Lane Community College

A Guide For Making Your Web Applications Accessible To Those With Disabilities

Section 508 is a set of guidelines that federal government websites are required by law to follow. These regulations also apply to institutions that receive federal money (like Lane). Plus, we want our applications to be accessible to people with disabilities. It's just good form.

The **WCAG 2.0 Guidelines (by W3C)** are not law, but simply guidelines for making your website as usable as possible to viewers with disabilities.

The following document describes each portion of Section 508 and WCAG 2.0 in a way that, hopefully, makes it understandable for technical and non-technical people alike.

Website Accessibility Checking

Section 508: http://wave.webaim.org
WCAG 2.0: http://www.achecker.ca/checker
Color Blindness: http://colorfilter.wickline.org

ColorFilter also has an option to disable your style sheet which is helpful when testing for both Section508 and WCAG 2.0.

Just copy and paste the address to the page you need to test into the form on the respective website. All three do a good job.

PLEASE NOTE, these tools are not to be considered complete or authoritative and should only be used as basic guides to assist in checking your web pages for accessibility.

Section 508

§ 1194.22 Web-based intranet and Internet information and applications.

A. A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).
B. Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.
C. Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.
D. Documents shall be organized so they are readable without requiring an associated style sheet.
E. Redundant text links shall be provided for each active region of a server-side image map.
F. Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.
G. Row and column headers shall be identified for data tables.
H. Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.
I. Frames shall be titled with text that facilitates frame identification and navigation.
J. Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.
K. A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.
L. When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by assistive technology.
M. When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).
N. When electronic forms are designed to be completed on-line, the form shall allow people using assistive technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.
O. A method shall be provided that permits users to skip repetitive navigation links.
P. When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.

Taken from: *http://www.section508.gov/index.cfm?fuseAction=stdsdoc#Web*

Section 508 Checklist for HTML

The following is not an official Section 508 document, but is meant to give you an understanding of what needs to be done to help people with disabilities get the most out of your website.
(Pass/Fail created with help from http://webaim.org/standards/508/checklist)

Must provide a text equivalent for every non-text element.

PASS - Every image, applet, embedded media, plug-in… that conveys a message has equivalent alternative text (`alt`, `longdesc`, or in the content).
FAIL - A non-text element (image, applet, embedded media, plug-in…) is missing an alt or text description, the description is not equivalent or is not described in the adjacent text.
PASS - The `alt` text describes the *content* of the element, without being too verbose for simple objects, or too vague for complex objects.
FAIL - `Alt` texts are long or include unnecessary text ("picture of...", "image of ..."), vague, misleading, inaccurate, or redundant to the context (the `alt` text is the same as the adjacent text).
PASS - Complex graphics, like graphs, charts, etc., are accompanied by equivalent text, either through a description in the body of the page, a link to a description on a separate page, or the `longdesc` attribute.
PASS - Images within links, image buttons, and image map areas have `alt` text that describes the function.
PASS - Decorative graphics are CSS background images or have null/empty `alt` values (`alt=""`). Images with text alternatives in element content are given empty alt text to avoid redundancy.
FAIL - Decorative graphics have alt text of "spacer", "decorative graphic," or other similar text or have `alt` text that is redundant with adjacent text.
PASS - Transcripts are included for audio content.

Equivalent alternatives for multimedia presentation are synchronized with the presentation.

PASS - Video files and live audio broadcasts have synchronized captions.
PASS - Audio descriptions are provided for visual-only content in multimedia.

Web pages are designed so that all information conveyed with color is also available without color.

PASS - Color is not used solely to convey important content. An example is this document. Red and green are used to convey PASS and FAIL, but each PASS and FAIL is further described with text.
PASS - Sufficient contrast is provided between the background and content so that it's easy to distinguish.

Documents are organized so they are readable without requiring a style sheet.

PASS - Style sheets may be used for layout, but the document is still readable and understandable when the style sheet is turned off.
FAIL - The document is confusing or information is missing when the style sheet is turned off.

To see an example of a page with and without a style sheet and a description of what this means, please visit: http://academic.cuesta.edu/acasupp/DSPS/curbcut/test.htm

Redundant text links are provided for each active region of a server-side image map. – Client-side image maps are provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.

