

Introduction to XHTML: Part 1

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Objectives

- In this chapter, you will learn:
 - To understand important components of XHTML documents.
 - To use XHTML to create Web pages.
 - To be able to add images to Web pages.
 - To understand how to create and use hyperlinks to navigate Web pages.
 - To be able to mark up lists of information.

4.1 Introduction

- Extensible HyperText Markup Language
 - XHTML
 - A markup language
 - Separation of the presentation of a document from the structure of the document's information
 - Based on HTML
 - Technology of the World Wide Web Consortium (W3C)

4.2 Editing XHTML

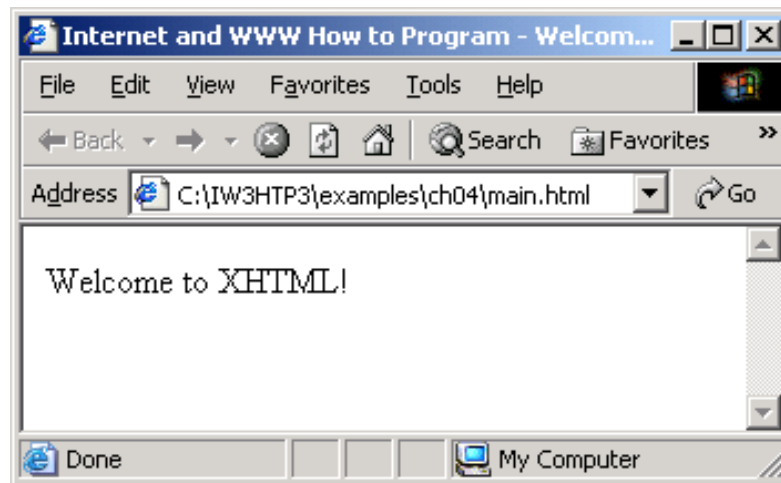
- XHTML documents
 - Source-code form
 - Text editor (e.g. Notepad, Wordpad, emacs, etc.)
 - .html or .htm file-name extension
 - Web server
 - Stores XHTML documents
 - Web browser
 - Requests XHTML documents

4.3 First XHTML Example

▣ XHTML comments

- Start with `<!--` and end with `-->`
- `html` element
 - `head` element
 - Head section
 - Title of the document
 - Style sheets and scripts
 - `body` element
 - Body section
 - Page's content the browser displays
- Start tag
 - attributes (provide additional information about an element)
 - name and value (separated by an equal sign)
- End tag

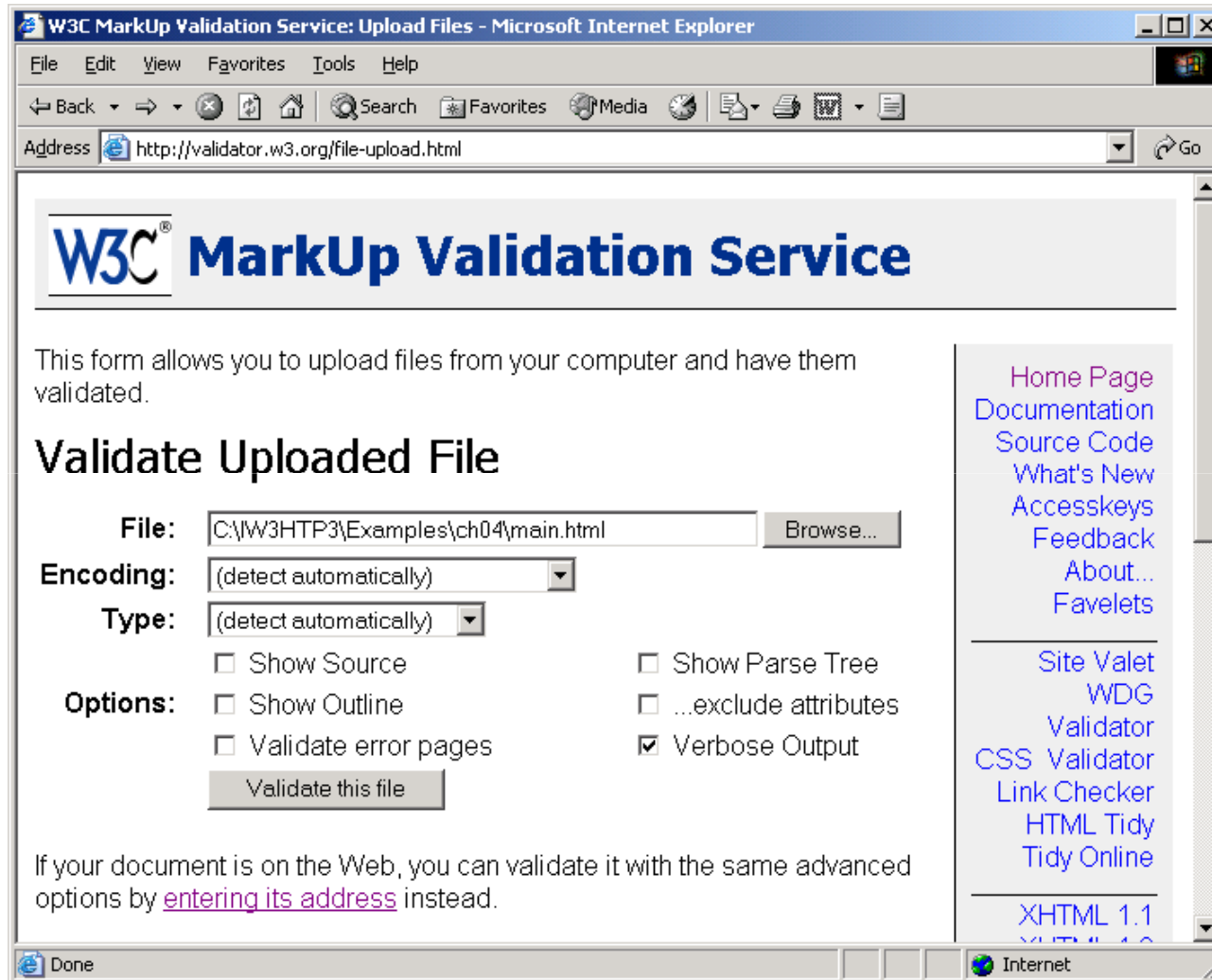
```
1 <?xml version = "1.0"?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
3   "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
4
5 <!-- Fig. 4.1: main.html -->
6 <!-- Our first web page -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9   <head>
10     <title>Internet and WWW How to Program - welcome</title>
11   </head>
12
13   <body>
14     <p>welcome to XHTML!</p>
15   </body>
16 </html>
```



