If you have not already done so,
please download Aptana:
http://aptana.com

GDI Cincinnati

Intro to HTML/CSS: Class 1

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Introductions

Before we begin, I'd like to learn a little bit more about everyone here!

Please introduce yourself:

- Why you're here?
- What you hope to learn?
- Which web browser are you using?
  - Internet Explorer, Firefox, Chrome, Safari or Opera?
    - *Have you downloaded Aptana? Grab a TA if you need assistance!*

Meet the GDI staff and volunteers!

Goals for Today

We hope that by the end of class today:

- ✓ You will have mastered some of the basic terms & jargon.
- ✓ You will know the most common HTML tags.
- ✓ You will get some practice using the **Aptana** software
- ✓ You will have built a very simple, HTML-only webpage.

Time permitting: You will understand the basics of web servers, and what they are used for.

Ask Questions!

We are going to cover **LOTS** of content today

If you missed something I just said, let me know and I'd be happy to repeat it.

If anything isn't clear, tell me, and I will do my best to clarify.

Feel free to inquire with our TA's as well!

What is HTML?

HTML stands for **H**yper **T**ext **M**arkup **L**anguage

HTML is not actually a programming language! It's a markup language.

What is a Markup Language?

A system for annotating text.

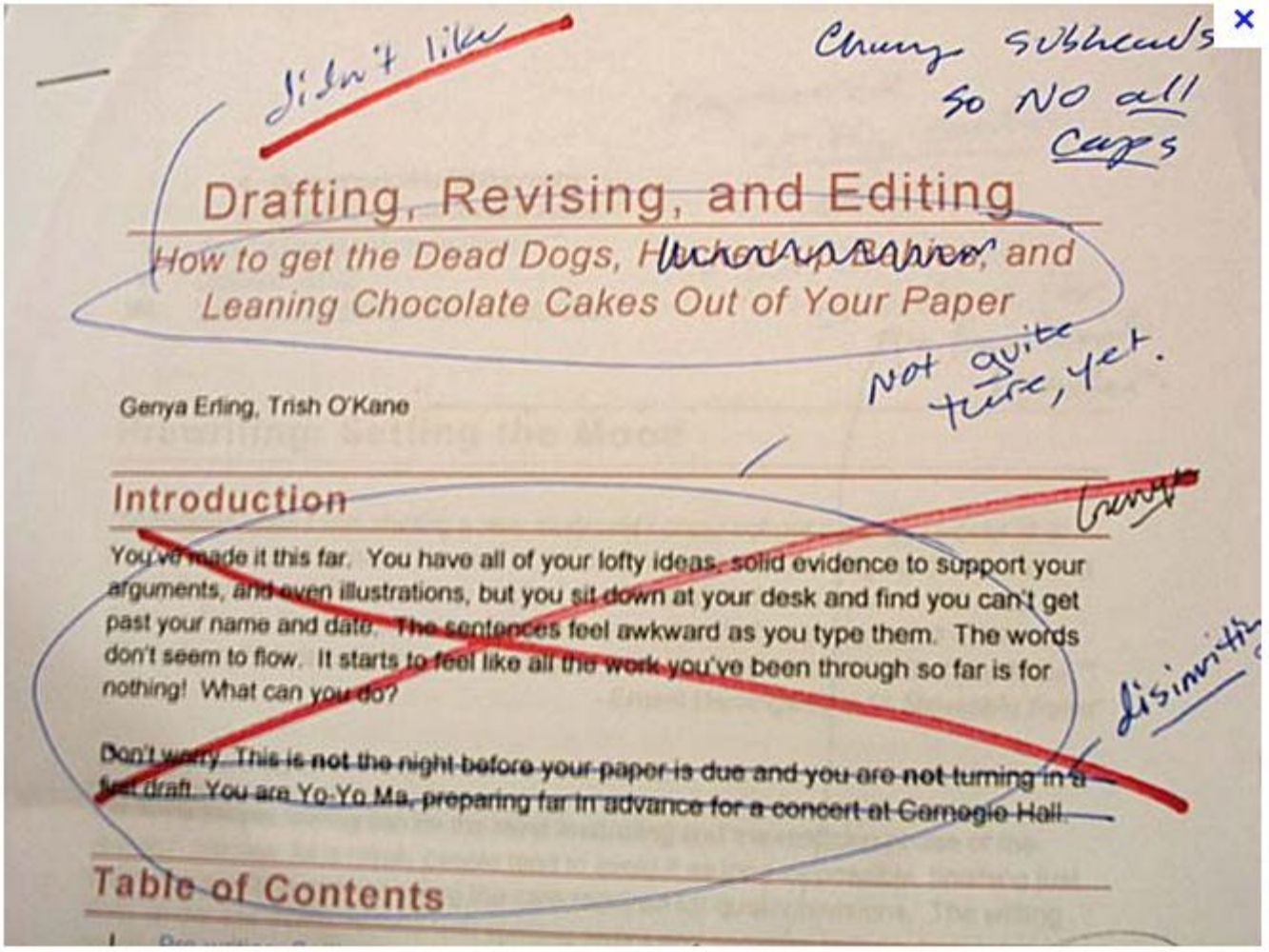
- Comes from publishing industry: you *mark up* a manuscript prior to publishing.

The revisions (mark up) editors make for the designers, so they know how to lay it out.

- They were traditionally done in blue pencil on author's manuscripts.

Other markup languages you may have heard of: LaTeX, XML

Example: marked up manuscript



Drafting, Revising, and Editing

How to get the Dead Dogs, Hiccoughing Babies, and Leaning Chocolate Cakes Out of Your Paper

Genya Erling, Trish O'Kane

Introduction

You've made it this far. You have all of your lofty ideas, solid evidence to support your arguments, and even illustrations, but you sit down at your desk and find you can't get past your name and date. The sentences feel awkward as you type them. The words don't seem to flow. It starts to feel like all the work you've been through so far is for nothing! What can you do?

