

Creating and Building Websites

Stanford University Continuing Studies CS 21

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Course Web Site: <http://web.stanford.edu/group/csp/cs21/>

Week 5 Agenda



- Images review
- Using *Dreamweaver*
- Imagemaps
- HTML5 & Embedding Sound & Video
- Lists
- Tables
- Email Newsletters

Using Graphics on Web Pages (Review)

- Graphics on web pages are separate files. Unlike a Word document, where the graphics actually "live" within the document, to get a graphic on a web page, designers point to the graphic file in the HTML source code like this:

```

```

- Graphics are copyrighted material and should only be used with permission.

Graphics can be described as either relative or fully qualified URLs (Review)

<http://web.stanford.edu/group/csp/cs21/demos/bunny.html>

```
<html>
  <head>
    <title>Bunny Webpage</title>
  </head>
  <body bgcolor="turquoise">
    <h2 align="center">BUNNY!</h2>
    <p align="center">
      
    </p>
  </body>
</html>
```

Relative reference (relative to the location of the HTML document)

```
<html>
  <head>
    <title>Bunny Webpage</title>
  </head>
  <body bgcolor="turquoise">
    <h2 align="center">BUNNY!</h2>
    <p align="center">
      
    </p>
  </body>
</html>
```

Fully qualified URL



What is an image map?

- Image maps allow a webmaster to take an image and define more than one hyperlink for the image. Each hyperlinked section is called a "hotspot".
- To define a hotspot, webmasters open the image in a graphics program and record the coordinates of the points corresponding to the hotspot boundaries.

Map tags

```

```

```
<map name="name-of-map">
```

```
  <area shape="rect" coords="x,y,a,b" href="link1.html" />
```

```
  <area shape="circle" coords="x,y,r" href="link2.html" />
```

```
  <area shape="polygon" coords="x1,y1,a1,b1,x2,y2,a2,b2,..."  
    href="link3.html" />
```

```
</map>
```

rect



```
<area shape="rect" coords="x,y,a,b"  
href="link1.html" />
```

- Coordinates refer to the x/y coordinates for the upper left and the lower right coordinates for the rectangle.

circle

```
<area shape="circle" coords="x,y,r"  
href="link2.html" />
```

- The x/y coordinates refer to the center of the circle. The r refers to the size of the radius (in pixels).

polygon

```
<area shape="polygon"  
coords="x1,y1,a1,b1,x2,y2,a2,b2,..."  
href="link3.html" />
```

- Coordinates refer to the x/y coordinates for as many are needed to define the polygon.

Imagemap software



- Macintosh
 - Dreamweaver
 - <http://www.adobe.com/software/dreamweaver>
- Windows-based PCs
 - Dreamweaver
 - <http://www.adobe.com/software/dreamweaver>
 - MapEdit
 - <http://www.boutell.com/mapedit/>

Enhancing with sound/video

- Adding sound and/or video to your website can make viewing your site an exciting and vibrant experience.
- However, depending on how you utilize this technology, it can also bog down the servers, and make visitor experience of your website a real drag.

Using the Anchor Tag

- `Click here to listen`
- `Click here to view`
- `Click here to view`
- `Click here to listen/view`
- **Advantages:**
 - Page loads instantly. No waiting for large files to download in the background.
 - Works with all browsers, even version 1.1N
- **Disadvantages:**
 - Requires plug-ins or players
 - Can't adjust the height/width or location of the video/sound.

<embed> tag

- SRC="URL"
- AUTOSTART="TRUE|FALSE"
- ALIGN="BOTTOM|TOP|LEFT|RIGHT"
- ALT="ALTERNATIVE TEXT"
- BORDER="XX" -- in pixels
- LOOP="TRUE|FALSE"
- HEIGHT="XX" -- in pixels
- WIDTH="XX" -- in pixels
- HIDDEN="TRUE|FALSE"
- VSPACE="XX" -- space above/below embedded object (in pixels)

<embed> examples

```
<embed src="bach.mp3" hidden="true"  
height="0" width="0" border="0"  
alt="Bach's Fugue in D  
Major"></embed>
```

```
<embed src="movie.mov"  
autostart="true" loop="false"  
height="640" width="480">  
</embed>
```

HTML5



- *Dive into HTML5: Video on the Web*
<http://diveintohtml5.info/video.html>
- HTML5 video example:
<http://stanford.edu/group/csp/cs22/html5/video.html>
- HTML5 audio example:
<http://stanford.edu/group/csp/cs22/html5/audio.html>

