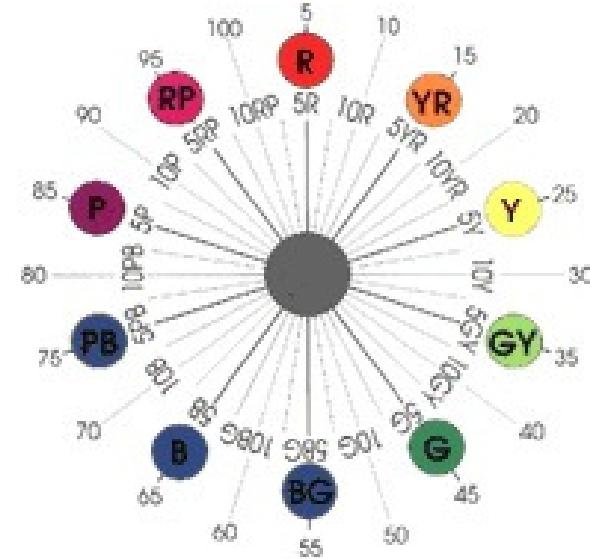


Chapter 3

Introduction to HTML5:

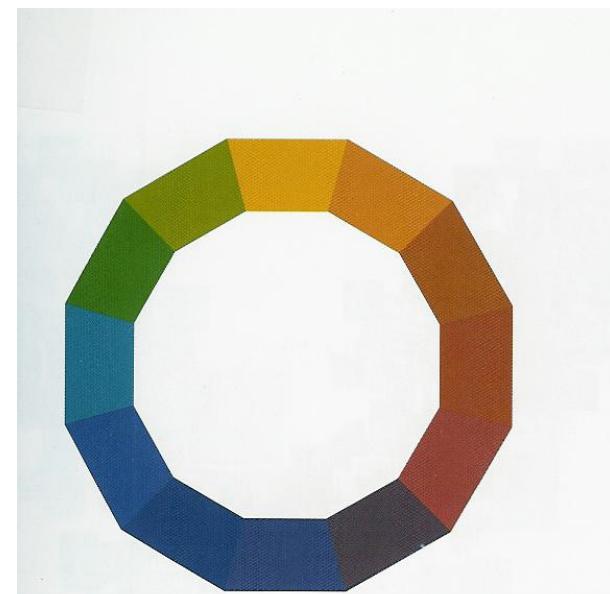
Part 2



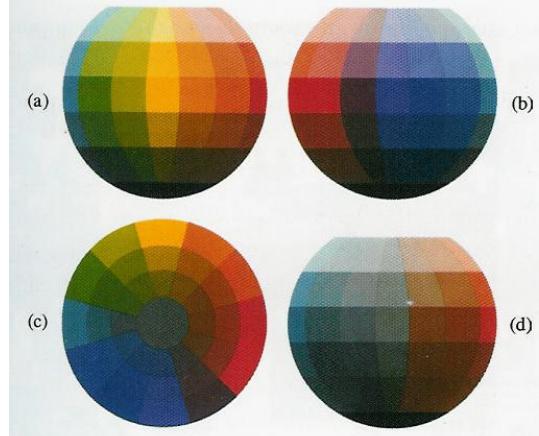
Munsell Hue Circle		Primary Hue Circle	
Hue	Symbol	Hue	Symbol
Red	R	Red	R
Yellow-Red	YR	Yellow-Red	YR
Yellow	Y	Yellow	Y
Green-Yellow	GY	Green-Yellow	GY
Green	G	Green	G
Blue-Green	C	Cyan	C
Blue	BG	Blue-Cyan	BC
Purple-Blue	PB	Blue	B
Purple	P	Magenta-Blue	MB
Red-Purple	RP	Magenta	M



1810 Runge
1810 Goethe
1961 Itten

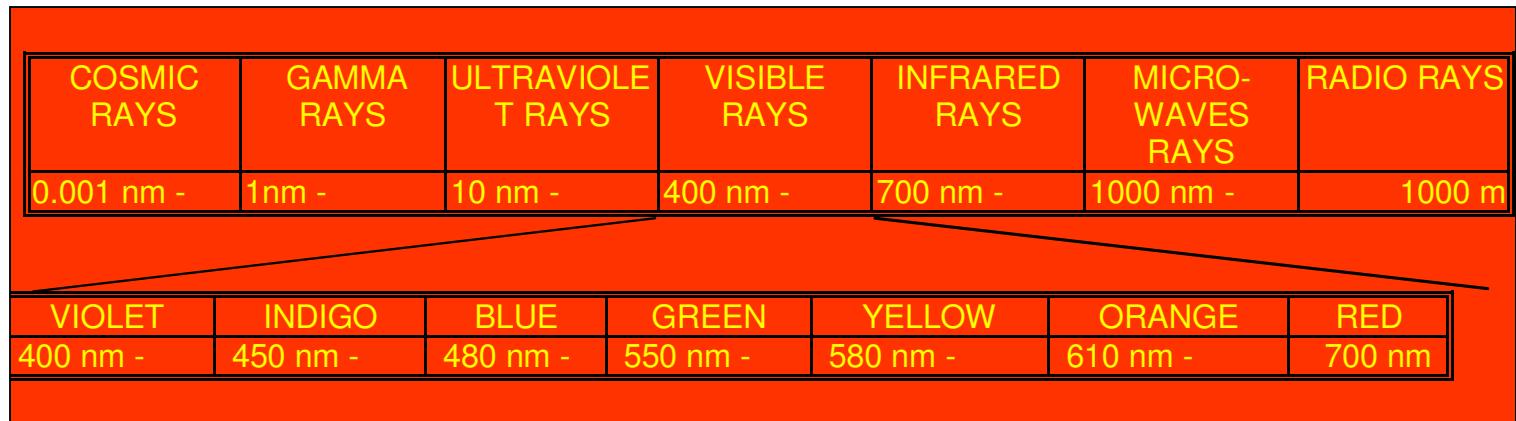


Color plate 1. The Runge-Itten color circle.

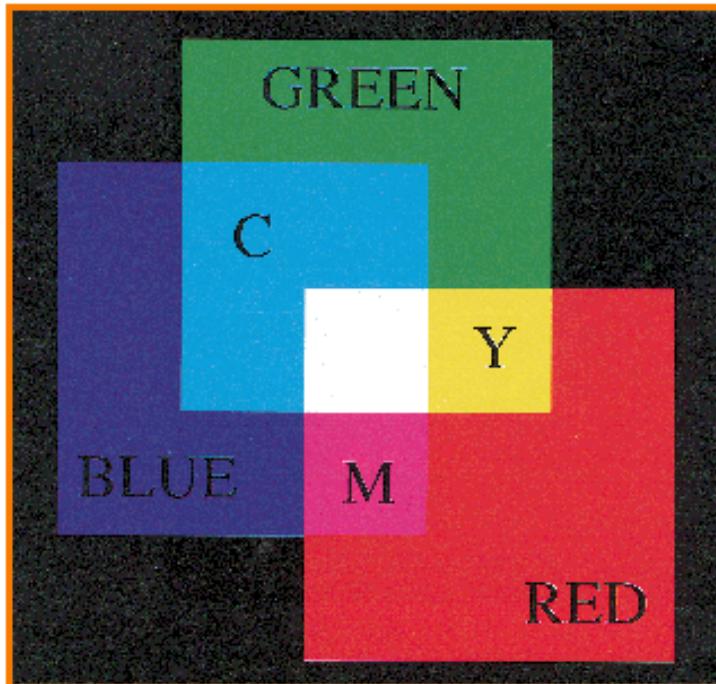


Color

- Black is the absorption of all colors. It is not considered as a color.
- Black is considered the absence of color, and therefore is not allowed to join its color family.



RGB



Colors are additive

R	G	B	Color
0.0	0.0	0.0	Black
1.0	0.0	0.0	Red
0.0	1.0	0.0	Green
0.0	0.0	1.0	Blue
1.0	1.0	0.0	Yellow
1.0	0.0	1.0	Magenta
0.0	1.0	1.0	Cyan
1.0	1.0	1.0	White
0.5	0.0	0.0	?
1.0	0.5	0.5	?
1.0	0.5	0.0	?
0.5	0.3	0.1	?



Yellow, the color of smileys



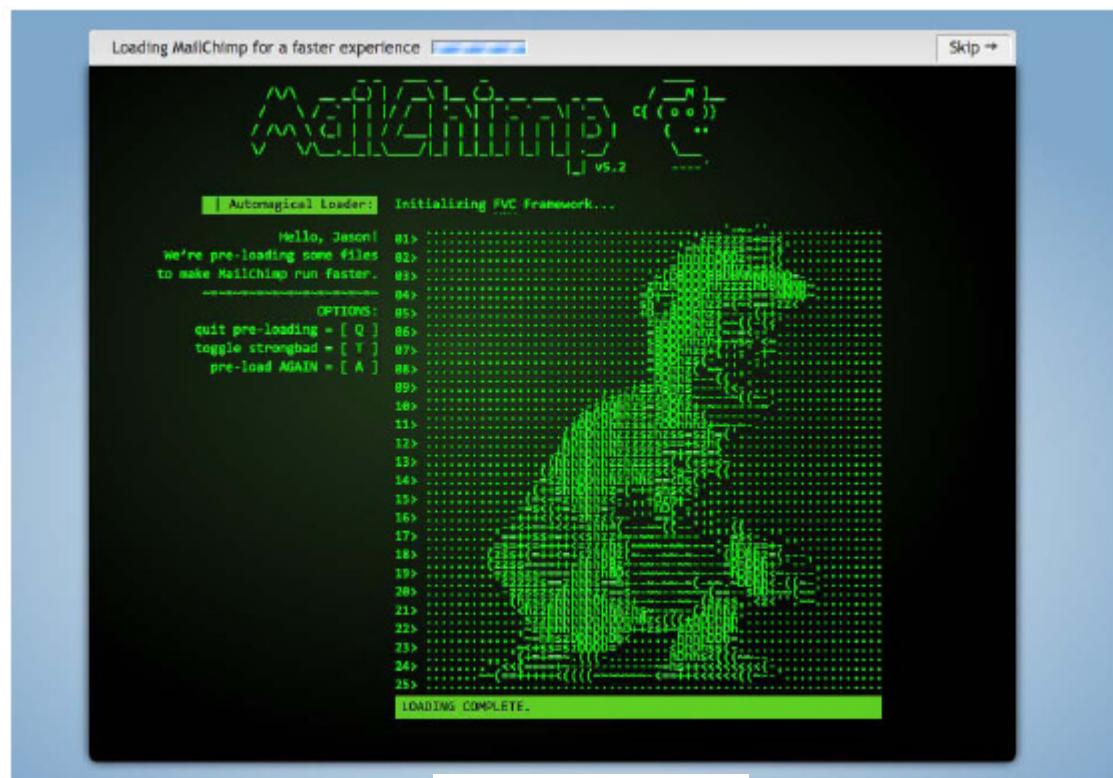
Red, the color of affection



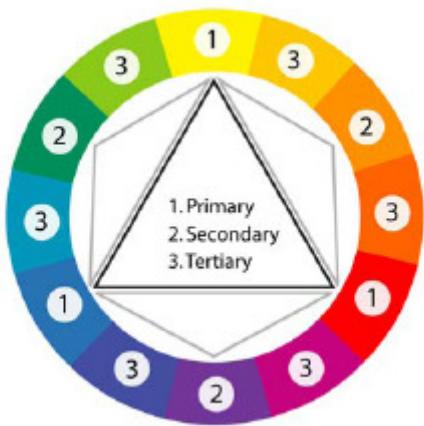
Calming stones, sky, and sea



passion



freshness, and hope.



A Monochromatic Color Scheme

The image displays two side-by-side screenshots of a website for 'darron walter'. Both screenshots feature a dark blue header with the 'darron walter' logo, which consists of a white wavy line icon inside a circle.

Speaker Section (Left Screenshot):

- Header:** Speaker, Author, Designer, About, Contact.
- Section Header:** Speaker
- Image:** A small thumbnail image of a man speaking on stage.
- Section Header:** Experience Designer
- Coming Attractions:**
 - All Fired Up! See Design
 - Future of Web Design
- Buttons:** Book Now!, Book Me!

Author Section (Right Screenshot):

- Header:** Speaker, Author, Designer, About, Contact.
- Section Header:** Author
- Section Header:** Building Findable Websites: Web-Scale SEO and Beyond
- Image:** A thumbnail image of the book 'Building Findable Websites: Web-Scale SEO and Beyond'.
- Text:** This is not another SEO book written for marketing professionals. In this book you'll find practical advice and examples for people who build websites knowing that they'll result in their target audience. Each chapter will introduce you to best practices and show perspectives on how websites should be built to accomplish these simple, yet indispensable goals.
- List:**
 - Help more people find your site
 - Help more fluid connect within your site
 - Measure your culture stats
- Text:** The web is like a river. It flows, meanders, curves, through the terrain of web standards, accessibility, and dependency. It connects to many APIs, tools, and environments. It's the logical definition of what constitutes a web application, and not something passed in the code. Meaning that you don't have to understand the core user experience in order to create a great website. Just do it.
- Text:** only website • improved search traffic • more user-created sites
- Section Header:** What People Are Saying



. Art in My Coffee—featuring colors directly drawn from the site's subject matter

Omihi Waipara
New Zealand Wine

Estate Black

[Top](#)
[Vineyard](#)
[Wines](#)
[Stockists](#)
[Join the Black List](#)
[Contact](#)
[Regions](#)

Black Estate is a remarkable place for wine.

A family owned vineyard on the warm, sunny slopes of the Waipara Valley, where the vines grow through clay and limestone soils to produce intense wines completely expressive of this site.

Our wines are hand crafted using artisan techniques and a dedication to creating exceptional Waipara Pinot Noir, Chardonnay and Riesling.



Latest News

December



A funky complementary monkey

Complementary colors

A screenshot of the Sprout Fund Spring Program website. The header features the text "Sprouting Local Biodiversity spring". Navigation links include THE AWARDS, APPLY NOW, SYMPOSIUM, and ABOUT SPRING. The main visual is a nature-themed illustration with a bird, butterflies, and a city skyline in the background. The central text reads "WHAT WILL YOU DO TO SUPPORT BIODIVERSITY?". Below it, a paragraph describes the program's purpose: "The Sprout Fund Spring Program is a funding stream to support local biodiversity initiatives in 2010. Supported by The Pittsburgh Foundation, this new program will catalyze community-based projects in Allegheny County, Westmoreland County, and the surrounding communities of Southwestern Pennsylvania with small grants of up to \$20,000." There are three columns below: "Updates", "Apply Now", and "Symposium".

The Sprout Fund Spring Program is a funding stream to support local biodiversity initiatives in 2010. Supported by The Pittsburgh Foundation, this new program will catalyze community-based projects in Allegheny County, Westmoreland County, and the surrounding communities of Southwestern Pennsylvania with small grants of up to \$20,000.

LEARN MORE ABOUT SPRING

Updates

AUGUST 10, 2010
Brainstorming Biodiversity
Thanks to everyone who attended the 2010 Biodiversity Symposium! The creativity, ingenuity and initiative demonstrated by those in attendance will surely help sustain our ecosystems and our communities well into the future. Arm yourself with knowledge and ideas from the presentations and discussions at the symposium.

Apply Now

Download and complete the application questions and budget form to submit your biodiversity project idea. The Spring Application is an opportunity for you to tell The Sprout Fund about your vision and how your proposed project would help improve biodiversity in our region.

Symposium

Set for August 9, 2010, The Spring Symposium will host a gathering of community leaders, environmental experts, and engaged citizens to promote a better understanding of biodiversity, brainstorm project ideas and applications, and plant the seeds for potential collaborations.

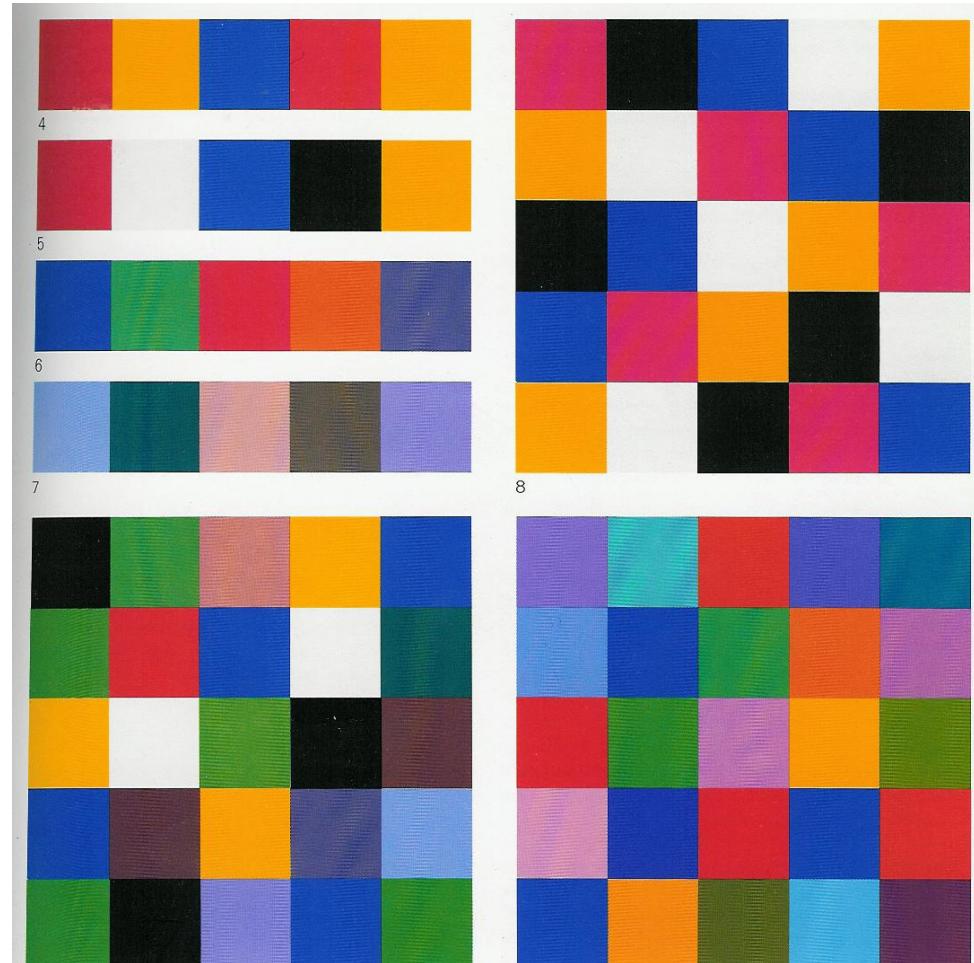
Syntax

- Colors
 - RGB
 - 0 0 0 is black
 - 00 00 00
 - #000000
 - 255 255 255 is white
 - FF FF FF
 - #FFFFFF
 - Background color
 - <body bgcolor="#FFFFFF">
 - <body bgcolor=green>

High level color characteristics. Contrast of hue.



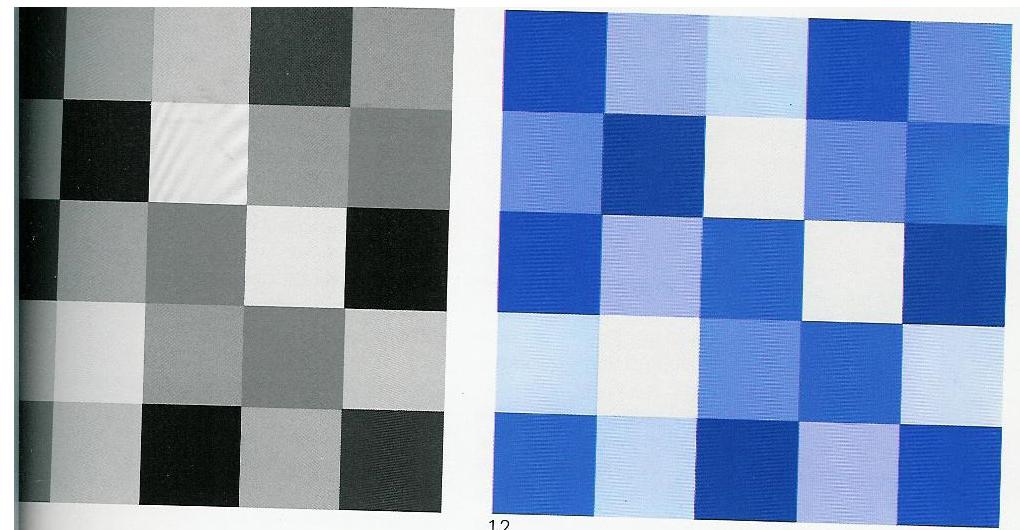
it presents undiluted colors in their most intense luminosity. Some color combinations are: yellow/red/blue, red/blue/green, blue/yellow/violet, yellow/green/violet/red/, violet/green/blue/orange/black.



High level color characteristics. Complementary contrast

Two colors are called complementary if their pigments mixed together yield in neutral grey.

Examples are: yellow-violet, blue-orange, red-green. This contrast gives the effect of a stability fixed image.

