W3C® Web Accessibility initiative

WAI: Strategies, guidelines, resources to make the Web accessible to people with disabilities

Tips on Designing for Web Accessibility

About WCAG

Web Content Accessibility Guidelines is the international standard for making web content more accessible to people with disabilities. The WCAG requirements are called "success criteria".

Learn more from the WCAG Overview.

This page introduces some basic considerations to help you get started making your user interface design and visual design more accessible to people with disabilities. These tips are good practice to help you meet Web Content Accessibility Guidelines (WCAG) requirements. Follow the links to the related WCAG requirements, detailed background in the "Understanding" document, guidance from Tutorials, user stories, and more.

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Provide sufficient contrast between foreground and background

Foreground text needs to have sufficient contrast with background colors. This includes text on images, background gradients, buttons, and other elements. This does not apply for logos, or incidental text, such as text that happens to be in a photograph. The

links below provide more information on the minimum contrast ratio as required by the WCAG and how to check contrast. "Contrast ratio" is a short version of the more technically correct term "luminance contrast ratio".

Example: Contrast ratio

> ❌ Insufficient
>
> Some people cannot read text if there is not sufficient contrast between the text and background. For others, bright colors (high luminance) are not readable; they need low luminance.

> ✔ Sufficient
>
> Some people cannot read text if there is not sufficient contrast between the text and background. For others, bright colors (high luminance) are not readable; they need low luminance.

For more information

- **WCAG**
  - Contrast (Minimum) 1.4.3 (Understanding 1.4.3)
- **User Story**
  - How a user with "color blindness" experiences the Web
- **Easy Check**
  - How to check contrast ratio
- **Support Tools**
  - List of tools to help determine contrast ratio

Don't use color alone to convey information

While color can be useful to convey information, color should not be the only way information is conveyed. When using color to differentiate elements, also provide additional identification that does not rely on color perception. For example, use an asterisk in addition to color to indicate required form fields, and use labels to distinguish areas on graphs.

Example: Using color to convey meaning
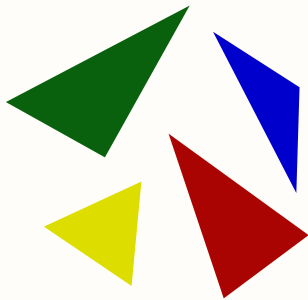
❌ Color only

Required fields are in red

Name [   ]

Email [   ]

✔ Color and symbol

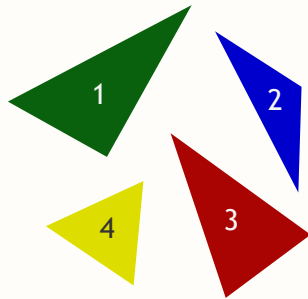Required fields are in red and marked with an *

Name [   ]

Email * [   ]

Example: Refer to something using color alone

❌ Color only

Which is the right-angled triangle?

○ Green
○ Blue
○ Red
○ Yellow
○ Don't know

✔ Color and number

Which is the right-angled triangle?
○ Green (1)
○ Blue (2)
○ Red (3)
○ Yellow (4)
○ Don't know

For more information

- **WCAG**
  - Use of Color 1.4.1 (Understanding 1.4.1)
- **User Story**
  - How a user with "color blindness" experiences the Web

Ensure that interactive elements are easy to identify

Provide distinct styles for interactive elements, such as links and buttons, to make them easy to identify. For example, change the appearance of links on mouse hover, keyboard focus, and touch-screen activation. Ensure that styles and naming for interactive elements are used consistently throughout the website.

Example: Unique styles for different link states

✔ Style links to stand out from text

Some people can't use a mouse and use only a keyboard to navigate through web pages.

It is important that users can reach all interactive elements using the keyboard, and that it is clear which element has focus.

Visible keyboard focus could be a border or highlight that moves as you tab through the web page.