PASS - Client-side image maps are used instead of server-side image maps. Appropriate `alt` text is provided for the image as well as each hot spot area.

Row and column headers are identified for data tables.

PASS - Data tables have column and/or row headers appropriately identified using the `<th>` element.
FAIL - Data tables have no header rows or columns.
PASS - Tables used strictly for layout purposes do not use the `<th>` element.
PASS - Include `<caption>`, `<thead>`, `<tfoot>`, `<details>` and `<summary>` tags to further describe tables of data for browsers that support HTML5.

Markup is used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.

PASS - Data table cells are associated with the appropriate headers using the scope or id/headers attributes.

Frames are titled with text for frame identification and navigation.

PASS - Each frame is given a title that describes the frame's purpose or content.

Pages are designed to avoid causing the screen to flicker with a frequency greater than 2Hz and lower than 55Hz.

PASS - No element on the page (animated GIF, Flash movie, text…) flashes at a rate of 2 to 55 times per second, thus reducing the risk of optically-induced seizures.

A text-only page, with equivalent information or functionality, is provided to make a web site comply with the following provisions, when compliance cannot be accomplished in any other way. The content of the text-only page is updated whenever the primary page changes.

PASS - A text-only version is created **only** when there is no other way to make the content accessible or when it offers significant advantages over the "main" version for certain disability types and is kept up-to-date with the "main" version of the content.
FAIL - A text-only version is provided when the "main" version is not accessible, but could be made fully accessible, or the accessible version is not kept up-to-date with the "main" version.

When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script is identified with functional text that can be read by assistive technology.

PASS - Content and functionality provided by scripting (Flash movies…) is directly accessible to assistive technologies and the keyboard. `<noscript>` content is not a suitable alternative to inaccessible scripting.
FAIL - Content and functionality provided by scripts only work with a mouse or cannot be accessed by assistive technologies.

For more info on making Flash movies more accessible, go here:
http://www.adobe.com/accessibility/products/flash/best_practices.html

It should also be noted that Flash does not work on iOS devices (iPhone, iPad…) and should be avoided whenever possible.

When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page provides a link to a plug-in or applet that complies with § 1194.21(a) through (l).

PASS - A link is provided to a page where the plug-in can be downloaded.
PASS - All applets, scripts and plug-ins (including PDF, PowerPoint presentations…) and the content within them are accessible to assistive technologies, or an alternative means of accessing equivalent content is provided.

When electronic forms are to be completed on-line, the form allows people using assistive technology to access the information, field elements and functionality required for completion and submission of the form, including all directions and cues.

PASS - `<input>`, `<textarea>` and `<select>` elements have `<label>` elements associated with them in the markup or are given a descriptive `<title>` attribute.

PASS - Scripting of form elements does not interfere with assistive technologies or keyboard.
FAIL - Scripting makes parts of the form unavailable to assistive technologies or keyboard users.

NOTE: Setting a label to `display:none` or `visibility: hidden` does not fix accessibility since a reader won't read something that isn't displayed. Instead, labels that are visually unappealing, but necessary for accessibility, should be moved outside of the browser window using CSS as follows:

```
.hidden_label {
   top:-9999;
   left:-9999;
   position: absolute;
}
```

A method is provided that allows users to skip repetitive navigation links.

PASS - A link is provided to skip over navigational menus or other lengthy lists of links. A good heading structure also facilitates navigation.
FAIL - There is no way to skip over repetitive lists of links.

When a timed response is required, the user is alerted and given sufficient time to indicate more time is required.

PASS - The user has control over the timing of content changes.
FAIL - The user is required to react within limited time constraints.

Scripts, Plug-ins, Java, etc.

The following is an excerpt from Section 508 of the Rehabilitation Act, §1194.21.

A. When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.
B. Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.
C. A well defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that assistive technology can track focus and focus changes.
D. Sufficient information about a user interface element including the identity, operation and state of the element shall be available to assistive technology. When an image represents a program element, the information conveyed by the image must also be available in text.
E. When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.
F. Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.
G. Applications shall not override user selected contrast and color selections and other individual display attributes.
H. When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.
I. Color-coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.
J. When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.
K. Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.
L. When electronic forms are used, the form shall allow people using assistive technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.

