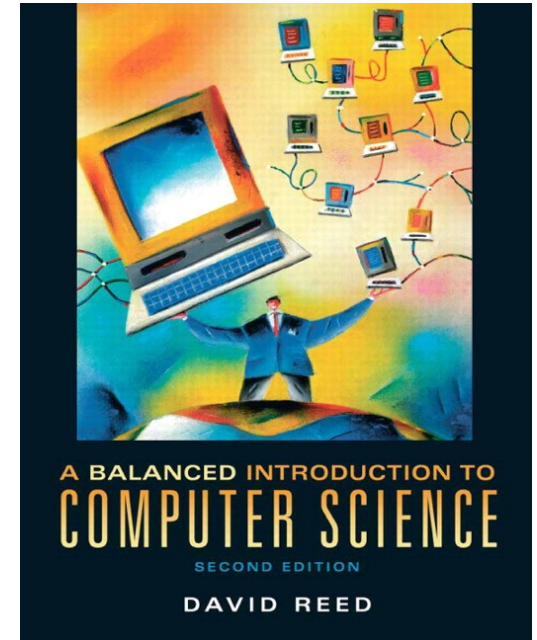


A Balanced Introduction to Computer Science, 2/E

David Reed, Creighton University

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Chapter 2 HTML and Web Pages



Text Layout

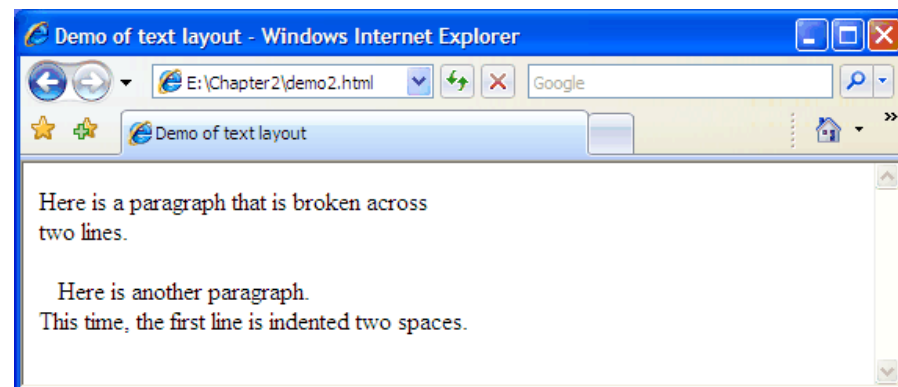
white space (extra spaces, tabs and blank lines) are ignored by the browser

- this allows the browser to adjust the text to the window size

you can control some of the text layout using HTML elements

- a PARAGRAPH element (`<p>...</p>`) specifies text surrounded by blank lines
- a BREAK element (`
`) causes text to be displayed on a new line
- the ` ` symbol forces a space to appear in the text

```
1. <html>
2. <!-- demo2.html            Dave Reed -->
3. <!-- This page demos text spacing and layout. -->
4. <!-- =====>
5.
6. <head>
7.   <title> Demo of text layout </title>
8. </head>
9.
10. <body>
11.   <p>
12.     Here is a paragraph
13.     that is broken across <br />
14.     two lines.
15.   </p>
16.
17.   <p>
18.     &nbsp;&nbsp;  Here is another paragraph. <br />
19.     This time, the first line is indented two spaces.
20.   </p>
21. </body>
22. </html>
```



Headings & Alignment



in a large document, it is useful to divide the text into sections and then provide each with a heading describing the content that follows

- `<h1> ... </h1>` enclose a top-level heading (large and bold)
- `<h2> ... </h2>` enclose a sub-heading (slightly smaller and bold)
- ...
- `<h6> ... </h6>` enclose the smallest sub-heading

the HORIZONTAL-RULE element `<hr />` draws a dividing line in the page

by default, headings and other elements are left-justified in the page

- can change the alignment of an element by adding a *style attribute* that qualifies the appearance of the element

```
<h1 style="text-align:center"> Centered Heading </h1>
```

```
<p style="text-align:right">
```

```
  This paragraph is right justified. Each line will be shifted  
  to line up at the right margin.
```

