

# CSS

Front-End 개발 실무



# 목 차

- ✓ CSS 개요
- ✓ CSS 선택자(Selector)
- ✓ CSS 속성(Property)
- ✓ 주요 개념
- ✓ 실습

# CSS 개요

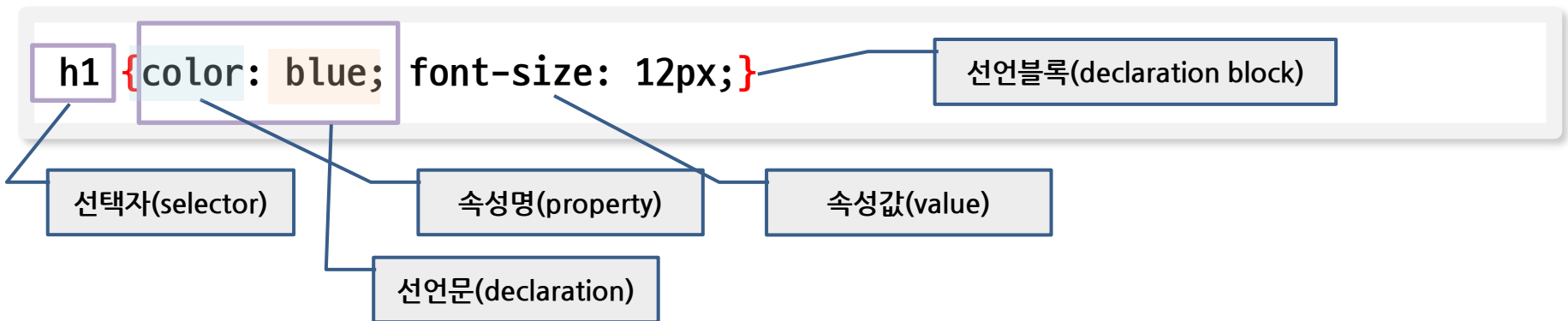
---

- CSS 개요
  - CSS Color
  - CSS Unit
- 

## ➤ CSS

- Cascading Style Sheets
- HTML 요소가 스크린(screen), 출력물(print) 등에서 어떻게 표현되는지를 정의

## ➤ CSS 문법



## ➤ CSS 연결

- 외부 스타일시트
- 내부 스타일시트
- 인라인(Inline) 스타일

```
<!DOCTYPE html>
<html lang="ko">
  <head>
    <title>하이셈(주)</title>
    <!-- 외부 스타일시트 -->
    <link rel="stylesheet" href="mystyle.css" />
    <!-- 내부 스타일시트 -->
    <style>
      body {background: #ffffff;}
    </style>
  </head>
  <body>
    <!-- 인라인 스타일 -->
    <h1 sytle="color: red; font-size: 20px;">CEO 인사말</h1>
    <p>안녕하세요? 하이셈 대표이사 000 입니다.</p>
  </body>
</html>
```

## ➤ Color Names

- red, green, blue, orange

## ➤ RGB(Red, Green, Blue)

- `rgb(255, 0, 0)`

## ➤ Hexadecimal Colors

- `#FF0000`, `#FFA500` 등

## ➤ RGBA Colors

- `rgba(255, 0, 0, 0.2)`

## ➤ HLS Colors

- `hsl(0, 100%, 30%)`
- 첫 요소는 각도 : 0 ~ 360

## ➤ HSLA Colors

- hsla(120, 100%, 30%, 0.5)

## ➤ Opacity

- opacity: 0.5 (0이상 1이하의 값 사용)

## ➤ RGBA, HLS, HSLA, Opacity는 IE9 이상만 지원

```
#p1 {background-color: red;}
#p1 {background-color: rgb(255, 128, 135);}
#p1 {background-color: #ff0000;}
#p1 {background-color: rgba(0, 0, 0, 0.5);
    filter:progid:DXImageTransform.Microsoft.gradient(startColorstr=#50000000,endColorstr=#50000000);}
#p1 {background-color: hls(120, 100%, 30%);}
#p1 {background-color: hlsa(120, 100%, 30%, 0.5);}
#p1 {background-color: rgba(255, 128, 135); opacity: 0.4; filter: alpha(opacity=40);}
```

## ➤ 상대길이

단위(Unit)	설명(Description)	비고
<b>em</b>	Relative to the font-size of the element (2em means 2 times the size of the current font)	
<b>ex</b>	Relative to the x-height of the current font (rarely used)	
<b>ch</b>	Relative to width of the "0"	IE9+
<b>rem</b>	Relative to font-size of the root element(html)	IE9+
<b>vw</b>	Relative to 1 % of the width of the viewport(browser window size)	IE9+
<b>vh</b>	Relative to 1 % of the height of the viewport(browser window size)	IE9+
<b>vmin</b>	Relative to 1 % of viewport's <b>smaller</b> dimension (폭과 높이 중 작은 값)	IE9+ IE9에서 <b>vm</b>
<b>vmax</b>	Relative to 1 % of viewport's <b>larger</b> dimension (폭과 높이 중 큰 값)	Not Supported
<b>%</b>		



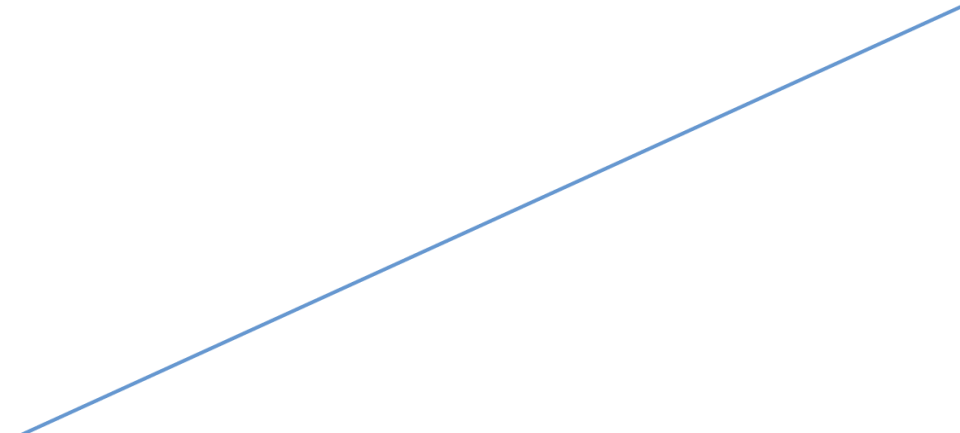
## 절대길이

단위(Unit)	설명(Description)	비고
cm	centimeters	
mm	millimeters	
in	inches (1in = 96px = 2.54cm)	
px	pixels (1px = 1/96th of 1in)	실제크기는 기기에 따라 다름
pt	points (1pt = 1/72 of 1in)	
pc	picas (1pc = 12 pt)	

