WITH PASSION

FOR E-COMMERCE

WCAG

“IS A FONT SIZE OF 10px IN GENERAL WCAG COMPLIANT?”

Is a font size of 10px in general WCAG compliant?

font

- Is font Arial in size of 10px in general WCAG compliant?
- Is font Times New Roman in size of 10px WCAG compliant?
- Is font Comic Sans MS in size of 10px WCAG compliant?

font family

- Is a font size of 10px in general WCAG compliant?
- Is a font size of 10px in general WCAG compliant?
- Is a font size of 10px in general WCAG compliant?
- **Is a font size of 10px in general WCAG compliant?**
- **Is a font size of 10px in general WCAG compliant?**

rough guideline

"According to WCAG 2.1, to meet the AA level of conformance, the minimum font size for normal text should be 12 pixels or 16 CSS pixels. However, it's important to note that this is a general guideline, and the actual size may vary depending on the font and the characters used." (12px)

Is a font size of 10px WCAG compliant?

font weight

- Is a font size of 16px WCAG compliant?
- **Is a font size of 16px WCAG compliant?**

font color

- Is a font size of 16px WCAG compliant?
- **Is a font size of 16px WCAG compliant?**

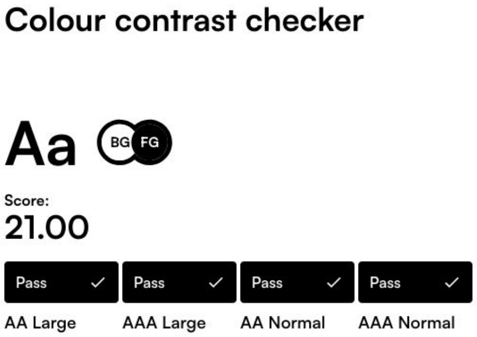
scaleable font

- browser Zoom (at least 200%)
- consider default browser settings
- think of em/rem instead of px

Is a font size of 10px WCAG compliant?

colour contrast checker

- Is a font size of 16px WCAG compliant?
- Is a font size of 16px WCAG compliant?

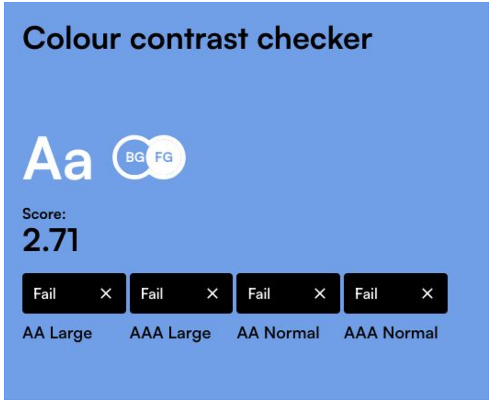


Colour contrast checker

Aa BG FG

Score:
21.00

Pass ✓	Pass ✓	Pass ✓	Pass ✓
AA Large	AAA Large	AA Normal	AAA Normal



Colour contrast checker

Aa BG FG

Score:
2.71

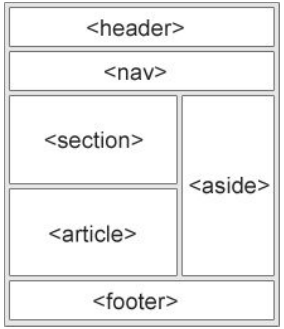
Fail ✕	Fail ✕	Fail ✕	Fail ✕
AA Large	AAA Large	AA Normal	AAA Normal

WCAG

DESIGN & DEVELOPMENT

Design & Development - Page Structure

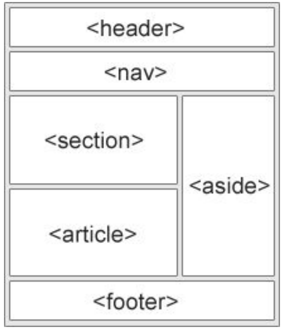
General site structure


<header>
<nav>
<section>
<aside>
<article>
<footer>

- <header> - Defines a header for a document or a section
- <nav> - Defines a set of navigation links
- <section> - Defines a section in a document
- <article> - Defines an independent, self-contained content

