



C CSS Syntax

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

COMMENTS (ANNOTATIONS)

/* comment */

/* CSS is awesome */

S CSS Selectors

SELECTORS & COMBINATORS

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

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]

BASIC	[attr]	attr present	ADVANCED	:not([attr])	attr absent
	[attr = "val"]	value is val		[attr ~= "val"]	contains val
	[attr ^= "val"]	begins w/ val		[attr = "es"]	contains es-*
	[attr \$= "val"]	ends w/ val		[attr *= "val"]	includes val

PSEUDOCLASSES

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

ACTION	:target	URL anchor target
	:hover	user move mouse/pointer over element
ACTION	: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
USER FORM INTERFACE	:indeterminate		input on indeterminate state
	:read-only	:read-write	input modifiable or not
USER FORM INTERFACE	:placeholder-shown		inputs w/ active placeholder
	:default		default elements for form (input, option...)
USER FORM INTERFACE	:valid	:invalid	userdata pass check validation
	:user-valid	:user-invalid	idem, with user interaction
USER FORM INTERFACE	:in-range	:out-of-range	userdata ok/out of range
	:required	:optional	required/optional for submit

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

PSEUDOELEMENTS

CONTENT	:before	:after	HIGHLIGHT	:selection	selected text of user
	:first-line			:target-text	fragment url style
CONTENT	:first-letter	text	HIGHLIGHT	:spelling-error	:grammar-error
	:file-selector-button			:backdrop	background elements
CONTENT	:marker	list sign	HIGHLIGHT	: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 SPACE	rgb(25% 41% 88% / 50%)	rgba()	RGB / A
	rgb(65 106 225 / 50%)		RGB / A
RGB SPACE	# 41 6A E1 88		#RRGGBBAA / #RGBA
	hsl(120deg 25% 75% / 50%)	hsla()	HSL / A
RGB SPACE	hwb(120deg 55% 25% / 50%)		HWB / A
	lab(41% 60 42 / 50%)		BW RG BY / alpha
DEVICE SPACE	oklab(51% 0.2 0.1 / 50%)		BW RG BY / alpha
	lch(41% 99 35deg / 50%)		BW S T / alpha
DEVICE SPACE	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

ABS	px	pixel	cm	mm	Q	¼mm	in	inches	pc	pt
	%	parent size	em	rem	root em	ex	rex	cap	rcap	
REL	ch	1 character	rch	ic	ric	lh		1 line	rlh	
	vw	vh	vmin	vmax	vi	vb		% viewport		
VIEWPORT	svw	svh	svmin	svmax	svi	svb		small		
	lvw	lvh	lvmin	lvmax	lvi	lvb		large		
VIEWPORT	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 %

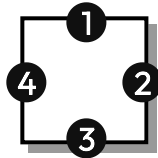
MARGIN/PADDINGS

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

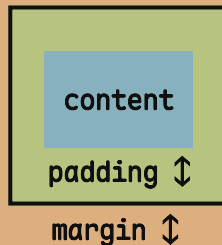
VISIBILITY

visibility: visible
hidden collapse

MODEL BOX TYPES

display: inline none
box-sizing: content-box border-box

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



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

solid dotted
dashed double
groove ridge
inset outset

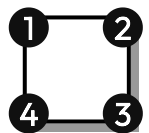
C Rounded Corners

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

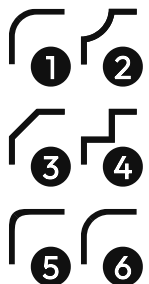
border-radius: border-radius / border-radius

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

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

COLOR-STOP

color | Basic color
color | start | end

RADIUS SIZE

closest-side
farthest-side
closest-corner
farthest-corner

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

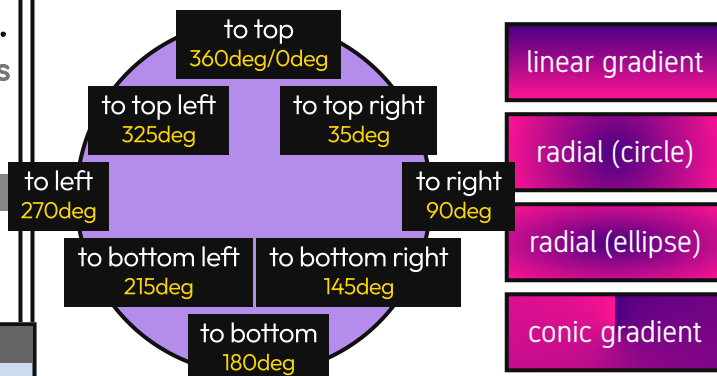
NESTING STYLES

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 | %, ...)

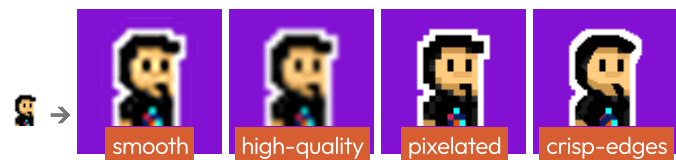
IMAGES AND OBJECTS

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

blur(`blur` **)**

brightness(`number` `%` **)**

contrast(`number` `%` **)**

saturate(`number` `%` **)**

grayscale(`number` `%` **)**

invert(`number` `%` **)**

sepia(`number` `%` **)**

opacity(`number` `%` **)**

hue-rotate(`angle` **)**

drop-shadow(`pos-x` `pos-y` `blur` `color` **)** (= 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



NON SEPARABLE



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

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 **)**

POSITIONING

top: auto size %

left: auto size %

right: auto size %

bottom: auto size %

z-index: auto number

inset:

top right bottom left

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, ...