※ 참조 : [https://www.w3schools.com/cssref/css\\_units.asp](https://www.w3schools.com/cssref/css_units.asp)

# CSS 선택자(Selector)

---

- CSS 선택자
  - 우선순위 식별
- 

선택자(Selector)	예시(Example)	예시설명(Example Description)	CSS
<b>.class</b>	.intro	Selects all elements with class="intro"	1
<b>#id</b>	#firstname	Selects the element with id="firstname"	1
<b>*</b>	*	Selects all elements	2
<b>element</b>	p	Selects all <p> elements	1
<b>element, element</b>	div, p	Selects all <div> elements and all <p> elements	1
<b>element element</b>	div p	Selects all <p> elements <b>inside</b> <div> elements	1
<b>element &gt; element</b>	div > p	Selects all <p> elements where the <b>parent is a &lt;div&gt;</b> element	2
<b>element + element</b>	div + p	Selects all <p> elements that are placed <b>immediately after &lt;div&gt;</b> elements (형제요소만)	2
<b>element1 ~ element2</b>	p ~ ul	Selects every <ul> element that are preceded by a <p> element (<p>이후에 나오는 모든 형제요소인 <ul>)	3

선택자(Selector)	예시(Example)	예시설명(Example Description)	CSS
<b>[attribute]</b>	[target]	Selects all elements with a target attribute	2
<b>[attribute=value]</b>	[target='blank']	Selects all elements with target="_blank"	2
<b>[attribute~=value]</b>	[title~='flower']	Selects all elements with a title attribute <b>containing</b> the <b>word</b> "flower" (단어 단위로 체크)	2
<b>[attribute!=value]</b>	[lang!='en']	Selects all elements with a lang attribute value <b>starting with</b> "en" (단어 단위로 체크, - 로 연결된 경우 다른 단어로 구분)	2
<b>[attribute^=value]</b>	a[href^='https']	Selects every <a> element whose href attribute value <b>begins with</b> "https" (글자 단위로 체크)	3
<b>[attribute\$=value]</b>	a[href\$='.pdf']	every <a> element whose href attribute value <b>ends with</b> ".pdf" (글자 단위로 체크)	3
<b>[attribute*=value]</b>	a[href*='w3schools']	Selects every <a> element whose href attribute value <b>contains the substring</b> "w3schools" (글자 단위)	3
<b>:active</b>	a:active	Selects the active link	1
<b>::after(:after)</b>	p::after	Insert something <b>after the content</b> of each <p> element	2
<b>::before(:before)</b>	p::before	Insert something <b>before the content</b> of each <p> element	2

선택자(Selector)	예시(Example)	예시설명(Example Description)	CSS
<b>:checked</b>	input:checked	Selects every checked <input> element	3
<b>:disabled</b>	input:disabled	Selects every disabled <input> element	3
<b>:empty</b>	p:empty	Selects every <p> element that has no children (including text nodes)	3
<b>:enabled</b>	input:enabled	Selects every enabled <input> element (disabled가 아닌 요소)	3
<b>:first-child</b>	p:first-child	Selects every <p> element that is the first <b>child</b> of its parent	2
<b>::first-letter</b>	p::first-letter	Selects the first letter of every <p> element	1
<b>::first-line</b>	p::first-line	Selects the first line of every <p> element	1
<b>:first-of-type</b>	p:first-of-type	Selects every <p> element that is the <b>first &lt;p&gt; element</b> of its parent	3
<b>:focus</b>	input:focus	Selects the input element which has focus	2
<b>:hover</b>	a:hover	Selects links on mouse over	1

선택자(Selector)	예시(Example)	예시설명(Example Description)	CSS
<b>:in-range</b>	input:in-range	Selects input elements with a value within a specified range 예: <input type="number" min="5" max="10" value="7" />	3
<b>:invalid</b>	input:invalid	Selects all input elements with an invalid value	3
<b>:lang( language)</b>	p:lang(en)	Selects every <p> element with a lang attribute equal to "en"	2
<b>:last-child</b>	p:last-child	Selects every <p> element that is the last child of its parent	3
<b>:last-of-type</b>	p:last-of-type	Selects every <p> element that is the last <p> element of its parent	3
<b>:link</b>	a:link	Selects all unvisited links	1
<b>:not(selector)</b>	:not(p)	Selects every element that is not a <p> element	3
<b>:nth-child(n)</b>	p:nth-child(2)	Selects every <p> element that is the second child of its parent	3
<b>:nth-last-child(n)</b>	p:nth-last-child(2)	Selects every <p> element that is the second child of its parent, counting from the last child	3
<b>:nth-last-of-type(n)</b>	p:nth-last-of-type(2)	Selects every <p> element that is the second <p> element of its parent, counting from the last child	3

