**Accessibility in UX and Responsive Design**

**1. Why Accessibility Matters**

Accessibility ensures that people with disabilities can perceive, understand, navigate, and interact with your site. It also:

* Improves SEO and usability for everyone.
* Is a legal requirement in many regions (ADA, Section 508).
* Expands your potential audience — 1 in 4 adults in the U.S. has a disability.

**2. Accessibility Principles (WCAG Overview)**

The **Web Content Accessibility Guidelines (WCAG)** are based on four principles:

**P.O.U.R.**

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| **Principle** | **What It Means** | **Example Fixes** |
| **Perceivable** | Users must be able to perceive the content | Use alt text, proper contrast, captions |
| **Operable** | Users must be able to use all features | Keyboard-friendly navigation, no time limits |
| **Understandable** | Users must understand how to use the site | Clear labels, consistent navigation |
| **Robust** | Works with assistive tech | Valid HTML, proper ARIA usage |

**3. Accessible Design Patterns and Techniques**

* Use semantic HTML: <nav>, <main>, <header>, <button>, etc.
* Provide labels with <label for="..."> and aria-label.
* Ensure keyboard focus with :focus styles.
* Use sufficient color contrast (4.5:1 for text).
* Hide non-decorative images from screen readers: aria-hidden="true" or role="presentation".

**Some ARIA Attributes**

* aria-label, aria-labelledby, aria-expanded, aria-hidden, aria-live
* *Use ARIA only when native HTML won’t do*