Web Accessibility (A11y)

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1. Why is Accessibility important?
2. What is Web Accessibility?
3. Inclusive Design & Diverse Abilities
4. Principles
5. Assistive technologies
6. What you can do

Why is Accessibility important?

1 in 12 men have trouble differentiating colors (color blindness) - *colourblindawareness.org*

1 out of 7 people in the world has some sort of disability - *World Health Organization*

20% of the US Population has some sort of disability - *US Census Bureau*

98% of web home pages have accessibility issues - *WebAIM Million Report*

What is Accessibility?

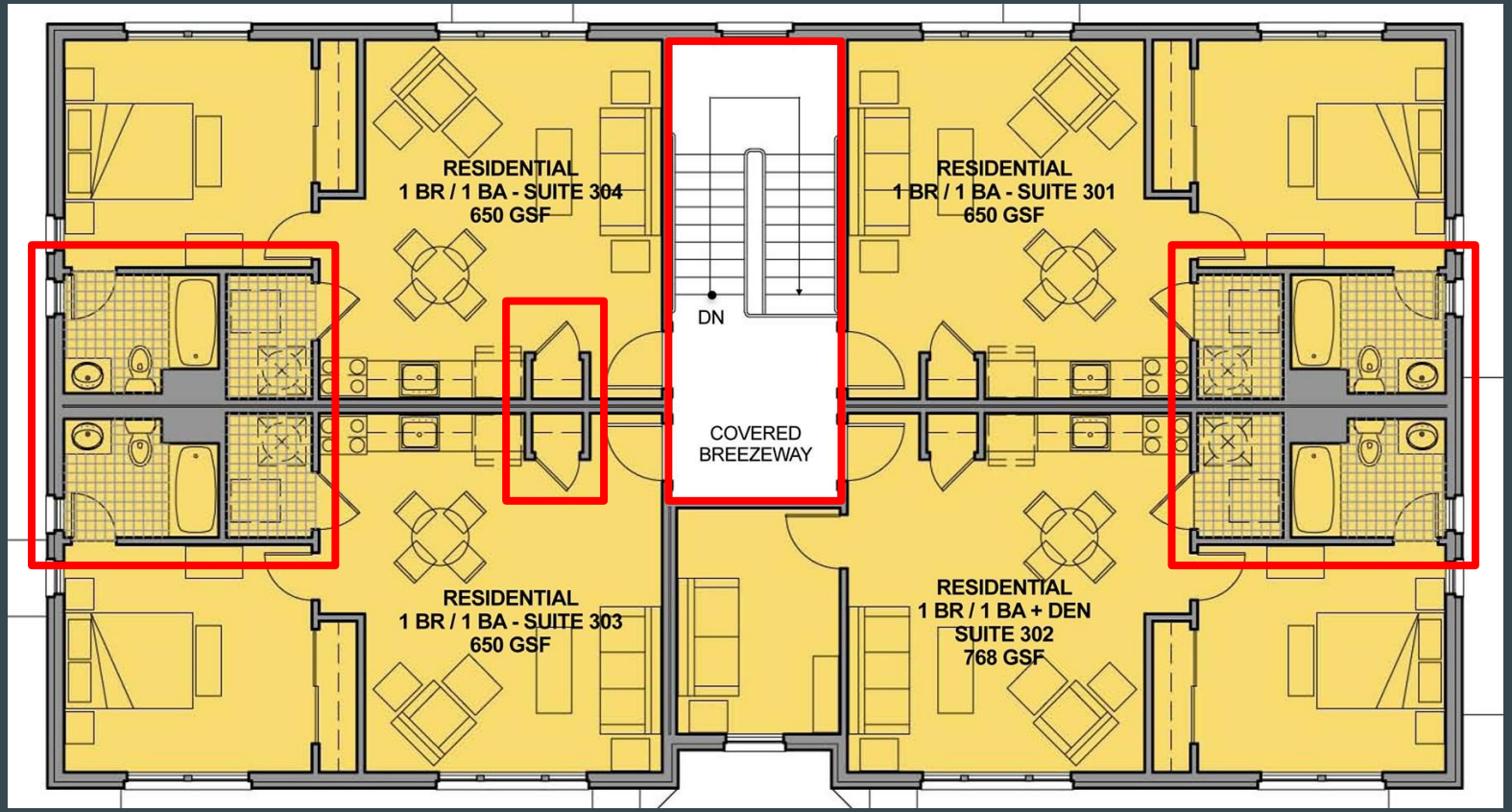
Accessibility is the design of products, devices, services, or environments for people with disabilities.

