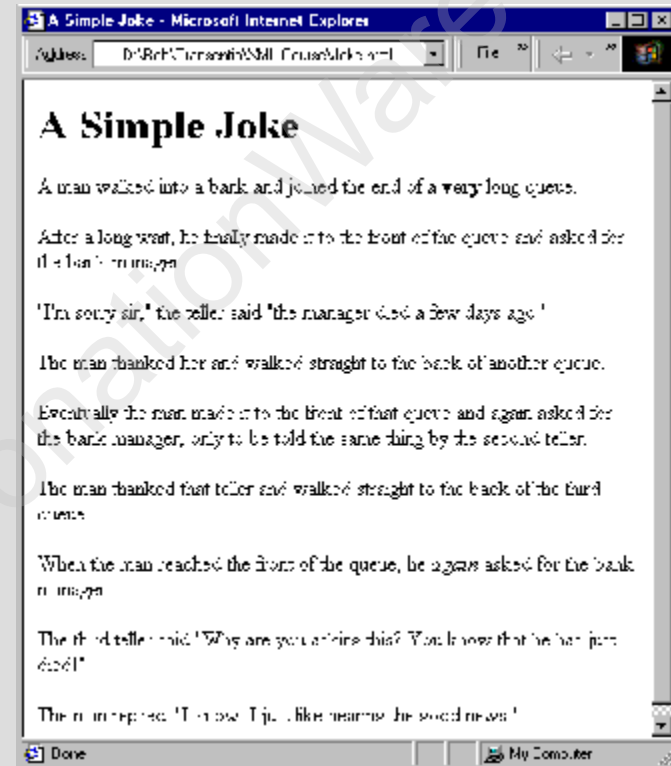


# *A Brief Introduction to HTML*

ml

```
<!DOCTYPE HTML PUBLIC "-//IETF//DTD HTML//EN">
<html>
  <head>
    <title>A Simple Joke</title>
  </head>
  <body>
    <h1>A Simple Joke</h1>
    <p>A man walked into a bank and joined the end of a
<strong>very</strong> long queue.</p>
    <p>After a long wait, he finally made it to the front
of the queue and asked for the bank manager.</p>
    <p>"I'm sorry sir," the teller said "the manager died a
few days ago."</p>
    <p>The man thanked her and walked straight to the back
of another queue.</p>
    <p>Eventually the man made it to the front of that
queue and again asked for the bank manager, only to be told
the same thing by the second teller.</p>
    <p>The man thanked that teller and walked straight to
the back of the third queue.</p>
    <p>When the man reached the front of the queue, he
<em>again</em> asked for the bank manager.</p>
    <p>The third teller said: "why are you asking this? you
know that he has just died!"</p>
    <p>The man replied: "I know. I just like hearing the
good news!"</p>
  </body>
</html>
```



- **HTML is a markup language**

- HTML specifies the parts of a document: “here is the title”, “this should be a level 3 heading”, “put an image here”, “emphasise this character sequence”, etc. To do this, HTML uses tags interspersed with the actual data

```
<tag tag-attribute="tag-value">tagged text</tag>
```

- looks similar to SGML
  - *also purely textual*
- the *lingua franca* of the World-Wide Web
  - *thus understood by all browsers*
- slowly migrating to XML
  - *XHTML 1.0 standard released in January 2000*
    - HTML reformulated to be compatible with XML standard

- Define the overall structure of an HTML document
  - the framework is ‘boilerplate’
  - `<head>` & associated tags are not part of ‘real’ document content
    - *supplies simple ‘metadata’ to the browser*
  - document does not correspond to the page as it is displayed by the browser
    - *layout, formatting, etc. “is in the eye of the beholder” and can change as circumstances dictate (as the browser’s window width changes, for instance)*
  - note use of lowercase tags
    - *now required by XHTML*

```
<!DOCTYPE HTML PUBLIC "-//IETF//DTD HTML//EN">
<html>
  <head>
    <title>Some text entitling the document...</title>
  </head>
  <body>
    </body>
</html>
```

