Accessibility Standard: WCAG 2.1

[Web Content Accessibility Guidelines 2.1 (WCAG 2.1 - 2018)](#)

WCAG 2.1 was published in June 2018, and extends WCAG 2.0 by adding mobile accessibility plus additional success criteria for people with low vision, cognitive and learning disabilities.

Rules

This section lists the 312 rules covering 42 checkpoints for WCAG 2.1 supported by the current version of the product.

1.1 Text Alternatives

1.1.1 A Non-text Content - 22 rules

[applet](#) [elements must contain alternative content.](#)

[area](#) [elements must have an](#) [alt](#) [attribute.](#)

[img](#) [elements must have an](#) [alt](#) [attribute.](#)

[alt](#) [text should not be an image file name.](#)

[input type=image](#) [elements must have a descriptive](#) [alt](#) [at...](#)

[object](#) [elements should contain alternative content.](#)

[img alt](#) [text must not use ASCII art (which includes smileys).](#)

[alt](#) [text should not contain placeholders like 'picture' or...](#)

[Figures and images in PDF documents should have non blank ALT...](#)

[button](#) [elements containing only an](#) [img](#) [must have an](#) [alt](#) [...](#)

[Provide redundant text links for each active region of a server-side...](#)

[Use client-side image maps instead of server-side image maps,…](#)

[The alt text of this image mentions a color, which isn't useful…](#)

[This image has been updated without updating the alt attribute…](#)

[Do not use filenames, placeholders or empty text as text alternatives…](#)

[Decorative and spacer images must have a null alt attribute.](#)

[Decorative and spacer images must not use descriptive alt …](#)

[An image with a null alt attribute should not have title,…](#)

[This page has words made of Unicode characters that look like…](#)

[Using the same alt text on adjacent images results in screen…](#)

[Using alt text which duplicates link text in the same link…](#)

[Word document contains a graphic without ALT text.](#)

1.2 Time Based Media

1.2.1 A Audio-only and Video-only (Prerecorded) - 1 rule

[Do not use filenames, placeholders or empty text as text alternatives…](#)

1.2.2 A Captions (Prerecorded) - No rules

1.2.3 A Audio Description or Media Alternative (Prerecorded) - No rules

1.2.4 AA Captions (Live) - No rules

1.2.5 AA Audio Description (Prerecorded) - No rules

1.2.6 AAA Sign Language (Prerecorded) - No rules

1.2.7 AAA Extended Audio Description (Prerecorded) - No rules

1.2.8 AAA Media Alternative (Prerecorded) - No rules

1.2.9 AAA Audio-only (Live) - No rules

1.3 Adaptable

1.3.1 A Info and Relationships - 33 rules

Headings should not contain other headings.

Mark up lists and list items properly. Avoid using images as...

Identify row and column headers in data tables using th elements,...

For data tables that have two or more logical levels of row or...

If a table is used for layout, do not use any structural markup...

Do not provide a summary attribute or caption for layout...

All fieldset elements should be labeled with legend elements.

label elements should be attached to the controls they label.

The label element is blank.

PDFs must be tagged to be accessible by screen readers.

PDF security on the document prevents screen readers accessing...

Use HTML headings instead of applying CSS heading styles to ...

An image of text has been used as a heading instead of using...

Use semantic markup like strong instead of using the CSS font-weight...

Using spaces to create multiple columns results in screen readers...

This element uses JavaScript to behave like a link. Links like...

A fieldset element has been used to give a border to text.

This form control has no label and no programmatically determined...

The aria-labelledby attribute references a non-existent element...

The aria-labelledby attribute references a blank element.

This form control has a blank label or title.

This input button has no value attribute and no programmatically...

This button element is empty and has no programmatically determined...

Content inserted with CSS is not read by some screen readers,...

The headers attribute references a non-existent table header...

Important content has been hidden from screen readers using ...

Identify row and column headers in Word tables.

Attribute aria-activedescendant value should either refer to...

The aria-controls attribute must point to IDs of elements in...

