

Introduction to CSS

Introduction to CSS (Cascading Style Sheets)

Version: CSS?3 – current standard

1. What Is CSS?

Aspect	Description
Definition	A language that describes how HTML (or XML) elements should be rendered on screen, paper, or other media.
Purpose	Separates <i>content</i> (HTML) from <i>presentation</i> (styles), enabling: • Consistent look across pages • Faster development & maintenance • Re?usable design components
Key Idea	Cascading – multiple style rules can apply to the same element; the final appearance is determined by a hierarchy of origins, specificity, and source order.

2. Basic Syntax

```
selector {  
  property: value;      /* declaration */  
  property2: value2;    /* another declaration */  
}
```

- **Selector** – identifies the HTML element(s) to style.
 - **Declaration block** – set of *property: value* pairs, each ending with a semicolon.
 - **Comments** – `/* comment text */`
-

3. Types of Selectors

Category	Example	What It Targets
Element	<code>p {}</code>	All <code><p></code> tags
Class	<code>.menu {}</code>	Elements with <code>class="menu"</code>
ID	<code>#header {}</code>	Element with <code>id="header"</code> (unique)

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Category	Example	What It Targets
Attribute	<code>input[type="text"] {}</code>	<code><input></code> elements whose type attribute equals text
Descendant	<code>nav ul li {}</code>	<code></code> inside <code></code> inside <code><nav></code>
Child	<code>ul > li {}</code>	Direct child <code></code> of <code></code>
Pseudo?class	<code>a:hover {}</code>	Links when mouse hovers
Pseudo?element	<code>p::first-line {}</code>	First line of every <code><p></code>
Group	<code>h1, h2, h3 {}</code>	All three heading levels
Universal	<code>* {}</code>	Every element (rarely used)

4. The Cascade & Specificity

1. Origin (order of importance)

- User agent (browser defaults)
- User styles (optional)
- Author styles (your CSS)
- Important declarations (`!important`) override all but later `!important` rules.

2. Specificity (weight of a selector)

- Inline style ? `a=1, b=0, c=0` (most specific)
- ID ? `0, 1, 0`
- Class / attribute / pseudo?class ? `0, 0, 1`
- Element / pseudo?element ? `0, 0, 0, 1`

Higher specificity wins; if equal, later rule in the stylesheet wins.

5. Including CSS in a Document

Method	Syntax	Typical Use
Inline	<code><p style="color:red;">Text</p></code>	Quick test, rarely for production

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Method	Syntax	Typical Use
Embedded	<code><style> p { color:red; } </style></code> placed in <code><head></code>	Small projects, single?page demos
External	<code><link rel="stylesheet" href="styles.css"></code>	Production?ready, reusable across many pages
Import	<code>@import url("theme.css");</code> inside a CSS file	Modularizing