

Welcome to the lecture on Chapter 2, HTML Basics.

WHAT IS HTML?

- ▶ **HTML:**
The set of markup symbols or codes placed in a file intended for display on a Web browser page.
- ▶ The World Wide Web Consortium (<http://w3c.org>) sets the standards for HTML and its related languages.

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HTML is a set of markup symbols or codes that surrounds pieces of text to help identify the structure or meaning of the content, as well as how to style the text in the browser.

HTML ELEMENTS

- Each markup code represents an HTML **element** .
- Each element has a purpose.

Most elements are coded as a pair of tags:
an opening tag and a closing tag.

- Tags are enclosed in angle brackets, "<" and ">" symbols.

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Each individual markup code is referred to as an element or tag. Most elements are coded with both an opening and closing tag, and the tags are enclosed in angle brackets. The angle brackets can be found on the comma and period keys on the keyboard.

WHAT IS HTML5 ?

- ▶ Newest draft version of HTML/XHTML
- ▶ Supported by modern browsers
 - ▶ Safari, Google Chrome, Firefox, Internet Explorer 9
- ▶ Intended to be backwards compatible
- ▶ Adds new elements
- ▶ Adds new functionality
 - ▶ Edit form data
 - ▶ Native video and audio
 - ▶ And more!



Source: W3C <http://www.w3.org/html/logo/>

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As discussed in Chapter 1, in this course we will be working with HTML5. HTML 5 is the newest version of HTML and incorporates features of both HTML and XHTML. At the time this book was written it was on its way to becoming an official recommendation by the W3C. In On October 28, 2014 HTML5 was released as a stable W3C Recommendation.

DOCUMENT TYPE DEFINITION

▶ Document Type Definition (DTD)

- ▶ doctype statement
- ▶ identifies the version of HTML contained in your document.
- ▶ placed at the top of a web page document

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Because multiple versions and type of HTML and XHTML have existed, the W3C recommends identifying the type of markup language being used in the web page you are creating. This is done through the use of the Document Type Declaration, also referred to as the DTD. The DTD is placed at the top of the web page.

DTD EXAMPLES

XHTML 1.0 Transitional DTD

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"  
http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd>
```

HTML5 DTD

```
<!DOCTYPE html>
```

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The Doctype Declaration is different for each version of HTML. In this example you can see how long and complicated the doctype declaration was for an XHTML document as compared to an HTML5 document. The doctype for an HTML5 document is simply `<!DOCTYPE html>`

EXAMPLE HTML5 WEB PAGE

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>Page Title Goes Here</title>
    <meta charset="utf-8">
  </head>
  <body>
    ... body text and more HTML5 tags go here ...
  </body>
</html>
```

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This is an example of the HTML5 structure that would be used for starting a new document. Take special note of how this is indented. When tags are nested within other tags, they need to be indented within the tags.

