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Color key overleaf

Code Structure

A cascading stylesheet is a collection of one or more rules bearing the form

```
selector{property1:value;...;propertyN:value}
```

The part within braces constitutes the declaration block consisting of one or more property specifications separated by a semicolon.

CSS comments bear the form `/*Comment Text*/`. Comments can span multiple lines and can be placed before, between or within a rule.

Use the `@import url(urlname)` directive to import stylesheets. To import stylesheets from another Internet location the full path to the url must be stated.

Spaces are generally ignored. If relevant, e.g. in font-family specification, the text should be quoted.

Selector Types

Class Selectors: `.name` – applies to HTML document elements (HDEs) which have the attribute `class="name"`.

ID Selectors: `#name` – applies to all HDEs which have the attribute `id="name"`.

Element Selectors: `tag` – where `tag` is a recognized HTML element type such as `h1`, `p`, `a` etc.

Selector types can be combined to deliver very targeted styling effects. For example

`.name#ID` – applies to all HDEs with the attributes `class="name"` and `id="ID"`.

`h1.name` – applies to all `<h1>` elements with the attribute `class="name"`.

`h1#ID` – applies to all `<h1>` elements with the attribute `id="ID"`.

`.name tag` – applies to all `<tag>` elements (e.g. `<h1>`, `<a>`) inside a block element with attribute `class="name"`.

`.name>tag` – applies to all `<tag>` elements directly owned by a block element with the attribute `class="name"`. **IE**.

Pseudo-Classes

`:link` – to style unvisited hyperlinks, `<a>`.

`:visited` – to style hyperlinks that have been visited.

`:hover` – to style HDEs while the mouse hovers over them. Only supported by hyperlinks in **IE6**.

`:focus` – to style form elements, e.g. `inputs`, while they are focused. **IE**.

`:active` – to style HDEs while they are being used, e.g. buttons & anchors while they are being clicked. **IE6(??)**.

`:first-child` – applies to the first child of another element, e.g. to style the first paragraph inside a division you would define `p:first-child`. **IE6**

`:hover` must be specified after `:visited` for it to have an effect.

Grouping & Nesting

When defining two or more nearly similar rules do this

```
.rule1,.rule2...{property1:value;...;propertyN:value}
.rule2{property3:value;...}
```

The first line defines a **group** of rules sharing identical property values. With this done, override properties that differ as done above for `rule2`.

Descendant Nesting: `.name selector` styles all elements that use `selector` and are owned by block elements with the attribute `class="name"`.

Child Nesting: `.name>selector` styles all elements that use `selector` and are directly owned by block elements with the attribute `class="name"`. **IE**

CSS in HTML

External CSS

```
<link rel="stylesheet" href="/styles/screen.css"
type="text/css" [media="screen"]>
```

Embedded CSS

```
<style type="text/css" [media="screen"]>
/*Style declarations here*/</style>
```

Good practice requires providing styles for screen and print media as a bare minimum. Multiple media types should be specified as a comma separated list. Other media types include all, aural, braille, embossed, handheld, print, projection and tv.

Inline CSS

`<tag style="...">` where `tag` is any legal HTML element tag such as `h1`, `p`, `a` etc. Use single quotes in the style assignment if required. Follow the `property1:value;..` format described above. Use sparingly.

Length Units

Absolute Units: `in|cm|mm|pt|pc`.

`px` (Pixels) as defined is a relative unit but as used by browsers is an absolute unit.

Relative Units: `em|%`. Measurements are relative to the parent element.

Lengths, except when 0, must **always** be followed by a unit. No space allowed between the number & the unit.

Color Units & Names

`#RRGGBB` is, generally speaking, the most economical way of specifying color. e.g. `#C515BE`.

Color Names: `aqua|black|blue|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow`

Background^{*1}

`background-attachment:scroll|fixed|inherit`

`background-color:transparent|<C>|inherit`

`background-image:none|url(<urlname>)`

`background-position:[(<L>|left|center|right) [<L>|top|center|bottom]][(||left|center|right) [||top|center|bottom]]` **L** is an offset from top-left. Default `0 0`

`background-repeat:no-repeat|repeat|repeat-x|repeat-y|inherit`

Border⁺²³

`border-?-color:color|<C>|transparent|inherit`

`border-?-style:none|hidden|dotted|dashed|solid|double|groove|ridge|inset|outset|inherit`

`border-?-width:medium|thin|thick|<L>|inherit`

? is one of `left`, `top`, `right` or `bottom`

Color

`color:inherit|<C>`

Default depends on the browser. Also sets border color unless overridden.

Cursor

`cursor:auto|default|pointer|crosshair|move|?-resize|groove|text|wait|help|progress|inherit`

where ? = `n|e|w|s|ne|nw|se|sw`

Use to assign cursor shape when mouse pointer enters the HDE. What "enter" means is browser dependent.

Dimensions

Dimension specifications only make sense for

- positioned HDEs, i.e. HDEs which have `position` set to a value other than static
- floated HDEs, i.e. HDEs which have `float` set to `left` or `right`, in which case a `width` must be specified.

