Web Programming

YJ – 2016
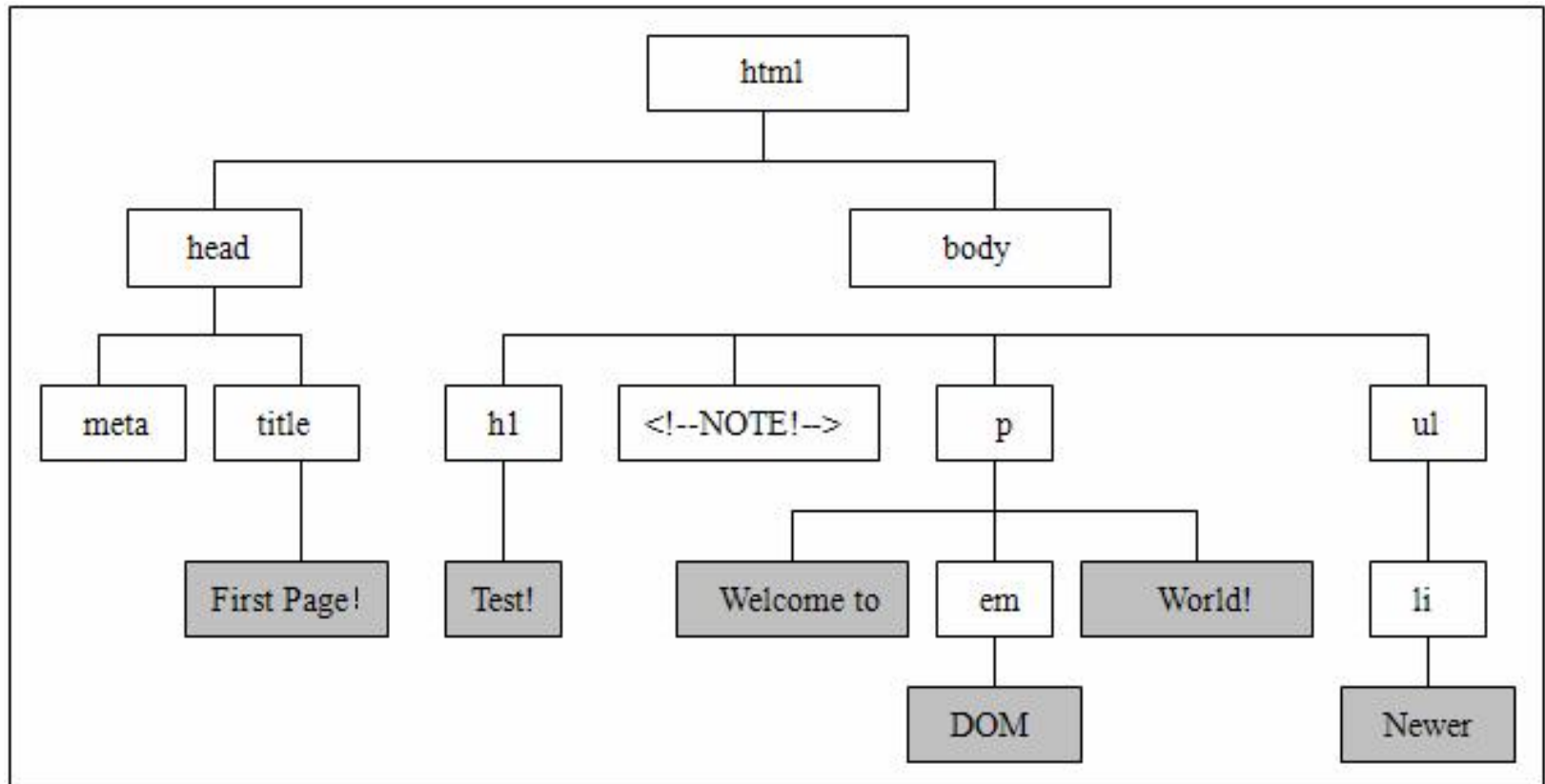
HTML

❖ HTML, the Hypertext Markup Language is a high level set of rules that describe the content of web pages

❖ Markup languages define markup, or tags, that supply structural, presentational, and semantic information about the content of documents.

❖ Authors embed this markup in their documents to describe the document's characteristics.