HEAD & BODY SECTIONS

▶ **Head Section**

Contains information that describes the Web page document

```
<head>
```

...head section info goes here

```
</head>
```

▶ **Body Section**

Contains text and elements that display in the Web page document

```
<body>
```

...body section info goes here

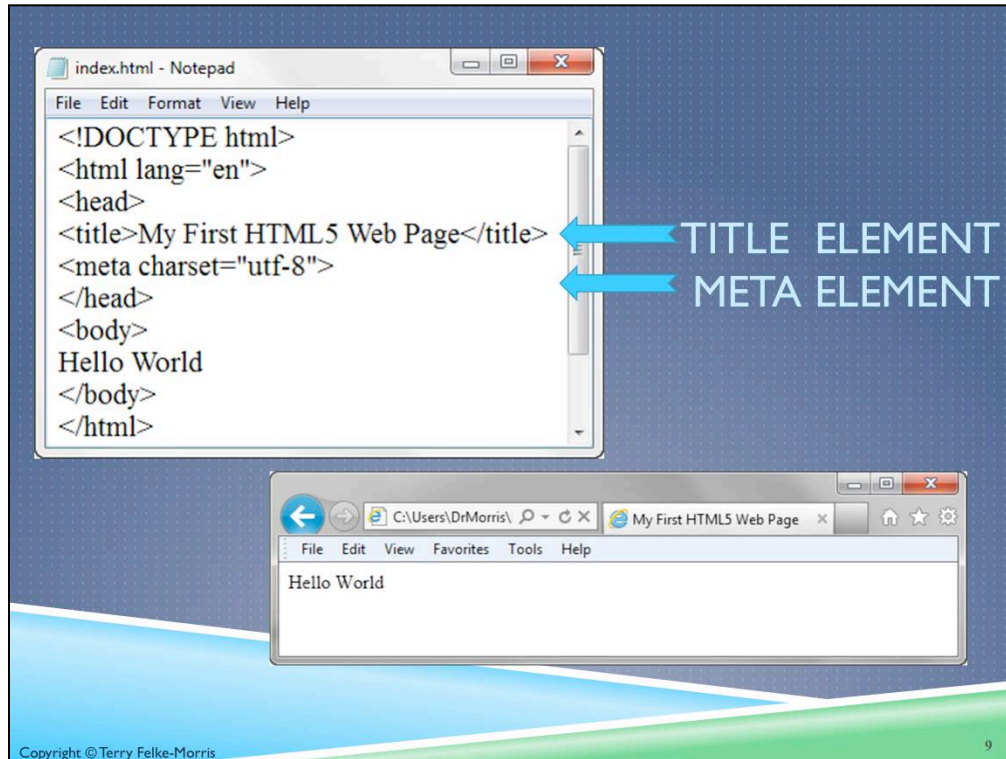
```
</body>
```

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The head element has an open and close head tag and contains information that describes the page to the browser. At a minimum, it should contain the title element and the meta element.

The body element contains all the information that actually displays in the browser viewport.



This example shows the title element “My first HTML5 Web Page” and the meta charset=“utf-8”. If you look closely you can see the title displayed in the browser tab. The information that lies between the open and close title tag is what displays in the browser tab. We’ll discuss the meta charset later in the course. For now all you need to know is that it is required in the head.

The words “Hello World” are contained within the body tags and are displayed in the browser viewport window.

HEADING ELEMENT

`<h1>Heading Level 1</h1>`
`<h2>Heading Level 2</h2>`
`<h3>Heading Level 3</h3>`
`<h4>Heading Level 4</h4>`
`<h5>Heading Level 5</h5>`
`<h6>Heading Level 6</h6>`

Heading Level 1
Heading Level 2
Heading Level 3
Heading Level 4
Heading Level 5
Heading Level 6

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Heading elements are organized into six levels, h1 through h6. The book discusses how the font size changes as the heading level changes. This is essentially true in that the default browser styles apply a large font to the h1 tag, and the font size decreases with each subsequent heading tag. However the font size can be changed with CSS (which we will learn about later) and the most important thing for you to understand is that the importance of the content is what should determine which heading tag to use, not how you want it to look in the browser. The most important heading on the page (or section) should have a h1 tag, and the next important heading or set of headings should be coded with h2 tags, etc. You think about the document outline when selecting your heading tags, not the appearance of the heading.

PARAGRAPH ELEMENT

- ▶ Paragraph element

`<p> ...paragraph goes here... </p>`

- ▶ Groups sentences and sections of text together.

- ▶ Block Display – Configures empty space above and below

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Paragraph elements are used to group sentences and sections of text together. Text that is contained in paragraph tags will be displayed as block level elements and there will be empty space above and below the element. If you look at your text and the way it is displayed, you will also see blank space above and below every paragraph. This is another example of default browser styles, which can also be changed with CSS if you want it to be displayed differently.

LINE BREAK ELEMENT

- ▶ Line Break element

- ▶ Stand-alone, or void tag

*...text goes here

This starts on a new line....*

- ▶ Causes the next element or text to display on a new line

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The line break element is created by wrapping the letters br (representing the word break) in angle brackets. The line break tag is a stand alone tag, or void tag. There is no closing tag. A way to think about whether or not there is going to be a closing tag is to understand that tags surround content. So if you have a paragraph, there will be an open paragraph tag, then the content, then the closing paragraph. With a line break, there is no content to surround. Therefore it is a stand alone tag. The line break just forces the next element or text to display on a new line and would be equivalent to hitting the return or enter key on a keyboard when creating a Word document.

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BLOCKQUOTE ELEMENT

- ▶ Blockquote element

- ▶ Indents a block of text for special emphasis

<blockquote>

...text goes here...

</blockquote>

- ▶ Block Display – Configures empty space above and below

A blockquote element is used to surround a quotation. The default browser styling is that the text will be indented on both the left and right sides, and empty space will be added above and below quote.

