CITS1231 Web Technologies

HTML Tables and Page Design Issues
Lecture Content

• Defining Tables
• Creating Hyperlinks
• Formatting Text
• Meta-data
• Good HTML practices
Creating a Newspaper-Style Layout

1) newspaper logo
2) list of links
3) articles
4) address
Table for Page Layout

• HTML tables are most often used to define the layout of an entire Web page

• If you want to design a page that displays text in newspaper style columns, or separates the page into distinct sections, you’ll find tables an essential and useful tool
A Simple Table

<body>
<table border>
<caption>The Caption</caption>
<tr><th>Heading1</th><th>Heading2</th></tr>
<tr><td>Line1</td><td>Line1</td></tr>
<tr><td>Line2</td><td>Line2</td></tr>
</table>
</body>
Table Elements

- The basic elements in tables are:
  - `table border` – A table with borders
  - `tr` – Table Row
  - `th` – Table Heading (appeared in bold face and centered)
  - `td` – Table Data

- Additional Attributes to add complexity:
  - `th` and `td` have the attribute `colspan` and `rowspan`
A Complex Table

```html
<body>
<table border>
<caption>The Caption</caption>
<tr><th>Heading1</th><th>Heading2</th></tr>
<tr><td rowspan="2">Weekends</td><td>Saturday</td></tr>
<tr><td>Sunday</td></tr>
</table>
</body>
```

<table>
<thead>
<tr>
<th>Heading1</th>
<th>Heading2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekends</td>
<td>Saturday</td>
</tr>
<tr>
<td></td>
<td>Sunday</td>
</tr>
</tbody>
</table>

The Caption
Another Complex Table

```html
<body>
<table border>
  <caption>The Caption</caption>
  <tr><th colspan="2">Heading</th></tr>
  <tr><td>1</td><td>2</td></tr>
  <tr><td>3</td><td>4</td></tr>
</table>
</body>
```

The Caption

<table>
<thead>
<tr>
<th>Heading</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
</tbody>
</table>
Example of Spanning Cells

<table>
<thead>
<tr>
<th>Today's Opinion Poll Question</th>
<th>Political Party</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Democrat</td>
</tr>
<tr>
<td>Favor</td>
<td>70%</td>
</tr>
<tr>
<td>Oppose</td>
<td>25%</td>
</tr>
<tr>
<td>Unsure</td>
<td>5%</td>
</tr>
</tbody>
</table>

"Do you favor or oppose increasing the minimum wage?"
More Table Attributes

- The `th` and `td` element also supports the following attributes
  - `width` – as a number of pixels, or a % of table width, or relative real number to other columns (may auto-adjust according to window width if unspecified)
  - `height` – as a number of pixels (may auto-adjust according to the amount of text if unspecified)
  - `align` – left, center, or right
  - `valign` – top, middle, or bottom

- The thickness of the border of a table can be set using the `border` attribute, e.g.
  - `<table border="2">`
The align and valign attribute
More Table Attributes (cont.)

- The colour scheme can be adjusted as attributes `table` or `td`. For example,
  - `<td bgcolor="yellow">`

- `cellpadding` and `cellspacing` are often used in table element
  - `cellpadding` adjusts the space around content within cells
  - `cellspacing` adjusts the space between cells

- Blank table cells need something in them so they don’t collapse on themselves.
  - `<td>&nbsp;</td>`
Creating Links Within a Document
Hyperlinks and Anchors

• A hyperlink is a reference (an address) to a resource on the web:
  – an HTML page
  – an image
  – a sound file
  – a movie, etc.

• An anchor is a term used to define a hyperlink destination inside a document.

• The HTML anchor element `<a>`, is used to define both hyperlinks and anchors.
Creating Hyperlinks

• Hyperlink <a> element
  – Requires an href attribute.
  – Value of the href attribute is an address identifying destination/target.

Visit <a href=http://www.abc.net.au/>ABC Online!</a>

• The code above will display like this in a browser:
  Visit ABC Online!
Creating Anchors

- Anchor `<a>` element requires a `name` or an `id` attribute.

```html
<a name="conclusion">The Conclusion</a>
```

- Value of attribute may be used with `href` to link to the anchor.

```html
Jump to the <a href="#conclusion">conclusion</a>!
```

- The code above will display like this in a browser:

  Jump to the `conclusion`!
Creating Anchors

• An anchor element marks a specific location within a document.

