# WML Reference Guide 

Write nice WAP code.

$$
\begin{aligned}
& \text { Specifies thatthetextwithin thetagsa hyperlink. The destination of a link isspecified asa } \\
& \text { URI: theaddress or ID of anothertag. Authorsare encouraged to use thea taginstead of anchor } \\
& \text { wherepossible. Itisinvalid to nestanchor tags. Thea tag is short form of theanchor tag; it is } \\
& \text { essentiallybound to a go task withoutvariables. }
\end{aligned}
$$

Attributes:

| Name: | Data | Mandatory: | Default: |
| :--- | :--- | :--- | :--- |
| id | String | Description: |  |
| class | String | A unique name for the tag within the deck |  |
| xml:lang | String | A name of a class of which the tag is a member |  |
| href | HREF | The natural or formal language of the tag or its attributes |  |
| title | String | The natural or formal language of the tag or its attributes |  |

## <access>

Specifiesaccess control information for theentiredeck. It is an error for a deck to contain more than oneaccesselement. If deck doesnotinclude an accesselement, access control is disabled. When access control isdisabled, cardsin any deck can accessthisdeck.

Adeck'sdomain and path attributes specify which other decksmay accessit. Asthebrowser navigatesfrom onedeckto another, itperforms accesscontrol checksto determinewhetherthe destination deckallowsaccessfrom the currentdeck.

If a deck has a domain and/orpath attribute, thereferring deck's URI mustmatch thevalues of theattributes. Matching isdoneasfollows: theaccessdomain issuffix-matchedagainst the domain nameportion of thereferring URI andtheaccesspath isprefix matched against the path portion of thereferringURI.

Domain suffix matching is doneusing theentireelement of each sub-domain and mustmatch each elementexactly (e.g. www.wapforum.orgshall match wapforum.org, butshall notmatch forum.org).

Path prefix matching is doneusing entirepath elementsand mustmatch each elementexactly (e.g./X/Ymatches/Xin theattribute, butdoesnotmatch/XZin theattribute).

## Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :--- | :--- | :--- | :--- | :--- |
| id | String | A unique name for the tag within the deck |  |  |
| class | String | A name of a class of which the tag is a member |  |  |
| domain | String | Current deck's | The domain suffix of allowed referring pages. |  |
| path | String |  |  |  |
| Nestedtags: $<\mathrm{br}><$ Timg $>$ |  |  |  |  |

## <anchor>

Specifies that thetextwithin the tagsa hyperlink. Thedestination of a link isspecified asa URI: theaddressor ID of another tag. Authorsareencouraged to usethe a taginstead of anchor wherepossible. Itisinvalid to nestanchortags.

Attributes:

| Name: | Data | Mandatory: | Default: |
| :--- | :--- | :--- | :--- |
| id | String | Description: |  |
| class | String | A unique name for the tag within the deck |  |
| xml:lang | String | A name of a class of which the tag is a member |  |
| title | String | The natural or formal language of the tag or its attributes |  |

Nestedtags: <br> <img> <go> <prev> <refresh>

Indicatesthatthetextwithin thetags should berendered with boldformatting. Authorsshould attemptto use thestrong and em tagsin place of theb, i and u tags, except where explicit control overtext presentation is required.

Attributes:

| Name: | Data | Mandatory: | Default: |
| :--- | :--- | :--- | :--- |
| id | String | Description: |  |
| class | String | A name of a class of which the tag is a member |  |
| xml:lang | String | The natural or formal language of the tag or its attributes |  |

Nestedtags: <em> <strong> <b> <i> <u> <big> <small>
<br> <img> <anchor> <a> <table>
<big> Indicatesthat thetextwithin thetags shouldberendered with a large font.

## Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :--- | :--- | :--- | :--- | :--- |
| id | String | A unique name for the tag within the deck |  |  |
| class | String | A name of a class of which the tag is a member |  |  |
| $x m l: l a n g$ | String | The natural or formal language of the tag or its attributes |  |  |

## <br> Ends thecurrentlineandstartsa newline. Should also besupported within tables.

## Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :--- | :--- | :--- | :--- | :--- |
| id | String | A unique name for the tag within the deck |  |  |
| class | String | A name of a class of which the tag is a member |  |  |
| xml:lang | String | The natural or formal language of the tag or its attributes |  |  |

AWMLdeck containsa collection of cards. The card elementisa container oftextandinput elements that issufficientlyflexibleto allowpresentation and layoutin a widevariety of devices, with a widevariety of display andinput characteristics. Acard can contain markup, inputfieldsandelementsindicating thestructureof thecard.

Acard'sidmay beused asa fragmentanchor.

Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :---: | :---: | :---: | :---: | :---: |
| xml:lang | String |  |  | The natural or formal language of the tag or its attributes |
| id | String |  |  | A unique name for the tag within the deck |
| class | String |  |  | A name of a class of which the tag is a member |
| title | String |  |  | Specifies advisory information about the card. The title may be rendered in a variety of ways by the browser (suggested bookmark name, pop-up tooltip, etc.) |
| newcontext | Boolean |  | FALSE | Indicates that the current browser context should be re-initialised upon entry to this card |
| ordered | Boolean |  | TRUE | Specifies a hint to the browser about the organisation of the card content. May be used to organise the content presentation or to otherwise influence layout of the card |
| onenterforward | HREF |  |  | The URI that is loaded when the user navigates into the card using a go task |
| onenterbackward | HREF |  |  | The URI that is loaded when the user navigates into the card using a go task |
| ontimer | HREF |  |  | The URI that is loaded when the timer expires |

Nestedtags: <do> <onevent> <timer> <p>

Thedo tag provides a general mechanism fortheuser to actupon the current card. The representation of the do tagisdependenton thedericeand theauthor mustonlyassumethat thetagismappedto auniqueuserinterface widget, such asa button, that the user can activate.
Thedo tagmayappearatboth the card and deck-level:

* Card-level: thedo tag mayappear inside a card tag and maybelocated anywherein thetext flow.
* Deck-level: thedo tagmayappearinsidea deck template, indicating a deck-level do tag. A deck-level do tag appliesto all cardsin the deck, and isequivalent to having specified the do within each card. For the purposes of rendering, the browsermustbehave asifdeck-level do tagsarelocatedat the end of the card'stextllow.

Acard-level do tag overides (or"shadows") a deck-level do tagif they have thesamename. For a singlecard, theactivedo tagsaredefined as thedo tagsspecified in the card, plusanydo tagsspecifiedin thedeck'stemplateandnotoveridden in thecard.

Non-active do tags and active do tagswith a nooptask arenot displayed. All activedo tagswith a task other than noop will be shown in somemanner. When the user activatesthe do tag, the associatedtaskisexecuted.

Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :---: | :---: | :---: | :---: | :---: |
| xml:lang | String |  |  | The natural or formal language of the tag or its attributes |
| id | String |  |  | A unique name for the tag within the deck |
| class | String |  |  | A name of a class of which the tag is a member |
| type | String |  |  | Provides a hint to the browser about the author's intended use of the tag and how the tag should be mapped to the physical user interface: 'accept' (positive acknowledgement); 'prev’ (backward history navigation); 'help' (request for help); 'reset’ (clearing or resetting state); 'options' (request for options or additional operations); 'delete' (delete item or choice); 'unknown' a generic do element |
| label | String |  |  | Specifies a textual string suitable for labelling the user widget. To work well on a variety of browsers, labels should be six characters or shorter in length |
| name | String |  | Value of type attribute | Specifies the name of the do event binding |
| optional | Boolean |  | FALSE | If true, the browser may ignore this element |

Nestedtags: <go> <prev> <noop> <refresh>

Indicates that thetextwithin thetagsshould berenderedwith someform of emphasis. Authors shouldattempt to use theem and strong tagsin place of theb, i andu tags, exceptwhere explicitcontrol overtextpresentation isrequired.

## Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :--- | :--- | :--- | :--- | :--- |
| id | String | A unique name for the tag within the deck |  |  |
| class | String | A name of a class of which the tag is a member |  |  |
| xml:lang | String | The natural or formal language of the tag or its attributes |  |  |

Nestedtags: <em> <strong> <b> <i> <u> <big>
<small> <br> <img> <anchor> <a> <table>

## Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :--- | :--- | :--- | :--- | :--- |
| id | String | A unique name for the tag within the deck |  |  |
| class | String | A name of a class of which the tag is a member |  |  |
| xml:lang | String | The natural or formal language of the tag or its attributes |  |  |
| title | String | Specifies a title for this element, which may be used in the presenta- <br> tion of this object. |  |  |

Nestedtags: <em> <strong> <b> <i> <u> <big>
<small> <br> <img> <anchor> <a> <table> <input>
<select> <fieldset> <do>

$$
<\mathrm{gO}>\quad \begin{aligned}
& \text { Declaresa 'go' task, indicating navigation to a newURI. If theURI namesaWML card or deck, } \\
& \text { theexecution of thetask will cause thatitem to bedisplayed. Thistask executesa 'push' } \\
& \text { operation on thebrowser'shistory stack. }
\end{aligned}
$$

## Attributes:

| Name: | Data | Mandatory: | Default: |
| :--- | :--- | :--- | :--- |
| id | String | A unique name for the tag within the deck |  |

Nestedtags: <postifield> <setvar>

Thehead tag containsinformation relatingto the deck as a whole, including meta-data and access control tags.

## Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :--- | :--- | :--- | :--- | :--- |
| id | String | A unique name for the tag within the deck |  |  |
| class | String | A name of a class of which the tag is a member |  |  |

Nestedtags: <access> <meta>

Indicates that thetext within thetags should berendered with italic formatting. Authors should attemptto use the strong and em tagsin place of theb, i iandu tags, except where explicit control overtextpresentation isrequired.

## Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :--- | :--- | :--- | :--- | :--- |
| id | String | A unique name for the tag within the deck |  |  |
| class | String | A name of a class of which the tag is a member |  |  |
| xml:lang | String | The natural or formal language of the tag or its <br> attributes |  |  |

Nested tags: <em> <triong> <b> <i> <u> <big>
<small> <br> <img> <anchor> <a> <table>

Theimg tagindicates thatan imageisto beincluded in thetextflow. Imagelayoutisdone within thecontext of normal textlayout.

Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :---: | :---: | :---: | :---: | :---: |
| id | String |  |  | A unique name for the tag within the deck |
| class | String |  |  | A name of a class of which the tag is a member |
| xml:lang | String |  |  | The natural or formal language of the tag or its attributes |
| alt | String |  |  | An alternative textual representation for the image if it can not be displayed using any other method |
| src | URI |  |  | This attribute specifies the URI of the image to be shown |
| localsrc | String |  |  | Specifies an alternative internal representation for the image. If this image exists, the parameter takes precedence over any image specified in the src parameter |
| vspace | Length |  | Small, nonzero length | Specifies the amount of white space to be inserted above and below the image. If specified as a percentage value, the resulting space is based on the available vertical space, not on the natural size of the image |
| hspace | Length |  | Small, nonzero length | Specifies the amount of white space to be inserted to the left and right of the image. If specified as a percentage value, the resulting space is based on the available horizontal space, not on the natural size of the image |
| align | String |  | Bottom | Specifies image alignment with respect to the baseline of the text. It has three possible values: 'bottom', 'middle' or 'top' |
| height | Length |  |  | Specifies the height of the image. If specified as a percentage value, the resulting size is based on the available vertical space, not on the natural size of the image |
| width | Length |  |  | Specifies the width of the image. If specified as a percentage value, the resulting size is based on the available horizontal space, not on the natural size of the image |

## <input>

Theinputelement specifies a textentry object. Theuserinputisconstrained by theoptional formatattribute.

## Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :---: | :---: | :---: | :---: | :---: |
| id | String |  |  | A unique name for the tag within the deck |
| class | String |  |  | A name of a class of which the tag is a member |
| $x \mathrm{ml}$ :lang | String |  |  | The natural or formal language of the tag or its attributes |
| name | String |  |  | Specifies the name of the variable to set with the result of the user's text input. The name variable's value is used to pre-load the text entry object. If this value does not conform to the input mask, the browser will unset the variable and attempt to initialise the variable with the value attribute |
| type | INPUT_TYPE |  | text | Specifies the type of text-input area. The following values are allowed: 'text' (text entry control) or 'password' (a text entry control where each character is displayed in an illegible form, such as with asterisks) |
| value | String |  |  | The value attribute indicates the default value of the variable named in the name attribute. When the element is displayed and the variable named in the name attribute is not set, the name variable is assigned the value specified in the value attribute. If the name variable already contains a value, the value attribute is ignored. If the value attribute specifies a value that does not conform to the input mask specified by the format attribute, the browser must ignore the value attribute. In the case where no valid value can be established, the name variable is left unset |
| format | String |  | *M | Specifies an input mask for user input entries. The string consists of mask control characters and static text that is displayed in the input area. The format control characters specify the data format expected to be entered by the user. The format codes are: 'A' (entry of any upper-case, non-numeric character); 'a' (entry of any lower-case, non-numeric character); ' $N$ ' (entry of any numeric character); ' $X$ ' (entry of any upper-case character); 'x' (entry of any lower-case character); 'M' (entry of any character); 'm' (entry of any character); '*f' (entry of any number of characters where $f$ is one of the above format codes); ' $n f$ ' (entry of $n$ characters where $n$ is from 1 to 9 and $f$ is one of the above format codes); ' lc ' (display the character, c , in the entry field: these characters are considered part of the input's value). |
| emptyok | Boolean |  | False | Indicates that this input element accepts empty input although a non-empty format string has been specified |

$\left.\begin{array}{lll}\text { size } & \text { NUMBER } & \text { Specifies the width, in characters, of the text-input area. }\end{array} \begin{array}{ll}\text { Infinite } & \begin{array}{l}\text { Specifies the maximum number of characters that can be } \\ \text { entered by the user in the text-entry area. }\end{array} \\ \hline \text { maxlength } & \text { NUMBER }\end{array} \begin{array}{l}\text { Specifies the tabbing position of the current element. The } \\ \text { tabbing position indicates the relative order in which elements } \\ \text { are traversed when tabbing within a single WML card. }\end{array}\right\}$

## <meta>

Themeta element contains genericmeta-information relating to the WMLdeck. Metainformation isspecified with propertynames and values. Thisspeciication doesnotdefineany propertie, nor doesitdefine howbrowsersmustinterpretmeta-data.

## Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :---: | :---: | :---: | :---: | :---: |
| id | String |  |  | A unique name for the tag within the deck |
| class | String |  |  | A name of a class of which the tag is a member |
| http-equiv | String |  |  | May be used in place of name and indicates that the property should be interpreted as an HTTP header. |
| name | String |  |  | Specifies the property name. The browser must ignore any meta-data named with this attribute. Servers should not emit WML content containing meta-data named with this attribute. |
| forua | Boolean |  |  | Specifies that the author intended the property to reach the browser. In the case where the user agent supports the metadata mechanism, and the property has its forua attribute set to true, the meta-data must be delivered to the browser. |
| content | String |  |  | This attribute specifies the property value. |
| scheme | String |  |  | This attribute specifies a form or structure that may be used to interpret the property value. Scheme values vary depending on the type of meta-data. |

Thenooptag specifies thatnothing should bedone- thatis, 'no operation'. Thiscan be used in a card to shadowa task that hasbeen specified in a template at the decklevel.

Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :--- | :--- | :--- | :--- | :--- |
| id | String | A unique name for the tag within the deck |  |  |
| class | String | A name of a class of which the tag is a member |  |  |

## <onevent>

Theoneventelementbindsa task to a particularintrinsic eventfortheimmediately enclosing element. For example, specifying an oneventelementinsidea card elementassociates an intrinsic eventbindingwith thatcardelement. Thebrowser will ignoreany oneventelement specifying a type that doesnot correspond to a legal intrinsic eventfortheimmediately enclosingelement.

Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :--- | :--- | :--- | :--- | :--- |
| id | String | A unique name for the tag within the deck |  |  |
| class | String | A name of a class of which the tag is a member |  |  |
| type | String | Indicates the name of the intrinsic event |  |  |

Nestedtags: <go> <prev> <noop> <refresh>

## <optgroup>

Theoptgroupelementallowstheauthorto group related option elementsinto a hierarchy. The browsermay usethishierarchy to facilitate layout and presentation on a widevariety of devices.

Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :--- | :--- | :--- | :--- | :--- |
| id | String | A unique name for the tag within the deck |  |  |
| class | String | A name of a class of which the tag is a member |  |  |
| xml:lang | String | The natural or formal language of the tag or its <br> attributes |  |  |
| title | String | Specifies a title for this element, which may be used in <br> the presentation of this object. |  |  |

Nested tags: <optgroup> <option>

## <option> Thiselementspeciifesa singlechoiceoption in a selectelement.

Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :---: | :---: | :---: | :---: | :---: |
| id | String |  |  | A unique name for the tag within the deck |
| class | String |  |  | A name of a class of which the tag is a member |
| xml:lang | String |  |  | The natural or formal language of the tag or its attributes |
| value | String |  |  | Specifies the value to be used when setting the name variable. When the user selects this option, the resulting value specified in the value attribute is used to set the select element's name variable. The value attribute may contain variable references, which are evaluated before the name variable is set. |
| title | String |  |  | Specifies a title for this element, which may be used in the presentation of this object. |
| onpick | HREF |  |  | The URI that is loaded when the user selects or deselects this option. |

Nestedtags: <onevent>

Thep elementestablishesboth thelinewrap and alignment parametersfora paragraph. If the textalignmentisnot specified, itdefaultstoleft. Iftheline wrap mode is not specified, itis identical to theline wrap mode of the epreviousparagraph in the current card. Emptyparagraphs(ie, an emptyelementor an elementwith onlyinsignificant whitespace) will be considered asinsignificantand ignored bybrowsers. Ifthefirstpelementin a card does not specify a line wrap or alignmentmode, that modedefaultsto theinitial modefor thecard.

Thebrowserwill inserta linebreak into thetextllowbetween significant paragraphs.

## Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :--- | :--- | :--- | :--- | :--- |
| align | TALIGN | Specifies the text alignment mode for the paragraph. Can be 'left', <br> 'center', or 'right'. |  |  |
| mode | WRAPMODE | wrap (or as <br> in previous <br> paragraph) | Specifies the line-wrap mode for the paragraph. 'wrap' <br> specifies breaking text mode and 'nowrap' specifies <br> non-breaking text mode. |  |
| xml:lang | String | The natural or formal language of the tag or its <br> attributes |  |  |
| id | String | A unique name for the tag within the deck |  |  |

Nested tags: <do> <em> <strong> <b> <i> <u> <big> <small> <br> <img> <anchor> <a> <table> <input> <select> <fieldset>

## <postfield>

Thepostfieldelementspecifiesa fieldnameandvalue for transmission to an origin server duringa URL request. Theactual encoding of thenameandvalue will depend on themethod usedto communicatewith the origin server.

Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :--- | :--- | :--- | :--- | :--- |
| id | String | A unique name for the tag within the deck |  |  |
| class | String |  | A name of a class of which the tag is a member |  |
| name | String |  | Specifies the variable name. |  |
| value | String |  | Specifies the variable name. |  |

Theprevtagdeclaresa 'prev' task, indicating navigation to the previousURL on the history stack.

Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :--- | :--- | :--- | :--- | :--- |
| id | String | A unique name for the tag within the deck |  |  |
| class | String | A name of a class of which the tag is a member |  |  |

Nestedtags: <setvar>

# <refresh> <br> Therefresh tagdeclaresa refresh task, indicating an update of the screen and devicecontextas specified by the setvartags, for example. User-visible side effects of thestate changes (e.g. a changein thescreen display) occurduring theprocessing of therefreesh task. 

Attributes:

| Name: | Data | Mandatory: | Default: |
| :--- | :--- | :--- | :--- |
| id | String | Description: |  |
| class | String | A unique name for the tag within the deck |  |

Nestedtags: <setvar>

Theselectelementletsuserspick from a listof options. Each option isspecified byan option element. Each option elementmay haveonelineofformattedtext. Option elementsmaybe organisedinto hierarchical groupsusing the optgroupelement.

## Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :---: | :---: | :---: | :---: | :---: |
| id | String |  |  | A unique name for the tag within the deck |
| class | String |  |  | A name of a class of which the tag is a member |
| title | String |  |  | Specifies a title for this element, which may be used in the presentation of this object. |
| name | String |  |  | Specifies the name of the variable to set with the result of the selection. The name variable's value is used to pre-load the text entry object. |
| value | String |  |  | Indicates the default value of the variable named in the name attribute. When the element is displayed, and the variable named in the name attribute is not set, the name variable may be assigned the value specified in the value attribute, depending on the values defined in iname and ivalue. If the name variable already contains a value, the value attribute is ignored. Any application of the default value is done before the list is preselected with the value of the name variable. If this element allows the selection of multiple options, the result of the user's choice is a list of all selected values, separated by the semicolon character. The name variable is set with this result. Similarly, the value attribute is interpreted as a semicolon-separated list of pre-selected options. |
| iname | String |  |  | Indicates the name of the variable to be set with the index result of the selection. The index result is the position of the currently selected option in the select list. An index of zero indicates that no option is selected. Index numbering begins at one and increases monotonically. |
| ivalue | String |  |  | Indicates the default-selected option element. When the element is displayed, if the variable named in the iname attribute is not set, it is assigned the default-selected entry. If the variable already contains a value, the ivalue attribute is ignored. If the iname attribute is not specified, the ivalue value is applied every time the element is displayed. If this element allows the selection of multiple options, the index result of the user's choice is a list of the indices of all the selected options, separated by the semicolon character. The iname variable is set with this result. Similarly, the ivalue attribute is interpreted as a semicolon-separated list of pre-selected options. |
| multiple | Boolean |  | FALSE | Indicates that the select list should accept multiple selections. When not set, the select list should only accept a single selected option. |


| multiple | Boolean | FALSEIndicates that the select list should accept multiple <br> selections. When not set, the select list should only <br> accept a single selected option. |
| :--- | :--- | :--- |
| tabindex | NUMBER | Specifies the tabbing position of the current element. <br> The tabbing position indicates the relative order in <br> which elements are traversed when tabbing within a <br> single WML card. |
| xml:lang | String | The natural or formal language of the tag or its <br> attributes |

Nestedtags: <optgroup> <option>

## Attributes:

| Name: | Data | Mandatory: | Default: |
| :--- | :--- | :--- | :--- |
| id | String | Description: |  |
| class | String | A unique name for the tag within the deck |  |
| name | String | A name of a class of which the tag is a member |  |
| value | String | Specifies the variable name. |  |

## <Small> Indicates that thetext within thetags should berendered with a small font.

Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :--- | :--- | :--- | :--- | :--- |
| id | String | A unique name for the tag within the deck |  |  |
| class | String | A name of a class of which the tag is a member |  |  |
| xml:lang | String | The natural or formal language of the tag or its <br> attributes |  |  |

Nestedtags: <em> <strong> <b> <i> <u> <big> <small> <br> <img> <anchor> <a> <table>
<strong> Indicatesthatthetextwithin thetagsshould berendered with someform of strong emphasis. Authorsshouldattemptto use thestrong and em tagsin place of theb, i andu tags, except where explicitcontrol overtextpresentation isrequired.

