

## IT350 Web and Internet Programming

Fall 2005

### Chapter 4 - Introduction to XHTML: Part 1

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## Lab Accounts

- Student Web Server Accounts
  - Mapping web-server account to department student account
    - File Explorer: Tools → Map Network Drive (pick drive W)
    - [\cs-websrvr.cs.usna.edu\www.mXXXXXX.it.cs.usna.edu\\$](http://cs-websrvr.cs.usna.edu/www.mXXXXXX.it.cs.usna.edu$)
    - Note \$ on the end
    - Username: cs-websrvr\mXXXXXX
    - Need Account Password (from instructor)
  - URL for each student website on Department Web-Server is as follows:
    - [www.mXXXXXX.it.cs.usna.edu](http://www.mXXXXXX.it.cs.usna.edu)
    - where "XXXXXX", is the individual student's alpha number

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## 4.1 Introduction / 4.2 Editing XHTML

- Extensible HyperText Markup Language (XHTML)
  - A markup language based on HTML
  - Separates document presentation from information
  - Standard defined by W3C
- 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

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## Basic Syntax

```
<a href="links.html"> Useful links </a>
```

```
<br />
```

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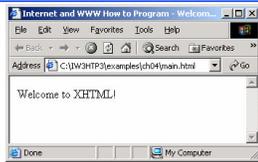
## Example

```

1 <?xml version = "1.0" encoding="utf-8" ?>
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>

```

main.html  
(1 of 1)



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## 4.4 W3C XHTML Validation Service

- Validation service ( [validator.w3.org](http://validator.w3.org) )
  - Checking a document's syntax
  - Provide URL or upload file

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## Block vs. inline tags in XHTML

- Block tags
  - Start their content on a new line
- Inline tags
  - Their content continues on the same line
- Restrictions
  - Inline tags (and text) must be nested inside block tags, not directly under <body> or <form>
  - Block tags cannot be nested inside inline tags  
ILLEGAL: <b> <h1> Foo </h1> </b>

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## 4.5 Headers – h1 to 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 --
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>

```



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## 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

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```
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.dail.com">Dail</a></p>
21
22    <p><a href = "http://www.prehall.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>
```

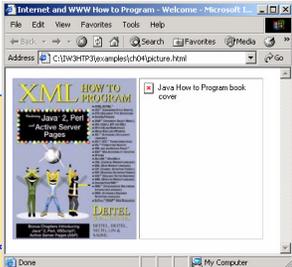


links.html  
(1 of 2)

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## 4.7 Images

```
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 = "218" width = "183"
17        alt = "xml how to program book cover" />
18      <img src = "http.jpg" height = "218" width = "183"
19        alt = "Java how to program book cover" />
20    </p>
21  </body>
22 </html>
```



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## REFERENCE

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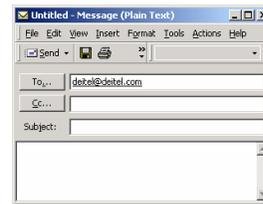
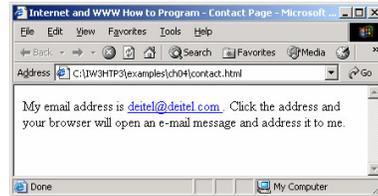
## Links to email addresses

```

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   <body>
13
14     <p>
15       My email address is
16       <a href = "mailto:detel@detel.com">
17         detel@detel.com
18       </a>
19     </p>
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>

```

contact.html  
(1 of 1)



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## Links with images as their content

```

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   <body>
14
15     <p>
16
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 />

```

nav.html  
(1 of 2)

```

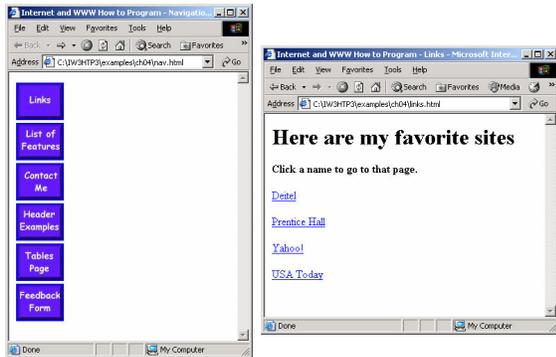
26
27     <a href = "contact.html">
28       <img src = "buttons/contact.jpg" width = "65"
29       height = "50" alt = "Contact Page" />
30     </a><br />
31
32     <a href = "header.html">
33       <img src = "buttons/header.jpg" width = "65"
34       height = "50" alt = "Header Page" />
35     </a><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 </body>
48 </html>

```

nav.html  
(2 of 2)

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## 4.8 Special Characters and More Line Breaks

- Character entity references (in the form `&code;`)
- Numeric character references (e.g. `&#38;`)
- `del`
  - Strike-out text
- `sup`
  - Superscript text
- `sub`
  - Subscript text
- `<hr />`
  - Horizontal rule (horizontal line)

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```

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
19 <p>
20 Click
21 <a href = "mailto:deitel@deitel.com">here
22 </a> to open an e-mail message addressed to
23 deitel@deitel.com.
24 </p>
25 <hr /> <!-- inserts a horizontal rule -->

```

contact2.html  
(1 of 2)

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```

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>/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>

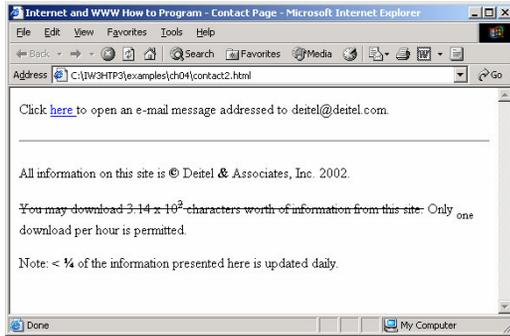
```

contact2.html  
(2 of 2)

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## 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



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```

1 <?xml version = "1.0" ?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
3 "http://www.w3.org/XML/1999/xhtml.dtd">
4
5 <!-- Fig. 4.10: links2.html -->
6 <!-- unordered list containing hyperlinks -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9
10 <head>
11 <title>Internet and WWW How to Program - Links</title>
12 </head>
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>

```

links2.html  
(1 of 2)

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```

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

```

links2.html  
(2 of 2)

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## 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
```

list.html  
(1 of 3)

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```
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   <li>Around the clock news</li>
39   <li>Search engines</li>
40   <li>Shopping</li>
41   <li>
42     Programming
43
44     <!-- another nested ordered list -->
45     <ol>
46       <li>XML</li>
47       <li>Java</li>
48
```

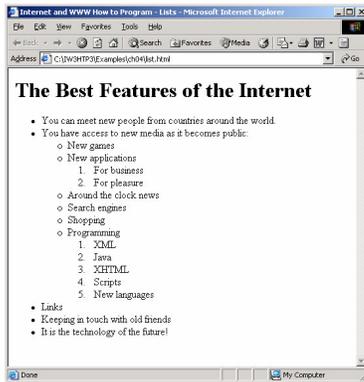
list.html  
(2 of 3)

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```
49   <li>XML</li>
50   <li>Scripts</li>
51   <li>New languages</li>
52 </ul>
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>
```

list.html  
(3 of 3)

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## 4.11 Web Resources

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

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