HTML AND WEB TECHNOLOGY

CS 2550 Dr. Brian Durney
BECOMING FLUENT IN HTML

In this class, we will be writing programs that generate HTML.

You’ll need to be able to check the generated HTML and find problems if it isn’t right.

```html
<html>
  <body>
    My Web Page
  </body>
</html>
```
If you use a WYSIWIG editor like Dreamweaver, you won’t become familiar with HTML.
If you use a WYSIWIG editor like Dreamweaver, you won’t become familiar with HTML.
If you use a WYSIWIG editor like Dreamweaver, you won’t become familiar with HTML.
If you use a plain-text editor you’ll type in HTML and will learn how to work with HTML. It’s okay to use an IDE. Just be sure to type in HTML directly.
BECOMING FLUENT IN HTML

Plain-Text Editor

TYPE HTML

<html>
  My Web Page
</html>

My Web Page

JavaScript Program

GENERATE HTML

<html>
  My Web Page
</html>

My Web Page

If you use a plain-text editor you’ll type in HTML and will learn how to work with HTML.

It’s okay to use an IDE. Just be sure to type in HTML directly.
If you use a plain-text editor you’ll type in HTML and will learn how to work with HTML.

It’s okay to use an IDE. Just be sure to type in HTML directly.
If you use a plain-text editor you’ll type in HTML and will learn how to work with HTML. It’s okay to use an IDE. Just be sure to type in HTML directly.
If you use a plain-text editor you’ll type in HTML and will learn how to work with HTML.
It’s okay to use an IDE. Just be sure to type in HTML directly.
Don’t use WYSIWYG editors like Dreamweaver or word processors that save documents as HTML.

Get lots of practice working directly with HTML so that you are familiar with HTML and can debug your JavaScript programs that generate HTML.
READ AN HTML TUTORIAL

Find an HTML tutorial on the Web and read it.

See the Lesson 1 notes page for some suggestions [http://universe.tc.uvu.edu/cs2550/notes/l1/l1notes.html](http://universe.tc.uvu.edu/cs2550/notes/l1/l1notes.html)

Don’t just read; **do some examples and try things out.**
BROWSERS

For this class: **Chrome, Firefox, Safari**

Make web apps that are not browser-dependent. Libraries and frameworks can help with that.

**Feature testing** or **object testing**

WORKING WITH LOCAL FILES

Two ways of opening an HTML document:
   From a web server
   From a local file

LOCAL FILES

No HTTP status code

Chrome treats local files differently: no Ajax
IMPORTANT HTML TAGS AND CONCEPTS

<html>...</html>
Opening and closing tags
Slash in closing tag
Root tag pair

<head>  <title>
Lists and list elements

<body>

<!--  -->  Comments

<ul>  <ol>  <li>

<!-- -->
<a href="...">
  Link
</a>

<img src="..." alt="...">

Image tag, including src, alt, height, and width attributes

---

Don’t forget the closing tag

etc.

Headings

<table>
<tr>
<td>  
</td>
</tr>
</table>
URLS

absolute URL

http://universe.tc.uvu.edu/Game/RSSA/index.html

protocol      path name

server domain name

What other protocols have you seen?

relative URL

howToPlay.html
**URLS**

- **server IP address**: 192.168.0.250
- **port number**: 8080
- **query string**: check.php?userName=Harpo&password=swordfish
- **URL**: http://192.168.0.250:8080/Game/RSSA/index.html
IP ADDRESSES

IP = Internet Protocol

IPv4 address: 161.28.117.185

IPv6 address: fe80::250:56ff:fe87:3b1d

Base 16 digits: 0-9, a-f
Hexadecimal or hex

Name server: translates domain name to IP address
WEB TECHNOLOGY

local

client computer

computer

remote

server computer
Browser gets URL for a web site
Browser gets URL for a web site

http://www.uvu.edu/index.html
Browser gets URL for a web site
WEB TECHNOLOGY

Browser gets URL for a web site
Browser gets domain name from URL
Browser gets URL for a web site
Browser gets domain name from URL

http://www.uvu.edu/index.html
Browser gets URL for a web site
Browser gets domain name from URL
Browser gets URL for a web site
Browser gets domain name from URL
Browser sends **HTTP request** message
Browser gets URL for a web site
Browser gets domain name from URL
Browser sends **HTTP request** message

Server sends back requested resource, along with **headers** that describe it and an **HTTP status code**
Browser gets URL for a web site
Browser gets domain name from URL
Browser sends **HTTP request** message

Server sends back requested resource, along with **headers** that describe it and and **HTTP status code**

**content-length**: 1278
Browser gets URL for a web site
Browser gets domain name from URL
Browser sends **HTTP request** message

Server sends back requested resource, along with **headers** that describe it and and **HTTP status code**

- **content-length:** 1278
- **200** successful
- **404** not found
Browser gets URL for a web site
Browser gets domain name from URL
Browser sends **HTTP request** message

Server sends back requested resource, along with **headers** that describe it and **HTTP status code**

- **200** successful
- **404** not found
Browser gets URL for a web site
Browser gets domain name from URL
Browser sends **HTTP request** message

Server sends back requested resource, along with **headers** that describe it and **HTTP status code**
Browser gets URL for a web site
Browser gets domain name from URL
Browser sends **HTTP request** message

**Server** sends back requested resource, along with **headers** that describe it and **HTTP status code**

Browser sends additional requests for related resources, like images in the HTML document
Browser gets URL for a web site
Browser gets domain name from URL
Browser sends **HTTP request** message

Server sends back requested resource, along with **headers** that describe it and **HTTP status code**

Browser sends additional requests for related resources, like images in the HTML document

Server sends back other resources
HTTP TRANSACTIONS

Browser’s request

+ 

Server’s response

Always initiated by client

This is a problem for some kinds of applications, like a text chat: there’s no way for the server to notify a client if there’s a new message.
HTTP TRANSACTIONS

Browser’s request + Server’s response

HTTP is a stateless protocol
The server doesn’t remember anything about previous requests from any client.
WEB 2.0
AND OTHER BUZZWORDS

Using the web as a platform

Do you agree with this description?

Is “Web 2.0” significant, or mostly hype?

How do web applications compare to conventional desktop applications?

Another buzz word: Rich Internet Applications (RIAs)
THIS IS NOT A CLASS IN GRAPHIC DESIGN...

...but you should be aware of some design issues and pay attention to the design of sites that you see on the Web.

What works?
What doesn’t work so well?
How would you change the site?
Major changes from earlier versions of HTML

- offline applications
- local storage
- web sockets
- geolocation

http://diveintohtml5.info