`bottom|top|left|right:auto|<L>|inherit`

`top` & `bottom` and `left` & `right` form pairs. If both are set to `auto`, both are zero. If one is set to `auto`, it is the negative of the other. If both are assigned a length and one is not the negative of the other, the browser may, at its discretion, ignore the setting.

`width|height:auto|<L>|inherit`

`width` & `height` are only relevant for block HDEs.

`max|min-?:<L>|inherit` where ? = `width|height`. The `max` properties are 0 by default. The `min` properties have no initial value. Excess content spills out of the block by default. Assign `overflow` to avoid this. **IE6**

Display⁴

`display:none|inline|inline-block|block`

Determines the type of display box generated by an HDE during page layout. The default value is `HDE` dependent `` and `<a>` HDEs for instance are `inline` while `<div>` and `<p>` HDEs are `blocks`. Floating an HDE sets `display:block`.

Inline HDEs only take up as much horizontal space as required for displaying their contents. Block HDEs take the available client area of their container – unless `width` or `max-width` require otherwise.

`inline-block` causes the HDE to behave like an `inline` element while still using all block like attributes such as margin and padding. For compatibility with Firefox use

`display:-moz-inline-stack;display:inline-block`

`display:none` hides the HDE and generates no display block for it. Other HDEs are laid out as though it were not there.

Float

`float:none|left|right|inherit`

Causes HDE to "float" to the left/right of its container if empty or to the right/left of its previously floated sibling if non-empty. Floated HDEs are always blocks. The `width` property must be specified. If available client width is insufficient floating begins afresh from the appropriate boundary of the container - below previously floated siblings.

Assign `clear:none|left|right|both` to force subsequently floated HDEs to start afresh from the appropriate boundary of the container – a sort of "carriage return" directive.

Font⁵

`font-family:inherit|[<F>|<F>|<G>]`

`font-size:inherit|<L>`

`font-family:inherit|italic|normal`

`font-weight:inherit|normal|bold`

`font:inherit|[(<font-style> || <font-weight>) <font-size> <font-family>] caption|icon|menu|message-box|small-caption|status-bar`

List⁺

`list-style-image:none|url(urlname)|inherit`

`list-style-position:outside|inside|inherit`

`list-style-type:disc|circle|square|decimal|decimal-leading-zero|lower-roman|upper-roman|lower-greek|lower-latin|inherit`

Margin⁺⁶

`margin-?:auto|<L>|inherit`

? is one of `left`, `top`, `right` or `bottom`

Overflow

`overflow:auto|visible|hidden|scroll|inherit`

Padding⁺

`padding-?:<L>|inherit`

? is one of `left`, `top`, `right` or `bottom`

`padding:<L>|inherit`

Position

`position:static|relative|absolute|fixed|inherit`

Absolutely positioned HDEs have as their container the nearest ancestor that has a `position` attribute other than `static`. If no such ancestor exists, the container is the initial containing block – for all intents the browser window.

Fixed HDEs always have the viewport as their container. Not very useful until **IE6** becomes obsolete.

Absolute HDEs define their own stacking context This means that `z-index` settings for their children are internal to the HDE.

Space

letter-spacing: *normal* | <L>

word-spacing: *normal* | <L>

Use negative values for effects such as overlap.

white-space: *normal* | *pre* | *pre-wrap* | *pre-line* | *inherit*

Stacking Order

z-index: *auto* | <N> | *inherit*

The +ve z-axis is orthogonal to the screen/paper in the direction of the viewer. Use values separated by 10 or more to simplify future page redesigns.

In the absence of a **z-index** specification, **HDEs** are displayed in the order of their occurrence in the document – subject to the **z-index** specification of any absolutely positioned container.

Text

text-align: *left* | *right* | *center* | *justify*

Default is browser and locale dependent

text-decoration: *none* | *underline* | *overline* | *line-through*

text-indent: | <L> | *inherit*

Indents first line of block **HDEs**. Use negative values to outdent.

text-transform: *none* | *lowercase* | *uppercase* | *capitalize* | *inherit*

vertical-align: *baseline* | *sub* | *super* | *top* | *text-top* | *middle* | *bottom* | *text-bottom* | <L> | *inherit*

Relative <L> values refer to the **line-height** of the element itself. Use -ve <L> values for subscripting. +ve values are an offset from the line top while -ve values are an offset from the line bottom.

line-height: *normal* | <N> | <L> | *inherit*

<N> = scaling factor. Use <N> < 1 or <L> < 100% to compress lines in block **HDEs**. Defines **minimum** line-height. Maximum is determined by inline elements, such as images.

Visibility

visibility: *inherit* | *visible* | *hidden* | *collapse*

hidden HDEs are not visible but still take up space and affect the layout of the document. **collapse** causes table rows/columns to be hidden.

Element Types

Replaced elements are rendered by the browser using information not available in the document itself. Examples are images, , and inputs, <input>. Nearly all other elements are **non-replaced**, i.e. their content is available in the document itself and is displayed in a box specified by the element attributes.