Attributes:

| Name: | Data | Mandatory: | Default: |
| :--- | :--- | :--- | :--- |
| id | String | A unique name for the tag within the deck |  |
| class | String | A name of a class of which the tag is a member |  |
| xml:lang | String | The natural or formal language of the tag or its <br> attributes |  |

Nestedtags: <em> <strong> <b> <i> <u> <big>
<small> <br> <img> <anchor> <a> <table>

## <table>

Used together with the tr andtd tags to create sets of aligned columns of textandimagesin a card. Thetabletagsdeterminethestructure of the columns. Thetagsseparatecontentinto columns, butdo notspecify column orintercolumn widths.

Thenumber of columnsfor therowsetmustbe specified by thecolumnsattribute. Iftheactual number of columnsin a rowisless than the value specified by the columnsattribute, therow will beeffectively padded with empty columns. Theorientation of thetabledepends on the language. Forleft-to-rightlanguages, theleftmost column isthe first column in thetable. Columnsareadded to therightside of a rowto padleft-to-righttables. Columnsareadded to theleftside of a rowto padright-to-left table.

Iftheactual number of columnsin a rowisgreaterthan thevaluespecified by the columns attribute, the extra columns of therowwill beaggregatedinto thelast column, such that the rowcontains exactly thenumber of columnsspecified. Asingleinter-wordspacewill beinserted between two cellsthatarebeing aggregated.

Thetablewill berendered asnarrowas possiblegiven the contents. Anon-zero width gutter is usedto separateeach non-emptycolumn.

## Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :---: | :---: | :---: | :---: | :---: |
| id | String |  |  | A unique name for the tag within the deck |
| class | String |  |  | A name of a class of which the tag is a member |
| xml:lang | String |  |  | The natural or formal language of the tag or its attributes |
| title | String |  |  | Specifies a brief text string identifying the table |
| align | String |  | Left | Specifies the layout of text and images (within the columns) as a list of alignment designations - one for each column. Centre alignment is specified with C , left alignment with $L$, and right alignment with $R$. If an alignment designation is omitted, the default alignment is applied |
| columns | NUMBER |  |  | Specifies the number of columns in the table. Must not be zero |
| Nested tags: | $r>$ |  |  |  |

Thetd element is used as a container to hold a single tablecell data within a table row. Table data cellsmaybeempty. Emptycellsaresignificant, andmustnotbeignored. Thebrowserwill attemptto deal with multiplelinedata cellsthatmay resultfrom usingimages or linebreaks.

## Attributes:

| Name: | Data | Mandatory: | Default: |
| :--- | :--- | :--- | :--- |
| id | String | Description: |  |
| class | String | A name of a class of which the tag is a member |  |
| xml:lang | String | The natural or formal language of the tag or its <br> attributes |  |

Nestedtags: <img> <anchor> <a> <em> <strong> <b> <i> <u> <big> <small> <br>

Thetemplateelementdeclaresa templateforcardsin thedeck. Eventbindingsspecifiedin the templateelement (e.g. do or onevent) applyto all cardsin that deck, although a card element mayoveridethebehaviourspecified in thetemplateelement. In particular:

* DOelementsspecifiedin thetemplateelementmaybeoveridden in individual cardsifboth elementshave thesameNAMEattributevalue.
* Intrinsic eventbindingsspecified in thetemplateelementmaybeoveridden bythespeciifcation of an eventbinding in a cardelement.


## Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :--- | :--- | :--- | :--- | :--- |
| id | String | A unique name for the tag within the deck |  |  |
| class | String | A name of a class of which the tag is a member |  |  |
| onenterforward | HREF | The URI that is loaded when the user navigates into a <br> card using a go task |  |  |


| onenterbackward | HREF | The URI that is loaded when the user navigates back <br> into a card using a prev task |
| :--- | :--- | :--- |
| ontimer | HREF | The URI that is loaded when the timer expires |

Nestedtags: <do> <onevent>

## <timer>

The timerelement declares a cardtimer which exposesa means of processing inactivity or idle
time. Thetimerisinitialised and started at card entry andisstopped when the cardisexited.
Cardentryis any task or user action thatresultsin the card being activated, for example,
navigating into the card. Card exit isdefined as the execution of any task. Thevalueof a timer
will decrementfrom theinitial value, triggering thedelivery of an ontimerintrinsic event when
itreacheszero. Notethattimer resolution and theinteraction of thetimerwith thebrowser's
userinterfaceandother time baseddevicefunctionalityisimplementation dependent.
Itisan errorto havemorethan onetimer elementin a card.

Thetimertimeoutvalueisspecifiedin unitsof onetenth ( $1 / 10$ ) of a second. Theauthor should notexpecta particulartimer resolution and should providetheuserwith another means to invokea timer'stask. Atimeout value of zero disables thetimer.

Invoking a refresh task isconsidered an exit. The task stops thetimer, commitsitsvalue to the context, and updatesthebrowser accordingly. Completion of therefresh task is considered an entryto thecard. At thattime, the timermustresume.

## Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :---: | :---: | :---: | :---: | :---: |
| id | String |  |  | A unique name for the tag within the deck |
| class | String |  |  | A name of a class of which the tag is a member |
| name | String |  |  | Specifies the name of the variable to be set with the value of the timer. The name variable's value is used to set the timeout period upon timer initialisation. The variable named by the name attribute will be set with the current timer value when the card is exited or when the timer expires. For example, if the timer expires, the named variable is set to a value of zero. |
| value | String |  |  | Indicates the default value of the variable named in the name attribute - that is the timer value. When the timer is initialised and the variable named in the name attribute is not set, the name variable is assigned the value specified in the value attribute. If the name variable already contains a value, the value attribute is ignored. If the name attribute is not specified, the timeout is always initialised to the value specified in the value attribute. |

Thetrelementisused asa containerto hold a singletablerow. Tablerowsmaybeempty (i.e., all cellsareempty). Emptytablerowsaresignificantandmustnotbeignored.

## Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :--- | :--- | :--- | :--- | :--- |
| id | String | A unique name for the tag within the deck |  |  |
| class | String | A name of a class of which the tag is a member |  |  |

Nestedtags: <td>

| <U> | Indicates that thetext within thetags shouldberendered with underline formatting. Authors <br> shouldattemptto use thestrong and em tagsin place of theb, i iandu tags, exceptwhere <br> explicitcontrol overtextpresentation isrequired. |
| :--- | :--- |

## Attributes:

| Name: | Data | Mandatory: | Default: |
| :--- | :--- | :--- | :--- |
| id | String | A unique name for the tag within the deck |  |
| class | String | A name of a class of which the tag is a member |  |
| xml:lang | String | The natural or formal language of the tag or its <br> attributes |  |

Nestedtags: <em> <strong> <b> <i> <u> <big>
<small> <br> <img> <anchor> <a> <table>

## <WMI> Thewml tagdefines a deck and enclosesall information and cardsin thedeck.

## Attributes:

| Name: | Data | Mandatory: | Default: | Description: |
| :--- | :--- | :--- | :--- | :--- |
| xml:lang | String | The natural or formal language of the tag or its <br> attributes |  |  |
| id | String | A unique name for the tag within the deck |  |  |
| class | String | A name of a class of which the tag is a member |  |  |

Nestedtags: <head> <template> <card>

