Tailwind CSS Utility-first CSS

Your source files class names found → scan → **input.css** @import "tailwindcss" → build → **Tailwind CLI / Vite** only used classes → emit → **output.css** linked in HTML

CONCEPTS

Utilities are single-purpose classes you combine in markup. Variants are prefixes: md:, hover:, dark:. Unprefixed means every size (mobile first).

Write class names in full. Tailwind scans for literal strings, so "bg-" + color is never found; use a lookup of complete names instead.

SETUP AND BUILD

npm install tailwindcss @tailwindcss/cli
Install with the standalone CLI

npm install tailwindcss @tailwindcss/vite
Install the Vite plugin

@import "tailwindcss";
Pull in Tailwind (preflight, theme, utilities)

npx @tailwindcss/cli -i *<in>* -o *<out>*
Build the CSS once

npx @tailwindcss/cli -i *<in>* -o *<out>* --watch
Rebuild on change

SETUP AND BUILD (cont.)

npx @tailwindcss/cli -i *<in>* -o *<out>* --minify
Minified production build

@source "*<path>*";
Scan extra files for classes

LAYOUT

flex
Flex container

flex-col
Stack children vertically

items-center
Align items on the cross axis

justify-between
Spread items along the main axis

gap-4
Gap between children (1 unit = 0.25rem)

grid grid-cols-3
Three-column grid

col-span-2
Span two grid columns

block / inline-block / hidden
Display values

relative / absolute / fixed / sticky
Positioning

LAYOUT (cont.)

inset-0
Pin to all four edges

overflow-hidden
Clip overflowing content

container mx-auto
Centred, width-capped container

flex-wrap
Let items wrap

grow / shrink-0
Flex grow and shrink

SPACING AND SIZING

p-4
Padding on all sides

px-4 py-2
Horizontal and vertical padding

m-4
Margin on all sides

mx-auto
Centre a block horizontally

w-full
Width 100%

w-64
Fixed width (16rem)

max-w-md
Cap the width

TYPOGRAPHY

text-lg
Font size (sm, base, lg, xl, 2xl...)

font-bold
Font weight

text-center
Align text

text-gray-700
Text colour

truncate
One line with ellipsis

COLOUR AND EFFECTS

bg-white
Background colour

bg-blue-500
Palette colour (50 to 950)

bg-black/50
Colour with 50% opacity

border
1px border

border-2 border-gray-300
Border width and colour

rounded-lg
Rounded corners

rounded-full
Pill or circle

shadow-md
Box shadow

VARIANTS

hover:bg-sky-700
On hover

focus:ring-2
On focus

sm: md: lg: xl: 2xl:
Min-width breakpoints (40/48/64/80/96rem)

dark:bg-gray-800
Dark mode

group / group-hover:underline
Style child on parent hover

CUSTOM VALUES AND THEME

w-[17px]
Arbitrary value

bg-[#316ff6]
Arbitrary colour

@theme { --color-brand: #f00; }
Add a design token (bg-brand)

@apply *<utilities>*;
Inline utilities into your own CSS

@custom-variant dark (&:where(.dark, .dark *));
Class-based dark mode