Why is Accessibility important?

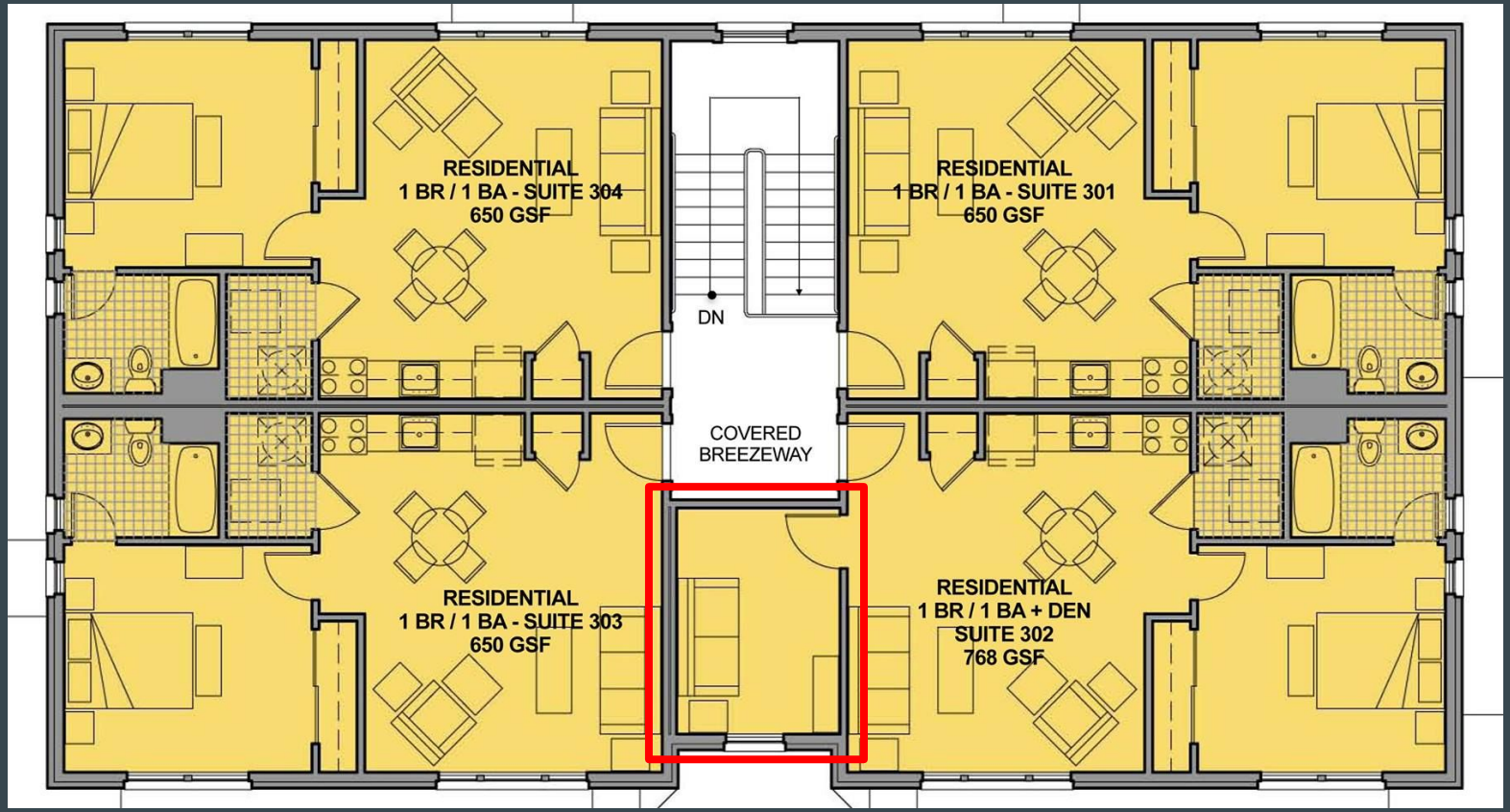
Accessibility is the design of products, devices, services, or environments for people with disabilities.

