

# Web 2.0 應用技術-CSS, JavaScript 及 HTML

CM310.1-03-2013-C

Lesson 1

# Who am I?

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# Course Administration

- Lectures (Monday 19:00-22:00)
- Labs (Thursday 19:00-20:30)

## Assessments:

- 4 assignments (40%)
- 3 quizzes (10%)
- 1 exam (50%)

# What I will learn in this course

- HTML
  - Syntax & Markup
- CSS
  - Syntax & Selector
- JavaScript
  - Syntax; Object; Array
- **jQuery**
  - Selector; Animation; Event Handling; Ajax; Plug-ins

# Outline

- Web
- HTML
- CSS
- Further Reading

A word cloud centered around the text "Web 2.0". The words are arranged in a circular pattern around the center, with varying font sizes and colors. The colors are primarily orange, yellow, and white. The words are: Aggregators, Wikis, Folksonomy, User Centered, Joy of Use, Blogs, Participation, Six Degrees, Usability, Widgets, Pagerank, XFN, Social Software, FOAF, Browser, Recommendation, Simplicity, AJAX, Videocasting, Podcasting, Sharing, Collaboration, Perpetual Beta, Design, Audio, IM, Video, Convergence, CSS, Pay Per Click, UMTS, Mobility, Atom, XHTML, SVG, Ruby on Rails, VC, Trust, Affiliation, OpenAPIs, RSS, Semantic, Web Standards, SEO, Economy, OpenID, Remixability, REST, Standardization, The Long Tail, DataDriven, Accessibility, XML, Modularity, SOAP, Microformats, Syndication.

Aggregators Wikis Folksonomy User Centered Joy of Use  
Blogs Participation Six Degrees Usability Widgets  
Pagerank XFN Social Software FOAF Browser  
Recommendation Simplicity AJAX  
Videocasting Podcasting Sharing Collaboration Perpetual Beta Design  
Audio IM Video Convergence CSS Pay Per Click  
UMTS Mobility Atom XHTML SVG Ruby on Rails VC Trust Affiliation  
OpenAPIs RSS Semantic Web Standards SEO Economy  
OpenID Remixability REST Standardization The Long Tail  
DataDriven Accessibility XML  
Modularity SOAP Microformats Syndication

