Accessible Web

Thanks to Scott Williams at the UM Office for Institutional Equity for his materials

https://accessibility.umich.edu/

Goals

- Learn what a web accessibility professional does
- Understand how disabilities relate to the web
- Introduce the four principles of accessible interface design

What does a "web accessibility coordinator" do?

- Helps guide policy and purchasing decisions
- Evaluates web interfaces for accessibility
- Assists those with disabilities to access online infrastructure
- Keep pace with changing technology

1 in 5 People Have a Disability

- There are 60 million people with disabilities in the U.S.
  - Half are impeded using the internet
- Visual Issues
- Hearing Issues
- Motor Issues
- Cognitive Issues

Visual Disabilities

- Blindness, low-vision, color-blindness
- 8 million have difficulty reading ordinary newsprint (even with glasses)
    - 1.8 million are completely blind
- How is your font-size, color-contrast, font-style?

Hearing Disabilities

- Partial to total deafness
- 8 million have difficulty hearing a normal conversation
    - 1 million are completely deaf
- Do your videos include closed-captioning? Are you blaring music?

Motor Disabilities

- Inability to use a mouse or physical keyboard, slow response time, limited fine motor control
- Dexterity issues—8 million Americans have difficulty using their arms or hands
- What happens when someone tries to "tab" through your page? Do you require a steady hand?

Cognitive Disabilities

- Learning disabilities, distractibility, dyslexia, inability to remember or focus on large amounts of information
- Adults with ADD/ADHD: 16 million
- 38% of soldiers, 31% of Marines and 49% of National Guard members returning from combat report psychological conditions such as TBI and PTSD
- Cognitive disabilities number greater than physical and perceptual disabilities combined

More Stats

- 8.3% of the U.S. population have 2 or more disabilities
- 40,000 people the in U.S are both deaf and blind
- 41 percent of adults 65 and older have a disability
- 8.7 million people with disabilities are poor
- 70% of disabled are unemployed or underemployed

The web offers unprecedented opportunities for disabled

- Education
- News
- Commerce
- Social
- Benefits of web are amplified for disabled!!
- Web is an enabling technology

Legal

- DOJ is in the process of revising Title II and III of the ADA to include online resources of state and local entities
- Case law—individuals or entities can file civil rights complaints, e.g., Penn State, NYU, Northwestern, FSU, Target, Southwest Airlines, Priceline.com, Ramada, Kindle, etc.

What is web accessibility?

- Making the web accessible for the *widest possible audience*
- This audience includes Temporarily Able-Bodied users (TABs)
- Currently, online infrastructure is *hostile* to those with disabilities
- Inseparable from SEO, mobile, and usability: improve one and you improve the others
- ***Best way to accomplish accessibility? Adherence to standards.***

W3C WCAG 2.0

- W3C Web Content Accessibility Guidelines are principle-, not technology-based
- The four principles (POUR):
  - Perceivable
  - Operable
  - Understandable
  - Robust

Review

- Designing with accessibility in mind is the right thing to do for many reasons
- Adhering to standards (not flashy, cool effects) is key
- Pay special attention to the semantics behind the HTML5 tags

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Validating Your Site

Check your code!

Why validate?

- Browsers are the helicopter parents of programming
- As your pages become more complex "hidden" areas can be devastating

Three approaches

- Validate by URI
- Validate by Filename
- Validate by Direct Input

Don’t freak out!

- Errors propagate, so always start at the top
- Search for solutions online and in forums

Accessibility Validation

- You can use wave.webaim.org to validate accessibility
- You can install an extension to check local pages.

Review

- Validated sites are more robust and more accessible

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Hosting Your Site

How to get your site on the Web

Requirements

- Domain name
- Hosting company

Domain Names

- Typically purchased for multiple years at cheap rate
- Most common is .com, but other extensions are gaining acceptance
- *Domain names are useless on their own*

Hosting

- What is your URL right now?
- You need a registered IP address to connect with your domain name
- Hosting services vary
  - Free
  - Mid-range
  - Full-service

Free Services

- Little/no control of domain name
- Limited tools
- Advertising and redirects
- Familiar look and feel across them

Paid Services

- Tend to have better tools
- Support is available
- But check for free services through work/school

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Final Project Demo

Final Project

- The final project gives you a chance to practice what you have learned so far.
- The topic and content are open to you.
- There are some requirements to help with grading.