Web Content Accessibility Guidelines (WCAG) 2.0

WCAG is the Web Content Accessibility Guidelines V. 2.0 as set forth by W3C. They have the following to say about it:

Web Content Accessibility Guidelines (WCAG) 2.0 covers a wide range of recommendations for making Web content more accessible. Following these guidelines will make content accessible to a wider range of people with disabilities, including blindness and low vision, deafness and hearing loss, learning disabilities, cognitive limitations, limited movement, speech disabilities, photosensitivity and combinations of these. Following these guidelines will also often make your Web content more usable to users in general.

WCAG 2.0 success criteria are written as testable statements that are not technology-specific. Guidance about satisfying the success criteria in specific technologies, as well as general information about interpreting the success criteria, is provided in separate documents. See Web Content Accessibility Guidelines (WCAG) Overview for an introduction and links to WCAG technical and educational material.

WCAG 2.0 succeeds Web Content Accessibility Guidelines 1.0 [WCAG10], which was published as a W3C Recommendation May 1999. Although it is possible to conform either to WCAG 1.0 or to WCAG 2.0 (or both), the W3C recommends that new and updated content use WCAG 2.0. The W3C also recommends that Web accessibility policies reference WCAG 2.0.

What it means

The WCAG 2.0 Guidelines are not law, but simply guidelines for making your website as usable as possible to viewers with disabilities.

The following pages are a basic checklist for achieving WCAG 2.0 levels A, AA and AAA.

This information can also be found online at:
http://www.w3.org/TR/2006/WD-WCAG20-20060427/appendixB.html

Perceivable – Web content is made available to the senses – Sight, Hearing and/or Touch

Guideline 1.1

Text Alternatives: Provide text alternatives for any non-text content.

1.1.1 For all non-text content, one of the following is true *(Level A)*

- All images, form image buttons and image map hot spots have appropriate `alt` text.
- Images that do not convey content, are decorative, or with content that is already conveyed in text, are given null `alt` text (`alt=""`) or implemented as CSS backgrounds. All linked images have descriptive alt text.
- Equivalent alternatives to complex images are provided in context or on a separate page (either linked or referenced via `longdesc`).
- Form buttons have a descriptive "value".
- Form inputs have associated text labels or, if labels cannot be used, a descriptive `title`.
- Embedded multimedia is identified via accessible text.
- Frames are appropriately titled.

Guideline 1.2

Time-based Media: Provide alternatives for time-based media.

If audio or video is designated as an alternative to web content (an audio or sign language version of a web page), then the web content itself serves as the alternate version.

1.2.1 Prerecorded Audio-only and Video-only *(Level A)*

- A descriptive text transcript (including all relevant visual and auditory clues and indicators) is provided for non-live, web-based audio (audio podcasts, MP3 files…).
- A text or audio description is provided for non-live, web-based video-only (video that has no audio track).

1.2.2 Captions (Prerecorded) *(Level A)*

- Synchronized captions are provided for non-live, web-based video (YouTube, Vimeo…)

1.2.3 Audio Description or Media Alternative (Prerecorded) *(Level A)*

- A descriptive text transcript OR audio description audio track is provided for non-live web-based video (YouTube, Vimeo…).

1.2.4 Captions (Live) *(Level AA)*

- Synchronized captions are provided for all live multimedia that contains audio (audio-only broadcasts, web casts, video conferences, Flash animations…)

1.2.5 Audio Description (Prerecorded) *(Level AA)*

- Audio descriptions are provided for all video content. (Only required if the video conveys content visually that is not available in the default audio track).

1.2.6 Sign Language (Prerecorded) *(Level AAA)*

- A sign language video is provided for all media content that contains audio.

1.2.7 Extended Audio Description (Prerecorded) *(Level AAA)*

- When an audio description track cannot be added to video due to audio timing (no pauses in the audio), an alternative version of the video with pauses that allow audio descriptions is provided.