- Markup the appearance of the data

- whitespace has no significance
- headings

- *six levels...<h1> to <h6>*
  - each higher-numbered sub heading is less visually 'strong'

```
<h1>A Big Heading</h1>
blah blah...
<h2>A subheading</h2>
more blah blah.
```

- paragraphs

- *<p> tag*

```
<p align="left">A paragraph</p>
<p align="center">A centered paragraph</p>
```

- decorations

- *<strong>, <em>*

```
He said <strong><em>what?</em></strong>
```

- also *<b>, <i>, <u>*

- deprecated

- *<hr>*

- horizontal rule divider

- colours

- *lightGrey, #ffeeff*

- font handling

- *<size>*

```
Hey <font size="+2">you!</font>
```

- *<font>*

```
Signed,
<font size="4" face="Lucida Handwriting">
Fred Smith
</font>.
```

- various

- *<blink>*

- affront to good taste!

- *<pre>*

- pre-formatted text; should be left alone by the browser

- still subject to parsing for tags, hence need to use &lt;

```
<pre>
a = 10;
b = 20;
if (a &lt; b)
    System.out.println ("result: " + a + b);
</pre>
```

- Creates HyperText

- “non-linear text”

- *text containing links and named locations that is not intended to be read in a linear, top-bottom fashion*

```
<a href="http://www.transentia.com.au/et#EducationAndTraining">  
Transentia's Education and Training  
</a>
```

- Uniform Resource Locators

- <http://www.transentia.com.au/et>
    - <ftp://cdrom.com>
    - <mailto:bob@transentia.com.au>

```
blah blah...  
<a name="EducationAndTraining">  
Transentia undertakes...  
</a>  
  
more blah blah...
```

- "Oh, look! Pretty Pictures..."

- accounts for the popularity of the web

- *GIF/JPEG formats widely supported*

- note: no `</img>` tag

```
<p>
Under Construction. Please check back later...</p>
```

- The use of width and height attributes is highly recommended

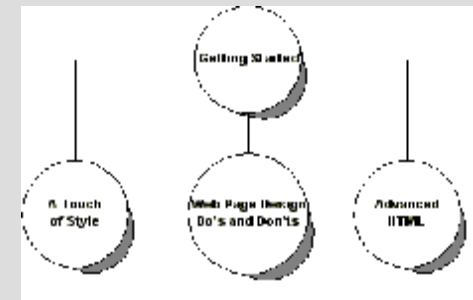
- *can greatly speed page rendering*

- Maps

- pretty pictures with distinguished areas for links

```
<p align="center">

<map name="sitemap">
  <area shape="circle" coords="186,44,45"
    href="Overview.html" alt="Getting Started">
  <area shape="circle" coords="42,171,45"
    href="Style.html" alt="A Touch of Style">
  <area shape="circle" coords="186,171,45"
    alt="Web Page Design">
  <area shape="circle" coords="318,173,45"
    href="Advanced.html" alt="Advanced HTML">
</map>
```

