Lecture 3
More Basic HTML and CSS

SE-805 Web 2.0 Programming
(http://my.ss.sysu.edu.cn/wiki/display/W2PSC/Home , **supported by Google;**
using some slides of & inspired by Marty Stepp's CSE 190 M courseware)

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Outline

- **More HTML Elements**
- More Basic CSS
- CSS in practice

Web page metadata: <meta>

```
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1" />
<meta name="description" content="Authors' web site for Building Java
Programs." />
<meta name="keywords" content="java, textbook" />
```
XHTML

- name
  - **author**
  - **description**
  - **keywords**
  - **generator**
  - **revised**
- http-equiv
  - **content-type**
  - **expires**
  - **refresh**

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Table: <table>, <tr>, <td>, <th>, <caption>

```
<table>
 <caption>Smart Guys</caption>
 <tr><th>name</th><th>gender</th></tr>
 <tr><td>Bill</td><td>male</td></tr>
 <tr><td>Susan</td><td>female</td></tr>
</table>
```
HTML

Smart Guys	
name	**gender**
Bill	male
Susan	female

output

- **Never use Table for layout~!**

Definition list: <dl>, <dt>, <dd>

dl represents a list of definitions of terms(*block*)

dt represents each term, and **dd** its definition

```html
<dl>
   <dt>newbie</dt><dd>one who does not have mad skills</dd>
   <dt>own</dt><dd>to soundly defeat
     (e.g. I owned that newbie!)</dd>
   <dt>frag</dt> <dd>a kill in a shooting game</dd>
</dl>
```

HTML

newbie
      one who does not have mad skills
own
      to soundly defeat (e.g. I owned that newbie!)
frag
      a kill in a shooting game

output

Quotations: <blockquote>

a lengthy quotation (*block*)

```
<p>As Lincoln said in his famous Gettysburg Address:</p>
<blockquote>
    <p>Fourscore and seven years ago, our fathers brought forth on
    this continent a new nation, conceived in liberty, and dedicated
    to the proposition that all men are created equal.</p>
</blockquote>
```

HTML

As Lincoln said in his famous Gettysburg Address:

> *Fourscore and seven years ago, our fathers brought forth on this continent a new nation, conceived in liberty, and dedicated to the proposition that all men are created equal.*

output

Inline quotations: <q>

a short quotation (*inline*)

```
<p>Quoth the Raven, <q>Nevermore.</q></p>
```
HTML

Quoth the Raven, "Nevermore".

output

- Why not just write the following?
  - `<p>`Quoth the Raven, "Nevermore."`</p>`
- We don't use " mark for two reasons:
  - XHTML shouldn't contain literal quotation mark characters; they should be written as "
  - using `<q>` allows us to apply CSS styles to quotations

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HTML character entities

a way of representing any Unicode character within a Web page

character (s)	entity
< >	< >
é è ñ	é è ñ
™ ©	™ ©
π δ Δ	π δ Δ
И	И
" &	" &

- <u>Complete list of HTML entities</u>
- How would you display the text & on a web page?

HTML-encoding text

<p> <a
href="http://google.com/search?q=marty&ie=utf-
8&aq=t"> Search Google for Marty </p>

HTML

```
<p> <a href="http://google.com/search?q=marty&ie=utf-
8&aq=t"> Search Google for Marty </a> </p>
```

output

- To display the link text in a Web page, its special characters must be encoded as shown above

Computer code: <code>

code: a short section of computer code (usually rendered in a fixed-width font)

```
<p> The <code>ul</code> and <code>ol</code> tags make lists.
</p>
```
HTML

The ul and ol tags make lists.

output

Preformatted text: <pre>

a large section of pre-formatted text (*block*)

```
<pre>
            Steve Jobs speaks loudly
                    reality distortion
            Apple fans bow down

</pre>
```
HTML

```
            Steve Jobs speaks loudly
                    reality distortion
            Apple fans bow down
```
output

- displayed with exactly the whitespace / line breaks given in the text

- shown in a fixed-width font by default

- how would it look if we had instead enclosed it in code tags?