Design & Development - Page Structure

General site structure



<header>

<nav>

<section>

<aside>

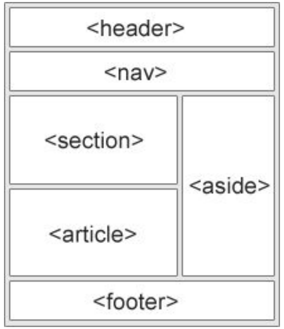
<article>

<footer>

- <aside> - Defines content aside from the content (like a sidebar)
- <footer> - Defines a footer for a document or a section
- <details> - Defines additional details that the user can open and close on demand
- <summary> - Defines a heading for the <details> element

Design & Development - Page Structure

Searchable Page structure

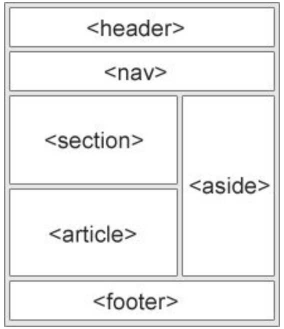


create a site searchable, think it like a newspaper. For example

- think headlines as structural meant by html (e.g. guideline for html headlines)
  - <h1> main headline, just once per page
  - meaningful hierarchy for <h2> … <h6>
- whenever possible use elements in its purpose (links, buttons, lists, …)

Design & Development - headline

Searchable
Page structure



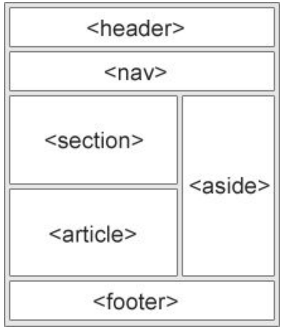
[Issue]

There is content that functions as a heading but does not use heading markup. Examples include:

- "FIND A STORE NEAR YOU"
- "SEARCH WITHIN THE US"
- "SEARCH INTERNATIONAL"

Design & Development - headline

Searchable Page structure

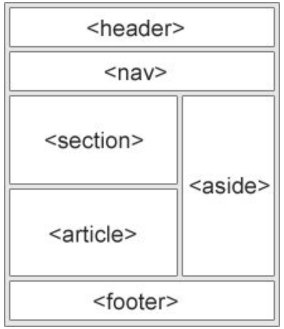


[User Impact]

Screen reader users will have difficulty efficiently navigating and gaining an accurate overview of the page.

Design & Development - headline

Searchable Page structure

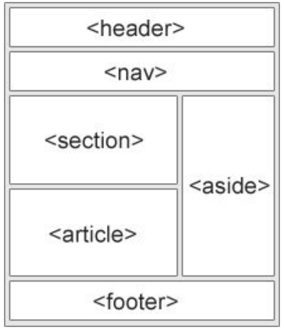


[Recommendation]

Avoid the use of implicit headings. Text that visually appears as a heading for a section of content must use <h1>, <h2>, etc. elements. Additionally, ensure the level of the heading accurately reflects the element's position in the visual hierarchy.

Design & Development - headline

Searchable Page structure



<header>

<nav>

<section>

<aside>

<article>

<footer>

[Code Reference]

```
<div class="store-header">Find a
Store Near You</div>
```

[Compliant Code Example]

```
<h3 class="store-header">Find a Store Near
You</h3>
```

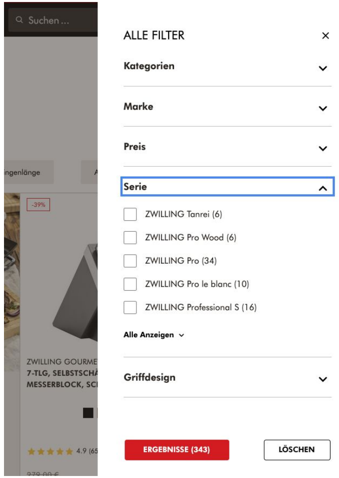
WCAG

LEAD DEVELOPMENT

Cross Dependencies - UX/UI

WCAG & UX/ UI

- fancy behaviour/ interactions
- amount of information/ interactions possible
- scalability (responsiveness)
- be descriptive for visible context
  - “See more”, “Buy now”, “click here”



