

# CPET 499/ITC 250 Web Systems

## Chapter 2 Introduction to HTML

### Text Book:

\* Fundamentals of Web Development, 2015, by Randy Connolly and Ricardo Hoar, published by Pearson

\*E-Book on Building Web Applications with HTML, 2012, by Paul I. Lin,  
[http://www.etcs.ipfw.edu/~lin/CECourses/2\\_HTML/CE\\_02WebHhtmlindex.html](http://www.etcs.ipfw.edu/~lin/CECourses/2_HTML/CE_02WebHhtmlindex.html)

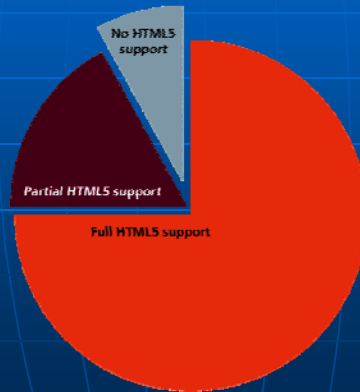
Paul I-Hai Lin, Professor  
<http://www.etcs.ipfw.edu/~lin>

## Topics

- What is HTML
- HTML Syntax
- Semantic Markup
- Structure of HTML Documents
- Quick Tour of HTML Elements
- HTML Semantic Structure Elements
- Summary

## HTML Syntax

- References of HTML standards
  - **HTML 5** - <http://www.w3.org/TR/2014/REC-html5-20141028/>
- Figure 2.3 Browser usage and HTML support



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## HTML Syntax

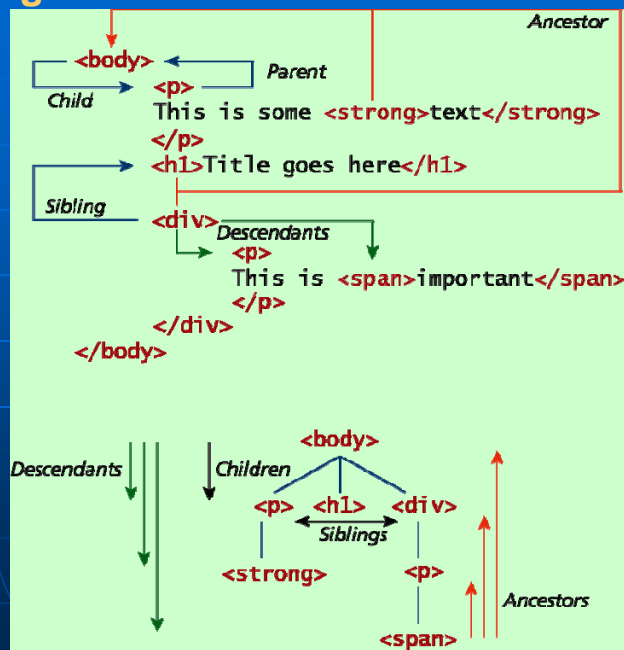
- Figure 2.4 The parts of an HTML element



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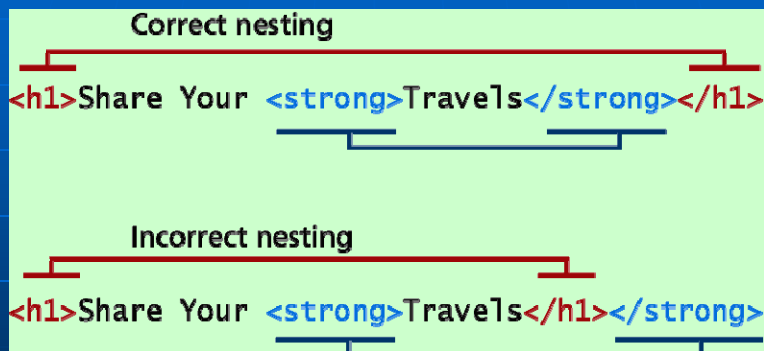
4

Figure 2.5 HTML document outline



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Figure 2.6 The proper nesting of HTML



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Figure 2.8 One of the simplest possible HTML5 documents