Outline

- More HTML Elements
- **More Basic CSS**
- CSS in practice

Grouping styles

```css
p, h1, h2 {
    color: green;
}
h2 {
    background-color: yellow;
}
```
CSS

This paragraph uses the above style.

This h2 uses the above style.

output

- a style can select multiple elements separated by commas
- the individual elements can also have their own style (like h2 above)

CSS properties for text

property	description
text-align	alignment of text within its element
text-decoration	decorations such as underlining
line-height, word-spacing, letter-spacing	gaps between the various portions of the text
text-indent	indents the first letter of each paragraph
Complete list of text properties	

text-align

```css
blockquote { text-align: justify; }
h2 { text-align: center; }
```
CSS

The Emperor's Quote

[TO LUKE SKYWALKER] The alliance... will die. As will your friends. Good, I can feel your anger. I am unarmed. Take your weapon. Strike me down with all of your hatred and your journey towards the dark side will be complete.

output

- text-align can be left, right, center, or justify (which widens all full lines of the element so that they occupy its entire width)

text-decoration

```css
p {
    text-decoration: underline;
}                                                              CSS

This paragraph uses the style above.
                                                            output
```

- can also be overline, ~~line-through~~, blink, or none

- effects can be combined:
  - text-decoration: overline underline

The **list-style-type** property

ol { list-style-type: upper-roman } *CSS*

- Possible values: none : No marker
  I. disc (default), circle, square
  II. decimal : 1, 2, 3, etc.
  III. decimal-leading-zero : 01, 02, 03, etc.
  IV. lower-roman : i, ii, iii, iv, v, etc.
  V. upper-roman : I, II, III, IV, V, etc.
  VI. lower-alpha : a, b, c, d, e, etc.
  VII. upper-alpha : A, B, C, D, E, etc.
  VIII. lower-greek : alpha, beta, gamma, etc.
  IX. others: hebrew, armenian, georgian, cjk-ideographic, hiragana, katakana, hiragana-iroha, katakana-iroha

Outline

- More HTML Elements
- More Basic CSS
- **CSS in practice**

Body Styles

body { font-size: 16px; }   *CSS*

- to apply a style to the entire body of your page, write a selector for the body element

- saves you from manually applying a style to each element

Cascading style sheets

- it's called Cascading Style Sheets because the properties of an element *cascade* together in this order:
  - browser's default styles
  - external style sheet files (in a <link> tag)
  - internal style sheets (inside a <style> tag in the page's header)
  - inline style (the style attribute of the HTML element)

Inheriting styles

```
body { font-family: sans-serif; background-color: yellow; }
p { color: red; background-color: aqua; }
a { text-decoration: overline underline; }
h2 { font-weight: bold; text-align: center; }                    CSS
```

This is a heading.

A styled paragraph. Previous slides are available on the web site.

- a bulleted list

output

- when multiple styles apply to an element, they are **inherited**

- a more tightly matching rule can override a more general inherited rule

- not all properties are inherited (notice link's color above)

Styles that conflict

```
p, h1, h2 { color: blue; font-style: italic; }
h2 { color: red; background-color: yellow; }          CSS
```

This paragraph uses the first style above.

This heading uses both styles above.

- when two styles set conflicting values for the same property, the latter style takes precedence

- (later we will learn about more specific styles that can override more general styles)

W3C CSS Validator

```
<p>
   <a href="http://jigsaw.w3.org/css-validator/check/referer">      HTML
      <img src="http://jigsaw.w3.org/css-validator/images/vcss"
            alt="Valid CSS!" />
   </a>
</p>
```