Suchen ...

ingenlänge

-39%

ZWILLING GOURME
7-TLG, SELBSTSCHÄ
MESSERBLOCK, SC

4.9 (65

279,00 €

ALLE FILTER ×

Kategorien

Marke

Preis

Serie

□ ZWILLING Tanrei (6)

□ ZWILLING Pro Wood (6)

□ ZWILLING Pro (34)

□ ZWILLING Pro le blanc (10)

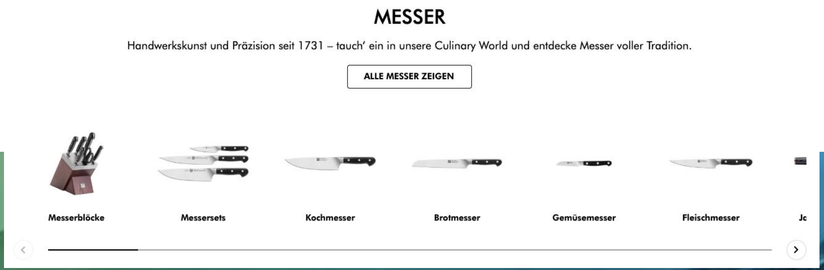
□ ZWILLING Professional S (16)

Alle Anzeigen

Griffdesign

ERGEBNISSE (343)

LÖSCHEN



MESSER

Handwerkskunst und Präzision seit 1731 – tauch’ ein in unsere Culinary World und entdecke Messer voller Tradition.

ALLE MESSER ZEIGEN

Messerblöcke

Messersets

Kochmesser

Brotmesser

Gemüsemesser

Fleischmesser

Jc

Cross Dependencies - SEO

WCAG & SEO

- think twice of WCAG recommendations
  - <img alt=””> for decorative images
- Issue
  - for SEO
  - UserWay generates alt Text if missing
- alternative options to hide semantics:
  - add aria-hidden=”true” or
  - role=”presentation”
- an accessible site is also a SEO friendly site

WCAG

DEVELOPMENT GUIDELINES

Development - WAI pattern

WAI pattern

- description of the pattern
- examples
- keyboard interaction
- WAI-ARIA roles, states and properties

```
<button>
```

```
<div role=”...” tabindex=”...” aria-XXX=”...”>
…
</div>
```

Development - WAI pattern

ARIA

roles

- describes the element how it should be announced by the screen reader
- does not change the HTML element functional

```
<button>
```

```
<div role=”button”>
…
</div>
```

Development - WAI pattern

ARIA

states

- to be announced by screenreader
- as to be in sync with visual state

<button>

```
<div aria-pressed=”false”>
…
</div>
```

Development - WAI pattern

ARIA

aria properties

- for further detailed description

<button>

```
<div aria-label=”submit address”>
…
</div>
```

Development - WAI pattern

Keyboard Interaction

- how to focus the element
- keys to support
- actions to perform on key press

<div role=”button”>

- Space: Activates the button
- Enter: Activates the button
- focus handling depending on type of button action

Development - WAI pattern

Focus the element

tabindex

- value “0” to add to regular order
- value=”-1” to hide from keyboard interaction but focus by Java Script
- value > 0 for special order

```
<button>
```

