

CM0133 Internet Computing

3. More HTML, Tables, and Forms

Tables

- Tables provide a means of organizing the layout of data
- A table is divided into **rows** and **columns**: these specify the **cells** of the table
- Cells can contain text, images, links, other tables...
- Tables can also be used for organising the layout of the web page itself. Although having stylesheets now it is not recommended.

Tables

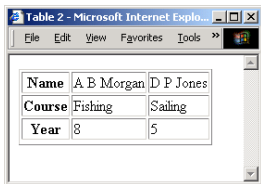
- `<table>` main element
- `<tr>` table row
- `<th>` table header
- `<td>` table data

Name	Course	Year
A B Morgan	Fishing	5
D P Jones	Sailing	8

```
<table border="1">  
<tr>  
<th>Name</th>  
<th>Course</th>  
<th>Year</th>  
</tr>  
<tr>  
<td>A B Morgan</td>  
<td>Fishing</td>  
<td>5</td>  
</tr>  
<tr>  
<td>D P Jones</td>  
<td>Sailing</td>  
<td>8</td>  
</tr>  
</table>
```

Tables

- `<table>` main element
- `<tr>` table row
- `<th>` table header
- `<td>` table data



Name	A B Morgan	D P Jones
Course	Fishing	Sailing
Year	8	5

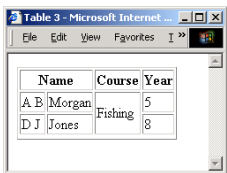
```
<table border="1">
<tr>
<th>Name</th>
<td>A B Morgan</td>
<td>D P Jones</td>
</tr>
<tr>
<th>Course</th>
<td>Fishing</td>
<td>Sailing</td>
</tr>
<tr>
<th>Year</th>
<td>8</td>
<td>5</td>
</tr>
</table>
```

3 More HTML

4

Rows and Columns

- Cells can span multiple columns and multiple rows with the `colspan` and `rowspan` attributes



Name	Course	Year
A B Morgan		5
D J Jones	Fishing	8

```
<table border="1">
<tr>
<th colspan="2">Name</th>
<th>Course</th>
<th>Year</th>
</tr>
<tr>
<td>A B</td>
<td>Morgan</td>
<td rowspan="2">Fishing</td>
<td>5</td>
</tr>
<tr>
<td>D J</td>
<td>Jones</td>
<td>8</td>
</tr>
</table>
```

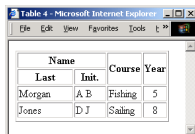
3 More HTML

5

The align and width attributes

- The `align` attribute determines the position of the text within a cell
- The `width` attribute determines the width of the row relative to the table

```
<table border="1" align="center">
<tr>
<th colspan="2" width="60%">Name</th>
<th rowspan="2">Course</th>
<th rowspan="2">Year</th>
</tr>
<tr>
<th>Last</th>
<th>Init.</th>
</tr>
<tr>
<td>Morgan</td>
<td>A B</td>
<td>Fishing</td>
<td>5</td>
</tr>
<tr>
<td>Jones</td>
<td>D J</td>
<td>Sailing</td>
<td align="center">8</td>
</tr>
<!-- etc -->
```



Name		Course	Year
Last	Init.		
Morgan	A B	Fishing	5
Jones	D J	Sailing	8

3 More HTML

6

Table attributes

Table attributes

- **align** alignment relative to the page
- **width** in pixels or percentage of page width
- **border** - width of border (pixels)
- **cellspacing** separation between cells (pixels)
- **cellpadding** - space around data inside cell (pixels)
- **bgcolor** - background colour (inside cells)

Furthermore

- The **<caption>** element puts a title above the table

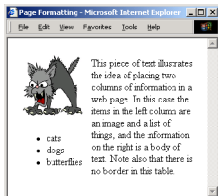
Table attributes

```
<table border="3" align="center" cellspacing="6"
cellpadding="6" bgcolor="cyan">
  <caption>
    <h2>Course Data</h2>
  </caption>
  <tr>
    <th>Name</th>
    <th>Course</th>
    <th>Year</th>
  </tr>
  <tr>
    <td>A B Morgan</td>
    <td>Fishing</td>
    <td>5</td>
  </tr>
  <tr>
    <td>D F Jones</td>
    <td>Sailing</td>
    <td>8</td>
  </tr>
<!-- etc -->
```

Name	Course	Year
A B Morgan	Fishing	5
D F Jones	Sailing	8

Page formatting

- Tables can be used to organise the layout of the web page itself



```
</body>
<table border="0" cellspacing="10">
  <tr>
    <td>
      
      <ul>
        <li>cats</li>
        <li>dogs</li>
        <li>butterflies</li>
      </ul>
    </td>
    <td>
      This piece of text illustrates
      the idea of placing two columns
      of information in a web page...
      Note also that there is no
      border in this table.
    </td>
  </tr>
</table>
</body>
```

