**✅ Day 11.1 – CSS Specificity & Cascade (with Color Styling)**

**📚 Topics Covered**

* CSS Specificity: How CSS decides which rule to apply
* CSS Cascade: Rule conflicts and how they're resolved
* Style Application Order: Inline > ID > Class > Element
* Importance of !important
* Styling elements: p, input, a, button, footer
* Using color & background-color
* Focus state, hover state
* Combining ID, Class, Inline styles

**🔍 1. CSS Specificity Overview**

CSS specificity determines **which CSS rule is applied** when multiple rules target the same element.

**🧠 Specificity Hierarchy:**

1. Inline Style ➜ 1000

2. ID Selector ➜ 0100

3. Class / Attribute / Pseudo ➜ 0010

4. Element Selector ➜ 0001

**Example:**

p { color: green; } /\* Element selector – low specificity \*/

.highlight { color: blue; } /\* Class – medium specificity \*/

#main-paragraph { color: orange; } /\* ID – high specificity \*/

If all three apply to one element, **ID wins**, unless:

* !important is used → **that overrides everything**.

**🔄 2. Cascade Order**

When multiple rules have the same specificity, the **last one written wins**, unless !important is present.

**Example:**

.conflict {

color: purple; /\* Class level \*/

}

#conflict {

color: navy; /\* ID level \*/

}

.conflict {

color: crimson !important; /\* Overrides everything above \*/

}

**🎨 3. Color and Background Example Summary**

The code example showcases various color applications:

**🔵 Text Colors**

* p → green
* .highlight → blue
* #main-paragraph → orange
* .conflict → crimson !important (wins)
* Inline style → black or darkorange (only loses to !important)

**🟡 Background Colors**

* .highlight → #e0f7fa (light blue)
* .note → #fbe9e7 (peach)
* body → #f4f4f4 (light gray)
* Buttons:
  + .btn → lightgray
  + #submit-btn → orange
  + .btn-primary → royalblue, darkblue on hover

**🖍️ Borders**

* .highlight → left border: #0288d1 (blue)
* .note → left border: #d84315 (orange-red)
* input → border gray, dodgerblue on focus

**🧪 4. Example Elements Breakdown**

**✅ Paragraphs**

<p>This paragraph is styled using the element selector (p).</p>

<p class="highlight">Class selector: blue text, light bg.</p>

<p id="main-paragraph" class="highlight">ID wins – orange color.</p>

**✅ Conflicting Rules**

<p id="conflict" class="conflict">.conflict uses !important → crimson.</p>

<p style="color: black;">Inline style overrides all but !important.</p>

**✅ Inputs & Interaction**

<input type="text" placeholder="Focus me">

* Normal: gray border
* Focus: blue border (dodgerblue), no outline

**✅ Buttons**

<button class="btn">Default</button>

<button class="btn btn-primary">Primary</button>

<button class="btn" id="submit-btn">ID Button</button>

* Class-based vs ID-based button styling
* Hover changes background

**✅ Anchor**

<a href="#">Link</a>

* Hover state turns text red

**💡 5. Important Observations**

* !important overrides all: use with caution.
* ID selectors beat class & element selectors.
* Inline styles win unless !important is present.
* Combining class + ID + inline can get messy — avoid if possible.
* Consistent naming & separation of concerns (class for styling, ID for JS) improves maintainability.

**🎨 Color Section Demo (Standalone Example)**

<style>

.color-box {

width: 150px;

height: 50px;

margin: 10px;

display: inline-block;

line-height: 50px;

text-align: center;

color: white;

font-weight: bold;

border-radius: 5px;

}

.red { background-color: red; }

.green { background-color: green; }

.blue { background-color: blue; }

.orange { background-color: orange; color: black; }

.gray { background-color: gray; }

.purple { background-color: purple; }

</style>

<div class="color-box red">Red</div>

<div class="color-box green">Green</div>

<div class="color-box blue">Blue</div>

<div class="color-box orange">Orange</div>

<div class="color-box gray">Gray</div>

<div class="color-box purple">Purple</div>

**🧠 Summary:**

| **Selector Type** | **Example** | **Specificity** | **Wins Over** |
| --- | --- | --- | --- |
| Element | p {} | 0001 | Lowest |
| Class | .highlight {} | 0010 | Beats element |
| ID | #main-paragraph {} | 0100 | Beats class & element |
| Inline | style="..." | 1000 | Beats ID, class, element |
| !important | color: red !important; | N/A | Beats all, even inline |