



## C CSS Syntax

tag #id .class [attr] :pseudoclass ::pseudoelement { selector : value ; }

## COMMENTS (ANNOTATIONS)

/\* comment \*/  
/\* CSS is awesome \*/

## S CSS Selectors

SELECTORS & COMBINATORS	
<b>PRIMARY</b>	# element with unique id . elements with class * all elements (universal) > inside elements (descendant)
<b>SECONDARY</b>	> direct childs + adjacents siblings ~ siblings (same level)

LOGICAL COMBINATORS	
:is( A , B ) group selectors	:where( A , B ) less specific than :is()
:not( S ) not match by S	:has( S ) element w/ childs match by S

ATTRIBUTES		IGNORE CASE SENSITIVE [attr="..." i]	
[attr] attr present	:not( [attr] ) attr absent	[attr ~="val"] contains val	
[attr = "val"] value is val	[attr ^= "val"] begins w/ val	[attr  = "es"] contains es-*	
[attr \$= "val"] ends w/ val	[attr *= "val"] includes val		

PSEUDOCLASSES	
:link :visited not/visited link	:lang(es) language match
:any-link links (visited or not)	:dir(val) direction match

ACTION	
:hover user move mouse/pointer over element	
:active element is being activated by user	
:focus :focus-within :focus-visible w/ focus or not	

USER FORM INTERFACE	
:enabled :disabled on/off input state	
:checked elements toggled "on" by user	
:indeterminate input on indeterminate state	
:read-only :read-write input modifiable or not	
:placeholder-shown inputs w/ active placeholder	
:default default elements for form (input, option...)	
:valid :invalid userdata pass check validation	
:user-valid :user-invalid idem, with user interaction	
:in-range :out-of-range userdata ok/out of range	
:required :optional required/optional for submit	

STRUCTURAL	
<b>CHILDS</b>	<b>CHILDS (SAME)</b>
:first-child	:first-of-type
:last-child	:last-of-type
:nth-child(n)	:nth-of-type(n)
:nth-last-child(n)	:nth-last-of-type(n)
:only-child	:only-of-type
<b>OTHERS</b>	
:root root element of the document	
:host root element of shadow dom	
:empty element without contents	

PSEUDOELEMENTS	
::before / ::after	::selection selected text of user
::first-line	::target-text fragment url style
::first-letter text	::spelling-error ::grammar-error
::file-selector-button	::backdrop background elements
::marker list sign	::placeholder form text hints

## C CSS Colors

COLOR PROPERTIES  
color: CanvasText color opacity: 1 alpha

COLOR MODELS  
KEYWORDS alpha 0...1 0%...100%

keyword transparent currentColor

COLOR FORMATS	
rgb( 25% 41% 88% / 50% ) rgba()	RGB / A
rgb( 65 106 225 / 50% )	RGB / A
# 41 6A E1 88 #RRGGBBAA / #RGBA	
hsl( 120deg 25% 75% / 50% ) hsla()	HSL / A
hwb( 120deg 55% 25% / 50% )	HWB / A
lab( 41% 60 42 / 50% )	BW RG BY / alpha
oklab( 51% 0.2 0.1 / 50% )	BW RG BY / alpha
lch( 41% 99 35deg / 50% )	BW S T / alpha
oklch( 50% 0.2 26deg / 50% )	BW S T / alpha

COLOR FUNCTIONS / OPERATIONS	
SPACE	SRGB SRGB-LINEAR DISPLAY-P3 A98-RGB
	PROPHOTO-RGB REC2020 XYZ XYZ-D65 XYZ-D50

color( space p1 p2 p3 ) color in a spacecolor  
light-dark( color lightmode , color darkmode )

RELATIVE COLORS	
color-mix( in space , c1 % , c2 % )	mix colors
rgb( from color , colors / A )	color-based

## U CSS Values & Units

RESETTING ALL PROPERTIES  
all: initial value inherit parent unset previous

UNITS	
<b>ABS</b>	px pixel cm mm Q ¼mm in inches pc pt
<b>REL</b>	% parent size em rem root em ex rex cap rcap ch 1 character rch ic ric lh 1 line rlh
<b>VIEWPORT</b>	vw vh vmin vmax vi vb % viewport svw svh svmin svmax svi svb small lvw lvh lvmin lvmax lvi lvb large dvw dvh dvmin dvmax dvi dvb dynamic cqw cqh cqmin cqmax cqi cqb container