Don't worry. This is not the night before your paper is due and you are not turning in a first draft. You are Yo-Yo Ma, preparing far in advance for a concert at Carnegie Hall.

Table of Contents

What is HTML?

✓ HTML is a markup language that describes webpages.

✓ It tells our browsers how to layout the page.

✓ It describes webpages using markup tags. We usually just refer to HTML's markup tags as "HTML tags"

Examples of HTML in use:

1. Publish online documents with headings, text, tables, lists, photos, etc.

2. Retrieve online information via hypertext links, at the click of a button.

3. Design forms for conducting transactions with remote services, for use in searching for information, making reservations, ordering products, etc.

4. Include spread-sheets, video clips, sound clips, and other

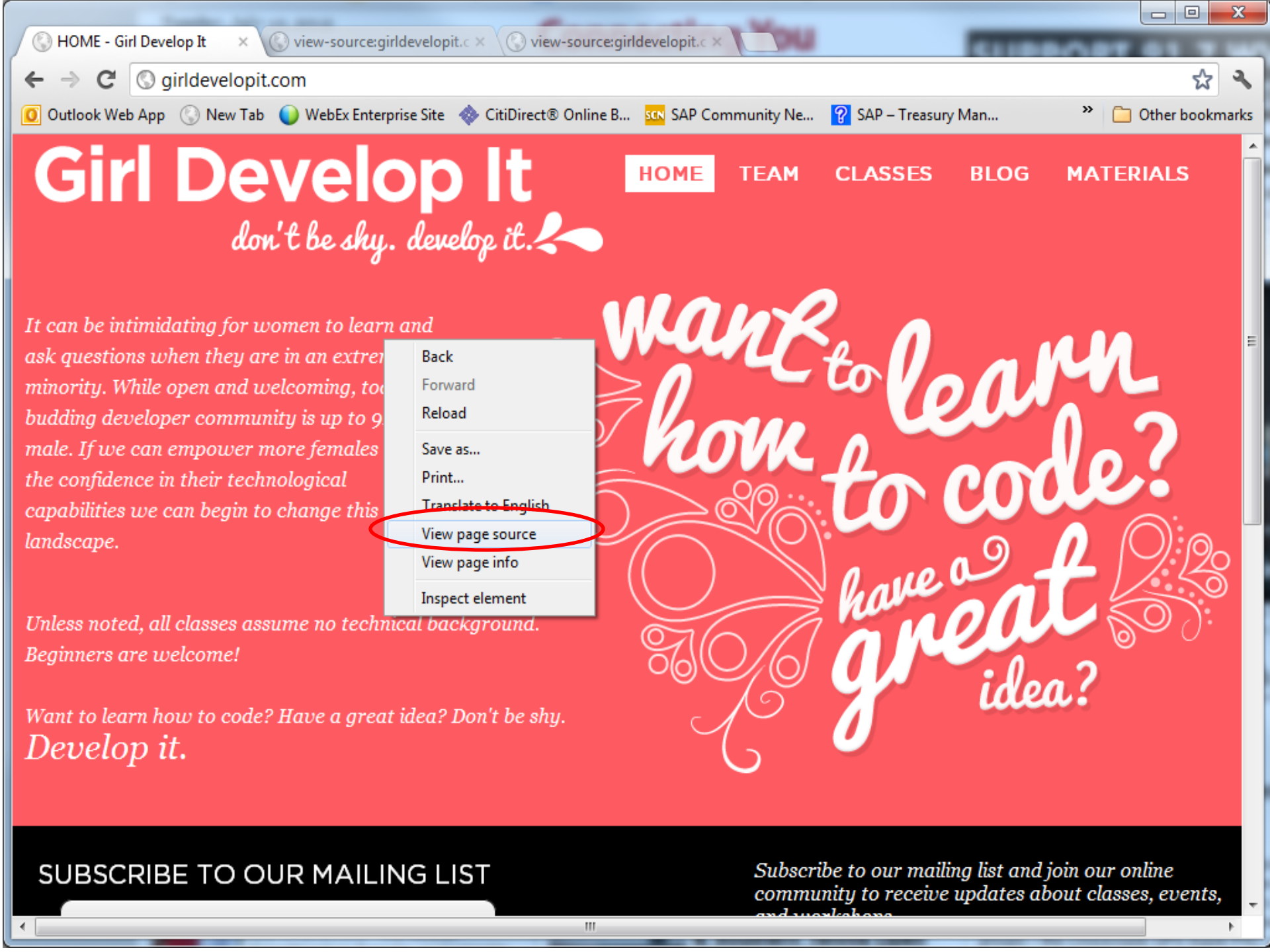
What does HTML look like?

Two ways to check it out:

1. View Page Source

Right-click on ANY website, and choose “View Page Source”

You can see the HTML and CSS of every single website on the web! HTML/CSS are open platforms.