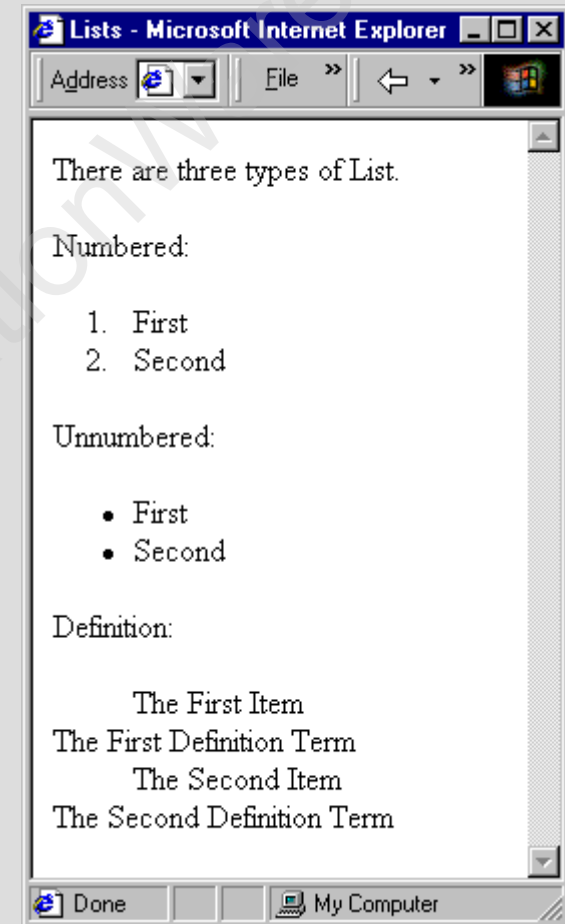


# • Three types

- numbered
- unnumbered
- definition

```
<html>
  <head>
    <title>Lists</title>
  </head>
  <body>
    <p>There are three types of List.</p>
    <p>Numbered:</p>
    <ol>
      <li>First</li>
      <li>Second</li>
    </ol>
    <p>Unnumbered:</p>
    <ul>
      <li>First</li>
      <li>Second</li>
    </ul>
    <p>Definition:</p>
    <dl>
      <dd>The First Item</dd>
      <dt>The First Definition Term</dt>
      <dd>The Second Item</dd>
      <dt>The Second Definition Term</dt>
    </dl>
  </body>
</html>
```

- can be nested, of course...





- Powerful but can be fiddly

# Tables

Year	Sales		
	North	South	Total
2000	\$10M	\$8M	\$18M
2001	\$14M	\$11M	\$25M

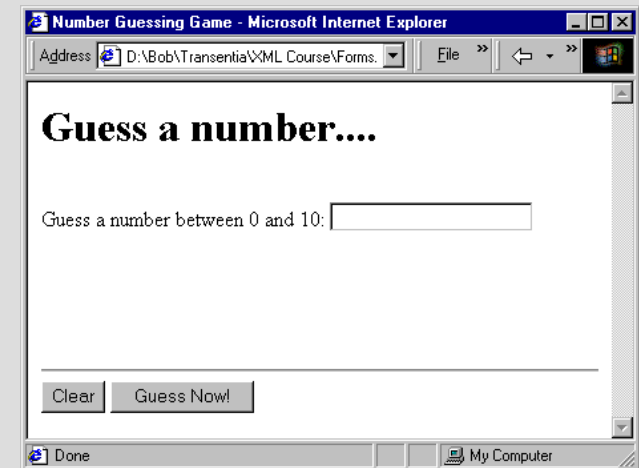
Sales and Projections

```
<table border="1" cellpadding="10" width="80%">
<caption align="bottom">Sales and Projections</caption>
  <tr align="center" bgcolor="lightGrey">
    <th rowspan="2">Year</th>
    <th colspan="3">Sales</th>
  </tr>
  <tr align="center" bgcolor="lightGrey">
    <th>North</th>
    <th>South</th>
    <th>Total</th>
  </tr>
  <tr align="center">
    <td>2000</td><td>$10M</td><td>$8M</td><td>$18M</td></tr>
  <tr align="center">
    <td>2001</td><td>$14M</td><td>$11M</td><td>$25M</td></tr>
</table>
```

## • Allowing for User Interaction

- buttons, text fields & areas, radio buttons, checkboxes, selection, etc.
- PASSWORD, FILE
- HIDDEN, SUBMIT, RESET

```
<html>
<head>
  <title>Number Guessing Game</title>
</head>
<body>
  <h1>Guess a number....</H1>
  <br>
  <form method="POST" action="http://the.server.machine/theServerScript">
    Guess a number between 0 and 10:
    <input name="Name">
    <p>&nbsp;</p>
    <p>&nbsp;</p>
    <input type="HIDDEN" name="done" value="done">
    <input type="HIDDEN" name="theValue" value="7">
    <hr>
    <input type="RESET" value="Clear">
    <input type="SUBMIT" value="Guess Now!">
  </form>
</body>
</html>
```



