



## HTML 5 NEW TAG

### TAG NOT SUPPORTED IN HTML 5

<!--...-->	Define a comment
<!DOCTYPE>	Defines the document type
<a>	Defines a hyperlink href, hreflang, media, ping , rel, target, type
<abbr>	Defines an abbreviation
<acronym>	Used to define an embedded acronyms
<address>	Defines an address element
<applet>	Used to define an embedded applet
<area>	Defines an area inside an image map alt, coords, href, hreflang, media, ping, rel, shape, target, type
<article>	Defines an article cite, pubdate
<aside>	Defines content aside from the page content
<audio>	Defines sound content autobuffer, autoplay, controls, src
<b>	Defines bold text
<base>	Defines a base URL for all the links in a page href, target
<basefont>	Used to define a default font-color, font-size, or font-family for all the document
<bdo>	Defines the direction of text display dir
<big>	Used to make text bigger
<blockquote>	Defines a long quotation cite
<body>	Defines the body element
 	Inserts a single line break
<button>	Defines a push button autofocus, disabled, form, formaction, formenctype, formmethod, formnovalidate, formtarget, name, type, value
<canvas>	Defines graphics height, width
<caption>	Defines a table caption
<center>	Used to center align text and content
<cite>	Defines a citation
<code>	Defines computer code text autobuffer, autoplay, controls, src
<col>	Defines attributes for table columns
<colgroup>	Defines groups of table columns span
<command>	Defines a command button checked, disabled, icon, label, radiogroup, type

■ <datalist>	Defines a dropdown list
<dd>	Defines a definition description
<del>	Defines deleted text cite, datetime
■ <details>	Defines details of an element open
<dialog>	Defines a dialog (conversation)
<dfn>	Defines a definition term
<dir>	Used to define a directory list
<div>	Defines a section in a document
<dl>	Defines a definition list
<dt>	Defines a definition term
<em>	Defines emphasized text
<embed>	Defines external interactive content or plugin height, src, type, width
<fieldset>	Defines a fieldset disabled, form, name
■ <figure>	Defines a group of media content, and their caption
<font>	Used to define font face, font size, and font color of text
■ <footer>	Defines a footer for a section or page
<form>	Defines a form accept-charset, action, autocomplete, enctype, method, name, novalidate, target
<frame>	Used to define one particular window (frame) within a frameset
<frameset>	Used to define a frameset, which organized multiple windows (frames)
<h1> to <h6>	Defines header 1 to header 6
<head>	Defines information about the document
■ <header>	Defines a header for a section or page
<hgroup>	Defines information about a section in a document
<hr>	Defines a horizontal rule
<html>	Defines an html document manifest, xmlns
<i>	Defines italic text
<iframe>	Defines an inline sub window height, name, sandbox, seamless, src, width
<img>	Defines an image alt, src, height, ismap, usemap, width
<input>	Defines an input field accept, alt, autocomplete, autofocus, checked, disabled, form, formaction, formenctype, formmethod, formnovalidate, formtarget, height, list, max, maxlength, min, multiple, name, pattern, placeholder, readonly, required, size, src, step, type, value, width
<ins>	Defines inserted text cite, datetime
■ <keygen>	Defines a generated key in a form autofocus, challenge, disabled, form, keytype, name
<kbd>	Defines keyboard text
<label>	Defines an inline sub window for, form
<legend>	Defines a title in afieldset
<li>	Defines a list item value
<link>	Defines a resource reference href, hreflang, media, rel, sizes, type
<map>	Defines an image map name
■ <mark>	Defines marked text
<menu>	Defines a menu list label, type
<meta>	Defines meta information charset, content, http-equiv, name
<meter>	Defines measurement within a predefined range high, low, max, min, optimum, value
<nav>	Defines navigation links
<noframes>	Used to display text for browsers that do not handle frames
<noscript>	Defines a noscript section
<object>	Defines an embedded object data, form, height, name, type, usemap, width
<ol>	Defines an ordered list reversed, start
<optgroup>	Defines an option group label, disabled
<option>	Defines an option in a drop-down list disabled, label, selected, value
■ <output>	Defines some types of output for, form, name
<p>	Defines a paragraph
<param>	Defines a parameter for an object name, value
<pre>	Defines preformatted text
<progress>	Defines progress of a task of any kind max, value
<q>	Defines a short quotation cite
■ <rp>	Used in ruby annotations to define what to show browsers that do not support the ruby element
<rt>	Defines explanation to ruby annotations
<ruby>	Defines ruby annotations
<s>, <strike>	Used to define strikethrough text.
<samp>	Defines sample computer code
<script>	Defines a definition list async, type charset defer, src
■ <section>	Defines a section cite
<select>	Defines a selectable list autofocus, disabled, form, multiple, name, size
<small>	Defines small text
■ <source>	Defines media resources media, src, type
<span>	Defines a section in a document
<strong>	Defines strong text
<style>	Defines a style definition type, media, scoped
<sub>, <sup>	Defines sub/super-scripted text
<table>	Defines a table summary
<tbody>	Defines a table body summary
<td>	Defines a table cell colspan, headers, rowspan
<td>	Defines a text area
<textarea>	Defines a table footer / head autofocus, cols, disabled, form, maxlen, name, placeholder, readonly, readonly, required, rows, wrap
<tfoot>, <thead>	Defines a table footer / head
<th>	Defines a table header colspan, headers, rowspan, scope
<time>	Defines a date/tim datetime
<title>	Defines the document title
<tr>	Defines a table row datetime
<tt>	Used to define teletype text
<u>	Used to define underlined text
<ul>	Defines an unordered list
<var>	Defines a variable
■ <video>	Defines a video autobuffer, autoplay, controls, height, loop, src, width