HOME - Girl Develop It
view-source:girldevelopit.c
view-source:girldevelopit.c
girldevelopit.com
Outlook Web App
New Tab
WebEx Enterprise Site
CitiDirect® Online B...
SAP Community Ne...
SAP – Treasury Man...
Other bookmarks
Girl Develop It
don't be shy. develop it.
HOME
TEAM
CLASSES
BLOG
MATERIALS
It can be intimidating for women to learn and
ask questions when they are in an extrer
minority. While open and welcoming, toc
budding developer community is up to 9
male. If we can empower more females
the confidence in their technological
capabilities we can begin to change this
landscape.
Back
Forward
Reload
Save as...
Print...
Translate to English
View page source
View page info
Inspect element
want to learn how to code?
have a great idea?
Unless noted, all classes assume no technical background.
Beginners are welcome!
Want to learn how to code? Have a great idea? Don't be shy.
Develop it.
SUBSCRIBE TO OUR MAILING LIST
Subscribe to our mailing list and join our online
community to receive updates about classes, events,

HOME - Girl Develop It | view-source:girldevelopit.c

view-source:girldevelopit.com

Outlook Web App | New Tab | WebEx Enterprise Site | CitiDirect® Online B... | SAP Community Ne... | SAP – Treasury Man... | Other bookmarks

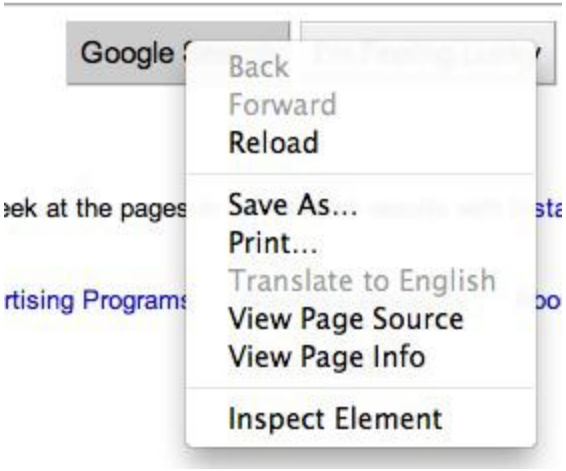
```
<!DOCTYPE html>
<!-- paulirish.com/2008/conditional-stylesheets-vs-css-hacks-answer-neither/ -->
<!--[if lt IE 7 ]> <html lang="en" class="no-js ie6"> <![endif]-->
<!--[if IE 7 ]>    <html lang="en" class="no-js ie7"> <![endif]-->
<!--[if IE 8 ]>    <html lang="en" class="no-js ie8"> <![endif]-->
<!--[if IE 9 ]>    <html lang="en" class="no-js ie9"> <![endif]-->
<!--[if (gt IE 9)|!(IE)]><!--> <html lang="en" class="no-js"> <!--<![endif]-->

  <head>
  <meta charset='utf-8' />
  <meta http-equiv="X-UA-Compatible" content="IE=edge,chrome=1" />
  <title>HOME - Girl Develop It</title>
      <meta name="csrf-param" content="authenticity_token"/>
<meta name="csrf-token" content="LSE1fk7G4ONLdWu+ca3OS3bV6M723h9gezp243scoHQ="/>

  <link href="/stylesheets/refinery/application.css" media="screen" rel="stylesheet" type="text/css" />
<link href="/stylesheets/application.css?1340682301" media="screen" rel="stylesheet" type="text/css" />
<link href="/stylesheets/refinery/formatting.css" media="screen" rel="stylesheet" type="text/css" />
<link href="/stylesheets/formatting.css?1340682301" media="screen" rel="stylesheet" type="text/css" />
<link href="/stylesheets/refinery/theme.css" media="screen" rel="stylesheet" type="text/css" />
<link href="/stylesheets/theme.css?1340682301" media="screen" rel="stylesheet" type="text/css" />
  <link href="/stylesheets/home.css?1340682301" media="screen" rel="stylesheet" type="text/css" />


  <!-- asynchronous google analytics: mathiasbynens.be/notes/async-analytics-snippet -->
<script>var _gaq=[['_setAccount','UA-19096645-1'],['_trackPageview'],['_trackPageLoadTime']];(function(d,t){
var g=d.createElement(t),s=d.getElementsByTagName(t)[0];
g.async=1;g.src='//www.google-analytics.com/ga.js';s.parentNode.insertBefore(g,s)
}(document,'script'))</script>


  <script src="/javascripts/modernizr-min.js" type="text/javascript"></script>
</head>

  <body>
            <div id="page_container">
      <header>
        <a href ="/"><img src="images/logo.gif" id="logo"></a>
<span id="menu">
```

What does HTML look like?