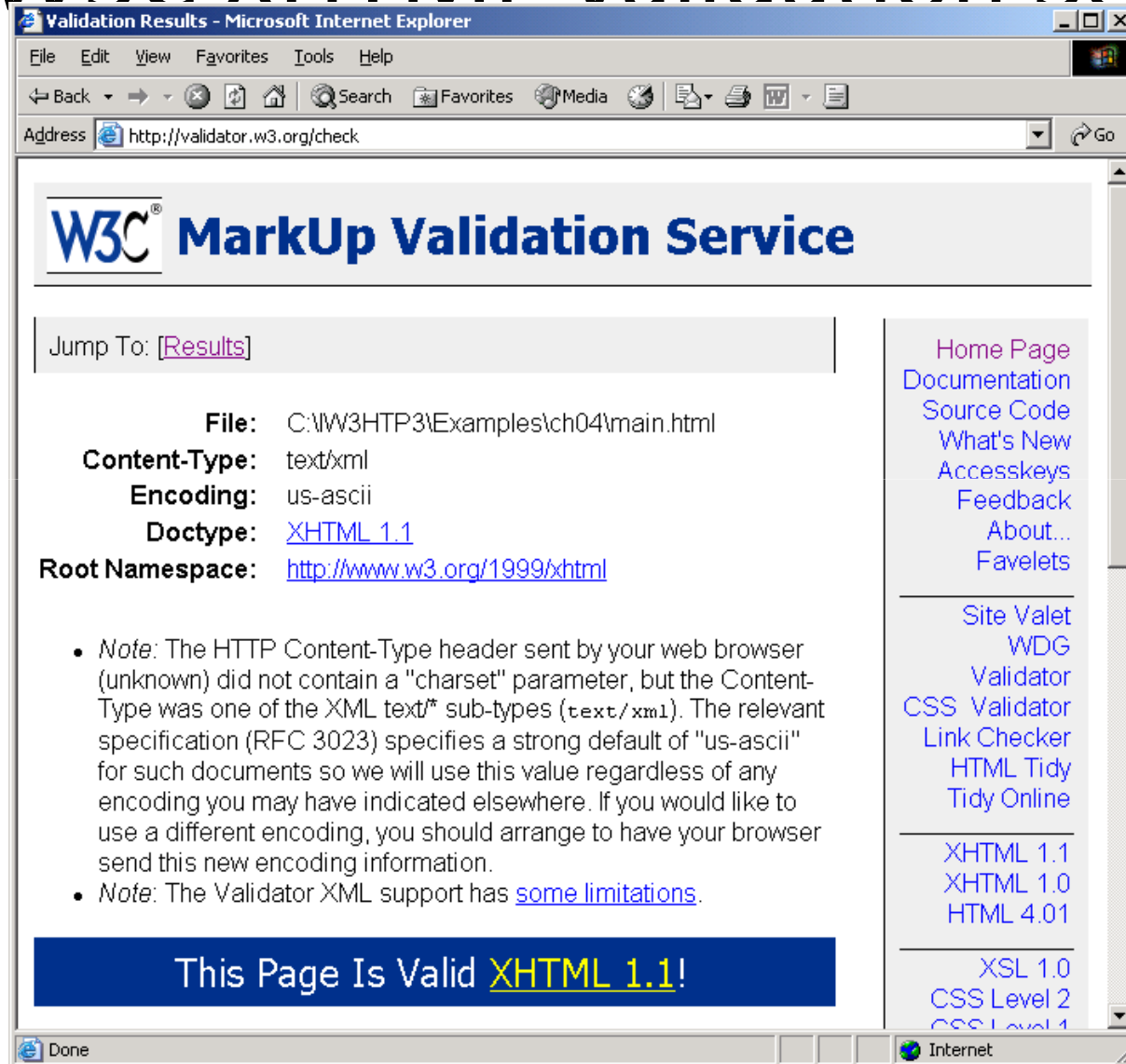
4.4 W3C XHTML Validation Service

- Validation service (`validator.w3.org`)
 - Checking a document's syntax
 - URL that specifies the location of the file
 - Uploading a file to the site
`validator.w3.org/file-upload.html`