## V CSS Variables

CUSTOM PROPERTIES  
-- varname : value ; declaring vars  
var( -- varname , fallback ... ) using vars  
env( environment-variable ) user-agent vars



### M CSS Box Model

#### INTRINSIC SIZES

max-content min-content fit-content

#### DIMENSIONS

width: auto size % height: auto size %  
min-width: 0 size % min-height: 0 size %  
max-width: none size % max-height: none size %

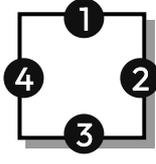
#### MARGIN/PADDINGS

##### SPECIFIC MARGINS

margin-top: 0 size % padding-top: 0 size %  
margin-right: 0 size % padding-right: 0 size %  
margin-bottom: 0 size % padding-bottom: 0 size %  
margin-left: 0 size % padding-left: 0 size %

##### MARGIN/PADDING SHORTHAND

margin/padding: [1] [2] [3] [4]  
margin/padding: [1] [2 4] [3]  
margin/padding: [1 3] [2 4]  
margin/padding: [1 2 3 4]



#### OVERFLOW/VISIBILITY

overflow-x: visible hidden scroll auto  
overflow-y: visible hidden scroll auto  
overflow: overflow-x overflow-y

#### VISIBILITY

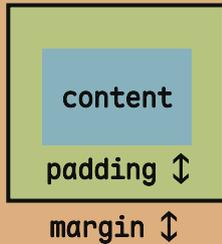
visibility: visible hidden collapse

#### MODEL BOX TYPES

display: inline none inline-block block inline-list-item list-item inline-table table table-cell table-row inline-grid grid subgrid inline-grid-lanes grid-lanes inline-flex flex

#### CHANGE BOX MODEL

box-sizing: content-box border-box



### BI CSS Border Image

#### BORDER IMAGE

border-image-source: none url( img.ext )  
border-image-slice: 100% top right bottom left fill  
border-image-width: 1 top right bottom left  
border-image-outset: 0 top right bottom left  
border-image-repeat: stretch repeat round space  
border-image: source slice /width outset repeat

#### BORDER IMAGE VALUES

-slice → number % -width → auto size number %  
-outset → number size  
-repeat → repeat space round no-repeat

### T CSS Tables

border-collapse: separate collapse  
border-spacing: 0 size caption-side: top bottom  
empty-cells: show hide table-layout: auto fixed

### B CSS Borders

#### BORDERS

border-width: size thin medium thick  
border-style: none border-style hidden  
border-color: currentColor color

#### SIDE BORDER SHORTHAND

border-top: width style color  
border-right: width style color  
border-bottom: width style color  
border-left: width style color

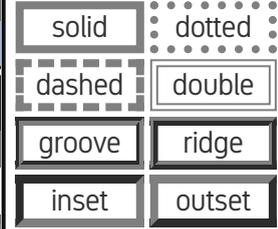
#### MAIN SHORTHAND

border: width style color

#### SHORTHANDS

border-top-\*  
border-right-\*  
border-bottom-\*  
border-left-\*

#### BORDER STYLES



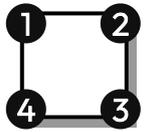
### C Rounded Corners

#### SPECIFIC CORNERS

border-top-left-radius: 0 size %  
border-top-right-radius: 0 size %  
border-bottom-left-radius: 0 size %  
border-bottom-right-radius: 0 size %

#### MAIN SHORTHAND

border-radius: [1][2][3][4]  
border-radius: [1][2 4][3]  
border-radius: [1 3][2 4]  
border-radius: [1 2 3 4]



#### MAIN SHORTHAND WITH HORIZONTAL/VERTICAL RADIUS

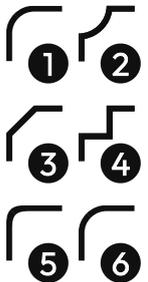
border-radius: border-radius / border-radius