HTML (Hyper Text Markup Language)

```
index.html*
30    <body>
31        <div id="content" >
32            <header class="app-header" >
33                <div class="logo-wrapper">
34                    <img id="logo" alt="Imaginet Logo" src="img/imaginetlogo-white.png" />
35                </div>
36                <h1 class="app-name" >Expert Directory App</h1>
37            </header>
38            <aside class="contact-list" >
39                <p class="notes" >
40                    Select the name of one of experts to view their contact details.
41                </p>
42                <ul id="contactList" >
43                    <!-- Contacts will be place here dynamically -->
44                </ul>
45            </aside>
46            <section class="contact-card" >
47                <article class="contact-info" >
48                    <div class="contact-images" >
49                        <div class="contact-image">
50                            <img id="contactImage" alt="Contact Image" src="img/contact-sample.png" />
51                        </div>
52                        <div class="contact-methods" >
53                            <ul id="contactMethods">
54                                <li><a id="contactTwitter"><img class="icon" src="img/twitter.png" alt="Twitter" /></a></li>
55                                <li><a id="contactFacebook"><img class="icon" src="img/facebook.png" alt="Facebook" /></a></li>
56                                <li><a id="contactLinkedIn"><img class="icon" src="img/linkedin.png" alt="LinkedIn" /></a></li>
57                                <li><a id="contactBlog"><img class="icon" src="img/blog.png" alt="Blog" /></a></li>
58                            </ul>
59                        </div>
60                    </div>
61                    <div class="contact-text" >
62                        <div>
63                            <h3>
64                                <span id="contactName"></span>
65                            </h3>
66                        </div>
```
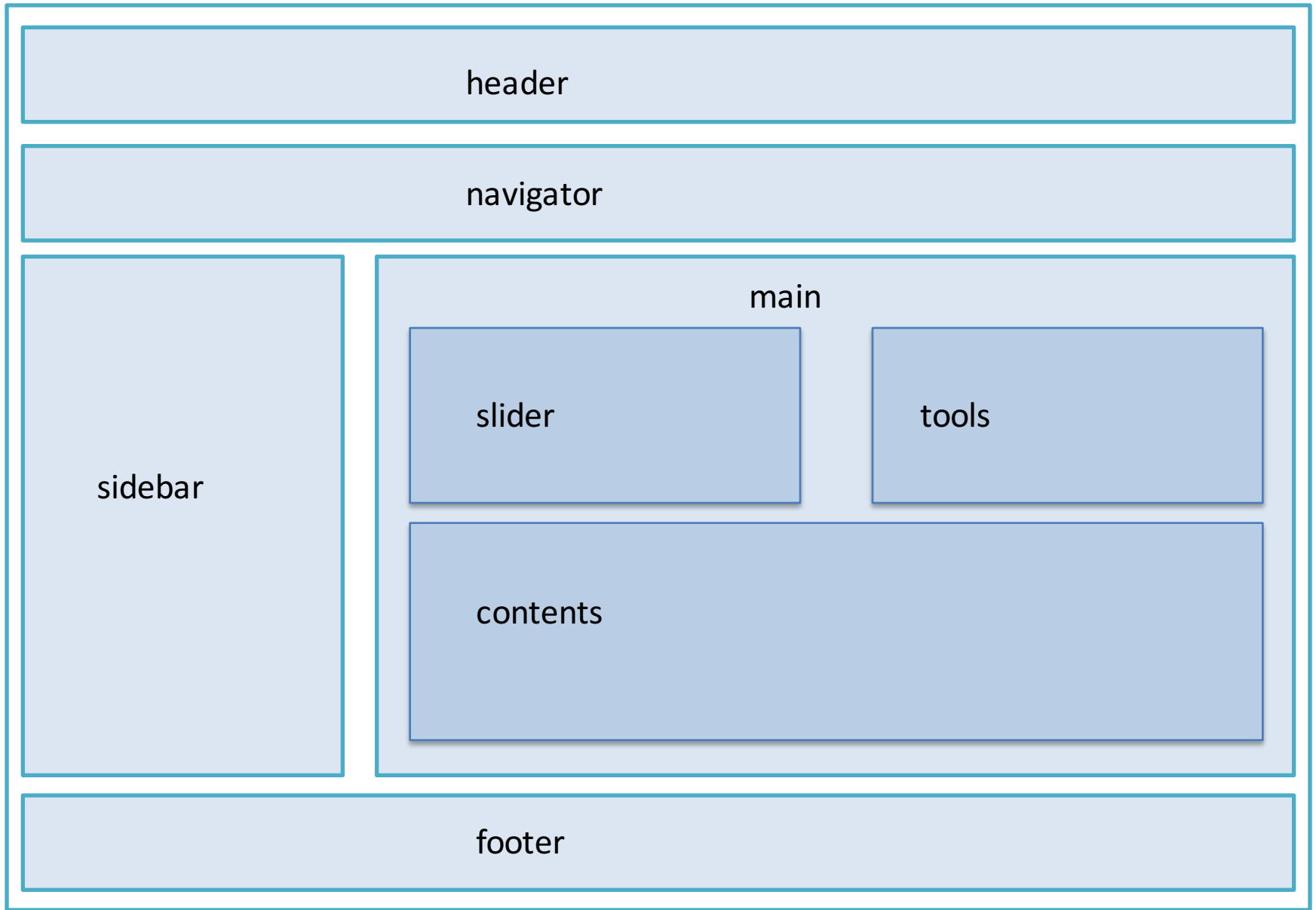
100 %