# Front-end Web Technologies



HTML5



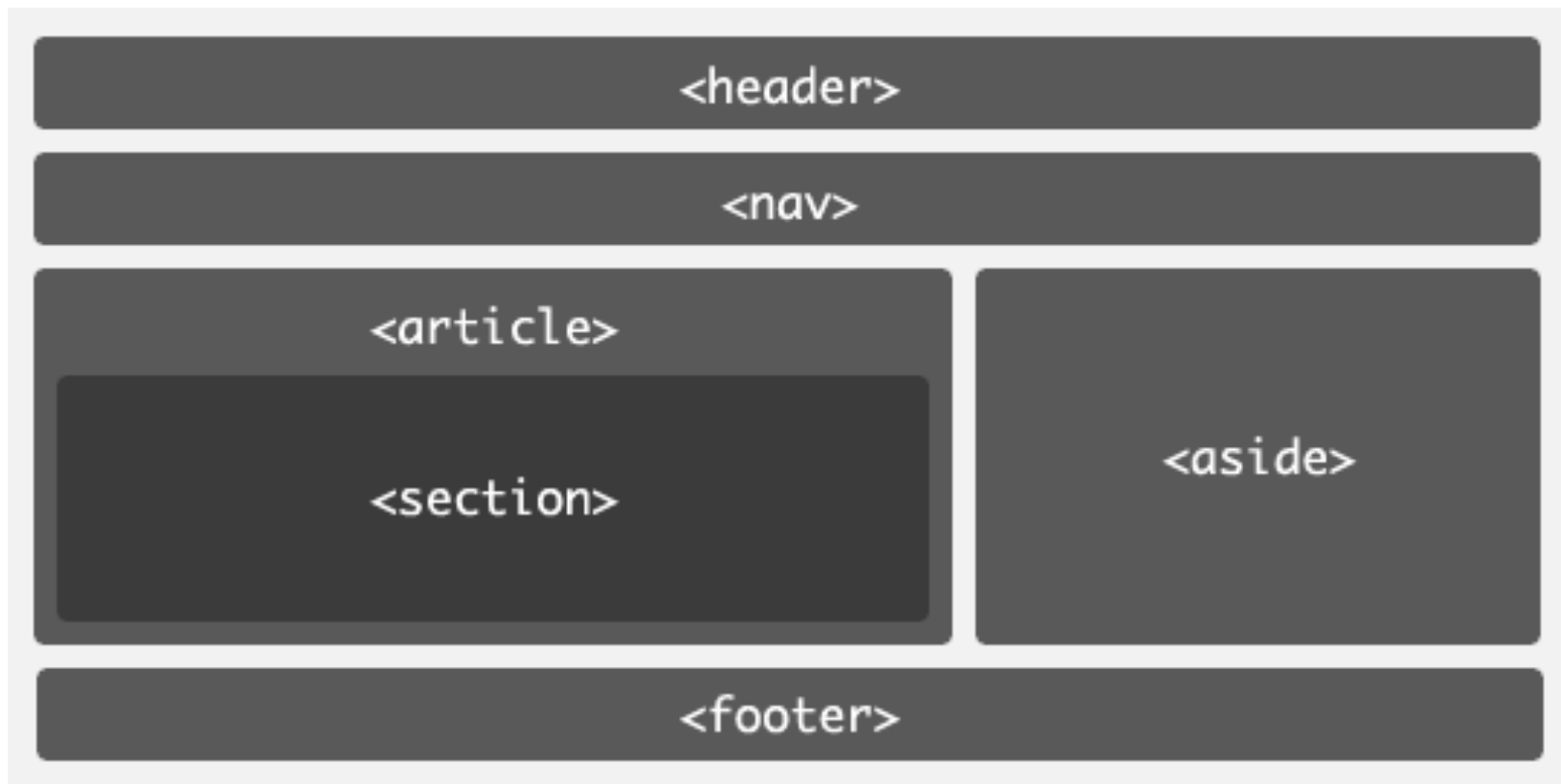
CSS3



JavaScript

# HTML (HyperText Markup Language)

- HTML defines **content** and **structure**.







# Web Development Process

- Discuss and determine the scope of works with clients
- Use Photoshop to design and confirm the layout of the website
- Slice the Photoshop creative into HTML
- Use CSS to style it
- Use JavaScript to make a website becomes interactive and dynamic





# Development Tools

- Editor / IDE
  - Sublime Text (<http://www.sublimetext.com/>)
  - Eclipse (<http://www.eclipse.org/>)
  - Vim
- Development Tools
  - Firebug / Chrome Developer Tools
- Web Playground
  - CodePen (<http://codepen.io/>)

# Getting Started

- Fire up your favorite editor
- Type Hello world
- Save it as an .html file instead of .txt
- Open it in the browser