Accessibility means ***independence***.

Importance of Inclusive Design



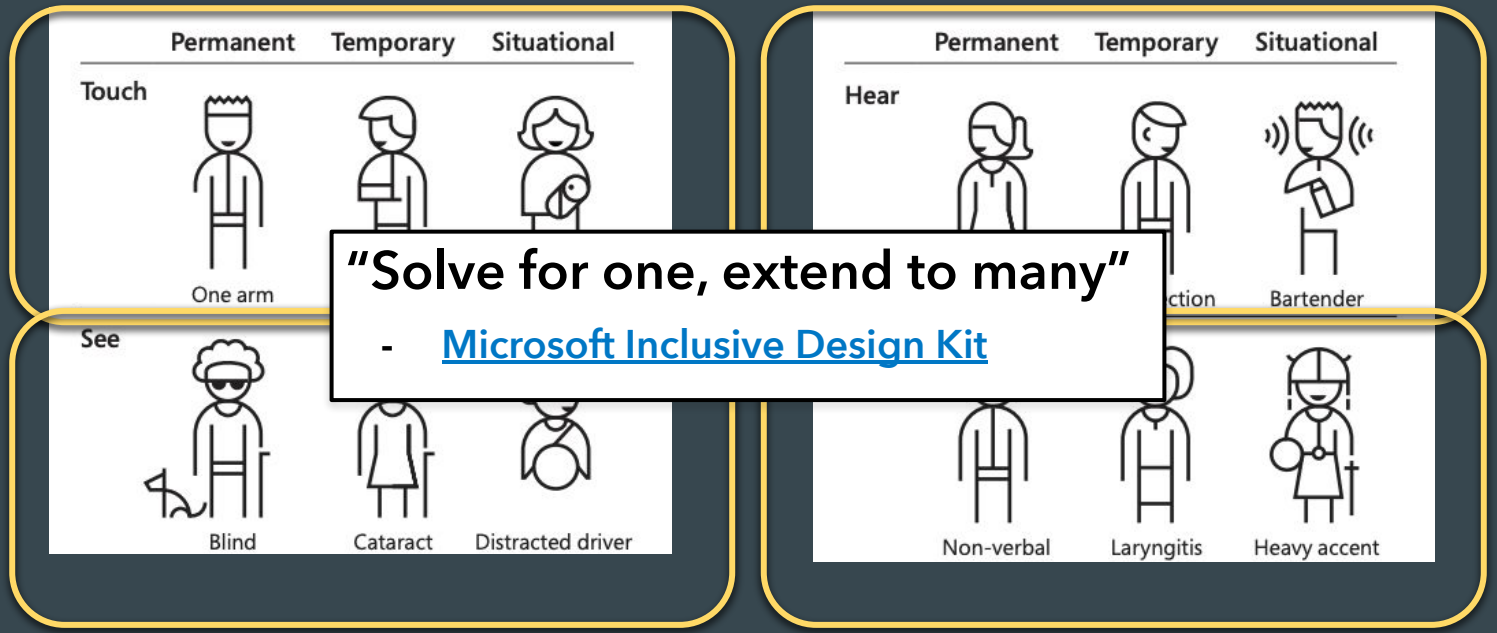
Importance of Inclusive Design



Accessibility benefits everyone!