4.4 W3C XHTML Validation Service



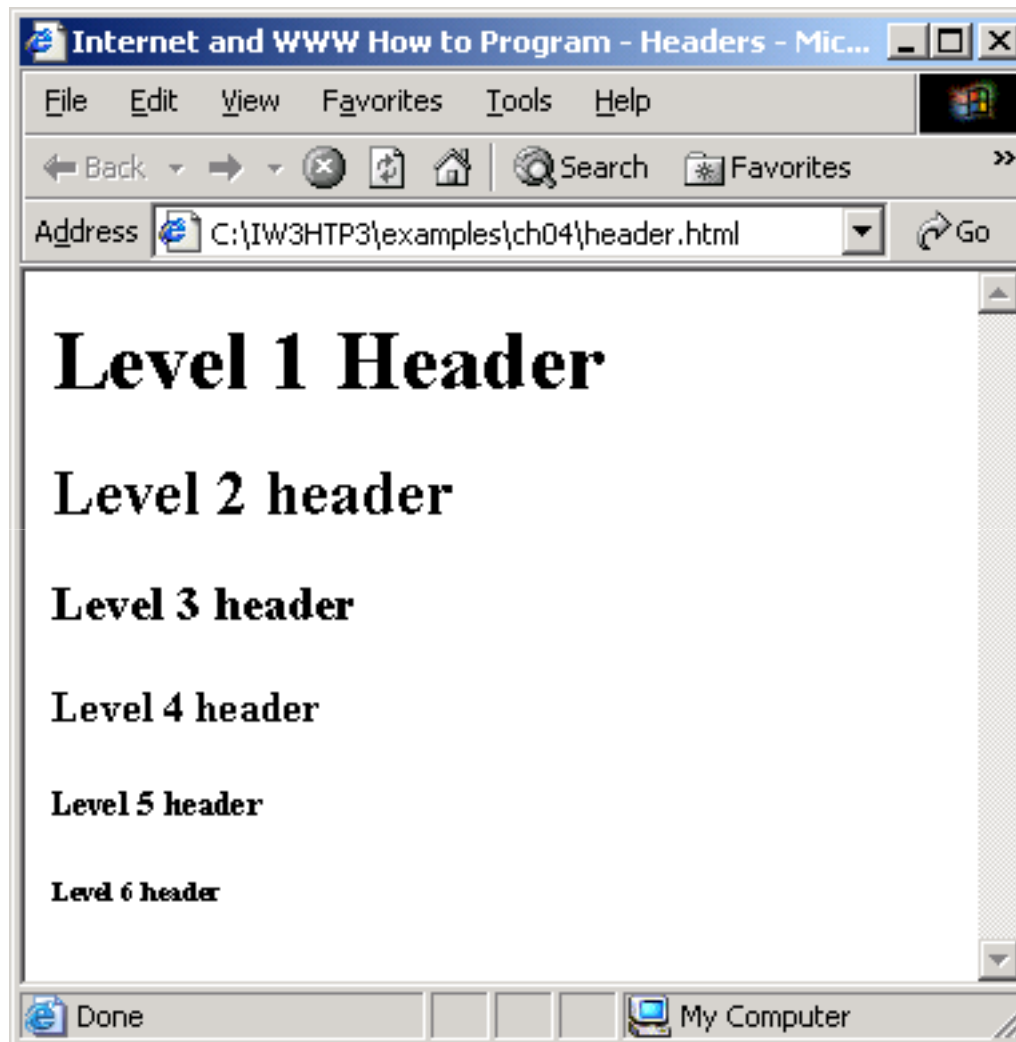
4.4 W3C XHTML Validation Service



4.5 Headers

- Six headers (header elements)
 - h1 through h6

```
1 <?xml version = "1.0"?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
3   "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
4
5 <!-- Fig. 4.4: header.html -->
6 <!-- XHTML headers      -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9   <head>
10     <title>Internet and WWW How to Program - Headers</title>
11   </head>
12
13   <body>
14
15     <h1>Level 1 Header</h1>
16     <h2>Level 2 header</h2>
17     <h3>Level 3 header</h3>
18     <h4>Level 4 header</h4>
19     <h5>Level 5 header</h5>
20     <h6>Level 6 header</h6>
21
22   </body>
23 </html>
```