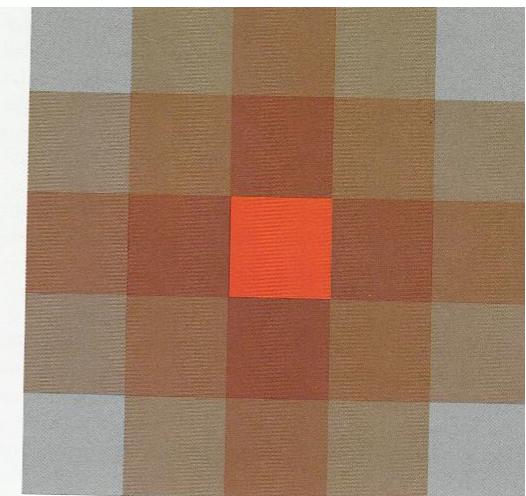
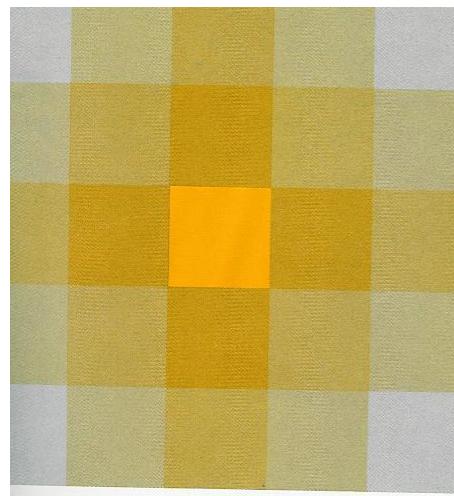


12

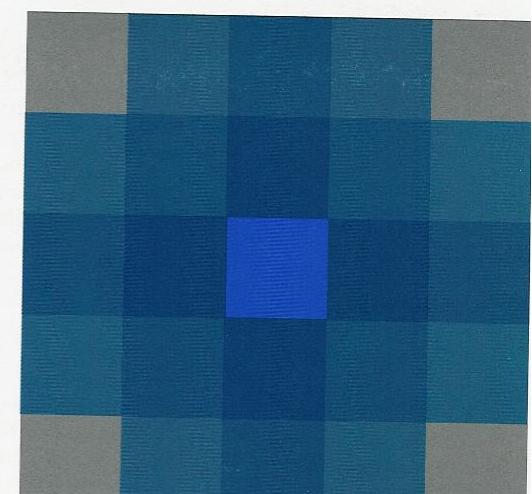
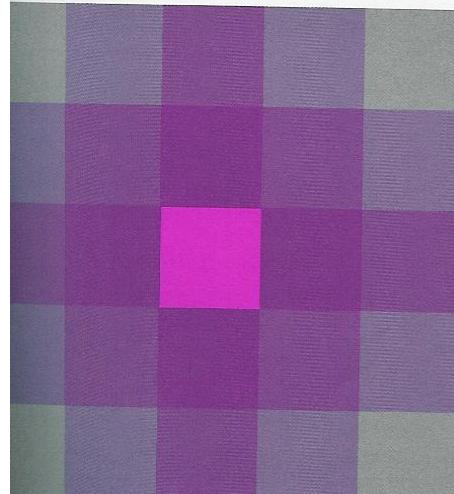


High level color characteristics. Saturation contract

Saturation relates to the degree of purity of the color.



39



Contrasts



The contrast of saturation. Juxtaposition of light and dark values and their relative saturation.



The contrast of light and dark. Juxtaposition of light and dark values. This could be a monochromatic composition.



The contrast of extension. Assigning proportional field sizes in relation to the visual weight of a color.



The contrast of complements. Juxtaposition of color wheel or perceptual opposites.



Simultaneous contrast. The boundaries between colors perceptually vibrate.



The contrast of hue. Juxtaposition of different hues.

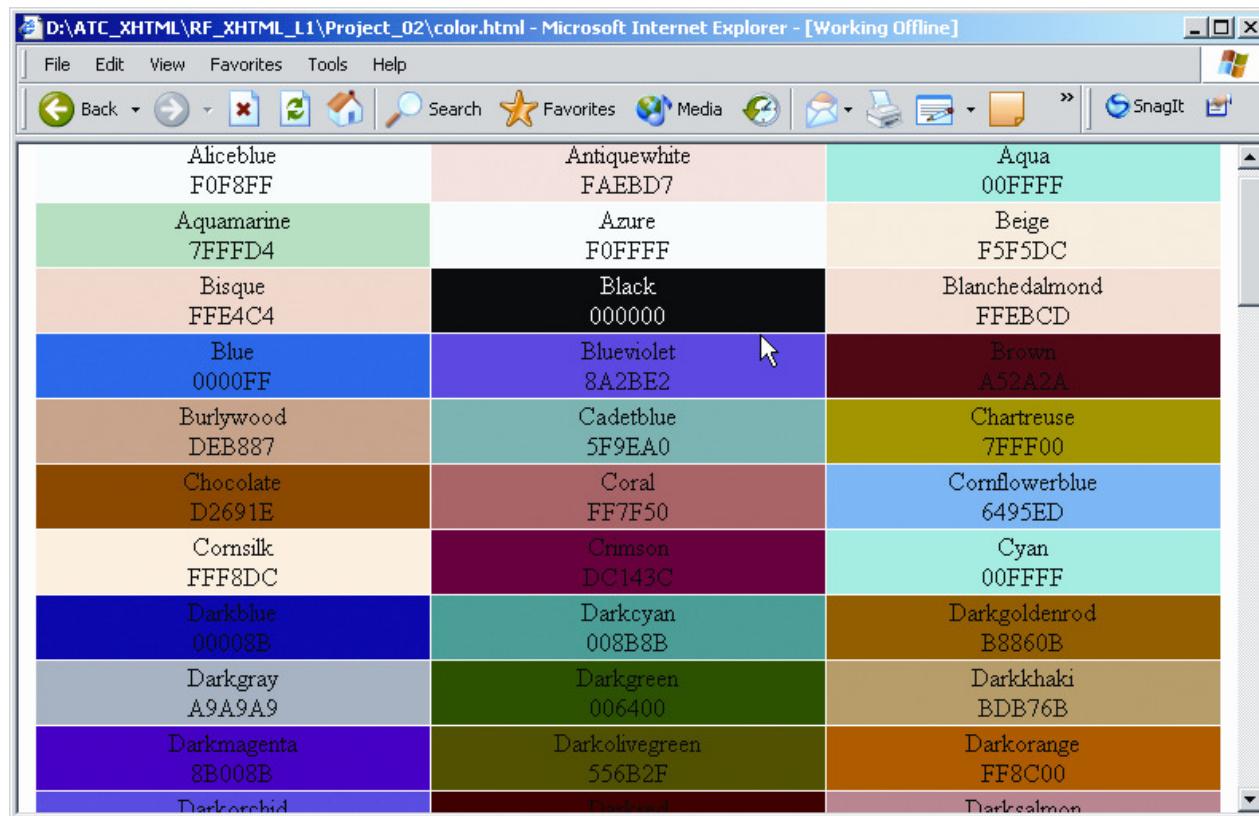
Color Names

There are 16 color names supported in XHTML

COLOR NAME:	HEX NUMBER:
BLACK	#000000
SILVER	#C0C0C0
GRAY	#808080
WHITE	#FFFFFF
MAROON	#800000
RED	#FF0000
PURPLE	#800080
FUCHSIA	#FF00FF
GREEN	#008000
LIME	#00FF00
OLIVE	#808000
YELLOW	#FFFF00
NAVY	#000080
BLUE	#0000FF
TEAL	#008080
AQUA	#00FFFF

Each color name has an associated Hexadecimal code

Some RGB Color Codes



A screenshot of Microsoft Internet Explorer displaying a table of RGB color names and their corresponding hex codes. The table is organized into three columns: Name, Hex Code, and Name, Hex Code. The rows are color-coded according to the values in the first column. The browser interface at the top includes a menu bar (File, Edit, View, Favorites, Tools, Help), a toolbar with various icons, and a status bar indicating the file path and offline status.

Aliceblue F0F8FF	Antiquewhite FAEED7	Aqua 00FFFF
Aquamarine 7FFFDD	Azure F0FFFF	Beige F5F5DC
Bisque FFE4C4	Black 000000	Blanchedalmond FFEBCD
Blue 0000FF	Blueviolet 8A2BE2	Brown A52A2A
Burlywood DEB887	Cadetblue 5F9EA0	Chartreuse 7FFF00
Chocolate D2691E	Coral FF7F50	Cornflowerblue 6495ED
Cornsilk FFF8DC	Crimson DC143C	Cyan 00FFFF
Darkblue 00008B	Darkcyan 008B8B	Darkgoldenrod B8860B
Darkgray A9A9A9	Darkgreen 006400	Darkkhaki BDB76B
Darkmagenta 8B008B	Darkolivegreen 556B2F	Darkorange FF8C00
Darkorchid 80008B	Darkred 800000	Darkseagreen 808080

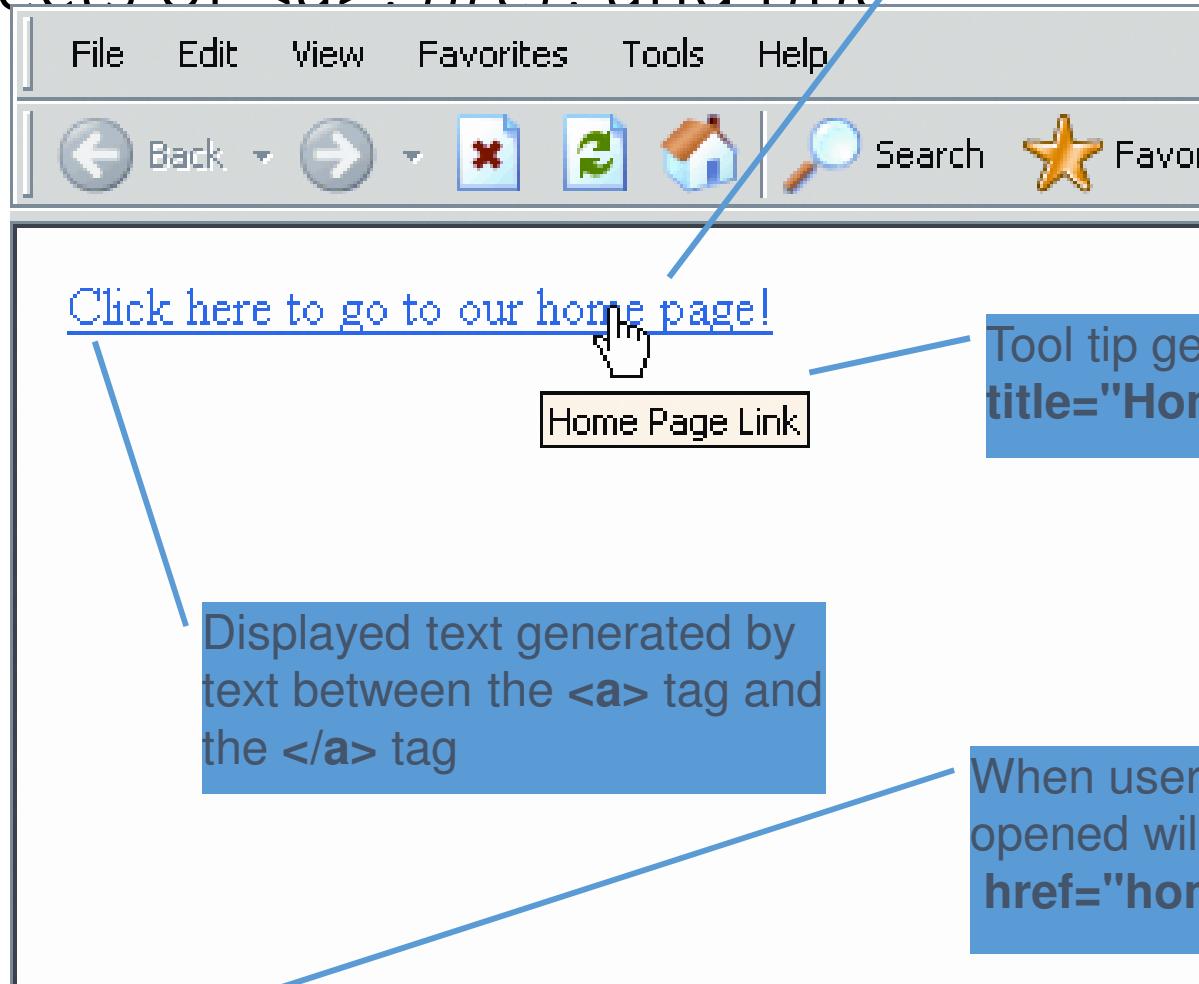
Syntax

- Colors
 - Other attributes
 - text
 - Color of page's body text that isn't a link
 - link
 - Color of unfollowed links
 - Blue by default
 - vlink
 - Color of visited links
 - Purple or red by default

Syntax

- Colors
 - Other attributes
 - Local font color changes
 -
 - Using an image as a background
 - <body background="tiles.gif">

Effects of `<a>`, `href`, and `title`



```
<a href="home.htm" title="Home Page Link">Click here to go to our home page!</a>
```

Effects of Within-Page Linking

I'm painting my room. What colors are compatible with tangerine and puce?
Would my husband still snore if I made him sleep standing upside down?
Can a duck fly if it's wet?
Where can I find a shoe store that sells mukluks?

I'm painting my room. What colors are compatible?
My great aunt had a parlor in exactly those colors. She used lime green to paint all the walls and purple for the paneled ceiling. It was her favorite room and she used to keep vanilla in it all the time.

[Back To Top](#)

Would my husband still snore if I Clicking here takes you to the "duck" line

Personally, I think you and your husband have more serious issues than snoring. While standing upside down on his head may stop him from snoring, after a time his head may get flat. I think you should look towards more conventional methods for help. Have you tried putting a clothespin on his nose?

[Back To Top](#)

Can a duck fly if it's wet? This line has
Can a duck fly if it's wet?

The question should not really be can he, but would he want to? There are people who have migraines and would want to avoid thunder as well. My advice to you is:

[Back To Top](#)

Where can I find a shoe store that sells mukluks?

This is a very silly question for which there is only one answer: Sam's Mukluk and Igloo Shop just south of the North Pole.

[Back To Top](#)

This is a very silly question for which there is only one answer: Sam's Mukluk and Igloo Shop just south of the North Pole.

Using a Special Value #top

The screenshot shows a Microsoft Internet Explorer window titled "Ask Dr. Know-It-All - Microsoft Internet Explorer provided by BellSouth". The menu bar includes File, Edit, View, Favorites, Tools, and Help. The toolbar includes Back, Forward, Stop, Refresh, Home, Search, Favorites, Media, Mail, and SnagIt. The main content area displays a list of questions:

- I'm painting my room. What colors are compatible with tangerine and puce?
- Would my husband still snore if I made him sleep standing upside down?
- Can a duck fly if it's wet?
- Where can I find a shoe store that sells mukluks?

I'm painting my room. What colors are compatible with tangerine and puce?

My great aunt had a parlor in exactly those colors. She used lime green to trim the borders and put a hot pink sofa in it. It was her favorite room. She used to nip vanilla in it all the time.

[Back To Top](#)

Would my husband still snore if I made him sleep standing upside down?

Personally, I think you and your husband have more serious issues than snoring. While standing upside down on his head may stop him from snoring, after a time his head may get flat. I think you should look towards more conventional methods for help. Have you tried putting a clothespin on his nose?

[Back To Top](#)

Can a duck fly if it's wet?

This question should not really be can he, but would he want to? There could also be other factors involved, such as lightning and wind. The duck could suffer from migraines and would want to avoid thunder as well. My advice to you is to find a duck, wait until it rains, and follow it.

[Back To Top](#)

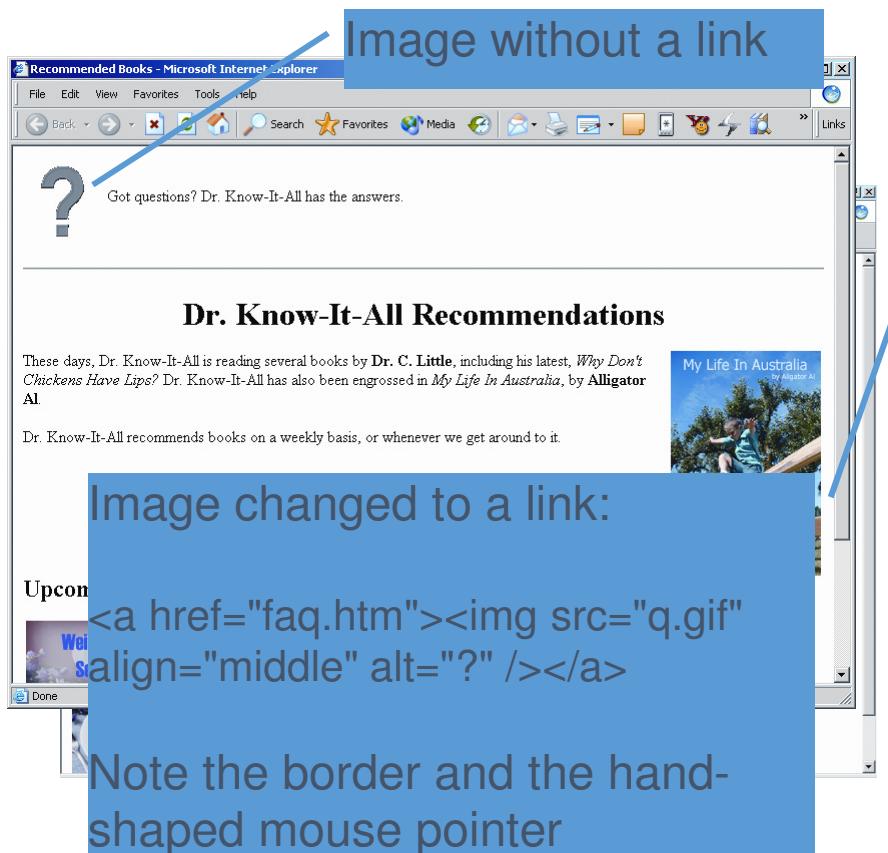
Where can I find a shoe store that sells mukluks?

This is a very silly question for w

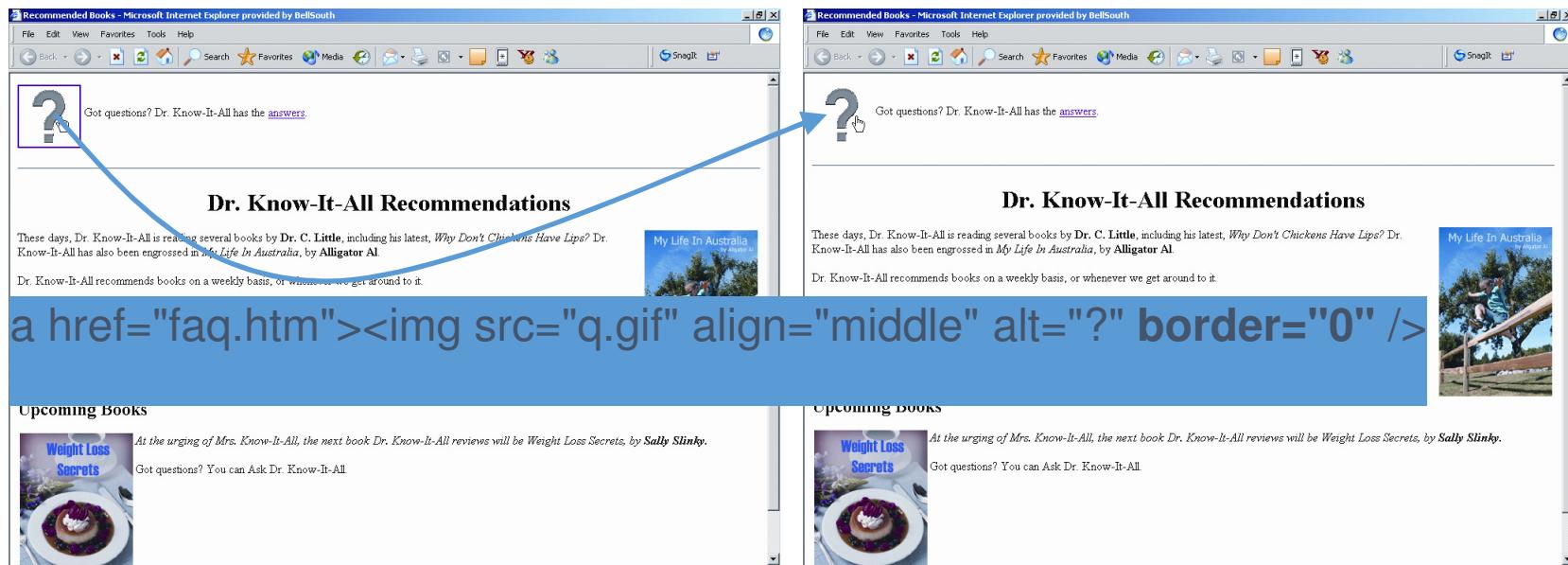
**Clicking here takes you to the top of the page
(no need for an anchor named "top")**

This is a very silly question for which there is only one answer: Sam's Mukluk and Igloo Shop just south of the North Pole.