Failing to design inclusively

Diverse abilities



"Solve for one, extend to many"

- Microsoft Inclusive Design Kit

Web Accessibility principles

- WWW is fundamentally designed to work for all people
- WWW removes barriers to communication and interaction
- Badly designed websites, applications, technologies, etc. introduce barriers

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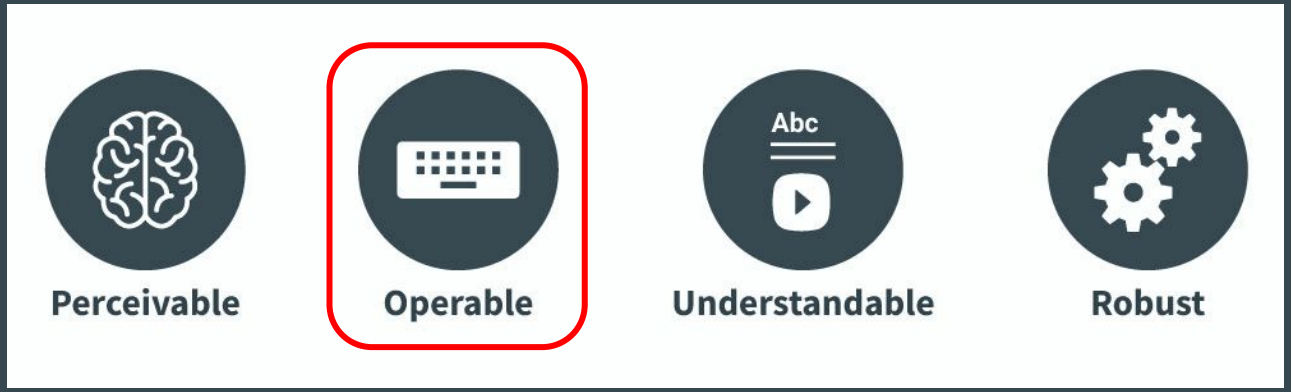
Web Accessibility principles - POUR

POUR

Perceivable:

People can see, hear, and/or feel the content

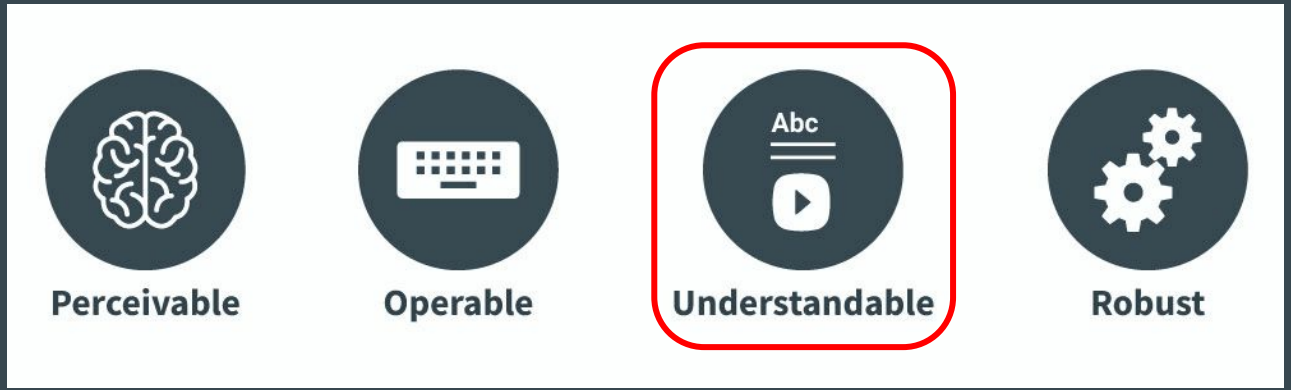
POUR



Operable:

People can use the software via keyboard, mouse, voice, etc.