- Embedding functionality within an HTML document

- many scripting languages

- *JavaScript, VBScript, PerlScript, etc.*

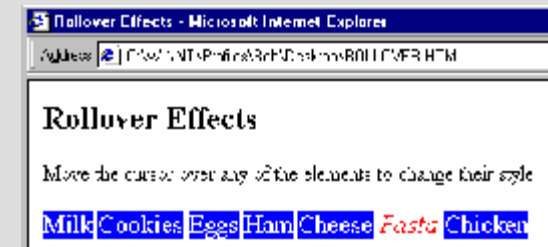
- 2 basic uses:

- *input validation*
  - behind-the-scenes processing
- *‘Dynamic’ HTML*
  - “jazzing up” the user experience
    - next slide...

```
<html>
<head>
  <title>Number Guessing Game</title>
</head>
<script language="JavaScript">
  <!--
    function guess()
    {
      // 13 is the 'enter' key
      if (window.event.keyCode == 13)
        if (Name.value == "5")
          alert ("You Won!");
    }
  -->
</script>
<body>
  <h1>Guess a number....</H1>
  Guess a number between 0 and 10:
  <input name="Name" onkeyup="guess()">
</body>
</html>:w
```

```
<html>
<head>
  <title>Rollover Effects</title>
  <style>
    .Item {
      font-size: 20; font-style: normal;
      background-color: blue; color: white
    }
    .Highlight {
      cursor: hand;
      font-size: 20; font-style: italic;
      background-color: white; color: red
    }
  </style>
</head>
<body>
  <h2>Rollover Effects</h2>
  <div id=Rollover>
    <p>Move the cursor over any of the elements to change their style.</p>
    <span class="Item">Milk</span>
    <span class="Item">Cookies</span>
    <span class="Item">Eggs</span>
    <span class="Item">Ham</span>
    <span class="Item">Cheese</span>
    <span class="Item">Pasta</span>
    <span class="Item">Chicken</span>
  </div>
  <script>
    function rollon() {
      if (window.event.srcElement.className == "Item") {
        window.event.srcElement.className = "Highlight";
      }
    }
    Rollover.onmouseover = rollon;
    function rolloff() {
      if (window.event.srcElement.className == "Highlight") {
        window.event.srcElement.className = "Item";
      }
    }
    Rollover.onmouseout = rolloff;
  </script>
</body>
</html>
```

- note use of <div> and <span> elements
  - *establish separate blocks*
- also <style>
  - *applies an internal stylesheet*




- **Comment**

```
<!-- this is a comment -->
```

- **Line Break**

```
<p>Bob Brown<br>
Transentia Pty. Ltd.<br>
Brisbane, Queensland, Australia.<br>
bob@transentia.com.au</p>
```

```
<p> This text will be flowed around
the left side of the graphic.<br clear="all"> This starts a
new line below the floated image.</p>
```

 This text will be flowed around the right side of the graphic. This starts a new line below the floated image.

- **META**

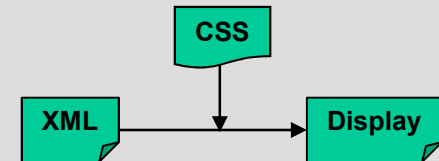
– provides information about the document

```
<HTML>
<HEAD>
<META HTTP-EQUIV="Content-Type" CONTENT="text/html; charset=windows-1252">
<META NAME="Generator" CONTENT="Microsoft Word 97">
<TITLE>Hello there</TITLE>
</HEAD>
<BODY>

<FONT SIZE=2><P>Hello there</P></FONT></BODY>
</HTML>
```

# • Each document can have associated style data

- stylesheet is consulted during rendering
- for each element, or each *class* of element



```

<html>
<head>
  <style>
    h1 { font-family: Braggadocio; font-size: 16pt; color: green }
    strong { font-size: 14pt; color: red }
  </style>
  <title>A Simple Joke</title>
</head>
<body>
  <h1>A Simple Joke</h1>
  <p>A man walked into a bank and joined the end of a <strong>very</strong> long queue.</p>

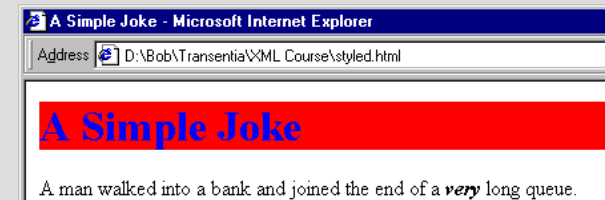
```



```

<html>
<head>
  <style>
    h1 { background: red; color: blue }
    strong { font-style: italic }
  </style>
  <title>A Simple Joke</title>
</head>
<body>
  <h1>A Simple Joke</h1>
  <p>A man walked into a bank and joined the end of a <strong>very</strong> long queue.</p>

