

# 508 COMPLIANCE WITH VUE

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Trusted Tester Certification Number: TT190900057

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- ▶ Section 508 of the rehabilitation act of 1973 as amended is a set of standards that requires federal agencies to make information technology and other equipment (ICT) accessible to employees and members of the public who have disabilities in a comparable manner to the access experienced by employees and members of the public without disabilities

# INTRODUCTION

- ▶ Perceivable

- ▶ Identify content and interface elements by means of the sense
    - ▶ Input Fields

- ▶ Operable

- ▶ Successfully use controls, buttons, navigation, etc
    - ▶ Keyboard accessibility

- ▶ Understandable

- ▶ Consistent in its presentation and format

- ▶ Robust

- ▶ Designed to work with all technologies

# ACCESSIBILITY PRINCIPLES

- ▶ Revised 508 Standards references the Web Content Accessibility Guidelines
  - ▶ A globally recognized and technologically neutral set of accessibility guidelines for web content
  - ▶ Level A
  - ▶ Level AA
  - ▶ Level AAA

# WCAG 2.0

- ▶ Repeatable
- ▶ Accurate
- ▶ Scalable Method for evaluating web content
- ▶ Combines manual and tools-aided test instructions to determine conformance
- ▶ Does not utilize specific assistive technologies

# TRUSTED TESTER V5 FOR THE WEB

A series of several parallel white diagonal lines of varying lengths, located in the bottom right corner of the slide.

- ▶ Color Contrast Analyzer

- ▶ Available as a standalone executable
  - ▶ No admin rights required to install

- ▶ ANDI

- ▶ Favelet

- ▶ Automated detection of potential accessibility issues
  - ▶ Reveal what a screen reader should say for interactive elements
  - ▶ Give practical suggestions to improve accessibility

# TESTING TOOLS

- ▶ A person certified to provide accurate and repeatable test results
- ▶ Uses approved testing tools
- ▶ Evaluates Web Content for conformance with Revised Section 508 Standards
- ▶ The baseline tests establishes the minimum steps required to determine compliance with Revised Section 508 Standards and WCAG 2.0 Level A and AA
- ▶ Failure to meet these success criteria could interfere with any use of the page and may indicate critical accessibility issues

## WHAT IS A TRUSTED TESTER?

- ▶ Each test section is a statement that can be evaluated as TRUE or FALSE
  - ▶ TRUE passes
  - ▶ FALSE fails
  - ▶ Does Not Apply (DNA) only if the content does not exist that meets the conditions described in the instructions
  - ▶ For some of the tests, DNA is not an acceptable result

## HOW TO EVALUATE?



USING VUE JS TO DEMO



- ▶ `<html lang="en-US">`
- ▶ `<title>{{title}}</title>`

MANDATORY 508 FOR ALL PAGES

- ▶ Determine if users have access to all functionality on a web page and all information essential or required to complete an activity using only a keyboard and keyboard navigation also needs to be logical
  - ▶ Keyboard Access
  - ▶ No Keystroke Timing
  - ▶ No Keyboard Trap
  - ▶ Focus Visible
  - ▶ Focus Order Meaning
  - ▶ Focus Order Reveal
  - ▶ Focus Order Return

# KEYBOARD ACCESS AND FOCUS

codepen.io/cai\_h/pen/yLyqwml

Accessible Form Elements  
A PEN BY Henggao

HTML

```
1 <h1>Accessible Basic Form Elements</h1>
2 <form>
3   <h2>Buttons</h2>
4   <button type="submit">Basic Submit
    Button</button>
5   <button type="reset" data-dojo-
    icon="cached">Reset Icon Button</button>
6   <button type="button" data-dojo-
    icon="delete" class="icon-only">
7     <span class="visually-hidden">Delete
    your account</span>
8   </button>
9
10 <h2>Checkboxes & Radio Buttons</h2>
```

CSS (SCSS)

```
1 @import
2   url('https://fonts.googleapis.com/css?
   family=Slabo+27px');
3
4 // general styles
5 body {
6   font-family: 'Slabo 27px', serif;
7   padding: 40px 80px;
8 }
9
10 // structural styles:
11 .visually-hidden {
12   border: 0;
13   clip: rect(0 0 0 0);
```

JS

```
1
```

Accessible Basic Form Elements

Buttons

Basic Submit Button

Reset Icon Button

Delete

Checkboxes & Radio Buttons

# FORMS

The purpose is to verify that form fields have on-screen labels or instructions

When an interactive form field is provided, it must have a label or instructions

Labels/instructions can be text or other elements with a text alternative and must be visible when the form field has focus

[https://codepen.io/cai\\_h/pen/yLyqwml](https://codepen.io/cai_h/pen/yLyqwml)

codepen.io/cai\_h/pen/qBEyvNO

Responsive Table  
A PEN BY Henggao

HTML

```
1 <h1>RWD List to Table</h1>
2 <table class="rwd-table">
3   <tr>
4     <th scope="col">Movie Title</th>
5     <th scope="col">Genre</th>
6     <th scope="col">Year</th>
7     <th scope="col">Gross</th>
8   </tr>
9   <tr>
10    <td data-th="Movie Title">Star Wars</td>
11    <td data-th="Genre">Adventure, Sci-fi</td>
12    <td data-th="Year">1977</td>
```

CSS (SCSS)

```
1 @import "compass/css3";
2
3 // More practical CSS...
4 // using mobile first method (IE8,7
  requires respond.js polyfill
  https://github.com/scottjehl/Respond)
5
6 $breakpoint-alpha: 480px; // adjust to
  your needs
7
8 .rwd-table {
9   margin: 1em 0;
10  min-width: 300px; // adjust to your
  needs
```

