

**Borland®**

**Silk Test 16.0**

Object Recognition  
with the Classic  
Agent

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# Construction of Window Declaration Identifiers and Tags

The object recognition system of Silk Test Classic uses a window declaration identifier as the logical name of an object and a tag or multitag as the attribution to uniquely identify an object. To permit robust operation across browsers, Silk Test Classic uses a complicated system of rules to construct the identifiers and associated attributes.

The window declaration identifiers and tags or multitags are constructed hierarchically from information such as HTML object attributes and closest static text. The class dependent caption and windowID construction rules form the basis for the window declaration identifier, single tag, and multitag construction rules. The Index construction rules are class independent.

## Legend

The effectiveness of recognition is usually not affected by the character length restrictions placed on the caption, windowID, and window declaration identifier.

Term	Description
CST	Closest Static Text
BNT	Browser Nearest Text Check Box (Agent CST default, Browser CST option)
Caption	Restricted to 127 characters
WindowID	Restricted to 67 characters
HTML Tag Attributes	<ul style="list-style-type: none"><li>• ALT</li><li>• CONTENT</li><li>• HREF</li><li>• HTTP-EQUIV</li><li>• ID</li><li>• NAME</li><li>• SRC</li><li>• VALUE</li></ul>
>	Interpret as "takes precedence over"
4Test	Produces window declaration identifier, single tag, or multitag
Agent	Produces index, prior text, or location
Extension	Produces WindowID or caption

## Relationships and Rules for DOM Processing

The following table lists the fundamental relationships used during DOM processing.

Class	Caption Rules	WindowID Rules
Browser Child	Title -> Page Location (URL)	Page Location (URL)
Browser Child Frame	Title (Frame) -> NAME (Frame) -> Page Location (URL)	None
HtmlCheckBox	Browser CST	NAME -> Class Name Counter
HtmlColumn	Inner Text -> BNT	ID
HtmlComboBox	Not applicable in DOM.	
HtmlForm	NAME -> BNT	ID
HtmlHeading	Text	ID
HtmlHidden	Inner Text -> BNT	NAME
HtmlImage <IMG SRC>	ALT -> BNT	NAME -> HREF
HtmlImage <INPUT type=image SRC>	Not applicable in DOM. Mapped to HtmlPushButton.	
HtmlLink-text <A>HREF text </A>	Inner Text -> Agent CST	NAME -> HREF
HtmlList	Browser CST	NAME
HtmlListBox	Browser CST	NAME -> Blank
HtmlMarquee	BNT	NAME
HtmlPushButton <INPUT type=image SRC>	ALT -> Agent CST	NAME
HtmlPushButton <INPUT type=[reset,submit] SRC><BUTTON>	VALUE -> Agent CST (when '<' is first character of VALUE)	NAME
HtmlRadioButton	BNT	NAME -> Class Name Counter
HtmlRadioList	BNT	NAME -> Class Name Counter
HtmlTable	Caption -> BNT	ID
HtmlText	Text	ID
HtmlTextField	Browser CST	NAME
HtmlTextField	Browser CST	NAME -> FILE_INPUT
XMLNode	VALUE -> NAME	Internally Generated Integer

The following table lists the window declaration identifier rules that are used during DOM processing.

Class	Rule	
All	<b>Use WindowID option</b>	WindowID -> Caption -> Index
	<b>Use Caption option</b>	Caption -> WindowID -> Index

Class	Rule
All	The same CST is used for multiple objects of the same class. Postpend WindowID with Index, postpend Caption with Index in brackets.
All	Same CST used for multiple objects of different classes. Postpend WindowID with Index.
All	Only Index exists. Postpend class with Index.

The following table lists the index rules that are used during DOM processing.

Class	Rule
All	Relative to parent. Left to right, then top to bottom.

The following table lists the single tag rules that are used during DOM processing.

Class	Rule
All	User Interface controls Tag selection.

The following table lists the multitag rules that are used during DOM processing.

Class	Rule
Browser Child	Caption is not selectable through user interface.
Browser Child Frame	Caption is not selectable through user interface.
HtmlCheckBox	Caption, Index, and WindowID are not selectable through the user interface.
HtmlColumn	Selectable through the user interface.
HtmlComboBox	Not applicable in DOM.
HtmlForm	Caption, Index, and WindowID are not selectable through the user interface.
HtmlHeading	Selectable through the user interface.
HtmlHidden	Caption, Index, and WindowID are not selectable through the user interface.
HtmlImage <IMG SRC>	Caption, Index, and WindowID are not selectable through the user interface.
HtmlImage <INPUT type=image SRC>	Not applicable in DOM. Mapped to HtmlPushButton.
HtmlLink-text <A>HREF text </A>	Caption, Index, and WindowID are not selectable through the user interface.
HtmlList	Selectable through the user interface.
HtmlListBox	Caption, Index, and WindowID are not selectable through the user interface.
HtmlMarquee	Caption, Index, and WindowID are not selectable through the user interface.
HtmlMeta	Caption, Index, and WindowID are not selectable through the user interface.