1.2.8 Media Alternative (Prerecorded) *(Level AAA)*

- A descriptive text transcript is provided for all pre-recorded media that has a video track.

1.2.9 Audio-only (Live) *(Level AAA)*

- A descriptive text transcript (the script of the live audio) is provided for all live content that has audio.

Guideline 1.3

Adaptable: Create content that can be presented in different ways (simpler layout) without losing information or structure.

1.3.1 Info and Relationships *(Level A)*

- Semantic markup is used to designate headings (`<h1>`), lists (`<ul>`, `<ol>` and `<dl>`), emphasized or special text (`<strong>`, `<code>`, `<abbr>`, `<blockquote>`…), etc. Semantic markup is used appropriately.
- Tables are used for tabular data. Headings, where necessary, are used to associate data cells with headers. Data table captions and summaries are used where appropriate.
- Text labels are associated with form input elements. Related form elements are grouped with `fieldset`/`legend`.

1.3.2 Meaningful Sequence *(Level A)*

- The reading and navigation order (determined by code order) is logical and intuitive.

1.3.3 Sensory Characteristics *(Level A)*

- Instructions do not rely on shape, size or visual location (“Click the square to continue” or “Instructions are on the left”).
- Instructions do not rely on sound (“A beep indicates you can continue.”).

Guideline 1.4

Distinguishable: Make it easier for users to see and hear content, including separating foreground from background.

1.4.1 Use of Color *(Level A)*

- Color is not the only method of conveying content or distinguishing visual elements.
- Color alone is not used to distinguish links from surrounding text unless the luminance contrast between the link and the surrounding text is at least 3:1 and an additional differentiation (it becomes underlined) is provided when the link is hovered over or receives focus.

1.4.2 Audio Control *(Level A)*

- A mechanism is provided to stop, pause, mute or adjust volume for audio that automatically plays on a page for more than 3 seconds.

1.4.3 Contrast (Minimum) *(Level AA)*

- Text and images of text have a contrast ratio of at least 4.5:1
- Large text (over 18 point or 14 point bold) has a contrast ratio of at least 3:1

1.4.4 Resize Text *(Level AA)*

- The page is readable and functional when the text size is doubled.

1.4.5 Images of Text *(Level AA)*

- If the same visual presentation can be made using text alone, an image is not used to present that text.

1.4.6 Contrast (Enhanced) *(Level AAA)*

- Text and images of text have a contrast ration of at least 7:1.
- Large text (over 18 point or 14 point bold) has a contrast ratio of at least 4.5:1.

1.4.7 Low or No Background Audio *(Level AAA)*

- Audio of speech has no or very low background noise so the speech is easily distinguished.

1.4.8 Visual Presentation *(Level AAA)*

- Blocks of text over one sentence in length
    - Are no more than 80 characters wide.
    - Are NOT full justification.
    - Have adequate line spacing (at least ½ the height of the text) and paragraph spacing (1.5x line spacing).
    - Have a specified foreground and background color. These can be applied to specific elements or to the page as a whole using CSS.
    - Do NOT require horizontal scrolling when the text size is doubled.

1.4.9 Images of Text (No Exception) *(Level AAA)*

- Text is used within an image only for decoration (image does not convey content) OR when the information cannot be presented with text alone.

Operable – Interface forms, controls and navigation

Guideline 2.1

Keyboard Accessible: Make all functionality available from a keyboard.

2.1.1 Keyboard *(Level A)*

- All page's functionality is available using the keyboard, unless the functionality cannot be accomplished in any known way using a keyboard (free hand drawing).
- Page-specified shortcut keys and accesskeys do not conflict with existing browser and screen reader shortcuts.

2.1.2 No Keyboard Trap *(Level A)*

- Keyboard focus is never locked or trapped at one particular page element. The user can navigate to and from all navigable page elements.

2.1.3 Keyboard (No exception) *(Level AAA)*

- All page functionality is available using the keyboard.

Guideline 2.2

Enough Time: Provide users enough time to read and use content.

2.2.1 Timing Adjustable *(Level A)*

- If a page or application has a time limit, the user is given options to turn off, adjust or extend that time limit. This is not a requirement for real-time events (auctions…) where the time limit is absolutely required or if the time limit is longer than 20 hours.

