

ITMD-461

CLASS 3

JANUARY 27, 2015

TONIGHT'S AGENDA

- **Review HTML5 Skeleton Structure**
- **HTML Tags**
 - Text
 - Links
 - Images
 - Tables
- **Readings & Assignments**

HTML5 SKELETON PAGE STRUCTURE

```
<!DOCTYPE html>
```

```
<html>
```

```
  <head>
```

```
    <meta charset="utf-8">
```

```
    <title>Title Here</title>
```

```
  </head>
```

```
  <body>
```

```
    Page content here
```

```
  </body>
```

```
</html>
```

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HTML TAGS

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ANATOMY OF AN HTML TAG

`Google`

- The `<` is the **OPENING** angle bracket. The angle bracket tells the browser that markup is starting
- `"a"` is the **ELEMENT**. All HTML tags are comprised of elements and attributes.
- `href=""` is an **ATTRIBUTE**. HTML tags can have one or more attributes applied to them. Attributes follow name/value pair convention. `href` is the **NAME**, `http://www.google.com` is the **VALUE**
- `"Google"` is the **TEXT NODE VALUE** of the html tag, this is the text a user will see
- `` is the **CLOSING TAG**. It repeats the element with a forward slash before it

Do not use the typographic curly quotes “ ”, use straight " " quotes instead. Curly quotes will break your markup. Biggest culprit is not using a plain text editor or coping and pasting carelessly.

HTML TAGS

HTML5 supports both html and xhtml syntax

Please use the rules that xhtml syntax gave us

- **All tags and attributes lowercase**
- **All attribute values quoted**
- **All tags properly nested**
- **All tags properly opened and closed**

Empty tags can have a closing slash

**
 or
 or **

- **Mandatory when using xhtml syntax, not html syntax**

In this class we are using HTML5 as our Doctype and syntax

HTML TAG ATTRIBUTES

There are two very important HTML tag attributes that every tag supports. Both of these attributes are used as hooks to select elements for styling and scripting.

- ID Attribute
- Class Attribute
- In HTML 5 the values for these attributes can contain almost any character. I would suggest you start the value with a letter [A-Za-z] and follow it by any number of letters, digits [0-9], hyphens (-), or underscores (_).
- This will make your life a lot easier when it comes to using them for CSS or JavaScript hooks.
- <https://mathiasbynens.be/notes/html5-id-class>

HTML TAG ID ATTRIBUTE

```
<div id="maincontent"></div>
```

The “id” attribute on an HTML tag is available for use on any HTML tag. It is a general attribute that works the same for all tags.

- The “id” attribute is used to identify an element on the page
- It is used as a hook to select an element for styling or scripting
- A single value for an “id” attribute can only be used once per page
- A individual HTML element can only have one value for an “id” attribute

HTML TAG CLASS ATTRIBUTE

```
<div class="tipsbox"></div>
```

The “class” attribute on an HTML tag is available for use on any HTML tag. It is a general attribute that works the same for all tags.

- The “class” attribute is used to classify an element on the page
- It is used as a hook to select an element for styling or scripting
- A single value for a “class” element can be used many times on a page. This is a way to group elements for styling or scripting.
- A individual HTML element can have multiple values for an “class” attribute. Multiple values would be space separated inside the quotes.
 - ```
<div class="tipsbox greentext"></div>
```

# BASIC HTML TAGS TO KNOW

The following tags are the most basic HTML tags and you should memorize them and their major attributes.

- `<h1>Head</h1>` thru `<h6>Head</h6>`
- ``
- `<a href="page.html">contact us</a>`
- `<p>Here is a paragraph</p>`
- `<div>Here is a division or container</div>`
- This is `<span>a span</span>` in a sentence.
- `<strong>Strong Importance</strong>` vs. `<b>bold</b>`
- `<em>Emphasized text</em>` vs. `<i>italic</i>`
- `<br>` or `<br />`
- `<ul>unordered list</ul>` , `<ol>ordered list</ol>` , `<li>list item</li>`
- Table Tags, `<table></table>` `<tr></tr>` `<th></th>` `<td></td>`

# HTML5 SEMANTIC TAGS

Some commonly used new HTML5 Semantic Tags

Act like a div tag but give content meaning

- `<header></header>` ---- DO NOT Confuse with `<head>`
- `<footer></footer>`
- `<nav></nav>`
- `<section></section>`
- `<article></article>`
- `<aside></aside>`
- `<figure></figure>` & `<figcaption></figcaption>`

<http://slides.html5rocks.com/#semantics-markup-title>

# HTML TAGS

## INLINE OR BLOCK

HTML Tags are either block elements or inline elements by default. The standard behavior can be changed with CSS.

### Block Tags

- Fill width of window unless floated or positioned
- Can contain other blocks or inline elements
- [https://developer.mozilla.org/en-US/docs/HTML/Block-level\\_elements](https://developer.mozilla.org/en-US/docs/HTML/Block-level_elements)

### Inline Tags

- Flows along with text content
- Contains no block level elements, only other inline or text data
- [https://developer.mozilla.org/en-US/docs/HTML/Inline\\_elements](https://developer.mozilla.org/en-US/docs/HTML/Inline_elements)

<http://www.impressivewebs.com/difference-block-inline-css/>

# HTML BLOCK ELEMENTS

- If no width is set, will expand naturally to fill its parent container
- Can have margins and/or padding
- If no height is set, will expand naturally to fit its child elements (assuming they are not floated or positioned)
- By default, will be placed below previous elements in the markup (assuming no floats or positioning on surrounding elements)
- Ignores the vertical-align property