The aria-describedby attribute must point to IDs of elements...

The aria-flowto attribute must point to IDs of elements in...

The aria-labelledby attribute must point to IDs of elements...

The aria-owns attribute must point to IDs of elements in the...

1.3.2 A Meaningful Sequence - 7 rules

The lang attribute specifies a language written right-to-left, ...

The dir attribute does not match the writing direction of the...

Absolute CSS positioning can make pages unreadable when style...

Inserting spaces between letters in a word means screen readers...

[Using spaces to create multiple columns results in screen readers…](#)

[This page uses nested tables, which do not make sense when read…](#)

[Word document contains a non-inline graphic or object.](#)

1.3.3 A Sensory Characteristics - 1 rule

[frame title must describe function rather than visual relationship…](#)

1.3.4 AA Orientation (new in 2.1) - 1 rule

[Don't lock the screen orientation on mobile devices.](#)

1.3.5 AA Identify Input Purpose (new in 2.1) - 1 rule

[For input type=password elements, set the autocomplete attribute…](#)

1.3.6 AAA Identify Purpose (new in 2.1) - No rules

1.4 Distinguishable

1.4.1 A Use of Color - 2 rules

[The alt text of this image mentions a color, which isn't useful…](#)

[Removing the underline from links makes it hard for color-blind…](#)

1.4.2 A Audio Control - 2 rules

[A sound plays longer than 3 seconds, without a way to turn it…](#)

[An HTML5 media element automatically plays sound, without a way…](#)

1.4.3 AA Contrast (Minimum) - 2 rules

If you set any of the colors on the `body` or `a` elements you...

Ensure that text and background colors have enough contrast.

1.4.4 AA Resize Text - 1 rule

Use relative units in CSS property values when zoom is disabled...

1.4.5 AA Images of Text - 1 rule

Equations rendered as images should be marked up with MathML....

1.4.6 AAA Contrast (Enhanced) - 2 rules

If you set any of the colors on the `body` or `a` elements you...

Ensure that text and background colors have a 7:1 contrast ratio.

1.4.7 AAA Low or No Background Audio - No rules

1.4.8 AAA Visual Presentation - 2 rules

If you set any of the colors on the `body` or `a` elements you...

Many people with cognitive disabilities (including dyslexia)...

1.4.9 AAA Images of Text (No Exception) - 1 rule

Equations rendered as images should be marked up with MathML....

1.4.10 AA Reflow (new in 2.1) - No rules

1.4.11 AA Non-Text Contrast (new in 2.1) - No rules

1.4.12 AA Text Spacing (new in 2.1) - No rules

1.4.13 AA Content on Hover or Focus (new in 2.1) - No rules

2.1 Keyboard Accessible

2.1.1 A Keyboard - 14 rules

[Provide redundant text links for each active region of a server-side...](#)

[For SCRIPTs and APPLETs, ensure that event handlers are input...](#)

[Use client-side image maps instead of server-side image maps,...](#)

[All onmouseup handlers should have an equivalent onkeyup...](#)

[All onmouseover handlers should have an equivalent onfocus...](#)

[All onmouseout handlers should have an equivalent onblur...](#)

[All onmousedown handlers should have an equivalent onkeydown...](#)

[All onclick handlers should have an equivalent onkeypress...](#)

[All ondblclick handlers should have an equivalent onkey...](#)

[select lists cannot be operated from the keyboard if they have...](#)

[onkey handlers on static elements like div and span cannot...](#)

[This form automatically submits when focus changes making it...](#)

[This element uses JavaScript to behave like a link. Links like...](#)

[This field removes focus when tabbed to making it impossible...](#)

2.1.2 A No Keyboard Trap - No rules

2.1.3 AAA Keyboard (No Exception) - 14 rules

[Provide redundant text links for each active region of a server-side...](#)