PHRASE ELEMENTS

- Indicate the context and meaning of the text

Element	Example	Usage
	bold text	Text that has no extra importance but is styled in bold font by usage and convention
	emphasized text	Causes text to be emphasized in relation to other text; usually displayed in italics
<i>	italicized text	Text that has no extra importance but is styled in italics by usage and convention
<mark>	mark text	Text that is highlighted in order to be easily referenced (HTML5 only)
<small>	small text	Legal disclaimers and notices ("fine print") displayed in small font-size
	strong text	Strong importance; causes text to stand out from surrounding text; usually displayed in bold
<sub>	sub text	Displays a subscript as small text below the baseline
<sup>	sup text	Displays a superscript as small text above the baseline

PROPER NESTING

CODE:

```
<p><i>Call for a free quote for your web development needs:  
<strong>888.555.5555 </strong></i></p>
```

BROWSER DISPLAY:

*Call for a free quote for your web development needs: **888.555.5555***

HTML LISTS

- ▶ Unordered List
- ▶ Ordered List
- ▶ Description List
formerly called a definition list

UNORDERED LIST

- ▶ Displays a bullet, or list marker, before each entry in the list.

- ▶ ``
Contains the unordered list

- ▶ ``
Contains an item in the list

- TCP
- IP
- HTTP
- FTP

UNORDERED LIST EXAMPLE

```
<ul>  
  <li>TCP</li>  
  <li>IP</li>  
  <li>HTTP</li>  
  <li>FTP</li>  
</ul>
```

- TCP
- IP
- HTTP
- FTP

ORDERED LIST

- ▶ Displays a numbering or lettering system to itemize the information contained in the list
- ▶ ``
 - Contains the ordered list
 - ▶ type attribute determines numbering scheme of list, default is numerals
- ▶ ``
 - Contains an item in the list

ORDERED LIST EXAMPLE

```
<ol>  
  <li>Apply to school</li>  
  <li>Register for course</li>  
  <li>Pay tuition</li>  
  <li>Attend course</li>  
</ol>
```

1. Apply to school
2. Register for course
3. Pay tuition
4. Attend course

DESCRIPTION LIST

- Useful to display a list of terms and descriptions or a list of FAQ and answers
 - `<dl>`
Contains the description list
 - `<dt>`
Contains a term/phrase/sentence
Configures empty space above and below the text
 - `<dd>`
Contains a description of the term/phrase/sentence
 - Indents the text
 - Configures empty space above and below the text

DESCRIPTION LIST EXAMPLE

```
<dl>  
  <dt>IP</dt>  
    <dd>Internet Protocol</dd>  
  <dt>TCP</dt>  
    <dd>Transmission Control Protocol</dd>  
</dl>
```

IP	Internet Protocol
TCP	Transmission Control Protocol

SPECIAL CHARACTERS

- Display special characters such as quotes, copyright symbol, etc.

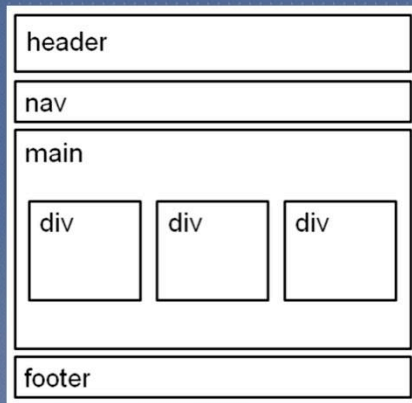
Character	Code
©	©
<	<
>	>
&	&
	

DIV ELEMENT

- ▶ Configures a structural block area or “division” on a web page with empty space above and below.
- ▶ Can contain other block display elements, including other div elements

```
<div>Home Services Contact</div>
```

HTML5 STRUCTURAL ELEMENTS



▶ header Element

`<header></header>`

Contains the web page document's headings

▶ nav Element

`<nav></nav>`

Contains web page document's main navigation

▶ main Element

`<main></main>`

Contains the web page document's main content

▶ footer Element

`<footer></footer>`

Contains the web page document's footer

HTML5 STRUCTURAL ELEMENTS

<body>

<header> *document headings go here* </header>

<nav> *main navigation goes here* </nav>

<main> *main content goes here* </main>

<footer> *document footer information goes here* </footer>

</body>



ANCHOR ELEMENT

- Specifies a hyperlink reference (href) to a file
- Text between the `<a>` and `` is displayed on the web page.

`Contact Us`

- href Attribute
 - Indicates the file name or URL

ABSOLUTE & RELATIVE HYPERLINKS

▶ Absolute link

- ▶ Link to a different website

```
<a href="http://yahoo.com">Yahoo</a>
```

▶ Relative link

- ▶ Link to pages on your own site

```
<a href="index.htm">Home</a>
```

E-MAIL HYPERLINK

- ▶ Automatically launch the default mail program configured for the browser
- ▶ If no browser default is configured, a message is displayed

```
<a href="mailto:me@gmail.com">me@gmail.com</a>
```

WRITING VALID HTML

- ▶ Check your code for syntax errors
 - ▶ Benefit:
 - ▶ Valid code →
more consistent browser display
- ▶ W3C HTML Validation Tool
 - ▶ <http://validator.w3.org>