**HTML5 TAG CHEAT SHEET**  
Created by [WebsiteSetup.org](http://WebsiteSetup.org)

# Cascading Style Sheets (CSS 3)

BACKGROUND		BORDER		BOX MODEL	
<b>background</b>	<i>background-image background-position background-size background-repeat background-attachment background-origin background-clip background-color</i>	<b>border-top</b>	<i>border-top-width border-style border-color</i>	<b>float</b>	<i>left   right   none</i>
<b>background-attachment</b>	<i>scroll   fixed</i>	<b>border-top-color</b>	<i>border-color</i>	<b>height</b>	<i>auto length %</i>
<b>background-break</b>	<i>bounding-box   each-box   continuous</i>	<b>border-top-style</b>	<i>border-style</i>	<b>max-height</b>	<i>none length %</i>
<b>background-clip</b>	<i>length % border-box   padding-box   content-box   no-clip</i>	<b>border-top-width</b>	<i>thin   medium   thick length</i>	<b>max-width</b>	<i>none length %</i>
<b>background-color</b>	<i>color transparent</i>	<b>border-radius</b>	<i>border-top-right-radius border-bottom-right-radius border-bottom-left-radius border-top-left-radius</i>	<b>min-height</b>	<i>none   inherit length %</i>
<b>background-image</b>	<i>url none</i>	<b>border-top-right-radius</b>	<i>length</i>	<b>min-width</b>	<i>none   inherit length %</i>
<b>background-origin</b>	<i>border-box   padding-box   content-box</i>	<b>border-bottom-right-radius</b>	<i>length</i>	<b>width</b>	<i>auto % length</i>
<b>background-position</b>	<i>top left   top center   top right   center left   center center   center right   bottom left   bottom center   bottom right x-% y-% x-pos y-pos</i>	<b>border-bottom-left-radius</b>	<i>length</i>	<b>margin</b>	<i>margin-top margin-right margin-bottom margin-left</i>
<b>background-repeat</b>	<i>repeat   repeat-x   repeat-y   no-repeat</i>	<b>border-top-left-radius</b>	<i>length</i>	<b>margin-bottom</b>	<i>auto length %</i>
<b>background-size</b>	<i>length % auto   cover   contain</i>	<b>box-shadow</b>	<i>inset    [ length, length, length, length   &lt;color&gt; ] none</i>	<b>margin-left</b>	<i>auto length %</i>
BORDER					
<b>border</b>	<i>border-width border-style border-color</i>	<b>font</b>	<i>font-style font-variant font-weight font-size/line-height font-family caption   icon   menu   message-box   small-caption   status-bar</i>	<b>margin-right</b>	<i>auto length %</i>
<b>border-break</b>	<i>border-width border-style color close</i>	<b>font-family</b>	<i>family-name generic-family inherit</i>	<b>margin-top</b>	<i>auto length %</i>
<b>border-bottom</b>	<i>border-bottom-width border-style border-color</i>	<b>font-size</b>	<i>xx-small   x-small   small   medium   large   x-large   xx-large   smaller   larger   inherit length %</i>	<b>padding</b>	<i>padding-top padding-right padding-bottom padding-left</i>
<b>border-bottom-color</b>	<i>border-color</i>	<b>font-size-adjust</b>	<i>none   inherit number</i>	<b>padding-bottom</b>	<i>length %</i>
<b>border-bottom-style</b>	<i>border-style</i>	<b>font-stretch</b>	<i>normal   wider   narrower   ultra-condensed   extra-condensed   condensed   semi-condensed   semi-expanded   expanded   extra-expanded   ultra-expanded   inherit</i>	<b>padding-left</b>	<i>length %</i>
<b>border-bottom-width</b>	<i>thin   medium   thick length</i>	<b>font-style</b>	<i>normal   italic   oblique   inherit</i>	<b>padding-right</b>	<i>length %</i>
<b>border-collapse</b>	<i>collapse   separate</i>	<b>font-variant</b>	<i>normal   small-caps   inherit</i>	<b>padding-top</b>	<i>length %</i>
<b>border-color</b>	<i>color</i>	<b>font-weight</b>	<i>normal   bold   bolder   lighter   100   200   300   400   500   600   700   800   900   inherit</i>	<b>marquee-direction</b>	<i>forward   reverse</i>
<b>border-image</b>	<i>image [ number / % border-width stretch   repeat   round ] none</i>	<b>BOX MODEL</b>		<b>marquee-loop</b>	<i>infinite number</i>
<b>border-left</b>	<i>border-left-width border-style border-color</i>			<b>marquee-play-count</b>	<i>infinite integer</i>
<b>border-left-color</b>	<i>border-color</i>	<b>clear</b>	<i>left   right   both   none</i>	<b>marquee-speed</b>	<i>slow   normal   fast</i>
<b>border-left-style</b>	<i>border-style</i>	<b>display</b>	<i>none   inline   block   inline-block   list-item   run-in   compact   table   inline-table   table-row-group   table-header-group   table-footer-group   table-row   table-column-group   table-column   table-cell   table-caption   ruby   ruby-base   ruby-text   ruby-base-group   ruby-text-group</i>	<b>marquee-style</b>	<i>scroll   slide   alternate</i>
<b>border-left-width</b>	<i>thin   medium   thick length</i>			<b>overflow</b>	<i>visible   hidden   scroll   auto   no-display   no-content overflow-x overflow-y</i>
<b>border-right</b>	<i>border-right-width border-style border-color</i>			<b>overflow-style</b>	<i>auto   marquee-line   marquee-block</i>
<b>border-right-color</b>	<i>border-color</i>			<b>overflow-x</b>	<i>visible   hidden   scroll   auto   no-display   no-content</i>
<b>border-right-style</b>	<i>border-style</i>			<b>overflow-y</b>	<i>visible   hidden   scroll   auto   no-display   no-content</i>
<b>border-right-width</b>	<i>thin   medium   thick length</i>			<b>rotation</b>	<i>angle</i>
				<b>rotation-point</b>	<i>position (paired value offset)</i>
				<b>visibility</b>	<i>visible   hidden   collapse</i>