For SCRIPTs and APPLETs, ensure that event handlers are input…

Use client-side image maps instead of server-side image maps,…

All `onmouseup` handlers should have an equivalent `onkeyup`…

All `onmouseover` handlers should have an equivalent `onfocus`…

All `onmouseout` handlers should have an equivalent `onblur`…

All `onmousedown` handlers should have an equivalent `onkeydown`…

All `onclick` handlers should have an equivalent `onkeypress`…

All `ondblclick` handlers should have an equivalent `onkey`…

`select` lists cannot be operated from the keyboard if they have…

`onkey` handlers on static elements like `div` and `span` cannot…

This form automatically submits when focus changes making it…

This element uses JavaScript to behave like a link. Links like…

This field removes focus when tabbed to making it impossible…

2.1.4 A Character Key Shortcuts (new in 2.1) - No rules

2.2 Enough Time

2.2.1 A Timing Adjustable - 3 rules

Do not use the `meta` tag to automatically refresh a page as…

Do not use `meta refresh` with a non-zero timeout to automatically…

Do not use the Refresh HTTP header to automatically refresh a…

2.2.2 A Pause, Stop, Hide - 8 rules

[Don't use CSS animations that run for more than 5 seconds without…](#)

[Scrolling marquee text is very hard to read for low vision…](#)

[The blink element can trigger epileptic seizures and cause…](#)

[Avoid animated images over 5 seconds long that can't be paused…](#)

[Avoid using Flash movies that run for more than 5 seconds and…](#)

[A video plays longer than 5 seconds, without a way to pause it.](#)

[CSS has been used to make an element blink, and there's no way…](#)

[This page uses script to create a blinking effect.](#)

2.2.3 AAA No Timing - No rules

2.2.4 AAA Interruptions - 2 rules

[Do not use the meta tag to automatically refresh a page as…](#)

[Do not use meta refresh with a non-zero timeout to automatically…](#)

2.2.5 AAA Re-authenticating - No rules

2.2.6 AAA Timeouts (new in 2.1) - No rules

2.3 Seizures and Physical Reactions

2.3.1 A Three Flashes or Below Threshold - 1 rule

[Web pages must not contain large images that flash more than…](#)

2.3.2 AAA Three Flashes - 1 rule

[Web pages must not contain any images that flash more than three…](#)

2.3.3 AAA Animation from Interactions (new in 2.1) - 1 rule

Don't use CSS animations or transitions in interactions without...

2.4 Navigable

2.4.1 A Bypass Blocks - 3 rules

iframe and frame elements must have title attributes.
Frame title must not be the same as the frame src file name.
This skip link is broken. The target anchor does not exist or...

2.4.2 A Page Titled - 4 rules

Document must have a title.
Document title must not be blank.
Document title must not contain placeholder text like 'Untitled'...
Some pages have the same title, so the title cannot be used...

2.4.3 A Focus Order - 1 rule

The tab order does not follow logical sequences on the page.

2.4.4 A Link Purpose (In Context) - 4 rules

Provide redundant text links for each active region of a server-side...
Each a element must contain text or an img with an alt...
Link uses general text like 'Click Here' with no surrounding...
Using alt text which duplicates link text in the same link...

2.4.5 AA Multiple Ways - 1 rule

[Provide information about the general layout of a site using...](#)

2.4.6 AA Headings and Labels - 4 rules

[Headings should not be empty.](#)
[The `label` element is blank.](#)
[Form field labels should be unique on a page, or enclosed in...](#)
[Radio buttons with very generic labels need to be enclosed in...](#)

2.4.7 AA Focus Visible - 2 rules

[This field removes focus when tabbed to making it impossible...](#)
[The CSS outline or border style on this element makes it difficult...](#)

2.4.8 AAA Location - No rules

2.4.9 AAA Link Purpose (Link Only) - 4 rules

[Each `a` element must contain text or an `img` with an `alt`...](#)
[Link uses general text like 'Click Here' which doesn't explain...](#)
[Several links on a page share the same link text, but go to different...](#)
[Using `alt` text which duplicates link text in the same link...](#)