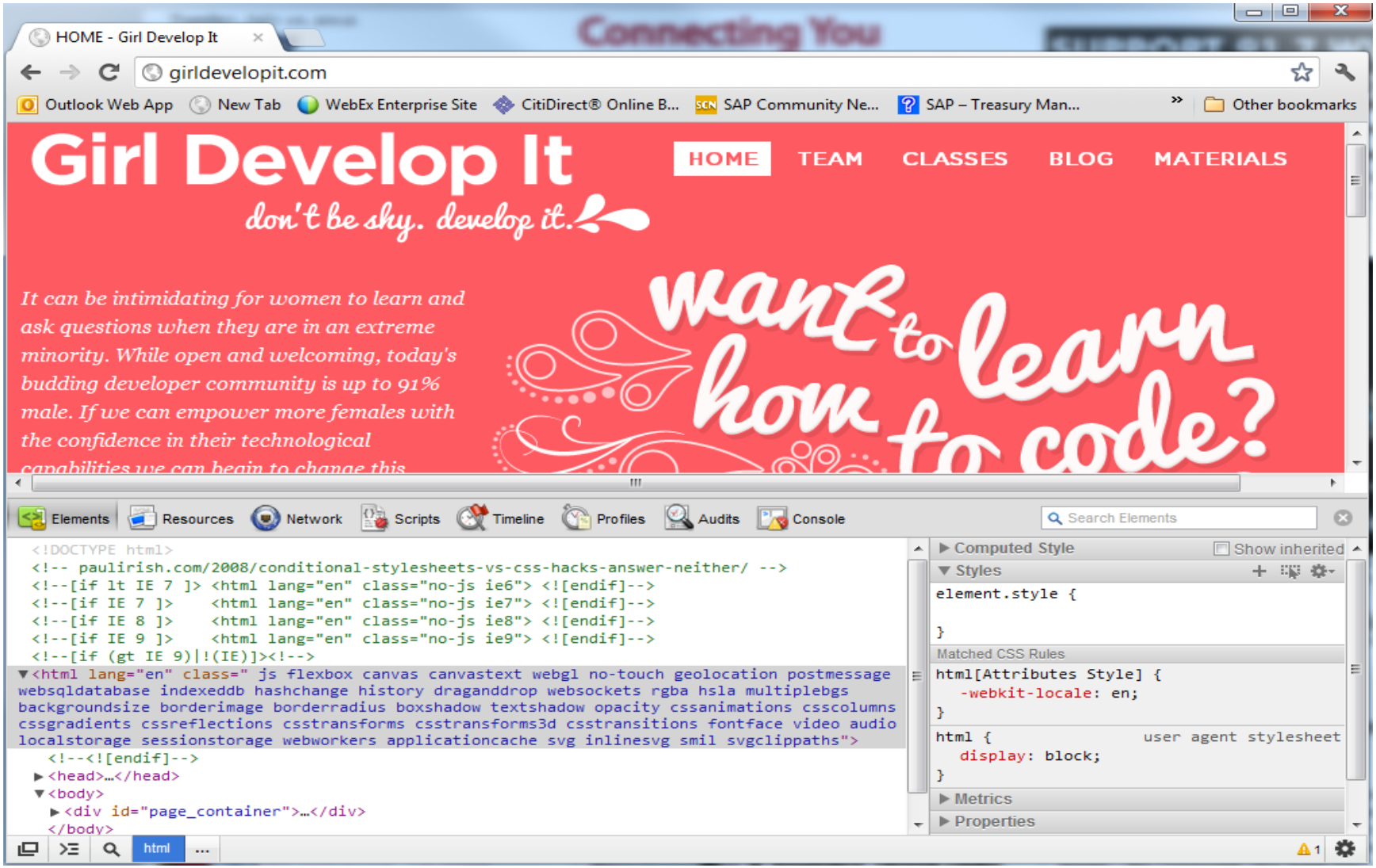
2. Inspect Element: Another great way to learn HTML is to inspect HTML elements on webpages you visit. There are two tools that can help you do this:

1. The Chrome browser has a right-click (control-click on a mac!) and "Inspect Element" tool built in

2. The Firefox browser has an extension called Firebug that also allows you to "Inspect Element"



Inspect Element (Chrome)



What does HTML look like?

HTML code:

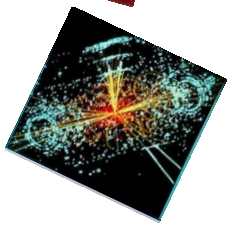
```
<html>
        <body>
                <h1>My First Heading</h1>
                <p>My first paragraph.</p>
        </body>
</html>
```

**note white space is important for humans; not computers*

HTML: A Brief History

1989: Tim Berners-Lee invents the Web with HTML as its publishing language

Berners-Lee was working at CERN in Switzerland, a particle physics lab.



Since particle physics often requires international collaboration, Berners-Lee wanted to create a way for researchers all over the world to share information easily.

HTML: A Brief History

The HTML that Berners-Lee created was based on SGML (Standard Generalized Mark-up Language)

SGML was used to mark up text into structural units such as paragraphs, headings, and list items.

HTML added something new: the hypertext link--what we've come to know of today as just "links"

HTML: A Brief History

1994: HTML 2 specification is released.

Netscape is formed. Begins adding to HTML without consulting international community.

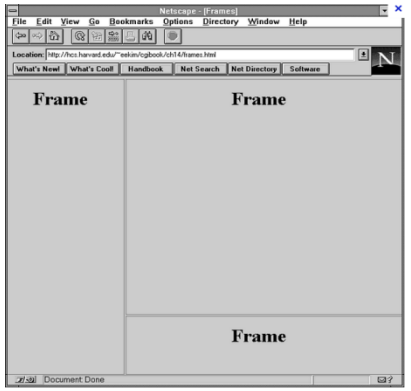
World Wide Web Consortium (aka the w3 consortium) is formed to “fulfill the potential of the Web through the development of open standards.”

HTML: A Brief History

1995: HTML is extended with lots of new tags,

including ones for formatting like BGCOLOR and FONT FACE. *“You’re not supposed to do that with HTML!”*

HTML 3 is released.



Internet Explorer browser comes out.

Netscape submits a proposal for FRAMES.

1998: HTML 4

2010: HTML 5 mobile enabled, dragging objects

Yahoo.com over the years

1994

1998

2002

2006

HTML: A Brief History

To learn more:

http://www.w3.org/People/Raggett/book4/ch02.html

Steven Johnson's "Where Good Ideas Come From"

HTML vs. CSS

CSS stands for Cascading Style Sheets.

- We will cover CSS in detail in class 2.

How does HTML fit in with CSS?

CSS was created to allow the separation of **document content** from **document presentation**.

HTML vs CSS

HTML defines the content of a document:

This is a HEADING

- this is a new bullet!

CSS defines the *formatting* and style of the content your website.

I am some blue text!

I am Courier font!

HTML/CSS and Browsers

You can think of HTML and CSS as languages that web browsers speak.

Your Internet Explorer, Firefox, Chrome or Safari Browser reads the HTML and CSS on a webpage, and creates what you see.

Free HTML/CSS Editors

You don't need anything more sophisticated than Notepad (on a PC) or TextEdit (on a Mac) to build an HTML page.

However, it is often easier to use an HTML editor.

