



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

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

:target URL anchor target

:hover user move mouse/pointer over element

:active element is being activated by user

:focus :focus-within :focus-visible w/ focus or not

: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

: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

:root root element of the document

:host root element of shadow dom

:empty element without contents

PSEUDOELEMENTS

CONTENT	::before / ::after	HIGHLIGHT	::selection	selected text of user
	::first-line		::target-text	fragment url style
	::first-letter t ext		::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

alpha 0..1 0%...100%

KEYWORDS

keyword transparent currentColor

COLOR FORMATS

RGB SPACE	rgb(25% 41% 88% / 50%)	rgba(25% 41% 88% / 50%)	RGB / A
	rgb(65 106 225 / 50%)		RGB / A
	# 41 6A E1 88	#RRGGBBAA / #RGBA	
	hsl(120deg 25% 75% / 50%)	hsla(120deg 25% 75% / 50%)	HSL / A
DEVICE SPACE	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 ST / alpha
	oklch(50% 0.2 26deg / 50%)		BW ST / 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		
REL	rcap	ch	1 char	rch	ic	ric	lh	1 line	rlh	
VIEWPORT	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
CO	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 %

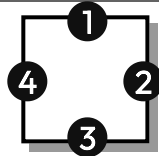
MARGIN/PADDINGS

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

VISIBILITY

visibility: visible
hidden collapse

MODEL BOX TYPES

display: inline none

inline-block block

inline-list-item list-item

inline-table table

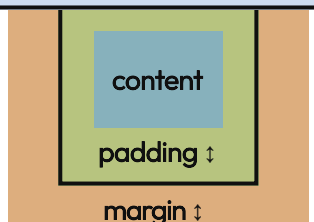
table-cell table-row

inline-grid grid subgrid

inline-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

TABLES PROPERTIES

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

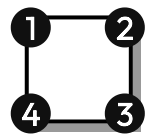
C Rounded Corners

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

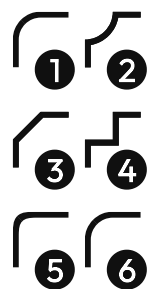
border-radius: border-radius / border-radius

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, font3 ..., 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 ;  
}
```

CDN FONTS

<https://fonts.googleapis.com/css2?family=Open+Sans:wght@100..800&family=...>
<https://cdn.jsdelivr.net/fontsource/fonts/roboto:vf@latest/latin-wght-normal.woff2>

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

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

white-space: normal collapse wrap-mode trim

tab-size: 8 number size

LINE BREAKING & WORD BOUNDARIES

line-break: auto loose normal strict anywhere

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

hyphens: none manual auto

overflow-wrap: normal break-word anywhere

TEXT-WRAP

text-wrap-style:

auto balance
pretty stable

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

underline overline line-through

LEVEL 2 (LEGACY)

text-decoration: none line-option

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;

MC CSS Multi Column

SPANNING & FILLING

column-span: none all
column-fill: auto balance

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



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 layers
@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 selectors

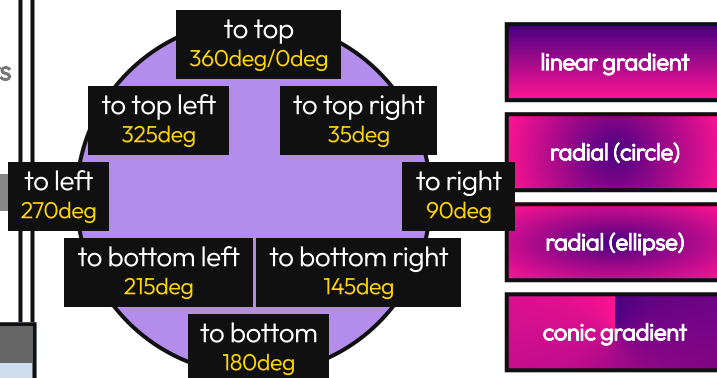
NESTING STYLES

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 x,y

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: 110.5 45deg



F CSS Flex

PARENT PROPERTIES

ORDERING AND ORIENTATION

flex-direction: row column

row-reverse column-reverse

flex-wrap: nowrap wrap wrap-reverse

flex-flow: direction wrap

PRIMARY AXIS

justify-content: start center end

space-between space-around space-evenly

SECONDARY AXIS

align-items: start center end baseline stretch

MULTI-LINE CONTAINER (WRAP)

align-content: start center end stretch

space-between space-around space-evenly

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 start center end baseline stretch

order: 0 number reorder items with weight

GRID AREA VALUES

area area name

. empty area

none no defined

P CSS Position

POSITIONING

position: static relative absolute fixed sticky

FLOATING

float: none left right

clear: none left right both

POSITIONING (NO STATIC)

top: auto size %

left: auto size %

right: auto size %

bottom: auto size %

z-index: auto number

G CSS Gaps

GUTTERS (GRID AND FLEX GAPS)

row-gap: 0 size %

column-gap: 0 size %

gap: row-gap column-gap

AREA PREFIXES

span-all / span-*

x-* / y-*

span-x-*

span-y-*

x-self-* / y-self-*

span-x-self-*

span-y-self-*

AP CSS Anchor Position

ANCHOR SETTING

anchor-name: none --name

anchor-scope: none all --name

position-anchor: auto --name

ANCHOR POSITIONING

position-area: top left right bottom

anchor(--name top left right bottom)

ANCHOR SIZING

anchor-size(width height block inline)

G CSS Grid

PARENT PROPERTIES

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 " ...

GRID ALIGNMENT

justify-content: normal start center end stretch

space-between space-around space-evenly

align-content: normal start center end stretch

space-between space-around space-evenly

place-content: align-content justify-content

justify-items: normal start center end stretch

align-items: normal start center end stretch baseline

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 line column start line

grid-column-end: auto line column end line

grid-column: column-start / column-end

grid-row-start: auto line row start line

grid-row-end: auto line row end line

grid-row: row-start / row-end

LINE

number [linename] refer to a numbered or named grid line

span number [linename] span across until grid line

CHILD ALIGNMENT

justify-self: auto normal stretch start center end

align-self: auto normal stretch start center end

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 check
`if(media(condition) : true ; else: false)` media style check

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, ...