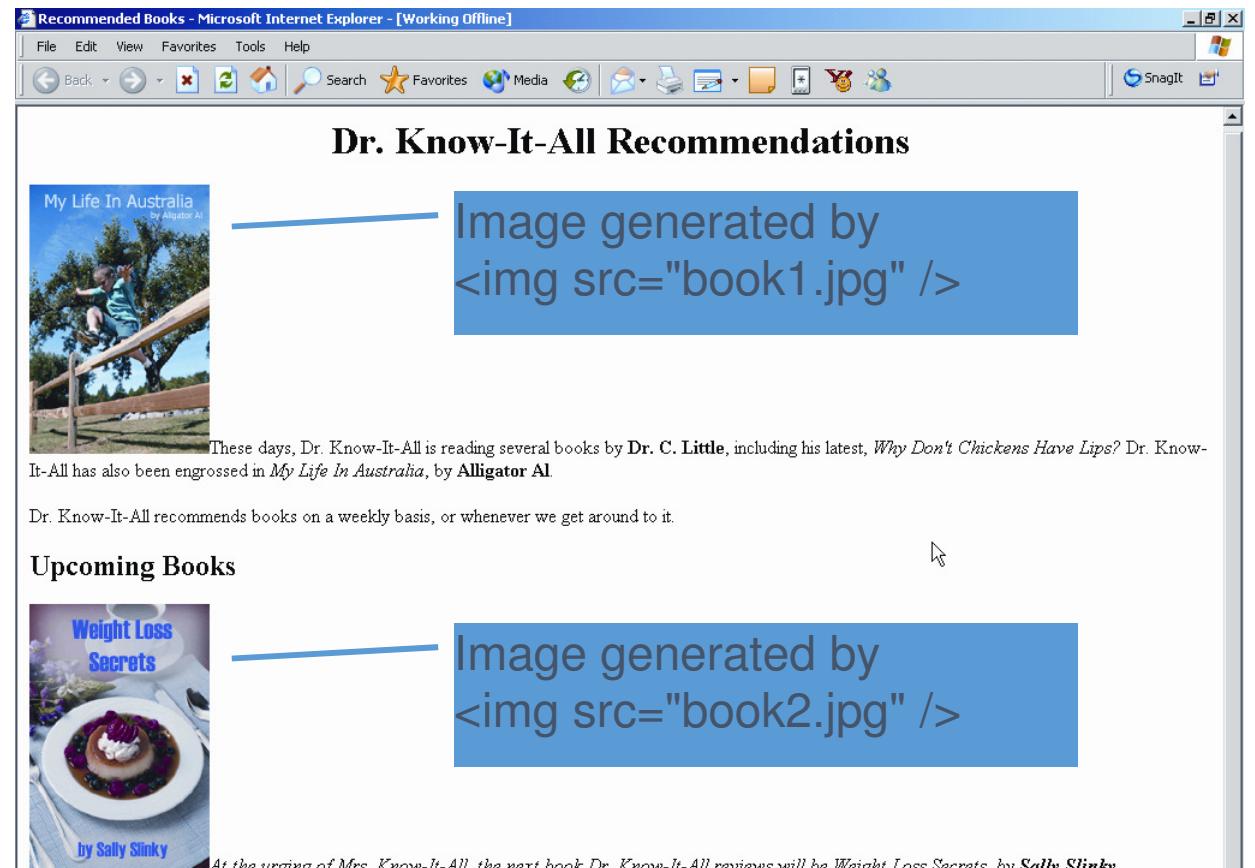
Effect of Image Hyperlinks



Effect of Border Removal



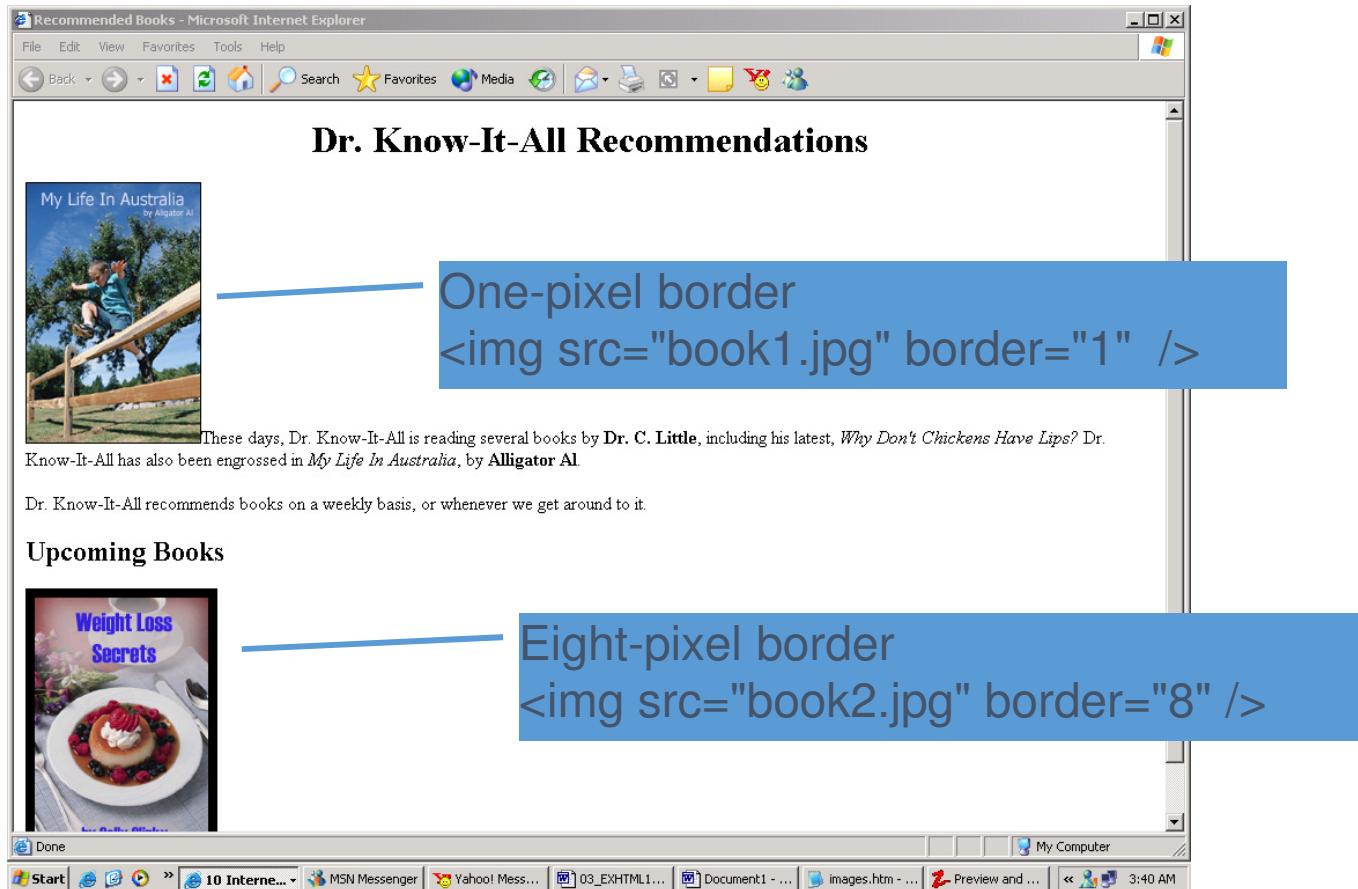
Effects of and src



No path needed if .jpg file is in same location as Web page

Effects of border

Dr. Know-It-All Recommendations



A screenshot of Microsoft Internet Explorer version 6.0. The title bar says "Recommended Books - Microsoft Internet Explorer". The menu bar includes File, Edit, View, Favorites, Tools, and Help. The toolbar has icons for Back, Forward, Stop, Home, Search, Favorites, Media, and other utilities. The main content area displays a heading "Dr. Know-It-All Recommendations" and a thumbnail image of a person sitting on a wooden fence. A blue callout box points to the image with the text "One-pixel border" and the HTML code "". Below the image is a paragraph of text: "These days, Dr. Know-It-All is reading several books by Dr. C. Little, including his latest, *Why Don't Chickens Have Lips?* Dr. Know-It-All has also been engrossed in *My Life In Australia*, by Alligator Al." Another blue callout box points to the text "Dr. Know-It-All recommends books on a weekly basis, or whenever we get around to it." with the heading "Upcoming Books". At the bottom, the taskbar shows various open windows like MSN Messenger, Yahoo! Messenger, and a preview window.

One-pixel border

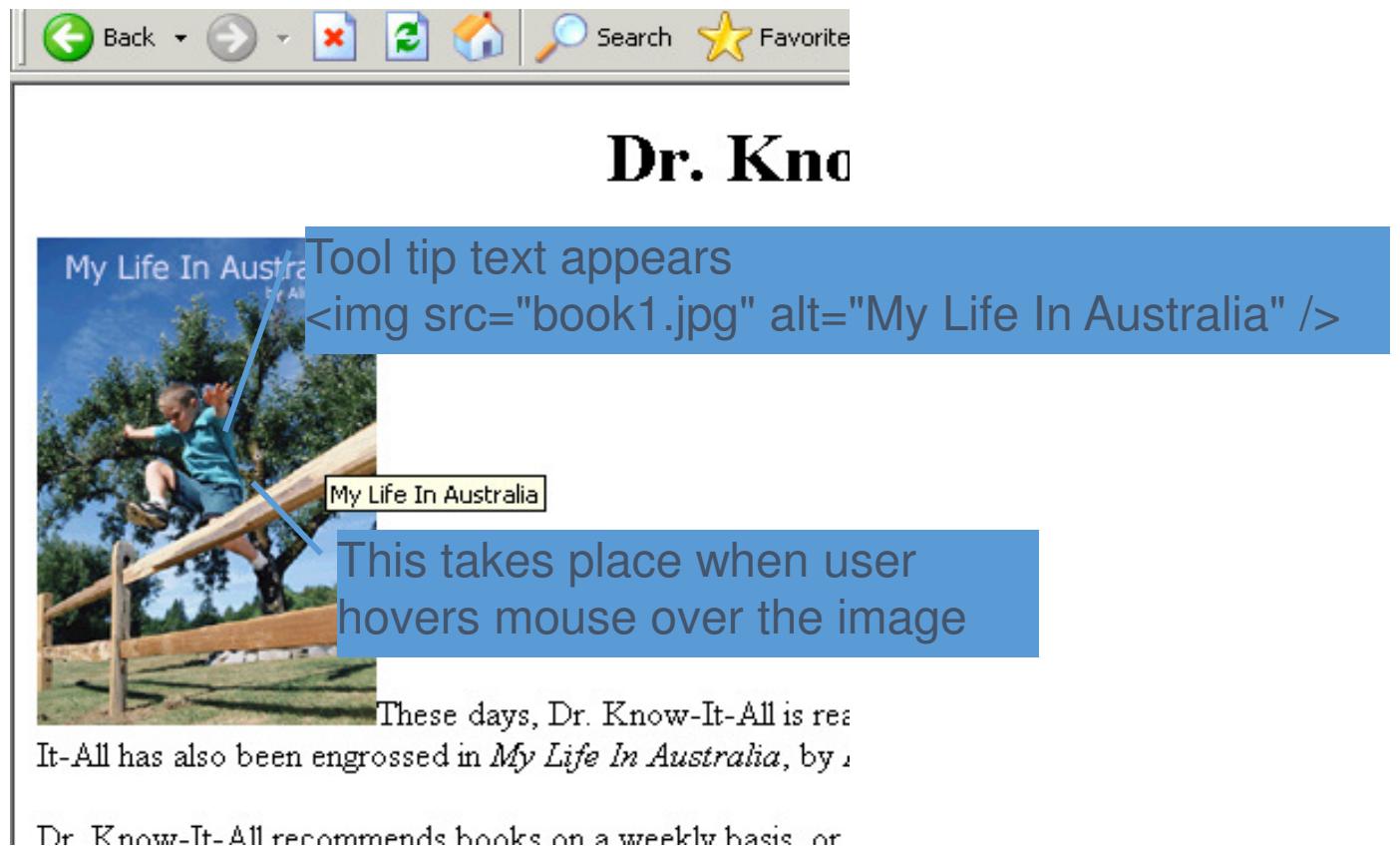
These days, Dr. Know-It-All is reading several books by Dr. C. Little, including his latest, *Why Don't Chickens Have Lips?* Dr. Know-It-All has also been engrossed in *My Life In Australia*, by Alligator Al.

Dr. Know-It-All recommends books on a weekly basis, or whenever we get around to it.

Upcoming Books

Eight-pixel border

Effects of Setting Alternate Text



Effect of Image Alignment

Middle alignment:

```

```

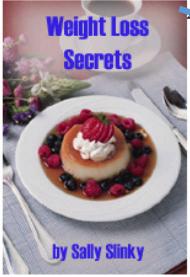
Dr. Know-It-All Recommends



These days, Dr. Know-It-All is reading several books by Dr. C. Little, including his latest, *Why Don't Chickens Have Lips?* Dr. Know-It-All has also been engrossed in *My Life In Australia*, by Alligator Al.

Dr. Know-It-All recommends books on a weekly basis, or whenever we get around to it.

Upcoming Books



At the urging of Mrs. Know-It-All, the next book Dr. Know-It-All reviews will be *Weight Loss Secrets*, by Sally Slinky.

Top alignment:

```

```

Effect of Image Alignment (continued)

Right alignment:

```

```

These days, Dr. Know-It-All is reading several books by Dr. C. Little, including his latest, *Why Don't Chickens Have Lips?* Dr. Know-It-All has also been engrossed in *My Life In Australia*, by Alligator Al.

Dr. Know-It-All recommends books on a weekly basis, or whenever we get around to it.

Upcoming Books



At the urging of Mrs. Know-It-All, the next book Dr. Know-It-All reviews will be Weight Loss Secrets, by Sally Slinky.



Left alignment:

```

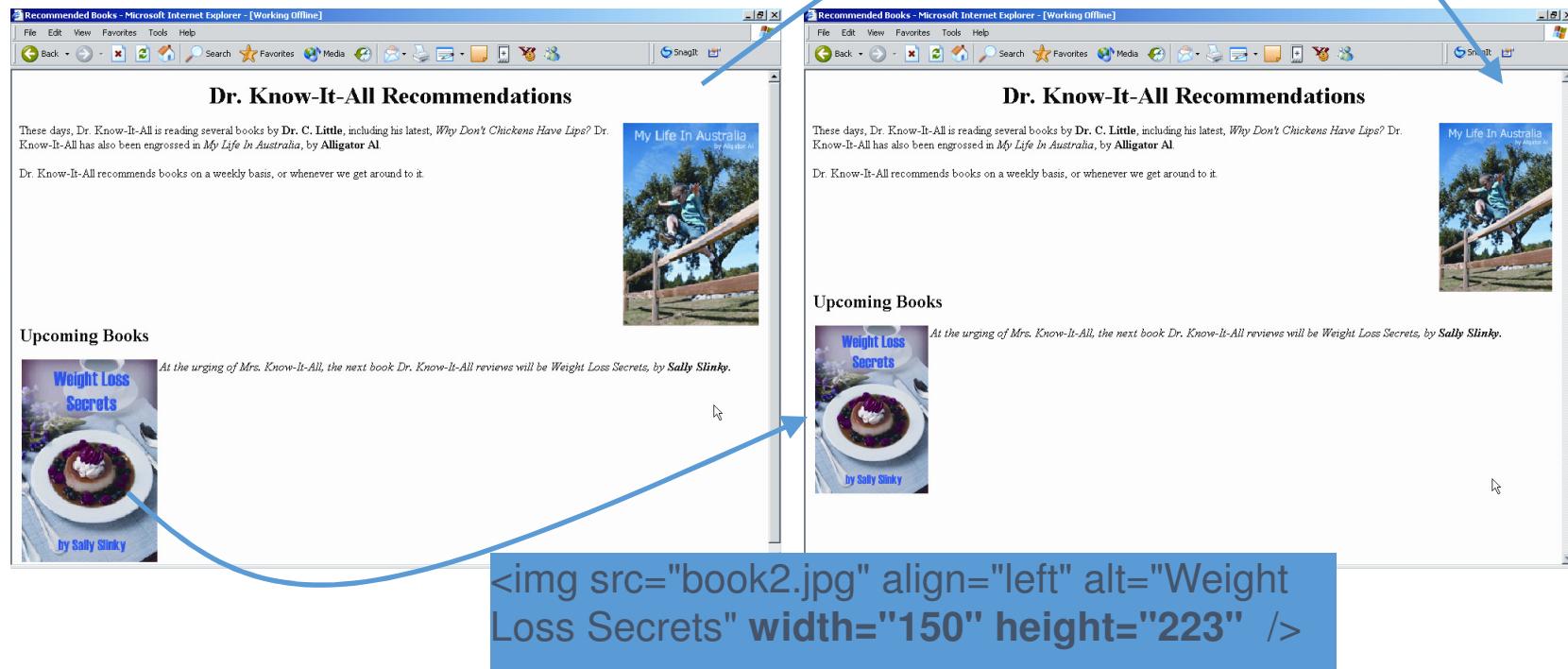
```

Left and right alignment causes remaining content to wrap around the image.
Note that Upcoming Books is at same level as right-aligned image.

Effects of Image Sizing

```

```



Effect of Vertical and Horizontal Spacing

```

```



Upcoming Books

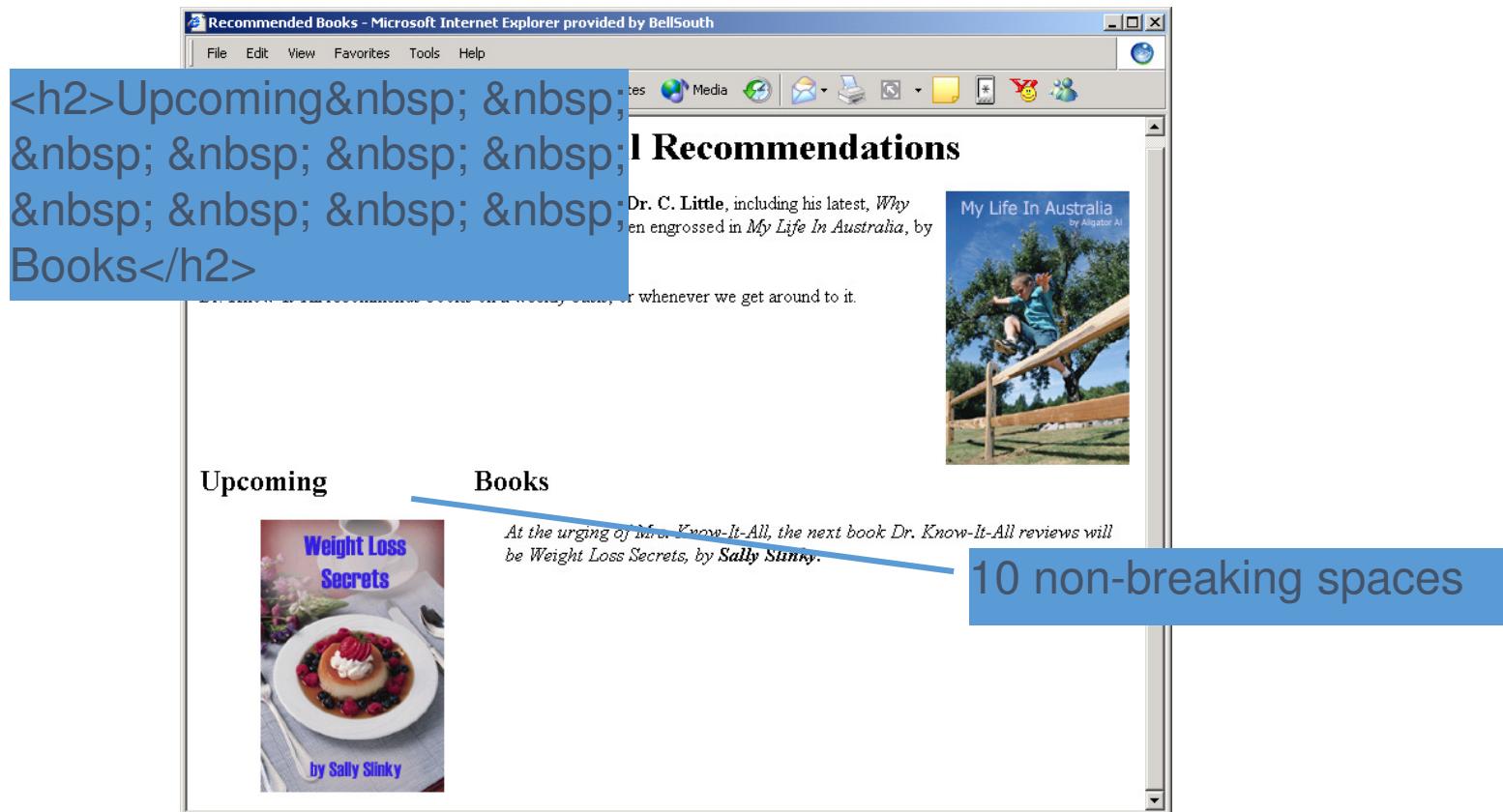


*At the urging of Mrs. Know-It-All, the next book I
be Weight Loss Secrets, by Sally Slinky.*

20 pixels of vertical space
above the image

50 pixels of horizontal space
to the left and right of the
image

Effect of Non-Breaking Space



Effects of Horizontal Rule

Grey bar displays as a result of `<hr />`

Recommended Books - Microsoft Internet Explorer provided by BellSouth

File Edit View Favorites Tools Help

Back Search Media

Dr. Know-It-All Recommendations

These days, Dr. Know-It-All is reading several books by Dr. C. Little, including his latest, *Why Don't Chickens Have Lips?* Dr. Know-It-All has also been engrossed in *My Life In Australia*, by Alligator Al.