Lists

There are two main types of lists in HTML:

- Unordered
 - Bulleted lists (disc, circle, square)
- Ordered
 - Numbered lists (1,2,3 or a,b,c or I,II,III, or i,ii,iii)

List tags

- ` ` = Ordered List
 - Attributes: "type=1/a/A/i/I"
- ` ` = Unordered List
 - Attributes: "type=disc/circle/square"
- ` ` = List Item (in an OL or UL)

CSS styles for lists



- list-style-type:
disc | circle | square | decimal |
lower-roman | upper-roman | lower-alpha |
upper-alpha | none
- list-style-position:
inside | outside
- list-style-image:
<url> | none

 -- Unordered Lists

Note: type="disc" is the default attribute

```
<ul>
  <li> Glory bear </li>
  <li> Osito bear </li>
  <li> Britttania bear </li>
  <li> Maple bear </li>
  <li> Germania bear </li>
</ul>
```



- Glory bear
- Osito bear
- Britttania bear
- Maple bear
- Germania bear

<UL type = "circle">

```
<ul type="circle">  
  <li> Glory bear </li>  
  <li> Osito bear </li>  
  <li> Britttania bear </li>  
  <li> Maple bear </li>  
  <li> Germania bear </li>  
</ul>
```



- Glory bear
- Osito bear
- Britttania bear
- Maple bear
- Germania bear

<UL type="square">

```
<ul type="square">  
  <li> Glory bear </li>  
  <li> Osito bear </li>  
  <li> Brittania bear </li>  
  <li> Maple bear </li>  
  <li> Germania bear </li>  
</ul>
```



- Glory bear
- Osito bear
- Brittania bear
- Maple bear
- Germania bear

* = Ordered Lists*

Note: type="1" is the default attribute

```
<ol>  
  <li> Glory bear </li>  
  <li> Osito bear </li>  
  <li> Brittania bear </li>  
  <li> Maple bear </li>  
  <li> Germania bear </li>  
</ol>
```



1. Glory bear
2. Osito bear
3. Brittania bear
4. Maple bear
5. Germania bear

<OL type="a">

```
<ol type="a">  
  <li> Glory bear </li>  
  <li> Osito bear </li>  
  <li> Brittania bear </li>  
  <li> Maple bear </li>  
  <li> Germania bear </li>  
</ol>
```



```
a. Glory bear  
b. Osito bear  
c. Brittania bear  
d. Maple bear  
e. Germania bear
```

<OL type="A">

```
<ol type="A">  
  <li> Glory bear </li>  
  <li> Osito bear </li>  
  <li> Brittania bear </li>  
  <li> Maple bear </li>  
  <li> Germania bear </li>  
</ol>
```



- A. Glory bear
- B. Osito bear
- C. Brittania bear
- D. Maple bear
- E. Germania bear

<OL type="i">

```
<ol type="i">  
  <li> Glory bear </li>  
  <li> Osito bear </li>  
  <li> Brittania bear </li>  
  <li> Maple bear </li>  
  <li> Germania bear </li>  
</ol>
```



```
i. Glory bear  
ii. Osito bear  
iii. Brittania bear  
iv. Maple bear  
v. Germania bear
```

<OL type="I">

```
<ol type="I">  
  <li> Glory bear </li>  
  <li> Osito bear </li>  
  <li> Brittania bear </li>  
  <li> Maple bear </li>  
  <li> Germania bear </li>  
</ol>
```



```
I. Glory bear  
II. Osito bear  
III. Brittania bear  
IV. Maple bear  
V. Germania bear
```

More on ordered lists

- In addition to modifying the method of counting, you can also modify the number to start the list with (`start="xx"` must be a numeric value, even if the type is an alphabetical value):

```
<ol type="1" start="4">  
  <li> Glory </li>  
  <li> Osito </li>  
  <li> Brittania </li>  
</ol>
```



4. Glory
5. Osito
6. Brittania

```
<ol type="A" start="4">  
  <li> Glory </li>  
  <li> Osito </li>  
  <li> Brittania </li>  
</ol>
```



D. Glory
E. Osito
F. Brittania

(note: NOT start="D")