### CS Corner Shape

#### CORNER SHAPE VALUES

#### corner-shape:

- 1 round ~ superellipse(2)
  - 2 scoop ~ superellipse(0.5)
  - 3 bevel ~ superellipse(1)
  - 4 notch ~ superellipse(0)
  - 5 squircle ~ superellipse(4)
  - 6 straight ~ superellipse(Infinity)
- superellipse( n ) ~ custom shape corner



### L CSS Lists

#### LISTS

list-style-image: none url( img.png )  
list-style-position: inside outside  
list-style-type: disc circle square upper-alpha lower-alpha upper-roman lower-roman decimal decimal-leading-zero lower-greek armenian georgian none countername symbols( ... )  
list-style: type position image



## F Base Fonts

### FONTS (TYPOGRAPHY)

**font-family:** font1, font2, ..., safe-font;

**font-size:** size % smaller larger  
xx-small x-small small medium  
large x-large xx-large

**font-size-adjust:** none number

**font-style:** normal italic oblique

**font-synthesis:** none weight style

**font-variant:** none small-caps

**font-weight:** normal bold lighter bolder  
number 1~1000

**font-width:** normal % condensed expanded  
ultra-condensed extra-condensed semi-condensed  
semi-expanded extra-expanded ultra-expanded

**font:** style variant weight width size/  
line-height family caption icon menu  
message-box small-caption status-bar

## FF Font Face

### FONT LOADING

```
@font-face {
  font-family: font-name;
  font-display: swap;
  src: url(file.woff2) format("woff2"),
       url(file.woff) format("woff"),
       url(file.ttf) format("truetype");
  unicode-range: U+000-27FF;
}
```

## MC CSS Multi Column

### COLUMNS

**column-width:** auto size

**column-count:** auto number

**columns:** width counter

### COLUMN RULES

**column-rule-width:** size thin medium thick

**column-rule-style:** style none

**column-rule-color:** color

**column-rule:** width style color

### COLUMN BREAKS

**break-before/break-after:** auto left right  
always recto verso avoid page column  
avoid-page avoid-column

**break-inside:** auto avoid avoid-page  
avoid-column

**orphans:** 2 number

**widows:** 2 number

### SPANNING & FILLING

**column-span:** none all

**column-fill:** auto balance

## CT CSS Text

### TRANSFORMING TEXT

**text-transform:** none capitalize uppercase lowercase  
full-width

### WHITE SPACES & BREAKING WORDS

**white-space-collapse:** break-spaces collapse preserve  
preserve-breaks

**text-wrap-mode:** nowrap wrap

**tab-size:** 8 number size

**white-space-trim:** none discard-before discard-after  
discard-inner

**white-space:** normal collapse wrap-mode trim

### TEXT-WRAP

**text-wrap-style:**  
auto balance  
pretty stable

### LINE BREAKING & WORD BOUNDARIES

**hyphens:** none manual auto

**overflow-wrap:** normal break-word anywhere

**line-break:** auto loose normal strict anywhere

**word-break:** normal keep-all break-all break-word

### ALIGNMENT & JUSTIFICATION

**text-align:** left right center justify start end match-parent

**text-align-last:** auto left right center justify start end  
match-parent

**text-justify:** auto none inter-word inter-character

### SPACING

**word-spacing:** normal size

**letter-spacing:** normal size

### EDGE EFFECTS

**text-indent:** 0 size hanging each-line

**hanging-punctuation:** none first last force-end allow-end

### SHADOW EFFECTS

**text-shadow:** none pos-x pos-y blur color

**box-shadow:** none pos-x pos-y blur spread color inset

## TD CSS Text Decoration

### LINE OPTIONS

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

### LEVEL 3

**text-decoration-line:** none line-option blink

**text-decoration-style:** solid double dotted dashed wavy

**text-decoration-color:** currentColor color

**text-decoration-skip:** none objects spaces ink edges  
box-decoration

**text-decoration:** none line style color

**text-underline-position:** auto under left right

### EMPHASIS MARKS

**text-emphasis-style:** none string status [ dot circle  
double-circle triangle sesame ]

**text-emphasis-color:** currentColor color

**text-emphasis-position:** over under left right

**text-emphasis:** style color

### STATUS

filled open  
EX: open circle;