# Cascading Style Sheets (CSS 3)

TEXT	
<b>direction</b>	ltr   rtl   inherit
<b>hanging-punctuation</b>	none   [ start   end   end-edge ]
<b>letter-spacing</b>	normal length %
<b>punctuation-trim</b>	none   [start   end   adjacent]
<b>text-align</b>	start   end   left   right   center   justify
<b>text-align-last</b>	start   end   left   right   center   justify
<b>text-decoration</b>	none   underline   overline   line-through   blink
<b>text-emphasis</b>	none   [ accent   dot   circle   disc] [ before   after ]? ]
<b>text-indent</b>	length %
<b>text-justify</b>	auto   inter-word   inter-ideograph   inter-cluster   distribute   kashida   tibetan
<b>text-outline</b>	none color length
<b>text-shadow</b>	none color length
<b>text-transform</b>	none   capitalize   uppercase   lowercase
<b>text-wrap</b>	normal   unrestricted   none   suppress
<b>unicode-bidi</b>	normal   embed   bidi-override
<b>white-space</b>	normal   pre   nowrap   pre-wrap   pre-line
<b>white-space-collapse</b>	preserve   collapse   pre-preserve-breaks   discard
<b>word-break</b>	normal   keep-all   loose   break-strict   break-all
<b>word-spacing</b>	normal length %
<b>word-wrap</b>	normal   break-word
COLUMN	
<b>column-count</b>	auto number
<b>column-fill</b>	auto   balance
<b>column-gap</b>	normal length
<b>column-rule</b>	column-rule-width column-rule-style column-rule-color
<b>column-rule-color</b>	color
<b>column-rule-style</b>	border-style
<b>column-rule-width</b>	thin   medium   thick length
<b>columns</b>	column-width column-count
<b>column-span</b>	1   all
<b>column-width</b>	auto length
COLOR	
<b>color</b>	inherit color
<b>opacity</b>	inherit number

TEMPLATE LAYOUT	
<b>box-align</b>	start   end   center   base-
<b>box-direction</b>	normal   reverse
<b>box-flex</b>	number
<b>box-flex-group</b>	integer
<b>box-lines</b>	single   multiple
<b>box-orient</b>	horizontal   vertical   inline-axis   block-axis
<b>box-pack</b>	start   end   center   justify
<b>box-sizing</b>	content-box   padding-box   border-box   margin-box
<b>tab-side</b>	top   bottom   left   right
TABLE	
<b>border-collapse</b>	collapse   separate
<b>border-spacing</b>	length length
<b>caption-side</b>	top   bottom   left   right
<b>empty-cells</b>	show   hide
<b>table-layout</b>	auto   fixed
SPEECH	
<b>cue</b>	cue-before cue-after
<b>cue-before</b>	uri [ silent   x-soft   soft   medium   loud   x-loud]   none   inherit ] number %
<b>cue-after</b>	uri [ silent   x-soft   soft   medium   loud   x-loud]   none   inherit ] number %
<b>mark</b>	mark-before mark-after
<b>mark-before</b>	string
<b>mark-after</b>	string
<b>pause</b>	pause-before pause-after
<b>pause-before</b>	none   x-weak   weak   medium   strong   x-strong   inherit time
<b>pause-after</b>	none   x-weak   weak   medium   strong   x-strong   inherit time
<b>phonemes</b>	string
<b>rest</b>	rest-before rest-after
<b>rest-before</b>	none   x-weak   weak   medium   strong   x-strong   inherit time
<b>rest-after</b>	none   x-weak   weak   medium   strong   x-strong   inherit time
<b>speak</b>	none   normal   spell-out   digits   literal-punctuation   no-punctuation   inherit
<b>voice-balance</b>	left   center   right   left-wards   rightwards   inherit number
<b>voice-duration</b>	time

SPEECH	
<b>voice-family</b>	inherit   [ <specific-voice, age, generic-voice, number> ]
<b>voice-rate</b>	x-slow   slow   medium   fast   x-fast   inherit %
<b>voice-pitch</b>	x-low   low   medium   high   x-high   inherit number %
<b>voice-pitch-range</b>	x-low   low   medium   high   x-high   inherit number
<b>voice-stress</b>	strong   moderate   none   reduced   inherit
<b>voice-volume</b>	silent   x-soft   soft   medium   loud   x-loud   inherit number %
LIST & MARKERS	
<b>list-style</b>	list-style-type list-style-position list-style-image
<b>list-style-image</b>	none url
<b>list-style-position</b>	Inside   outside
<b>list-style-type</b>	none   asterisks   box   check   circle   diamond   disc   hyphen   square   decimal   decimal-leading-zero   lower-roman   upper-roman   lower-alpha   upper-alpha   lower-greek   lower-latin   upper-latin   hebrew   armenian   georgian   cjk-ideographic   hiragana   katakana   hiragana-iroha   katakana-iroha   footnotes
<b>marker-offset</b>	auto length
ANIMATIONS	
<b>animation</b>	animation-name animation-duration animation-timing-function animation-delay animation-iteration-count animation-direction
<b>animation-delay</b>	time
<b>animation-direction</b>	normal   alternate
<b>animation-duration</b>	time
<b>animation-iteration-count</b>	inherit number
<b>animation-name</b>	none   IDENT
<b>animation-play-state</b>	running   paused
<b>animation-timing-function</b>	ease   linear   ease-in   ease-out   ease-in-out   cubic-Bezier (number, number, number)
TRANSITIONS	
<b>transition</b>	transition-property transition-duration transition-timing-function transition-delay
<b>transition-delay</b>	time
<b>transition-duration</b>	time
<b>transition-property</b>	none   all
<b>transition-timing-function</b>	ease   linear   ease-in   ease-out   ease-in-out   cubic-Bezier (number, number, number)