Block elements generate a box that, unless otherwise specified, occupies the full client width of the parent. Examples: <div>, <p> & . The vertical margins of adjacent blocks collapse – i.e. only the bigger of the two is used. This does not apply to elements that are blocks by virtue of being **float**ed.

Inline elements generate a box which only consumes as much horizontal space as is required to display its contents. Inline elements do not use vertical margin settings. Examples: <a>, , etc.

Block elements can act as containers for other elements

Element types can be changed by setting the **display** attribute. **inline-block** (-moz-inline-stack) offers a useful half-way house between **block** and **inline**.

Box Model

HDEs are rendered by browsers in a notional box made up of the following

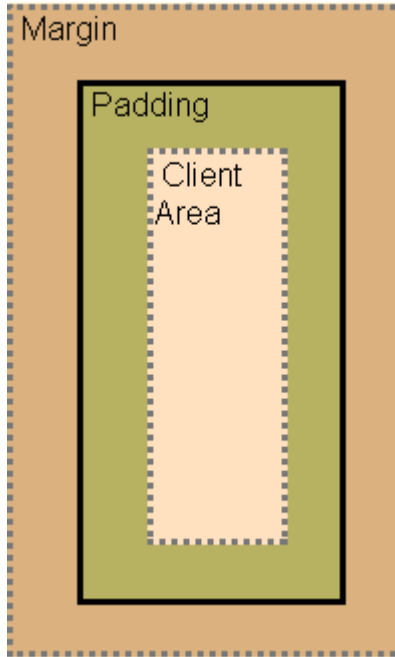
1. The margin –
 1. vertical, where relevant.
 2. horizontal, always
2. The padding

3. The border
4. The client area

The precise manner in which CSS **height/width** settings are used is browser and DTD dependent

With the strict DTD the figures reported by Javascript for **e.clientWidth/Height** include the padding but not the border. **e.offsetWidth/Height**, on the otherhand, reports figures that include both the border width and the padding. Padding is nevertheless **outside** the client area – i.e the available area for child **HDEs** is **CSS height x CSS width**.

With the transitional DTD nothing changes – with Firefox and Opera. However, **IE** (even **IE7**) treats the CSS settings as the **whole** area of the element – border and padding included. The padding and border eat into the client area.



Notes

Tested under IE6+, Firefox 1.5+ & Opera 9.1+.

Most CSS properties are not inherited. Notable exceptions are **color**, **font**, **letter-spacing**, **word-spacing**, **text-align**, **text-indent** & **line-height**.

CSS properties describe **HDE** qualities. In other words, they are always adjectives, not verbs. Thus **visibility: hidden** not **visibility: hide**.

Key

- rule** – CSS Selector
- property** – CSS Property Identifier
- value** – CSS Property Value
- value** – CSS Property Value (Default)
- attrib** – HTML Element Attribute Identifier
- value** – HTML Element Attribute Value

- a|b** – a or b
- a|b** – a or b or both, any order
- a*** – a zero or more times

- IE** – not supported by **IE**, even **IE7**
- IE6(7)** – not supported by **IE6**. **IE7** support incomplete.
- IE6** – not supported by **IE6**
- IE** – not supported by **IE**, even **IE7**
- IE** – not supported by **IE6**.
- [...] - option
- [a b] – group of a and b.

<text> - replace **text** with suitable value
C – color value, e.g. fuchsia or #FF00FF
F – Family-name, e.g. arial, "comic sans ms" etc. Names containing spaces should be wrapped in quotes.
G – Generic-family name = **serif**|**sans-serif**|**cursive**|**fantasy**|**monospace**. Optional but recommended.
L – length value with unit, e.g. 2em, 10% 30px etc
N – simple number (no unit).
 + – accepts shorthand. Shorthand properties are specified by combining the individual property specifications and assigning them to the root property, e.g. **border:** or **font:**. **Note:** Omitting a sub-property in shorthand specification causes it to take its default value. With the notable exception of **font:**, shorthand properties can be specified in any order.
¹ **IE6** bug:**20% right** will move background right. Firefox and Opera will use **20%** and ignore **right**.
² There are five distinct shorthand formats for the border property

- **border-?**: where ? is one of left, top, right or bottom
- **border:**
- ³ for consistency specify a border width in length units. Each browser has its own interpretation of **medium**.
- ⁴ only a partial list
- ⁵ **Not** a copy of CSS standards. Use relative units for font sizes. **Always** specify font information – the defaults depend on, user-configured, browser settings. Other font-weights are often not available in the selected font. The shorthand, **font**, property requires the sub-property **order** given here to be followed. The system settings options, such as **menu** and **caption**, are handy when creating dialogs which feel like system dialogs.
- ⁶ The default is zero. Assign shorthand **margin** first, then change others individually - if required. Vertically adjacent block **HDEs** collapse – i.e. only the bigger margin is used. Inline **HDEs** do not use vertical margins. Horizontal margins never collapse. Nor do any of the margins of floated **HDEs**. To center **HDE** horizontally in its parent, set horizontal margins to **auto**. Margins can be negative – use with care for overlap effects.

An extensive range of free quick reference cards is available at <http://www.explainth.at>