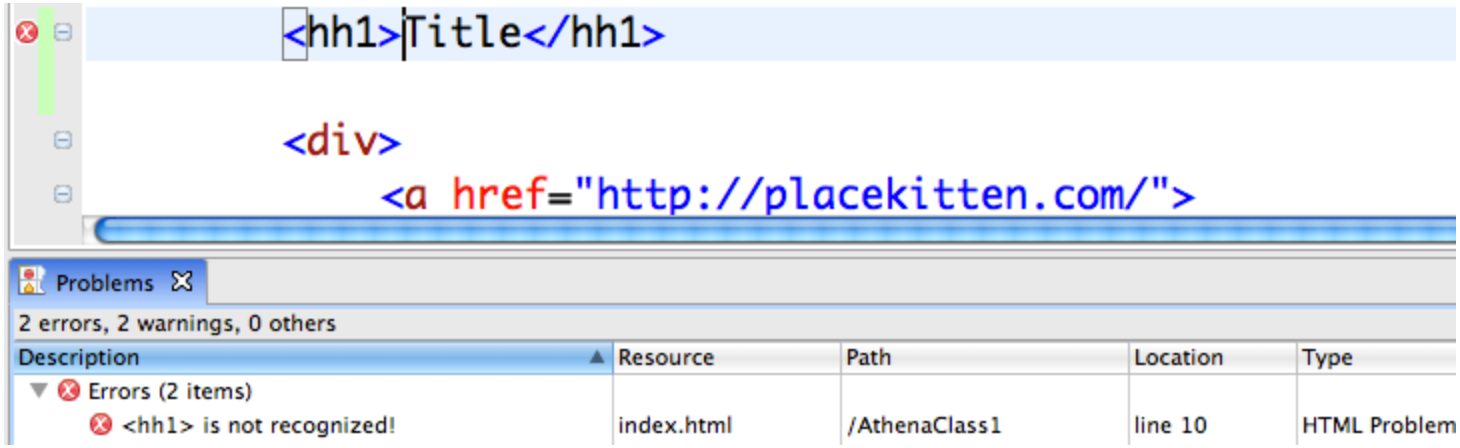
Here are some free ones:

- Aptana (Windows, Mac OS 10.5+, Linux): http://www.aptana.com/products/studio2/Download

- Komodo (Windows, Mac OS 10.4+, Linux): http://www.activestate.com/komodo-edit **note, free trial only**

Why use an Editor?

Editors like Aptana will highlight mistakes in your HTML or CSS code



Why use an Editor?

They will highlight different parts of your code in different colors, making it easier to read.

This is called “syntax highlighting” in programming.

```
<!-- comments are one color -->
<body>
    <!-- tags are yet another color -->
    <h1>
    <!-- the text inside tages are yet another color -->
    Athena HTML/CSS Class 1
```

HTML Vocabulary

HTML Terms:

Tag

- Opening Tag
- Closing Tag

Element

Attribute

HTML term: Tag

HTML surrounds your text with what's called a "tag"

Tags describe what the content is (is it a paragraph of text? A heading? A table? A list of items?)

Tags are surrounded by angle brackets <>

The name of the tag goes in between the angle brackets: <tag>

HTML term: Tag

Tags usually come in pairs:

Opening tag: <html>

Closing tag: </html>

Here's how you could create a paragraph of text in HTML, using the paragraph (<p>) tag:

```
<p>Hello, world! This is my first paragraph
of text</p>
```

Learning HTML tags

You learn HTML one tag at a time.

We are going to start by learning the following tags:

- html, head, title
- body
- p, h1-h6, strong

We will then move on to:

- a, img
- table

HTML Vocabulary

HTML Terms:

Tag

- Opening Tag
- Closing Tag

Element

Attribute

HTML term: Element

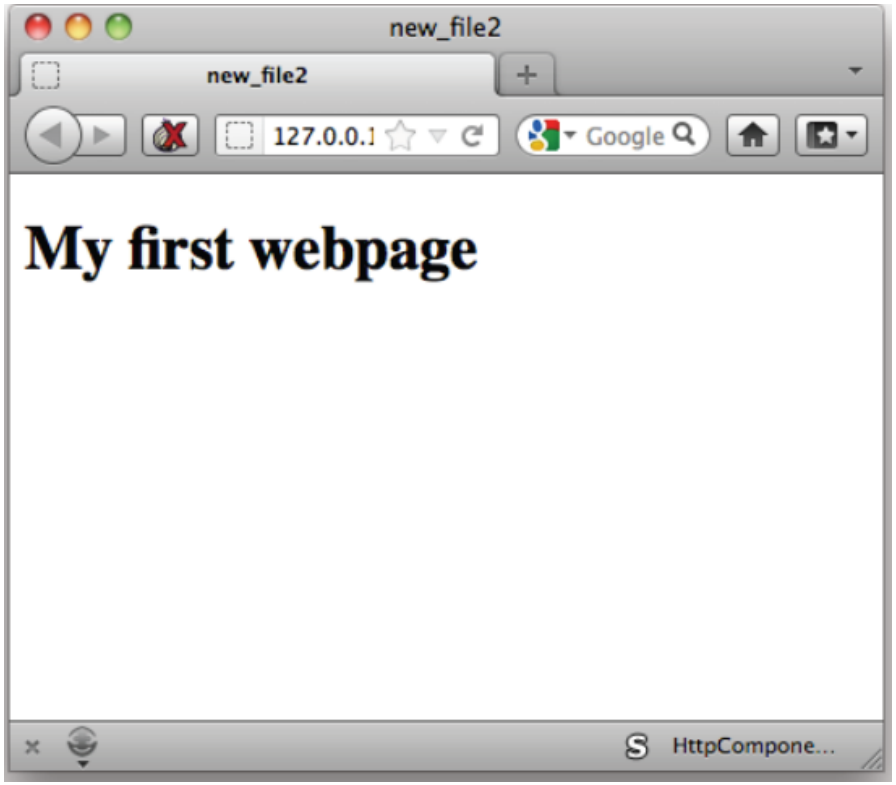
A starting tag + some text/content + an ending tag is called an HTML Element.