# Cascading Style Sheets (CSS 3)

GRID POSITIONING	
<code>grid-columns</code>	none   inherit [ length percentage relative length ]
<code>grid-rows</code>	none   inherit [ length percentage relative length ]
OUTLINE	
<code>outline</code>	<code>outline-color</code> <code>outline-style</code> <code>outline-width</code>
<code>outline-color</code>	<code>color</code> <code>invert</code>
<code>outline-offset</code>	inherit <code>length</code>
<code>outline-style</code>	None   dotted   dashed   solid   double   groove   ridge   inset   outset
<code>outline-width</code>	thin   medium   thick <code>length</code>
3D / 2D TRANSFORM	
<code>backface-visibility</code>	visible   hidden
<code>perspective</code>	none <code>number</code>
<code>perspective-origin</code>	[ [ [ percentage ]   <length> ]   left   center   right ] [ <percentage>   <length> ]   top   center   bottom ]? ] <length> ]   [ [ [ left   center   right ]   [ top   center   bottom ] ] <length> ] ]
<code>transform</code>	none   matrix   matrix3d   translate3d   translateX   translateY   translateZ   scale   scale3d   scaleX   scaleY   scaleZ   rotate   rotate3d   rotateX   rotateY   rotateZ   skewX   skewY   skew   perspective
<code>transform-origin</code>	[ [ [ <percentage>   <length> ]   left   center   right ] [ <percentage>   <length> ]   top   center   bottom ]? ] <length> ]   [ [ [ left   center   right ]   [ top   center   bottom ] ] <length> ] ]
<code>transform-style</code>	flat   preserve-3d
GENERATED CONTENT	
<code>bookmark-label</code>	content <code>attr</code> <code>string</code>
<code>bookmark-level</code>	none <code>integer</code>
<code>bookmark-target</code>	self <code>uri</code> <code>attr</code>
<code>border-length</code>	<code>auto</code> <code>length</code>
<code>content</code>	normal   none   inhibit <code>uri</code>
<code>counter-increment</code>	none <code>identifier number</code>
<code>counter-reset</code>	none <code>identifier number</code>
<code>crop</code>	<code>auto</code> <code>shape</code>
<code>display</code>	normal   none   list-item
<code>float-offset</code>	<code>length</code> <code>length</code>

GENERATED CONTENT	
<code>hyphenate-after</code>	<code>auto</code> <code>integer</code>
<code>hyphenate-before</code>	<code>auto</code> <code>integer</code>
<code>hyphenate-character</code>	<code>auto</code> <code>string</code>
<code>hyphenate-lines</code>	<code>no-limit</code> <code>integer</code>
<code>hyphenate-resource</code>	<code>none</code> <code>uri</code>
<code>hyphens</code>	<code>none</code>   <code>manual</code>   <code>auto</code>
<code>image-resolution</code>	<code>normal</code>   <code>auto</code> <code>dpi</code>
<code>marks</code>	[ <code>crop</code>    <code>cross</code> ]   <code>none</code>
<code>move-to</code>	<code>normal</code>   <code>here</code> <code>identifier</code>
<code>page-policy</code>	<code>start</code>   <code>first</code>   <code>last</code>
<code>quotes</code>	<code>none</code> <code>string</code> <code>string</code> <code>string</code> <code>string</code>
<code>string-set</code>	<code>identifier</code> <code>content-list</code>
<code>text-replace</code>	<code>none</code> [ < <code>string</code> > < <code>string</code> > ]+
LINE BOX	
<code>alignment-adjust</code>	<code>auto</code>   <code>baseline</code>   <code>before-edge</code>   <code>text-before-edge</code>   <code>middle</code>   <code>central</code>   <code>after-edge</code>   <code>text-after-edge</code>   <code>ideographic</code>   <code>alphabetic</code>   <code>hanging</code>   <code>mathematical</code> <code>length</code> <code>%</code>
<code>alignment-baseline</code>	<code>baseline</code>   <code>use-script</code>   <code>before-edge</code>   <code>text-before-edge</code>   <code>after-edge</code>   <code>text-after-edge</code>   <code>central</code>   <code>middle</code>   <code>ideographic</code>   <code>alphabetic</code>   <code>hanging</code>   <code>mathematical</code>
<code>baseline-shift</code>	<code>baseline</code>   <code>sub</code>   <code>super</code> <code>length</code> <code>%</code>
<code>dominant-baseline</code>	<code>auto</code>   <code>use-script</code>   <code>no-change</code>   <code>reset-size</code>   <code>alphabetic</code>   <code>hanging</code>   <code>ideographic</code>   <code>mathematical</code>   <code>central</code>   <code>middle</code>   <code>text-after-edge</code>   <code>text-before-edge</code>
<code>drop-initial-after-align</code>	<code>alignment-baseline</code>
<code>drop-initial-after-adjust</code>	<code>central</code>   <code>middle</code>   <code>after-edge</code>   <code>text-after-edge</code>   <code>ideographic</code>   <code>alphabetic</code>   <code>mathematical</code> <code>length</code> <code>%</code>
<code>drop-initial-before-align</code>	<code>caps-height</code> <code>alignment-baseline</code>
<code>drop-initial-before-adjust</code>	<code>before-edge</code>   <code>text-before-edge</code>   <code>central</code>   <code>middle</code>   <code>hanging</code>   <code>mathematical</code> <code>length</code> <code>%</code>
<code>drop-initial-value</code>	<code>initial</code> <code>integer</code>
<code>drop-initial-size</code>	<code>auto</code> <code>integer</code> <code>%</code> <code>line</code>
<code>inline-box-align</code>	<code>initial</code>   <code>last</code> <code>integer</code>