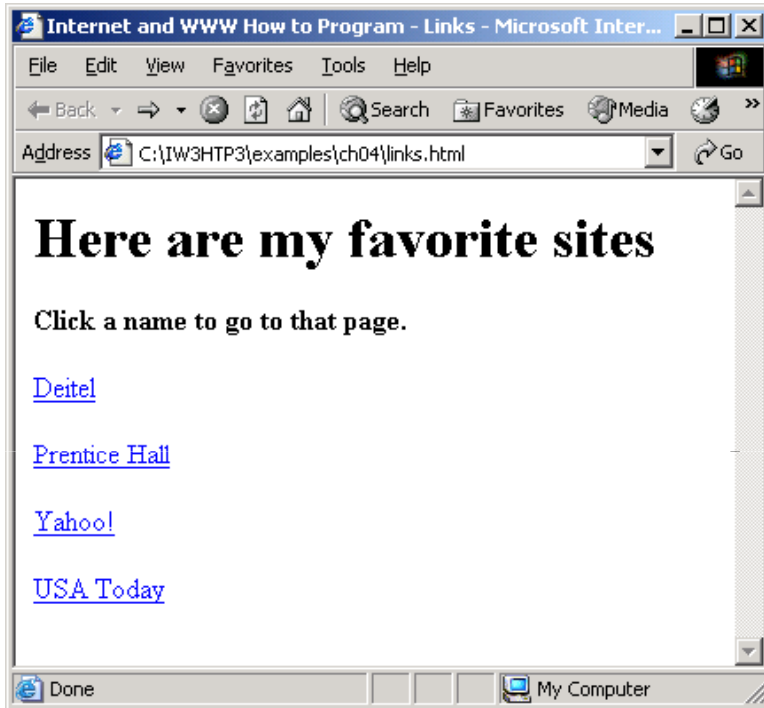


4.6 Linking

- Hyperlink
 - References other sources such as XHTML documents and images
 - Both text and images can act as hyperlinks
 - Created using the `a` (anchor) element
 - Attribute `href`
 - Specifies the location of a linked resource
 - Link to e-mail addresses using `mailto:` URL
- `` tag
 - Bold

```
1 <?xml version = "1.0"?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
3   "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
4
5 <!-- Fig. 4.5: links.html      -->
6 <!-- Introduction to hyperlinks -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9   <head>
10     <title>Internet and WWW How to Program - Links</title>
11   </head>
12
13   <body>
14
15     <h1>Here are my favorite sites</h1>
16
17     <p><strong>Click a name to go to that page.</strong></p>
18
19     <!-- Create four text hyperlinks -->
20     <p><a href = "http://www.deitel.com">Deitel</a></p>
21
22     <p><a href = "http://www.prenhall.com">Prentice Hall</a></p>
23
24     <p><a href = "http://www.yahoo.com">Yahoo!</a></p>
25
```

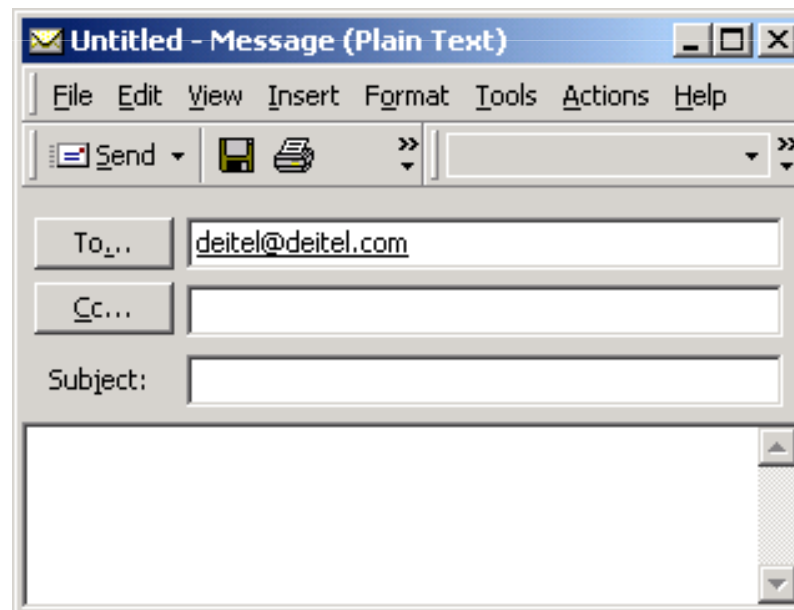
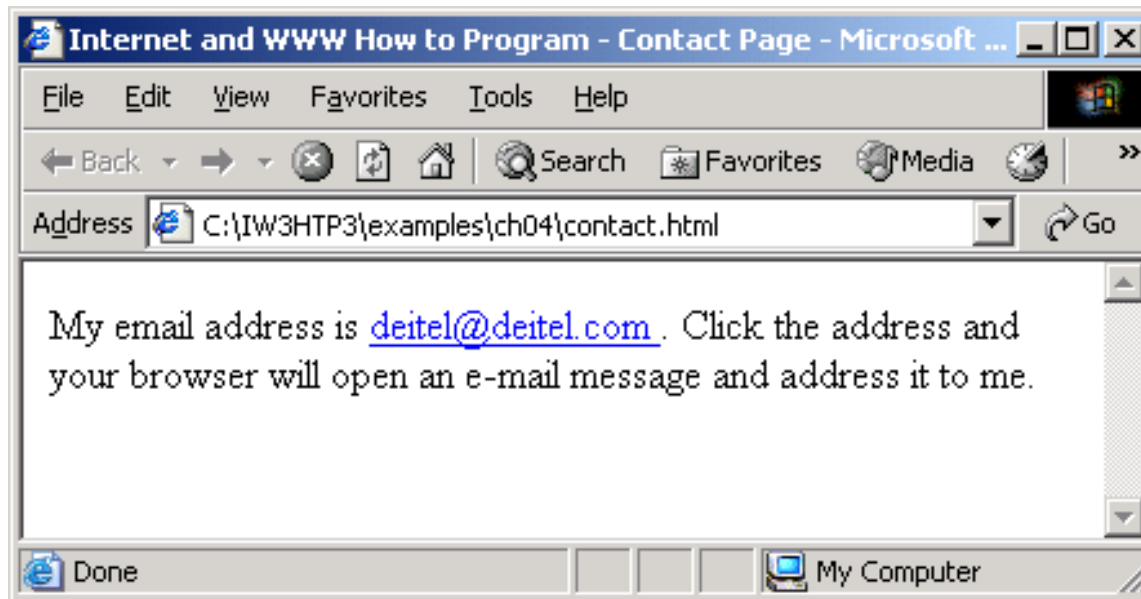
```
26 <p><a href = "http://www.usatoday.com">USA Today</a></p>
27
28 </body>
29 </html>
```



ks.html
2



```
1 <?xml version = "1.0"?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
3   "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
4
5 <!-- Fig. 4.6: contact.html -->
6 <!-- Adding email hyperlinks -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9   <head>
10     <title>Internet and WWW How to Program - Contact Page</title>
11   </head>
12
13   <body>
14
15     <p>
16       My email address is
17       <a href = "mailto:deitel@deitel.com">
18         deitel@deitel.com
19       </a>
20       . Click the address and your browser will
21       open an e-mail message and address it to me.
22     </p>
23   </body>
24 </html>
```