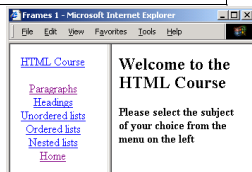
Frames and Framesets

- A **frameset** partitions a web browser window so that multiple web documents can be displayed simultaneously.
- **Examples**
 - To maintain a permanently visible directory of links within your site, while also displaying one or more selected documents from the site.
 - To show contents from your site together with contents from an external website, excluding any data interaction with the external site.
- **Disadvantages:**
 - The web developer must keep track of more HTML documents
 - It is difficult to print the entire page
 - framesets can cause problems for bookmarking and for "screen readers" (for visually-impaired users)

Framesets

```
<html>
<head><title>Frames 1</title></head>
<frameset cols="140,*">
  <frame name="navF" src="navigation.html">
  <frame name="mainF" src="intro.html">
</frameset>
</html>
```

- The **frameset** element replaces the **body** element
- **frameset** has attributes **cols** or **rows**, defined in terms of pixels, percentage(%) or unspecified (*)
 - this splits the window into two or more columns or rows



Frame attributes

```
<frameset cols="140,*">
  <frame name="navF" src="navigation.html">
  <frame name="mainF" src="intro.html">
</frameset>
```

- The **name** attribute uniquely identifies the frame. It may be used as the target in an anchor (**<a>**) element
- **The src** attribute specifies the web page to be placed in the frame initially (it may subsequently be overwritten)

Frame attributes

```
<frameset cols="140,*">
  <frame name="navF" src="navigation.html">
  <frame name="mainF" src="intro.html">
</frameset>
```

- The **scrolling** attribute ("auto", "yes", "no") specifies whether the frame is to have scroll bars
- The **frameborder** attribute ("0", "1") specifies whether the frame is to have a border

navigation.html

- The anchor tag has a **target** attribute
 - takes the name of the frame used to display the information
- All anchors below are targeted to the "mainF" frame

```
<html><head><title>Navigation Bar</title></head>
<body style="text-align:center;">
  <a href="course.html" target="mainF">HTML Course</a><br><br>
  <a href="paragraph.html" target="mainF">Paragraphs</a><br>
  <a href="headings.html" target="mainF">Headings</a><br>
  <a href="ulists.html" target="mainF">Unordered lists</a><br>
  <a href="olists.html" target="mainF">Ordered lists</a><br>
  <a href="nlists.html" target="mainF">Nested lists</a><br>
  <a href="intro.html" target="mainF">Home</a><br>
</center></body>
</html>
```

intro.html

- A simple document which is initially placed in the "mainF" frame
- This is replaced when a user clicks on a link in the "navF" frame

```
<html>
<head><title>Internet Computing</title></head>
<body>
  <h2>Welcome to the HTML Course</h2>
  <p>
    <h4>Please select the subject of...</h4>
  </p>
</body>
</html>
```

Nested framesets

```
<html>
<head><title>Frames 2</title></head>
<frameset cols="140,*">
  <frame name="navF" src="navigation.html">
  <frameset rows="30%,70%">
    <frame name="upperF" src="intro.html">
    <frame name="lowerF" src="course.html">
  </frameset>
</frameset>
</html>
```



Noframes

- Some browsers cannot process frames. Alternative content should be provided using the `noframes` element

```
<html>
<head><title>Frames 1</title></head>
<frameset cols="140,*">
  <frame name="navF" src="navigation.html">
  <frame name="mainF" src="intro.html">
</frameset>
<noframes>
<body>
  Something here for browsers not supporting frames
</body>
</noframes>
</html>
```

Forms

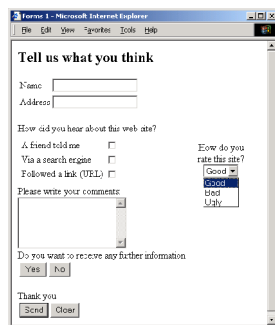
- Forms are user interfaces for data input
- Main application: to provide user input for
 - programs and databases located on a web server
 - local (client-side) scripts associated with the form
- Server-based programs may return data to the client as a web page
- Client-side scripts can read input data
 - To validate the data, prior to sending to server
 - To use in local processing which may output web page content that is displayed on the client

Example applications

- Questionnaires to provide feedback on a web site other type of polls or surveys.
- e-commerce, to enter name, address, details of purchase and credit-card number
 - request brochures from a company
 - make a booking for holiday, cinema etc.
 - buy a book, cd, etc
 - obtain a map giving directions to a shop
- Run a database query and receive results (an important part of e-commerce)

Input types

- text
- checkbox
- radio (buttons)
- select (options)
- textarea
- password
- button
- submit
- reset
- hidden
- file
- image