[https://developer.mozilla.org/en-US/docs/HTML/Block-level\\_elements](https://developer.mozilla.org/en-US/docs/HTML/Block-level_elements)

# HTML INLINE ELEMENTS

- **Flows along with text content, thus**
- **Will not clear previous content to drop to the next line like block elements**
- **Is subject to white-space settings in CSS**
- **Will ignore top and bottom margin settings, but will apply left and right margins, and any padding**
- **Will ignore the width and height properties**
- **If floated left or right, will automatically become a block-level element, subject to all block characteristics**
- **Is subject to the vertical-align property**

**[https://developer.mozilla.org/en-US/docs/HTML/Inline\\_elements](https://developer.mozilla.org/en-US/docs/HTML/Inline_elements)**

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# **TEXT MARKUP**

# TEXT MARKUP

Chapter 5 in our course book covers all HTML tags used for text markup.

Things like

- **Headlines – h1 thru h6**
- **Paragraphs – p**
- **Lists – ol, ul, dl, li**
- **Text level inline elements – like strong, em**
- **And more...**



# SPECIAL CHARACTERS

See page 99 in the book.

Some special characters need to be escaped or encoded in your HTML.

They are either escaped by their entity number or entity name.

All character references begin with a & and end with a ;

Must always escape the ampersand (&) since it signifies the start of a character reference

Example, Copyright symbol

- `&copy;`
- `&#169;`

<http://dev.w3.org/html5/html-author/charref>

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# **HTML LINKS**

# HTML LINKS

- Anchor element "a" is used to create links to internal or external pages.
- Attribute "href" determines where the link goes when clicked.
- Attribute "title" is the link title. Used for tooltip and assistive devices.
- Can add attribute target="\_blank" to have link open in new tab/window
- href can be fully qualified domain and protocol or relative to current page on your server.

# HTML LINKS

- **A fully qualified href would have protocol and domain**
  - Example, href="http://www.iit.edu/"
- **A Little about pathing for relative links.**
  - If the document exists in the same folder
    - href="page2.html"
  - Document exists in subfolder
    - href="folder/page2.html"
  - Document exists in folder one level above file
    - href="../page2.html"
  - Link to a document and folder structure relative to root
    - href="/folder1/folder2/page.html"
- **Pathing explained in the book starting on page 108 please read and make sure you understand. This is a common error.**

# HTML LINKS

**Chapter 6 in our course book covers HTML links and all the attributes they can have.**

**Please read and pay close attention to the section on pathing. This can cause troubles for some students and you will need to understand this concept.**

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# **HTML IMG**

# HTML IMG

- Images should be .png, .jpg or .jpeg, .gif format
- We will discuss image formats in more detail in a later class. Ch 21 & 22 if you want a head start.
- .png and .gif support transparency
- .jpg no transparency
- .jpg should be 24bit RGB
- .png can be 8bit index or 24bit RGB
- .gif will be 8bit index
- Typically .jpg is better for photos and .png is better for logos and graphics. Try to not use .gif unless necessary.

# HTML IMG

## Image Tag

- **Element is img, <img>**
- **Empty element. No inner text node.**
- **Needs to have a src attribute, **
- **Needs alt attribute to validate and for accessibility**
  - Used to provide a textual description of the image
  - ``
- **Can provide a width and height attribute**
  - Value is in pixels
  - ``
- **Providing the dimensions has some benefits**
  - Image reserves the proper space as it loads
  - Allows you to scale an image although not ideal solution



# HTML IFRAME

- An iframe element is a embedded window to other content.
- This other content can exist on another server or the same server.
- It is treated like a whole html page embedded in the part of the page the iframe defines
- All the content in the iframe is completely separated from your page content. You can not style or interact with JavaScript any of the content of an iframe.
- Typically used for embedding content, like youtube videos.
- `<iframe src="path to content" width="600" height="400"></iframe>`

# HTML IMG

**Chapter 7 in the course book talks all about using images in HTML with the img tag.**

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# **HTML TABLES**

# HTML TABLES

**HTML tables have historically been used for reasons other than their intended purpose.**

**Tables should be used to display tabular data**

**Tables should not be used to structure layout**

- **In the past many web sites were built using tables to structure the layout.**
- **This involved many nested tables**
- **This is considered a bad practice these days and would be looked at poorly by most web design companies.**
- **Page layout should be done all in CSS in modern web pages**

# HTML TABLES

- Main table defined and wrapped with `<table>` tag
- Table rows are defined and wrapped with `<tr>` tag
- Columns or cells are defined by `<td>` tags
- Basic structure
- Should be styled and sized with css – no style by default

```
<table>
 <tr>
 <td>R1 C1</td>
 <td>R1 C2</td>
 </tr>
 <tr>
 <td>R2 C1</td>
 <td>R2 C2</td>
 </tr>
</table>
```

R1 C1	R1 C2
R2 C1	R2 C2

# HTML TABLES

**Chapter 8 in the course book talks all about using tables in your HTML**

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# **READINGS AND ASSIGNMENTS**

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# READING & ASSIGNMENTS

## Book

- Read through chapter 10 for next week. We will be talking about HTML forms next week. Read the chapter before class.

## Online

- Additional online HTML resources if you need more help
- <http://htmldog.com/guides/html/beginner/>
- <http://www.codecademy.com/tracks/web>
- <https://developer.mozilla.org/en-US/docs/Web/HTML>
- <https://developer.mozilla.org/en-US/learn/html>
- <https://docs.webplatform.org/wiki/html>

## Assignment

- Lab 2. All details are posted in blackboard. Due Feb 7 by 11:59pm Chicago Time