Nesting a List

- You can nest a list to make organization charts, outlines, etc.

```
<ul>
  <li>Boss
    <ul>
      <li>Supervisor A
        <ul>
          <li>Worker A</li>
          <li>Worker B</li>
        </ul>
      </li>
      <li>Supervisor B
        <ul>
          <li>Worker C</li>
          <li>Worker D</li>
        </ul>
      </li>
    </ul>
  </li>
</ul>
```

- Boss
 - Supervisor A
 - Worker A
 - Worker B
 - Supervisor B
 - Worker C
 - Worker D

```
<ol type="I">
  <li>Intro</li>
  <li>Thesis 1
    <ol type="A">
      <li>Point A
        <ol type="1">
          <li>Subpoint 1
            <ol type="a">
              <li>Proof a</li>
              <li>Proof b</li>
            </ol>
          </li>
          <li>Subpoint 2</li>
        </ol>
      </li>
      <li>Point B</li>
    </ol>
  </li>
  <li>Thesis 2</li>
  <li>Thesis 3</li>
  <li>Conclusion</li>
</ol>
```

- I. Intro
- II. Thesis 1
 - A. Point A
 - 1. Subpoint 1
 - a. Proof a
 - b. Proof b
 - 2. Subpoint 2
 - B. Point B
- III. Thesis 2
- IV. Thesis 3
- V. Conclusion

Tables

- Tables allow web designers to place data into rows and columns of cells.
- Organizing Content
 - Tables are most often used to organize data on a web page. As with spreadsheets, tables allow you to arrange data into rows and columns of cells. Any sort of data can be placed in the table -- even other tables.
- Page Layout
 - Creative web page designers often use tables for page layout. By hiding the border of the table, the cells can hold elements of the page and place them more precisely on the page. This method allows for more creativity and control by the author.
 - The World Wide Web Consortium (W3C) is an organization dedicated to providing guidance and structure to the Internet. In 2002, the W3C recommended that web designers stop using tables to control page layout, and to instead use Cascading Style Sheets (CSS). As web browsers became more compliant with CSS, the need for using tables as a page layout tool fast became an obsolete method. That said, email clients (Outlook, Apple Mail, etc.) do not understand CSS well. If you want to create an HTML email newsletter, you must still use tables to control page layout.

Table basics



`<table> </table>` = defines a table

`<tr> </tr>` = defines a Table Row

`<td> </td>` = defines a Table Cell ("Table Data")

`<th> </th>` = defines a Table Header (special kind of Table Cell)


`<caption> </caption>` = defines a caption above the table

Attributes:

- `summary` - text description of the contents of the table (modifies `<table>`)
- `bgcolor` / `background` - specifies color/background of the table (modifies `<table>`, `<td>`, `<tr>`)
- `border` - specifies border width of table in pixels or % (modifies `<table>`)
- `height` - specifies height of the table or cell in pixels or % (modifies `<table>` and `<td>`)
- `width` - specifies width of the table or cell in pixels or % (modifies `<table>` and `<td>`)
- `cellpadding` - specifies distance between cell and content within cell(modifies `<table>`)
- `cellspacing` - specifies spacing between each cell (modifies `<table>`)
- `align` - specifies horizontal alignment (`center/right/left` - modifies `<caption>`, `<table>`, `<td>`)
- `valign` - specifies vertical alignment (`top/middle/bottom` - modifies `<caption>`, `<tr>`, `<td>`)

Table example

```
<table>
  <caption>
    Beanie Babies!
  </caption>
  <tr>
    <th>Bear Name</th>
    <th>Description</th>
  </tr>
  <tr>
    <td>Glory</td>
    <td>American Bear</td>
  </tr>
  <tr>
    <td>Osito</td>
    <td>Mexican Bear</td>
  </tr>
</table>
```



Bear Name	Description
Glory	American Bear
Osito	Mexican Bear

Creative Use of Tables



- In addition to allowing data to be placed onto a web site, tables allow designers the ability to control page layout.
- You can use tables to wrap text around graphics, to put text in rows and columns (like a newspaper), etc...

Using Tables for Page Layout (HTML Email only)



- 1) Decide what elements you are going to want on the HTML email page -- both text and graphics.
- 2) On paper, sketch how you'd like the page to look.
- 3) Sketch in basic lines to help break your table up into the cells you'll need to define with your hidden table.
- 4) Now that you have the basic layout of the table, simply create the table code and add the elements to the correct cells.