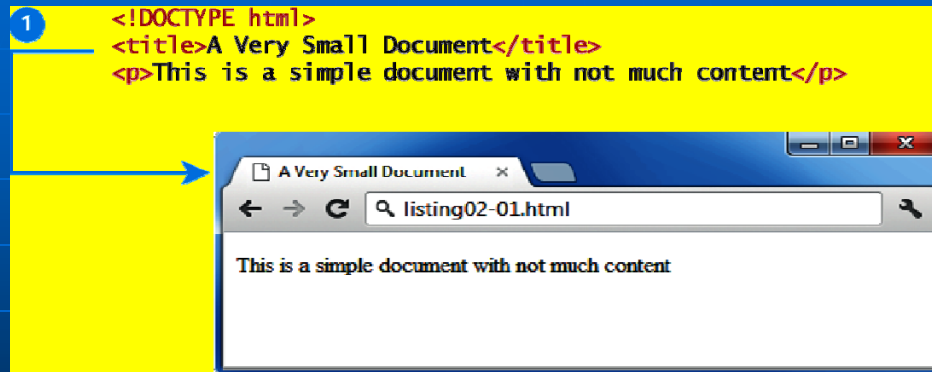


Figure 2.9 Structure elements of an HTML5 document

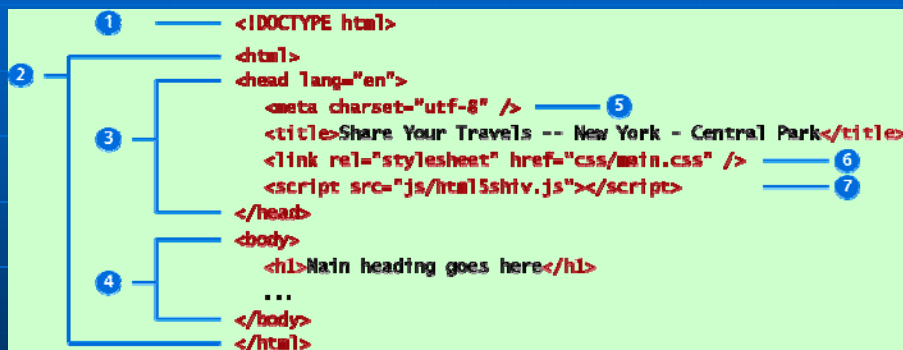


Figure 2.10

```

<body>
1  <h1>Share Your Travels</h1>
2  <h2>New York - Central Park</h2>
3  <p>Photo by Randy Connolly</p>
4  <p>This photo of Conservatory Pond in
   <a href="http://www.centralpark.com/">Central Park</a>
   New York City was taken on October 22, 2015 with a
   <strong>Canon EOS 30D</strong> camera.
   </p>
5  

   <h3>Reviews</h3>
6  <div>
7      <p>By Ricardo on <time>September 15, 2015</time></p>
      <p>Easy on the HDR buddy.</p>
   </div>

   <div>
      <p>By Susan on <time>October 1, 2015</time></p>
      <p>I love Central Park.</p>
   </div>
8
   <p><small>Copyright &copy; 2015 Share Your Travels</small></p>
   </body>
9

```

Figure 2.11 Share Your Travels – New York Central Park

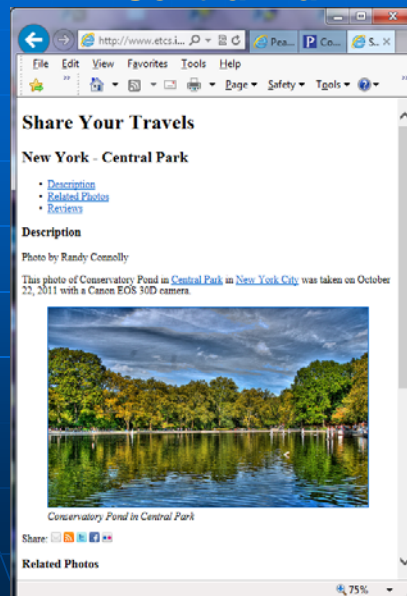


Figure 2.15 Two parts of a link

```
<a href="http://www.centralpark.com">Central Park</a>
```

Destination                      Label (text)

```
<a href="index.html"></a>
```

Label (image)

Figure 2.16  
Different link destinations

Link to external site

```
<a href="http://www.centralpark.com">Central Park</a>
```

Link to resource on external site

```
<a href="http://www.centralpark.com/logo.gif">Central Park</a>
```

Link to another page on same site as this page

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

Link to another place on the same page

```
<a href="#top">Go to Top of Document</a>
```

...

```
<a name="top">
```

Defines anchor for a link to another place on same page

Link to specific place on another page

```
<a href="productX.html#reviews">Reviews for product X</a>
```