LINE BOX	
<code>line-height</code>	<code>normal</code> <code>number</code> <code>length</code> <code>%</code>
<code>line-stacking</code>	<code>line-stacking-strategy</code> <code>line-stacking-ruby</code> <code>line-stacking-shift</code>
<code>line-stacking-strategy</code>	<code>inline-line-height</code>   <code>block-line-height</code>   <code>max-height</code>   <code>grid-height</code>
<code>line-stacking-ruby</code>	<code>exclude-ruby</code>   <code>include-ruby</code>
<code>line-stacking-shift</code>	<code>consider-shifts</code>   <code>disregard-shifts</code>
<code>text-height</code>	<code>auto</code>   <code>font-size</code>   <code>text-size</code>   <code>max-size</code>
<code>vertical-align</code>	<code>Baseline</code>   <code>sub</code>   <code>super</code>   <code>top</code> <code>text-top</code>   <code>middle</code>   <code>bottom</code> <code>text-bottom</code> <code>length</code> <code>%</code>
HYPERLINK	
<code>target</code>	<code>target-name</code> <code>target-new</code> <code>target-position</code>
<code>target-name</code>	<code>current</code>   <code>root</code>   <code>parent</code>   <code>new</code>   <code>modal</code> <code>string</code>
<code>target-new</code>	<code>window</code>   <code>tab</code>   <code>none</code>
<code>target-position</code>	<code>above</code>   <code>behind</code>   <code>front</code>   <code>back</code>
POSITIONING	
<code>bottom</code>	<code>auto</code> <code>%</code> <code>length</code>
<code>clip</code>	<code>shape</code> <code>auto</code>
<code>left</code>	<code>auto</code> <code>%</code> <code>length</code>
<code>position</code>	<code>static</code>   <code>relative</code>   <code>absolute</code>   <code>fixed</code>
<code>right</code>	<code>auto</code> <code>%</code> <code>length</code>
<code>top</code>	<code>auto</code> <code>%</code> <code>length</code>
<code>z-index</code>	<code>auto</code> <code>number</code>
RUBY	
<code>ruby-align</code>	<code>auto</code>   <code>start</code>   <code>left</code>   <code>center</code>   <code>end</code>   <code>right</code>   <code>distribute-letter</code>   <code>distribute-space</code>   <code>line-edge</code>
<code>ruby-overhang</code>	<code>auto</code>   <code>start</code>   <code>end</code>   <code>none</code>
<code>ruby-position</code>	<code>before</code>   <code>after</code>   <code>right</code>   <code>inline</code>
<code>ruby-span</code>	<code>attr(x)</code>   <code>none</code>

# Cascading Style Sheets (CSS 3)

PAGED MEDIA	
<b>fit</b>	fill   hidden   meet   slice
<b>fit-position</b>	[top   center   bottom]    [left   center   right] <i>length</i> %
<b>image-orientation</b>	auto <i>angle</i>
<b>orphans</b>	<i>integer</i>
<b>page</b>	auto <i>identifier</i>
<b>page-break-after</b>	auto   always   avoid   left   right
<b>page-break-before</b>	auto   always   avoid   left   right
<b>page-break-inside</b>	auto   avoid
<b>size</b>	auto   landscape   portrait <i>length</i>
<b>windows</b>	<i>integer</i>
UI	
<b>appearance</b>	normal   inherit   [icon   window   desktop   workspace   document   tooltip   dialog   button   push-button   hyperlink   radio-button   checkbox   menu-item   tab   menu   menubar   pull-down-menu   pop-up-menu   list-menu   radio-group   checkbox-group   outline-tree   range   field   combo-box   signature   password]
<b>cursor</b>	auto   crosshair   default   pointer   move   e-resize   ne-resize   nw-resize   n-resize   se-resize   sw-resize   s-resize   w-resize   text   wait   help <i>url</i>
<b>icon</b>	auto   inherit <i>url</i>
<b>nav-index</b>	auto   inherit <i>number</i>
<b>nav-up</b>	auto   inherit < <i>id</i> > [ current   root   <target-name> ]
<b>nav-right</b>	auto   inherit < <i>id</i> > [ current   root   <target-name> ]
<b>nav-down</b>	auto   inherit < <i>id</i> > [ current   root   <target-name> ]
<b>nav-left</b>	auto   inherit < <i>id</i> > [ current   root   <target-name> ]
<b>resize</b>	none   both   horizontal   vertical   inherit

- Values in italics are place holders for an actual value (like 1px, 1em, 1%), values in normal text are values that can be used as the actual value
- CSS Properties in **Dark Red** are shorthand properties and each value must be defined. The exception is where the property can define from one to four of the sides of a box element property (Top-Right-Bottom-Left) - i.e. border-width