2.4.10 AAA Section Headings - 1 rule

[Each section of content should begin with a heading element (`h1`,...](#)

2.5 Input Modalities

2.5.1 A Pointer Gestures (new in 2.1) - No rules

2.5.2 A Pointer Cancellation (new in 2.1) - No rules

2.5.3 A Label in Name (new in 2.1) - No rules

2.5.4 A Motion Actuation (new in 2.1) - No rules

2.5.5 AAA Target Size (new in 2.1) - No rules

2.5.6 AAA Concurrent Input Mechanisms (new in 2.1) - No rules

3.1 Readable

3.1.1 A Language of Page - 1 rule

[Use the lang attribute to identify the language of the page.](#)

3.1.2 AA Language of Parts - 1 rule

[Phrases in a different language should be in a span or div…](#)

3.1.3 AAA Unusual Words - No rules

3.1.4 AAA Abbreviations - 1 rule

[Specify the expansion of each abbreviation or acronym in a document…](#)

3.1.5 AAA Reading Level - 1 rule

[This page is hard to read for users with learning disabilities…](#)

3.1.6 AAA Pronunciation - No rules

3.2 Predictable

3.2.1 A On Focus - 2 rules

[The page shows a popup when the page is loaded.](#)
[This field removes focus when tabbed to making it impossible…](#)

3.2.2 A On Input - 3 rules

[select](#) lists cannot be operated from the keyboard if they have…

[This form automatically submits when focus changes making it…](#)

[This element uses JavaScript to launch a new window without warning…](#)

3.2.3 AA Consistent Navigation - No rules

3.2.4 AA Consistent Identification - No rules

3.2.5 AAA Change on Request - 8 rules

[Do not use the meta tag to automatically refresh a page as…](#)

[Do not use meta refresh with a non-zero timeout to automatically…](#)

[Avoid specifying a new window as the target of a link with `…](#)

[Avoid specifying a new window as the target of a link using …](#)

[This input control submits the form when the user tabs out of it.](#)

[The page shows a popup when the page is loaded.](#)

[Do not popup windows as users enter text into input fields.](#)

[This page uses script to periodically refresh the entire page…](#)

3.3 Input Assistance

3.3.1 A Error Identification - No rules

3.3.2 A Labels or Instructions - 2 rules

[All fieldset elements should be labeled with legend elements.](#)

[A group of phone numbers fields needs a label or instructions…](#)

3.3.3 AA Error Suggestion - No rules

3.3.4 AA Error Prevention (Legal, Financial, Data) - No rules

3.3.5 AAA Help - No rules

3.3.6 AAA Error Prevention (All) - No rules

4.1 Robust

4.1.1 A Parsing - 180 rules

This page has markup errors, causing screen readers to miss ...

This page has duplicate IDs which cause problems in screen r...

The element form must not appear as a descendant of the form ...

The element progress must not appear as a descendant of the...

The element meter must not appear as a descendant of the meter ...

The element dfn must not appear as a descendant of the dfn ...

The element noscript must not appear as a descendant of the...

The element label must not appear as a descendant of the label ...

The element address must not appear as a descendant of the...

The element section must not appear as a descendant of the...

The element nav must not appear as a descendant of the address ...

The element article must not appear as a descendant of the...

The element header must not appear as a descendant of the header ...

The element header must not appear as a descendant of the footer ...

The element header must not appear as a descendant of the address …

The element footer must not appear as a descendant of the header …

The element footer must not appear as a descendant of the footer …

The element header must not appear as a descendant of the dt …

The element footer must not appear as a descendant of the dt …

The element article must not appear as a descendant of the…

The element nav must not appear as a descendant of the dt …

The element section must not appear as a descendant of the…

The element h1 must not appear as a descendant of the dt …

The element h2 must not appear as a descendant of the dt …

The element h3 must not appear as a descendant of the dt …

The element h4 must not appear as a descendant of the dt …

The element h5 must not appear as a descendant of the dt …

The element h6 must not appear as a descendant of the dt …

The element hgroup must not appear as a descendant of the dt …

The element header must not appear as a descendant of the th …

The element footer must not appear as a descendant of the th …

The element article must not appear as a descendant of the…

The element nav must not appear as a descendant of the th...