## CB CSS Backgrounds

### BACKGROUND BASE PROPERTIES

**background-color:** transparent | **currentColor** | color

**background-image:** none | url( im1.png ), url( im2.png ) ...

**background-repeat:** also support 2 parameters  
repeat | repeat-x | repeat-y | space | round | no-repeat

**background-attachment:** scroll | fixed | local

### BACKGROUND POSITION

**background-position-x:** 0% | size | %  
left | center | right | x-start | x-end

**background-position-y:** 0% | size | %  
top | center | bottom | y-start | y-end

### COLOR-STOP

color | Basic color

color | start | end

### RADIUS SIZE

closest-side

farthest-side

closest-corner

farthest-corner

**background-position:** 0% 0% pos-x pos-y

### BACKGROUND MODERN PROPERTIES

**background-clip:** border-box | padding-box | content-box | text

**background-origin:** border-box | padding-box | content-box

**background-size:** auto | width | height | contain | cover

**background:** color | position | size | repeat | origin | clip | attachment | image

## CR CSS Rules

### IMPORTING SYNTAX AND ALTERNATIVE SYNTAX

@import "file.css" | @import url( "file.css" )

### IMPORTING FEATURES

ONLY ON TOP FILE

@import "file.css" print apply styles if printing

@import "file.css" MQ conditions if media query is true

@import "file.css" supports( condition ) if feature supported

@import "file.css" layer( layername ) apply styles on layer

### CASCADE LAYERS

CAN NEST LAYERS

@layer { ... } create anonymous cascade layer

@layer layername1, layername2, ... ; order layers

@layer layername1, layername2, ... { ... } create/order

@layer layername.sub-layername { ... } create sublayer

### SCOPING STYLES

@scope { ... } limit scope from parent to child (using on inline <style>)

@scope ( selector ) { ... } limit scope from selector to child

@scope ( selector ) to ( selector ) { ... } limit between select

### NESTING STYLES

A-selector { parent selector

B-selector { ... } equivalent to "A B"

& B-selector { ... } equivalent to "A B"

B-selector & { ... } equivalent to "B A"

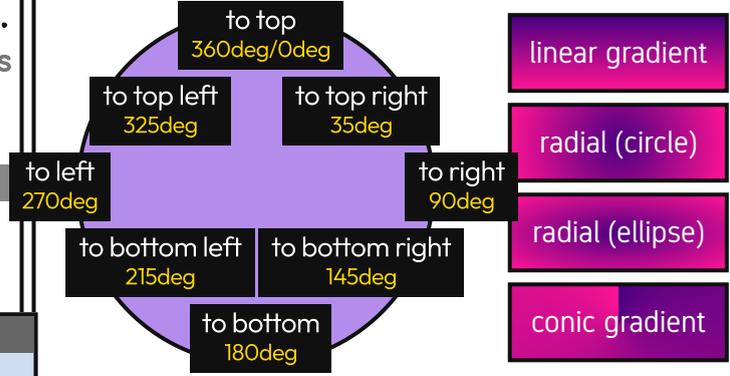
@media ( condition ) { ... } nesting media query

@scope ( selector ) { ... } nesting scoping

## CG CSS Gradients

### GRADIENTS

#### DIRECTIONS



### LINEAR GRADIENTS

**background-image:** linear-gradient( direction, color-stop1, ... )

repeating-linear-gradient( ...same params... )

### RADIAL GRADIENT (CIRCLE)

**background-image:** radial-gradient( circle rsize at pos, col, ... )

repeating-radial-gradient( ...same params... )

### RADIAL GRADIENT (ELLIPSE)

**background-image:** radial-gradient( ellipse rx ry at pos, col, ... )

repeating-radial-gradient( ...same params... )

### CONIC GRADIENTS

**background-image:** conic-gradient( from angle at pos, col1, ... )

repeating-conic-gradient( ...same params... )