Class	Rule
HtmlPopupList	Caption, Index, and WindowID are not selectable through the user interface.
HtmlPushButton <INPUT type=image SRC>	Caption, Index, and WindowID are not selectable through the user interface.
HtmlPushButton <INPUT type=[reset,submit] SRC><BUTTON>	Caption, Index, and WindowID are not selectable through the user interface.
HtmlRadioList	Caption, Index, and WindowID are not selectable through the user interface.
HtmlTable	Selectable through the user interface.
HtmlText	Selectable through the user interface.
HtmlTextField	Caption, Index, and WindowID are not selectable through the user interface.
XMLNode	Selectable through the user interface.

## HTML Object Recognition

The following table lists the rules for mapping 4Test objects to HTML objects. For additional information about the attribute tags of HTML objects, refer to the *Silk Test Classic Help*.

4Test Class	HTML Tag
HtmlCheckBox	<input type=checkbox>
HtmlColumn	<th>,<td> is column if the <td> is in the first row and there is no <th>
HtmlForm	<form>
HtmlHeading	<ul style="list-style-type: none"> <li>• &lt;h1&gt;</li> <li>• &lt;h2&gt;</li> <li>• &lt;h3&gt;</li> <li>• &lt;h4&gt;</li> <li>• &lt;h5&gt;</li> <li>• &lt;h6&gt;</li> <li>• &lt;th&gt;</li> </ul>
HtmlHidden	<input type=hidden>
HtmlImage	<img>
HtmlLink-text	<a href=...><area>
HtmlList	<ul style="list-style-type: none"> <li>• &lt;ol&gt;</li> <li>• &lt;ul&gt;</li> <li>• &lt;dl&gt;</li> <li>• &lt;dir&gt;</li> <li>• &lt;menu&gt;</li> </ul>

4Test Class	HTML Tag
HtmlListBox	<select size=1>
HtmlMeta	<meta>
HtmlPopupList	<select size= > if size is larger than 1
HtmlPushButton	<ul style="list-style-type: none"> <li>• &lt;button&gt;</li> <li>• &lt;input type=button&gt;</li> <li>• &lt;input type=file&gt;</li> <li>• &lt;input type=image&gt;</li> <li>• &lt;input type=reset&gt;</li> <li>• &lt;input type=submit&gt;</li> </ul>
HtmlRadioList	<input type=radio>
HtmlTable	<table>
HtmlText	<ul style="list-style-type: none"> <li>• &lt;a&gt; without &lt;href&gt;</li> <li>• &lt;abbr&gt;</li> <li>• &lt;acronym&gt;</li> <li>• &lt;b&gt;</li> <li>• &lt;bdo&gt;</li> <li>• &lt;big&gt;</li> <li>• &lt;blockquote&gt;</li> <li>• &lt;br&gt;</li> <li>• &lt;center&gt;</li> <li>• &lt;cite&gt;</li> <li>• &lt;code&gt;</li> <li>• &lt;dd&gt;</li> <li>• &lt;dfn&gt;</li> <li>• &lt;div&gt;</li> <li>• &lt;dt&gt;</li> <li>• &lt;em&gt;</li> <li>• &lt;font&gt;</li> <li>• &lt;kbd&gt;</li> <li>• &lt; &gt;</li> <li>• &lt;label&gt;</li> <li>• &lt;left&gt;</li> <li>• &lt;legend&gt;</li> <li>• &lt;li&gt;</li> <li>• &lt;nobr&gt;</li> <li>• &lt;p&gt;</li> <li>• &lt;pre&gt;</li> <li>• &lt;q&gt;</li> <li>• &lt;right&gt;</li> <li>• &lt;s&gt;</li> <li>• &lt;samp&gt;</li> <li>• &lt;small&gt;</li> <li>• &lt;span&gt;</li> <li>• &lt;strike&gt;</li> <li>• &lt;strong&gt;</li> </ul>



4Test Class	HTML Tag
	<ul style="list-style-type: none"><li>• &lt;sub&gt;</li><li>• &lt;sup&gt;</li><li>• &lt;tt&gt;</li><li>• &lt;u&gt;</li><li>• &lt;var&gt;</li><li>• &lt;xmp&gt;</li></ul>
HtmlTextField	<ul style="list-style-type: none"><li>• &lt;input type=file&gt;</li><li>• &lt;input type=password&gt;</li><li>• &lt;input type=text&gt;</li><li>• &lt;textarea&gt;</li></ul>
XMLNode	

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