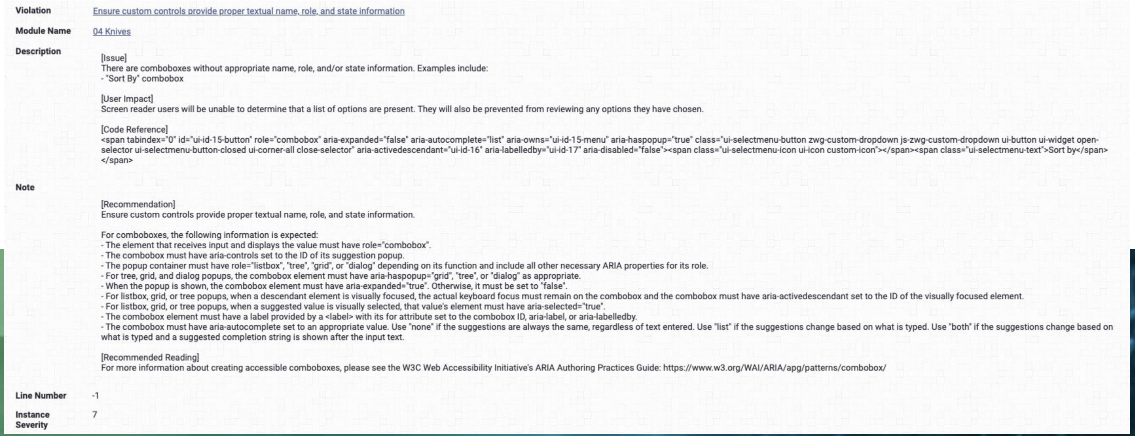
```
<div tabindex=”0”>
…
</div>
```

Development - Feedback driven

Violations

Agencies screen your site and share a report

- violation
- issue description
- recommendation



Violation Ensure custom controls provide proper textual name, role, and state information

Module Name 04 Knives

Description

[Issue]
There are comboboxes without appropriate name, role, and/or state information. Examples include:
- "Sort By" combobox

[User Impact]
Screen reader users will be unable to determine that a list of options are present. They will also be prevented from reviewing any options they have chosen.

[Code Reference]

```
<span tabindex="0" id="ui-id-15-button" role="combobox" aria-expanded="false" aria-autocomplete="list" aria-owns="ui-id-15-menu" aria-haspopup="true" class="ui-selectmenu-button zwg-custom-dropdown js-zwg-custom-dropdown ui-button ui-widget open-selector ui-selectmenu-button-closed ui-corner-all close-selector" aria-activedescendant="ui-id-16" aria-labelledby="ui-id-17" aria-disabled="false"><span class="ui-selectmenu-icon ui-icon custom-icon"></span><span class="ui-selectmenu-text">Sort by</span>
</span>
```

Note

[Recommendation]
Ensure custom controls provide proper textual name, role, and state information.

For comboboxes, the following information is expected:
- The element that receives input and displays the value must have role="combobox".
- The combobox must have aria-controls set to the ID of its suggestion popup.
- The popup container must have role="listbox", "tree", "grid", or "dialog" depending on its function and include all other necessary ARIA properties for its role.
- For tree, grid, and dialog popups, the combobox element must have aria-haspopup="grid", "tree", or "dialog" as appropriate.
- When the popup is shown, the combobox element must have aria-expanded="true". Otherwise, it must be set to "false".
- For listbox, grid, or tree popups, when a descendant element is visually focused, the actual keyboard focus must remain on the combobox and the combobox must have aria-activedescendant set to the ID of the visually focused element.
- For listbox, grid, or tree popups, when a suggested value is visually selected, that value's element must have aria-selected="true".
- The combobox element must have a label provided by a <label> with its for attribute set to the combobox ID, aria-label, or aria-labelledby.
- The combobox must have aria-autocomplete set to an appropriate value. Use "none" if the suggestions are always the same, regardless of text entered. Use "list" if the suggestions change based on what is typed. Use "both" if the suggestions change based on what is typed and a suggested completion string is shown after the input text.