# Cascading Style Sheets (CSS 3)

PSEUDO-CLASS		UNITS		SELECTOR TYPES	
		ABSOLUTE MEASUREMENT		Name	
:active	an activated element	%	percentage	Universal	Any element
:focus	an element while the element has focus	cm	centimeter	Type	Any element of that type
:visited	a visited link	in	inch	Grouping	Multiple elements of different types
:hover	an element when you mouse over it	mm	millimeter	Class	Multiple elements of different types when you don't want to affect all instances of that type
:link	an unvisited link	pc	pica (1p = 12 points)		
:disabled	an element while the element is disabled	pt	point (1pt = 1/72 inch)		
:enabled	an element while the element is enabled	RELATIVE MEASUREMENT			
:checked	an element (form element control) that is checked	ch	width of the "0" glyph found in the font for the font size used to render		
:selection	an element that is currently selected or highlighted by the user	em	1em = current font size of current element		
:lang	Allows the author to specify a language to use in a specified element	ex	x-height of the element's font		
:nth-child(n)	an element that is the n-th sibling	gd	the grid defined by 'layout-grid'		
:nth-last-child(n)	an element that is the n-th sibling counting from the last sibling	px	pixel of the viewing device		
:first-child	an element that is the first sibling	rem	the font size of the root element		
:last-child	an element that is the last sibling	vh	the viewport's height		
:only-child	an element that is the only child	vw	the viewport's width		
:nth-of-type(n)	an element that is the n-th sibling of its type.	vm	viewport's height or width, whichever is smaller of the two		
:nth-last-of-type(n)	an element that is the n-th sibling of its type counting from the last sibling	ANGLES			
:last-of-type	an element that is the first sibling of its type	deg	degrees		
:first-of-type	an element that is the last sibling of its type	grad	grads		
:only-of-type	an element that is the only child of that type	rad	radians		
:empty	an element that has no children	turn	turns		
:root	root element within the document	TIME			
:not(x)	an element not represented by the argument 'x'	ms	milli-seconds		
:target	a target element as specified by a target in a URI	s	seconds		
PSEUDO-ELEMENT		FREQUENCY			
::first-letter	Adds special style to the first letter of a text	Hz	hertz		
::first-line	Adds special style to the first line of a text	kHz	kilo-hertz		
::before	Inserts some content before an element	COLORS			
::after	Inserts some content after an element	color name	red, blue, green, dark green		
		rgb(x,y,z)	red = rgb(255,0,0)		
		rgb(x%,y%,z%)	red = rgb(100%,0,0)		
		rgba(x,y,z,alpha)	red = rgba(255,0,0)		
		#rrggbb	red = #ff0000 (or shorthand = #f00)		
		hsl(hue, saturation, lightness)	red = hsl(0, 100%, 50%)		
		hsla(hue, saturation, lightness, alpha)	red = hsl(0, 100%, 50%)		
		flavor	An accent color (typically chosen by the user) to customize the user interface of the user agent itself		
		currentColor	computed value of the 'currentColor' keyword is the computed value of the 'color' property		
				Attribute	An element with that matches the attribute listed E[selected] - att whatever the value E[att="val"] - att with a specific value E[rel~="next"] - att with a value is a whitespace separated list *[lang="en"] - att value either being exactly "val" or beginning with "val" immediately followed by ":" E[att^="val"] - att value that begins with the prefix "val" E[att\$="val"] - att value that end with the suffix "val" E[att*="val"] - att value contains at least one instance of the substring "val"



## Basics ►

### Loops ↴

#### For Loop

```
for (var i = 0; i < 10; i++) {
    document.write(i + ":" + i*3 + "<br />");
}
var sum = 0;
for (var i = 0; i < a.length; i++) {
    sum += a[i];
}                                // parsing an array
html = "";
for (var i of custOrder) {
    html += "<li>" + i + "</li>";
}
```

#### While Loop

```
var i = 1;                      // initialize
while (i < 100) {               // enters the cycle
    i *= 2;                     // increment to avoid
    document.write(i + ", ");    // output
}
```

#### Do While Loop

```
var i = 1;                      // initialize
do {
    i *= 2;                     // increments to avoid
    document.write(i + ", ");    // output
} while (i < 100)               // repeats cycle if
```

#### Break

```
for (var i = 0; i < 10; i++) {
    if (i == 5) { break; }       // stops and exits
    document.write(i + ", ");    // last output
}
```

#### Continue

```
for (var i = 0; i < 10; i++) {
    if (i == 5) { continue; }    // skips the rest
    document.write(i + ", ");    // skips 5
}
```

### Variables x

```
var a;                          // variable
var b = "init";                 // string
var c = "Hi" + " " + "Joe";     // = "Hi Joe"
var d = 1 + 2 + "3";            // = "33"
var e = [2,3,5,8];              // array
var f = false;                  // boolean
var g = /()/
var h = function(){};
const PI = 3.14;
var a = 1, b = 2, c = a + b;     // one line
let z = 'zzz';                  // block scope local
```

#### Strict mode

```
"use strict"; // Use strict mode to write secure
x = 1;          // Throws an error because variable
```

#### On page script

```
<script type="text/javascript"> ...
</script>
```

#### Include external JS file

```
<script src="filename.js"></script>
```

#### Delay - 1 second timeout

```
setTimeout(function () {
}, 1000);
```

#### Functions

```
function addNumbers(a, b) {
    return a + b;
}
x = addNumbers(1, 2);
```

#### Edit DOM element

```
document.getElementById("elementID").innerHTML = '
```

#### Output

<code>console.log(a);</code>	// write to the browser
<code>document.write(a);</code>	// write to the HTML
<code>alert(a);</code>	// output in an alert
<code>confirm("Really?");</code>	// yes/no dialog, returns true/false
<code>prompt("Your age?", "0");</code>	// input dialog. Returns user input

#### Comments

```
/* Multi line
comment */
// One line
```

## If - Else ↓

```
if ((age >= 14) && (age < 19)) {           // logical
    status = "Eligible.";                    // executes
} else {                                         // else block
    status = "Not eligible.";                 // executes
}
```

#### Switch Statement

```
switch (new Date().getDay()) {                // input is current day
    case 6:                                    // if (day == 6)
        text = "Saturday";                   // executes
        break;
    case 0:                                    // if (day == 0)
        text = "Sunday";                     // executes
        break;
    default:                                 // else...
        text = "Whatever";                  // executes
}
```

## Data Types ☰

<code>var age = 18;</code>	// number
<code>var name = "Jane";</code>	// string

## Values

```
false, true          // boolean
18, 3.14, 0b10011, 0xF6, NaN // number
"flower", 'John'      // string
undefined, null , Infinity // special
```

## Operators

```
a = b + c - d;      // addition, subtraction
a = b * (c / d);    // multiplication, division
x = 100 % 48;        // modulo. 100 / 48 remainder =
a++; b--;            // postfix increment and decrement
```