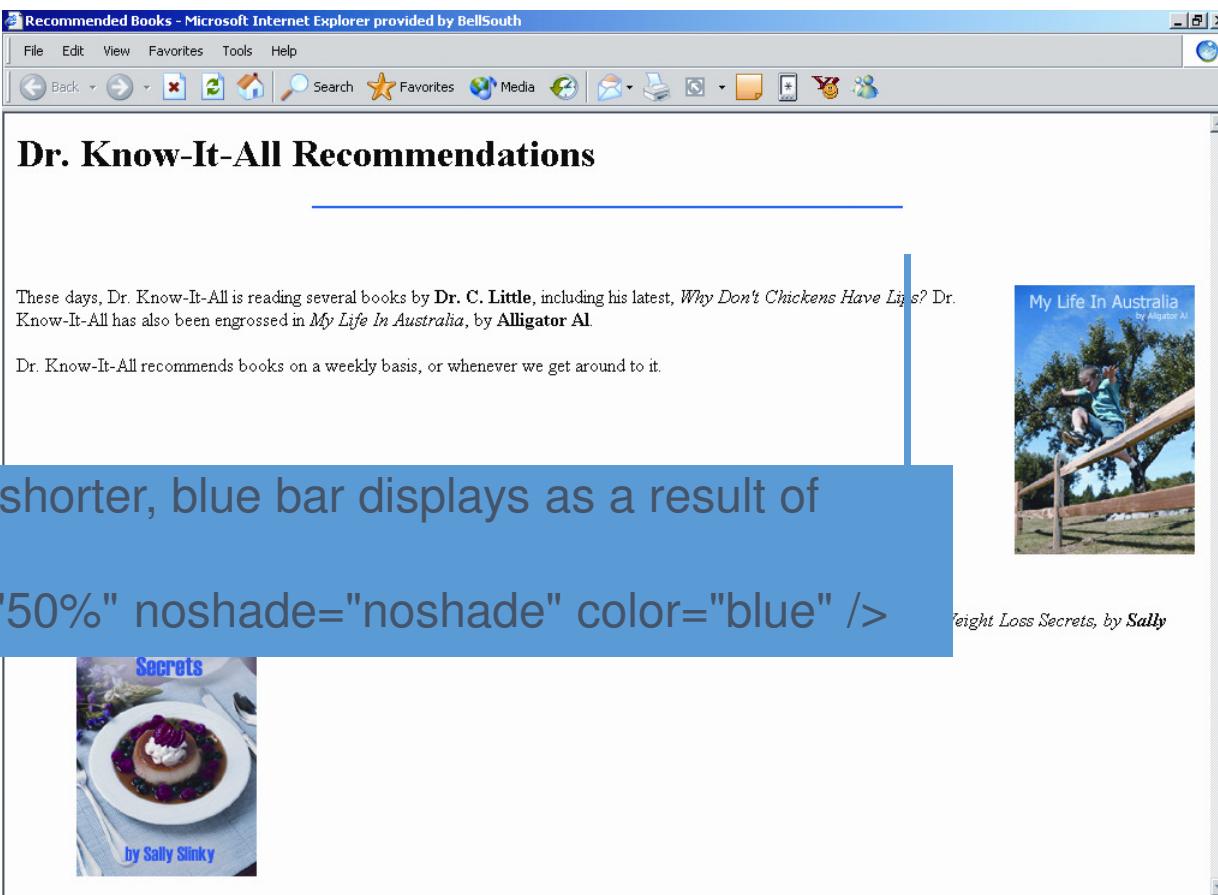
Dr. Know-It-All recommends books on a weekly basis, or whenever we get around to it.

At the urging of Mrs. Know-It-All, the next book Dr. Know-It-All reviews will be Weight Loss Secrets, by Sally Slinky.




Effects of Horizontal Rule Attributes

Unshaded, shorter, blue bar displays as a result of
`<hr width="50%" noshade="noshade" color="blue" />`



These days, Dr. Know-It-All is reading several books by Dr. C. Little, including his latest, *Why Don't Chickens Have Lips?* Dr. Know-It-All has also been engrossed in *My Life In Australia*, by Alligator Al.

Dr. Know-It-All recommends books on a weekly basis, or whenever we get around to it.

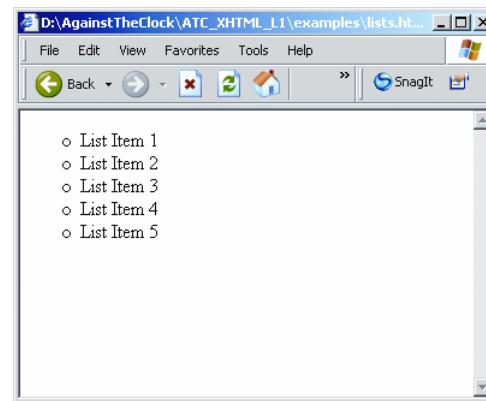
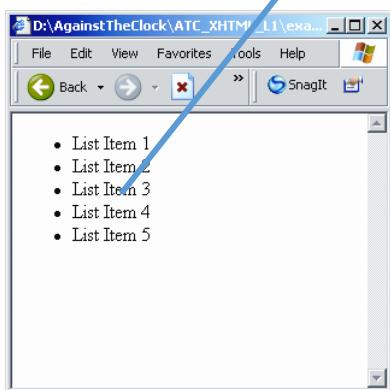
Secrets
by Sally Slinky

My Life In Australia
by Alligator Al

Weight Loss Secrets, by Sally

Effects of Unordered Lists

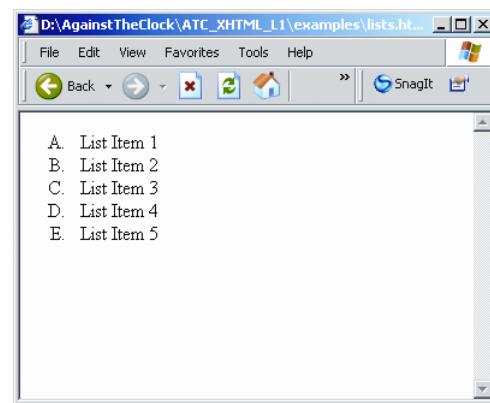
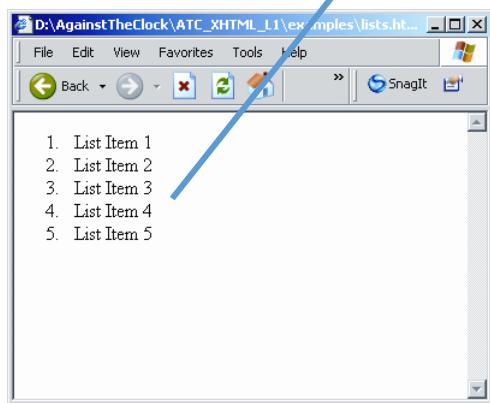
```
<ul>
<li> List Item 1</li>
<li> List Item 2</li>
<li> List Item 3</li>
<li> List Item 4</li>
<li> List Item 5</li>
</ul>
```



`<ul type="circle">` affects the type of bullet

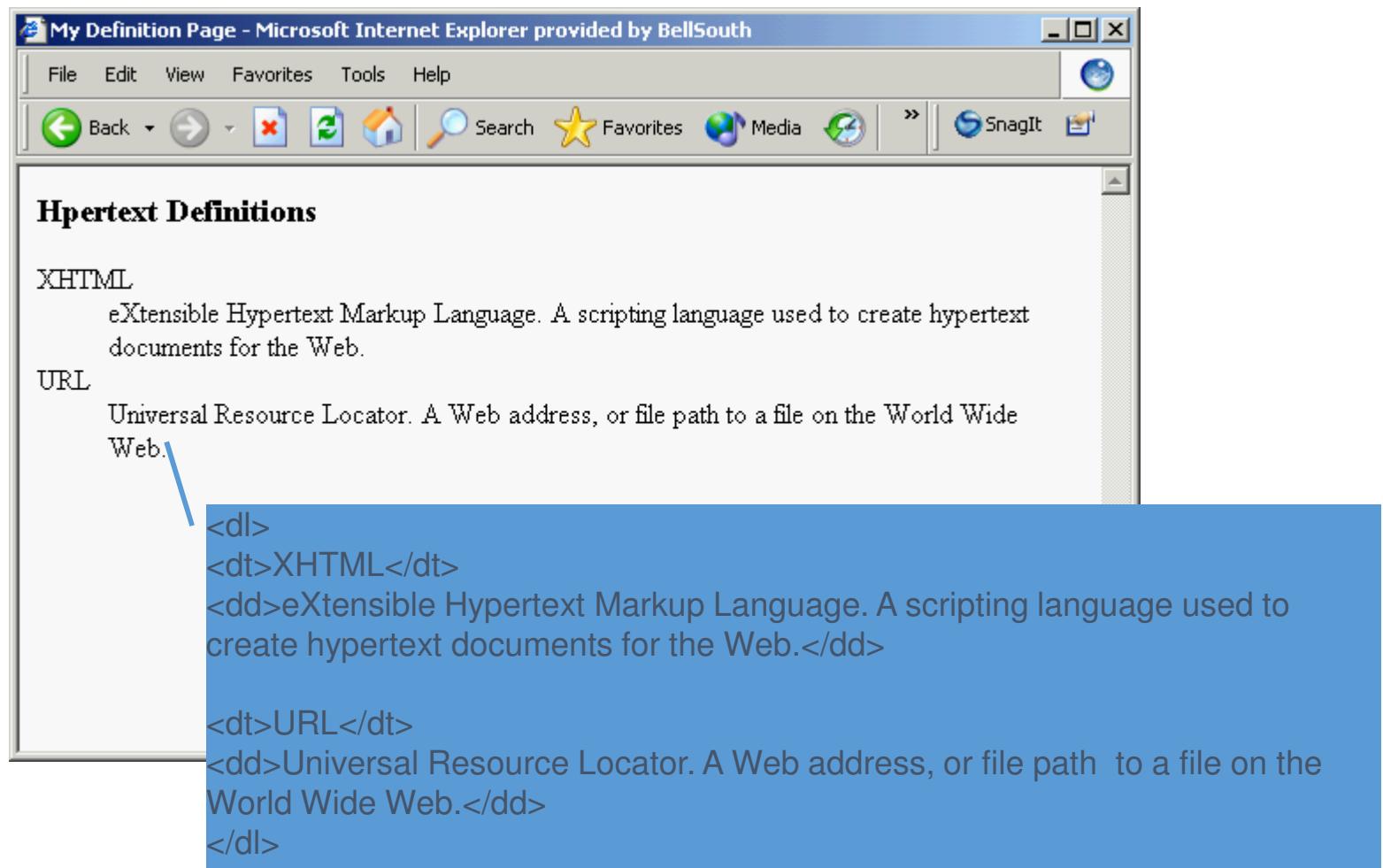
Effects of Ordered Lists

```
<ol>
<li> List Item 1</li>
<li> List Item 2</li>
<li> List Item 3</li>
<li> List Item 4</li>
<li> List Item 5</li>
</ol>
```



<ol type="A"> causes uppercase alphabetic listing

Effects of Definition Lists



The screenshot shows a Microsoft Internet Explorer window titled "My Definition Page - Microsoft Internet Explorer provided by BellSouth". The window displays a definition list with two entries: "XHTML" and "URL". A blue callout box highlights the first entry, "XHTML", with its corresponding HTML code underneath.

Hypertext Definitions

XHTML

eXtensible Hypertext Markup Language. A scripting language used to create hypertext documents for the Web.

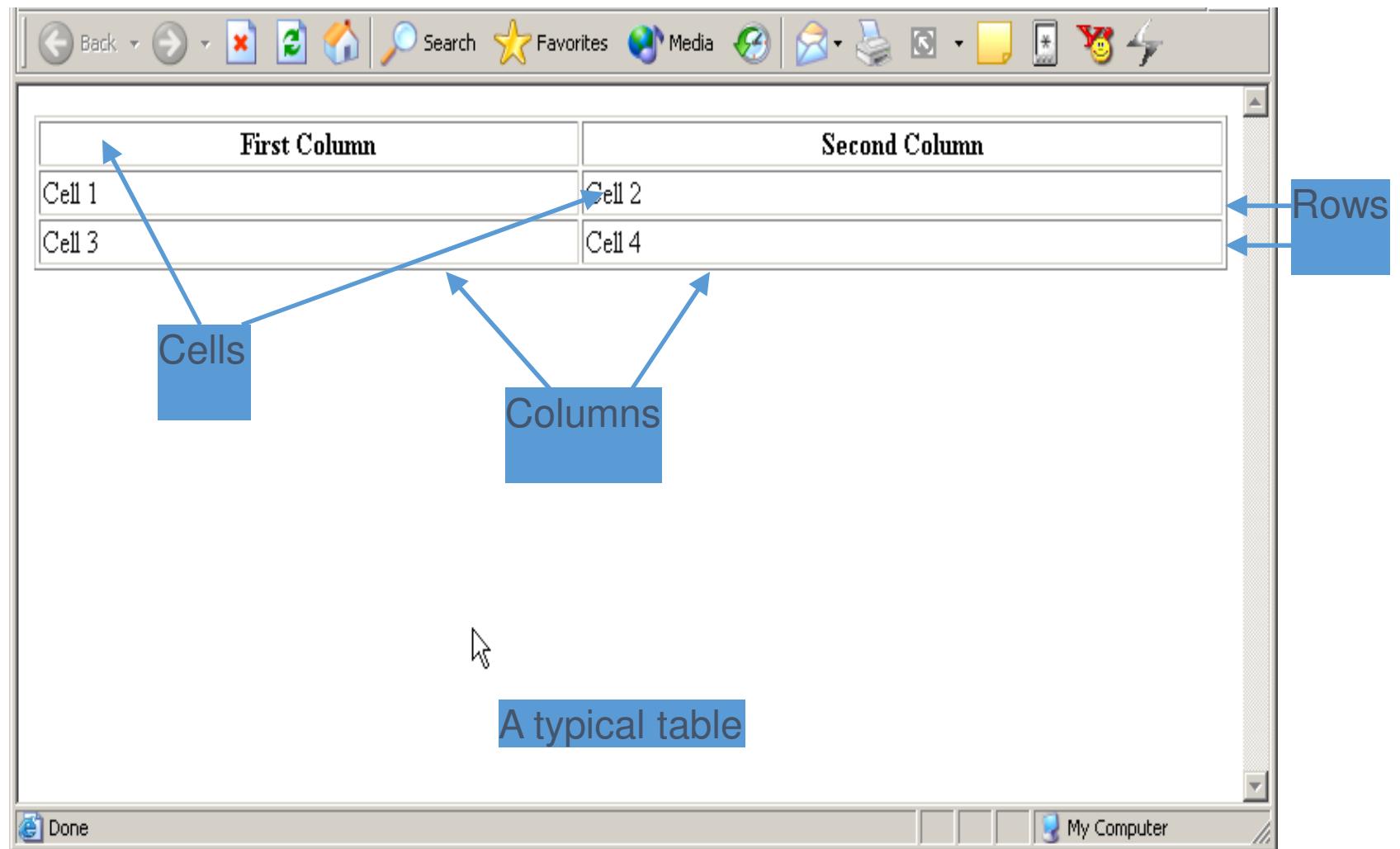
URL

Universal Resource Locator. A Web address, or file path to a file on the World Wide Web.

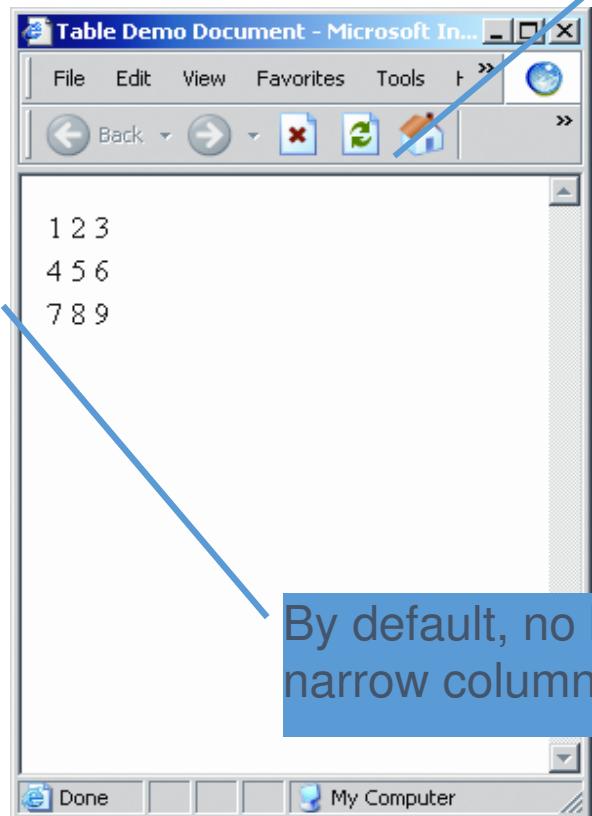
```
<dl>
<dt>XHTML</dt>
<dd>eXtensible Hypertext Markup Language. A scripting language used to
create hypertext documents for the Web.</dd>

<dt>URL</dt>
<dd>Universal Resource Locator. A Web address, or file path to a file on the
World Wide Web.</dd>
</dl>
```

Visual Summary



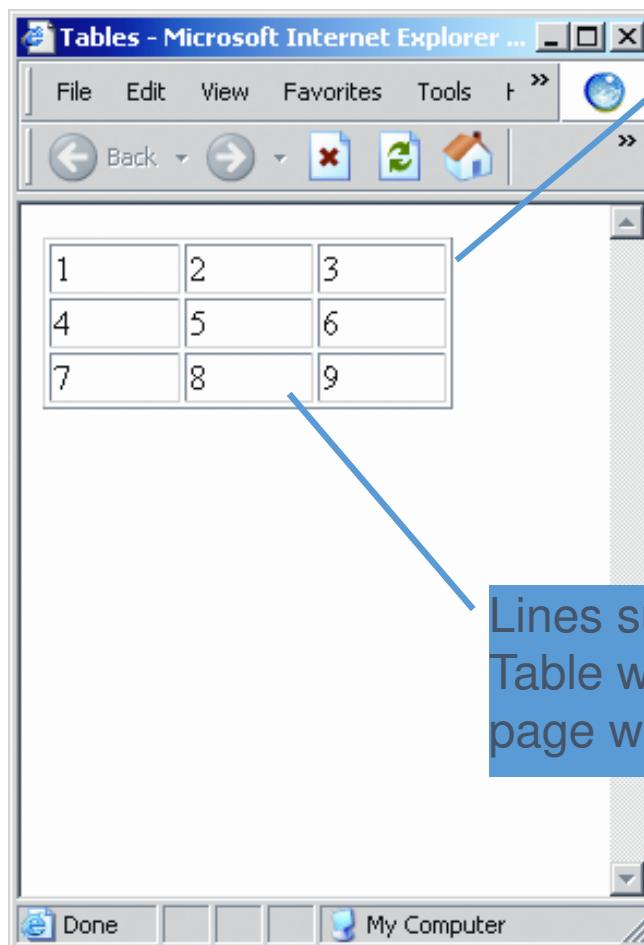
Effects of <table>, <tr>, and <td> Tags



```
<html>
<head><title>Tables</title></head>
<body>
<table>
  <tr> <td>1</td> <td>2</td>
  <td>3</td> </tr>
  <tr> <td>4</td> <td>5</td>
  <td>6</td> </tr>
  <tr> <td>7</td> <td>8</td>
  <td>9</td> </tr>
</table>
</body>
</html>
```

