aria-required for other versions
- **aria-valuemin & aria-valuemax**
  - Min and max values for a range
  - Required on some roles



# Images



## Check

the alt tag

- alt="Checkbox"



## Set

the role attribute if necessary

- role="button"



## Hide

glyphs from screenreaders

- aria-hidden="true"

# Images – Wrong vs Right

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``

``

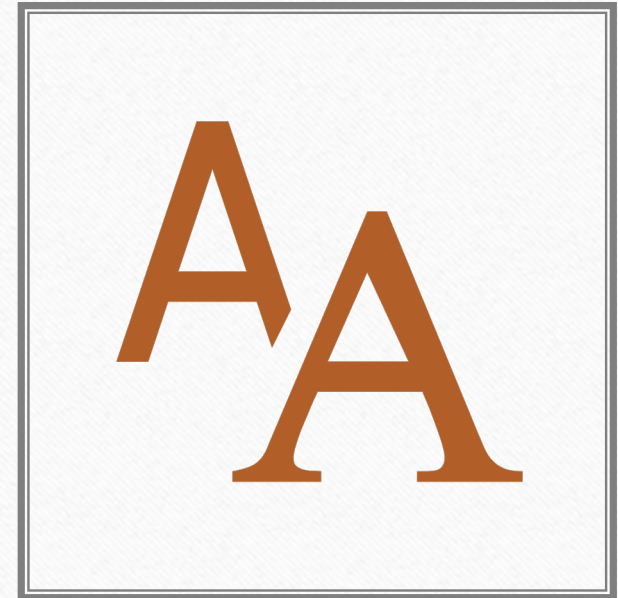
``



# Fonts

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- Text controls should scale for font size
  - Translations also need scalability
- Foreground/background color affects readability
- Use text; not images



# Fonts – Wrong vs Right

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```
div {  
    height: 200px;  
}
```

```
div {  
    min-height: 200px;  
}
```



# Colors

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- Dev responsibility?
- Sometimes product owner/client sets theme
  - Give feedback
  - Sometimes, you can't do anything
  - Be an evangelist to non-devs:
    - Business
    - UX
    - Sales

## Resources

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WAVE Accessibility  
Browser Addin

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WebAIM Color Contrast  
Tool

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NVDA

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Dragon Naturally  
Speaking



# Resources

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Presentation:

<https://github.com/Hosch250/MDC2020AccessibilityTalk>

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Inaccessible Demo Site:

<https://github.com/Hosch250/WeatherTechInaccessible>

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Accessible Demo Site:

<https://github.com/Hosch250/WeatherTechAccessible>