## Bitwise operators

&	AND	5 & 1 (0101 & 0001)	1 (1)
	OR	5   1 (0101   0001)	5 (101)
~	NOT	~ 5 (~0101)	10 (1010)
^	XOR	5 ^ 1 (0101 ^ 0001)	4 (100)
<<	left shift	5 << 1 (0101 << 1)	10 (1010)
>>	right shift	5 >> 1 (0101 >> 1)	2 (10)
>>>	zero fill right shift	5 >>> 1 (0101 >>> 1)	2 (10)

## Arithmetic

```
a * (b + c)          // grouping
person.age             // member
person[age]            // member
!(a == b)              // logical not
a != b                // not equal
typeof a               // type (number, object, function)
x << 2 x >> 3         // binary shifting
a = b                 // assignment
a == b                // equals
a != b                // unequal
a === b               // strict equal
a !== b               // strict unequal
a < b a > b           // less and greater than
a <= b a >= b         // less or equal, greater or equal
a += b                // a = a + b (works with - * %)
a && b                // logical and
a || b                // logical or
```

## Numbers and Math

```
var pi = 3.141;
pi.toFixed(0);          // returns 3
pi.toFixed(2);          // returns 3.14 - for working with numbers
pi.toPrecision(2);       // returns 3.1
pi.valueOf();           // returns number
Number(true);           // converts to number
Number(new Date());     // number of milliseconds since epoch
parseInt("3 months");  // returns the first number
parseFloat("3.5 days"); // returns 3.5
Number.MAX_VALUE         // largest possible JS number
Number.MIN_VALUE         // smallest possible JS number
Number.NEGATIVE_INFINITY // -Infinity
Number.POSITIVE_INFINITY // Infinity
```

## Math.

```
var pi = Math.PI;        // 3.141592653589793
Math.round(4.4);          // = 4 - rounded
Math.round(4.5);          // = 5
Math.pow(2,8);            // = 256 - 2 to the power of 8
Math.sqrt(49);            // = 7 - square root
Math.abs(-3.14);          // = 3.14 - absolute, positive
Math.ceil(3.14);          // = 4 - rounded up
Math.floor(3.99);         // = 3 - rounded down
Math.sin(0);              // = 0 - sine
```

```
var name = {first:"Jane", last:"Doe"}; // object
var truth = false;                      // boolean
var sheets = ["HTML", "CSS", "JS"];      // array
var a; typeof a;                         // undefined
var a = null;                           // value is null
```

## Objects

```
var student = {                     // object name
  firstName:"Jane",                // list of properties
  lastName:"Doe",
  age:18,
  height:170,
  fullName : function() {          // object function
    return this.firstName + " " + this.lastName
  }
};
student.age = 19;                  // setting value
student[age]++;                  // incrementing
name = student.fullName();        // call object function
```

## Strings

```
var abc = "abcdefghijklmnopqrstuvwxyz";
var esc = 'I don\'t \n know'; // \n new line
var len = abc.length;         // string length
abc.indexOf("lmno");         // find substring
abc.lastIndexOf("lmno");     // last occurrence
abc.slice(3, 6);             // cuts out "def".
abc.replace("abc", "123");   // find and replace
abc.toUpperCase();           // convert to uppercase
abc.toLowerCase();           // convert to lowercase
abc.concat(" ", str2);       // abc + " " + str2
abc.charAt(2);               // character at index
abc[2];                      // unsafe, abc[2]
abc.charCodeAt(2);           // character code
abc.split(",");             // splitting a string
abc.split("");               // splitting on character
128.toString(16);            // number to hex(:
```

## Events

```
<button onclick="myFunction();">
  Click here
</button>
```

### Mouse

onclick, oncontextmenu, ondblclick, onmousedown, onmouseenter, onmouseleave, onmousemove, onmouseover, onmouseout, onmouseup

### Keyboard

onkeydown, onkeypress, onkeyup

### Frame

onabort, onbeforeunload, onerror, onhashchange, onload, onpageshow, onpagehide, onresize, onscroll, onunload

### Form

onblur, onchange, onfocus, onfocusin, onfocusout, oninput, oninvalid, onreset, onsearch, onselect, onsubmit

### Drag

ondrag, ondragend, ondragenter, ondragleave, ondragover, ondragstart, ondrop

### Clipboard

oncopy, oncut, onpaste

```

Math.cos(Math.PI);           // OTHERS: tan, atan, asin, ac
Math.min(0, 3, -2, 2);      // = -2 - the lowest value
Math.max(0, 3, -2, 2);      // = 3 - the highest value
Math.log(1);                // = 0 natural logarithm
Math.exp(1);                // = 2.7182pow(E,x)
Math.random();               // random number between 0
Math.floor(Math.random() * 5) + 1; // random integ

```

#### Constants like Math.PI:

E, PI, SQRT2, SQRT1\_2, LN2, LN10, LOG2E, Log10E

## Dates [31]

Mon Feb 17 2020 13:42:03 GMT+0200 (Eastern European Standard Time)

```

var d = new Date();
1581939723047 milliseconds passed since 1970
Number(d)

Date("2017-06-23");          // date declaration
Date("2017");                // is set to Jan
Date("2017-06-23T12:00:00-09:45"); // date - time
Date("June 23 2017");        // long date format
Date("Jun 23 2017 07:45:00 GMT+0100 (Tokyo Time)");

```

#### Get Times

```

var d = new Date();
a = d.getDay();              // getting the weekday

getDate();                  // day as a number (1-31)
getDay();                    // weekday as a number (0-6)
getFullYear();               // four digit year (yyyy)
getHours();                  // hour (0-23)
getMilliseconds();           // milliseconds (0-999)
getMinutes();                // minutes (0-59)
getMonth();                  // month (0-11)
getSeconds();                // seconds (0-59)
getTime();                  // milliseconds since 1970