선택자(Selector)	예시(Example)	예시설명(Example Description)	CSS
<b>:nth-of-type(n)</b>	p:nth-of-type(2)	Selects every <p> element that is the second <p> element of its parent	3
<b>:only-of-type</b>	p:only-of-type	Selects every <p> element that is the only <p> element of its parent	3
<b>:only-child</b>	p:only-child	Selects every <p> element that is the only child of its parent	3
<b>:optional</b>	input:optional	Selects input elements with no "required" attribute	3
<b>:out-of-range</b>	input:out-of-range	Selects input elements with a value outside a specified range	3
<b>:read-only</b>	input:read-only	Selects input elements with the "readonly" attribute specified	3
<b>:read-write</b>	input:read-write	Selects input elements with the "readonly" attribute NOT specified	3
<b>:required</b>	:required	Selects input elements with the "required" attribute specified	3
<b>:root</b>	:root	Selects the document's root element (<html>)	3
<b>::selection</b>	::selection	Selects the portion of an element that is selected by a user (마우스로 선택한 영역)	3 (removed)

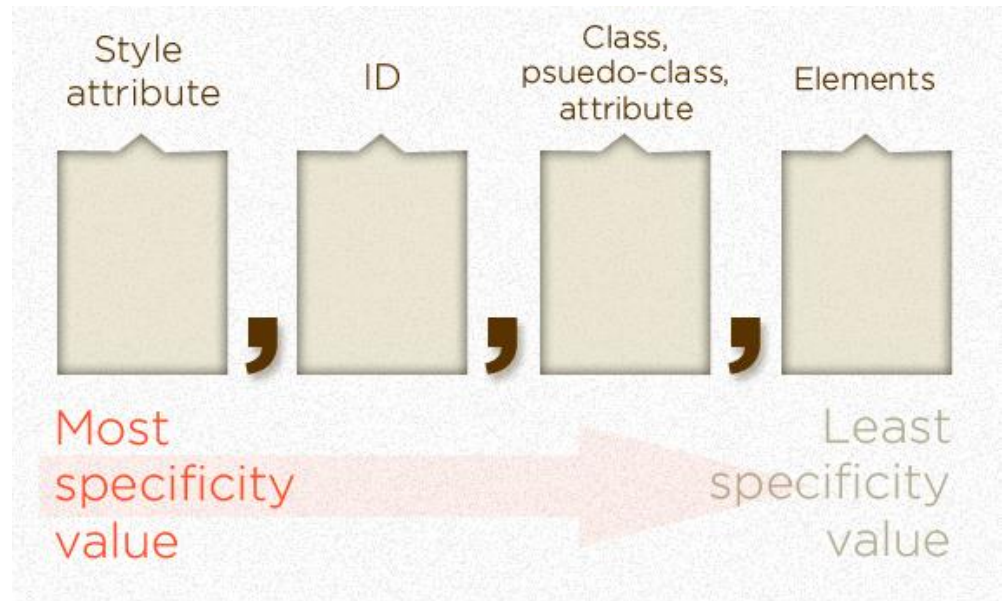
선택자(Selector)	예시(Example)	예시설명(Example Description)	CSS
<b>:target</b>	<code>#news:target</code>	Selects the current active #news element (clicked on a URL containing that anchor name)	3
<b>:valid</b>	<code>input:valid</code>	Selects all input elements with a valid value	3
<b>:visited</b>	<code>a:visited</code>	Selects all visited links	1

※ 참조 : [https://www.w3schools.com/cssref/css\\_selectors.asp](https://www.w3schools.com/cssref/css_selectors.asp)

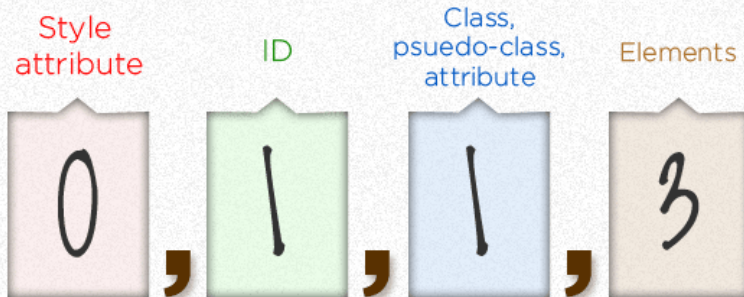


## ➤ 순위

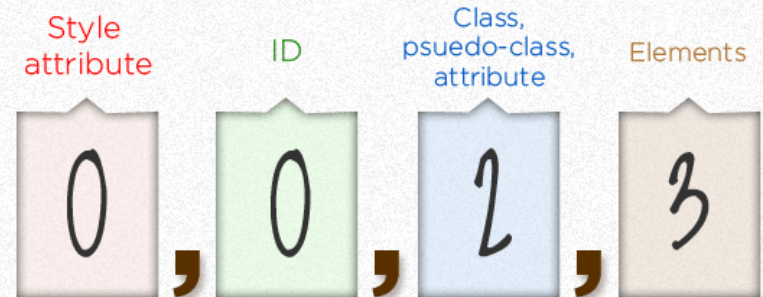
- 1 : !important
- 2 : inline-style (HTML style 속성)
- 3 : ID(#) 선택자
- 4 : Class(.) 선택자, 가상(:) 선택자, 속성([]) 선택자
- 5 : 요소(태그) 선택자
- 동률 : 나중에 사용한 선택자