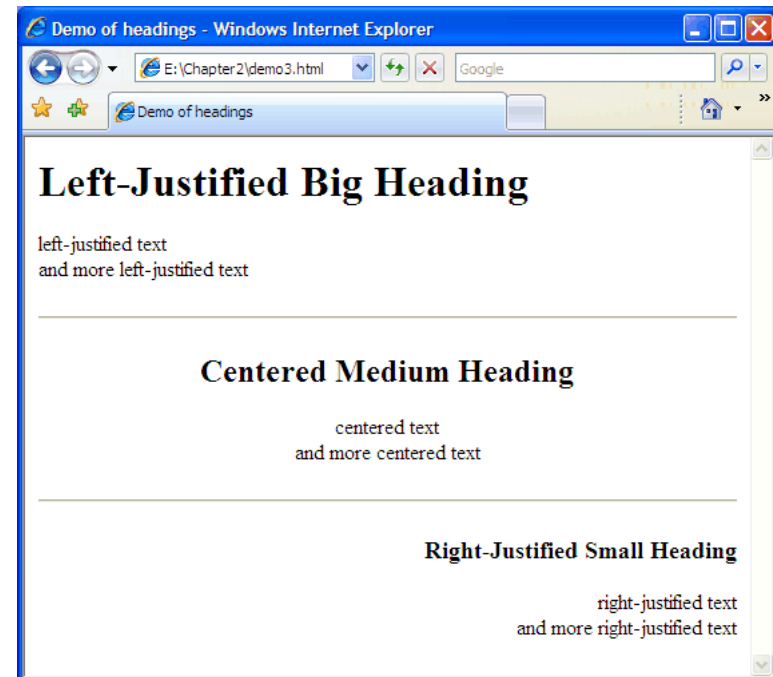
```
</p>
```

Headings & Alignment (cont.)



the DIV element groups multiple elements, so can be formatted together

```
1. <html>
2. <!-- demo3.html           Dave Reed -->
3. <!-- This page demos headings & alignment. -->
4. <!-- ===== -->
5.
6. <head>
7.   <title> Demo of headings </title>
8. </head>
9.
10. <body>
11. <h1>Left-Justified Big Heading</h1>
12. <p>
13.   left-justified text <br />
14.   and more left-justified text
15. </p>
16.
17. <hr />
18. <h2 style="text-align:center">Centered Medium Heading</h2>
19. <p style="text-align:center">
20.   centered text <br />
21.   and more centered text
22. </p>
23.
24. <hr />
25. <div style="text-align:right">
26.   <h3>Right-Justified Small Heading</h3>
27.   <p>
28.     right-justified text <br />
29.     and more right-justified text
30.   </p>
31. </div>
32. </body>
33. </html>
```





Font Formatting

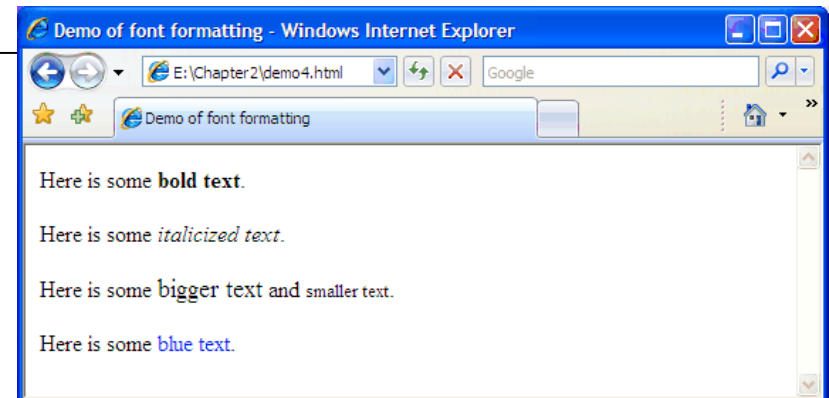
text can be formatted in a variety of ways

- bold (` ... `), italics (`<i> ... </i>`), underlined (`<u> ... </u>`)

colored text is enclosed in ` ... `

- common colors can be used (e.g., red, green, orange, light blue, dark blue)

```
1. <html>
2. <!-- demo4.html           Dave Reed -->
3. <!-- This page demos font formatting. -->
4. <!-- ===== -->
5.
6. <head>
7.   <title> Demo of font formatting </title>
8. </head>
9.
10. <body>
11.   <p>Here is some <b>bold text</b>.</p>
12.
13.   <p>Here is some <i>italicized text</i>.</p>
14.   .
15.   <p>Here is some <big>bigger text</big> and <small>smaller text</small>.</p>
16.
17.   <p>Here is some <span style="color:blue">blue text</span>.</p>
18. </body>
19. </html>
```



Hyperlinks



a *hyperlink*, or just *link*, is a connection to another Web page

- by default, a link appears as underlined text in the page
- when the user clicks on the link, the corresponding page is retrieved and displayed

a link is specified using ANCHOR tags `<a>` and ``

- text that appears within the tags is displayed as the link in the page
- must have an HREF attribute that specifies the associated Web address

```
<a href="http://www.creighton.edu">Creighton University</a>
```

```
<a href="personal.html">Local Page</a>
```

