# WAI-ARIA Workshop quick reference

## States and Properties

### Relationship and Description Attributes (commonly used)

|  |  |  |
| --- | --- | --- |
| Keyword | Values | Requirements |
| aria-activedescendant | ID reference | Used on roles: combobox, textbox, group |
| aria-autocomplete | None  Inline  List  Both | Used on roles: combobox, textbox, searchbox |
| aria-checked | True  False  Mixed | Used on roles: checkbox, menuitemcheckbox, menuitemradio, option, radio, switch |
| aria-controls | ID reference |  |
| aria-current | Page  Step  Location  Date  Time  True  False | Used on all roles except: gridcell, option, row, tab (aria-selected should be used) |
| aria-describedby | ID reference |  |
| aria-disabled | True  False | Used on roles: button, gridcell, group, input, link, menuitem, scrollbar, tab, checkbox, columnheader, combobox, grid, listbox, menu, menubar, menuitemcheckbox, menuitemradio, option, radio, radiogroup, row, rowheader, searchbox, select, slider, spinbutton, switch, tablist, textbox, tree, treegrid, treeitem |
| aria-expanded | True  False | Often requires aria-controls or aria-owns.  Used on roles: button, checkbox, combobox, gridcell, link, listbox, menuitem, row, rowheader, tab, treeitem |
| aria-haspopup | Dialog  Listbox  Menu  Tree  Grid  True | The value matches the role of the element that appears.  The value “true” is equivalent to “menu”  Used in roles: button, combobox, gridcell, link, menuitem, slider, tab, textbox, treeitem |
| aria-hidden | True  False |  |
| aria-invalid | Grammar  Spelling  True  False | Used on roles: checkbox, combobox, gridcell, listbox, radiogroup, slider, spinbutton, textbox, tree, switch, treegrid |
| aria-label | String |  |
| aria-labelledby | ID reference |  |
| aria-level | Number | Used on role: heading, row |
| aria-modal | True  False | Used on role: dialog, alertdialog |
| aria-multiselectable | True  False | Used on roles: grid, listbox, tablist, tree, treegrid |
| aria-orientation | Horizontal  Vertical | Used on roles: scrollbar, select, separator, slider, tablist, toolbar, listbox, menu, menubar, radiogroup, tree, treegrid |
| aria-owns | ID reference |  |
| aria-pressed | True  False  Mixed | Use on role=”button” |
| aria-required | True  False | Use on roles: checkbox, combobox, gridcell, listbox, radiogroup, spinbutton, textbox, tree |
| aria-selected | True  False | Use on roles: gridcell, option, row, tab |
| aria-sort | Ascending  Descending  None  Other | Added to a single table or grid header at a time |
| aria-valuemax | Number | Use on roles: spinbutton, meter, progressbar, scrollbar, slider |
| aria-valuemin | Number | Use in roles: spinbutton, meter, progressbar, scrollbar, slider |
| aria-valuenow | Number | Use in roles: spinbutton, meter, progressbar, scrollbar, slider |
| aria-valuetext | String | Used with aria-valuenow  Use in roles: spinbutton, meter, progressbar, scrollbar, slider |

## Roles

### Widget Roles

|  |  |  |
| --- | --- | --- |
| Role | HTML | Requirements |
| button | <button> or  <input type=”button> |  |
| checkbox | <input type=”checkbox”> | aria-checked state.  A label. |
| gridcell | <td> | A parent with role=”row” |
| link | <a href=”[url]”> |  |
| menuitem |  | A parent with role=”menu” or “menubar” |
| menuitemcheckbox |  | A parent with role=”menu” or “menubar”  aria-checked state  A label |
| menuitemradio |  | A parent with role=”menu” or “menubar”  aria-checked state  A label |
| option | <option> | A parent with role=”listbox”  aria-selected state |
| progressbar | <progress> | aria-valuemin, aria-valuemax, aria-valuenow  A label |
| radio | <input type=”radio”> | Grouped in a parent with role=”radiogroup”  A label. |
| scrollbar | Native scrollbars using CSS overflow property  <input type=”range”> (closest HTML) | aria-controls and aria-valuenow properties. |
| searchbox | <input type=”search”> | A label |
| separator | <hr> | If focusable: aria-valuenow, aria-valuemin, aria-valuemax |
| slider | <input type=”range”> | aria-valuenow.  A label |
| spinbutton | <input type=”number”> | aria-valuenow  A label |
| switch |  | aria-checked state |
| tab |  | A parent with the role=”tablist”  aria-controls property identifying an element with role=”tabpanel”  aria-selected state |
| tabpanel |  |  |
| textbox | <textarea> or  <input type=”text”> | A label |
| treeitem |  | A parent with role=”tree”  Aria-selected state |