[Recommended Reading]
For more information about creating accessible comboboxes, please see the W3C Web Accessibility Initiative's ARIA Authoring Practices Guide: https://www.w3.org/WAI/ARIA/apg/patterns/combobox/

Line Number -1

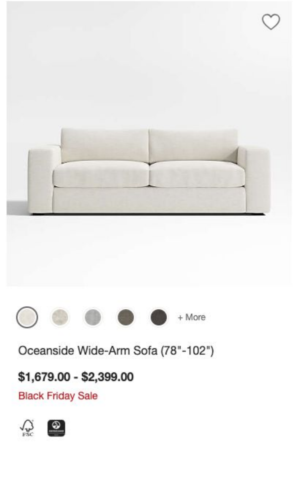
Instance Severity 7

Development - Reviews

Review WCAG compliant Sites

- UX/UI often refer to another site
- if WCAG compliant, get an idea how it is done

Example Product Tiles for Crate and Barrel

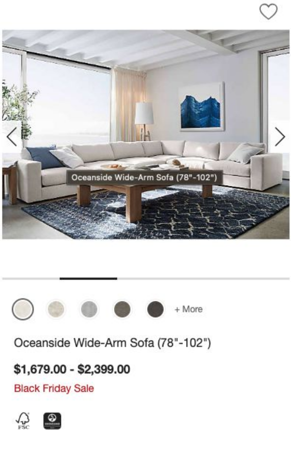


+ More

Oceanside Wide-Arm Sofa (78"-102")

$1,679.00 - $2,399.00

Black Friday Sale



+ More

Oceanside Wide-Arm Sofa (78"-102")

$1,679.00 - $2,399.00

Black Friday Sale

WCAG

DEVELOPMENT EXAMPLE

Design & Development - Elements

Native elements

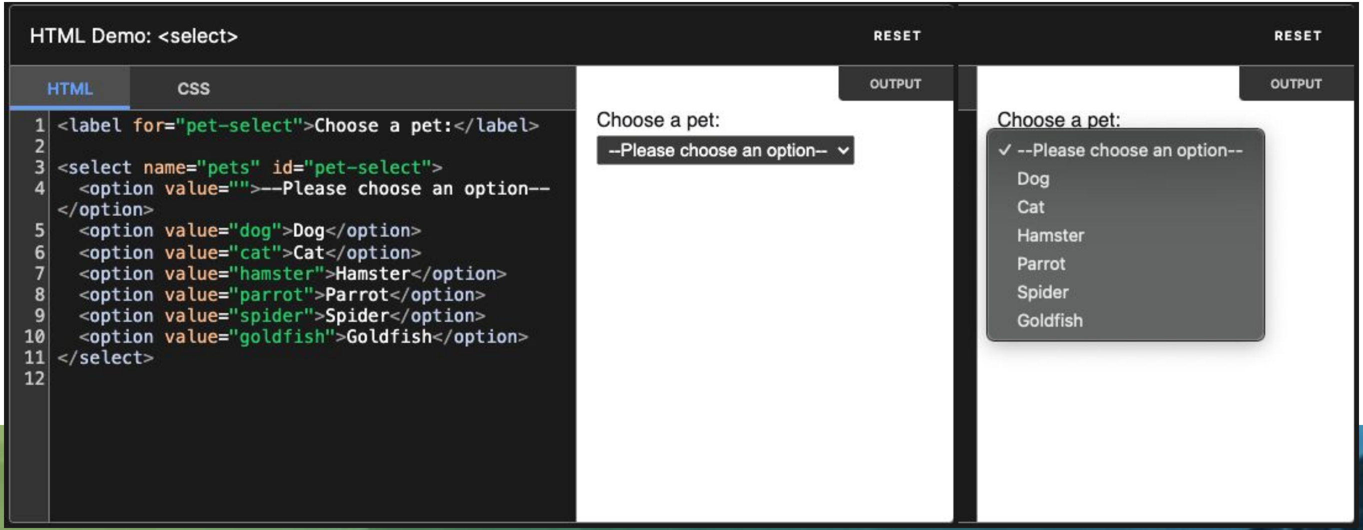
- best to use native elements

- correct announced by assistant tools
  - roles
  - states
  - further details/ aria properties
- out of the box click/touch/key handling