Requirements

1. Create a fully formed page with a doctype, head, and body
    a. Use semantic tags, including h1 and main.
    b. Include a list with at least three items
    c. Include at least three images
2. Validate your site
3. Host and share your site
4. Peer review a site

Examples

- Example 1
- Example 2
- Example 3

Validate Your Site

- Use the W3 validator to check the syntax
- Use the Wave validator from WebAIM to check for accessibility

Share Your Site

- If you are using Replit you can share your site easily.
- If not, you can utilize some of the optional videos to learn about other ways to host your site.

Peer Reviews

- You will need to do at least three peer reviews to receive credit for this assignment.
- The expectation is that everyone will participate in this assignment.
- If you are not a paid learner, consider putting the link to your site in a forum.

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Closing

Wait? That's It?

- With the exception of forms and some graphics the lectures and reading have covered the bulk of the HTML5 tags.

- But what can I do???

Edit/View Files and Code

- You can use an editor to create or modify an html file
  - Creation – create shell for designers
  - Modify a page created by web-authoring software
- You know the different options for opening a file

Evaluate Accessibility

- Use “View Source” to look at code from any site
    - Did they use semantic tags?
- w3.validator.org checks for well-structured code
- wave.webaim.org checks for semantic structure

Publish Site

- You know the basic requirements (domain/host) for publishing
- Achieving even a small familiarity with as many systems as you can is beneficial.

What next?

- Continue to practice your skills
- Get comfortable with multiple editors
- Try uploading your code
- Begin to learn about Cascading Style Sheets!!

Thank you!

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The Secret Lecture

Separating Content From Style

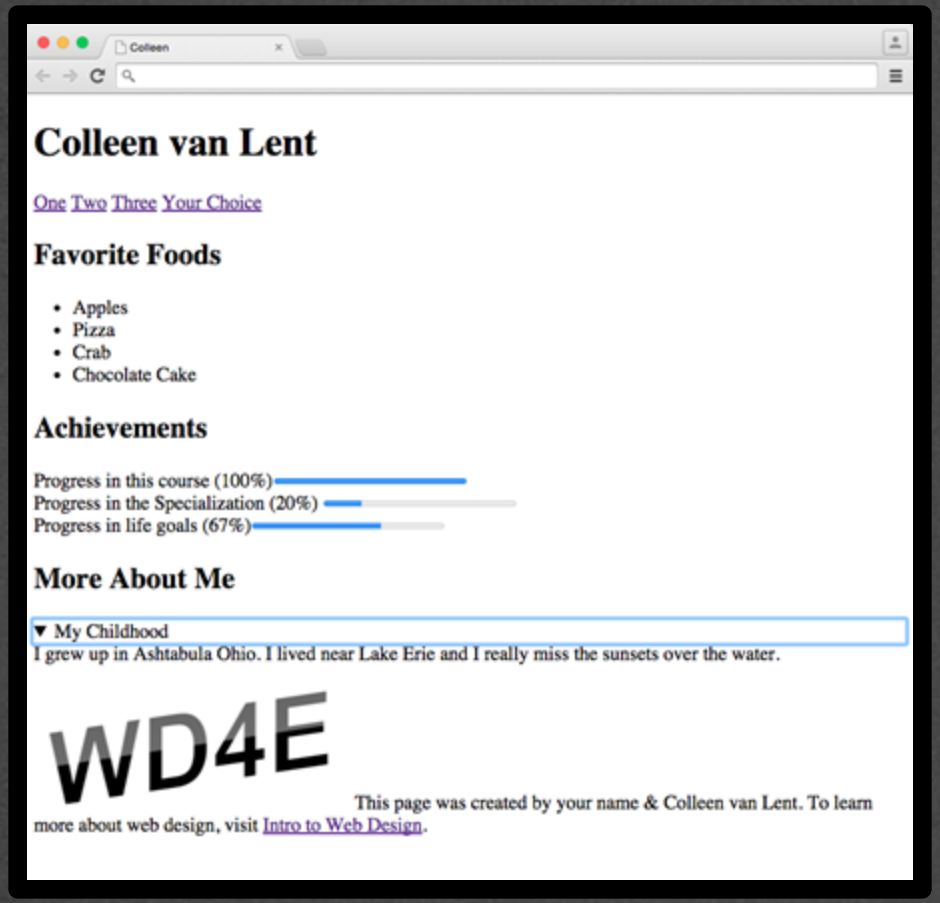
- Separating content from style is basic tenet of HTML5
- Tags are meant to convey information
- But…..