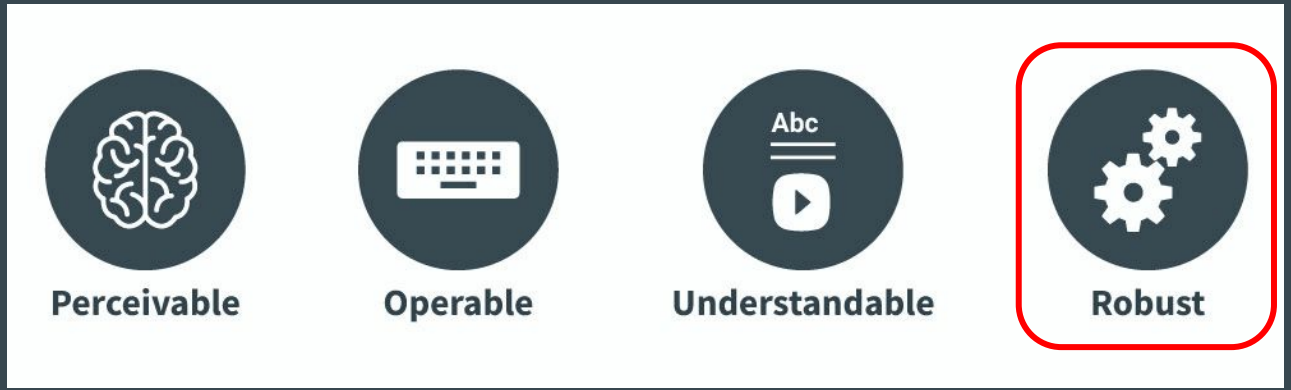
POUR



Understandable:

People get clear and simple language

POUR



Robust:

People can use different assistive technologies

Assistive Technologies

Assistive Technologies

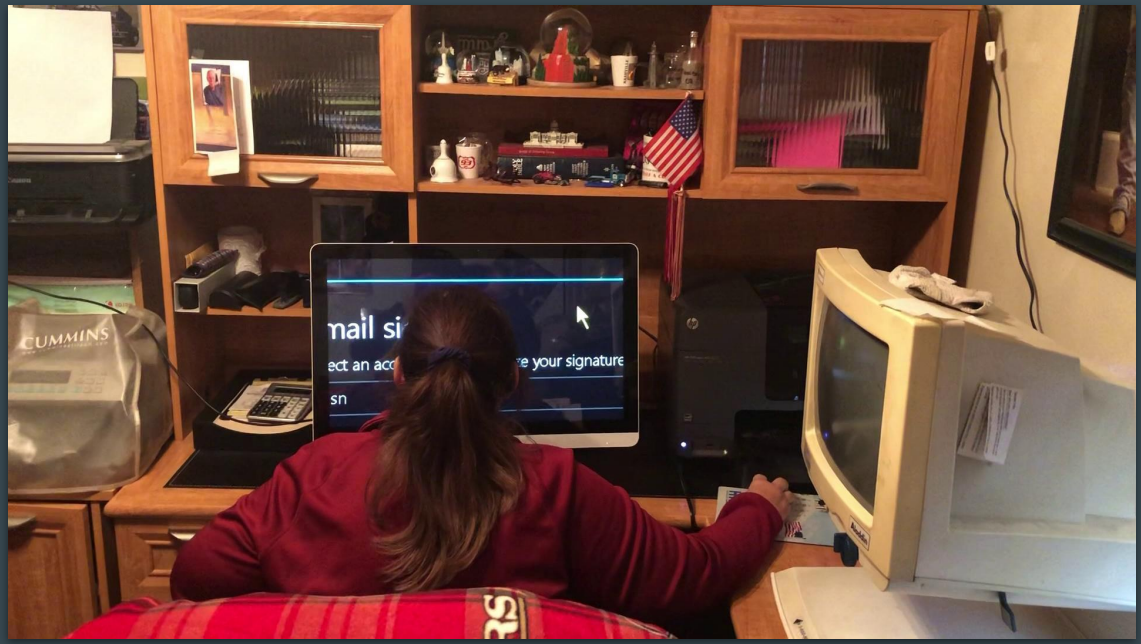
- Screen reader

Assistive Technologies

- Screen reader
- Text-to-speech

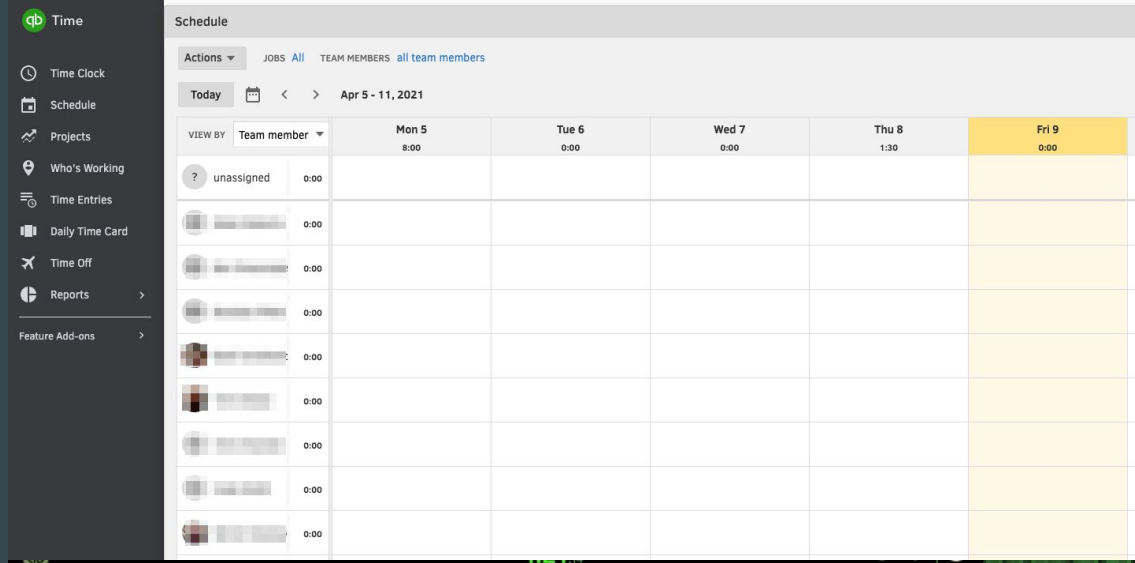
Assistive Technologies

- Screen reader
- Text-to-speech
- Screen magnification



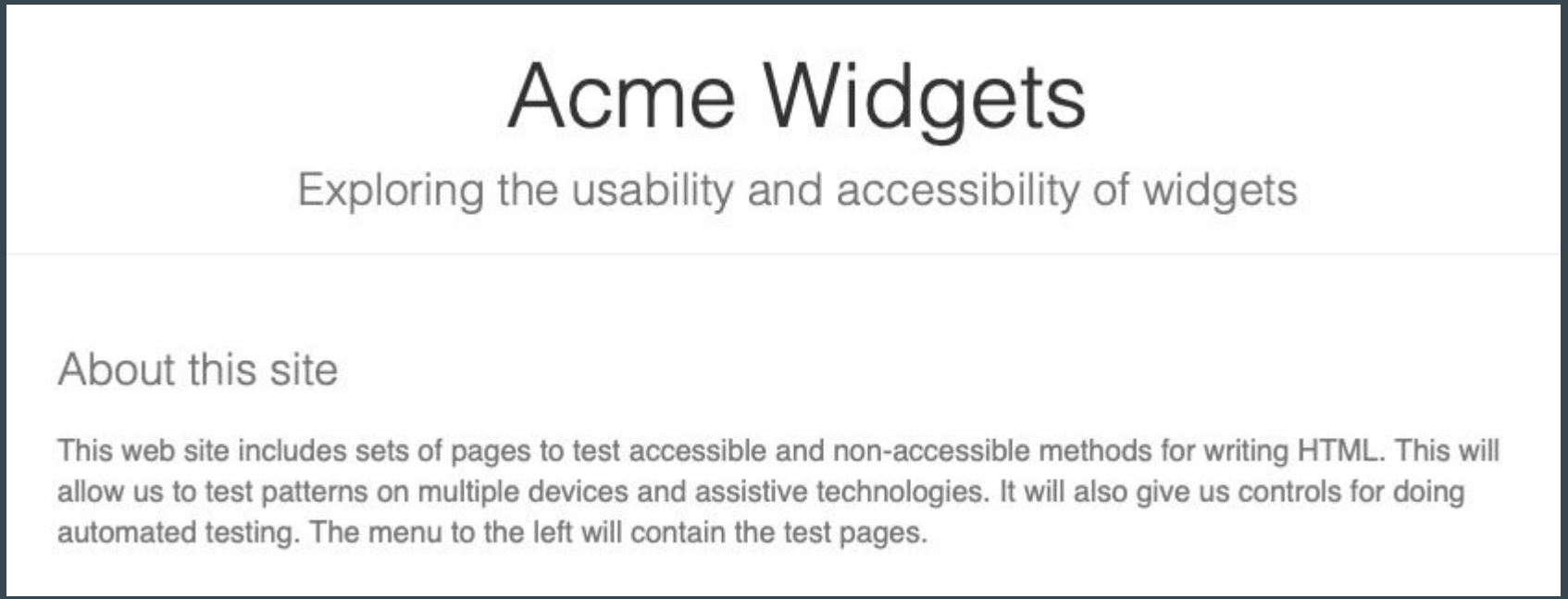
Assistive Technologies

- Screen reader
- Text-to-speech
- Screen magnification
- Custom color theming



Using a screen reader

1. Accessibility Testing Site



What you can do

1. Use semantic HTML

What you can do

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```
<section>
    <h1>This is my page title!</h1>
    <div>This is my first paragraph of my page.</div>
</section>
<section>
    <h3>This is a heading for my first section.</h3>
    <div>This is the paragraph. It also contains a link to <span class="link" onclick="goToGoogle()">Google's homepage</span>.</div>
    <div>This paragraph contains a button to <div class="btn-custom" onclick="submitFeedback()">submit feedback</div>.</div>
</section>
<section>
    <h5>This is a heading for my second section.</h5>
    <div>This section includes an image.</div>
    <div>
        <img src="./images/s789dbcaodoip82392dahg0784fda.png" />
    </div>
    <div>
        <div class="checkmark">List item one</div>
        <div class="checkmark">List item two</div>
        <div class="checkmark">List item three</div>
    </div>
</section>

```

What you can do

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What you can do

1. Use semantic HTML

```
<section>
    <h1>This is my page title!</h1>
    <p>This is my first paragraph of my page.</p>