```



CSS

- A comprehensive set of parameters can be adjusted:

- font & text

- *font, font-family, font-size, font-style, font-weight, line-height, letter-spacing, text-align, text-decoration, text-indent, vertical-align, etc.*

- color & background

- *background-color, background-image, background-position, background-repeat, color, etc.*

- layout

- *border, border-bottom, border-bottom-color, border-bottom-style, border-width, margin, padding, etc.*

- positioning

- *clip, height, left, overflow, position, top, visibility, width, z-index, etc.*

- other

- *classifications,*
- *printing*
- *import, hover, etc.*



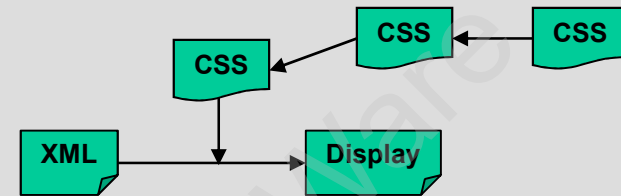


# • Styles can cascade

– be added to successively

• *makes it easier to give groups of files a consistent 'look'*

– hence the name!



```

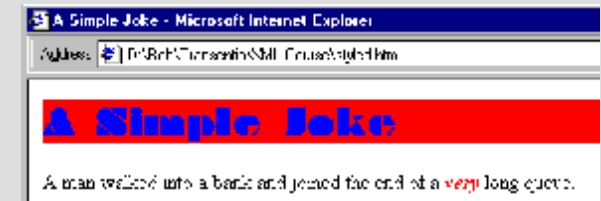
<!-- file mystyles.css -->
h1 { font-family: Braggadocio; font-size: 20pt }
strong { color: red }
  
```

cascade

```

<html>
<head>
  <LINK REL="STYLESHEET" TYPE="text/css" HREF="mystyles.css">
  <style>
    h1 { background: red; color: blue }
    strong { font-style: italic }
  </style>
  <title>A Simple Joke</title>
</head>
<body>
  <h1>A Simple Joke</h1>
  <p>A man walked into a bank and joined the end of a <strong>very</strong> long queue.</p>
  
```

cascade



Cascades

- Tags can be given classes and a style applied to a class

```
<html>
<head>
  <LINK REL="STYLESHEET" TYPE="text/css" HREF="mystyles.css">
  <style>
    h1 { background: red; color: blue }
    strong { font-style: italic }
    .dropcap {float: left; color: red;
              font-size: x-large; width: 1em;
              height: 1em; }
    .first { background: lightGrey }
  </style>
  <title>A Simple Joke</title>
</head>
<body>
  <h1>A Simple Joke</h1>
  <p class="first"><span class="dropcap">A</span> man walked
  into a bank and joined the end of a <strong>very</strong>
  long queue. After a long wait, he finally made it to the
  front of the queue and asked for the bank manager.</p>
```



- CSS are useful when creating dynamic behaviours

# "Dynamic" HTML

```
<html>
<head>
  <style>
    .whiteText { color:white;
                  font-family: Comic Sans MS;
                  font-size: 18pt;
                  font-style: normal;
                  text-align: left;
                  line-height: 18pt}
  </style>
  <title>Dynamic Styles in HTML: changing in-line style, or attribute.</title>
</head>
<body>
  <IMG ID="cowgirl" SRC="cowgirl.jpg" HEIGHT=265 WIDTH=400>
  <DIV STYLE="position:absolute; top:48px; left:88px; width:100px; height:100px; visibility: visible">
    <p class="whiteText" onmouseover="this.style.color='red';" onmouseout="this.style.color = 'white'">
      Howdy<BR>Partner!</p>
    </DIV>
  </body>
</html>
```