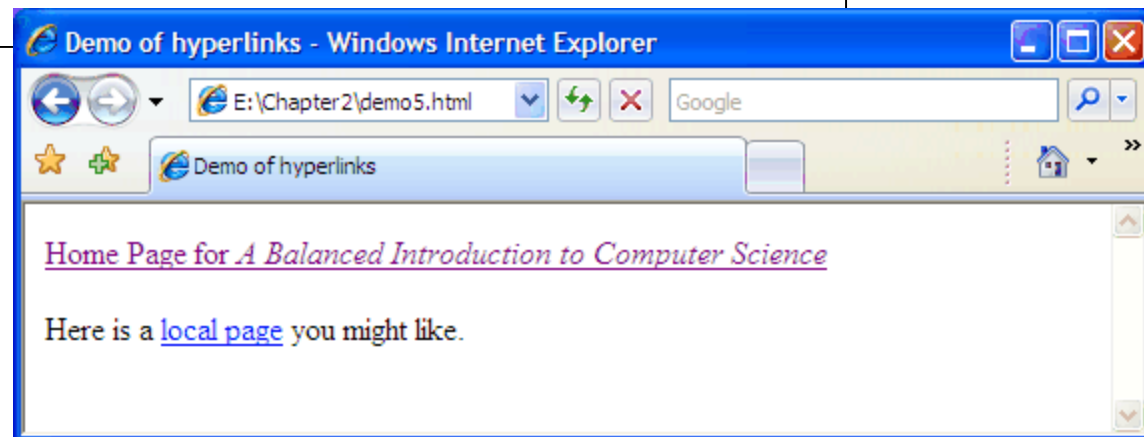
note: the browser displays links underlined and in color

- by default, links whose pages have not yet been visited are blue
- by default, links whose pages have previously been visited are purple



Hyperlinks (cont.)

```
1. <html>
2.  <!-- demo5.html           Dave Reed -->
3.  <!-- This page demos hyperlinks. -->
4.  <!-- ===== -->
5.
6.  <head>
7.    <title> Demo of hyperlinks </title>
8.  </head>
9.
10. <body>
11.  <p>
12.    <a href="http://dave-reed.com/book">
13.      Home Page for <i>A Balanced Introduction to Computer Science</i></a>
14.    </p>
15.
16.  <p>
17.    Here is a <a href="local.html">local page</a> you might like.
18.  </p>
19. </body>
20. </html>
```



Images



Web pages can contain other types of media besides text and links

- images are embedded in a page using an IMG tag (``)
- similar to `
` and `<hr />`, there is no closing tag so it ends with a slash

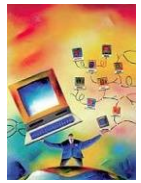
IMG attributes

- SRC specifies the location of the image file
- ALT specifies alternate text that is displayed if the image fails to load

```
1. <html>
2. <!-- demo6.html           Dave Reed -->
3. <!-- This page demos images. -->
4. <!-- ===== -->
5.
6. <head>
7.   <title> Demo of images </title>
8. </head>
9.
10. <body>
11.   <div style="text-align:center">
12.     
13.
14.     <p>This is a picture of the author.</p>
15.   </div>
16. </body>
17. </html>
```