4.7 Images



- Three most popular formats
 - Graphics Interchange Format (GIF)
 - Joint Photographic Experts Group (JPEG)
 - Portable Network Graphics (PNG)
 - `img` element
 - `src` attribute
 - Specifies the location of the image file
 - `width` and `height`
- Pixels (“picture elements”)
- Empty elements
 - Terminated by character `/` inside the closing right angle bracket (`>`), or by explicitly including the end tag
- `br` element
 - Line break


```
1 <?xml version = "1.0"?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
3   "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
4
5 <!-- Fig. 4.7: picture.html -->
6 <!-- Adding images with XHTML -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9   <head>
10     <title>Internet and WWW How to Program - welcome</title>
11   </head>
12
13   <body>
14
15     <p>
16       <img src = "xmlhttp.jpg" height = "238" width = "183"
17         alt = "XML How to Program book cover" />
18       <img src = "jhttp.jpg" height = "238" width = "183"
19         alt = "Java How to Program book cover" />
20     </p>
21   </body>
22 </html>
```

Internet and WWW How to Program - Welcome - Microsoft I...

File Edit View Favorites Tools Help

← Back → Stop Home Search Favorites Media >>

Address  C:\IW3HTP3\examples\ch04\picture.html  Go





XML HOW TO PROGRAM

Introducing **Java™ 2, Perl™**
and **Active Server Pages**

DEITEL
HOW TO PROGRAM

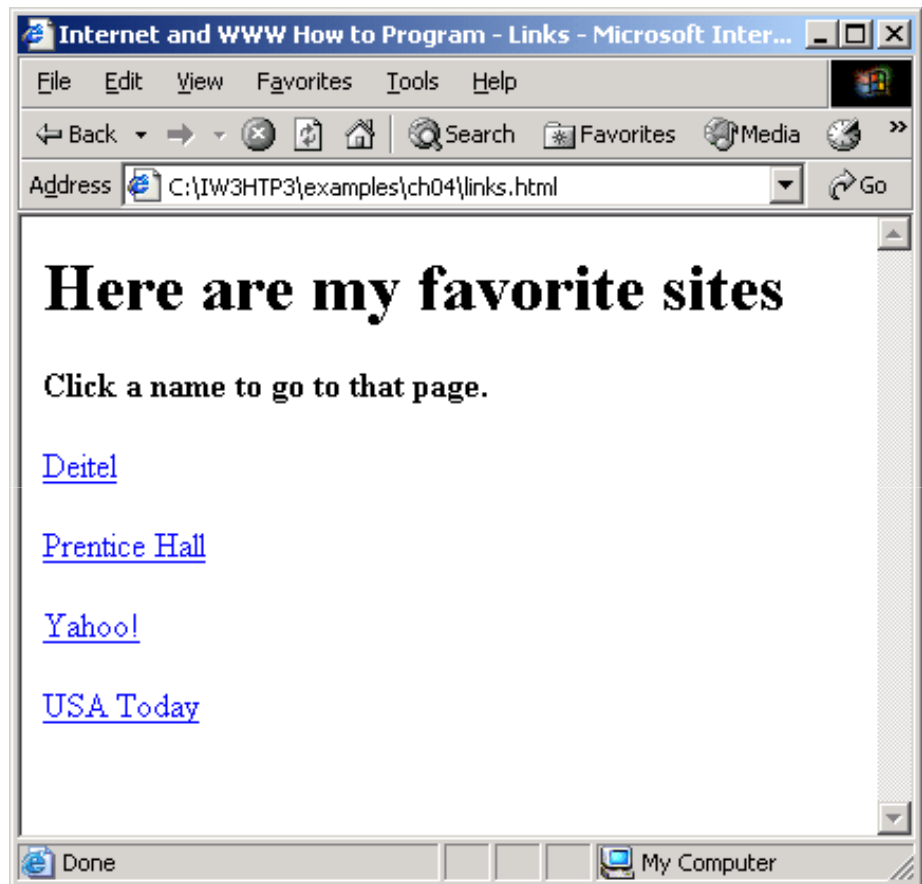
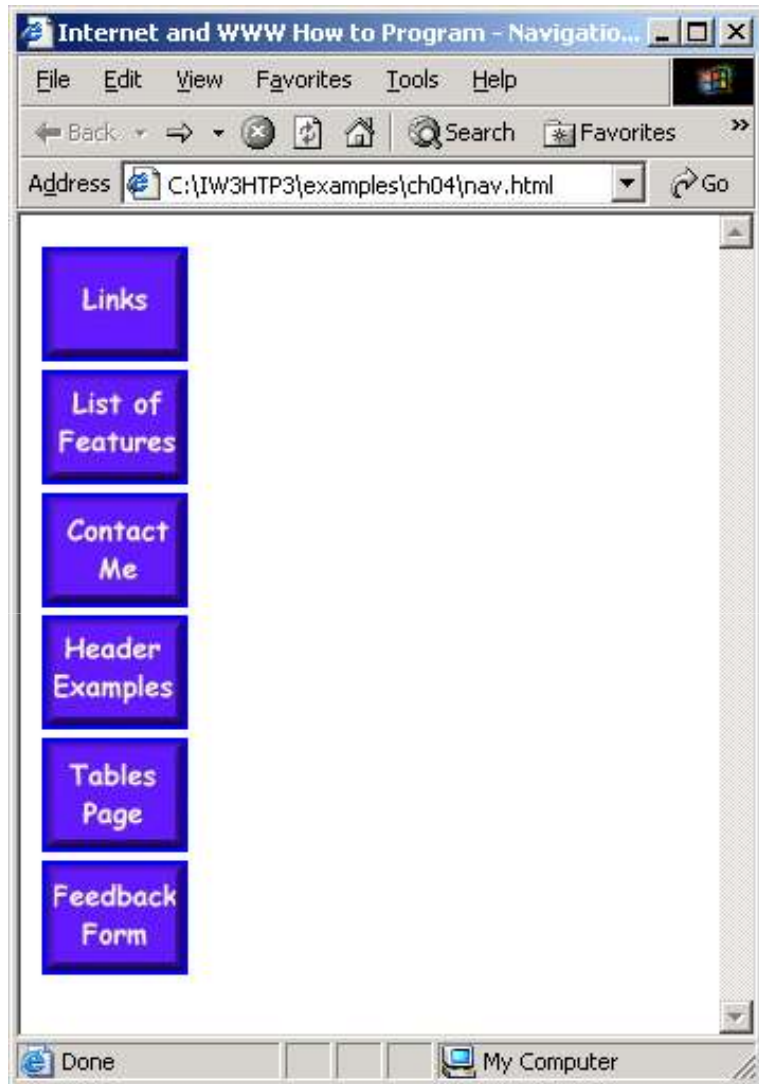
DEITEL, DEITEL,
NETO, LIN &
SADRE