## CI CSS Images

### FUNCTIONS

**image-set(** set alternative image  
url(im1.avif) type("image/avif"), by type  
url(im2.webp) 2x, ... by density  
);

**cross-fade(** [ image | color ] size | %, ... )

### IMAGES AND OBJECTS

#### SIZING

**object-fit:** fill | contain | cover | none | scale-down

**object-position:** 50% 50% background-position

**object-view-box:** rect() inset() xywh()

### IMAGE PROCESSING

**image-orientation:** from-image | none

**image-rendering:**





## CF CSS Filters

### FILTER PROPERTY

`filter/backdrop-filter: none filter1 filter2 filter3 ... ;`

### FILTERS

<code>blur( blur )</code>	<code>blur</code>	
<code>brightness( number % )</code>	<code>brightness</code>	>100%
<code>contrast( number % )</code>	<code>contrast</code>	>100%
<code>saturate( number % )</code>	<code>saturate</code>	>100%
<code>grayscale( number % )</code>	<code>grayscale</code>	
<code>invert( number % )</code>	<code>invert</code>	
<code>sepia( number % )</code>	<code>sepia</code>	
<code>opacity( number % )</code>	<code>opacity</code>	
<code>hue-rotate( angle )</code>	<code>hue-rotate</code>	
<code>drop-shadow( pos-x pos-y blur color )</code>	(= text-shadow)	

## CM CSS Masks

### CLIPPING SHAPE

`clip-path: none url( img.png ) basic-shape shape-box`

### POSITIONED MASKS

`mask-image: none url( img.svg#mask ) gradient`

`mask-mode: auto alpha luminance`

`mask-repeat: no-repeat background-repeat`

`mask-position: center background-position`

`mask-clip: border-box no-clip shape-box`

`mask-origin: border-box shape-box`

`mask-size: auto background-size`

`mask-composite: add subtract intersect exclude`

`mask: image mode position /size repeat clip composite`

## C Compositing

### COMPOSITING AND BLENDING

`background-blend-mode: normal blend`

`mix-blend-mode: normal blend isolation: auto isolate`

### BLEND MODES

#### SEPARABLE

<code>normal</code>	<code>multiply</code>	<code>screen</code>	<code>overlay</code>	<code>darken</code>	<code>lighten</code>
<code>color-dodge</code>	<code>color-burn</code>	<code>hard-light</code>	<code>soft-light</code>	<code>difference</code>	<code>exclusion</code>

#### NON SEPARABLE

<code>hue</code>	<code>saturation</code>	<code>color</code>	<code>luminosity</code>

## CSO CSS Shape Outside

### FLOATING AREA SHAPE

`shape-outside: none url( img.png ) gradient`

`basic-shape shape-box`

`shape-image-threshold: 0.0 number`

`shape-margin: 0 size %`

## CS CSS Shapes

### BASIC SHAPES

#### RECTANGLE

`rect( x w y h round radius )`

`inset( top right bottom left round radius )`

`xywh( x y w h round radius )`

#### CIRCLE/ELLIPSE

`circle( shaperadius at position )`

`ellipse( radius-x radius-y at position )`

#### ADVANCED

`polygon( x0 y0, ..., xi yi )`

`path( svg coords )`

`shape( from position, shape commands )`

#### SHAPE COMMANDS

##### MOVE COMMANDS

`from x y` `move to x y` `move by x y`

`close` close shape and connect with first point

##### LINE COMMANDS

`line to x y` `hline to x` `vline to y`

##### CURVE COMMANDS

`curve to x y` reuse previous point

`curve to x y with Ax Ay` use control point A

`curve to x y with Ax Ay / Bx By` ctrl point A,B

##### SYMETRIC CURVE COMMANDS

`smooth to x y` reuse previous point

`smooth to x y with Ax Ay` use control point A

##### SEGMENT COMMANDS

`arc to x y` implicit arc (radius and shape autocalc)

`arc to x y of r` between current point and xy

`arc to x y of Rx Ry` elliptic arc with radius R

##### OPTIONS

`cw ccw` clockwise or counterclockwise

`large small` segment size `rotate angle` (def. 0deg)