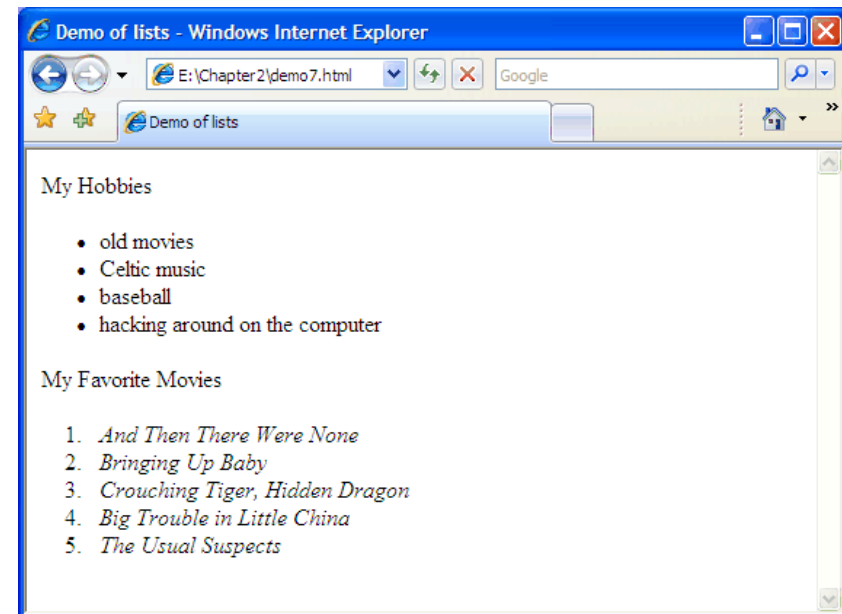
Lists



HTML lists organize items in sequence

- `...` enclose an unordered list; `...` enclose an ordered list
- `...` enclose a list item

```
1. <html>
2. <!-- demo7.html Dave Reed -->
3. <!-- This page demos unordered and ordered lists. -->
4. <!-- ===== -->
5.
6. <head>
7. <title> Demo of lists </title>
8. </head>
9.
10. <body>
11. <p>My Hobbies
12. <ul>
13. <li> old movies </li>
14. <li> Celtic music </li>
15. <li> baseball </li>
16. <li> hacking around on the computer </li>
17. </ul>
18. </p>
19.
20. <p>My Favorite Movies
21. <ol>
22. <li> <i>And Then There Were None</i> </li>
23. <li> <i>Bringing Up Baby</i> </li>
24. <li> <i>Crouching Tiger, Hidden Dragon</i> </li>
25. <li> <i>Big Trouble in Little China</i> </li>
26. <li> <i>The Usual Suspects</i> </li>
27. </ol>
28. </p>
29. </body>
30. </html>
```



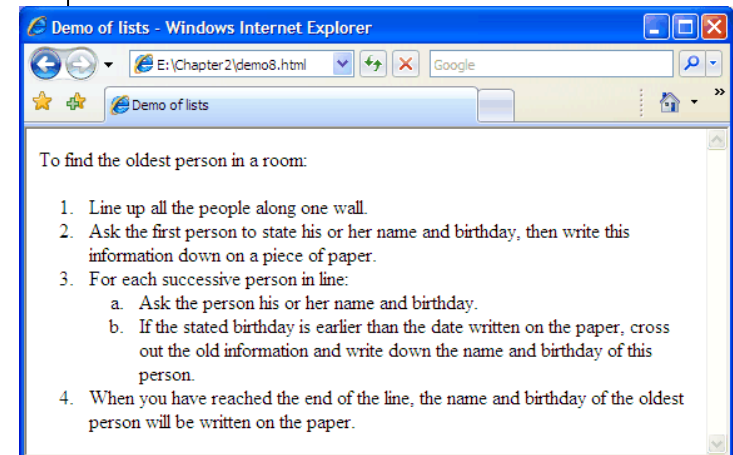


Lists (cont.)

a style attribute can be used to format the list elements

<code><ul style="list-style-type:square"></code>	→ Items preceded by squares.
<code><ol style="list-style-type:lower-alpha"></code>	→ Items preceded by lowercase letters (a, b, c, d, ...).
<code><ol style="list-style-type:upper-alpha"></code>	→ Items preceded by uppercase letters (A, B, C, D, ...).
<code><ol style="list-style-type:lower-roman"></code>	→ Items preceded by lowercase roman letters (i, ii, iii, iv, ...).
<code><ol style="list-style-type:upper-roman"></code>	→ Items preceded by uppercase roman letters (I, II, III, ...).

```
1. <html>
2. <!-- demo8.html           Dave Reed -->
3. <!-- This page demos formatted lists. -->
4. <!-- =====>
5.
6. <head>
7.   <title> Demo of lists </title>
8. </head>
9.
10. <body>
11.   <p>To find the oldest person in a room:</p>
12.
13.   <ol>
14.     <li> Line up all the people along one wall. </li>
15.     <li> Ask the first person to state his or her name and birthday,
16.       then write this information down on a piece of paper. </li>
17.     <li> For each successive person in line:
18.       <ol style="list-style-type:lower-alpha">
19.         <li> Ask the person his or her name and birthday. </li>
20.         <li> If the stated birthday is earlier than the date
21.           written on the paper, cross out the old information
22.           and write down the name and birthday of this person. </li>
23.       </ol> </li>
24.     <li> When you have reached the end of the line, the name and
25.       birthday of the oldest person will be written on the paper. </li>
26.   </ol>
27. </body>
28. </html>
```