```

#### Setting part of a date

```

var d = new Date();
d.setDate(d.getDate() + 7); // adds a week to a date

 setDate();                 // day as a number (1-31)
setFullYear();               // year (optionally month and day)
setHours();                  // hour (0-23)
setMilliseconds();           // milliseconds (0-999)
setMinutes();                // minutes (0-59)
setMonth();                  // month (0-11)
setSeconds();                // seconds (0-59)
setTime();                  // milliseconds since 1970

```

## Global Functions ()

```

eval();                      // executes a string as a function
String(23);                  // return string from number
(23).toString();              // return string from number
Number("23");                // return number from string
decodeURI(enc);              // decode URI. Result: string
encodeURI(uri);              // encode URI. Result: string
decodeURIComponent(enc);     // decode a URI component
encodeURIComponent(uri);     // encode a URI component
isFinite();                  // is variable a finite number
isNaN();                     // is variable an illegal value
parseFloat();                // returns floating point number
parseInt();                  // parses a string and returns a number

```

## Media

onabort, oncanplay, oncanplaythrough, ondurationchange, onended, onerror, onloadeddata, onloadedmetadata, onloadstart, onpause, onplay, onplaying, onprogress, onratechange, onseeked, onseeking, onstalled, onsuspend, ontimeupdate, onvolumechange, onwaiting

## Animation

animationend, animationiteration, animationstart

## Miscellaneous

transitionend, onmessage, onmousewheel, ononline, onoffline, onpopstate, onshow, onstorage, ontoggle, onwheel, ontouchcancel, ontouchend, ontouchmove, ontouchstart

## Arrays ≡

```

var dogs = ["Bulldog", "Beagle", "Labrador"];
var dogs = new Array("Bulldog", "Beagle", "Labrador");

alert(dogs[1]);           // access value at index 1
dogs[0] = "Bull Terrier"; // change the first item

for (var i = 0; i < dogs.length; i++) {      // pair loop with array
  console.log(dogs[i]);
}

```

## Methods

```

dogs.toString();           // convert array to string
dogs.join(" * ");          // join: ' * '
dogs.pop();                // remove last element
dogs.push("Chihuahua");    // add new element
dogs[dogs.length] = "Chihuahua"; // the same
dogs.shift();              // remove first element
dogs.unshift("Chihuahua"); // add new element at start
delete dogs[0];            // change element
dogs.splice(2, 0, "Pug", "Boxer"); // add elements
var animals = dogs.concat(cats,birds); // join two arrays
dogs.slice(1,4);           // element range
dogs.sort();                // sort升序
dogs.reverse();             // sort降序
x.sort(function(a, b){return a - b}); // numeric
x.sort(function(a, b){return b - a}); // numeric
highest = x[0];             // first element
x.sort(function(a, b){return 0.5 - Math.random()});

```

concat, copyWithin, every, fill, filter, find, findIndex, forEach, indexOf, isArray, join, lastIndexOf, map, pop, push, reduce, reduceRight, reverse, shift, slice, some, sort, splice, toString, unshift, valueOf

## Regular Expressions \n

var a = str.search(/CheatSheet/i);

### Modifiers

i	perform case-insensitive matching
g	perform a global match
m	perform multiline matching

### Patterns

\	Escape character
\d	find a digit
\s	find a whitespace character
\b	find match at beginning or end of a word

## Errors

```
try {                                // block of code to
    undefinedFunction();
}
catch(err) {                           // block to handle
    console.log(err.message);
}

Throw error
throw "My error message";      // throw a text

Input validation
var x = document.getElementById("mynum").value; //
try {
    if(x == "")   throw "empty";           //
    if(isNaN(x)) throw "not a number";
    x = Number(x);
    if(x > 10)   throw "too high";
}
catch(err) {
    document.write("Input is " + err);    //
    console.error(err);                  //
}
finally {
    document.write("</br>Done");          //
}
```

### Error name values

RangeError	A number is "out of range"
ReferenceError	An illegal reference has occurred
SyntaxError	A syntax error has occurred
TypeError	A type error has occurred
URIError	An encodeURI() error has occurred

## Useful Links ↵

JS cleaner	Obfuscator
Can I use?	Node.js
jQuery	RegEx tester

n+	contains at least one n
n*	contains zero or more occurrences of n
n?	contains zero or one occurrences of n
^	Start of string

## JSON j

```
var str = '{"names":[' +                                // create
  '{"first":"Hakuna","lastN":"Matata" },' +
  '{"first":"Jane","lastN":"Doe" },' +
  '{"first":"Air","last":"Jordan" }]};'                // parse
obj = JSON.parse(str);                               // parse
document.write(obj.names[1].first);                  // access
```

### Send

```
var myObj = { "name": "Jane", "age": 18, "city": "Chicago" };
var myJSON = JSON.stringify(myObj);
window.location = "demo.php?x=" + myJSON;
```

### Storing and retrieving

```
myObj = { "name": "Jane", "age": 18, "city": "Chicago" };
myJSON = JSON.stringify(myObj);
localStorage.setItem("testJSON", myJSON);
text = localStorage.getItem("testJSON");
obj = JSON.parse(text);
document.write(obj.name);
```

## Promises P

```
function sum (a, b) {
    return Promise(function (resolve, reject) {
        setTimeout(function () {
            if (typeof a !== "number" || typeof b !== 'number')
                return reject(new TypeError("Inputs must be numbers"));
            resolve(a + b);
        }, 1000);
    });
}
var myPromise = sum(10, 5);
myPromise.then(function (result) {
    document.write(" 10 + 5: ", result);
    return sum(null, "foo");           // Invalid
}).then(function () {                  // Won't log
}).catch(function (err) {             // The catch
    console.error(err);              // => Please
});
```

### States

pending, fulfilled, rejected

### Properties

Promise.length, Promise.prototype

### Methods

Promise.all(iterable), Promise.race(iterable),  
Promise.reject(reason), Promise.resolve(value)