The element section must not appear as a descendant of the...

The element h1 must not appear as a descendant of the th...

The element h2 must not appear as a descendant of the th...

The element h3 must not appear as a descendant of the th...

The element h4 must not appear as a descendant of the th...

The element h5 must not appear as a descendant of the th...

The element h6 must not appear as a descendant of the th...

The element hgroup must not appear as a descendant of the th...

The element footer must not appear as a descendant of the address...

The element h1 must not appear as a descendant of the address...

The element h2 must not appear as a descendant of the address...

The element h3 must not appear as a descendant of the address...

The element h4 must not appear as a descendant of the address...

The element h5 must not appear as a descendant of the address...

The element h6 must not appear as a descendant of the address...

The element table must not appear as a descendant of the caption...

The element a must not appear as a descendant of the a e...

The element a must not appear as a descendant of the button ...

The element button must not appear as a descendant of the a ...

The element button must not appear as a descendant of the button ...

The element details must not appear as a descendant of the ...

The element details must not appear as a descendant of the ...

The element embed must not appear as a descendant of the a ...

The element embed must not appear as a descendant of the button ...

The element iframe must not appear as a descendant of the a ...

The element iframe must not appear as a descendant of the button ...

The element label must not appear as a descendant of the a ...

The element label must not appear as a descendant of the button ...

The element select must not appear as a descendant of the a ...

The element select must not appear as a descendant of the button ...

The element textarea must not appear as a descendant of the ...

The element textarea must not appear as a descendant of the ...

The element main must not appear as a descendant of the a ...

The element main must not appear as a descendant of the address ...

The element main must not appear as a descendant of the article ...

The element main must not appear as a descendant of the aside …

The element main must not appear as a descendant of the audio …

The element main must not appear as a descendant of the blockquote …

The element main must not appear as a descendant of the canvas …

The element main must not appear as a descendant of the caption …

The element main must not appear as a descendant of the dd …

The element main must not appear as a descendant of the del …

The element main must not appear as a descendant of the details …

The element main must not appear as a descendant of the dialog …

The element main must not appear as a descendant of the dt …

The element main must not appear as a descendant of the fieldset …

The element main must not appear as a descendant of the figure …

The element main must not appear as a descendant of the footer …

The element main must not appear as a descendant of the header …

The element main must not appear as a descendant of the ins …

The element main must not appear as a descendant of the li …

The element main must not appear as a descendant of the main …

The element main must not appear as a descendant of the map …

The element main must not appear as a descendant of the nav...

The element main must not appear as a descendant of the noscript...

The element main must not appear as a descendant of the object...

The element main must not appear as a descendant of the section...

The element main must not appear as a descendant of the slot...

The element main must not appear as a descendant of the td...

The element main must not appear as a descendant of the th...

The element main must not appear as a descendant of the video...

The a element must not appear as a descendant of an element...

The a element must not appear as a descendant of an element...

The button element must not appear as a descendant of an element...

The button element must not appear as a descendant of an element...

The details element must not appear as a descendant of an element...

The details element must not appear as a descendant of an element...

The embed element must not appear as a descendant of an element...

The embed element must not appear as a descendant of an element...

The iframe element must not appear as a descendant of an element...

The iframe element must not appear as a descendant of an element...

The label element must not appear as a descendant of an element...

The label element must not appear as a descendant of an element...

The select element must not appear as a descendant of an element...

The select element must not appear as a descendant of an element...

The textarea element must not appear as a descendant of an...

The textarea element must not appear as a descendant of an...

An element with the attribute tabindex must not appear as a...

An element with the attribute tabindex must not appear as a...

The audio element with the attribute controls must not appear...

The audio element with the attribute controls must not appear...

The img element with the attribute usemap must not appear...

The img element with the attribute usemap must not appear...