Design & Development - Elements

<select>

native <select>

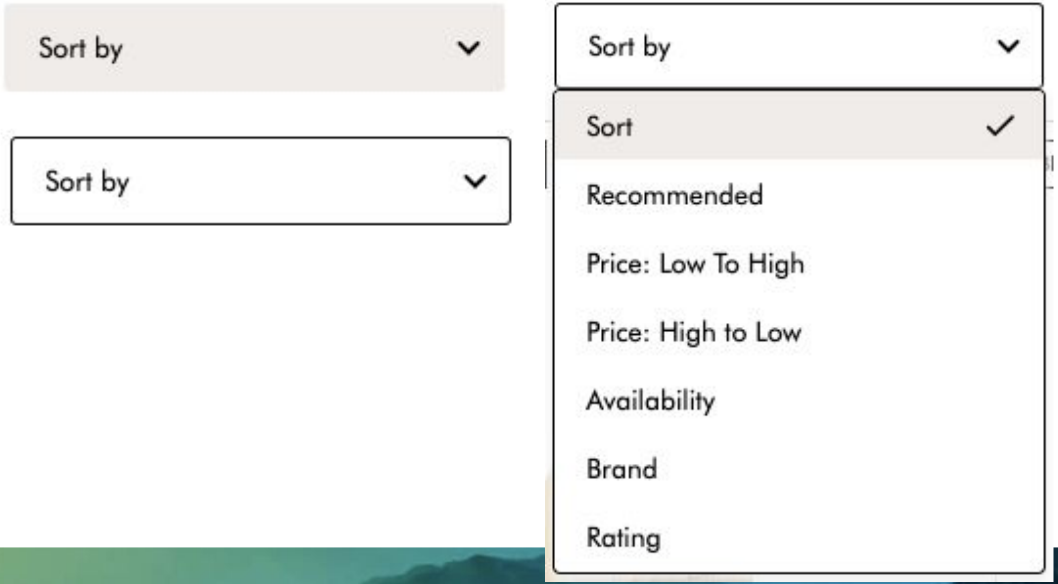


```
<label for="pet-select">Choose a pet:</label>

<select name="pets" id="pet-select">
  <option value="">--Please choose an option--</option>
  <option value="dog">Dog</option>
  <option value="cat">Cat</option>
  <option value="hamster">Hamster</option>
  <option value="parrot">Parrot</option>
  <option value="spider">Spider</option>
  <option value="goldfish">Goldfish</option>
</select>
```

Example - Input Field <select>

Customized
<select>



Example - Input Field <select>

Issues

inappropriate name, role, and/or state information

[Issue]
There are comboboxes without appropriate name, role, and/or state information. Examples include:
- "Sort By" combobox

Example - Input Field <select>

Issues

inappropriate name, role, and/or state information

[User Impact]
Screen reader users will be unable to determine that a list of options are present. They will also be prevented from reviewing any options they have chosen.

Example - Input Field <select>

Issues

inappropriate name, role, and/or state information

[Code Reference]

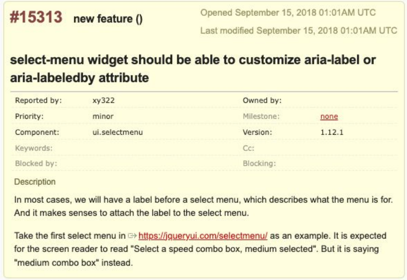
```
<span tabindex="0" id="ui-id-15-button" role="combobox"
aria-expanded="false" aria-autocomplete="list"
aria-owns="ui-id-15-menu" aria-haspopup="true"
class="ui-selectmenu-button ui-button ui-widget open-selector
ui-selectmenu-button-closed ui-corner-all close-selector"
aria-activedescendant="ui-id-16" aria-labelledby="ui-id-17"
aria-disabled="false"><span class="ui-selectmenu-icon ui-icon
custom-icon"></span><span class="ui-selectmenu-text">Sort
by</span></span>
```

Example - Input Field <select>

3rd party Libraries

jQuery UI:

- no aria-selected support
- aria-labelledby not customizable



#15313 new feature ()

Opened September 15, 2018 01:01AM UTC

Last modified September 15, 2018 01:01AM UTC

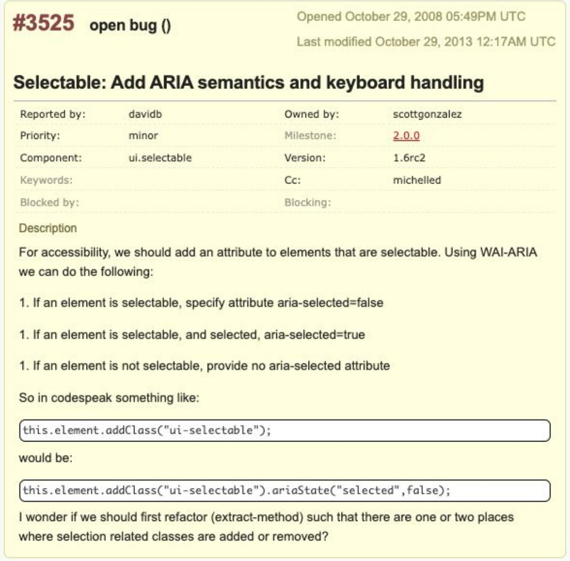
select-menu widget should be able to customize aria-label or aria-labeledby attribute

Reported by:	xy322	Owned by:	
Priority:	minor	Milestone:	none
Component:	ui.selectmenu	Version:	1.12.1
Keywords:		Cc:	
Blocked by:		Blocking:	

Description

In most cases, we will have a label before a select menu, which describes what the menu is for. And it makes senses to attach the label to the select menu.

Take the first select menu in https://jqueryui.com/selectmenu/ as an example. It is expected for the screen reader to read "Select a speed combo box, medium selected". But it is saying "medium combo box" instead.



#3525 open bug ()

Opened October 29, 2008 05:49PM UTC

Last modified October 29, 2013 12:17AM UTC

Selectable: Add ARIA semantics and keyboard handling

Reported by:	davidb	Owned by:	scottgonzalez
Priority:	minor	Milestone:	2.0.0
Component:	ui.selectable	Version:	1.6rc2
Keywords:		Cc:	michelled
Blocked by:		Blocking:	

Description

For accessibility, we should add an attribute to elements that are selectable. Using WAI-ARIA we can do the following:

1. If an element is selectable, specify attribute aria-selected=false

1. If an element is selectable, and selected, aria-selected=true

1. If an element is not selectable, provide no aria-selected attribute

So in codespeak something like:

```
this.element.addClass("ui-selectable");
```

would be:

```
this.element.addClass("ui-selectable").ariaState("selected",false);
```

I wonder if we should first refactor (extract-method) such that there are one or two places where selection related classes are added or removed?

Example - Input Field <select>

Issue

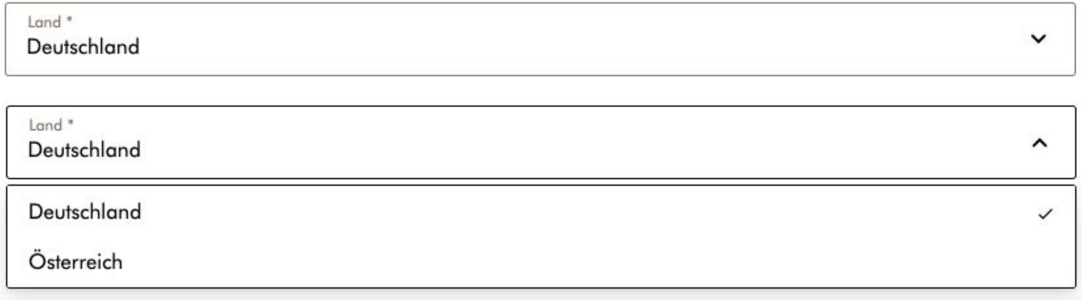
Invalid aria-attributes
[Issue]
There are elements with invalid ARIA attributes or values. Examples include:
- The "Sort By" combobox lacks a required attribute: aria-controls

[User Impact]
Assistive technologies may be unable to parse this content.