By default, no border and narrow columns

Effects of *border* and *width* attributes



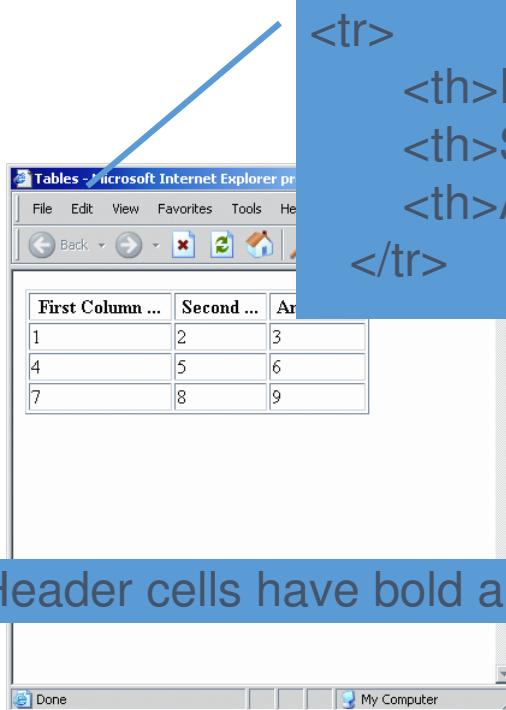
A screenshot of Microsoft Internet Explorer window titled "Tables - Microsoft Internet Explorer ...". The window displays a 3x3 table with cells containing the numbers 1 through 9. The table has a border of 1 pixel. A blue callout box points to the table with the text: "Lines surround cells" and "Table width takes up ¾ of page width". Above the table, another blue callout box contains the HTML code: <table border="1" width="75%">

1	2	3
4	5	6
7	8	9

```
<table border="1" width="75%">
```

Lines surround cells
Table width takes up ¾ of page width

Effects of *border* and *width* attributes



Tables - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Stop Refresh Stop Home

First Column ...	Second ...	Ar
1	2	3
4	5	6
7	8	9

Done My Computer

<tr>

<th>First Column ...</th>

<th>Second ... </th>

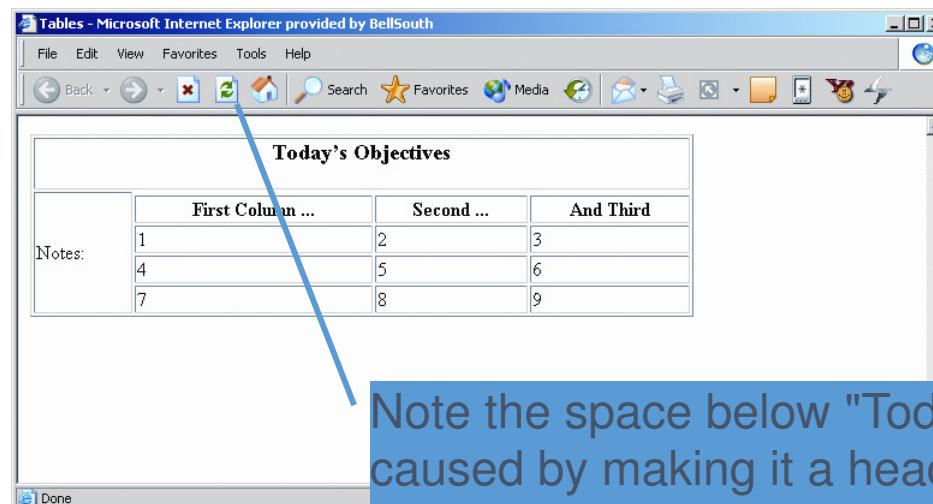
<th>And Third</th>

</tr>

Header cells have bold and centered text

Effects of Column and Row Spanning

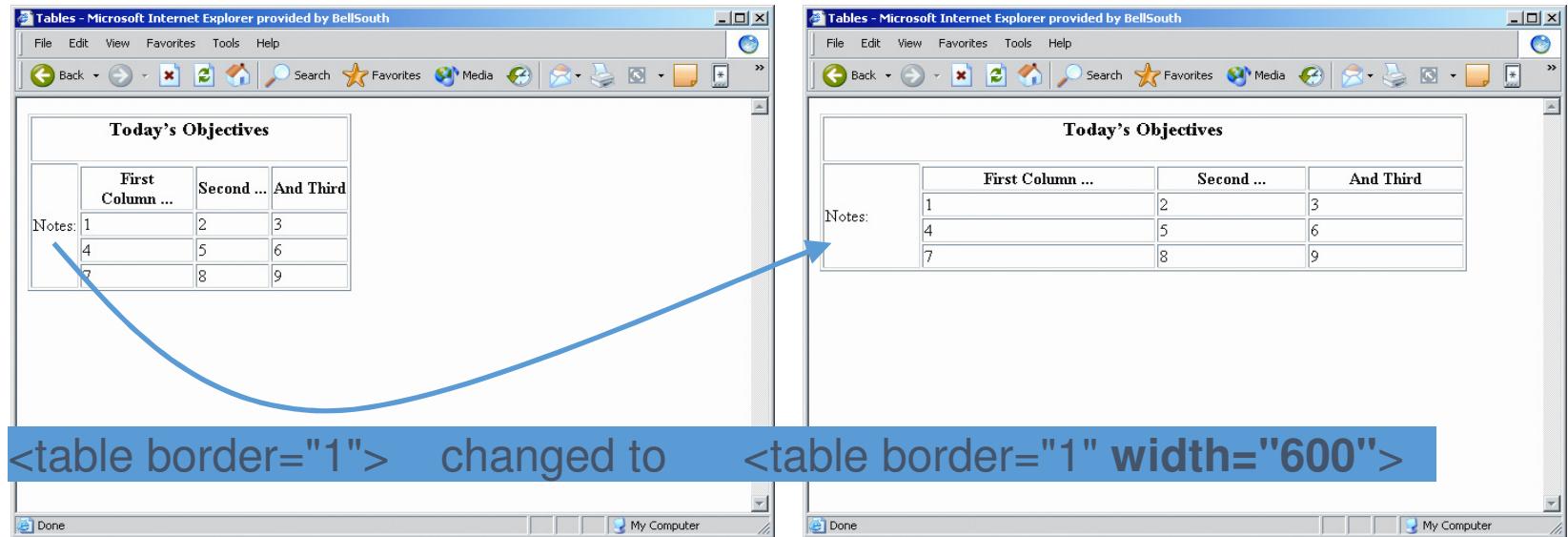
Column spanning:
`<td colspan="4"><h3 align="center">Today's Objectives</h3></td>`



Note the space below "Today's Objectives", caused by making it a header (h3)

Row spanning:
`<td rowspan="5">Notes:</td>`

Effect of Changing Table Size



Effect of Changing Cell Size

The image shows two side-by-side Microsoft Internet Explorer windows. Both windows have a title bar 'Tables - Microsoft Internet Explorer provided by BellSouth' and a toolbar with standard browser icons.

The left window displays a table with a header row 'Today's Objectives' and three data rows. The first column is labeled 'Notes:' and contains three rows of numbers: 1, 4, and 7. The second column is labeled 'First Column ...', the third is 'Second ...', and the fourth is 'And Third'. The data rows contain the numbers 2, 5, and 8 in the second column, and 3, 6, and 9 in the third column.

The right window shows the same table structure, but the first column ('Notes:') has been modified. It now contains only one row with the number 1, while the other two rows (4 and 7) are missing. The second column ('First Column ...') still contains the numbers 2, 5, and 8, and the third column ('Second ...') contains the numbers 3, 6, and 9.

A large blue arrow points from the left window to the right window, indicating the change made to the first column.

`<th>First Column ...</th>`
changed to
`<th height="75">First Column ...</th>`

Effect of Table Alignment

The image displays two Microsoft Internet Explorer windows side-by-side, illustrating the effect of table alignment on the position of table cells.

Left Window (Centered Table): The table is centered horizontally. The cell containing the number "7" is positioned to the left of the other cells in its row. A blue arrow points from this cell to the corresponding cell in the right window.

Today's Objectives			
Notes:	First Column ...	Second ...	And Third
	1	2	3
	4	5	6
	7	8	9

Right Window (Right-aligned Table): The table is aligned to the right horizontally. The cell containing the number "7" is positioned to the right of the other cells in its row. A blue arrow points from the left window's 7 to this cell.

Today's Objectives			
Notes:	First Column ...	Second ...	And Third
	1	2	3
	4	5	6
	7	8	9

Text Overlay:

```
<table border="1" width="600" align="center">  
changed to  
<table border="1" width="600" align="right">
```

Effect of Cell Data Alignment

The image shows two Microsoft Internet Explorer windows side-by-side, both displaying a table titled "Today's Objectives". The table has a single row with four columns labeled "First Column ...", "Second ...", and "And Third". Below the table, there is a large text area containing the word "Notes:" repeated five times, spanning the width of the table. A blue curved arrow points from the left side of the first window to the right side of the second window, highlighting the difference in how the text is displayed.

Today's Objectives			
First Column ...	Second ...	And Third	
1	2	3	
4	5	6	
7	8	9	

<td rowspan="5">Notes:</td>
changed to
<td rowspan="5" valign="top">Notes:</td>

Effects of Headers and Footers

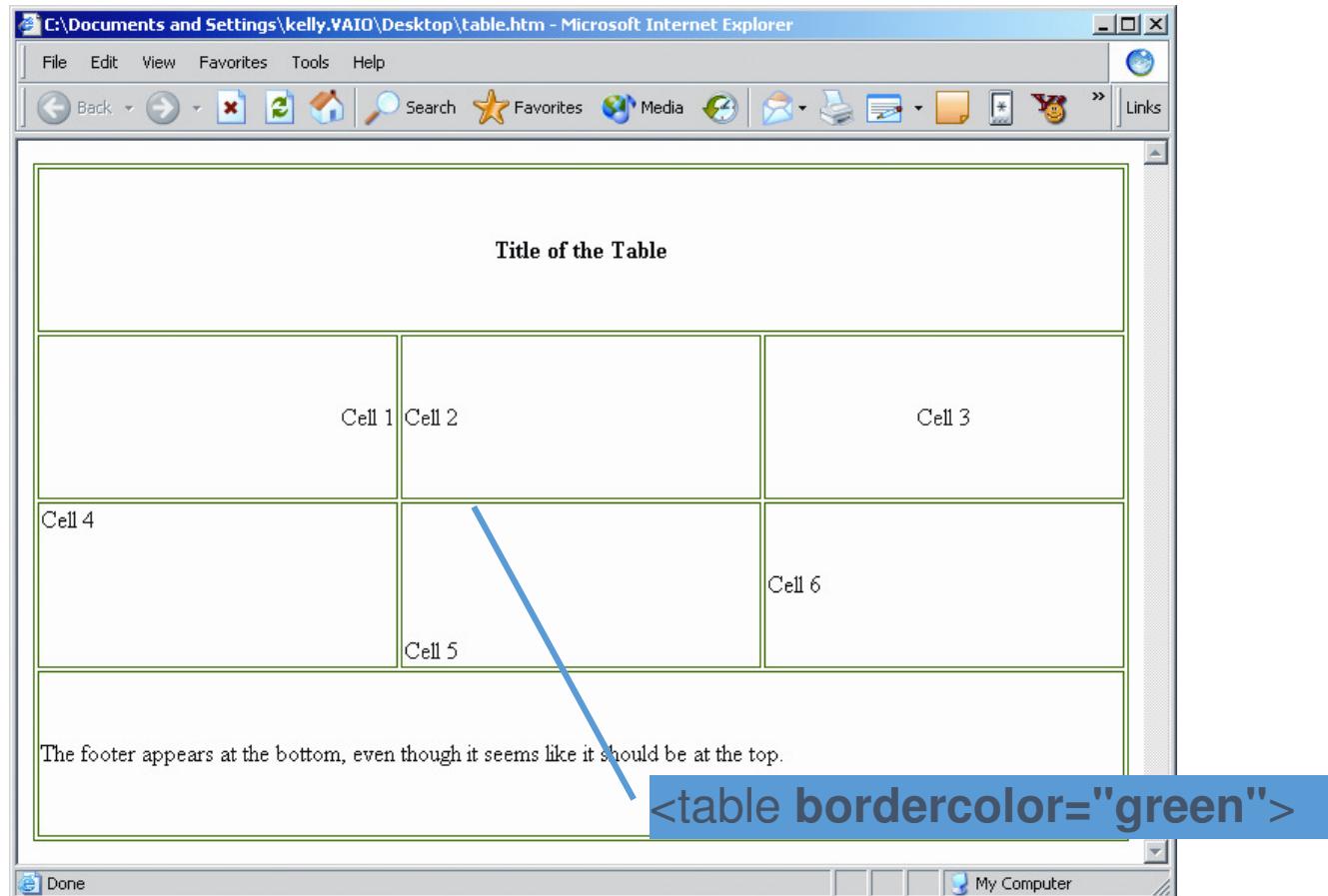
The screenshot shows a Microsoft Internet Explorer window displaying a table. The title bar reads "C:\Documents and Settings\kelly.VAIO\Desktop\table.htm - Microsoft Internet Explorer". The menu bar includes File, Edit, View, Favorites, Tools, and Help. The toolbar contains Back, Forward, Stop, Home, Search, Favorites, Media, and other links. The table has three rows. The first row is the header, containing one column with the text "Title of the Table". The second row contains two columns, labeled "Cell 2" and "Cell 5". The third row is the footer, containing one column with the text "The footer appears at the bottom". A blue callout box points from the text "Title of the Table" to the header cell. Another blue callout box points from the text "Cell 2" to the second column of the second row. A third blue callout box points from the text "The footer appears at the bottom" to the footer cell. The code for the table is visible on the left side of the browser window:

```
<tfoot>
  <tr>
    <td colspan="3">
      The footer appears at the bottom
    </td>
  </tr>
</tfoot>

<thead>
  <tr>
    <th colspan="3">Title of the Table</th>
  </tr>
</thead>
```

The footer appears at the bottom, even though it seems like it should be at the top.

Effects of Border Color Control



Effects of Background Color Control

The screenshot shows a Microsoft Internet Explorer window titled "Tables - Microsoft Internet Explorer". The window displays a table with a green header row containing the text "Today's Objectives". Below the header, there is a column labeled "Notes:" and three rows labeled "Call List", "To Do", and "Groceries". Each of these rows contains three numerical entries: 1, 2, 3; 4, 5, 6; and 7, 8, 9 respectively. The entire table has a yellow background color. A blue callout box on the right side of the table contains the following text:

Global settings:
`<table border="1" width="600"
align="center" bgcolor="yellow">`

A second blue callout box at the bottom right of the table contains the following text:

Local settings:
`<td colspan="4" bgcolor="green">
<td rowspan="5" valign="top"
bgcolor="gray">`

Effect of Cellpadding and Spacing

The image shows two side-by-side Microsoft Internet Explorer windows displaying tables with different CSS properties applied.

Left Window (cellpadding="15"): This window illustrates the effect of cellpadding. The table has a total of six cells arranged in two rows of three. The first row contains cells "Cell 1", "Cell 2", and "Cell 3". The second row contains cells "Cell 4", "Cell 5", and "Cell 6". A title "Title of the Table" is centered above the table. A footer message "The footer appears at the bottom, even though it seems like it should be at the top." is located at the bottom of the table's content area. A blue callout box labeled "Gap between content and cell borders:" points to the vertical space between the bottom of the table's content and the footer. Below this callout is the HTML code: `<table cellpadding="15" border="1">`.

Right Window (cellspacing="15"): This window illustrates the effect of cellspacing. The table structure is identical to the left one. The title "Title of the Table" is centered above the table. The footer message "The footer appears at the bottom, even though it seems like it should be at the top." is located at the bottom of the table's content area. A blue callout box labeled "Gap between different cells borders:" points to the horizontal space between the right edge of one cell and the left edge of the next cell in the same row. Below this callout is the HTML code: `<table cellspacing="15" border="1">`.

Effects of Table Nesting

A table is nested
inside the Notes cell

The screenshot shows a web page titled "Today's Objectives". On the left, there is a sidebar with a "Notes:" heading and a numbered list from 1 to 6. To the right of the sidebar is a main content area with three columns: "Call List", "To Do", and "Groceries". Each of these columns contains a 2x4 grid of numbered boxes (1 through 8). A blue callout box points from the text "A table is nested inside the Notes cell" to the first cell of the "Call List" column.

```
<td rowspan="5" valign="top" bgcolor="gray">
<table>
<tr><td>Notes:</td></tr>
<tr><td>1. </td></tr>
<tr><td>2. </td></tr>
<tr><td>3. </td></tr>
<tr><td>4. </td></tr>
<tr><td>5. </td></tr>
<tr><td>6. </td></tr>
</table>
</td>
```

Innovative Design Technologies, Inc. - Microsoft Internet Explorer provided by BellSouth

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Mail Print Refresh *

Request for Proposal

Name:
Company:
Email:
Phone:

Single-line text fields

Please provide a detail description of your project:

Multi-line text area

[Printer Friendly Version \(requires MS Word\)](#)

Submit input

Submit Reset

A typical form

Code for Form Page

```
<html>
<head><title>Form Test Page</title></head>
<body>
<form>
    <input name="welcome" />
</form>
</body>
</html>
```

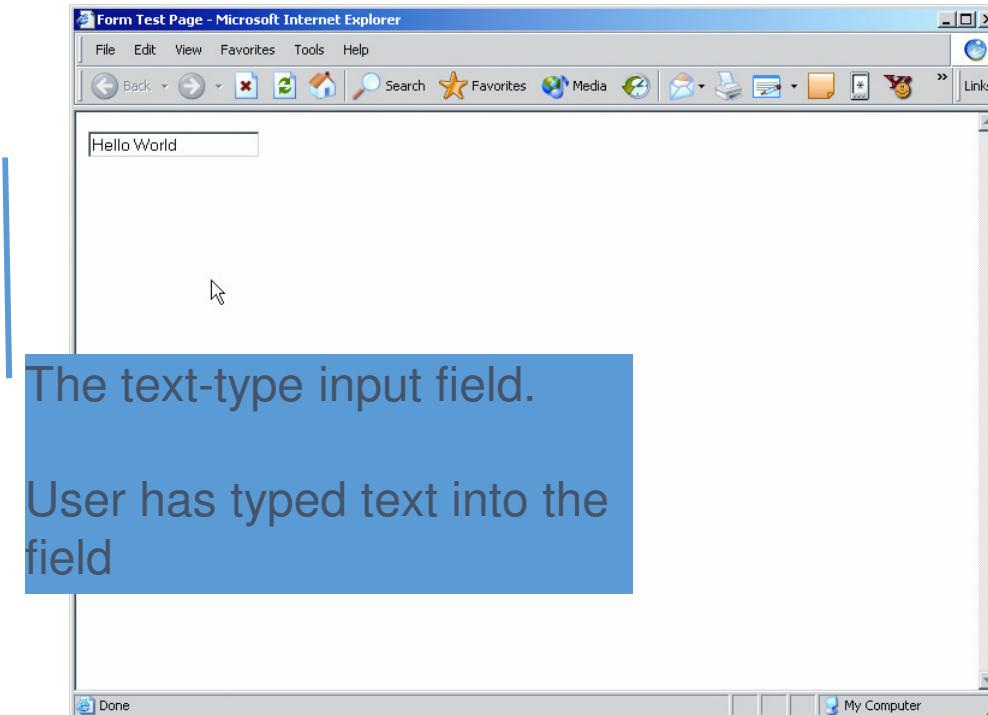
Start of form

End of form

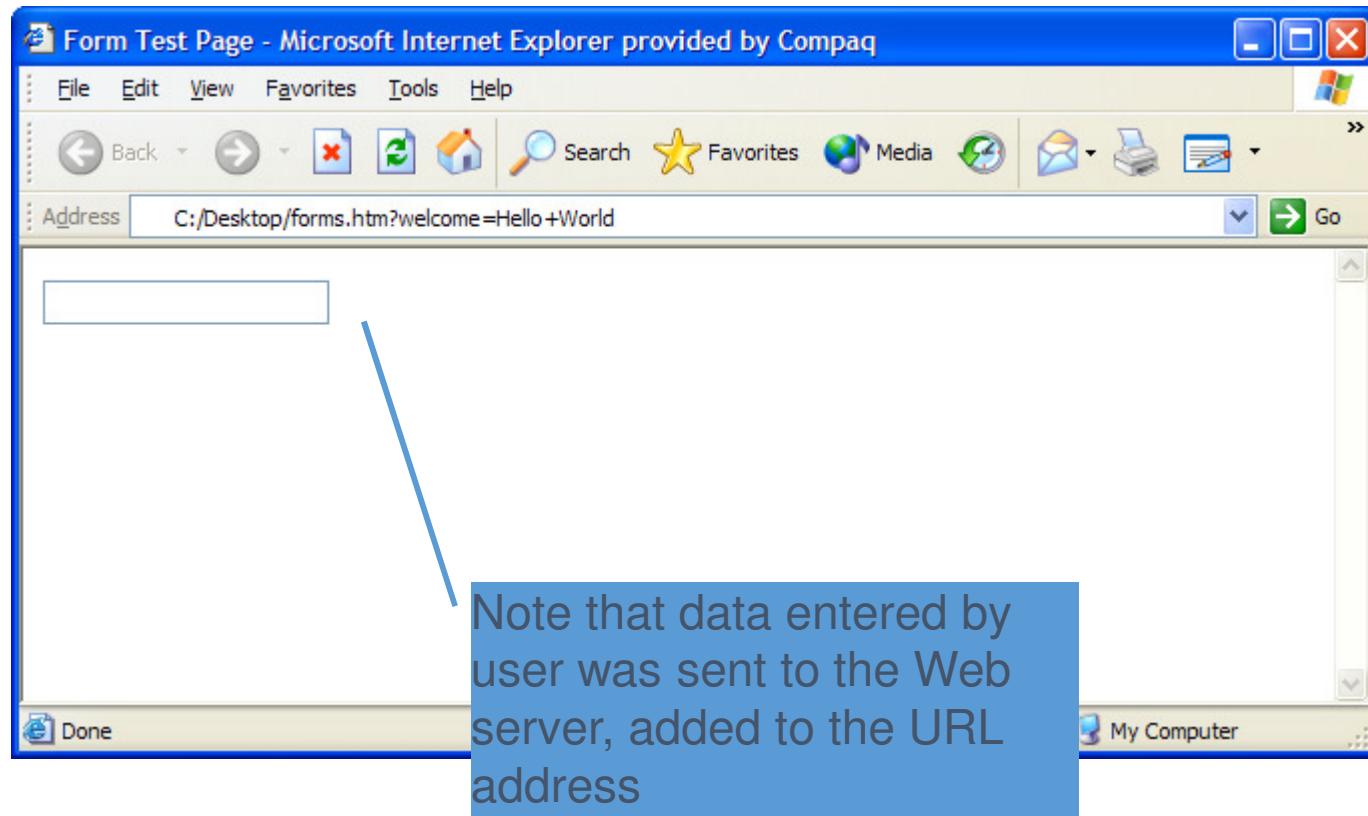
Text type input field

```
graph LR
    Start[Start of form] --> HTML[<html>]
    End[End of form] --> HTML
    End --> Input[Text type input field]
    Input --> Form[<form>]
    Form --> InputField[<input name="welcome" />]
    InputField --> Body[</body>]
    Body --> End
```