W3C CSS ✓

output

- jigsaw.w3.org/css-validator/

- checks your CSS to make sure it meets the official CSS specifications

- more picky than the web browser, which may render malformed CSS correctly

CSS properties for backgrounds

property	description
background-color	color to fill background
background-image	image to place in background
background-position	placement of bg image within element
background-repeat	whether/how bg image should be repeated
background-attachment	whether bg image scrolls with page

background-image

```css
body {
  background-image: url("images/draft.jpg");
}                                                    CSS
```

This is the first paragraph
This is the second paragraph...
It occupies 2 lines

draft.jpg

- background image/color fills the element's content area

background-repeat

```css
body {
  background-image: url("images/draft.jpg");
  background-repeat: repeat-x;
}
                                                    CSS
```

This is the first paragraph
This is the second paragraph...
It occupies 2 lines

- can be repeat (default), repeat-x, repeat-y, or no-repeat

background-position

```css
body {
  background-image: url("images/draft.jpg");
  background-repeat: no-repeat;
  background-position: 370px 20px;
}                                                    CSS
```
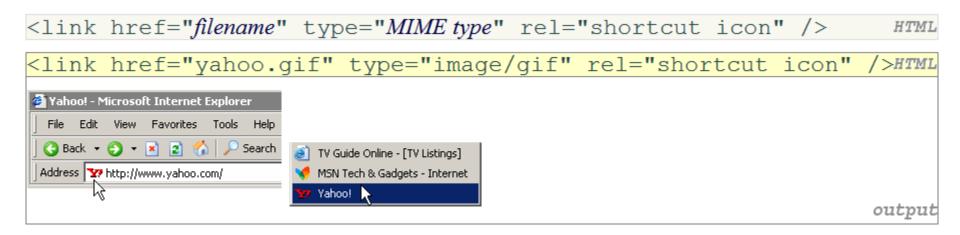
This is the first paragraph

This is the second paragraph...   *DRAFT*

It occupies 2 lines

- value consists of two tokens, each of which can be top, left, right, bottom, center, a percentage, or a length value in px, pt, etc.

- value can be negative to shift left/up by a given amount

Favorites icon ("favicon")

```
<link href="filename" type="MIME type" rel="shortcut icon" />        HTML
```

```
<link href="yahoo.gif" type="image/gif" rel="shortcut icon" />HTML
```


- the link tag, placed in the HTML page's head section, can specify an icon for a Web page.

- IE6: this doesn't work; must place a file in .ico format named favicon.ico in the root directory of the Web server (instructions)

Summary

- ## More HTML Elements
  - meta
  - dl, dt, dd
  - blockquote, q
  - HTML character entities, HTML-encoding text
  - code, pre
- ## More Basic CSS
  - grouping style
  - comments
  - text properties: text-align, text-decoration
  - list-style-type

Summary

- ## CSS in practice
  - body styles
  - cascading vs. inherit
  - conflict resolve
  - W3C CSS validator
  - background properties: background-image, background-repeat, background-position
  - favorites icon

Exercises

- list definitions all html tags and css properties we learned this course in a web page with explanations of their purposes and usages
  - dl, dt, dd for definitions
  - blockquote, q for quoted sentences from w3 school
  - code, pre for examples
  - applying style with a standalone css file

Further Readings

- http://en.wikipedia.org/wiki/XHTML

- http://en.wikipedia.org/wiki/Cascading_Style_Sheets

- Chapter 1~8, *Web Programming with HTML, XHTML, and CSS* http://my.ss.sysu.edu.cn:8080/display/W2PSC/References+and+Books

- List of all HTML tags: http://www.w3schools.com/tags/default.asp

- List of HTML character entites: http://www.w3schools.com/tags/ref_entities.asp

- XHTML 1.1 Spec. http://www.w3.org/TR/xhtml11/

- XHTML 1.1 Elements Reference: http://www.w3.org/2007/07/xhtml-basic-ref.html

- W3 List of all CSS properties: http://www.w3.org/TR/CSS21/propidx.html

- W3 CSS 2.1 Specifications: http://www.w3.org/TR/CSS21/

- Fonts of each operating systems: http://www.apaddedcell.com/web-fonts

Thank you!