# Change the title

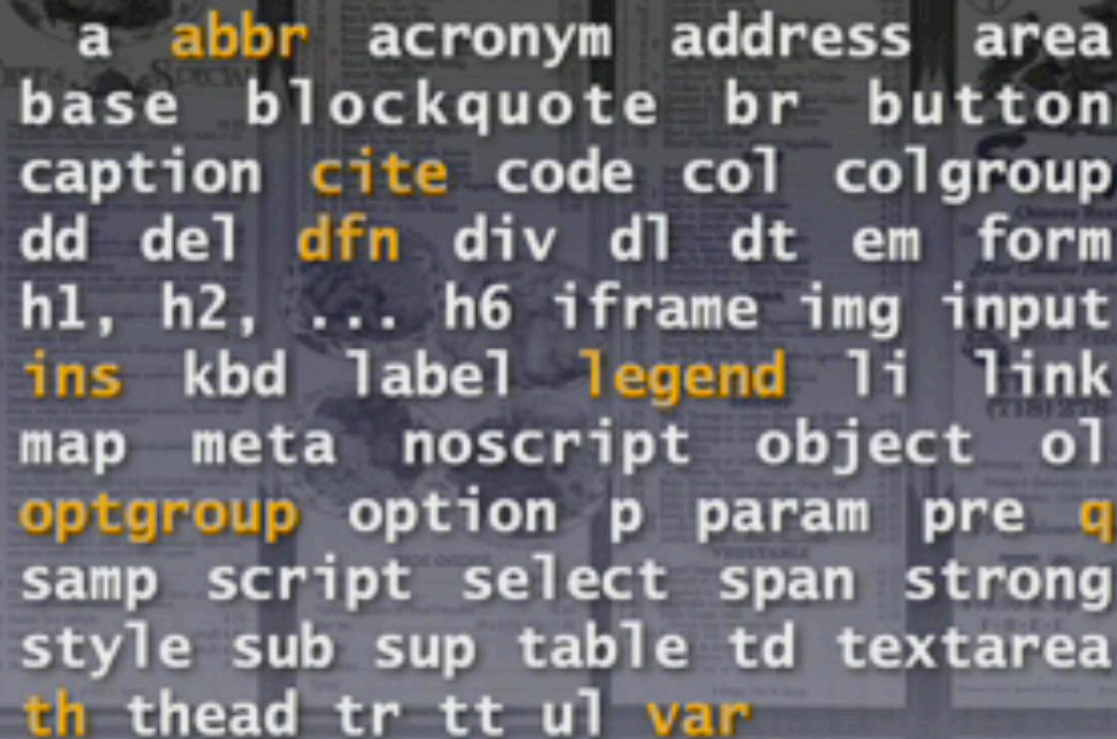
```
<html>
<head>
  <title>My first web page</title>
</head>
<body>
  Hello World
</body>
</html>
```

# HTML



# HTML Tags

- <http://www.w3schools.com/tags/default.asp>



a abbr acronym address area  
base blockquote br button  
caption cite code col colgroup  
dd del dfn div dl dt em form  
h1, h2, ... h6 iframe img input  
ins kbd label legend li link  
map meta noscript object ol  
optgroup option p param pre q  
samp script select span strong  
style sub sup table td textarea  
th thead tr tt ul var

# Anatomy of an HTML tag

<tagname attribute="value">

content

</tagname>

<p id="id\_name" class="class\_name">

lorem ipsum

</p>



# Headings

<h1>Header 1</h1>

<h2>Header 1</h2>

...

<h6>Header 6</h6>

- Headings are important in HTML documents.

# Paragraphs

`<p>` Lorem Ipsum is simply dummy text of the printing and typesetting industry.`</p>`

- HTML documents are divided into paragraphs.
- Lorem Ipsum
- <http://html-ipsum.com/>

## Unordered Lists

<ul>

<li>Item 1</li>

...

<li>Item n</li>

</ul>

## Ordered Lists

<ol>

<li>Item 1</li>

...