### Composite roles

|  |  |  |
| --- | --- | --- |
| Role | HTML | Requirements |
| combobox |  | Aria-expanded state  (likely required: aria-haspopup, aria-controls, aria-activedescendant, aria-autocomplete)  A label |
| grid | <table> | Roles of columnheader, rowheader, row, gridcell |
| listbox | <select> | At least one child with role=”option”  Aria-activedescendant, aria-owns, aria-expanded  A label |
| menu |  | Child elements with role=”menuitem” or “menuitemcheckbox or “menuitemradio” |
| menubar |  | Child elements with role=”menuitem” or “menuitemcheckbox or “menuitemradio” |
| radiogroup | <input type=”radio” name=”[radiogroup]”> |  |
| tablist |  | Child elements with role=”tab” |
| tree |  | Child elements with role=”treeitem” |
| treegrid |  | At least one child with role=”row” or “rowgroup”  Roles columnheader, rowheader, gridcell |

### Landmark roles

|  |  |  |
| --- | --- | --- |
| Role | HTML | Requirements |
| banner | <header> | Limited to one per document |
| complementary | <aside> | Aria-label or aria-labelledby if more than one in document |
| contentinfo | <footer> | Limited to one per document |
| form | <form> | Aria-label or aria-labelledby |
| main | <main> | Limited to one per document |
| navigation | <nav> | Aria-label or aria-labelledby if more than one in document |
| region | <section> | Aria-label or aria-labelledby if more than one in document |
| search |  | Aria-label or aria-labelledby if more than one in document |

## ARIA live region settings

|  |  |  |  |
| --- | --- | --- | --- |
| Property | Definition | Values | User Experience |
| aria-live | Region of content that notifies the end user of content changes | polite  assertive  off | -Announce during a pause in user action  -Interrupts user, announce immediately  -No announcement |
| aria-atomic | What will be announced to user. Added to existing aria-live region | True  False | -Everything in the live region, every update  -Only the updated content |
| aria-relevant | What type of modification will be announced in an existing aria-live region | Additions  Removals  Text  all | -Nodes added to the live region  -Text or nodes removed from the live region  -Text added to any descendant in live region  -Shorthand for “additions removals text” |
| aria-busy | State added to an aria-live region to communicate the modification in progress | True  False | -Element is being modified  -Element is not being modified |

## Live regions with role

|  |  |  |  |
| --- | --- | --- | --- |
| Role | Live setting | Property | User Experience |
| status | aria-live=”polite” | aria-atomic=”true” | Advisory information which is announced when the user is idle. |
| alert | aria-live=”assertive” | aria-atomic=”true” | Important, time-sensitive information announced immediately. |
| log | aria-live=”polite” | aria-atomic=”false” | New information added in a meaningful order announcing only the new content |
| timer | aria-live=”off” |  | Time remaining or elapsed time updated at regular intervals. No announcement unless modified by additional properties. |
| marquee | aria-live=”off” |  | Presents non-essential information that changes frequently. No announcement unless modified by additional properties. |

### Window roles

|  |  |  |
| --- | --- | --- |
| Role | Definition | Requirements |
| alertdialog | Modal alert dialogs that interrupt user’s workflow communicating important information | Always be modal (user cannot access content outside of the dialog)  Have a label.  Have at least one focusable control (confirm, close, cancel) |
| dialog | Application dialog or window that separates content or UI from the rest of the web application. Generally placed on top of the rest of the page. | Have a label.  Keyboard focus must be managed. |