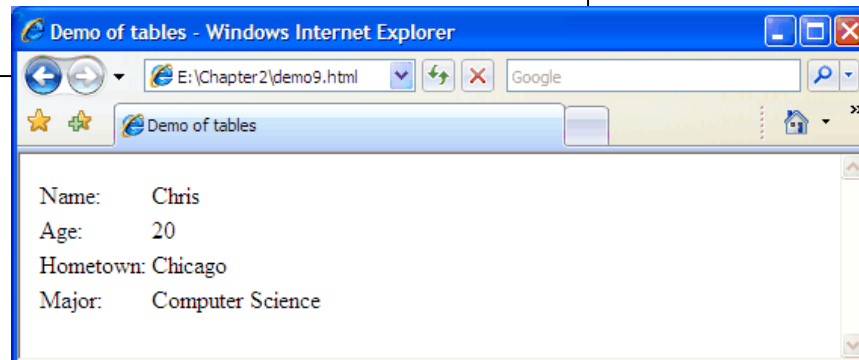
Tables



text can be aligned into rows and columns using a TABLE element

- `<table>` and `</table>` encapsulate the table data
- `<tr>` and `</tr>` encapsulate a row within the table
- `<td>` and `</td>` encapsulate table data within a row (i.e., a column entry)

```
1. <html>
2. <!-- demo9.html           Dave Reed -->
3. <!-- This page demos a borderless table. -->
4. <!-- ===== -->
5.
6. <head>
7.   <title> Demo of tables </title>
8. </head>
9.
10. <body>
11.   <table>
12.     <tr> <td> Name:      </td> <td> Chris      </td> </tr>
13.     <tr> <td> Age:       </td> <td> 20          </td> </tr>
14.     <tr> <td> Hometown: </td> <td> Chicago     </td> </tr>
15.     <tr> <td> Major:    </td> <td> Computer Science </td> </tr>
16.   </table>
17. </body>
18. </html>
```



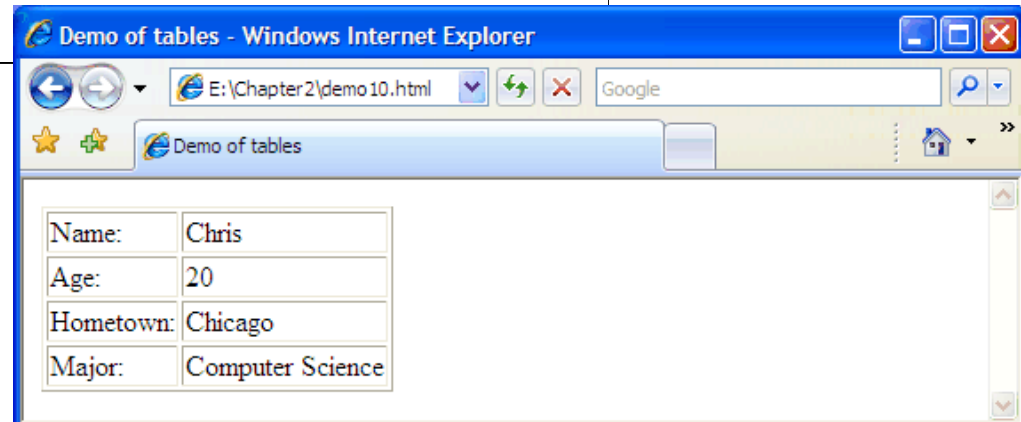


Tables with Borders

borders can be added to tables using the border attribute

- the numeric value assigned to the attribute specifies thickness

```
1. <html>
2. <!-- demo10.html           Dave Reed -->
3. <!-- This page demos a bordered table. -->
4. <!-- ===== -->
5.
6. <head>
7.   <title> Demo of tables </title>
8. </head>
9.
10. <body>
11.   <table border="1">
12.     <tr <td> Name:      </td> <td> Chris          </td> </tr>
13.     <tr <td> Age:       </td> <td> 20             </td> </tr>
14.     <tr <td> Hometown: </td> <td> Chicago        </td> </tr>
15.     <tr <td> Major:    </td> <td> Computer Science </td> </tr>
16.   </table>
17. </body>
18. </html>
```





Tables for Alignment

```
1. <html>
2. <!-- demo11.html           Dave Reed -->
3. <!-- This page demos a table for alignment. -->
4. <!-- =====>
5.
6. <head>
7.   <title> Demo of tables </title>
8. </head>
9.
10. <body>
11.   <table>
12.     <tr>
13.       <td></td>
14.       <td><a href="http://www.creighton.edu"><b>Creighton University</b></a>
15.         <br />
16.         2500 California Plaza<br />
17.         Omaha, NE &nbsp;   68178</td>
18.     </tr>
19.   </table>
20. </body>
21. </html>
```

tables are commonly used to align elements in the page

- here, an image is aligned to the left of some text