<li>Item n</li>

</ol>

# Links

`<a href="url">text</a>`

Absolute Path vs. Relative Path

`<a href="http://cpttm.org.mo/">CPTTM</a>`

`<a href="/contact">contact</a>`

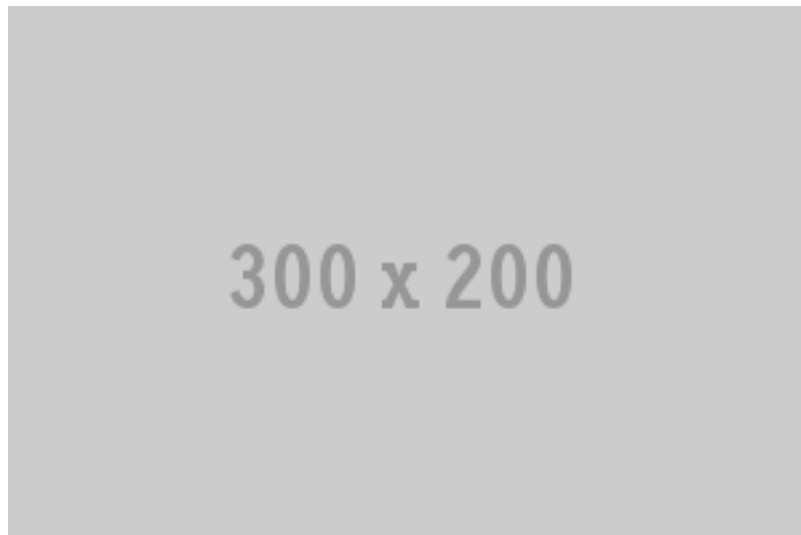
# Images

```

```

```

```



# Emphasized text

`<em>Text</em>`

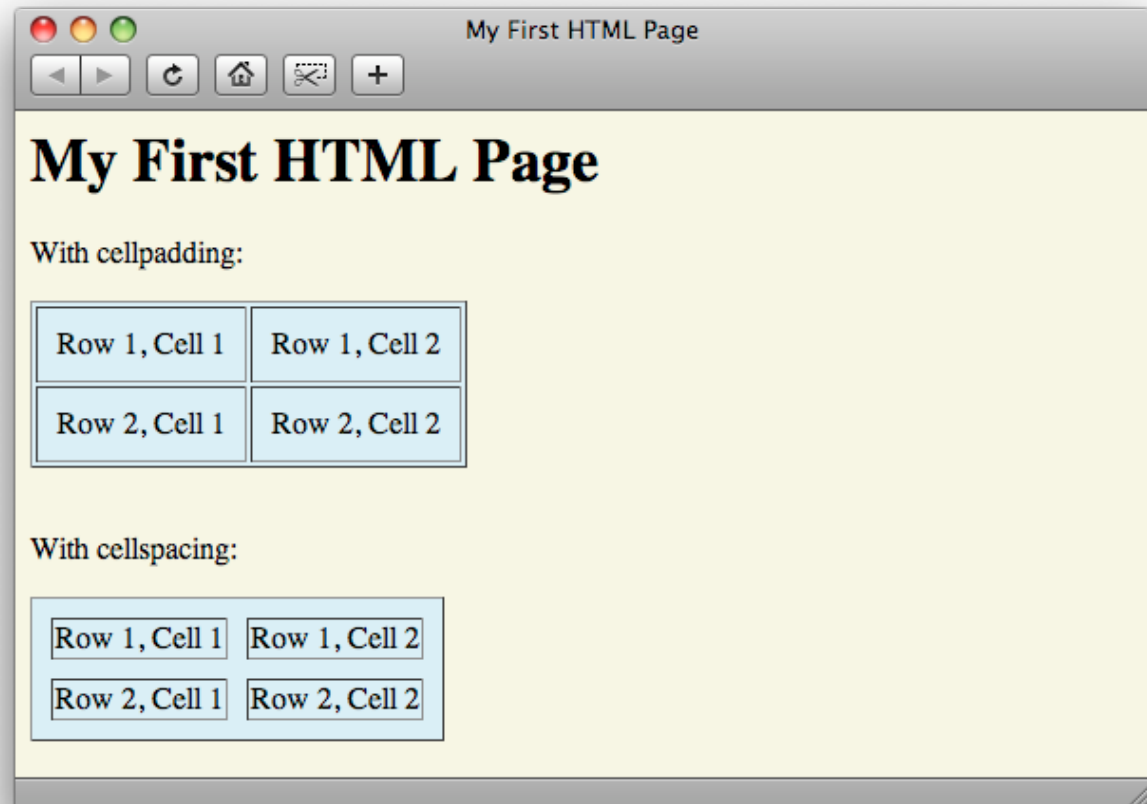
Semantic

`<em>` vs. `<i>`

`<strong>` vs. `<b>`

# table

```
<table>
  <tr>
    <th>Name</th>
    <th>Age</th>
  </tr>
  <tr>
    <td>Apple</td>
    <td>20</td>
  </tr>
  <tr>
    <td>Mac</td>
    <td>10</td>
  </tr>
</table>
```