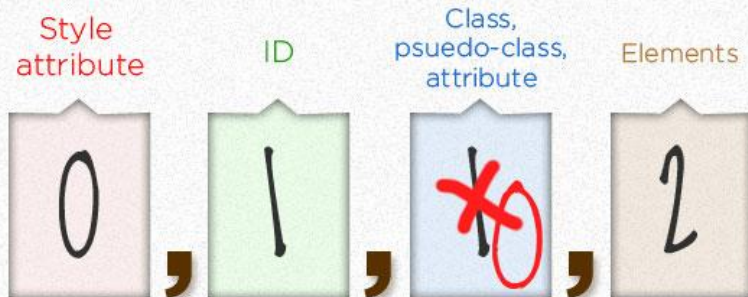
ul#nav li.active a



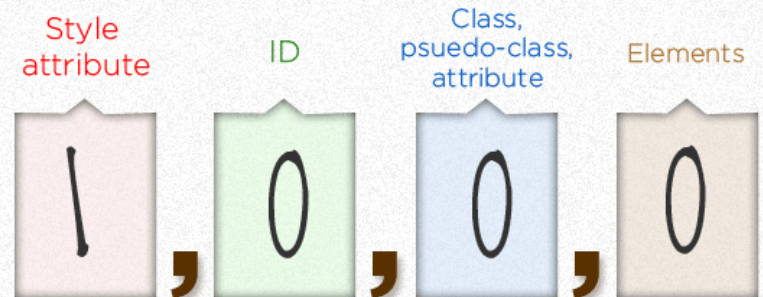
body.ie7 .col\_3 h2 ~ h2

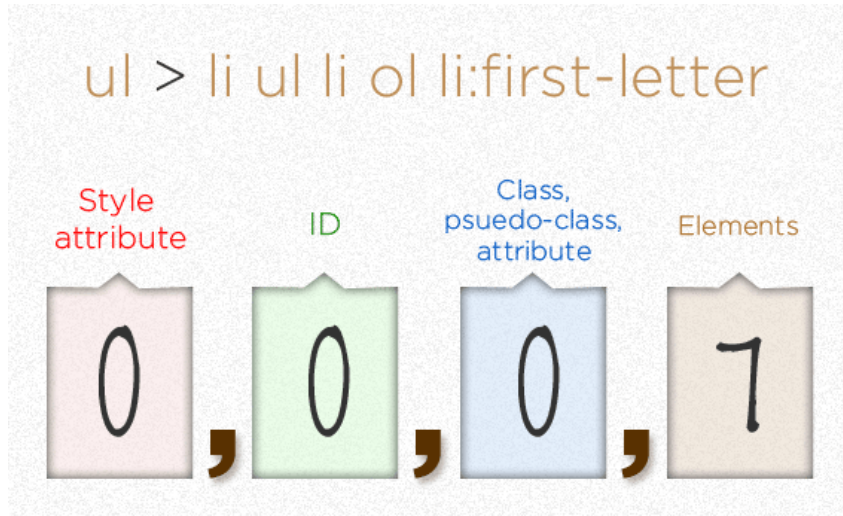


#footer \*:not(nav) li



<li style="color: red;">





## ➤ 점수화

- 10,000 : **!important**
- 1,000 : inline-style (HTML style 속성)
- 100 : ID(#) 선택자
- 10 : Class(.) 선택자, 가상(:) 선택자, 속성([]) 선택자
- 1 : 요소(태그) 선택자
- 0 : 기타 선택자

# CSS 속성(property)

- Color 속성
- Background and Border 속성
- Basic Box 속성
- Flex Box Layout
- Text 속성
- Text Decoration 속성
- Font 속성
- Writing Mode 속성
- Table 속성
- List and Counters 속성
- Animation 속성
- Transform 속성
- Transition 속성
- Basic User 속성
- Multi-column Layout 속성
- Paged Media
- Generated Counter for Paged Media
- Filter Effect 속성
- Masking 속성
- Speech 속성
- Marquee 속성

속성(property)	값(value)	설명(Description)	CSS
color	<i>color</i>   <i>initial</i>   <i>inherit</i> ( <b>default</b> : 미지정)	Sets the color of text	1
opacity	<i>number</i>   <i>initial</i>   <i>inherit</i> ( <b>default</b> : 1)	Sets the opacity level for an element (범위: 0.0 ~ 1.0)	3

- ※ initial : 기본 설정값(default)으로 돌림 (IE12 부터 지원)
- ※ inherit : 자신의 부모의 값을 상속 받음 (IE8 부터 지원)
- ※ initial, inherit 값은 모든 HTML 요소와 모든 CSS 속성값으로 사용 가능 (이후 표에서 생략)

# Background and Border 속성

속성(property)	값(value)	설명(Description)	CSS
background	<i>color image position/size repeat origin clip attachment</i>	A <b>shorthand</b> property for setting all the background properties in one declaration	1
background-attachment	<b>scroll</b>   fixed   local	Sets whether a background image is fixed or scrolls with the rest of the page	1
background-blend-mode	<b>normal</b>   multiply   screen   overlay   darken   lighten   color-dodge   saturation   color   luminosity	Specifies the blending mode of each background layer (color/image)	3
background-color	<b>transparent</b>   <i>color</i>	Specifies the background color of an element	1
background-image	<b>none</b>   <i>url</i>	Specifies one or more background images for an element	1
background-position	<i>value</i> ( <b>default</b> : 0% 0%)	Specifies the position of a background image	1
background-repeat	<b>repeat</b>   repeat-x   repeat-y   no-repeat	Sets how a background image will be repeated	1
background-clip	<b>border-box</b>   padding-box   content-box	Specifies the painting area of the background	3
background-origin	<b>padding-box</b>   border-box   content-box	Specifies where the background image(s) is/are positioned	3
background-size	<b>auto</b>   <i>length</i>   %   cover   contain	Specifies the size of the background image(s)	3



# Background and Border 속성

CSS 속성

속성(property)	값(value)	설명(Description)	CSS
<b>border</b>	<i>width style color</i> (default: medium none color)	Sets all the border properties in one declaration	1
<b>border-top</b> (right, bottom, left)	<i>width style color</i> (default: medium none color)	Sets all the top(right, bottom, left) border properties in one declaration	1
<b>border-top-width</b> (right, bottom, left)	medium thin thick  <i>length</i>	Sets the width of the top(right, bottom, left) border	1
<b>border-top-style</b> (right, bottom, left)	none hidden dotted dashed solid double groove ridge inset outset	Sets the style of the top(right, bottom, left) border	1
<b>border-top-color</b> (right, bottom, left)	<i>color</i>  transparent (default: 해당 요소의 컬러)	Sets the color of the top(right, bottom, left) border	1
<b>border-width</b>	1-4 medium thin thick  <i>length</i>	Sets the width of the four borders	1
<b>border-style</b>	1-4 none hidden dotted dashed solid double groove ridge inset outset	Sets the style of the four borders	1
<b>border-color</b>	1-4 <i>color</i>  transparent	Sets the color of the four borders	1
<b>border-radius</b>	1-4 <i>length, %</i> [/ <i>length, %</i> ] (default : 0)	A shorthand property for setting all the four border-* radius properties	3
<b>border-top-left-radius</b> (top bottom-left right)	1-4 <i>length, %</i> [ <i>length, %</i> ] (default : 0)	Defines the shape of the border of the top-left corner (bottom-right 등)	3

