



CSS In-Depth Guide



1. Introduction to CSS

CSS (Cascading Style Sheets) is used to style HTML documents. It allows for layout design, colors, font settings, and responsiveness.



2. Methods of Adding CSS

- **Inline:** `style="color: red;"`
- **Internal:** `<style> p { color: red; } </style>`
- **External:** `import './App.css'`



3. CSS Selectors

- **Element Selector** (`div`): Targets all div elements.
- **Class Selector** (`.classname`): Targets elements with specific classes.
- **ID Selector** (`#idname`): Targets unique elements.
- **Descendant** (`div p`): Targets any p inside div.
- **Direct Child** (`div > p`): Targets p elements that are direct children of div.



4. The Box Model

Each element is comprised of: - **Content:** Text, images - **Padding:** Space inside the element - **Border:** Outline around padding - **Margin:** Space between elements



5. Positioning

- **static:** Default positioning.
- **relative:** Position relative to itself.
- **absolute:** Position relative to the closest positioned parent.
- **fixed:** Position relative to the viewport.
- **sticky:** Sticks to position within parent when scrolling.



6. Display Properties

- **block:** Full-width, starts a new line.
- **inline:** Doesn't break the line.
- **inline-block:** Similar to inline, allows dimensions.
- **flex:** Enables flexbox layout.
- **grid:** Enables grid layout.



7. Units in CSS

- **Absolute Units:** `px`, `pt`
- **Relative Units:** `%`, `em`, `rem`, `vw`, `vh`



8. Pseudo-classes and Pseudo-elements

- Pseudo-classes (`:hover` , `:focus`): Styles an element in a specific state.
- Pseudo-elements (`::before` , `::after`): Styles parts of an element.



9. Responsive Design

Use **media queries** to adjust styles for different screen sizes.



10. Advanced Techniques

- **CSS Modules**: Scoped styles for React.
- **CSS-in-JS**: Styles as JavaScript (styled-components, emotion).

This guide provides an in-depth reference for understanding and applying CSS concepts effectively in both plain HTML/CSS and React projects.