

Lecture 2: HTML Continued

Review From Last Time

- Web sites are built by writing HTML code.
- Tags are the building blocks of HTML.
- Tags always follow a specific format.
- There are two main types of tags, opening tags and closing tags.

Review From Last Time

- A closing tag looks just like an opening tag with a forward slash “/” after the opening angle bracket:

Opening tags:

`<body>`

`<div>`

`<p>`

`<a>`

Closing tags:

`</body>`

`</div>`

`</p>`

`<a>`

Review From Last Time

- A pair of tags, consisting of an opening tag and a closing tag, affects the text between the opening and closing tags.
- This includes plain text or other tags.
- Attributes determine how a pair of tags affects the contents.
- Only opening tags get attributes.

Review From Last Time

Example:

You type:

```
<span style="font-weight: bold">Hello</span> world!
```

... and your browser displays:

Hello world!

Only the text between the opening and closing span tags is bold.

Review From Last Time

- There are several important tags that appear in every web page.
- A web page always begins with the opening `<html>` tag and ends with the closing `</html>` tag.
- The head is contained between the `<head>` tags.
- The `<title>` tags go inside the head.
- The body is contained between the `<body>` tags.

Review From Last Time

A simple web page:

```
<html>
  <head>
    <title>A Simple Web Page</title>
  </head>
  <body style="background: green;">
    Hello world!
  </body>
</html>
```

Review From Last Time

Making links:

- The `<a>` (anchor) tags are used to make links.
- The href attribute determines the link location.
- The link text goes between the opening and closing `<a>` tags.

Example:

```
<a href="http://www.google.com">  
Click here to go to Google.</a>
```

Review From Last Time

Adding images:

- The `` tag adds an image to your page.
- The `src` attribute determines the file name.
- The `` tag does not require a closing tag.

Example:

```

```

Review From Last Time

Making images into links:

You can make an image into a link by placing it between the opening and closing `<a>` tags:

```
<a href= "http://www.google.com">  
  
</a>
```

Review From Last Time

Nesting tags within tags:

- The contents of (almost) any tag pair can include other tags:

```
<div><span><p>Hello World!</p></span></div>
```

- You always need to close the innermost tag first.
This is wrong:

```
<div><span><p>Hello World!</span></p></div>
```

More on Formatting text

We'll be working with a simple web page again today. Start by creating the basic layout in notepad:

```
<html>
  <head>
    <title>My Web Page!</title>
  </head>
  <body>

  </body>
</html>
```

More on Formatting text

Now add the following between the body tags:

line 1

line 2

line 3

Save your html file and open it in a Web browser.
What do you see?

More on Formatting text

Now try this example:

Small space

Big

Bigger

Space

Space

More on Formatting text

Example number 1:

line 1 line 2 line 3

Example number 2:

Small Space Big Space Bigger Space

What is going on here?

More on Formatting text

Web Browsers collapse any amount of whitespace down to a single space.

- Spaces, tabs, and carriage returns are considered whitespace characters.
- You can combine any number of characters in any way, and your web browser will only display a single space.

More on Formatting text

Here's another example:

Welcome

my web to
page!

What does your browser display?

More on Formatting text

Here's another example:

Welcome

my web to
page!

What does your browser display?

Welcome to my web page!

More on Formatting text

So what if we want manual carriage return, or a big gap between two words? How can we tell the web browser to format the text the way we want?

More on Formatting text

So what a manual carriage return, or a big gap between two words? How can we tell the web browser to format the text the way we want?

With a tag!

The `
` tag

There are several way to make text appear on a new line. The simplest as the `
` tag.

Example:

Line 1
Line 2

Your browser displays:

Line 1
Line 2

The `
` tag

- Like the `` tag, the `
` tag does not require a closing tag.
- You do not need to start a new line in your code for the `
` tag to work. All of the following will have the same effect:

Line 1
Line 2

Line 1
Line 2

Line 1

Line 2

The `
` tag

There are times when the `
` tag is the right tag to use, and times when it isn't.