Examples of elements:

this is my great paragraph. I really hope
you like it, I put a lot of thought into it.
No, really, I did.
this is some bold text!!</
strong>

Element = <tag> + text + </tag>

A basic HTML page




```
<!DOCTYPE html PUBLIC "-//W3C//
DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/
loose.dtd">
<html lang="en">
    <head>
        <meta charset="utf-8"
content="text/html;
charset=utf-8">
        <title>new_file2</title>
    </head>
    <body>
        <h1>My first webpage</h1>
    </body>
</html>
```

First things first: Doctype

The very first thing on an HTML page is the doctype. Doctype tells us what kind of standards the page is using.

It is an instruction to the web browser about what version of the markup language the page is written in.

You do not have to type in DocType, it's automatically populated.

To read more:
http://www.w3schools.com/tags/tag_doctype.asp

```
<!DOCTYPE html PUBLIC "-//W3C//
DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/
loose.dtd">
<html lang="en">
    <head>
        <meta http-equiv="Content-
Type" content="text/html;
charset=utf-8">
        <title>new_file2</title>
    </head>
    <body>
        <h1>My first webpage</h1>
    </body>
</html>
```

<html>

Next comes the <html> **opening tag**.

All of your HTML code will go in between the

<html> and the **</html>**

The very last line of every webpage you create should always be **</html>**

```
<!DOCTYPE html PUBLIC "-//W3C//
DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/
loose.dtd">
<html
    <head>
        <meta http-equiv="Content-
Type" content="text/html;
charset=utf-8">
        <title>new_file2</title>
    </head>
    <body>
        <h1>My first webpage</h1>
    </body>
</html>
```

<html>

Since most tags come in pairs, there will be an **opening tag** and a **closing tag**.

The **closing tag** will have a backslash / before the tag name.

<html> is the **opening tag**.

</html> is the **closing tag**.

Everything in between them are other HTML tags.

```
<!DOCTYPE html PUBLIC "-//W3C//
DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/
loose.dtd">
<html>
    <head>
        <meta http-equiv="Content-
Type" content="text/html;
charset=utf-8">
        <title>new_file2</title>
    </head>
    <body>
        <h1>My first webpage</h1>
    </body>
</html>
```

The <head> element

There are two main sections in every HTML page:

- the <head>
- the <body>

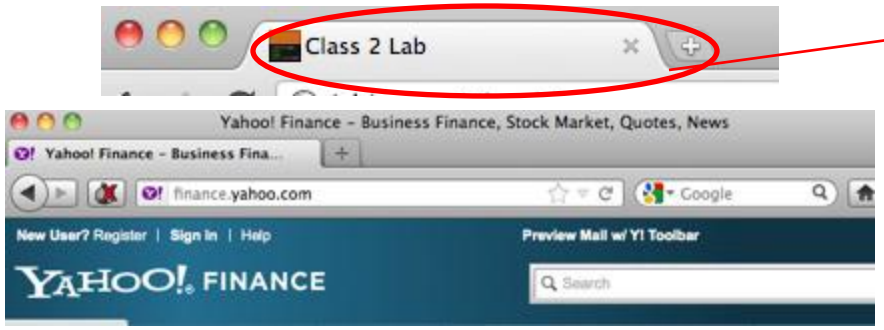
<head> allows you to define metadata for search engines, as well as things like the page's title.

Just like with <html>, <head> has an opening and closing tag.

```
<!DOCTYPE html PUBLIC "-//W3C//
DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/
loose.dtd">
<html
  <head>
      <meta http-equiv="Content-
Type" content="text/html;
charset=utf-8">
      <title>new_file2</title>
  </head>
   <body>
      <h1>My first webpage</h1>
   </body>
</html>
```

<title>

The **title** element allows us to set the text displayed for our page in the brower's tab, or the the top of the browser window:




```
<!DOCTYPE html PUBLIC "-//W3C//
DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/
loose.dtd">
<html
    <head>
        <meta http-equiv="Content-
Type" content="text/html;
charset=utf-8">
        <title>new_file2</title>

    </head>
    <body>
        <h1>My first webpage</h1>
    </body>
</html>
```

Nesting of HTML tags

Some tags can be nested within other tags.

title, for example, is nested inside the head tag:

```
<head>
    <title>My Amazing Webpage</title>
</head>
```

The **body** element

The body element typically contains the main content of your page.

All the visible content of your page will go inside the <body> opening and </body> closing tags.

```
<!DOCTYPE html PUBLIC "-//W3C//
DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/
loose.dtd">
<html
    <head>
        <meta http-equiv="Content-
Type" content="text/html;
charset=utf-8">
        <title>new_file2</title>
    </head>
    <body>
        <h1>My first webpage</h1>
    </body>
</html>
```

The **h1** element

<h1> will create a new heading for your website

<h1> stands for the 1st Heading

There are six different levels of headings:

h1, h2, h3, h4, h5, and h6

<h1> is typically used to set the **title** of your website

```
<!DOCTYPE html PUBLIC "-//W3C//
DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/
loose.dtd">
<html
    <head>
        <meta http-equiv="Content-
Type" content="text/html;
charset=utf-8">
        <title>new_file2</title>
    </head>
    <body>
        <h1>My first webpage</h1>
    </body>
</html>
```

The **h2** element

<h2> will create a new heading for your website

<h2> stands for the 2nd Heading

There are six different levels of headings:

h1, h2, h3, h4, h5, and h6

<h2> is typically used to set the **subtitle** of your website

```
<!DOCTYPE html PUBLIC "-//W3C//
DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/
loose.dtd">
<html
    <head>
        <meta http-equiv="Content-
Type" content="text/html;
charset=utf-8">
        <title>new_file2</title>
    </head>
    <body>
        <h1>My first webpage</h1>
        <h2>Where I learn HTML</h2>
    </body>
</html>
```

The **p** element

 will create a new paragraph when you surround a section of text with and

It will create space above and below any text you wrap inside it.

```
<!DOCTYPE html PUBLIC "-//W3C//
DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/
loose.dtd">
<html
   <head>
      <meta http-equiv="Content-
Type" content="text/html;
charset=utf-8">
      <title>new_file2</title>
   </head>
   <body>
      <h1>My first webpage</h1>
      <h2>Where I learn HTML</h2>
      <p>
       This is my first paragraph
of text!
      </p>
   </body>
</html>
```

Spacing your content

There are two ways to add whitespace around your content:

...

