

Introduction to Web Programming

January 8, 2014

URLs

http:// www.cs.williams.edu / ~andrea/cs11 / index.html

The diagram illustrates the components of the URL `http:// www.cs.williams.edu / ~andrea/cs11 / index.html`. Below the URL, four labels are positioned: "Protocol" under `http://`, "Server(domain)" under `www.cs.williams.edu`, "Path" under `/ ~andrea/cs11 /`, and "Filename" under `index.html`. Four blue arrows point upwards from each label to its respective component in the URL.

- If no filename is specified, a default is assumed.
- Can be `index.html`, `default.htm`, `index.php`, `index.asp`, depending on how the server is configured

Hyperlinks

- Can specify an absolute path
- Can specify a relative path (relative to the current directory)

`"/../course.css"`

- Can specify a named anchor in the current or another page.

`<h1 id="topic1">Topic 1: HTML</h1>` give an id

`HTML` link in this page

`HTML` link to another page

Anchor elements, cont'd

- Can be text or images

```
<a href="http://www.williams.edu">
```

```
</a>
```

- Text anchor typical defaults:
 - Underlined blue before click
 - Purple after click

Anchor elements, cont'd

- Can open a new window (or tab, depending on browser default)

```
<a href="http://www.cs.williams.edu"
  target="_blank">CS at Williams</a>
```

- Can reuse the window/tab if you give it a name

```
<a href="http://www.cs.williams.edu"
  target="CSWindow">CS at Williams</a>
```

- For advertising-style pop-up windows, need JavaScript

Mail and Phone Links

- Can make sending mail easy (though it leaves you open as a target for spam)

```
<a href="mailto:me@cs.williams.edu">email me</a>
```

- Can do something similar for phone numbers

```
<a href="tel:+14135551234">Call 413-555-1234</a>
```

Design Considerations

- Follow W3C HTML and CSS standards as much as possible.
 - Your primary tool for ensuring that your site is as consistent as possible on all standards-compliant browsers.
- Design with progressive enhancement as a guide.
 - Start with a baseline experience that makes your content/functionality available to even the most rudimentary browser.
 - Progressively add enhancements that are nice but not critical.

Design Considerations

- Serve a single HTML document to all devices but apply different style sheets based on the screen size to provide the best layout for each device.
 - See links on Resources page.
- Keep accessibility in mind.
 - Consider vision, mobility, auditory, and cognitive impairment.

Design Considerations

- Site performance is important.
 - Amazon.com showed that reducing page load times by just 100ms resulted in a 1% increase in revenue.
 - A few ways to optimize performance:
 - Make images the smallest size possible
 - Minimize html and css documents by removing extra spaces and line returns. (But still keep them readable.)
 - Keep JavaScript to a minimum
 - Don't load anything unnecessary
 - Check out code.google.com/speed

Design Considerations

- Forcing new windows/tabs to open up is not a good idea for accessibility.
 - Too many windows/tabs can be confusing to anyone.
 - Can be confusing on small readers.
 - Use sparingly.

Color Matters

- Select a color scheme that makes sense for the product/service at the heart of your website.
 - If it's a skiing website, reds, oranges, and yellows aren't the best choice.
- Be sure you know your target audience.
- Overuse of bright colors causes eye fatigue.
- Choose a background color.
 - Distinguish your website from others.
 - “Punches” the body of the page forward.

Color Matters, cont'd

- Don't make your website a rainbow.
 - Work with a palette of 2-3 colors.
- Make your text black.
 - People are used to reading black text.

Color Choice

- **Complementation**
 - Colors on “opposite” ends of the color spectrum lead people to consider a design visually appealing
 - Good for general color scheme selection and highlighting, but not as much for text
- **Contrast**
 - Reduces eyestrain and focuses user attention
 - Good for selecting text color and associated background (black on white/light gray; white on black)
 - When in doubt, use a very light color for the background and a dark color for text

Color Choice

- Vibrancy
 - Vibrancy affects the emotional response to your design
 - Brighter colors: energetic
 - Darker, muted shades: relaxing
- Colors have both positive and negative associations
 - For example, Red
 - Positive: power, strength, action, energy
 - Negative: warning, danger, caution, anger
 - Blue
 - Positive: Cool, tranquil, secure
 - Negative: Cold, passive
 - White
 - Positive: Pure, fresh, clean
 - Negative: Cold