Effects of <form> and <input> (initial page)

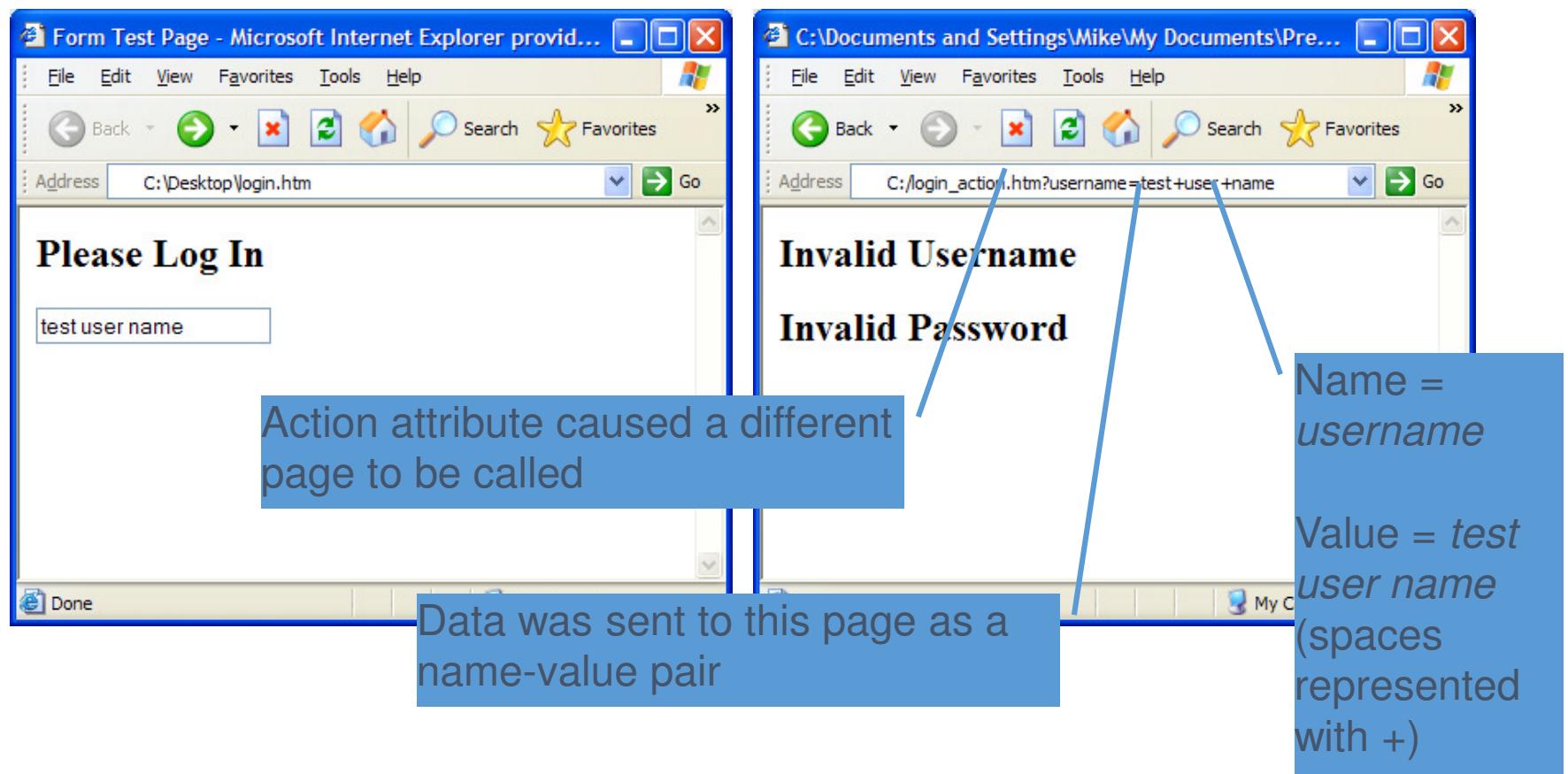


Effects of <form> and <input> (after user types text and hits Enter)

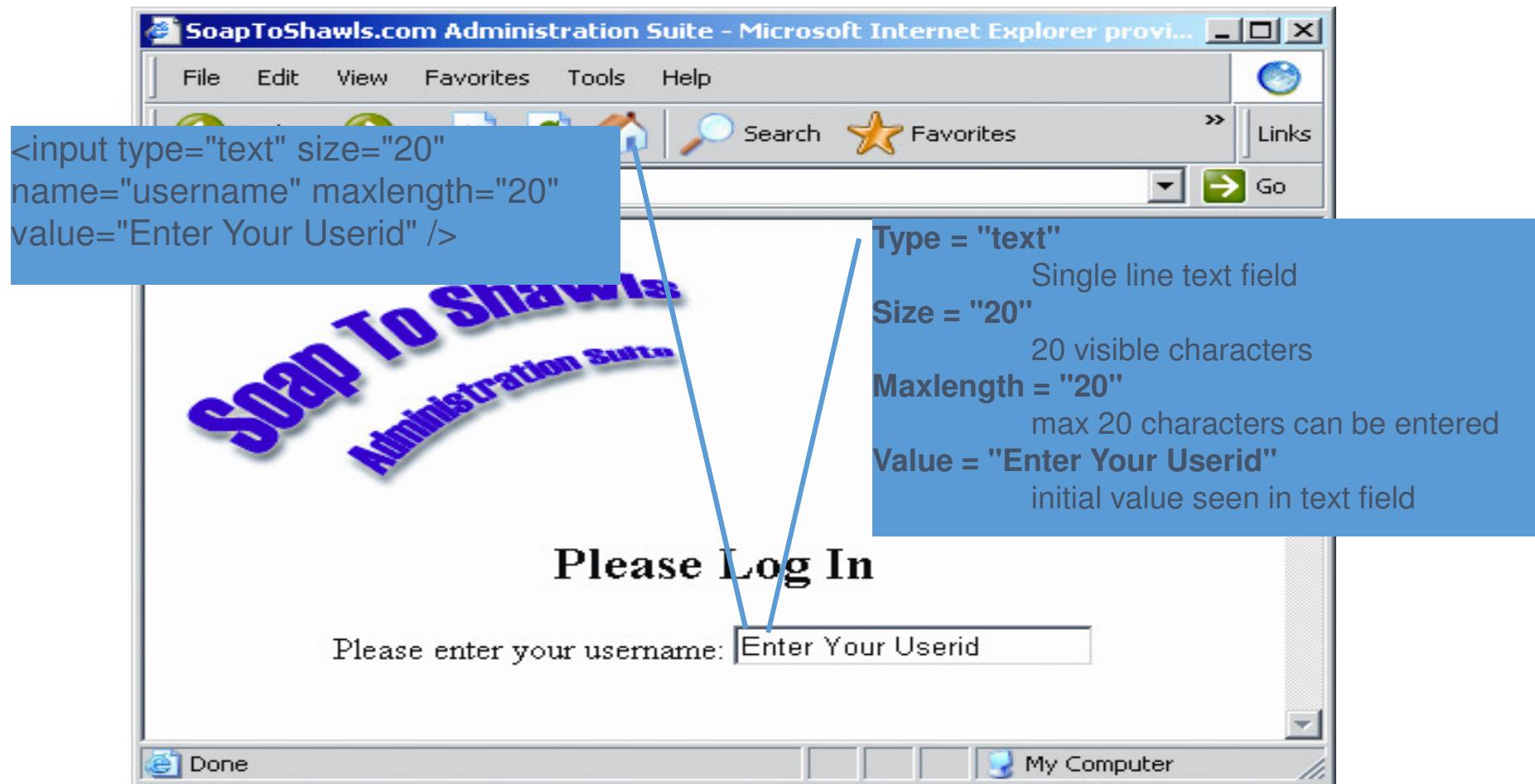


Effect of Using the *action* Attribute

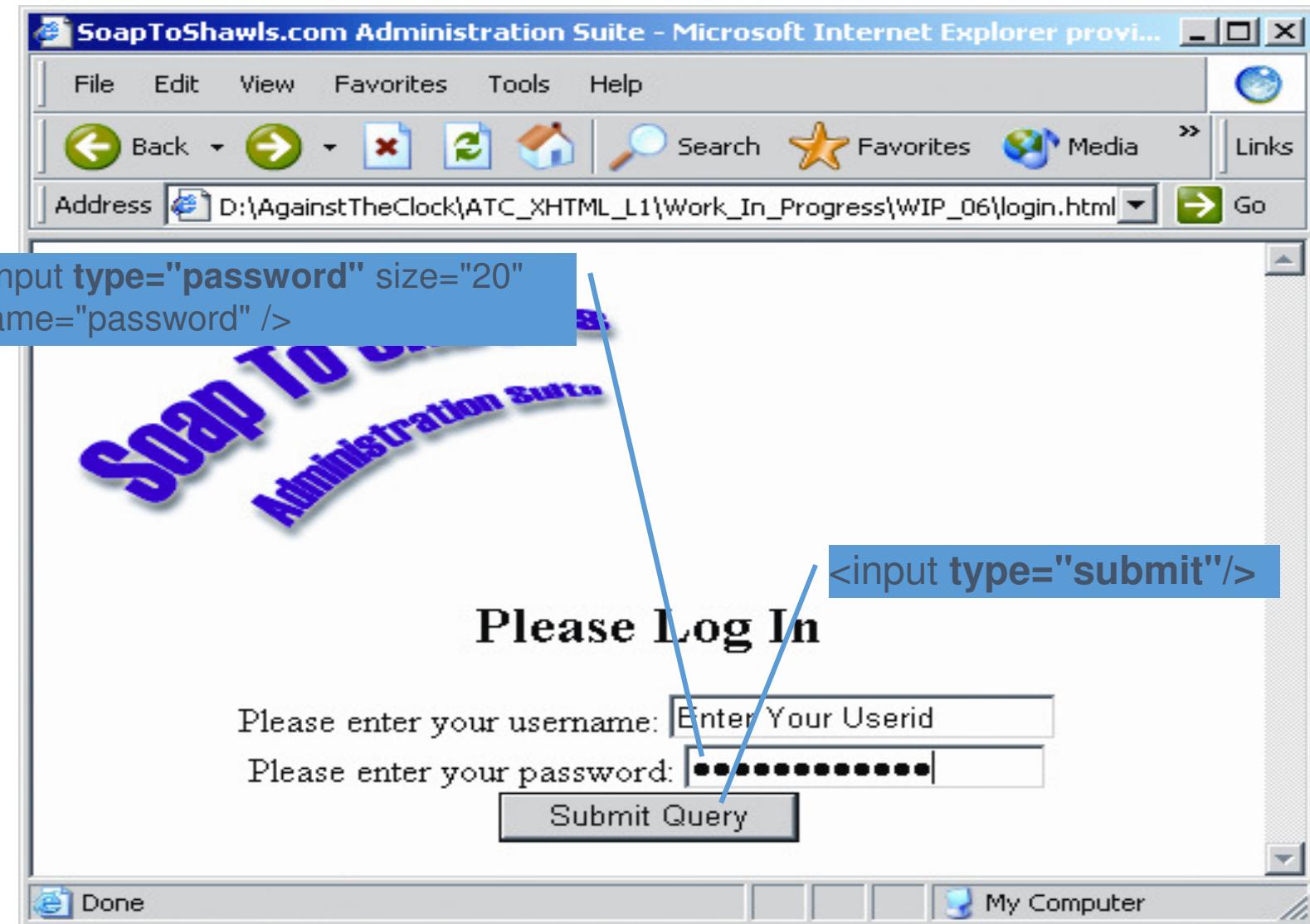
```
/ <form action="login_action.htm">
```



Effect of Input Tag Attributes



Effect of Input Password and Submit



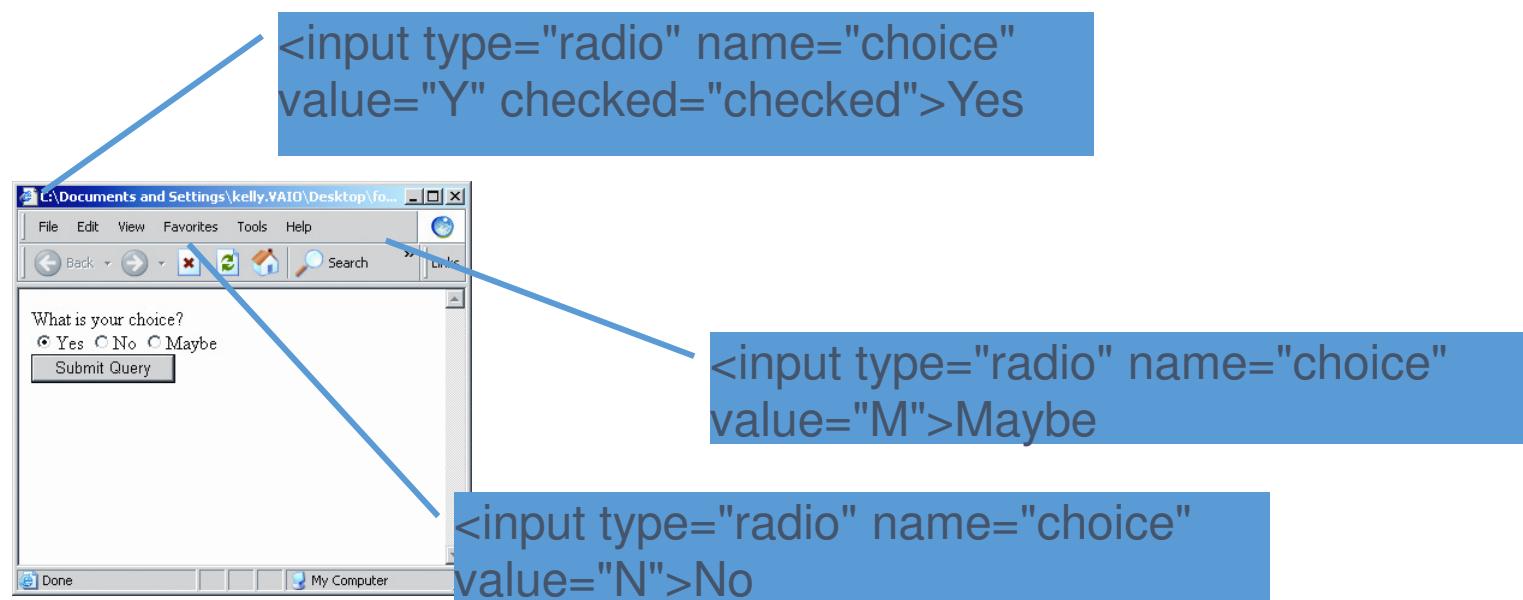
Radio Buttons Syntax

```
■<input type="radio"  
      name="name"  
      value="val"  
      checked="checked">  
      Text to Display
```

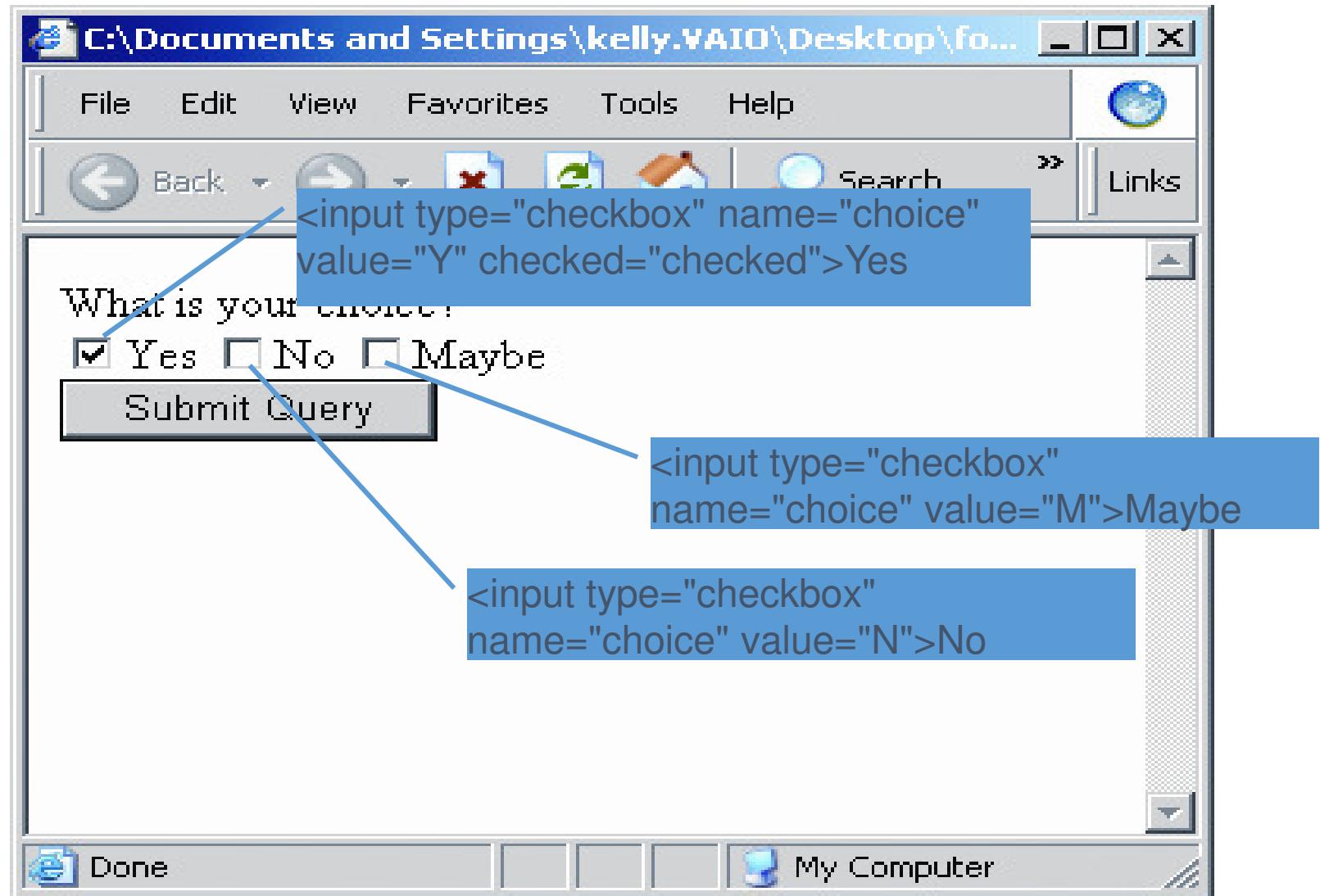
The diagram illustrates the syntax of an HTML radio button with five annotations:

- A blue box labeled "Indicates radio type" points to the `type="radio"` attribute.
- A blue box labeled "Name of the group" points to the `name="name"` attribute.
- A blue box labeled "Value that will be submitted for the group if checked" points to the `value="val"` attribute.
- A blue box labeled "Selected item. Only one in a group" points to the `checked="checked"` attribute.
- A blue box labeled "Label displayed to the user for the radio button" points to the text "Text to Display".

Effect of Radio Buttons



Effect of Check Boxes



Creating an Order Form

**Soap To Shawls
Order Form**

Check boxes, more than one can be checked at a time

Keep Item	Quantity	Item #	Description	Price	Extended Price
<input checked="" type="checkbox"/>	1	SG8	Glycerine Soap (8 oz.)	\$5.00	\$5.00
<input type="checkbox"/>	1	SB-red	Sash Belt — Choose Up		
<input checked="" type="checkbox"/>	2	S4S4	Four Sage Soap (4 oz.)		