- p stands for paragraph

  It will create space above and below any text

  you wrap inside it.

- br stands for break

  It will create a new line break (hitting ‘Enter’) anywhere you place it.

HTML tags:
 and

 tag is used to insert line breaks

- The
 tag is our first example of a self-closing tag.
- You can write is
 or
, both will work.
-
 is preferred in HTML5

  tag is used to insert non-breaking space to add spaces to your text

Self-Closing Tags

Tags usually come in pairs...but not always

- Most tags have a starting and ending tag.
- However, some tags are “self-closing” tags.

  They don’t require a closing tag, because you don’t have anything to sandwich between them.

All the information you need is in the first

tag!

Example self-closing tags: br, img

Character Codes

There are character codes for many different characters in many different languages

- Delta
  δ δ
- Copyright symbol
  © ©
- Grave
  ` `
- An “a” with the grave
  à à

Full list:

http://rabbit.eng.miami.edu/info/htmlchars.html

HTML Vocabulary

HTML Terms:

- Tag
  - Opening Tag
  - Closing Tag

Element (*Element = <tag> + text + </tag>*)

Attribute

HTML Term: Attribute

Attributes provide additional information about HTML elements.

Attributes are formatted like this: attr="value"

Attributes are always specified in the opening tag.

Attribute values should always be in quotes.

An example: in <a href="http://www.google.com">, href is the attribute.

HTML: Attributes

We use an HTML attribute to specify where we want the a tag to go.

- The tag **a** is probably one of the most frequently tags in all of HTML.
  - <a> tag defines the hyperlink (Twitter)
  - **href** attribute specifies the destination of a link (@gdicincinnati)

Example: Go to Twitter!

Try it yourself: http://w3schools.com/tags/tag_a.asp

More HTML Tags: <img>

Another very common HTML tag is the img tag, which creates images.

The img tag has lots of attributes you

can specify.

The most important one is the **src** attribute.

Without a **src**, you won't display an image!

alt: Specifies an alternate text for an image. Used by search engines, and by screen readers.

- height
- width

HTML Forms

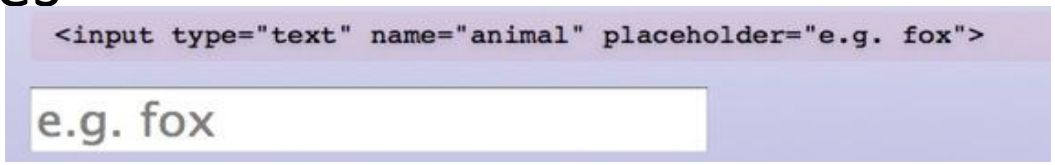
A form is usually received and interpreted by a program on a server, written in a programming language like PHP or Ruby.

If you don't have a server, you can also have all the form contents sent to the email address of your choice, using extra attributes in the form element.

HTML Forms

- What I suggest for creating forms is to use Google Forms, which allows you to embed forms.
  - You must have a Google account to create a form
- You can also use HTML to define forms:

  including things like:
  - drop-down boxes
  - text fields
  - radio buttons
  - buttons



HTML Validation

A good way to make sure your HTML is valid, and doesn't have any errors, is to validate it.

Aptana can do this for you.

You can also find many sites on the web that will allow you to copy/paste your code in, and it will point out any errors.

Aptana: New Project

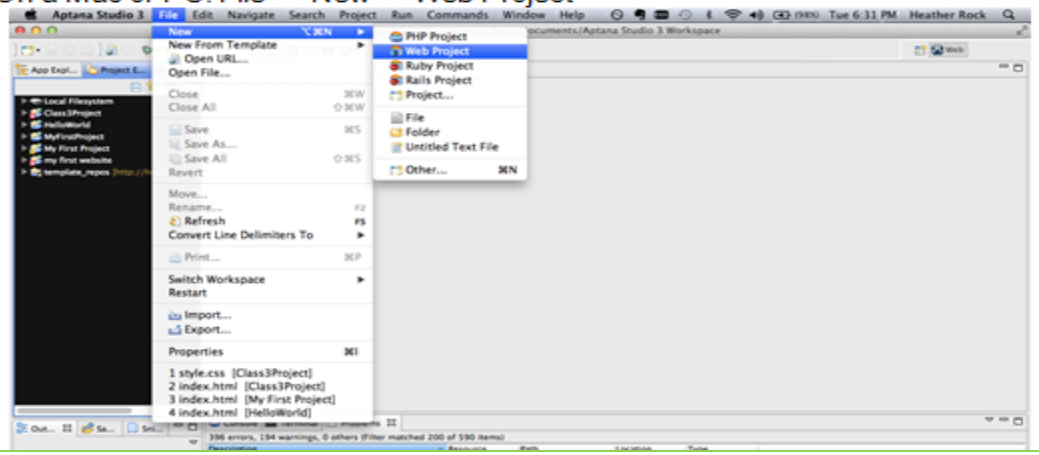
Refer to Class 1 Handout 1 for instructions on how to set up a project.

Intro to HTML/CSS

Class 1 Handout: Creating a New Project in Aptana

Create a new project in Aptana

- On a Mac or PC: File -> New -> Web Project



HTML in Practice

Refer to Class 1 Handout 2 for instructions and code.