JS

```
1 // Responsive table method using
  display:block and data attributes
2 // Thanks to @leefroese for suggestion
  about data attributes
```

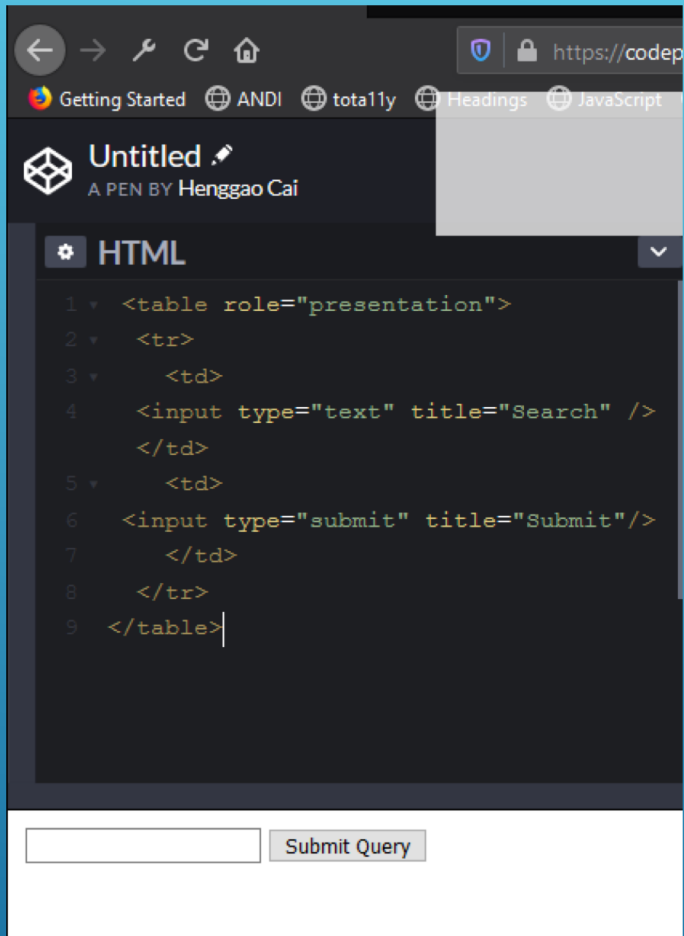
### RWD List to Table

Movie Title	Genre	Year	Gross
Star Wars	Adventure, Sci-fi	1977	\$460,935,665
Howard The Duck	"Comedy"	1986	\$16,295,774
American Graffiti	Comedy, Drama	1973	\$115,000,000

← Drag window (in editor or full page view) to see the effect. →

## DATA TABLES

Each data table has programmatic markup to identify it as a table



## LAYOUT TABLES

Tables used only for layout purposes do not use data table structure elements

Does not designate the layout table with `role='table'`

Does not include table header structure and relationship elements

<https://codepen.io/caih/pen/oNgPXbm>

- ▶ The purpose is to determine whether a link or button provides sufficient description of the link or button's purpose
- ▶ To decide whether to follow a link or activate a button, users need to understand what action what action will occur once they select the link or button
- ▶ The page provides notification of each change in content that is the result of interaction with a link or button

## LINKS AND BUTTONS

- ▶ The ANDI output contains the equivalent description for the meaningful image and/or refers to a description in the page content
- ▶ The background image is not the only means used to convey important information
- ▶ Alternative forms of CAPTCHA are provided
- ▶ The image of text cannot be replaced by text or is customizable
- ▶ There is no accessible name and description for a decorative images
  - ▶ Role="presentation"

# IMAGES



- ▶ The user can turn off, adjust, or extend the time limit
- ▶ Real Time exception
  - ▶ It is required part of a real time event (e.g. an auction)
- ▶ 20 hr exception (SLED meets the 20 hr exception, so this test does not apply)
- ▶ Essential exception
  - ▶ Time limit is essential and extending it would invalidate the activity (e.g. a timed exam)

## ADJUSTABLE TIME LIMITS

- ▶ The purpose is to ensure blocks of content that are repeated on multiple pages can be skipped so that main page content can be accessed easily
  - ▶ Keyboard accessible method is provided to bypass repetitive content
  - ▶ Consistent Navigation
  - ▶ Consistent Identification

## SKIP TO REPETITIVE CONTENT

- ▶ Determine whether understanding and meaning is preserved
- ▶ For meaningful content provided via CSS pseudo-elements `::before` and `::after`, equivalent information is available in another way
  - ▶ Some screen readers ignore CSS
  - ▶ In these cases, users may not have access to the information inserted with CSS unless presented another way on the web page

## CSS POSITIONING AND CONTENT

- ▶ Verifies that there is a mechanism to resize, scale, or zoom text to at least 200% of its original size without loss of content or functionality
  - ▶ Text cannot be cut off, obscured, overlap, or difficult to read due to the magnification

## RESIZE TEXT

- ▶ Use of Color
  - ▶ Not the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element
- ▶ Use of Sensory Characteristics
  - ▶ Instructions do not solely rely on sensory characteristics of components, such as shape, size, visual location, orientation, or sound
- ▶ Color Contrast
  - ▶ The visual presentation of text and images have sufficient contrast

# SENSORY CHARACTERISTICS AND CONTRASTS

- ▶ Each heading describes the topic and purpose of its content
- ▶ Each programmatically determinable heading is a visual heading and each visual heading is programmatically determinable
- ▶ Programmatic heading levels logically match the visual heading presentation within the heading structure
- ▶ All visually apparent lists are programmatically identified according to their type

## CONTENT STRUCTURE