Example - Input Field <select>

3rd party Libraries

Bootsrap



Land *
Deutschland

Land *
Deutschland

Deutschland ✓

Österreich

Design & Development - Elements

ComboBox

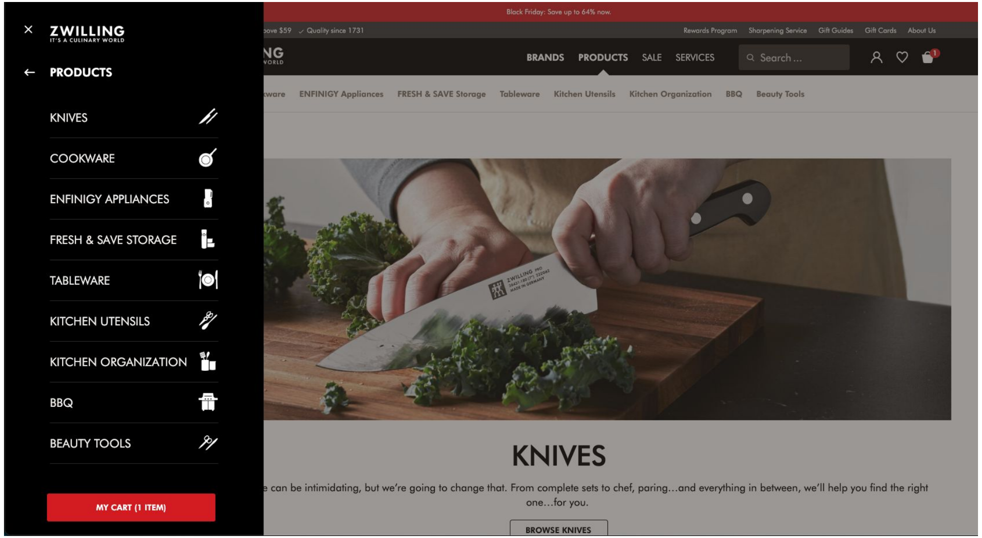
- WAI pattern combobox
- WAI pattern combobox select only
- complex effort by WAI Pattern example
  - accessibility features
  - role, property, state
  - keyboard support

WCAG

DEVELOPMENT COMPLEX EXAMPLE

Examples - Navigation

Zwilling



KNIVES

e can be intimidating, but we're going to change that. From complete sets to chef, paring…and everything in between, we'll help you find the right one…for you.

Examples - Navigation

Summary of the presentation of Navigation
navigation to show complexity of accessibility

Design

- contrast
- usability: size like font size, icon size
- self explaining (“see more”, “show less”, “click here”)
- scalable, responsive

Examples - Navigation

Visual Support

- focus highlighting
- only visible items (current navigation level)
- consistency

Examples - Navigation

WAI Patterns

listing of patterns

- menu button
- menubar
- dialog modal
- link
- accordion
- …

Examples - Navigation

Keyboard key support

- correct keyboard support for all elements as specified by WAI patterns
- navigation & flyout itself
- but also single interaction elements like links, buttons, accordions for collapsible areas, …
- general key functionality like close on “ESC”

Examples - Navigation

Keyboard trap

- has to prevent access to navigation if not visible (reverse keyboard trap)
- has to prevent tabbing other page elements when navigation open

Aria Attributes

- as specified in WAI pattern for single elements as well as
- for the navigation itself, e.g. aria-expanded for flyout, sub-menus, …

Project - Experience

Frontend-Development

- trainings are beneficial
- accessibility should be part of design & development, no additional task
- avoid redundancy
- think twice about recommendations

Developer Testing

- be aware of different devices/ OS
- be aware of different assistive tools
- align with QA for
  - automated tests
  - manual experience
  - keyboard tests
  - screenreader usage

Thanks for your attention!

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