Exercise 1: html, head, title, body, p, h1-h6

Exercise 2: br,   character codes

Exercise 3: a, href, img, src

Exercise 4: img, src

Exercise 5: ol, ul

Exercise 6: th, tr, td

Exercise 7: Forms

Your Homework

As a homework assignment, you should:

1. Review the following links:
   - ❑ The a tag: http://www.w3schools.com/tags/tag_a.asp
   - ❑ The img tag: http://www.w3schools.com/tags/tag_img.asp

2. Go to the htmldog HTML tag list: http://htmldog.com/reference/htmltags/
   - ❑ Pick three tags we did NOT cover today and read through what they do
   - ❑ Experiment with these tags in a HTML page

Questions?

Extra Topics

Time permitting!

How do I create a website?

1. Register a Domain

2. Get Hosting for that Domain

3. Upload your HTML files, images and CSS files to your web server

Jargon Alert!

DOMAIN

http://www.something.com

DOMAIN REGISTRATION

The process of claiming / reserving a domain name.

Lasts for one year, then you must renew the domain if you want to keep it. Should not cost you more than $10/year.

Step One: Registering a Domain

Lots of choices:

- godaddy.com
- namecheap.com
- register.com
- dreamhost.com (recommended)
- networksolutions.com
- bluehost.com

Step Two: Getting Hosting

Once you've secured the domain, you need a way to make it available for others to see!

You need someone to host your domain in order to use a domain you've registered.

A hosting service provides you with a **server**.

- The server is what actually makes your website viewable from any browser, on any network, anywhere.

Jargon Alert!

SERVER

A server is just a computer!

A dedicated computer that does nothing but sit around and wait for you to call.

When someone types in your domain (blahblah.com), the server receives the request, and **serves** you back the website.

How Do Servers Receive your Request?

When someone types in your domain (blahblah.com), how does your request get to the server?

Through DNS: Domain Name System

- DNS is like a phone book.

It takes a domain (blahblah.com) and looks up the IP address for that domain.

- This is the IP address of the server that hosts your domain.

Jargon Alert!

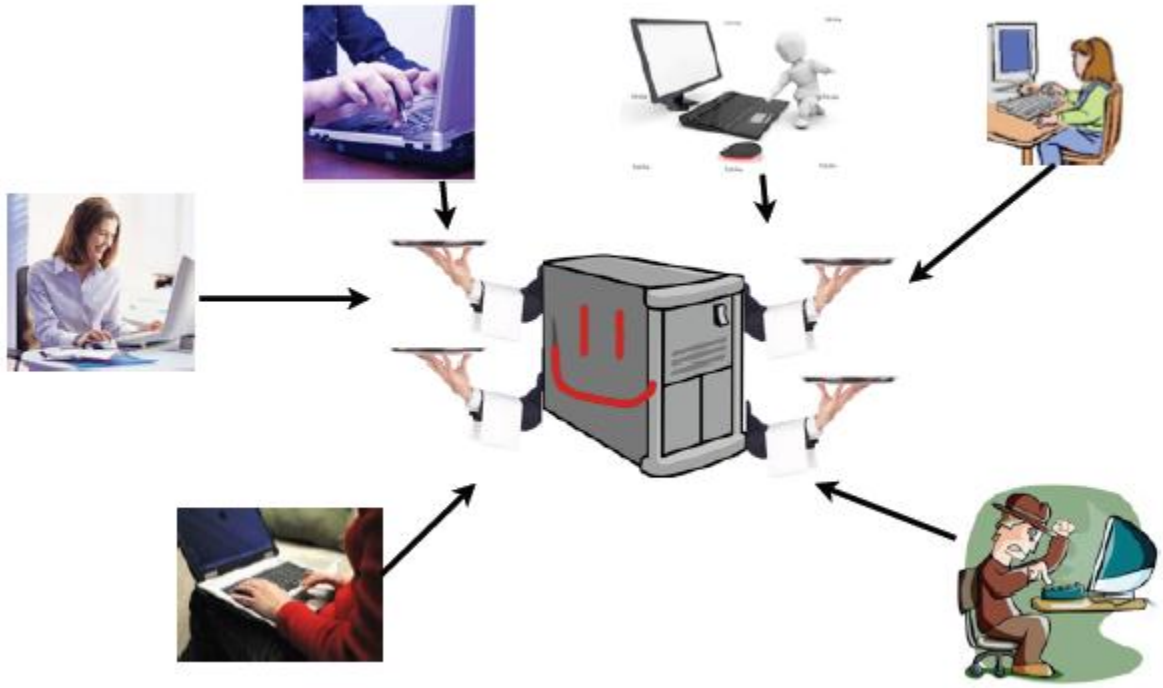
IP ADDRESS

The “address” of your computer. It tells the Internet how to connect to a given machine.

- Every single computer that is connected to the internet has a unique IP address.

Hosting your Domain, Continued

A dedicated server will allow multiple people to connect to your site at the same time.



Hosting your Domain, Continued

A good hosting company will allow many thousands of people to simultaneously view your site, with no crashes.

- Even a good hosting service may not be able to prepare you for “The Oprah Effect”
  - If you are on Oprah, and a million people all try and access your site at once, your server may crash!
    - If you have plans to go on Oprah, hire a network specialist to guard your site against crashing!

Hosting your Domain, Continued

Who should I use for hosting?

Again, you have lots of choices. Some common ones:

- godaddy.com
- bluehost.com
- rackspacecloud.com
- dreamhost.com -- what I use and recommend

Comprehensive list:
http://ietherpad.com/3GA5A4CG9F

Contact Info

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- Meetup
- Facebook
- Twitter
- Girl Develop It Website

Thank you!