# Background and Border 속성

CSS 속성

속성(property)	값(value)	설명(Description)	CSS
<b>box-decoration-break</b>		Sets the behaviour of the background and border of an element at page-break, or, for in-line elements, at line-break.	3
<b>box-shadow</b>	<b>none</b>   <i>h-shadow v-shadow blur spread color</i>   inset	Attaches one or more drop-shadows to the box	3



# Basic Box 속성

속성(property)	값(value)	설명(Description)	CSS
<b>bottom</b> (left, right, top)	<b>auto</b>   <i>length</i>   %	Specifies the bottom(left, right, top) position of a positioned element	2
<b>clear</b>	<b>none</b>   left   right   both	Specifies which sides of an element where other floating elements are not allowed	1
<b>clip</b>	<b>auto</b>   shape shape → rect( <i>top</i> , <i>right</i> , <i>bottom</i> , <i>left</i> )	Clips an absolutely positioned element (예시: clip: rect(0, 60px, 200px, 0);)	2
<b>display</b>	<b>inline</b>   block   flex   inline-block   inline-flex   inline-table   list-item   run-in   table   table-caption   table-column-group   table-header-group   table-footer-group   table-row-group   table-cell   table-column   table-row   none	Specifies how a certain HTML element should be displayed	1
<b>float</b>	<b>none</b>   left   right	Specifies whether or not a box should float	1
<b>height</b> (width)	auto   <i>length</i>   %	Sets the height of an element	1
<b>margin</b>	1-4 <i>length</i> (0)   %   auto	Sets all the margin properties in one declaration	1
<b>margin-bottom</b> (-left, -right, -top)	<i>length</i> (0)   %   auto	Sets the bottom(left, right, top) margin of an element	1

# Basic Box 속성

속성(property)	값(value)	설명(Description)	CSS
max-height (max-width)	<b>none</b>   <i>length</i>   %	Sets the maximum height(width) of an element	2
min-height (min-width)	<b>none</b>   <i>length</i>   %	Sets the minimum height(width) of an element	2
overflow	<b>visible</b>   hidden   scroll   auto	Specifies what happens if content overflows an element's box	2
overflow-x (overflow-y)	<b>visible</b>   hidden   scroll   auto	Specifies whether or not to clip the left/right(top/bottom) edges of the content, if it overflows the element's content area	3
padding	1-4 <i>length</i> (0)   %	Sets all the padding properties in one declaration	1
padding-bottom (-left, -right, -top)	<i>length</i> (0)   %	Sets the bottom(left, right, top) padding of an element	1
position	<b>static</b>   absolute   fixed   relative	Specifies the type of positioning method used for an element (static, relative, absolute or fixed)	2
visibility	<b>visible</b>   hidden   collapse	Specifies whether or not an element is visible	2
vertical-align	<b>baseline</b>   <i>length</i>   %   sub   super   top   text-top   middle   bottom   text-bottom	Sets the vertical alignment of an element	1
z-index	<b>auto</b>   <i>number</i>	Sets the stack order of a positioned element	2

# Flexible Box Layout

속성(property)	값(value)	설명(Description)	CSS
<b>align-content</b>	<b>stretch</b>  center flex-start flex-end space-between space-around	Specifies the alignment between the lines inside a flexible container when the items do not use all available space	3
<b>align-items</b>	<b>stretch</b>  center flex-start flex-end baseline	Specifies the alignment for items inside a flexible container	3
<b>align-self</b>	<b>auto</b>  stretch center flex-start flex-end baseline	Specifies the alignment for selected items inside a flexible container	3
<b>flex</b>	<i>grow shrink basis</i>  auto none ( <b>default</b> : 0 1 auto)	Specifies the length of the item, relative to the rest	3
<b>flex-basis</b>	<b>auto</b>   <i>number</i>	Specifies the initial length of a flexible item	3
<b>flex-direction</b>	<b>row</b>  row-reverse column column-reverse	Specifies the direction of the flexible items	3
<b>flex-flow</b>	<i>direction wrap</i> ( <b>default</b> : row nowrap)	A shorthand property for the flex-direction and the flex-wrap properties	3
<b>flex-grow</b>	<i>number</i> ( <b>default</b> : 0)	Specifies how much the item will grow relative to the rest	3
<b>flex-shrink</b>	<i>number</i> ( <b>default</b> : 1)	Specifies how the item will shrink relative to the rest	3
<b>flex-wrap</b>	<b>nowrap</b>  wrap wrap-reverse	Specifies whether the flexible items should wrap or not	3

# Flexible Box Layout

속성(property)	값(value)	설명(Description)	CSS
<b>justify-content</b>	<b>flex-start</b>   flex-end   center   space-between   space-around	Specifies the alignment between the items inside a flexible container when the items do not use all available space	3
<b>order</b>	<i>number</i> <b>(default: 0)</b>	Sets the order of the flexible item, relative to the rest	3

속성(property)	값(value)	설명(Description)	CSS
hanging-punctuation	<b>none</b>  first last allow-end force-end	Specifies whether a punctuation character may be placed outside the line box	3
hyphens		Sets how to split words to improve the layout of paragraphs	3
letter-spacing	<b>normal</b>   <i>length</i>	Increases or decreases the space between characters in a text	1
line-break		Specifies how/if to break lines	3
line-height	<b>normal</b>   <i>number</i>   <i>length</i>  %	Sets the line height ( <b>normal</b> 값은 브라우저에 따라 110% ~ 120%)	1
overflow-wrap		Specifies whether or not the browser may break lines within words in order to prevent overflow (when a string is too long to fit its containing box)	3
tab-size	<i>number</i>   <i>length</i> ( <b>default</b> : 8)	Specifies the length of the tab-character	3
text-align	<b>left</b>   <b>right</b>  center justify	Specifies the horizontal alignment of text	1
text-align-last	<b>auto</b>  left right center justify start end	Describes how the last line of a block or a line right before a forced line break is aligned when text-align is "justify"	3
text-combine-upright		Specifies the combination of multiple characters into the space of a single character	3