HTML Code Structure

HTML Page Structure

header

navigator

sidebar

main

slider

tools

contents

footer

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- 护肤彩妆 ›
- 母婴用品 ›
- 家纺居家 ›
- 家具建材 ›
- 美食特产 ›
- 日用百货 ›
- 汽车摩托 ›
- 文化娱乐 ›
- 本地生活 ›
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HTML
Hello World

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0//EN"
"http://www.w3.org/TR/REC-html40/strict.dtd">
<HTML>
  <HEAD>
    <TITLE>My first HTML document</TITLE>
    <META http-equiv= "Content-Type" content =
      "text/html;charset=iso-8859-1">
  </HEAD>
  <BODY>
    <P>Hello world!</P>
  </BODY>
</HTML>
```

DTD

Document

DTD

❖ The HTML document type definition (DTD) declares element types that represent structures or desired behaviour.

❖ HTML includes element types that represent paragraphs, hypertext links, lists, tables, images, and so on.

❖ Each element is declared in the HTML DTD. An element's name appears between the start tag (written <element-name>) and the end tag (written </element-name>).

❖ Note the slash before the element name in the end tag

❖ You can validate your code against the W3 standard here: https://validator.w3.org/

DTD

HTML 4

❖ Strict
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN"
"http://www.w3.org/TR/REC-html40/strict.dtd">

❖ Loose/ Transitional
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/REC-html40/ loose.dtd">

HTML5

<!DOCTYPE html>

Meta

❖ Meta tags don't do anything to the content that is presented in the browser window, but they are used by the likes of search engines to catalogue information about the web page.

```
<meta name="keywords" content="HTML, Meta Tags, Metadata" />

<meta name="description" content="Learning about Meta Tags." />

<meta name="revised" content="Tutorialspoint, 3/7/2014" />

<meta http-equiv="cookie" content="userid=xyz; expires=Wednesday,
08-Aug-15 23:59:59 GMT;"/>

<meta ame="author" content="Mahnaz Mohtashim" />

<meta http-equiv="Content-Type" content="text/html; charset=UTF-
8" />
```

HTML Elements

code	html	option	textarea
col	I	p	tfoot
colgroup	iframe	param	th
dd	img	pre	thead
del	input	q	title
dfn	ins	s	tr
dir	Isindex	samp	tt
div	kbd	script	u
dl	label	select	ul
dt	legend	small	var
em	li	span	
fieldset	link map	strike	
Font	menu	strong	
form	meta	style	
frame	noframes	sub	
frameset	Noscript	sup	
h1-h6	object	table	
Head	ol	tbody	
hr	optgroup	td	

Div & Span

❖ They are used to group together a chunk of HTML and hook some information onto that chunk, most commonly with the attributes class and id to associate the element with a class or id CSS selector.

❖ The difference between span and div is that a span element is in-line and usually used for a small chunk of HTML inside a line (such as inside a paragraph) whereas a div (division) element is block-line (which is basically equivalent to having a line-break before and after it) and used to group larger chunks of code.

❖ <**div id="scissors"**>
    <**p**>This is <**span class="paper"**>crazy</**span**></**p**>
</**div**>

Sections

```html
<header>
    <h1>Alternatively&hellip;</h1>
    <p>[An introduction]</p>
</header>
<nav id="main_nav">
    <ul>
        <li><a href="/tutorials/">Tutorials</a></li>
        <li><a href="/reference/">Reference</a></li>
        <li><a href="/articles/">Articles</a></li>
        <li><a href="/about/">About us</a></li>
    </ul>
</nav>
    <section id="main_content">
        <p>[Content]</p>
<aside>
        <h2>Tixall Obelisk</h2>
        <p>[A short note about Tixall Obelisk]</p>
    </aside>
    </section>
    <footer>
        <p>[End notes]</p>
    </footer>
</article>
<footer>
    <p>[Copyright bumf]</p>
</footer>
```

BR/HR