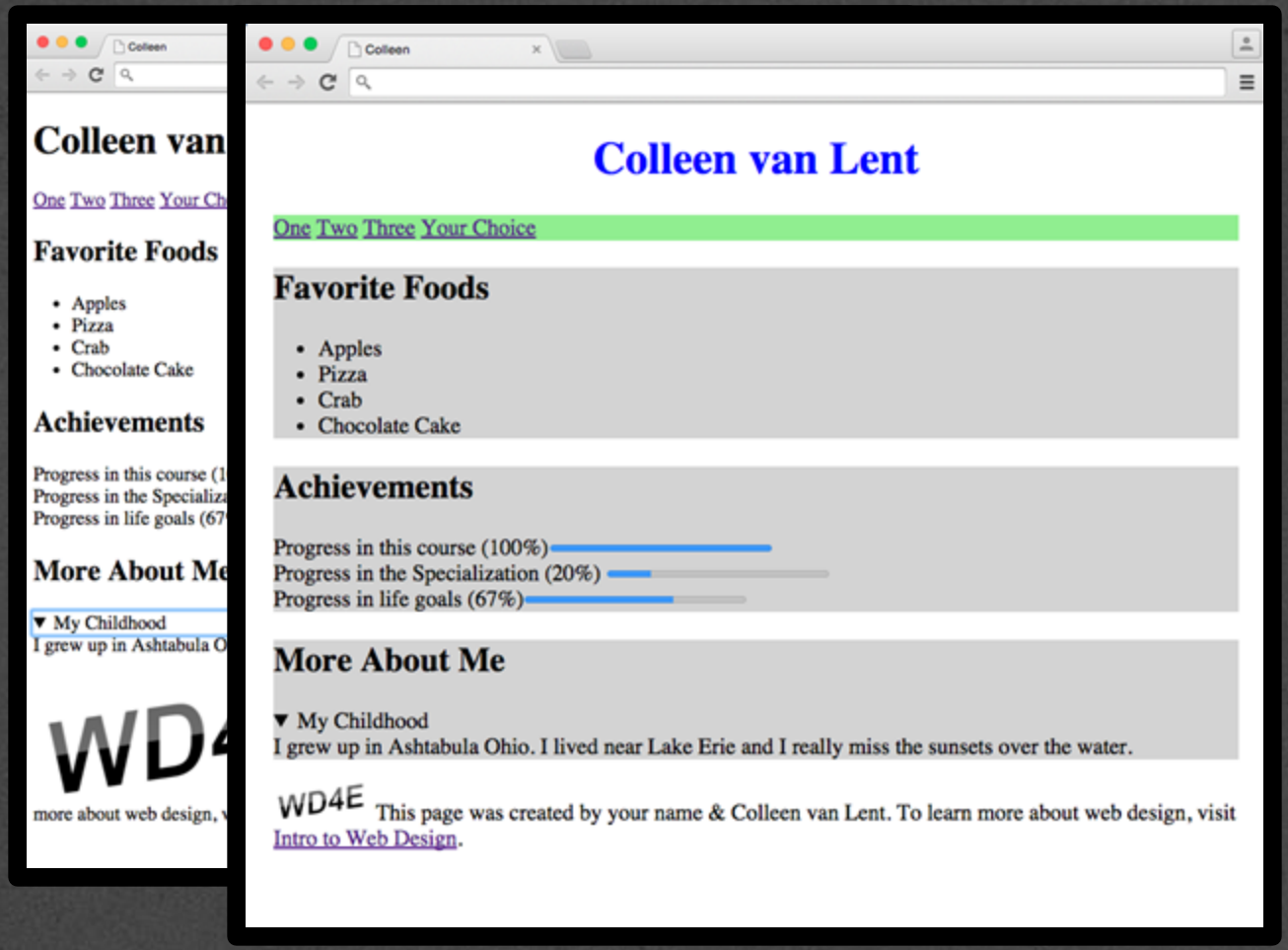
Using the "style" attribute

- Every tag can utilize a **style** attribute.
  - Similar to **href**, **src**, **alt**, **etc**.
- Style can specify color, background-color, margins, etc.

```
<h1 style = "color:blue;">Colleen  van Lent</h1>
```

Colleen van Lent


Colleen
Colleen van Lent
One Two Three Your Choice
Favorite Foods
Apples
Pizza
Crab
Chocolate Cake
Achievements
Progress in this course (100%)
Progress in the Specialization (20%)
Progress in life goals (67%)
More About Me
▼ My Childhood
I grew up in Ashtabula Ohio. I lived near Lake Erie and I really miss the sunsets over the water.
WD4E
This page was created by your name & Colleen van Lent. To learn more about web design, visit Intro to Web Design.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Why not use it?

- There are practical reasons for not using style attribute
  - Only applies to one element
  - Difficult to change later
  - Takes away from “reusability”

Cascading Style Sheets

- A better way to style your page is to use Cascading Style Sheets

- Styling is done in a separate file and the HTML file links to whichever style files work best for that site.

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