속성(property)	값(value)	설명(Description)	CSS
text-indent	<i>length</i>   % (default: 0)	Specifies the indentation of the first line in a text-block	1
text-justify	auto   inter-word   inter-ideograph   inter-cluster   distribute   kashida   trim   none	Specifies the justification method used when text-align is "justify"	3
text-transform	none   capitalize   uppercase   lowercase	Controls the capitalization of text	1
white-space	normal   nowrap   pre   pre-line   pre-wrap	Specifies how white-space inside an element is handled	1
word-break	normal   break-all   keep-all	Specifies line breaking rules for non-CJK scripts	3
word-spacing	normal   <i>length</i>	Increases or decreases the space between words in a text	1
word-wrap	normal   break-word	Allows long, unbreakable words to be broken and wrap to the next line	3

# Text Decoration 속성

CSS 속성

속성(property)	값(value)	설명(Description)	CSS
text-decoration	<b>none</b>  underline overline line-through	Specifies the decoration added to text	1
text-decoration-color	<i>color</i> ( <b>default</b> : 현재 컬러)	Specifies the color of the text-decoration	3
text-decoration-line	<b>none</b>  underline overline line-through	Specifies the type of line in a text-decoration	3
text-decoration-style	<b>solid</b>  double dotted dashed wavy	Specifies the style of the line in a text decoration	3
text-shadow	<b>none</b>   <i>h-shadow v-shadow blur-radius color</i>	Adds shadow to text	3
text-underline-position		Specifies the position of the underline which is set using the text-decoration property	3

속성(property)	값(value)	설명(Description)	CSS
@font-face	font-family, src, font-stretch, font-style, font-weight, unicode-range	A rule that allows websites to download and use fonts other than the "web-safe" fonts	3
@font-feature-values		Allows authors to use a common name in font-variant-alternate for feature activated differently in OpenType	3
font	<i>style variant weight size/line-height family</i>  caption icon menu message-box small-caption status-bar	Sets all the font properties in one declaration	1
font-family	<i>family-name</i>   <i>generic-family</i>	Specifies the font family for text	1
font-feature-settings		Allows control over advanced typographic features in OpenType fonts	3
font-kerning		Controls the usage of the kerning information (how letters are spaced)	3
font-language-override		Controls the usage of language-specific glyphs in a typeface	3
font-size	medium xx-small x-small small large x-large xx-large smaller larger length %	Specifies the font size of text	1
font-size-adjust	none number	Preserves the readability of text when font fallback occurs	3
font-stretch	normal ultra-condensed extra-condensed condensed semi-condensed semi-expanded expanded extra-expanded ultra-expanded	Selects a normal, condensed, or expanded face from a font family	3



속성(property)	값(value)	설명(Description)	CSS
font-style	<b>normal</b>  italic oblique	Specifies the font style for text	1
font-synthesis		Controls which missing typefaces (bold or italic) may be synthesized by the browser	3
font-variant	<b>normal</b>  small-caps	Specifies whether or not a text should be displayed in a small-caps font	1
font-variant-alternates		Controls the usage of alternate glyphs associated to alternative names defined in @font-feature-values	3
font-variant-caps		Controls the usage of alternate glyphs for capital letters	3
font-variant-east-asian		Controls the usage of alternate glyphs for East Asian scripts (e.g Japanese and Chinese)	3
font-variant-ligatures		Controls which ligatures and contextual forms are used in textual content of the elements it applies to	3
font-variant-numeric		Controls the usage of alternate glyphs for numbers, fractions, and ordinal markers	3
font-variant-position		Controls the usage of alternate glyphs of smaller size positioned as superscript or subscript regarding the baseline of the font	3
font-weight	<b>normal</b>  bold bolder lighter  <i>number</i>	Specifies the weight of a font (number: 100, 200, ..., 900)	1

# Writing Modes 속성

CSS 속성

속성(property)	값(value)	설명(Description)	CSS
<b>direction</b>	<b>ltr</b>  rtl	Specifies the text direction/writing direction	2
<b>text-orientation</b>		Defines the orientation of the text in a line	3
<b>text-combine-upright</b>		Specifies the combination of multiple characters into the space of a single character	3
<b>unicode-bidi</b>	<b>normal</b>  embed bidi-override	Used together with the direction property to set or return whether the text should be overridden to support multiple languages in the same document	2
<b>user-select</b>	<b>auto</b>  none text all (initial, inherit 없음)	Specifies whether the text of an element can be selected	3
<b>writing-mode</b>			3

# Table 속성

속성(property)	값(value)	설명(Description)	CSS
<b>border-collapse</b>	<b>separate</b>  collapse	Specifies whether or not table borders should be collapsed	
<b>border-spacing</b>	<i>length [length]</i> <b>(default: 2px)</b>	Specifies the distance between the borders of adjacent cells	
<b>caption-side</b>	<b>top</b>  bottom	Specifies the placement of a table caption	
<b>empty-cells</b>	<b>show</b>  hide	Specifies whether or not to display borders and background on empty cells in a table	
<b>table-layout</b>	<b>auto</b>  fixed	Sets the layout algorithm to be used for a table	

# List and Counters 속성

CSS 속성

속성(property)	값(value)	설명(Description)	CSS
counter-increment	<b>none</b>   <i>id</i>	Increments one or more counters	2
counter-reset	<b>none</b>   <i>name number</i>	Creates or resets one or more counters	2
list-style	<i>type position image</i>	Sets all the properties for a list in one declaration	1
list-style-image	<b>none</b>   <i>url</i>	Specifies an image as the list-item marker	1
list-style-position	<b>outside</b>   <i>inside</i>	Specifies if the list-item markers should appear inside or outside the content flow	1
list-style-type	<i>value</i> ( <b>default</b> : <i>disc</i> )	Specifies the type of list-item marker	1