## CP CSS Performance

### PERFORMANCE PROPERTIES

`will-change: property` optimize painting/animation

`contain: none strict content`

`size inline-size layout style paint`

`content-visibility: visible auto hidden`



### CT CSS Transitions

#### TRANSITIONS

**transition-property:** all none property1, property2, ...

**transition-duration:** 0s time

**transition-timing-function:** ease timing-function

**transition-delay:** 0s time

**transition:** property duration t-function delay

#### TIMING FUNCTIONS

##### TIMING BASE FUNCTIONS

**ease** (0.25, 0.1, 0.25, 1)

**linear** (0.00, 0.0, 1.00, 1)

**ease-in** (0.42, 0.0, 1.00, 1)

**ease-out** (0.00, 0.0, 0.58, 1)

**ease-in-out** (0.42, 0.0, 0.58, 1)

**cubic-bezier()** custom timing func

**linear()** custom: linear(0, 1) = linear

##### TIMING STEP FUNCTIONS

**step-start** steps(1,start)

**step-end** steps(1,end)

**steps(n)** steps(n,end)

**steps(a,b)** steps(a,b)

#### CHAINED ANIMATIONS

**name1** 5s linear,

**name2** 5s linear 5s,

**name3** 6s linear 10s;

### CA CSS Animations

#### ANIMATIONS

**animation-name:** none name1, name2, ...

**animation-duration:** 0s time

**animation-timing-function:** ease timing-function

**animation-delay:** 0s time

**animation-iteration-count:** 1 number infinite

**animation-direction:** normal reverse alternate alternate-reverse

**animation-fill-mode:** none forwards backwards both

**animation-play-state:** running paused

**animation-range-start:** normal name size % size %

**animation-range-end:** normal name size % size %

**animation-range:** range-start range-end

**animation-composition:** replace add accumulate

**animation-timeline:** auto none --name scroll() view()

**animation:** name duration timing-function delay  
iteration-count direction fill-mode play-state

#### SCROLL DRIVEN ANIMATION

##### TIMELINE FUNCTIONS

**scroll()** → **scroll()** [ nearest root self ] [ x y ]

**view()** → **view()** [ x y ] auto size-start size-end

##### TIMELINE PROPERTIES

**scroll-timeline-name:** none --name

**scroll-timeline-axis:** x y

**scroll-timeline:** name axis

**view-timeline-name:** none --name

**view-timeline-axis:** x y

**view-timeline-inset:** auto size % size %

**view-timeline:** name axis inset

#### KEYFRAMES

```
@keyframes name {
  0% { /* css */ }
  100% { /* css */ }
}
```

### CT CSS Transforms

#### TRANSFORM PROPERTY

**transform:** none func1 func2 ...

#### 2D TRANSFORM FUNCTIONS

**translateX()** ( size % ) move x-axis

**translateY()** ( size % ) move y-axis

**translate()** ( size % , size % )

**scaleX()** ( number ) resize x-axis

**scaleY()** ( number ) resize y-axis

**scale()** ( number , number )

**skewX()** ( angle ) horizontal shear transform

**skewY()** ( angle ) vertical shear transform

**skew()** ( angle , angle )

**rotate()** ( angle ) spin element angle

**matrix()** ( n1 , n2 , n3 , n4 , n5 , n6 )

#### 3D TRANSFORM FUNCTIONS

**translateZ()** ( size ) move along depth

**translate3d()** ( size % , size % , size )

**scaleZ()** ( number ) stretch along depth

**scale3d()** ( number , number , number )

**rotateX()** ( angle ) spin on x-axis

**rotateY()** ( angle ) spin on y-axis

**rotateZ()** ( angle ) spin on z-axis

**rotate3d()** ( number , number , number , angle )

#### TRANSFORM OPTIONS

**transform-origin:** 50% 50% pos-x pos-y pos-z

**transform-style:** flat preserve-3d preserve 3d child

**backface-visibility:** visible hidden hide rear face

#### PERSPECTIVE OPTIONS

**perspective:** none size depth illusion control

**perspective-origin:** 50% 50% pos-x pos-y pos-z

#### INDIVIDUAL PROPERTIES

##### TRANSLATE PROPERTY

**translate:** size % move only x axis

**translate:** size % size % only x/y axis

**translate:** size % size % size % x/y/z axis

##### SCALE PROPERTY

**scale:** num % apply same factor to x/y axis

**scale:** num % num % apply to x/y axis

**scale:** num % num % num % x/y/z axis

##### ROTATE PROPERTY

**rotate:** angle apply to z axis

**rotate:** axis angle ex: rotate: y 10deg

**rotate:** x y z angle ex: rotate: 1 1 0.5 45deg



## F CSS Flex

PARENT PROPERTIES DISPLAY: FLEX

### ORDERING AND ORIENTATION

**flex-direction:** row column row-reverse column-reverse  
**flex-wrap:** nowrap wrap wrap-reverse  
**flex-flow:** direction wrap