```
<!DOCTYPE html>
<html>
<head>
   <title>My first web page</title>
</head>
<body>
Line 1: Hi, my name is John Gilson.<br>
Line 2: This is my first attempt at a Web page.
<hr>
Line 3: Here is a riddle for you.
Line 4: <P>Why did the lobster blush?
<hr>
Line 5: Because it saw the salad dressing.<br><br>
<hr>
</body>
</html>
```

Size

```html
<!DOCTYPE html>
<html>
<head>
   <title>salad recipe</title>
</head>
<body>
<h2 align="center">tossed salad</h2>

<h3 align="center"><em>simple and attractive</em></h3>
<hr>
<p>1 large bunch of greens, preferably mixed<br>
   10 cherry tomatoes quartered
</p>

<p><strong>dressing</strong><br>
   1/2 cup mayonnaise<br>
   2 tbsp. minced dill or sweet pickle<br>
   1 tsp. prepared mustard<br>
   1/4 tsp. onion powder<br>
   1 tsp. granulated sugar<br>
   1 tbsp. milk
</p>

<p><em>have greens ready in separate containers in refrigerator.</em></p>

<p><strong>dressing:</strong> combine all ingredients together in a small bowl.
   mix well. spoon over greens. toss to coat. add tomato and toss together
   lightly. <em>serves 8</em></p>
</body>
</html>
```

List

```
<h2 ALIGN="CENTER">number order list</h2>
<ul>
  <li>To learn HTML</li>
  <li>
    To show off
    <ol>
      <li>To my boss</li>
      <li>To my friends</li>
      <li>To my cat</li>
      <li>To the little talking duck in my brain</li>
    </ol>
  </li>
  <li>Because I've fallen in love with my computer and
want to give her some
    HTML loving.
  </li>
</ul>
```

```
<H2 ALIGN="CENTER">no dot list</H2><HR>
<DL>
  <DT>Winter
  <DD>Write for maps and travel brochures
  <DD>Read camping books
  <DD>Prepare budget and equipment list
  <DT>Spring
  <DD>Visit camping shows
  <DD>Buy essential items
  <DD>Make reservations
  <DT>Week Before Trip
  <DD>Have vehicle serviced
  <DD>Vaccinate pets
  <DD>Buy traveler's cheques
  <DD>Cancel newspaper and other deliveries
  <DT>Day before trip
  <DD>Load vehicle
</DL>
```

Table

```html
<table>
   <tr>
      <td>Row 1, cell 1</td>
      <td>Row 1, cell 2</td>
      <td>Row 1, cell 3</td>
   </tr>
   <tr>
      <td>Row 2, cell 1</td>
      <td>Row 2, cell 2</td>
      <td>Row 2, cell 3</td>
   </tr>
   <tr>
      <td>Row 3, cell 1</td>
      <td>Row 3, cell 2</td>
      <td>Row 3, cell 3</td>
   </tr>
   <tr>
      <td>Row 4, cell 1</td>
      <td>Row 4, cell 2</td>
      <td>Row 4, cell 3</td>
   </tr>
</table>
```

Links & Images

❖ <**a href="http://www.google.com"**>Google</**a**>

❖ <**img src="./image/map.jpg" align="left" width="260" height="auto" border="0" hspace="20" alt="map"**>

❖ <**a href="http://www.baidu.com"**>
        <**img src="./image/baidu.png" width="100" height="50" alt="baidu"**>
    baidu</**a**>

Audio & Video

```html
<audio src="meow_mix.mp3" controls>
    Your stupid browser doesn't support HTML 5 audio.
</audio>

<video src="kitties.mp4" poster="fluffy.jpg" width="300" height="200" loop muted
autoplay controls></video>