Link to email

```
<a href="mailto:person@somewhere.com">Someone</a>
```

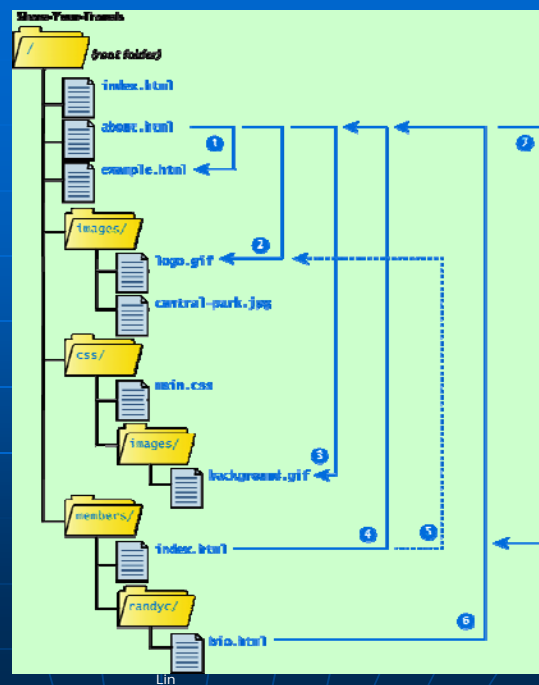
Link to JavaScript function

```
<a href="javascript:OpenAnnoyingPopup();">See This</a>
```

Link to telephone (automatically dials the number when user clicks on it using a smartphone browser)

```
<a href="tel:+18009220579">Call toll free (800) 922-0579</a>
```

Figure 2.17  
Example site  
directory tree



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Figure 2.18 The `<img>` element

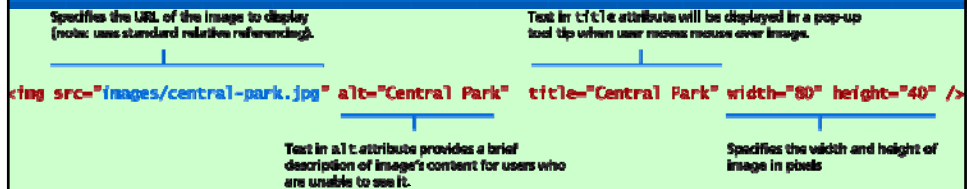


Figure 2.19 List elements and their default rendering

Notice that the list item element can contain other HTML elements.

```

<ul>
  <li><a href="index.html">Home</a></li>
  <li>About Us</li>
  <li>Products</li>
  <li>Contact Us</li>
</ul>

<ol>
  <li>Introduction</li>
  <li>Background</li>
  <li>My Solution</li>
  <li>
    <ol>
      <li>Methodology</li>
      <li>Results</li>
      <li>Discussion</li>
    </ol>
  </li>
  <li>Conclusion</li>
</ol>

```

Figure 2.20 Sample <div> based XHTML layout (with HTML 5 equivalent) elements and their default rendering

```

<body>
  <div id="header">
    <div id="logo-headings">
      ...
    </div>
    ...
    <div id="top-navigation">
      ...
    </div>
  </div>
  <div id="main">
    <div id="left-navigation">
      ...
    </div>
    <div class="content">
      <div class="story">
        ...
      </div>
      <div class="story">
        ...
        <div class="story-photo">
          <img ... class="blog-photo"/>
          <p class="photo-caption">...
        </div>
        <div class="related-stuff-on-right">
          ...
        </div>
      </div>
    </div>
    <div class="content">
      ...
    </div>
  </div>
  <div id="footer">
    ...
  </div>
</body>

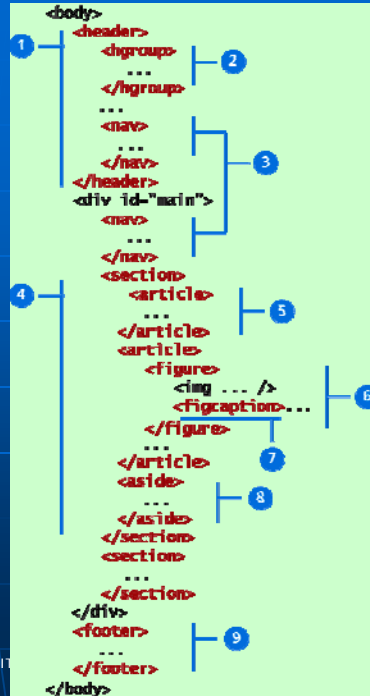
```

