

HTML AND WEB TECHNOLOGY

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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.

JavaScript
Program

GENERATE
HTML

```
<html>  
My Web Page  
</html>
```



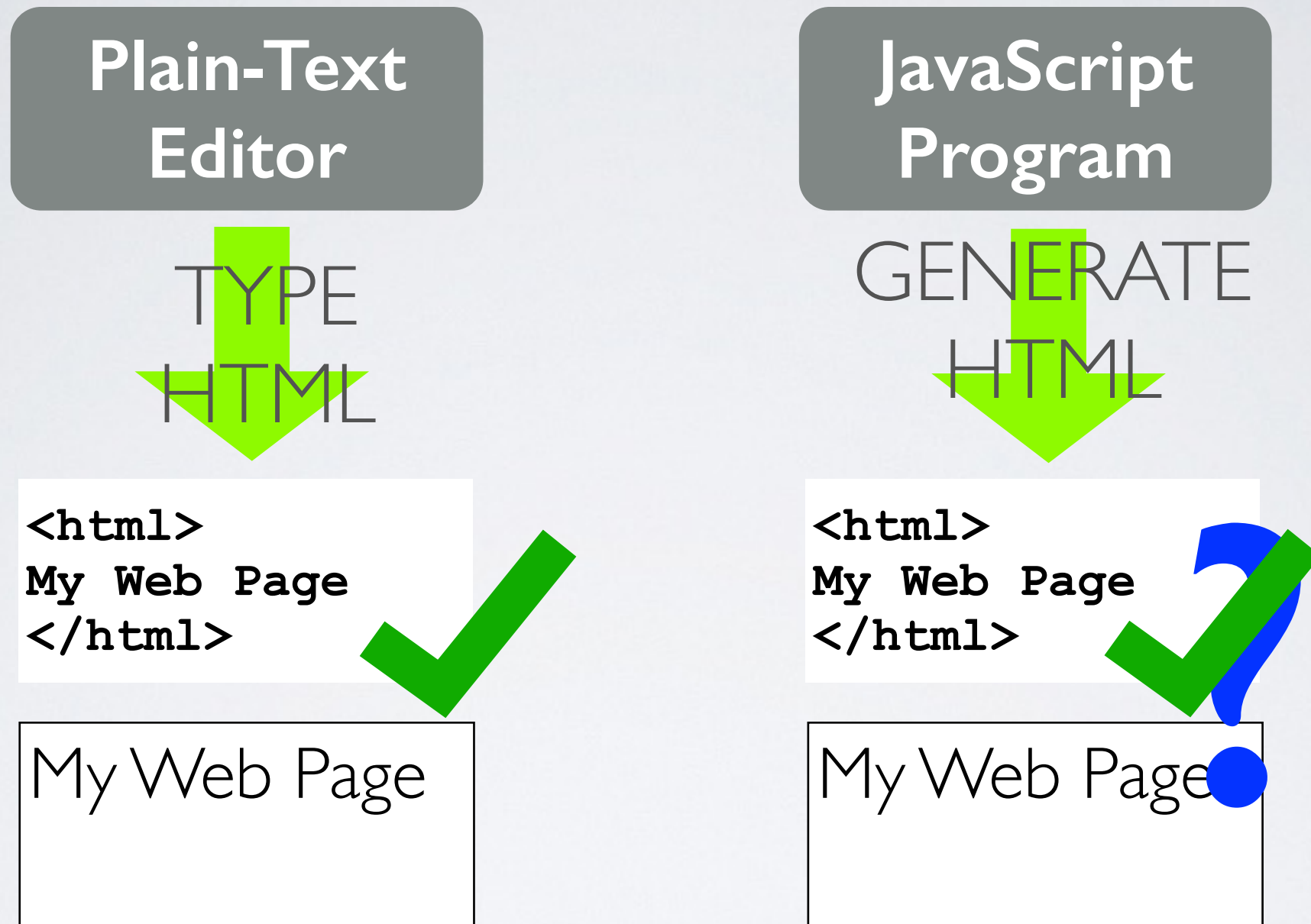
My Web Page

BECOMING FLUENT IN HTML



If you use a WYSIWYG editor like Dreamweaver, you won't become familiar with HTML.

BECOMING FLUENT IN 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.



WYSIWYG

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>



sitepoint.com

w3schools.com

tizag.com

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>
```

```
<body>
```

Lists and list
elements

```
<ul>
```

```
<ol>
```

```
<!-- -->
```

Comments

```
<li>
```

```
<a href="...">
```

Link

```
<br>
```



```

```

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

```
<hr>
```

```
<table>
```

```
<tr>
```

```
<td>
```


Headings

```
<h1>
```

```
<h2>
```

```
<h3>
```

```
<p>
```

Don't forget the closing tag

etc.

```
class="..."
```

class attribute -- styles

```
<div>
```

```
id="..."
```

id attribute

```
<span>
```

```
<frameset>
```

```
<frame>
```

```
<form>
```

```
<input type="...">
```

```
<select>
```

```
<option>
```

```
<button>
```

A screenshot of a web form. At the top, there are two input fields: "Last Name:" and "Code:". Below them is a "Section:" dropdown menu showing "X01 Online". Underneath is an "Assignment" dropdown menu with a checkmark icon and the text "Select an Assignment". The dropdown menu is open, showing a list of options: "Assignment 1", "Assignment 2", "Assignment 3", "Assignment 4", "Assignment 5", "Assignment 6", and "Project". To the left of the "Assignment" dropdown are two buttons: "Choose File" and "Submit".

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

port number

`http://192.168.0.250:8080/Game/RSSA/index.html`

server IP address

`check.php?userName=Harpo&password=swordfish`

query string

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

remote
server computer

Browser gets URL for a web site

Browser sends `http://www.uvu.edu/index.html`

Browser sends `http://www.uvu.edu/index.html`

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

Browser sends additional resources, like images in the HTML document
`content-length: 1278`

Server sends `200 successful` or `404 not found` status codes

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?

HTML



Major changes from earlier versions of HTML

<http://diveintohtml5.info>

offline applications

local storage

web sockets

`<audio>`

`<video>`

`<canvas>`

geolocation