

# CSS Full Revision Guide (1-Day Intensive)

This guide is designed to help you revise and learn modern CSS in a single day. It includes core concepts, layout systems, advanced features, and the latest updates in CSS.

## 1. CSS Core Concepts

- CSS Syntax (selectors, properties, values)
- Box Model (content, padding, border, margin)
- Units: px, %, em, rem, vh, vw
- Colors: HEX, RGB, HSL
- Specificity & Inheritance
- Shorthand properties

## 2. CSS Flexbox

- One-dimensional layout (row/column)
- Main axis vs cross axis
- Alignment: justify-content, align-items
- Flex-grow, flex-shrink, flex-basis
- Flex-wrap and gap

## 3. CSS Grid

- Two-dimensional layout (rows & columns)
- Grid tracks, gaps, template-areas
- Line-based placement
- auto-fit, auto-fill, repeat()
- Grid nesting and subgrid

## 4. CSS Positioning

- static, relative, absolute, fixed, sticky
- z-index layering and stacking context
- Position using top/right/bottom/left
- Scroll effects with sticky/fixed

## 5. Responsive Design

- Media queries and breakpoints
- Mobile-first design approach
- Fluid layouts using % and vw
- Responsive typography with clamp(), min(), max()

## 6. CSS Variables (:root)

- Defining custom properties in :root
- Using var() for reusability
- Theme switching (light/dark mode)

## 7. Transitions & Animations

- CSS transitions for smooth hover/focus effects
- @keyframes for custom animations
- Transform effects: scale, rotate, translate
- Animation timing functions and delays

## 8. Modern CSS Features

- clamp(), min(), max() for responsive values
- aspect-ratio to control layout proportions
- Container queries (element-based media queries)
- CSS nesting (new syntax for nesting rules)
- Subgrid (advanced layout in nested grids)

## 9. Pseudo Elements & Selectors

- ::before, ::after for content injection
- :hover, :focus for interaction
- :nth-child, :not(), :is(), :where() for advanced targeting

## 10. Useful CSS Tricks

- Centering techniques (Flexbox, Grid, Positioning)
- Custom buttons, modals, and cards
- Sticky headers and scroll-based effects
- Hiding/showing elements responsively

## 11. Practice Project Ideas

- Navbar layout with Flexbox
- Responsive card grid using Grid
- Sticky + animated header
- Light/Dark mode toggle using :root variables