2.2.2 Pause, Stop, Hide *(Level A)*

- Automatically moving, blinking or scrolling content that lasts longer than 5 seconds can be paused, stopped or hidden by the user. Moving, blinking or scrolling can be used to draw attention to or highlight content as long as it lasts less than 5 seconds.
- Automatically updating content (automatically redirecting or refreshing a page, a news ticker, AJAX updated field, a notification alert…) can be paused, stopped or hidden by the user or the user can manually control the timing of the updates.

2.2.3 No Timing *(Level AAA)*

- The content and functionality has no timing limits or constraints.

2.2.4 Interruptions *(Level AAA)*

- Interruptions (alerts, page updates…) can be postponed or suppressed by the user.

2.2.5 Re-authenticating *(Level AAA)*

- If an authentication session (login) expires, the user can re-authenticate (log in again) and continue the activity without losing any data from the current page.

Guideline 2.3

Seizures: Do not design content in a way that is known to cause seizures.

2.3.1 Three Flashes or Below Threshold *(Level A)*

- No page content flashes more than 3 times per second unless that flashing content is sufficiently small and the flashes are of low contrast and do not contain too much red.

2.3.2 Three Flashes *(Level AAA)*

- No page content flashes more than 3 times per second.

Guideline 2.4

Navigable: Provide ways to help users navigate, find content and determine where they are.

2.4.1 Bypass Blocks *(Level A)*

- A link is provided to skip navigation and other page elements that are repeated across web pages.
- If a page has a proper heading structure (`H1`, `H2`, `H3`…), this may be considered a sufficient technique instead of a “Skip to main content” link. Note that navigating by headings is not yet supported in all browsers.
- If a page uses frames and the frames are appropriately titled, this is a sufficient technique for bypassing individual frames.

2.4.2 Page Titled *(Level A)*

- The web page has a descriptive and informative page `title`.

2.4.3 Focus Order *(Level A)*

- The navigation order of links, form elements, etc is logical and intuitive.

2.4.4 Link Purpose (In Context) *(Level A)*

- The purpose of each link (or form image button or image map hotspot) can be determined from the link text alone, or from the link text and it’s context (surrounding paragraph, list item, table cell or table headers).
- Links (or form image buttons) with the same text that go to different locations are readily distinguishable.

2.4.5 Multiple Ways *(Level AA)*

- Multiple ways are available to find other web pages on the site – at least two of: a list of related pages, table of contents, site map or site search.

2.4.6 Headings and Labels *(Level AA)*

- Page headings and labels for form and interactive controls are informative. Avoid duplicate headings (“More Details”) or label text (“Name”) unless the structure provides adequate differentiation between them.

2.4.7 Focus Visible *(Level AA)*

- It is visually apparent which page element has the current keyboard focus (as you tab through the page, you can see where you are through a color change, or some other method).

2.4.8 Location *(Level AAA)*

- If a web page is part of a sequence of pages or within a complex site structure, an indication of the current page location is provided, for example, through breadcrumbs or specifying the current step in a sequence (“Step 1 of 3 – Choose a Color”).

2.4.9 Link Purpose (Link Only) *(Level AAA)*

- The purpose of each link (or form image button or image map hotspot) can be determined from the link text alone.
- There are no links (or form image buttons) with the same text that go to different locations.

2.4.10 Section Headings *(Level AAA)*

- Beyond providing an overall document structure, individual sections of content are designated using headings, where appropriate.

Understandable – Content and interface are understandable

Guideline 3.1

Readable: Make text content readable and understandable.

3.1.1 Language of Page *(Level A)*

- The language of the page is identified using the HTML `lang` attribute (`<html lang=”en”>`).

3.1.2 Language of Parts *(Level AA)*

- When appropriate, the language of sections of content that are a different language are identified, for example, by using the `lang` attribute (`<blockquote lang=”en”>`)

3.1.3 Unusual Words *(Level AAA)*

- Words that could be ambiguous or used in a very specific way are defined through adjacent text, a definition list, a glossary or other suitable method.

