

WEB DESIGNER HANDBOOK

2025 Edition

Your complete reference for modern web design —
CSS, typography, colour, layout, accessibility, and performance.

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01

Design Fundamentals

The Visual Hierarchy Principle

Visual hierarchy guides the viewer's eye through a design in order of importance. Every element on a page should have a clear rank — primary, secondary, or tertiary. Establish hierarchy through size, weight, colour, spacing, and position.

- Size: larger elements attract attention first
- Weight: bold text reads before regular weight
- Colour: high contrast elements dominate; muted elements recede
- Whitespace: isolated elements attract more attention
- Position: top-left reads first in left-to-right cultures

The 8-Point Grid System

Base all spacing, sizing, and layout decisions on multiples of 8px. This creates visual rhythm and consistency across your entire interface. Common values: 8, 16, 24, 32, 48, 64, 96px. For fine-grained control, use 4px as your base unit for small components.

Contrast and Colour Theory

WCAG 2.1 AA requires 4.5:1 contrast ratio for normal text and 3:1 for large text. Use the 60-30-10 colour rule: 60% dominant neutral, 30% secondary, 10% accent. Never rely on colour alone to convey meaning — always pair with text or icons.

Pro tip: Check every text/background combination with a contrast checker before shipping. Browser DevTools colour picker now shows contrast ratios directly.

02

CSS Quick Reference

Property	Values	Notes
display	flex grid block inline	Layout mode
position	relative absolute fixed sticky	Positioning context
flex	1 auto none 0 1 auto	Shorthand: grow shrink basis
grid-template	"areas" rows / cols	Named area layout
gap	8px 1rem 16px 24px	Row and column gaps
border-radius	8px 50% 4px 8px 4px 8px	Corner rounding
box-shadow	x y blur spread rgba()	Layered shadows
transition	prop dur ease delay	Smooth state changes
transform	scale() translateY() rotate()	GPU-accelerated
clamp()	min, preferred, max	Fluid sizing
var()	--name, fallback	Custom property

03

Typography System

Type Scale (Perfect Fourth × 1.333)

Token	Size	REM	Usage
--text-xs	12px	0.75rem	Labels, captions, meta
--text-sm	14px	0.875rem	Helper text, secondary
--text-base	16px	1rem	Body copy, default
--text-lg	18px	1.125rem	Lead paragraphs
--text-xl	20px	1.25rem	Sub-headings (h4/h5)
--text-2xl	24px	1.5rem	Section headings (h3)
--text-3xl	30px	1.875rem	Page headings (h2)
--text-4xl	36px	2.25rem	Hero headings (h1)
--text-5xl	48px	3rem	Display / hero

Line Height Rules

- Body text: 1.6–1.8 — generous leading for readability
- Headings: 1.1–1.3 — tight leading for visual impact
- UI labels: 1.2–1.4 — compact for interface elements
- Always use unitless values (1.6 not 24px) for scalability

Optimal Line Length

45–75 characters per line for body text. Use max-width: 65ch on prose containers. Lines that are too long cause eye strain; too short create choppy reading rhythm. For mobile, 35–55 characters is acceptable given smaller screens.

04

Colour & Palettes

Palette Type	Hue Relationship	Best For
Complementary	Opposite on wheel (180°)	CTAs, high contrast UI
Analogous	Adjacent (30° apart)	Calm, harmonious UI
Triadic	Evenly spaced (120° apart)	Vibrant, balanced design
Split-Complementary	Base + 2 adjacent complements	High contrast, less tension
Monochromatic	Same hue, varied lightness	Minimal, elegant design
Tetradic	4 hues (2 complementary pairs)	Rich, complex palettes

Semantic Colour Usage

Role	Hex	Usage
Success / Positive	#10b981	Confirmations, success states
Warning / Caution	#f59e0b	Warnings, pending states
Error / Danger	#ef4444	Errors, destructive actions
Info / Neutral	#3b82f6	Information, links, focus
Disabled	#4a6080	Inactive controls, placeholder