<video controls>
    <source src="kitties.mp4" type="video/mp4; codecs='avc1, mp4a'">
    <source src="kitties.webm" type="video/webm; codecs='vp8.0, vorbis'">
    <p>Browser no likey HTML 5.</p>
</video>
```
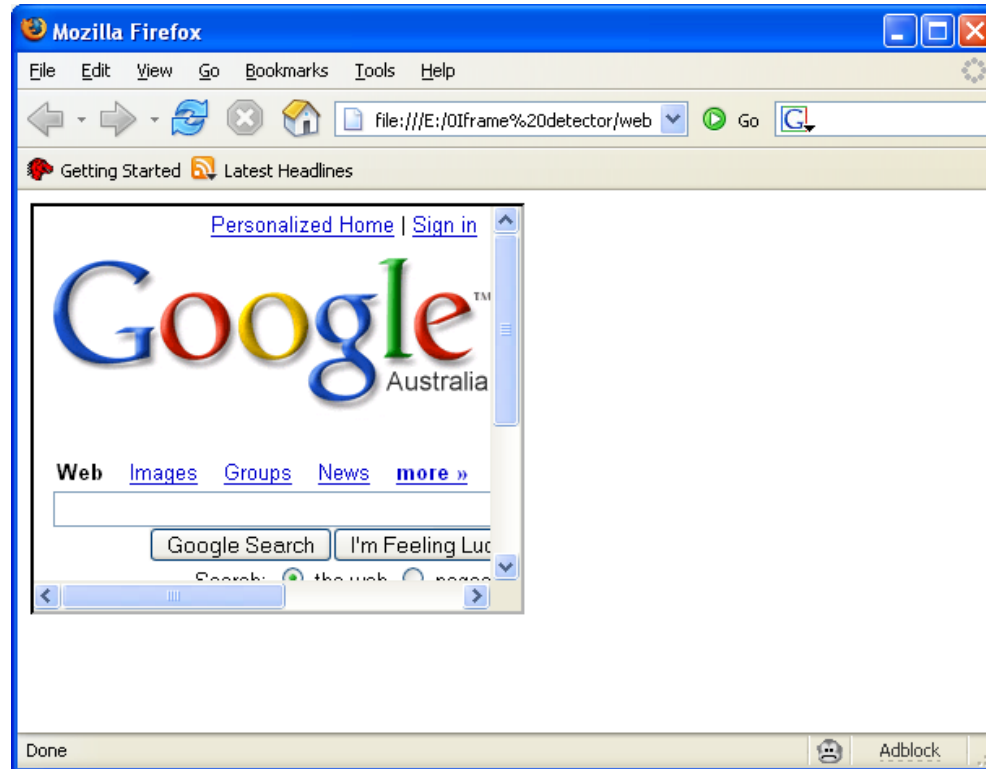
iFrame

❖ <**iframe src="http://www.baidu.com" width="800" height="400" style="border**:5**px dotted"**></**iframe**>

Form

- ❖ TEXT

Name: [   ]

- ❖ POP-UP BOXES

Country: [United States ⌄]

- ❖ RADIO BUTTONS

Please rate my website!
● It's Great! ○ It's Good! ○ It's Fair! ○ It's Poor!

- ❖ CHECK BOXES

Please indicate your interests. Cl
☑ skiing ☑ swimming ☐ jogging

- ❖ TEXT AREA BOXES

Seen any good websites lately? Got a good story t

[   ]

HTML5 additional input

❖ `<input type="search" name="search">`

❖ `<input type="tel" name="telephone_number">`

❖ `<input type="url" name="web_address">`

❖ `<input type="email" name="email_address">`

❖ `<input type="number" name="quantity" step="2" min="20" max="30">`

❖ `<input type="range" name="temperature" min="15" max="25" step="0.5" value="18.5">`

❖ `<input name="color" type="color" value="#ff8800">`

Conditional Comments

❖ Conditional comments, which are nothing more than simple HTML comments that IE (up to version 9) happens to take a peep at, are used to throw a chunk of HTML at these browsers and only these browsers.

```
<link href="everything.css" rel="stylesheet">
<!--[if IE]><link href="stupidie.css" rel="stylesheet"><![endif]-->
```

- `<!--[if IE 6>`…
- `<!--[if IE 7>`…
- `<!--[if IE 8>`…
- `<!--[if IE 9>`…
- `<!--[if IE gt 6]>`… for IE versions greater than 6
- `<!--[if IE gte 8]>`… for IE versions greater than or equal to than 8
- `<!--[if IE lt 7]>`… for IE versions less than 7
- `<!--[if IE lte 7]>`… for IE versions less than or equal to 7

Other tags

❖ Abbreviations

abbr is used to markup an abbreviation, a shortened form of a word or phrase.

❖ Quotations

blockquote and q are used for quotations. blockquote is generally used for standalone often multi-line quotations whereas q is used for shorter, in-line quotations.

❖ Citations

Just to make things nice and confusing, as well as a cite attribute, there is also a cite tag. This can be used to define the title of a work, such as a book.

❖ Code

code is used to represent any form of computer code. Further, var can be used for variables (which could be a variable in anything, not just in code - it could be a variable in an equation, for example), samp for sample output, and kbd (keyboard) for user input.

❖ Mark

Text can be highlighted, as if with a marker pen, using mark

❖ Time

by the datetime attribute, the value of which should be a machine-readable date and/or time.