 Java How to Program book cover

Done  My Computer

```
1 <?xml version = "1.0"?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
3   "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
4
5 <!-- Fig. 4.8: nav.html          -->
6 <!-- Using images as link anchors -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9   <head>
10     <title>Internet and WWW How to Program - Navigation Bar
11     </title>
12   </head>
13
14   <body>
15
16     <p>
17       <a href = "links.html">
18         <img src = "buttons/links.jpg" width = "65"
19           height = "50" alt = "Links Page" />
20       </a><br />
21
22       <a href = "list.html">
23         <img src = "buttons/list.jpg" width = "65"
24           height = "50" alt = "List Example Page" />
25       </a><br />
```

```
26
27     <a href = "contact.html">
28         <img src = "buttons/contact.jpg" width = "65"
29             height = "50" alt = "Contact Page" />
30     </a><br />
31
32     <a href = "header.html">
33         <img src = "buttons/header.jpg" width = "65"
34             height = "50" alt = "Header Page" />
35     </a><br />
36
37     <a href = "table1.html">
38         <img src = "buttons/table.jpg" width = "65"
39             height = "50" alt = "Table Page" />
40     </a><br />
41
42     <a href = "form.html">
43         <img src = "buttons/form.jpg" width = "65"
44             height = "50" alt = "Feedback Form" />
45     </a><br />
46 </p>
47
48 </body>
49 </html>
```