# form

```
<form>
  <label for="email">
    <input type="text" name="email" id="email" />

    <input type="password" name="email" id="email" />
    <input type="radio" name="gender" />M
    <input type="radio" name="gender" />F
    <input type="checkbox" name="box" checked="checked" />1
    <input type="checkbox" name="box" />2

    <input type="submit" />
</form>
```

[http://www.w3schools.com/html/html\\_forms.asp](http://www.w3schools.com/html/html_forms.asp)



# HTML Exercise

- Please download the source code from  
<https://github.com/victorwkm/jquery-2013-03>

# CSS (Cascading Style Sheet)

*text*

color

size

position

# How do I put CSS on my page?

3 options:

- Inline
- Embedded
- External

# Inline CSS (Bad in most cases)

- `<h1 style="color: red;">hello</h1>`
- mixing the style with the structure
- Guide to CSS support in email | Campaign Monitor
- <http://www.campaignmonitor.com/css/>

# Embedded CSS (OK)

```
<head>
```

```
<style>
```

```
p {
```

```
  color: red;
```

```
}
```

```
</style>
```

```
</head>
```

# External CSS (Good)

```
<head>
```

```
  <link rel="stylesheet" href="style.css" />
```

```
</head>
```

# how does css works?

3 parts:

- selector
- properties
- value

The diagram illustrates the components of a CSS rule. It shows the text `h1 { color: red; font-size: 12px; }` in a light gray font. Three labels with arrows point to specific parts of the code: 'curly braces' points to the opening curly brace '{' after 'h1'; 'semicolon' points to the semicolon ';' at the end of the 'color: red;' line; and 'colon' points to the colon ':' between 'color' and 'red'.

```
h1 {  
  color: red;  
  font-size: 12px;  
}
```

curly braces

semicolon

colon

# Part 1 CSS Syntax

- Selector
- Declaration
- Cascade



# Selector

1. element
2. class
3. id
4. position in the document

# Element, Class, ID, Nesting, Grouping

```
<div id="about">  
  <h2>About</h2>  
  <p class="help intro">Help Introduction</p>  
  <p class="help">Help</p>  
</div>  
<p>Another paragraph</p>
```

```
p {}  
.help {}  
p.intro {}  
#about {}  
#about p {}  
p, h2 {}
```

# class vs. id

- a **class** attribute that **contains**
- an **id** attribute that **equals**

# The Declaration

- A declaration is the combination of a **property** & **value**.
- You declare what you want to change.

# Cascade

- The cascade determines which declaration apply to any given element

p { color: red; }

p { color: blue; }

- Who wins?

```
<div id="a">  
  <div id="b">  
    <h1>hello</h1>  
  </div>  
</div>
```

```
#a #b h1 { color: red; }  
#a h1 { color: blue; }
```

- Who wins?

# CSS Specificity

Style  
attribute

ID

Class,  
psuedo-class,  
attribute

Elements

Most  
specificity  
value

Least  
specificity  
value



# CSS Specificity (cont.)

- Element 1 point
- Class 10 points
- ID 100 points
- Style Attribute 1000 points

p a { } = 2 points

p.intro a { } = 12 points

#about p.intro a { } = 112 points



# Inheritance

```
#blog { color: red; }
```

```
<div id="blog">
```

```
  <p>hello</p>
```

```
</div>
```

the descendant `<p>` element of ancestor `#blog`  
will have a color of red

# Inheritance (cont.)

- text-related properties inherit
- layout-related properties don't

## Text-related

color  
font (and related)  
letter-spacing  
line-height  
list-style (and related)  
text-align  
text-indent  
text-transform  
visibility  
white-space  
word-spacing

## Layout-related

background (and related)  
border (and related)  
display  
float / clear  
height / width  
margin (and related)  
min-max-height / width  
outline  
overflow  
padding (and related)  
position (and related)  
text-decoration  
vertical-align  
z-index

# Further Reading

- W3Schools CSS Reference <http://www.w3schools.com/cssref/default.asp>
- Quirksmode <http://www.quirksmode.org/>
- CSS-Tricks <http://css-tricks.com/>