**UX Instructions Exercise 2d**

**We'll:**

* Use hsl() instead of hex for theme variables.
* Add alpha transparency.
* Use color-mix() and color-contrast() where supported.
* Demonstrate fallback options for broader browser support.
* Include a media query for wide color gamut (Display-P3).
* Explain each new feature with real-life CSS examples.

**Update :root Variables Using Modern CSS Color Syntax**

:root {

--primary-color: hsl(210, 100%, 50%);

--primary-color-alpha: hsl(210, 100%, 50%, 0.8); /\* Slightly transparent \*/

--secondary-color: color-mix(in srgb, hsl(210, 100%, 50%), white 30%);

--contrast-text: color-contrast(var(--primary-color) vs white, black);

--padding: 1rem;

--max-width: 1200px;

}

**Create Header with Alpha Channel**

.site-header {

text-align: center;

padding: 2rem 0;

background: var(--primary-color-alpha);

color: white;

}

**Make Buttons with color-mix()**

button {

background-color: var(--secondary-color);

color: white;

border: none;

padding: 0.5rem 1rem;

border-radius: 6px;

cursor: pointer;

}

**Use Text Contrast with color-contrast() (where supported)**

.nav-list li a {

color: var(--contrast-text); /\* Automatically chooses black or white based on contrast \*/

}

**Optional: Add a Wide Gamut Style (P3)**

@media (color-gamut: p3) {

:root {

--primary-color: color(display-p3 0.2 0.6 1);

}

}

**Add to your HTML after the flex section:**

<section class="color-demo">

<h2>Color Demonstration</h2>

<p>This section uses <code>hsl()</code>, <code>color-mix()</code>, and <code>color-contrast()</code>.</p>

<button>Primary Action</button>

</section>

**Add CSS Section for .color-demo**

.color-demo {

background: #f4f4f4;

padding: var(--padding);

margin-top: 2rem;

}

.color-demo button {

font-size: 1rem;

font-weight: bold;

}

**Browser Compatibility Notes**

* color-mix() and color-contrast() require **modern Chromium or Safari**.
* Firefox does **not yet support** these features (as of mid-2025).
* Always include fallback values where necessary for production.