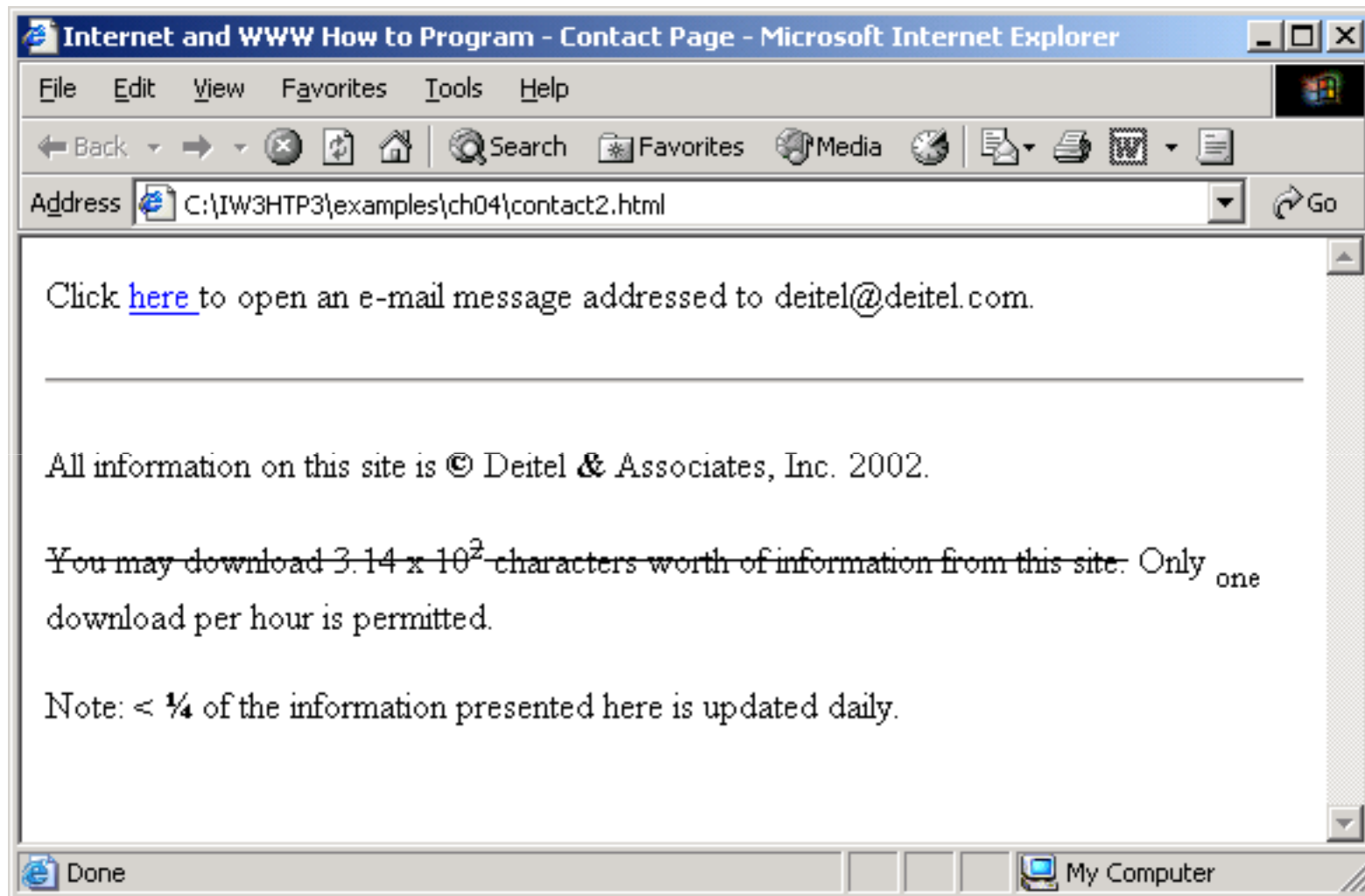


4.8 Special Characters and More Line Breaks

- Character entity references (in the form `&code;`)
- Numeric character references (e.g. `&`)
- `del`
 - Strike-out text
- `sup`
 - Superscript text
- `sub`
 - Subscript text
- `<hr />`


```
1 <?xml version = "1.0"?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
3   "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
4
5 <!-- Fig. 4.9: contact2.html -->
6 <!-- Inserting special characters -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9   <head>
10     <title>Internet and WWW How to Program - Contact Page
11     </title>
12   </head>
13
14   <body>
15
16     <!-- special characters are entered -->
17     <!-- using the form &code; -->
18     <p>
19       click
20       <a href = "mailto:deitel@deitel.com">here
21       </a> to open an e-mail message addressed to
22       deitel@deitel.com.
23     </p>
24
25     <hr /> <!-- inserts a horizontal rule -->
```

```
26
27     <p>All information on this site is <strong>&copy;</strong>
28     Deitel <strong>&amp;</strong> Associates, Inc. 2002.</p>
29
30     <!-- to strike through text use <del> tags    -->
31     <!-- to subscript text use <sub> tags        -->
32     <!-- to superscript text use <sup> tags      -->
33     <!-- these tags are nested inside other tags -->
34     <p><del>You may download 3.14 x 10<sup>2</sup>
35     characters worth of information from this site.</del>
36     only <sub>one</sub> download per hour is permitted.</p>
37
38     <p>Note: <strong>&lt; &frac14;</strong> of the information
39     presented here is updated daily.</p>
40
41     </body>
42 </html>
```



4.9 Unordered Lists

- Unordered list element `ul`
 - Creates a list in which each item begins with a bullet symbol (called a disc)
 - `li` (list item)
 - Entry in an unordered list

```
1 <?xml version = "1.0"?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
3   "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
4
5 <!-- Fig. 4.10: links2.html          -->
6 <!-- Unordered list containing hyperlinks -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9   <head>
10     <title>Internet and WWW How to Program - Links</title>
11   </head>
12
13   <body>
14
15     <h1>Here are my favorite sites</h1>
16
17     <p><strong>Click on a name to go to that page.</strong></p>
18
19     <!-- create an unordered list -->
20     <ul>
21
22       <!-- add four list items -->
23       <li><a href = "http://www.deitel.com">Deitel</a></li>
24
25       <li><a href = "http://www.w3.org">W3C</a></li>
```

```
26
27     <li><a href = "http://www.yahoo.com">Yahoo!</a></li>
28
29     <li><a href = "http://www.cnn.com">CNN</a></li>
30 </ul>
31 </body>
32 </html>
```