</section>
<section>
    <h2>This is a heading for my first section.</h2>
    <p>This is the paragraph. It also contains a link to <a href="www.google.com">Google's homepage</a>.</p>
    <p>This paragraph contains a button to <button onclick="submitFeedback()">submit feedback</button></p>
</section>
<section>
    <h2>This is a heading for my second section.</h2>
    <p>This section includes an image.</p>
    <div>
        <img src="./images/s789dbcaodoip82392dahg0784fda.png" alt="dog playing table tennis" />
    </div>
    <ul>
        <li>List item one</li>
        <li>List item two</li>
        <li>List item three</li>
    </ul>
</section>

```

What you can do

1. Use semantic HTML
2. Use reusable UI components that are accessible
    a. Vue.js Accessibility Basics




What you can do

1. Use semantic HTML
2. Use reusable UI components that are accessible
3. Test the UI using only your keyboard
    a. `tab / shift+tab` to move forwards and backwards
    b. `enter` to activate a button or a link
    c. `space` to check/uncheck a checkbox
    d. `up/down/left/right` to select a radio button in a radio button group

What you can do

1. Use semantic HTML
2. Use reusable UI components that are accessible
3. Test the UI using only your keyboard
4. Test the UI using a screen reader
    a. Windows - download and use NVDA
    b. Mac/iOS - use VoiceOver (built-in)
    c. Android - use Talkback (built-in)

Links to resources

1. Web Content Accessibility Guidelines (WCAG)
2. NVDA Shortcut Keys
3. MacOS VoiceOver Guide
4. Android TalkBack Guide
5. Vue.js Accessibility Basics
6. Accessibility Testing Site
7. https://github.com/joshharrison626/Intro-To-Accessibility