### PRIMARY / SECONDARY / WRAP AXIS

**justify-content:** start center end space  
**align-items:** start center end baseline stretch  
**align-content:** start center end stretch space

### CHILD PROPERTIES

#### FLEXIBILITY

**flex-grow:** 0 number **flex-shrink:** 0 number  
**flex-basis:** auto content size %  
**flex:** grow shrink basis

#### ALIGNMENT AND ORDERING

**align-self:** auto space baseline  
**order:** 0 number reorder items w/ weight

#### AREA PREFIXES

span-all / span-\*  
x-\* / y-\*  
span-x-\* span-y-\*  
x-self-\* / y-self-\*  
span-x-self-\*  
span-y-self-\*

## P CSS Position

### POSITIONING

**position:** static relative absolute fixed sticky

### FLOATING

**float:** none left right  
**clear:** none left right both

### POSITIONING

**top:** auto size %  
**left:** auto size %  
**right:** auto size %  
**bottom:** auto size %  
**z-index:** auto number  
**inset:**  
top right bottom left

## AP CSS Anchor Position

### ANCHOR SETTING

**anchor-name:** none --name  
**anchor-scope:** none all --name  
**position-anchor:** auto --name

### ANCHOR POSITIONING / SIZING

**position-area:** top left right bottom prefixes  
**anchor(** --name top left right bottom **)**  
**anchor-size(** width height block inline **)**

## GL Grid Lanes

MODERN MASONRY DISPLAY: GRID-LANES

**item-direction:** row column row-reverse column-reverse  
**item-wrap:** wrap wrap-reverse nowrap normal reverse  
**item-pack:** normal dense balance  
**item-tolerance:** normal size % infinite  
**item-flow:** direction wrap pack tolerance

## G CSS Gaps

### GUTTERS (GRID AND FLEX GAPS)

**row-gap:** 0 size % **column-gap:** 0 size %  
**gap:** row-gap column-gap

## G CSS Grid

PARENT PROPERTIES DISPLAY: GRID

### EXPLICIT GRID

**grid-template-columns:** none column1 column2 ...  
**grid-template-rows:** none row1 row2 ...  
**grid-template:** rows / columns

### GRID VALUES (ROWS AND COLUMNS)

**auto** size % fr automatic size or size/fraction unit  
**repeat( number, size )** repeat fragments n times  
**repeat( auto-fill, size )** repeat + fill space & empty  
**repeat( auto-fit, size )** repeat + fit + remove empty  
**minmax( min, max )** min <= size range <= max

### GRID AREA

**grid-template-areas:** " area1 area2 " ...  
**area** area name . empty area **none** no defined

### GRID ALIGNMENT

**align** start center end stretch  
**space** space-between space-around space-evenly

**justify-content:** normal align space  
**align-content:** normal align space  
**justify-items:** normal align  
**align-items:** normal align baseline

**place-content:** align-content justify-content  
**place-items:** align-items justify-items

### IMPLICIT GRID

**grid-auto-columns:** auto size % auto-created columns size  
**grid-auto-rows:** auto size % auto-created rows size  
**grid-auto-flow:** row column row dense column dense

### CHILD PROPERTIES

#### CELLS PLACEMENT

**grid-column-start:** auto ln **grid-column-end:** auto ln  
**grid-column:** column-start / column-end  
**grid-row-start:** auto ln **grid-row-end:** auto ln  
**grid-row:** row-start / row-end

### LINE (LN)

**number** | [linename] refer to a numbered or named grid line  
**span** number | [linename] span across until grid line

### CHILD ALIGNMENT

**justify-self:** auto normal align  
**align-self:** auto normal align  
**place-self:** align-self justify-self

### AREA PLACEMENT

**grid-area:** area-name named area **order:** 0 number

### GLOBAL SHORTHAND

**grid:** row-start / column-start / row-end / column-end



```
<meta name="viewport" content="initial-scale=1, width=device-width">
```