# Animation 속성

속성(property)	값(value)	설명(Description)	CSS
@keyframes	<i>animationname</i> { <i>keyframes-selector</i> { <i>css-styles</i> ;} }	Specifies the animation code (keyframe-selector → 0~100%, from, to)	3
animation	<i>name duration timing-function delay iteration-count direction fill-mode play-state</i> ;	A <b>shorthand</b> property for all the animation properties (except animation-play-state and animation-fill-mode)	3
animation-delay	<i>time</i> ( <b>default</b> : 0s)	Specifies a delay for the start of an animation	3
animation-direction	<b>normal</b>   reverse   alternate   alternate-reverse	Specifies whether or not the animation should play in reverse on alternate cycles	3
animation-duration	<i>time</i> ( <b>default</b> : 0s)	Specifies how many seconds or milliseconds an animation takes to complete one cycle	3
animation-fill-mode	<b>none</b>   forwards   backwards   both	Specifies a style for the element when the animation is not playing (when it is finished, or when it has a delay)	3
animation-iteration-count	<i>number</i>   infinite ( <b>default</b> : 1)	Specifies the number of times an animation should be played	3
animation-name	<b>none</b>   <i>keyframename</i>	Specifies the name of the @keyframes animation	3
animation-play-state	<b>running</b>   paused	Specifies whether the animation is running or paused	3
animation-timing-function	<b>ease</b>   linear   ease-in   ease-out   ease-in-out   step-start   step-end   steps(int, start   end)   cubic-bezier(n,n,n,n)	Specifies the speed curve of an animation	3

속성(property)	값(value)	설명(Description)	CSS
<b>backface-visibility</b>	<b>visible</b>  hidden	Defines whether or not an element should be visible when not facing the screen	3
<b>perspective</b>	none  <i>length</i>	Specifies the perspective on how 3D elements are viewed	3
<b>perspective-origin</b>	<i>x-axis y-axis</i> ( <b>default</b> : 50% 50%)	Specifies the bottom position of 3D elements	3
<b>transform</b>	<b>none</b>   <i>transform-functions</i>	Applies a 2D or 3D transformation to an element	3
<b>transform-origin</b>	<i>x-axis y-axis z-axis</i> ( <b>default</b> : 50% 50% 0)	Allows you to change the position on transformed elements	3
<b>transform-style</b>	<b>flat</b>  preserve-3d	Specifies how nested elements are rendered in 3D space	3

## ➤ Transform Functions

- 2D: matrix(n, n, n, n, n, n), translate(x, y), translateX(x), translateY(Y), scale(x, y), scaleX(x), scaleY(y), rotate(angle), skew(x-angle, y-angle), skewX(angle), skewY(angle)
- 3D: matrix(n, n, n, n, n, n, n, n, n, n, n, n, n, n, n, n), translate3d(x, y, z), translateZ(x), scale3d(x, y, z), scaleZ(z), rotate(x, y, z, angle), rotateX(angle), rotateY(angle), rotateZ(angle), perspective(n)

# Transition 속성

속성(property)	값(value)	설명(Description)	CSS
<b>transition</b>	<i>property duration timing-function delay</i> (default: all 0s ease 0s)	A shorthand property for setting the four transition properties	3
<b>transition-property</b>	<b>all</b>  none  <i>property</i>	Specifies the name of the CSS property the transition effect is for	3
<b>transition-duration</b>	<i>time</i> ( <b>default</b> : 0s)	Specifies how many seconds or milliseconds a transition effect takes to complete	3
<b>transition-timing-function</b>	<b>ease</b>  linear ease-in ease-out ease-in-out step-start step-end steps(int,start end) cubic-bezier(n,n,n,n)	Specifies the speed curve of the transition effect	3
<b>transition-delay</b>	<i>time</i> ( <b>default</b> : 0s)	Specifies when the transition effect will start	3

# Basic User Interface 속성

CSS 속성

속성(property)	값(value)	설명(Description)	CSS
box-sizing	<b>content-box</b>   border-box	Tells the browser what the sizing properties (width and height) should include	3
content	<b>normal</b>   none   counter   attr   <i>string</i>   open-quote   close-quote   no-open-quote   no-close-quote   <i>url</i>	Used with the :before and :after pseudo-elements, to insert generated content	2
cursor	<i>value</i> ( <b>default</b> : auto)	Specifies the type of cursor to be displayed	2
ime-mode		Controls the state of the input method editor for text fields	3
nav-down	<b>auto</b>   <i>id</i>   <i>target-name</i>	Specifies where to navigate when using the arrow-down navigation key	3
nav-index	<b>auto</b>   <i>number</i>	Specifies the tabbing order for an element	3
nav-left	<b>auto</b>   <i>id</i>   <i>target-name</i>	Specifies where to navigate when using the arrow-left navigation key	3
nav-right	<b>auto</b>   <i>id</i>   <i>target-name</i>	Specifies where to navigate when using the arrow-right navigation key	3
nav-up	<b>auto</b>   <i>id</i>   <i>target-name</i>	Specifies where to navigate when using the arrow-up navigation key	3



# Basic User Interface 속성

CSS 속성

속성(property)	값(value)	설명(Description)	CSS
<b>outline</b>	<i>color style width</i> (default: invert none medium)	Sets all the outline properties in one declaration	2
<b>outline-color</b>	invert color	Sets the color of an outline	2
<b>outline-offset</b>	length (default: 0)	Offsets an outline, and draws it beyond the border edge	3
<b>outline-style</b>	none hidden dotted dashed solid double groove ridge inset outset	Sets the style of an outline	2
<b>outline-width</b>	medium thin thick length	Sets the width of an outline	2
<b>resize</b>	none both horizontal vertical	Specifies whether or not an element is resizable by the user	3
<b>text-overflow</b>	clip ellipsis string	Specifies what should happen when text overflows the containing element	3