✔ Mouse hover style

keyboard to navigate

✔ Keyboard focus style

keyboard to navigate

✔ Touch or click style

keyboard to navigate

For more information

- **WCAG**
  - Focus Visible 2.4.7 (Understanding 2.4.7)
  - Consistent Identification 3.2.4 (Understanding 3.2.4)
- **User Story:**
  - Challenges faced by someone with a limited ability to use a mouse
  - Challenges faced by an older user with hand tremors

Provide clear and consistent navigation options

Ensure that navigation across pages within a website has consistent naming, styling, and positioning. Provide more than one method of website navigation, such as a site search or a site map. Help users understand where they are in a website or page by providing orientation cues, such as breadcrumbs and clear headings.

For more information

- **WCAG**

- Consistent Navigation 3.2.3 (Understanding 3.2.3)
        - Multiple Ways 2.4.5 (Understanding 2.4.5)
  - **User Story**
        - How consistency and navigation can help someone with cognitive difficulties

Ensure that form elements include clearly associated labels

Ensure that all fields have a descriptive label adjacent to the field. For left-to-right languages, labels are usually positioned to the left or above the field, except for checkboxes and radio buttons where they are usually to the right. Avoid having too much space between labels and fields.

Example: Labels and input fields associated by proximity

Add a comment

Your E-mail

☐ I am happy for you to contact me

Your Website

Comment

For more information

- **WCAG**
        - Labels or Instructions 3.3.2 (Understanding 3.3.2)
        - Headings and Labels 2.4.6 (Understanding 2.4.6)
  - **Tutorial**

  - Visual position of label text
- **User Story**
  - How clear labelling can help someone with cognitive difficulties

Provide easily identifiable feedback

Provide feedback for interactions, such as confirming form submission, alerting the user when something goes wrong, or notifying the user of changes on the page. Instructions should be easy to identify. Important feedback that requires user action should be presented in a prominent style.

Example: Using error list, icon, and background color to make errors stand out

Please correct the following errors:

1. ⚠ Email address is invalid
2. ⚠ A Comment is required

Add a comment
Required fields are in red and marked with an *

Name

Superbear

⚠ E-mail *

superbear@@hq.example.com

Website

⚠ Comment *

For more information

- **WCAG**
  - [Error Identification 3.3.1](#) ([Understanding 3.3.1](#))
  - [Labels or Instructions 3.3.2](#) ([Understanding 3.3.2](#))
  - [Error Suggestion 3.3.3](#) ([Understanding 3.3.3](#))
- **Tutorial**
  - [User Notifications](#)
- **User Story**
  - [How making important content easily identifiable can help](#)

Use headings and spacing to group related content

Use whitespace and proximity to make relationships between content more apparent. Style headings to group content, reduce clutter, and make it easier to scan and understand.

Example: Spacing highlights relationship between content

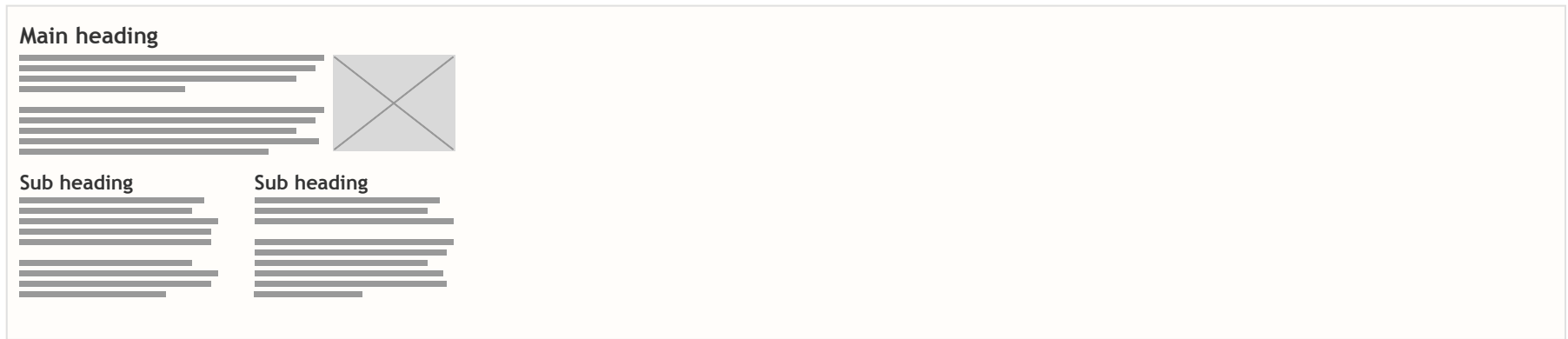✖ Little spacing and unclear relationship

