

# 1. Required and non-required (best practice) semantics

The following meet WCAG 2.0 AA standards for both legal conformance and accessibility best practices.

[ [Page titles](#) ] [ [Language](#) ] [ [Headings](#) ] [ [Navigation](#) ] [ [Links](#) ] [ [Lists](#) ] [ [Tables](#) ] [ [iFrames](#) ] [ [Other \(content\)](#) ]

## Page titles

### Required

- Must be present.
- Must be updated when the URL changes.
- Must be accurate and informative.

### Non-required / best practice

- Should describe result of user action or change of context if either occur
- Should be concise.
- Should be unique, if possible.
- Unique information should come first in the title. Example: *About us | Cornell Alumni*
- Should match H1 tag

## Language

### Required

- Must be identified accurately in the <html> tag with a valid language code. Example: `<html lang="en">`
- Valid lang attribute must be used for inline language changes. Example: `<p>And then I said in a German accent, <span lang="de">Bach ist ein Komponist.</span>.</p>`

## Headings

### Required

- Must be accurate and informative.

### Non-required / best practice

- If text looks like a heading, or is structurally a heading, use HTML heading tags. Example: `<h2>The history of Cornell University</h2>`
- Do not use HTML heading tags for anything other than true headings
- Should be concise
- Should convey clear and accurate structural outline of web page content
- Should not skip hierarchical levels Example: *Don't jump from <h2> to <h4>*
- Beginning of main content should start with `<h1>`
- Should only have one `<h1>`

## Navigation

### Required

- Navigation must be consistent in presentation order across website
- Skip link must be visible on keyboard focus (or at all times).
- Reading order must be logical.
- Navigation order of focusable elements must be logical.

### Non-required / best practice

- Navigation lists should be marked with `<nav>` or `role="navigation"`.
- Include a visible way of letting users know which page they're on. Same for screen readers. Same for paginated views.
- The skip link should be the first focusable element on a page.
- Page table of contents should reflect the heading structure of the page.
- Positive tabindex values should not be used.

## Links

## Required

- Must be visually distinguishable from surrounding text. Color alone isn't enough unless color contrast is at least 3:1, *and* hovering or focus provides additional differentiation.
- Must be semantically designated as links. Example: `<a href="https://cornell.edu">Cornell University</a>`
- Must have programmatically-discernible text. Example: 1) *if an image is used inside a link, put link text in the alt tag* 2) *if an icon is used, add an aria-label such as:* `<a href="https://cornell.edu" aria-label="Cornell University"><icon html... \></a>`
- Link labels and text alternatives must be consistent across the website. Example: *don't use "Contact Us" and "Give us a call" for the same URL*
- Anything focusable (that you can tab to) must have visual indicator appear when it's focused.

## Non-required / best practice

- Links and buttons should semantically reflect their functions. Example: *Use* `<a href="...">` for links and `<button>` for buttons.
- Link text should clearly state its purpose.
- Link text shouldn't use the word "Link." Example: *Say "More information on gummy bears." not "Link to more information on gummy bears."*
- Indicate that a link will open in a new window. Example: *add a new-window icon next to links that open in a new window*
- Links to files or non-web destinations should tell users what kind of files they are. Example: *add "PDF" next to links to PDFs*
- Enhance focus indicator on focusable elements. Example: *instead of the default browser focus, add a colorful, thicker border with a change in background when elements receive focus*

## Lists

### Required

Must use HTML semantic markup. Example: `<ul><li>Grain-fed bats</li></ul>`

## Tables

### Required

- Headers must use `<th>`
- Data header text must describe category of the corresponding data cells.
- Data cells must be associated with their corresponding header cells.
- Data group headers must be associated with their corresponding data cell groups.
- Header/data associations that can't use `<th>` and scope must use with headers plus id
- Data headers and data associations must not be referenced across nested, merged, or separate tables.
- Layout tables must not contain data table markup.

## Non-required / best practice

- Tabular data should use HTML table semantics.
- Data tables should have an associated caption or name that describes table accurately, and be unique.
- Provide a data table summary to make it easier for screen reader users
- Don't use tables for non-data page layout

## iFrames

### Required

- must have a descriptive title Example: `<iframe title="Star Wars: The Last Jedi trailer">` and be unique in relation to other iFrames on the page
- for iframes bringing in other web pages, the external page must have a `<title>`

## Non-required / best practice

- Hidden frames should also be hidden from assistive technologies using `aria-hidden="true"`.

## Other (content)

### Required

- Important strikethrough text must be supplemented with a text-based method to convey the meaning of the strikethrough.
- Important insertion text must be supplemented with a text-based method to convey the meaning of the insertion.

## Non-required / best practice

- `<blockquote>` should be used for long (block level) quotations. It shouldn't be used for visual styling alone (non-quotes).
- Code should be marked with the `<code>` element and styled to look different from non-code text. Blocks of code should use the `<pre>` element for formatting.

- Strikethrough text should use the <del> element.
- Insertion text should use the <ins> element.
- Highlighted text should use the <mark> element.
- Important highlighted text should have a text-based way of conveying the importance of the text.