## M CSS Math

### CÁLCULOS

`calc( operations )` calc operations  
`calc( var(--value) + 50px )`, `calc( 25px + 50% )`

### SIGN RELATED

`abs( number )` get absolute value  
`sign( number )` sign of number (-1, 0 or 1)

### COMPARE FUNCTIONS

`min( A, B, ... )` `max( A, B, ... )`  
`clamp( A, B, C )` ~ max(A, min(B, C))

### STEPPED FUNCTIONS

`round( method, value, interval )`  
`method` → nearest up down to-zero  
`mod( A, B )` modulus operation  
`rem( A, B )` remainder of trunc division

### TRIGONOMETRIC FUNCTIONS

`sin( angle )` `asin( number )`  
`cos( angle )` `acos( number )`  
`tan( angle )` `atan( number )` `atan2( Y, X )`

### EXPONENTIAL FUNCTIONS

`pow( A, B )` `sqrt( A )` `hypot( A, ... )`  
`log( A, B )` `exp( A )`

## F CSS Functions

### FUNCTION DEFINITION SYNTAX

```
@function --func-name ( --p1, --p2, ... ) {  
  result: value; you can use params: var(--p1)  
}
```

### USE CSS FUNCTION

```
property: --func-name( p1, p2, ... );
```

## R CSS Random

### RANDOM VALUE FUNCTIONS

`random( min, max )` cached random value  
`random( min, max, by step )` step-random  
`random( --v, min, max )` non-cached  
`random( per-element, mn, mx )` random

### RANDOM ITEMS FUNCTIONS

`random-item( v1, v2, ... )` cached random item  
`random-item( --v, v1, v2, ... )` non-cached  
`random-item( per-element, v1, v2, ... )` random

## WE CSS When/Else

### CONDITIONAL RULES

`@when ( condition ) { ... }` conditional rule support  
`@else ( condition ) { ... }` conditional else support

## C CSS Conditionals

### MEDIA QUERIES

`@media ( condition ) { ... }` standard media query  
`@media ( cond1 ) and ( cond2 ) { ... }` multi-condition MQ  
`@media not ( condition ) { ... }` negative media query  
`@media print { ... }` print media query

### MEDIA FEATURES (CONDITIONS)

#### SCREEN FEATURES

`width/height: size` device width/height size  
`aspect-ratio: number / number` size proportion  
`orientation: landscape portrait` device screen rotation  
`overflow-block: none scroll paged` primary axis scrollability  
`overflow-inline: none scroll` secondary axis scrollability  
`display-mode: fullscreen picture-in-picture browser`  
`minimal-ui standalone` PWA presentation mode  
`scripting: none initial-only enabled` scripting support level

#### PRECISION FEATURES

`pointer: none coarse fine` detect primary device  
`any-pointer: none coarse fine` detect any device  
`hover: none hover` detect primary device  
`any-hover: none hover` detect any device

#### OTHERS FEATURES

`resolution: ddpix-res infinite` pixel density  
`update: none slow fast` speed update screen  
`color: number` color-depth (8 bits, 16 bits, ...)

### CONTAINER QUERIES

`@container name ( condition ) { ... }` MQ for containers  
`@container name style( prop: value ) { ... }` style check

### CONTAINER QUERIES PROPERTIES

`container-name: none name` container name  
`container-type: normal size inline-size` axis (block or inline)  
`container: container-name / container-type`

### CONDITIONAL IF

`if( true cond: true; else: false )` css conditional  
`if( cond1: true; cond2: true; ...; else: false )` multi  
`if( style( prop: value ): true; else: false )` style check  
`if( supports( prop: value ): true; else: false )` support  
`if( media( condition ): true; else: false )` media style

### SUPPORTS CONDITIONALS

`@supports ( condition ) { ... }` check «prop: values» support  
`@supports not ( condition ) { ... }` negative check support  
`@supports ( cond1 ) and or ( cond2 ) { ... }` multi check  
`@supports selector( selector ) { ... }` check complex selector  
`@supports font-tech( feature ) { ... }` (variations, palettes, ...)  
`@supports font-format( format ) { ... }` woff, woff2, ...