Radio buttons, only one in the group can be checked at a time

Shipping Method: Overnight Second Day Standard Mail

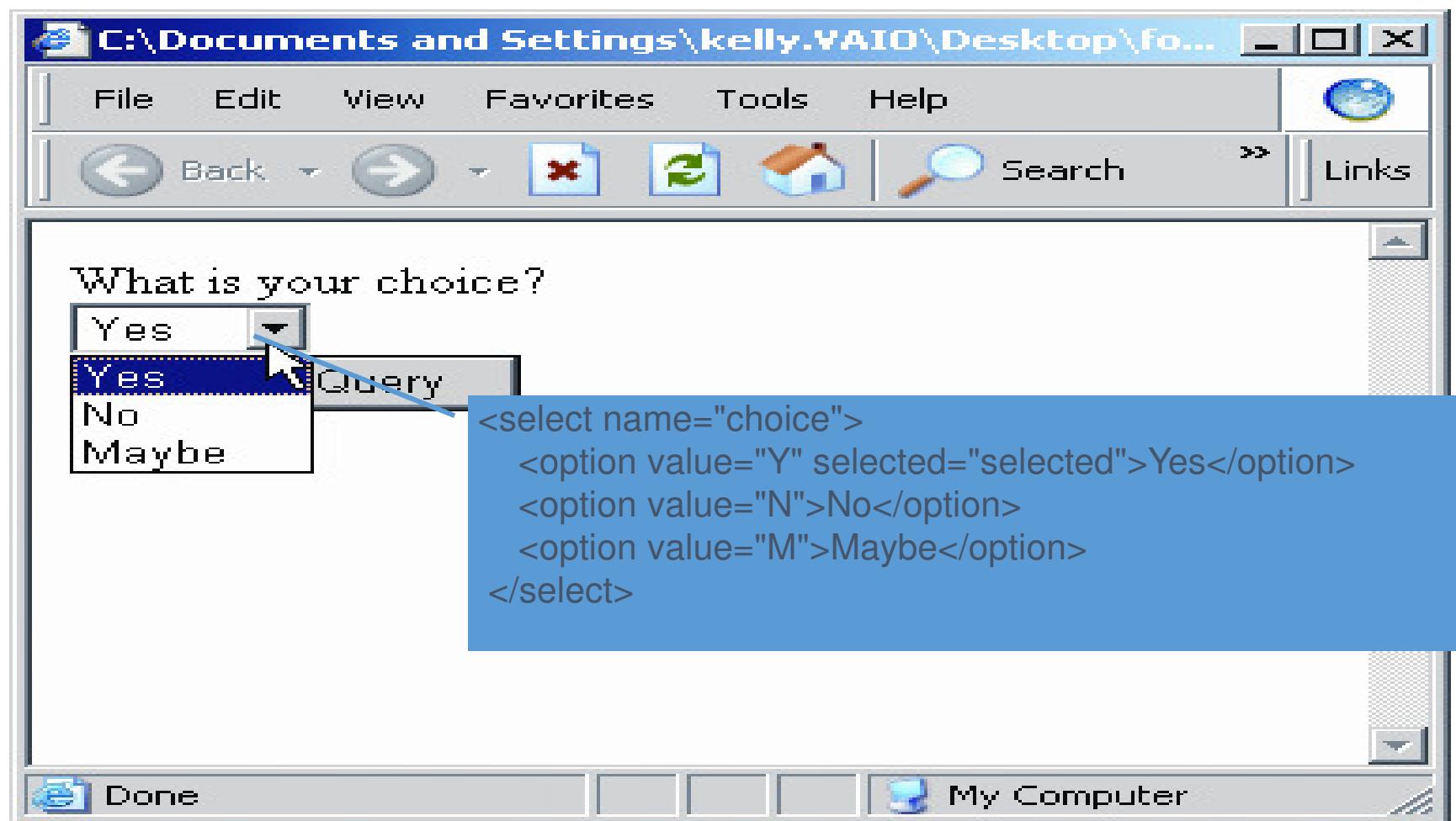
Credit Card Type: American Express Mastercard Visa

Credit Card Number: Expiration Date:

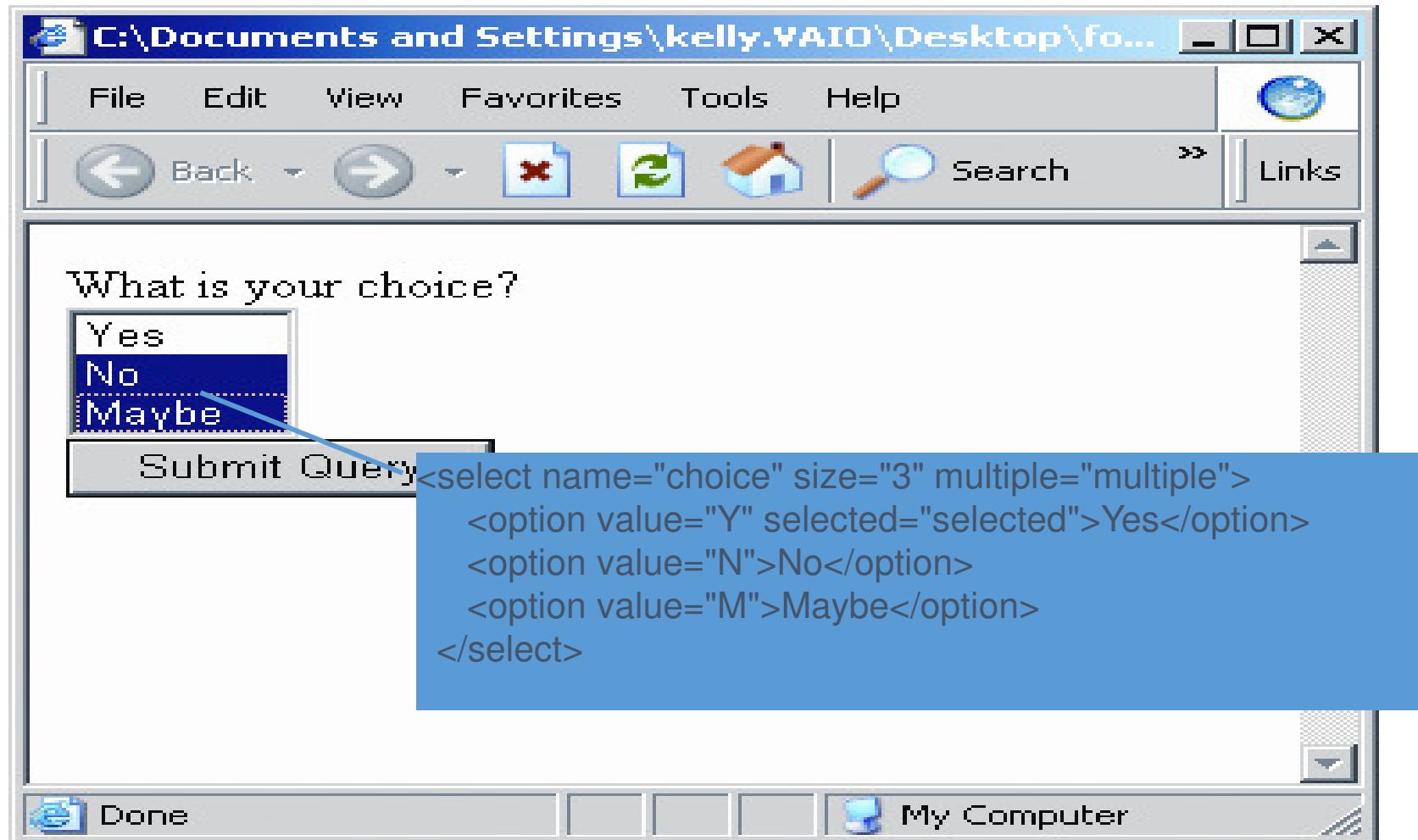
Order Comments:

Radio buttons, only one in the group can be checked at a time

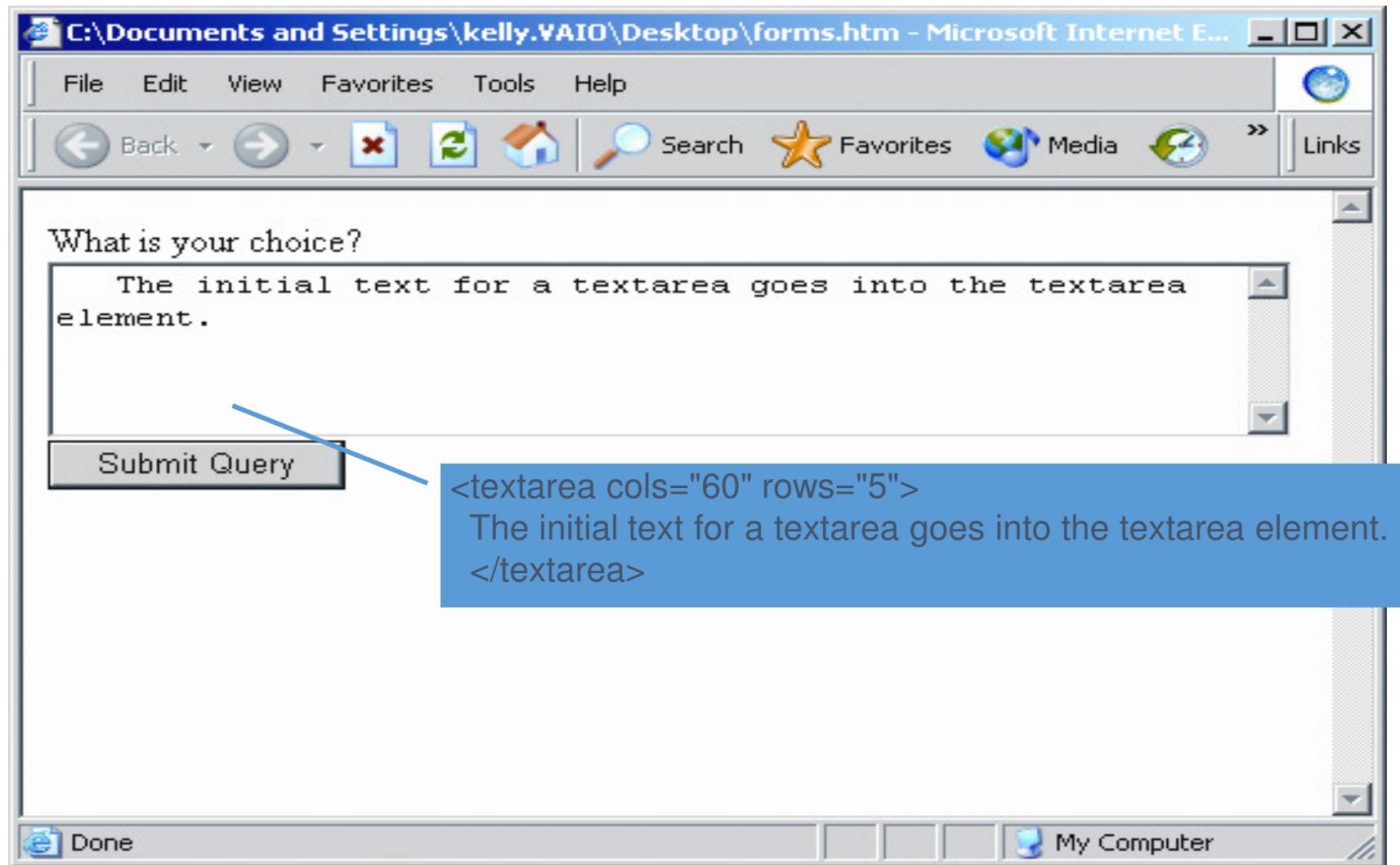
Single-Selection Dropdown List



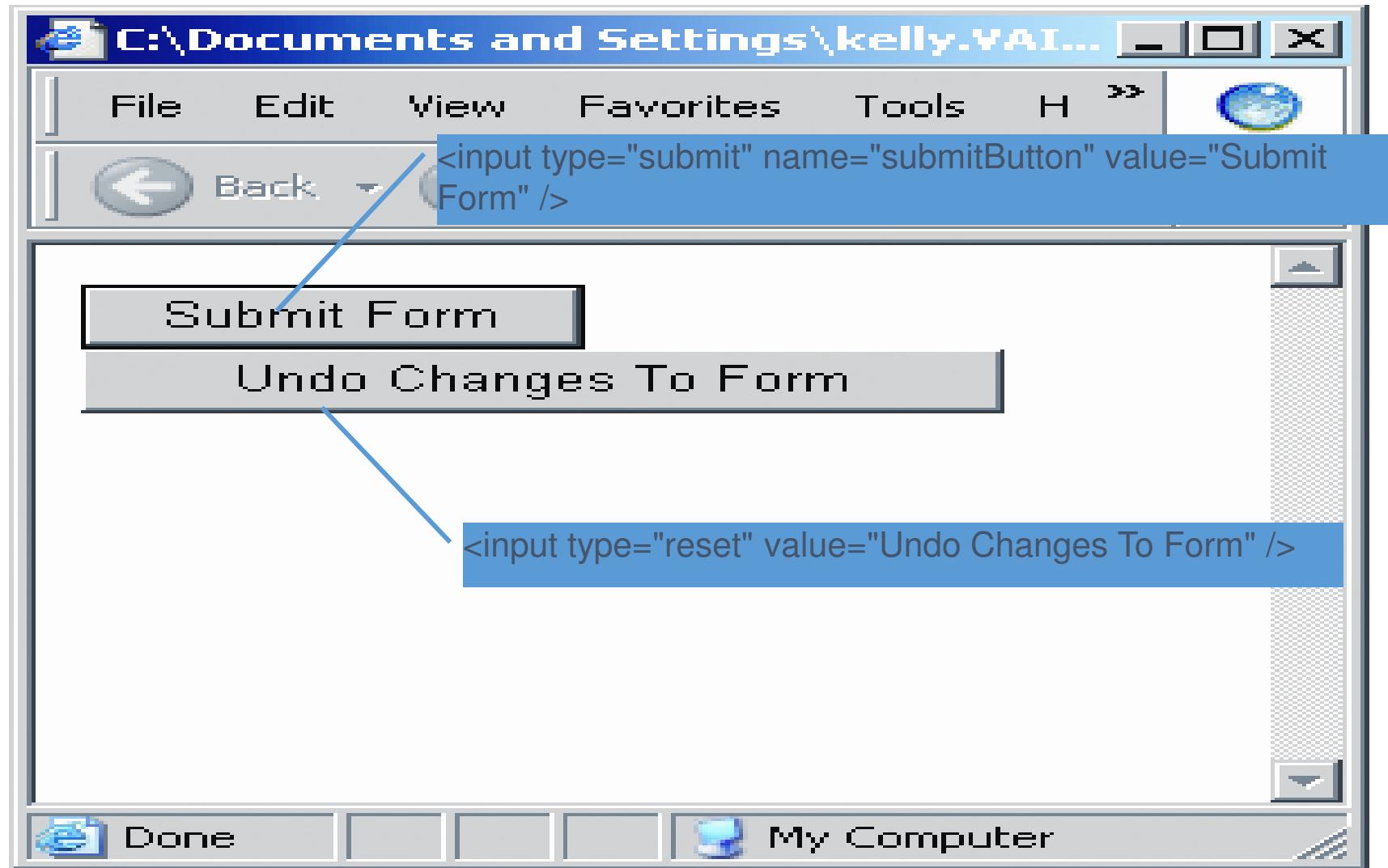
Multiple-Selection List



Effect of <textarea>



Button Tags



3.1 New HTML5 Form input Types

```
1 <!DOCTYPE html>
2
3 <!-- Fig. 3.1: newforminputtypes.html -->
4 <!-- New HTML5 form input types and attributes. -->
5 <html>
6   <head>
7     <meta charset="utf-8">
8     <title>New HTML5 Input Types</title>
9   </head>
10
11 <body>
12   <h1>New HTML5 Input Types Demo</h1>
13   <p>This form demonstrates the new HTML5 input types
14     and the placeholder, required and autofocus attributes.
15   </p>
16
17   <form method = "post" action = "http://www.deitel.com">
18     <p>
19       <label>Color:
20         <input type = "color" autofocus />
21         (Hexadecimal code such as #ADD8E6)
22       </label>
23     </p>
```

Fig. 3.1 | New HTML5 form input types and attributes. (Part 1 of 5.)

```
24    <p>
25        <label>Date:
26            <input type = "date" />
27                (yyyy-mm-dd)
28        </label>
29    </p>
30    <p>
31        <label>Datetime:
32            <input type = "datetime" />
33                (yyyy-mm-ddThh:mm+ff:gg, such as 2012-01-27T03:15)
34        </label>
35    </p>
36    <p>
37        <label>Datetime-local:
38            <input type = "datetime-local" />
39                (yyyy-mm-ddThh:mm, such as 2012-01-27T03:15)
40        </label>
41    </p>
42    <p>
43        <label>Email:
44            <input type = "email" placeholder = "name@domain.com"
45                required /> (name@domain.com)
46        </label>
47    </p>
```

Fig. 3.1 | New HTML5 form input types and attributes. (Part 2 of 5.)

```
48 <p>
49   <label>Month:
50     <input type = "month" /> (yyyy-mm)
51   </label>
52 </p>
53 <p>
54   <label>Number:
55     <input type = "number"
56       min = "0"
57       max = "7"
58       step = "1"
59       value = "4" />
60     </label> (Enter a number between 0 and 7)
61 </p>
62 <p>
63   <label>Range:
64     0 <input type = "range"
65       min = "0"
66       max = "20"
67       value = "10" /> 20
68   </label>
69 </p>
```

Fig. 3.1 | New HTML5 form input types and attributes. (Part 3 of 5.)

```
70    <p>
71        <label>Search:
72            <input type = "search" placeholder = "search query" />
73            </label> (Enter your search query here.)
74    </p>
75    <p>
76        <label>Tel:
77            <input type = "tel" placeholder = "(###) ###-####"
78                pattern = "\(\d{3}\) +\d{3}-\d{4}" required />
79                (###) ###-####
80        </label>
81    </p>
82    <p>
83        <label>Time:
84            <input type = "time" /> (hh:mm:ss.ff)
85        </label>
86    </p>
87    <p>
88        <label>URL:
89            <input type = "url"
90                placeholder = "http://www.domainname.com" />
91                (http://www.domainname.com)
92        </label>
93    </p>
```

Fig. 3.1 | New HTML5 form input types and attributes. (Part 4 of 5.)

```
94      <p>
95          <label>Week:
96              <input type = "week" />
97                  (yyyy-Wnn, such as 2012-W01)
98          </label>
99      </p>
100     <p>
101         <input type = "submit" value = "Submit" />
102         <input type = "reset" value = "Clear" />
103     </p>
104     </form>
105 </body>
106 </html>
```

Fig. 3.1 | New HTML5 form input types and attributes. (Part 5 of 5.)

3.1.1 input Type color

- The `color` `input type` enables the user to enter a color.
- At the time of this writing, most browsers render the `color` `input type` as a text field in which the user can enter a hexadecamal code or a color name.
- In the future, when you click a `color` `input`, browsers will likely display a *color picker* similar to the Microsoft Windows color dialog shown in Fig. 3.2.

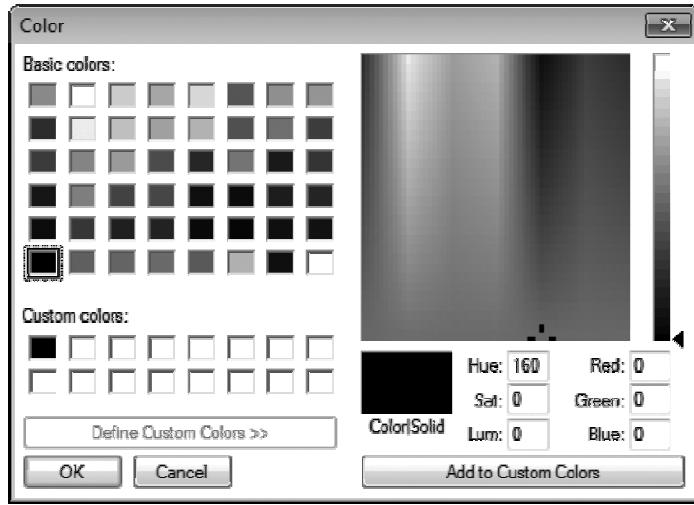


Fig. 3.2 | A dialog for choosing colors.

3.1.1 input Type color

autofocus Attribute

- The **autofocus attribute**—an optional attribute that can be used in only one **input** element on a form—automatically gives the focus to the **input** element, allowing the user to begin typing in that element immediately.

3.1.1 `input` Type `color` (cont.)

- Figure 3.3 shows `autofocus` on the `color` element—the first `input` element in our form—as rendered in Chrome. You do not need to include `autofocus` in your forms.