Main heading

Sub heading

Sub heading

✔ More spacing and clearer relationship

For more information

- **WCAG**
  - [Headings and Labels 2.4.6](#) ([Understanding 2.4.6](#))
  - [Section Headings 2.4.10](#) ([Understanding 2.4.10](#))
- **Tutorial**
  - [Headings](#)
- **User Story**
  - [Describes how headings can be helpful for navigation](#)

Create designs for different viewport sizes

Consider how page information is presented in different sized viewports, such as mobile phones or zoomed browser windows. Position and presentation of main elements, such as header and navigation can be changed to make best use of the space. Ensure that text size and line width are set to maximize readability and legibility.

Example: Content and navigation adapt to smaller mobile screen

Display in a wide window with small text uses multiple columns for primary content, visible navigation options, and visible secondary information.

Display in a narrow window, such as a mobile phone, or with large text uses single column for primary content, navigation options are revealed using an icon, and secondary information is also revealed via icon.

For more information

- **Background**
  - Small Screen Size
  - Mobile considerations related to Understandability
- **User Story**
  - Describes how alternative views of zoomed pages can be helpful

Include image and media alternatives in your design

Provide a place in your design for alternatives for images and media. For example, you might need:

- Visible links to transcripts of audio
- Visible links to audio described versions of videos
- Text along with icons and graphical buttons
- Captions and descriptions for tables or complex graphs

Work with content authors and developers to provide alternatives for non-text content.

Example: Design includes links to a transcript and to an alternative video

Transcript | AD))
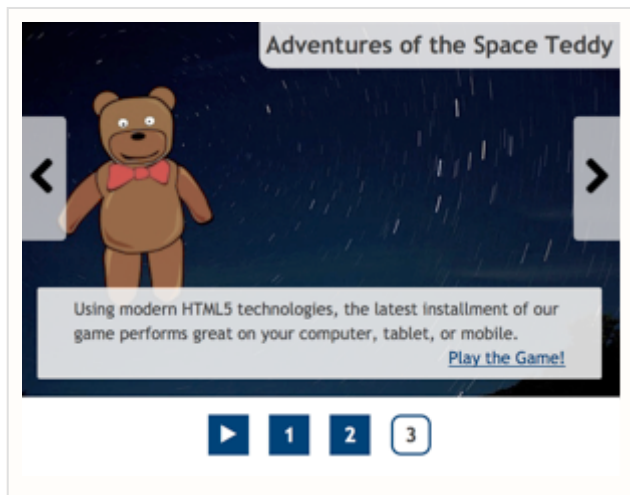
For more information

- **WCAG**
  - Non-text Content 1.1.1 (Understanding 1.1.1)
- **Tutorial**
  - Images
- **User Story**

- Describes the value of text alternatives to a blind user

Provide controls for content that starts automatically

Provide visible controls to allow users to stop any animations or auto-playing sound. This applies to carousels, image sliders, background sound, and videos.

Example: Show play/stop and selection controls in carousel design

For more information

- **WCAG**
  - Audio Control 1.4.2 (Understanding 1.4.2)
  - Pause, Stop, Hide 2.2.2 (Understanding 2.2.2)
- **Tutorial**
  - Carousel Concepts

Learn more about accessibility

These tips are a few of the things you need to consider for web accessibility. The following resources help you learn why accessibility is important, and about guidelines for making the web more accessible to people with disabilities.

- Accessibility Introduction — covers broad issues, such as the business case, and links to helpful resources
- Accessibility Principles — introduces the concepts behind the web accessibility requirements
- How people with disabilities use the web — explores the impact of accessible design with real-life examples
- Web Accessibility Tutorials — includes some guidance related to designing, for example, providing alternative text for images
- Before and After Demonstration — shows an inaccessible and accessible version of the same website, with annotations on accessibility barriers and repairs
- WCAG Quick Reference — customizable reference of all WCAG 2.0 requirements and techniques
- Web Accessibility Evaluation Tools List — includes tools to help explore contrast ratio

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