Advantages:

- The `
` tag is convenient for adding the occasional line break, because no closing tag is required.
- You can also use multiple `
` tags to make multiple line breaks.

The `
` tag

There are times when the `
` tag is the right tag to use, and times when it isn't.

Disadvantages:

- The `
` tag has no content, so there's nothing “inside” of it to apply style information to.
- This makes it inefficient for formatting paragraphs.

The `<p>` tag

- The `<p>` and `</p>` tags are better than the `
` tag for formatting a series of paragraphs.
- The contents of the paragraph go between the opening and closing `<p>` tags.
- By adding attributes to the opening `<p>` tag, you can control the way the paragraph is displayed.

The <p> tag

Example (using Wikipedia's definition of HTML):

```
<p>This is paragraph 1.</p>
```

```
<p>This is paragraph 2.</p>
```

Your browser displays:

This is paragraph 1.

This is paragraph 2.

The <p> tag

Why is this better than the
 tag?

Consider this example:

```
<p style= "text-indent: 20px">The first line of this paragraph  
is indented. I couldn't do this with a break tag!</p>
```

Your browser displays:

The first line of this paragraph is indented. I couldn't do this with a break tag!

The <p> tag

- The
 and <p> tags are both useful.
- Sometimes it's better to use the
 tag, and sometimes it's better to use a pair of <p> tags.
- Neither way is “right” or “wrong.”
- The ability of the <p> tag to format its contents will be very useful when we cover CSS.

The `<hr>` tag

- The `<hr>` is similar to the `
` tag.
- The `<hr>` tag creates *two* lines breaks, and places a horizontal lines in the gap.
- The same effect can is possible with a `<div>` or `<p>` tag. We will see how when we get to CSS.

The <div> tag

- The <div> (page division) tags are also useful for formatting text.
- The opening and closing <div> tags can also be used to create paragraphs.
- This tag will be very important when we cover CSS.

<div> vs <p>

- By default, the <p> tag creates a wider gap between paragraphs.
- This can easily be modified with CSS.
- Choosing a <div> tag or a <p> tag for your paragraphs is a matter of personal preference.
- The <div> tag has other uses which we will cover soon.

What about ``?

- We've also used the `` tag to format text.
- The major difference between a `` tag and a `<div>` or `<p>` tag is that a span tag is displayed *inline*.

Inline vs Block

- If a tag is displayed as a *block*, it occupies a box-shaped region in your browser window.
- The box-shaped region has a width and height which we can control.
- The box-shaped region will push other content out of the way.
- Both `<div>` and `<p>` are displayed as blocks.

Inline vs Block

Here's an example to show you the difference.
Add the following to the body of your Web page:

Welcome ``
to`
`my web`` page!

`

`

Welcome `<div style="background: red;">`
to`
`my web`</div>` page!

Inline vs Block

- If a tag is displayed *inline*, it simply affects the text between the opening and closing tags, and affects nothing else.
- Inline tags have no dimensions.
- The `` and `<a>` tags are displayed inline.

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Adding Spaces

- There are several tags that can be used for making line breaks.
- There is not a tag for inserting a space.
- Usually you can use the style attribute to insert space where you want (for example, indenting the first line of a paragraph)

But what if you can't do what you want with the style attribute?

Special Characters

- In html, there are some “special characters.”
- Each of these special characters has a code, which you can add to your html document.
- The code for adding a space is “ ” (without the quotes!)
- This is a good way to add an occasional space, but usually there is a better way to do it.

Special Characters

- Character codes follow a specific format.
- Character codes always start with the ampersand and end with a semicolon.
- Some examples:

", &, <, >,

Special Characters

Special characters can do more than create spaces.

- What if you want to display the text “<div>” on your web page?
- How do you prevent the browser from treating it as HTML?

Special Characters

You can use special characters!

- There are special characters for the left and right angle brackets.
- The character codes are `<` and `>`; (respectively)
- To display the text “`<div>`”, you would type `<div>`.

Special Characters

- Special characters can also be used to add other symbols that are not found on the keyboard such as:
- For example, ® is ® and © is ©.
- See the link on the course web page for a list of special characters.