# Multi-column Layout 속성

CSS 속성

속성(property)	값(value)	설명(Description)	CSS
break-after		Specifies the page-, column-, or region-break behavior after the generated box	3
break-before		Specifies the page-, column-, or region-break behavior before the generated box	3
break-inside		Specifies the page-, column-, or region-break behavior inside the generated box	3
column-count	<b>auto</b>   <i>number</i>	Specifies the number of columns an element should be divided into	3
column-fill	<b>balance</b>   auto	Specifies how to fill columns	3
column-gap	<b>normal</b>   <i>length</i>	Specifies the gap between the columns	3
column-rule	<i>width style color</i> ( <b>default</b> : medium none <i>color</i> )	A shorthand property for setting all the column-rule-* properties	3
column-rule-color	<i>color</i> ( <b>default</b> : 현재 컬러)	Specifies the color of the rule between columns	3
column-rule-style	none   hidden   dotted   dashed   solid   double   groove   ridge   inset   outset	Specifies the style of the rule between columns	3
column-rule-width	medium   thin   thick   <i>length</i>	Specifies the width of the rule between columns	3

# Multi-column Layout 속성

CSS 속성

속성(property)	값(value)	설명(Description)	CSS
column-span	<b>none</b>  1 all	Specifies how many columns an element should span across	3
column-width	<b>auto</b>   <i>length</i>	Specifies the width of the columns	3
columns	auto  <i>width count</i> ( <b>default</b> : auto auto)	A shorthand property for setting column-width and column-count	3
widows		Sets the minimum number of lines that must be left at the top of a page when a page break occurs inside an element	2

# Paged Media

속성(property)	값(value)	설명(Description)	CSS
<b>orphans</b>		Sets the minimum number of lines that must be left at the bottom of a page when a page break occurs inside an element	2
<b>page-break-after</b>	<b>auto</b>  always avoid left right	Sets the page-breaking behavior after an element	2
<b>page-break-before</b>	<b>auto</b>  always avoid left right	Sets the page-breaking behavior before an element	2
<b>page-break-inside</b>	<b>auto</b>  avoid	Sets the page-breaking behavior inside an element	2

# Generated Content for Paged Media

CSS 속성

속성(property)	값(value)	설명(Description)	CSS
marks		Adds crop and/or cross marks to the document	3
quotes	<code>none <i>string</i></code>	Sets the type of quotation marks for embedded quotations	2

# Filter Effect 속성

속성(property)	값(value)	설명(Description)	CSS
<b>filter</b>	<code>none</code>   <code>blur(px)</code>   <code>brightness(%)</code>   <code>contrast(%)</code> ; <code>drop-shadow(<i>h-shadow v-shadow blur spread color</i>)</code> ; <code>grayscale(%)</code>   <code>hue-rotate(deg)</code>   <code>invert(%)</code>   <code>opacity(%)</code> ; <code>saturate(%)</code>   <code>sepia(%)</code>   <code>url()</code>	Defines effects (e.g. blurring or color shifting) on an element before the element is displayed	3

# Image Values and Replaced Content

속성(property)	값(value)	설명(Description)	CSS
<b>image-orientation</b>		Specifies a rotation in the right or clockwise direction that a user agent applies to an image (This property is likely going to be deprecated and its functionality moved to HTML)	3
<b>image-rendering</b>		Gives a hint to the browser about what aspects of an image are most important to preserve when the image is scaled	3
<b>image-resolution</b>		Specifies the intrinsic resolution of all raster images used in/on the element	3
<b>object-fit</b>		Specifies how the contents of a replaced element should be fitted to the box established by its used height and width	3
<b>object-position</b>		object-position Specifies the alignment of the replaced element inside its box	3

# Masking 속성

CSS 속성

속성(property)	값(value)	설명(Description)	CSS
mask			3
mask-type			3



속성(property)	값(value)	설명(Description)	CSS
<b>mark</b>		A shorthand property for setting the mark-before and mark-after properties	3
<b>mark-after</b>		Allows named markers to be attached to the audio stream	3
<b>mark-before</b>		Allows named markers to be attached to the audio stream	3
<b>phonemes</b>		Specifies a phonetic pronunciation for the text contained by the corresponding element	3
<b>rest</b>		A shorthand property for setting the rest-before and rest-after properties	3
<b>rest-after</b>		Specifies a rest or prosodic boundary to be observed after speaking an element's content	3
<b>rest-before</b>		Specifies a rest or prosodic boundary to be observed before speaking an element's content	3
<b>voice-balance</b>		Specifies the balance between left and right channels	3
<b>voice-duration</b>		Specifies how long it should take to render the selected element's content	3
<b>voice-pitch</b>		Specifies the average pitch (a frequency) of the speaking voice	3

속성(property)	값(value)	설명(Description)	CSS
<b>voice-pitch-range</b>		Specifies variation in average pitch	3
<b>voice-rate</b>		Controls the speaking rate	3
<b>voice-stress</b>		Indicates the strength of emphasis to be applied	3
<b>voice-volume</b>		Refers to the amplitude of the waveform output by the speech synthesises	3

# Marquee 속성

속성(property)	값(value)	설명(Description)	CSS
<b>marquee-direction</b>		Sets the direction of the moving content	3
<b>marquee-play-count</b>		Sets how many times the content move	3
<b>marquee-speed</b>		Sets how fast the content scrolls	3
<b>marquee-style</b>		Sets the style of the moving content	3

# 주요 개념

---

➤ Box Model

➤ Positioning

## ➤ Box Model



## ➤ 관련 속성

- width, height, max-width, max-height, min-width, min-height, box-sizing
- margin, padding, border, outline, display, visibility
- overflow

## ➤ position

- static
- relative
- absolute
- fixed

## ➤ left, right, top, bottom

## ➤ float, clear

## ➤ z-index