4.10 Nested and Ordered Lists

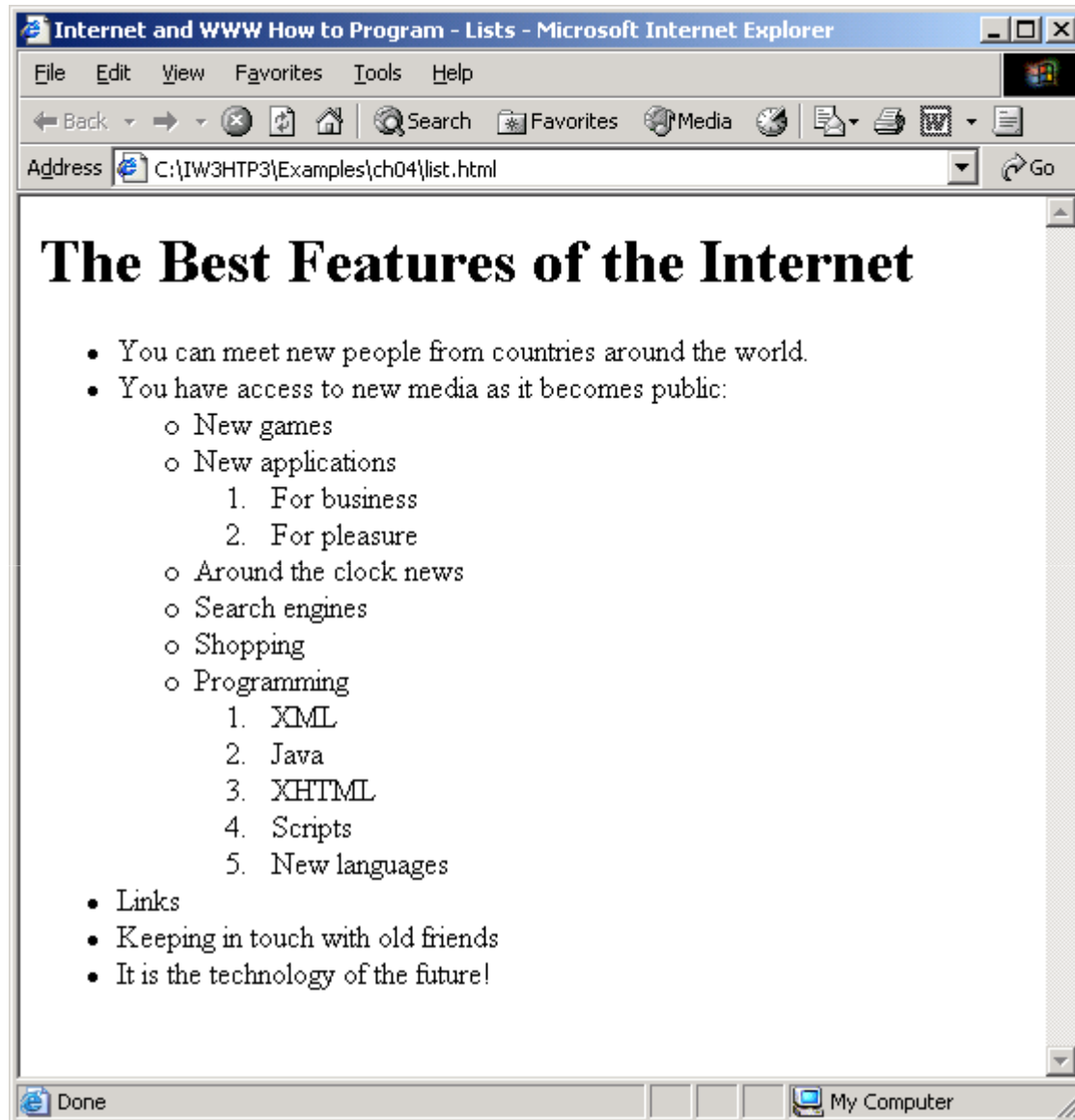
- Represent hierarchical relationships
- Ordered lists (o1)
 - Creates a list in which each item begins with a number

```
1 <?xml version = "1.0"?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
3   "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
4
5 <!-- Fig. 4.11: list.html -->
6 <!-- Advanced Lists: nested and ordered -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9   <head>
10     <title>Internet and WWW How to Program - Lists</title>
11   </head>
12
13   <body>
14
15     <h1>The Best Features of the Internet</h1>
16
17     <!-- create an unordered list -->
18     <ul>
19       <li>You can meet new people from countries around
20         the world.</li>
21       <li>
22         You have access to new media as it becomes public:
23
```



```
24      <!-- this starts a nested list, which uses a -->
25      <!-- modified bullet. The list ends when you -->
26      <!-- close the <ul> tag.                -->
27      <ul>
28          <li>New games</li>
29          <li>
30              New applications
31
32              <!-- nested ordered list -->
33              <ol>
34                  <li>For business</li>
35                  <li>For pleasure</li>
36              </ol>
37          </li>
38
39          <li>Around the clock news</li>
40          <li>Search engines</li>
41          <li>Shopping</li>
42          <li>
43              Programming
44
45              <!-- another nested ordered list -->
46              <ol>
47                  <li>XML</li>
48                  <li>Java</li>
```

```
49         <li>XHTML</li>
50         <li>Scripts</li>
51         <li>New languages</li>
52     </ol>
53
54     </li>
55
56     </ul> <!-- ends the nested list of line 27 -->
57 </li>
58
59 <li>Links</li>
60 <li>Keeping in touch with old friends</li>
61 <li>It is the technology of the future!</li>
62
63 </ul> <!-- ends the unordered list of line 18 -->
64
65 </body>
66 </html>
```



4.11 Web Resources

- www.w3.org/TR/xhtml11
- www.xhtml.org
- www.w3schools.com/xhtml/default.asp
- validator.w3.org
- hotwired.lycos.com/webmonkey/00/50/index2a.html
- wdvl.com/Authoring/Languages/XML/XHTML
- www.w3.org/TR/2001/REC-xhtml11-20010531