The input element must not appear as a descendant of an element...

The input element must not appear as a descendant of an element...

The menu element with the attribute toolbar must not appear...

The menu element with the attribute toolbar must not appear...

The object element with the attribute usemap must not appear...

The object element with the attribute usemap must not appear...

The [video] element with the attribute [controls] must not appear...

The [video] element with the attribute [controls] must not appear...

An element with [role=button] must not appear as a descendant...

An element with [role=button] must not appear as a descendant...

An element with [role=checkbox] must not appear as a descendant...

An element with [role=checkbox] must not appear as a descendant...

An element with [role=combobox] must not appear as a descendant...

An element with [role=combobox] must not appear as a descendant...

An element with [role=grid] must not appear as a descendant of...

An element with [role=grid] must not appear as a descendant of...

An element with [role=gridcell] must not appear as a descendant...

An element with [role=gridcell] must not appear as a descendant...

An element with [role=listbox] must not appear as a descendant...

An element with [role=listbox] must not appear as a descendant...

An element with [role=menu] must not appear as a descendant of...

An element with [role=menu] must not appear as a descendant of...

An element with [role=menubar] must not appear as a descendant...

An element with [role=menubar] must not appear as a descendant...

An element with role=menuitem must not appear as a descendant...

An element with role=menuitem must not appear as a descendant...

An element with role=menuitemcheckbox must not appear as a...

An element with role=menuitemcheckbox must not appear as a...

An element with role=menuitemradio must not appear as a descendant...

An element with role=menuitemradio must not appear as a descendant...

An element with role=option must not appear as a descendant...

An element with role=option must not appear as a descendant...

An element with role=radio must not appear as a descendant...

An element with role=radio must not appear as a descendant...

An element with role=scrollbar must not appear as a descendant...

An element with role=scrollbar must not appear as a descendant...

An element with role=searchbox must not appear as a descendant...

An element with role=searchbox must not appear as a descendant...

An element with role=slider must not appear as a descendant...

An element with role=slider must not appear as a descendant...

An element with role=spinbutton must not appear as a descendant...

An element with role=spinbutton must not appear as a descendant...

An element with role=switch must not appear as a descendant…

An element with role=switch must not appear as a descendant…

An element with role=tab must not appear as a descendant of…

An element with role=tab must not appear as a descendant of…

An element with role=textbox must not appear as a descendant…

An element with role=textbox must not appear as a descendant…

An element with role=treeitem must not appear as a descendant…

An element with role=treeitem must not appear as a descendant…

An element with role=cell must be contained in, or owned by,…

An element with role=option must be contained in, or owned…

An element with role=menuitem must be contained in, or owned…

An element with role=menuitemcheckbox must be contained in,…

An element with role=menuitemradio must be contained in, or…

An element with role=tab must be contained in, or owned by,…

An element with role=treeitem must be contained in, or owned…

An element with role=listitem must be contained in, or owned…

An element with role=gridcell must be contained in, or owned…

An element with role=columnheader must be contained in, or…

An element with role=rowheader must be contained in, or owned…

An element with role=row must be contained in, or owned by,…

An element with role=rowgroup must be contained in, or owned…

HTML5 Parse Error.

4.1.2 A Name, Role, Value - 16 rules

iframe and frame elements must have title attributes.

Frame title must not be the same as the frame src file name.

label elements should be attached to the controls they label.

The label element is blank.

Each a element must contain text or an img with an alt…

This image has been updated without updating the alt attribute…

This element uses JavaScript to make a div or span behave like…

This form control has no label and no programmatically determined…

The aria-labelledby attribute references a non-existent element…

The aria-labelledby attribute references a blank element.

This form control has a blank label or title.

This input button has no value attribute and no programmatically…

This button element is empty and has no programmatically determined…

Flash 6 and earlier does not expose the focus location to screen…

All fields in a group of input fields (for example phone numbers)…

This page has a Flash movie which references Flash version 5…

4.1.3 AA Status Messages (new in 2.1) - No rules