3.1.4 Abbreviations *(Level AAA)*

- Descriptions for abbreviations are provided by expanding or explaining the definition the first time it is used, using the `<abbr>` element, or linking to a definition or glossary. NOTE: WCAG 2.0 gives no exception for regularly understood abbreviations ("ASAP" needs to be described as "As Soon As Possible").

3.1.5 Reading Level *(Level AAA)*

- A more understandable alternative is provided for content that is more advanced than can be reasonably read by a person with a 9th grade reading level.

3.1.6 Pronunciation *(Level AAA)*

- If the pronunciation of a word is vital to understanding that word, its pronunciation is provided immediately following the word or via a link or glossary.

Guideline 3.2

Predictable: Make web pages appear and operate in predictable ways.

3.2.1 On Focus *(Level A)*

- When a page element receives focus, it does not result in a substantial change to the page, the spawning of a pop-up window, an additional change of keyboard focus or any other change that could confuse or disorient the user.

3.2.2 On Input *(Level A)*

- When a user inputs information or interacts with a control, it does not result in a substantial change to the page, the spawning of a pop-up window, an additional change of keyboard focus or any other change that could confuse or disorient the user unless the user is informed of the change ahead of time.

3.2.3 Consistent Navigation *(Level AA)*

- Navigation links that are repeated on web pages do not change order when navigating through the site.

3.2.4 Consistent Identification *(Level AA)*

- Elements that have the same functionality across multiple web pages are consistently identified. For example, the main menu at the top of the site should always be labeled the same way.

3.2.5 Change on Request *(Level AAA)*

- Substantial changes to the page, the spawning of pop-up windows, uncontrolled changes of keyboard focus, or any other change that could confuse or disorient the user must be initiated by the user. Alternatively, the user is provided an option to disable such changes.

Guideline 3.3

Input Assistance: Help users avoid and correct mistakes.

3.3.1 Error Identification *(Level A)*

- Required form elements or form elements that require a specific format, value or length provide this information within the element's label (or if a label is not provided, within the element's `title` attribute).
- If utilized, form validation cues and errors (client-side or server-side) alert users to errors in an efficient, intuitive and accessible manner. The error is clearly identified, quick access to the problematic element is provided and user is allowed to easily fix the error and resubmit the form.

3.3.2 Labels or Instructions *(Level A)*

- Sufficient labels, cues and instructions for required interactive elements are provided via instructions, examples, properly positioned form labels and/or fieldsets/legends.

3.3.3 Error Suggestion *(Level AA)*

- If an input error is detected (via client-side or server-side validation), provide suggestions for fixing the input in a timely and accessible manner.

3.3.4 Error Prevention (Legal, Financial, Data) *(Level AA)*

- If the user can change or delete legal, financial or test data, the changes/deletions are reversible, verified or confirmed.

3.3.5 Help *(Level AAA)*

- Provide instructions and suggestions in context to help in form completion and submission.

3.3.6 Error Prevention (All) *(Level AAA)*

- If the user can submit information, the submission is reversible, verified or confirmed.

Robust – Content can be used reliably by a wide variety of user agents, including assistive technologies

Guideline 4.1

Compatible: Maximize compatibility with current and future user agents, including assistive technologies.

4.1.1 Parsing *(Level A)*

- Significant HTML/XHTML validation/parsing errors are avoided.

4.1.2 Name, Role, Value *(Level A)*

- Markup is used in a way that facilitates accessibility. This includes following the HTML/XHTML specifications and using forms, form labels, frame titles… appropriately.
- Element has the current keyboard focus (as you tab through the page, you can see where you are through a color change, or some other method).

2.4.8 Location *(Level AAA)*

- If a web page is part of a sequence of pages or within a complex site structure, an indication of the current page location is provided, for example, through breadcrumbs or specifying the current step in a sequence ("Step 1 of 3 – Choose a Color").

2.4.9 Link Purpose (Link Only) *(Level AAA)*

- The purpose of each link (or form image button or image map hotspot) can be determined from the link text alone.
- There are no links (or form image buttons) with the same text that go to different locations.

2.4.10 Section Headings *(Level AAA)*

- Beyond providing an overall document structure, individual sections of content are designated using headings, where appropriate.