• An anchor can include most inline elements and empty elements; however, anchors cannot include block-level elements.

• A link’s content is not limited to text, an image can be used as a link content as well.
Anchor Using **id** or **name**?

- **Use id or name?** Should consider:
  - The *id* attribute can act as more than just an anchor name (e.g., style sheet selector, processing identifier, etc.).
  - Some older browsers don't support anchors created with the *id* attribute.
  - The *name* attribute allows richer anchor names (e.g. with special characters).
Quoting

- Quotations can be incorporated in HTML using the `<blockquote>` tag (the quoted tag will be indented). For example,

  <p>Quotation of the day by Robert X. Cringely at InfoWorld Magazine:</p>
  <blockquote>
    If the automobile had followed the same development cycle as the computer, a Rolls-Royce would today cost $100, get a million miles per gallon, and explode once a year, killing everyone inside.
  </blockquote>

Produces
Centering

- All produce:
  
  This goes in the center.

- However, first two usages are deprecated in favour of Cascading Style Sheets (CSS).

- We will discuss controlling presentation using CSS later.
Preformatting

- Preformatted text is often necessary in cases of including source code in a web page. The `<pre>` tag can be used.

```perl
#!/usr/bin/perl -w
if (@ARGV) {
    @files = @ARGV;
} else {
    @files = <[a-z]*>;
}
foreach $name (@files) {
    if (-d $name) {
        print "\n\nTest for $name","\n";
    }
}
</pre>
```
Inside HTML’s head

- A HTML document is made of two main parts: a `<head>` and a `<body>`. As we have seen so far, displayable document content goes in `<body>`.

- The `<head>` element is used as a container for information about the document, additional to the document content.

- We’ve already used the `<title>` elements. Other possible elements are `<meta>`, `<link>`, `<script>` and `<style>`.

- `<script>` and `<style>` will be introduced when we discuss JavaScript and Cascading Style Sheets in later lectures.
META-data

- The `<meta>` element is used to store metadata about a document, such as a short description of its content, keywords that maybe used for search engine indexing, or to include details about the page author. For example,

```html
<head>
<title>Web Technologies</title>
<meta name="author" content="Wei Liu"/>
<meta name="description" content="This is a webpage of CITS1231 at CSSE, UWA"/>
<meta name="keywords" content="Internet, Web, HTML, CSS, JavaScript, XML"/>
</head>
```
META-refresh

• The `<meta>` element can also be used to redirect visitors to another document:

```html
<meta http-equiv=refresh content="5; url="http://web.csse.uwa.edu.au">
```

Five seconds after loading this document containing this `<meta>` data, most modern browsers will start automatically loading the web pages at http://web.csse.uwa.edu.au/.
What you haven’t seen here

- `<object>` element - used for generic chunk of data to include images, sound track, video clip, applet or another HTML document.

- `<applet>` element to include a Java Applet.

- `<frameset>`, `<frame>` and `<iframe>` elements for displaying multiple HTML documents in one browser window.
  - hard to bookmark, difficult to maintain & navigate with non-graphical browsers, search engine problems.
  - think really hard before using frames.
Tips for Good HTML Code

• Use line breaks and indented text to make your HTML file easier to read

• Insert comments into your HTML file to document your work

• Enter all tag and attribute names in lowercase

• Place all attribute values in quotes

• Close all two-sided tags

• Make sure that nested elements do not cross
Tips for Good HTML Code

- Use *styles* in place of presentational elements whenever possible
- Use *logical* elements to describe an element’s content
- Use *physical* elements to describe the element’s appearance
- Include the *alt attribute* for any inline image to specify alternative text for non-graphical browsers
- Know your market and the *types of browsers* that your audience will use to view your Web page
- Test your Web page on all relevant browsers
Saving a file

- Save your work often.
- Use extension .html or .htm.
- Avoid names with embedded blanks, like My Home Page.html because blanks cause grief to some systems, and the URL for such a page would have to be My%20Home%20Page.html.
- Default web page is index.html or default.html or whatever the ISP has decided is the default filename. This file will be returned by the server when the request URL has no filename included.
- If you don't have a default page, many servers will show the contents of your directory.
Conclusion

In this lecture, we discussed the following concepts:

- Defining Tables
- Creating Hyperlinks
- Formatting Text
- Meta-data
- Good HTML practices