Diagram illustrating the mapping of XHTML/HTML5 elements to their default rendering:

- 1** `<div id="header">` maps to **2** `<header>`
- 3** `<div id="logo-headings">` maps to **4** `<hgroup>`
- 5** `<div id="top-navigation">` maps to **6** `<nav>`
- 7** `<div id="left-navigation">` maps to **8** `<nav>`
- 9** `<div class="content">` maps to **10** `<div class="content">`
- 11** `<div class="story">` maps to **12** `<article>`
- 13** `<div class="story-photo">` maps to **14** `<figure>`
- 15** `<p class="photo-caption">` maps to **16** `<figcaption>`
- 17** `<div class="related-stuff-on-right">` maps to **18** `<aside>`
- 19** `<div id="footer">` maps to **20** `<footer>`



Figure 2.21 Sample layout using new HTML 5 semantic structure elements



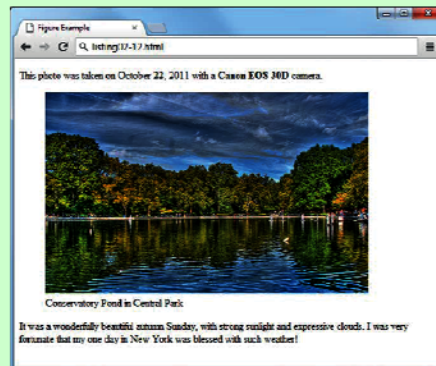
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Figure 2.22 The figure and figcaption elements in the browser

Figure could be moved to a different location in document ...  
But it has to exist in the document (i.e., the figure isn't optional).

```
<p>This photo was taken on October 22, 2011 with a Canon EOS 300 camera.</p>
<figure>
  <br/>
  <figcaption>Conservatory Pond in Central Park</figcaption>
</figure>
<p>
  It was a wonderfully beautiful autumn Sunday, with strong sunlight and expressive clouds. I was very fortunate that my one day in New York was blessed with such weather!
</p>
```



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Figure 2.23 Complete Project 1 – pp. 90-92

