Accessibility

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Plan for today

Web accessibility challenges

Demo: screen reader use and navigation

Demo: Accessibility examples
  Both positive and negative...

Summary of takeaways from demo
Access challenges

Many are not unique to web

Fonts, colors, styling
- Low contrast colors, small text size, hard to read fonts
  - E.g. contrast checker

Animation, movement
- E.g. text that scrolls by quickly

Spacing and layout
- E.g. right-aligned text can be easy to miss
Access challenges

Some are more specific

Navigation challenges
  Assume use of mouse
  Overridden keyboard shortcuts

Element labeling and identification
  E.g. everything is a div
  Some UX (menus, toolbars) don't have HTML elements
Takeaways

Use **semantic elements**
- Meaning aids navigation, searching
- Use CSS to suppress default styles

**Label elements clearly**
- Images: use `alt` text
- Form controls: use `<label>`

When setting colors/fonts/etc. in CSS, ensure there is a text description
  - E.g. don't just mark same text red or green

For general elements, use `aria-label`
  - But this is a bit of a "hammer;" prefer more specific techniques
Takeaways

Ensure DOM element ordering makes sense
  E.g. don't put footer as first child of body
  Beware when using absolute/fixed position, Flexbox reverse, etc.

Manage the user focus
  Use .focus() to move focus programmatically
    Draw attention to new/changed content, dialogs, etc.
    Set tabindex="-1" to make elements focusable via JS
  Restrict focus to subset of elements
    E.g. when elements aren't interactable (dialogs)
  See code on lectures page for example
Takeaways

Be careful of keyboard and mouse events

Provide alternatives to drag/hover

Be careful about overriding standard keyboard shortcuts and behavior
**ARIA**

**ARIA** defines HTML attributes used by assistive tech

- Should still prefer more general techniques (e.g. semantic elements)
- But provides more flexibility

**Examples of ARIA roles**

- Allows you to decouple HTML from assistive tech behavior
- Often requires a fair amount of JS to work correctly