The method and action attributes

- The `method` attribute specifies the way that form data is sent to the server program
 - `GET` appends the data to the URL
 - `POST` sends the data separately
- The `action` attribute specifies a server program that processes the form data (often as a URL)

```
<body>
<form method="POST" action="comments.php">
  <h2>Tell us what you think</h2>
  <!-- etc -->
</form>
</body>
```

The `input` element: `type="text"`

- The `type` attribute specifies the type of user input
- The `name` attribute gives an identifier to the input data



```
<form method="POST" action="comments.php">  
<h2>Tell us what you think</h2>  
Name <input name="name" type="text" size="20" /><br />  
Address <input name="address" type="text" size="30" />  
</form>
```

The `input` element: `type="text"`

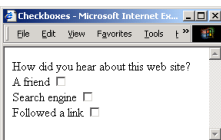
- The `size` attribute specifies the length of the input field
- The `value` attribute specifies an initial value for the text (optional)



```
<form method="POST" action="comments.php">  
<h2>Tell us what you think</h2>  
Name <input name="name" type="text" size="20" /><br />  
Address <input name="address" type="text" size="30" />  
</form>
```

The `input` element: `type="checkbox"`

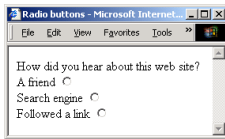
- The `name` attribute is used to define a set of checkboxes
- The `value` attribute identifies the individual checkbox
- If the `checked` attribute is set the box is initially checked



```
How did you hear about this web site?<br>  
A friend  
<input type="checkbox" name="howdid" value="friend" /><br />  
Search engine  
<input type="checkbox" name="howdid" value="engine" /><br />  
<!-- etc -->
```

The `input` element: `type="radio"`

- Radio buttons are similar to checkboxes, but only one can be selected
- To select a button by default, use the `checked` attribute (for one button only)



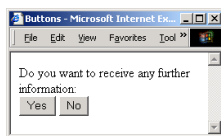
```
How did you hear about this web site?<br />
A friend
<input type="radio" name="howdid" value="friend" /><br />
Search engine
<input type="radio" name="howdid" value="engine" /><br />
<!-- etc -->
```

3 More HTML

25

The `input` element: `type="button"`

- The `name` attribute uniquely identifies a button
- The `value` attribute gives a label to the button
- Actions can be associated with buttons using JavaScript
 - see weeks 5 and 6



```
Do you want to receive any further information:<br />
<input type="button" name="yes" value=" Yes " />
<input type="button" name="no" value=" No " /><br />
```

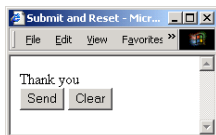
3 More HTML

26

The `input` element:

`type="submit/reset"`

- Click to add an outline
- `type="submit"`
 - clicking this button sends the form data to the program (URL) specified in the `action` attribute of the form
- `type="reset"`
 - clicking this button clears all data entered so far



```
Thank you<br />
<input type="submit" name="send" value="Send" />
<input type="reset" name="clear" value="Clear" /><br />
```

3 More HTML

27

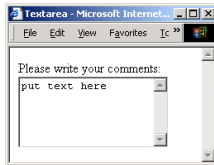
The input element:

type="password/file/hidden"

- Click to add an outline
- **type="password"**
 - similar to **type="text"** except that the input is echoed with asterisks (so not visible)
- **type="file"**
 - provides a file dialogue box to specify a file that is sent to the server
- **type="hidden"**
 - similar to text input, but the **value** attribute is used to specify data that is to be sent to the server. Nothing appears on the screen.
 - The data might be set by a server program to keep track of the details of a particular transaction.

The textarea element

- Used for multi-line text input
- The size of the input area is specified with the **cols** and **rows** attributes
- Any text placed inside the element appears in the input area (this can be deleted).



```
Please write your comments:<br>
<textarea name="comments" rows="5" cols="20">
  put text here
</textarea>
```

The select element

- The **select** element provides a menu of options
- An option can be selected by default using the **selected** attribute (otherwise the first in the list is initially selected)



```
How do you rate this site?<br>
<select name="rating">
  <option>Good</option>
  <option selected>Bad</option>
  <option>Ugly</option>
</select>
```

Links & Literature HTML

- W3schools: <http://www.w3schools.com>
- Google "html tutorial" and similar to find lot of more resources on the web
- Check the library: <http://library.cf.ac.uk> , e.g.:
 - Jamsa, Kris A., HTML & Web design [electronic resource] : tips & techniques / Kris Jamsa, Konrad King, Andy Anderson, Boulder, Colo. : NetLibrary 2003
 - Castro, Elizabeth, HTML for the world wide web. 5^h Edition, Berkeley : Peachpit Press, 2003. Classmark: 005.72 CAS
 - Musciano, Chuck., HTML and XHTML, the definitive guide, 5^h Edition, O'Reilly, 2002 : QA76.76.H94.M8