Understandable – Content and interface are understandable

Guideline 3.1

Readable: Make text content readable and understandable.

3.1.1 Language of Page *(Level A)*

- The language of the page is identified using the HTML `lang` attribute (`<html lang="en">`).

3.1.2 Language of Parts *(Level AA)*

- When appropriate, the language of sections of content that are a different language are identified, for example, by using the `lang` attribute (`<blockquote lang="en">`)

3.1.3 Unusual Words *(Level AAA)*

- Words that could be ambiguous or used in a very specific way are defined through adjacent text, a definition list, a glossary or other suitable method.

3.1.4 Abbreviations *(Level AAA)*

- Descriptions for abbreviations are provided by expanding or explaining the definition the first time it is used, using the `<abbr>` element, or linking to a definition or glossary. NOTE: WCAG 2.0 gives no exception for regularly understood abbreviations ("LCC" on Lane Community College's website must always be explained).

3.1.5 Reading Level *(Level AAA)*

- A more understandable alternative is provided for content that is more advanced than can be reasonably read by a person with a 9th grade reading level.

3.1.6 Pronunciation *(Level AAA)*

- If the pronunciation of a word is vital to understanding that word, its pronunciation is provided immediately following the word or via a link or glossary.

Guideline 3.2

Predictable: Make web pages appear and operate in predictable ways.

3.2.1 On Focus *(Level A)*

- When a page element receives focus, it does not result in a substantial change to the page, the spawning of a pop-up window, an additional change of keyboard focus or any other change that could confuse or disorient the user.

3.2.2 On Input *(Level A)*

- When a user inputs information or interacts with a control, it does not result in a substantial change to the page, the spawning of a pop-up window, an additional change of keyboard focus or any other change that could confuse or disorient the user unless the user is informed of the change ahead of time.

3.2.3 Consistent Navigation *(Level AA)*

- Navigation links that are repeated on web pages do not change order when navigating through the site.

3.2.4 Consistent Identification *(Level AA)*

- Elements that have the same functionality across multiple web pages are consistently identified. For example, the main menu at the top of the site should always be labeled the same way.

3.2.5 Change on Request *(Level AAA)*

- Substantial changes to the page, the spawning of pop-up windows, uncontrolled changes of keyboard focus, or any other change that could confuse or disorient the user must be initiated by the user. Alternatively, the user is provided an option to disable such changes.

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Guideline 3.3

Input Assistance: Help users avoid and correct mistakes.

3.3.1 Error Identification *(Level A)*

- Required form elements or form elements that require a specific format, value or length provide this information within the element's label (or if a label is not provided, within the element's `title` attribute).
- If utilized, form validation cues and errors (client-side or server-side) alert users to errors in an efficient, intuitive and accessible manner. The error is clearly identified, quick access to the problematic element is provided and user is allowed to easily fix the error and resubmit the form.

3.3.2 Labels or Instructions *(Level A)*

- Sufficient labels, cues and instructions for required interactive elements are provided via instructions, examples, properly positioned form labels and/or fieldsets/legends.

3.3.3 Error Suggestion *(Level AA)*

- If an input error is detected (via client-side or server-side validation), provide suggestions for fixing the input in a timely and accessible manner.

3.3.4 Error Prevention (Legal, Financial, Data) *(Level AA)*

- If the user can change or delete legal, financial or test data, the changes/deletions are reversible, verified or confirmed.

3.3.5 Help *(Level AAA)*

- Provide instructions and suggestions in context to help in form completion and submission.

3.3.6 Error Prevention (All) *(Level AAA)*

- If the user can submit information, the submission is reversible, verified or confirmed.

Robust – Content can be used reliably by a wide variety of user agents, including assistive technologies

Guideline 4.1

Compatible: Maximize compatibility with current and future user agents, including assistive technologies.

4.1.1 Parsing *(Level A)*

- Significant HTML/XHTML validation/parsing errors are avoided.

4.1.2 Name, Role, Value *(Level A)*

- Markup is used in a way that facilitates accessibility. This includes following the HTML/XHTML specifications and using forms, form labels, frame titles… appropriately.