05

Layout: Grid & Flexbox

Grid vs Flexbox Decision Guide

Scenario	Use
Page-level layout (header, sidebar, main, footer)	CSS Grid
Card grid with auto-fill responsive columns	CSS Grid
Navigation bar (logo + links)	Flexbox
Centring a single item	Flexbox
Button group / toolbar	Flexbox
Form layout with label + input rows	CSS Grid
List of items in a single row	Flexbox
Dashboard with named areas	CSS Grid

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Responsive Design

Standard Breakpoints

Name	Min Width	Target
xs (default)	0	Small phones
sm	480px / 30rem	Large phones
md	768px / 48rem	Tablets
lg	1024px / 64rem	Small desktops
xl	1280px / 80rem	Desktops
2xl	1536px / 96rem	Large screens

Mobile-First Media Query Pattern

```
/* Base styles for mobile */ .grid { display: flex; flex-direction: column; } @media (min-width: 768px) { .grid { display: grid; grid-template-columns: 1fr 1fr; } } @media (min-width: 1024px) { .grid { grid-template-columns: repeat(3,1fr); } }
```

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Accessibility Checklist

Component	Requirement
Images	All images have descriptive alt text; decorative images have alt=""
Colour contrast	Text meets 4.5:1 AA standard; large text meets 3:1
Keyboard nav	All interactive elements reachable and operable via keyboard
Focus visible	Focus indicator visible on all focusable elements
Semantic HTML	Use button, nav, main, header, footer, section appropriately
ARIA labels	Icon-only buttons have aria-label; regions have aria-labelledby
Form labels	Every input associated with a <label> element
Error messages	Form errors describe the problem and how to fix it
Skip link	Skip to main content link at page top for keyboard users
Zoom support	Page usable at 200% zoom; no horizontal scroll
Motion	Animations respect prefers-reduced-motion media query
Language	html lang attribute set correctly for the page language

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Performance Optimisation

Optimisation	Impact	Effort
Convert images to WebP	High	Low
Enable GZIP/Brotli compression	High	Low
Preload LCP image	High	Low
Minify CSS + JS	Medium	Low
Set explicit image dimensions	High (CLS)	Low
Inline critical CSS	High	Medium
Lazy load below-fold images	Medium	Low
Use a CDN for static assets	High	Medium
Remove unused CSS (PurgeCSS)	Medium	Medium
Code-split JavaScript bundles	High	Medium
Preconnect to external origins	Low	Low

09

CSS Custom Properties

```
:root { --color-primary: #6366f1; --color-success: #10b981; --color-warning: #f59e0b;
--color-error: #ef4444; --spacing-1: 0.25rem; --spacing-2: 0.5rem; --spacing-4: 1rem;
--spacing-8: 2rem; --radius-sm: 6px; --radius-md: 12px; --radius-lg: 20px; --font-sans:
"Inter", system-ui, sans-serif; --font-mono: "Fira Code", monospace; }
```

Dark mode pattern:

```
@media (prefers-color-scheme: dark) { :root { --bg: #060b14; --surface: #0c1525; --text:
#dde8f8; --border: #1e2d45; } }
```

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Web Design Workflow

Phase	Key Activities
1. Discovery	Define goals, audience, content requirements, technical constraints
2. Information Architecture	Sitemap, content hierarchy, user flows, navigation structure
3. Wireframes	Low-fidelity layouts, content placement, interaction patterns
4. Design System	Colours, typography, spacing scale, component library
5. High-Fidelity Design	Full visual design, states, responsive variants
6. Prototyping	Interactive prototype for user testing and stakeholder approval
7. Development	Semantic HTML, CSS, JavaScript — mobile-first, accessible
8. Performance Audit	Lighthouse audit, Core Web Vitals, asset optimisation
9. Accessibility Audit	Screen reader test, keyboard navigation, contrast check
10. Launch & Monitor	Deploy, submit sitemap, set up analytics and error monitoring

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