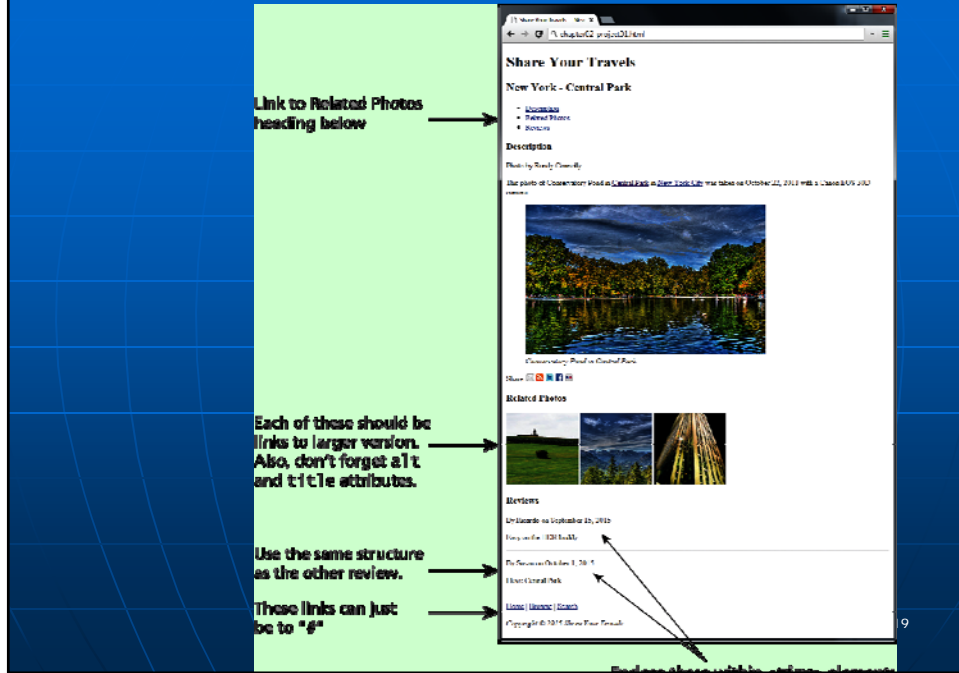


Figure 2.24 Complete Project 2 – pp. 92-93

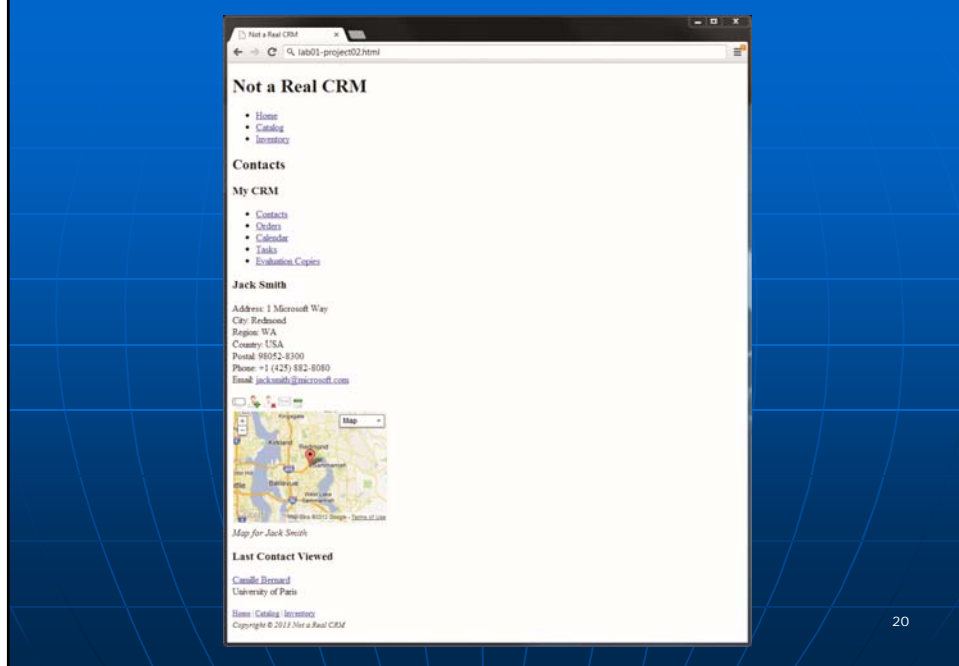
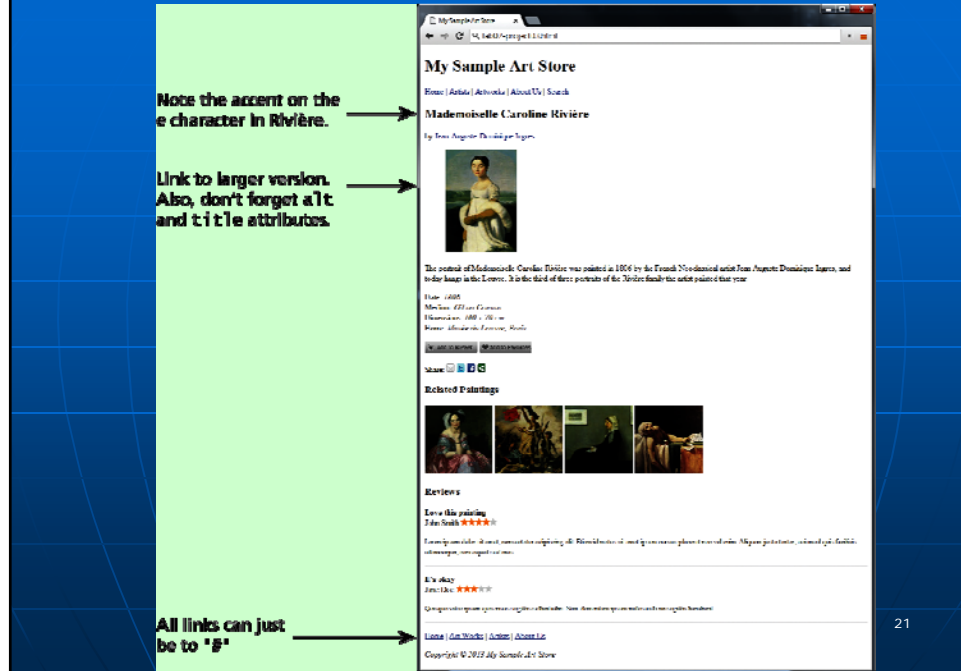


Figure 2.25 Complete Project 3 – pp. 93-94



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## Summary