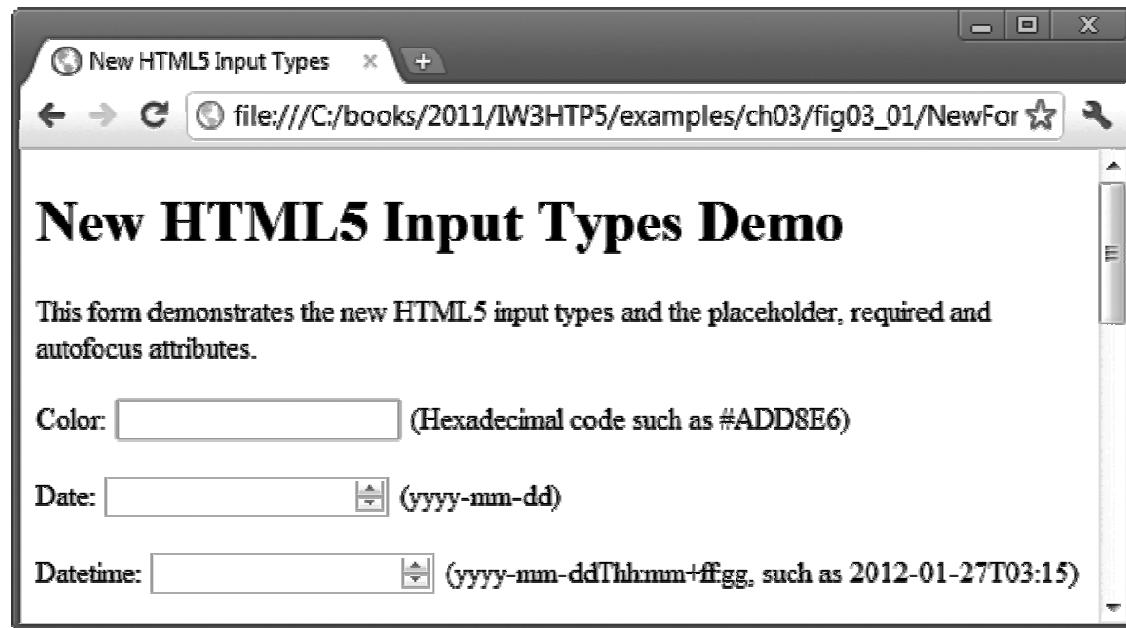


Fig. 3.3 | Autofocus in the color input element using Chrome.

3.1.1 `input` Type `color` (cont.)

Validation

- The new HTML 5 `input` types are *self validating* on the client side, eliminating the need to add complicated JavaScript code to your web pages to validate user input, reducing the amount of invalid data submitted and consequently reducing Internet traffic between the server and the client to correct invalid input.
- *The server should still validate all user input.*
- When a user enters data into a form then submits the form the browser immediately checks the self-validating elements to ensure that the data is correct (Fig. 3.4).

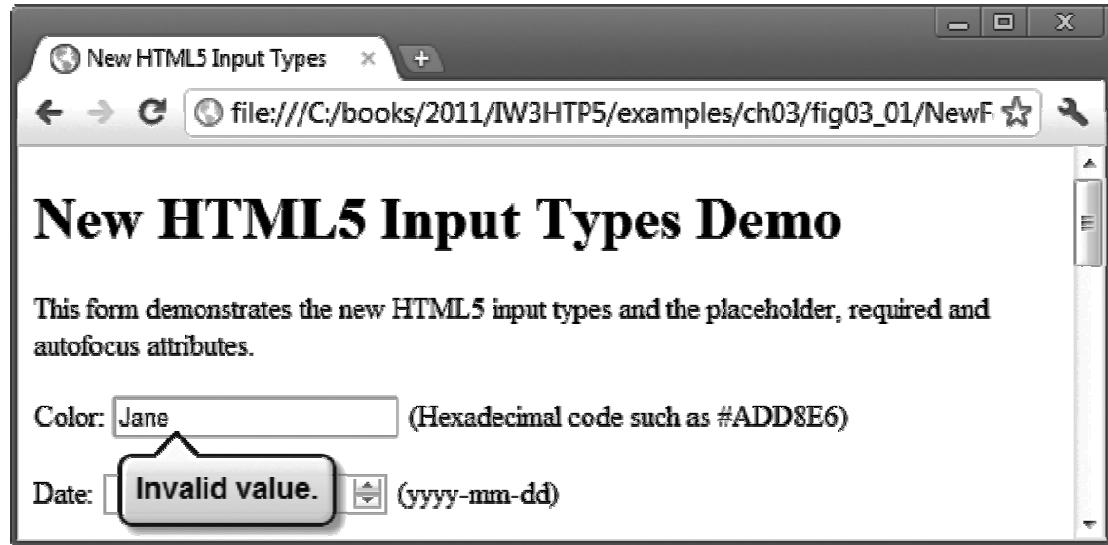


Fig. 3.4 | Validating a color input in Chrome.

3.1.1 `input` Type `color` (cont.)

- Figure 3.5 lists each of the new HTML5 `input` types and provides examples of the proper formats required for each type of data to be valid.

input type	Format
color	Hexadecimal code
date	yyyy-mm-dd
datetime	yyyy-mm-dd
datetime-local	yyyy-mm-ddThh:mm
month	yyyy-mm
number	Any numerical value
email	name@domain.com
url	http://www.domain-name.com
time	hh:mm
week	yyyy-Wnn

Fig. 3.5 | Self-validating input types.

3.1.2 `input` Type `date`

- The `date` input type enables the user to enter a date in the form `yyyy-mm-dd`.
- Firefox and Internet Explorer display a text field in which a user can enter a date such as `2012-01-27`.
- Chrome and Safari display a `spinner control`—a text field with an up-down arrow () on the right side—allowing the user to select a date by clicking the up or down arrow.
- The start date is the *current date*.
- Opera displays a calendar from which you can choose a date.
- In the future, when the user clicks a `date` `input`, browsers are likely to display a date control similar to the Microsoft Windows one shown in Fig. 3.6.



Fig. 3.6 | A date chooser control.

3.1.3 input Type `datetime`

- The `datetime` input type enables the user to enter a date (year, month, day), time (hour, minute, second, fraction of a second) and the time zone set to UTC (Coordinated Universal Time or Universal Time, Coordinated).
- Currently, most of the browsers render `datetime` as a text field; Chrome renders an up-down control and Opera renders a date and time control.

3.1.4 input Type `datetime-local`

- The `datetime-local` input type enables the user to enter the date and time in a *single* control.
- The data is entered as year, month, day, hour, minute, second and fraction of a second.
- Internet Explorer, Firefox and Safari all display a text field.
- Opera displays a date and time control.

3.1.5 `input` Type `email`

- The `email` input type enables the user to enter an e-mail address or a list of e-mail addresses separated by commas (if the `multiple` attribute is specified).
- Currently, all of the browsers display a text field.
- If the user enters an *invalid* e-mail address (i.e., the text entered is *not* in the proper format) and clicks the Submit button, a callout asking the user to enter an e-mail address is rendered pointing to the `input` element (Fig. 3.7).
- HTML5 does not check whether an e-mail address entered by the user actually exists—rather it just validates that the e-mail address is in the *proper format*.



Fig. 3.7 | Validating an e-mail address in Chrome.

3.1.5 input Type email (cont.)

placeholderAttribute

- The **placeholder attribute** allows you to place temporary text in a text field.
- Generally, **placeholder** text is *light gray* and provides an example of the text and/or text format the user should enter (Fig. 3.8).
- When the *focus* is placed in the text field (i.e., the cursor is in the text field), the **placeholder** text disappears—it's not “submitted” when the user clicks the Submit button (unless the user types the same text).

a) Text field with gray placeholder text



b) placeholder text disappears when the text field gets the focus



Fig. 3.8 | placeholder text disappears when the input element gets the focus.

3.1.5 `input` Type `email` (cont.)

- HTML5 supports `placeholder` text for only six `input` types—`text`, `search`, `url`, `tel`, `email` and `password`.

requiredAttribute

- The `required` attribute forces the user to enter a value before submitting the form.
- You can add `required` to any of the `input` types.
- In this example, the user *must* enter an e-mail address and a telephone number to submit the form (Fig. 3.9).

New HTML5 Input Types Demo

This form demonstrates the new HTML5 input types and the placeholder, required and autofocus attributes.

Color: (Hexadecimal code such as #ADD8E6)

Date: (yyyy-mm-dd)

Datetime: (yyyy-mm-ddThh:mm+ff:gg, such as 2012-01-27T03:15)

Datetime-local: (yyyy-mm-ddThh:mm, such as 2012-01-27T03:15)

Email: (name@domain.com)

Month: Please fill out this field. (yyyy-mm)

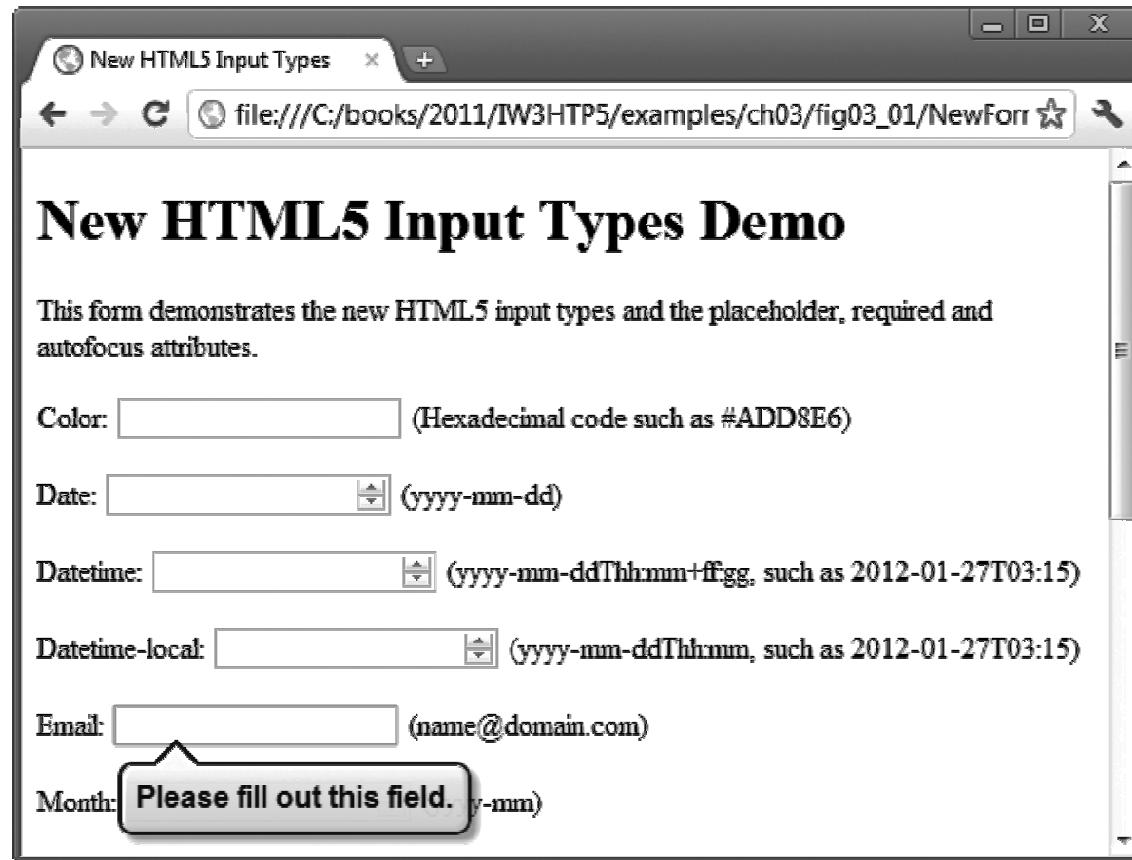


Fig. 3.9 | Demonstrating the required attribute in Chrome.

3.1.6 input Type month

- The [month input type](#) enables the user to enter a year and month in the format yyyy-mm, such as 2012-01.
- If the user enters the data in an improper format (e.g., January 2012) and submits the form, a callout stating that an invalid value was entered appears.

3.1.7 input Type number

- The **number** **input type** enables the user to enter a numerical value—mobile browsers typically display a numeric keypad for this **input** type.
- Internet Explorer, Firefox and Safari display a text field in which the user can enter a number. Chrome and Opera render a spinner control for adjusting the number.
- The **min** attribute sets the minimum valid number.
- The **max** attribute sets the maximum valid number.
- The **step** attribute determines the increment in which the numbers increase.
- The **value** attribute sets the initial value displayed in the form (Fig. 3.10).
- The spinner control includes only the valid numbers.
- If the user attempts to enter an invalid value by typing in the text field, a callout pointing to the **number** **input** element will instruct the user to enter a valid value.



Fig. 3.10 | `input` type `number` with a `value` attribute of 4 as rendered in Chrome.

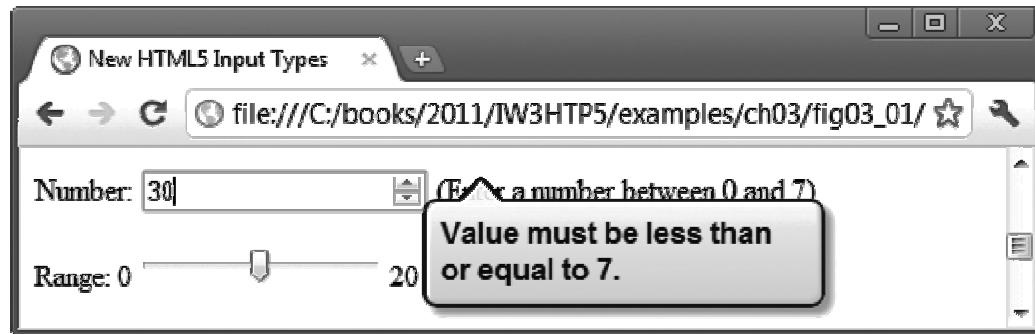


Fig. 3.11 | Chrome checking for a valid number.

3.1.8 `input` Type `range`

- The `range` input type appears as a *slider* control in Chrome, Safari and Opera (Fig. 3.12).
- You can set the minimum and maximum and specify a value.
- The `range` input type is *inherently self-validating* when it is rendered by the browser as a slider control, because *the user is unable to move the slider outside the bounds of the minimum or maximum value*.



Fig. 3.12 | range slider with a value attribute of 10 as rendered in Chrome.

3.1.9 `input` Type `search`

- The `search` input type provides a search field for entering a query.
- This `input` element is functionally equivalent to an `input` of type `text`.
- When the user begins to type in the search field, Chrome and Safari display an X that can be clicked to clear the field (Fig. 3.13).
-

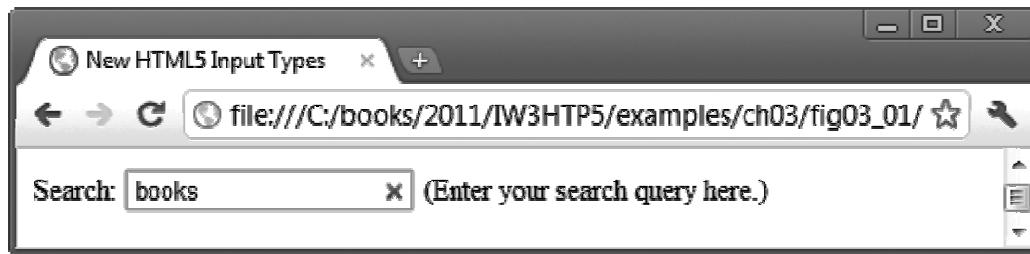


Fig. 3.13 | Entering a search query in Chrome.

3.1.10 `input` Type `tel`

- The `tel` `input type` enables the user to enter a telephone number—mobile browsers typically display a keypad specific to entering phone numbers for this `input` type.
- At the time of this writing, the `tel` `input type` is rendered as a text field in all of the browsers.
- HTML5 does *not* self validate the `tel` `input type`.
- To ensure that the user enters a phone number in a proper format, we've added a `pattern` attribute that uses a *regular expression* to determine whether the number is in the format:
 - (555) 555-5555
- When the user enters a phone number in the wrong format, a callout appears requesting the proper format, pointing to the `tel` `input` element (Fig. 3.14).
-



Fig. 3.14 | Validating a phone number using the pattern attribute in the tel input type.

3.1.11 input Type time

- The **time** input type enables the user to enter an hour, minute, seconds and fraction of second (Fig. 3.15).
- The HTML5 specification indicates that a time must have two digits representing the hour, followed by a colon (:) and two digits representing the minute.
- Optionally, you can also include a colon followed by two digits representing the seconds and a period followed by one or more digits representing a fraction of a second (shown as ff in our sample text to the right of the time input element in Fig. 3.15).
-



Fig. 3.15 | time input as rendered in Chrome.

3.1.12 `input Type url`

- The `url` input type enables the user to enter a URL.
- The element is rendered as a text field, and the proper format is `http://www.deitel.com`.
- If the user enters an improperly formatted URL (e.g., `www.deitel.com` or `www.deitelcom`), the URL will *not* validate (Fig. 3.16).
- HTML5 does not check whether the URL entered is valid; rather it validates that the URL entered is in the proper format.



Fig. 3.16 | Validating a URL in Chrome.

3.1.13 `input Type week`

- The `week` input type enables the user to select a year and week number in the format `yyyy-Wnn`, where `nn` is 01–53—for example, `2012-W01` represents the first week of 2012. Internet Explorer, Firefox and Safari render a text field.
- Chrome renders an up-down control.
- Opera renders *week control* with a down arrow that, when clicked, brings up a calendar for the current month with the corresponding week numbers listed down the left side.

3.2 `input` and `datalist` Elements and `autocomplete` Attribute

```
1 <!DOCTYPE html>
2
3 <!-- Fig. 3.17: autocomplete.html -->
4 <!-- New HTML5 form autocomplete attribute and datalist element. -->
5 <html>
6   <head>
7     <meta charset="utf-8">
8     <title>New HTML5 autocomplete Attribute and datalist Element</title>
9   </head>
10
11 <body>
12   <h1>Autocomplete and Datalist Demo</h1>
13   <p>This form demonstrates the new HTML5 autocomplete attribute
14     and the datalist element.
15   </p>
16
17   <!-- turn autocomplete on -->
18   <form method = "post" autocomplete = "on">
19     <p><label>First Name:
20       <input type = "text" id = "firstName"
21         placeholder = "First name" /> (First name)
22     </label></p>
```

Fig. 3.17 | New HTML5 form autocomplete attribute and
datalist element. (Part 1 of 6.)

```
23      <p><label>Last Name:  
24          <input type = "text" id = "lastName"  
25              placeholder = "Last name" /> (Last name)  
26          </label></p>  
27      <p><label>Email:  
28          <input type = "email" id = "email"  
29              placeholder = "name@domain.com" /> (name@domain.com)  
30          </label></p>  
31      <p><label for = "txtList">Birth Month:  
32          <input type = "text" id = "txtList"  
33              placeholder = "Select a month" list = "months" />  
34          <datalist id = "months">  
35              <option value = "January">  
36              <option value = "February">  
37              <option value = "March">  
38              <option value = "April">  
39              <option value = "May">  
40              <option value = "June">  
41              <option value = "July">  
42              <option value = "August">  
43              <option value = "September">  
44              <option value = "October">  
45              <option value = "November">
```

Fig. 3.17 | New HTML5 form autocomplete attribute and datalist element. (Part 2 of 6.)

```
46          <option value = "December">
47      </datalist>
48  </label></p>
49  <p><input type = "submit" value = "Submit" />
50      <input type = "reset" value = "Clear" /></p>
51  </form>
52 </body>
53 </html>
```

Fig. 3.17 | New HTML5 form autocomplete attribute and datalist element. (Part 3 of 6.)

a) Form rendered in Firefox before the user interacts with it

The screenshot shows a Firefox browser window with the title bar "Firefox". The address bar displays "file:///C:/books/2011/IW3HTP5/examples/" followed by a placeholder "New HTML5 autocomplete Attribute an...". The main content area contains the heading "Autocomplete and Datalist Demo" in large bold letters. Below the heading is a descriptive text: "This form demonstrates the new HTML5 autocomplete attribute and the datalist element." The form itself consists of four input fields: "First Name:" followed by an input field containing "First name" with the placeholder "(First name)", "Last Name:" followed by an input field containing "Last name" with the placeholder "(Last name)", "Email:" followed by an input field containing "name@domain.com" with the placeholder "(name@domain.com)", and "Birth Month:" followed by an input field containing "Select a month". At the bottom of the form are two buttons: "Submit" and "Clear".

Fig. 3.17 | New HTML5 form autocomplete attribute and datalist element. (Part 4 of 6.)

b) **autocomplete** automatically fills in the data when the user returns to a form submitted previously and begins typing in the **First Name** **input** element; clicking Jane inserts that value in the **input**

The screenshot shows a Firefox browser window with the title "New HTML5 autocomplete Attribute an...". The address bar shows "file:///C:/books/2011/IW3HTP5/examples/". The main content area displays the heading "Autocomplete and Datalist Demo". Below it, a paragraph states: "This form demonstrates the new HTML5 autocomplete attribute and the datalist element." The form contains four fields:

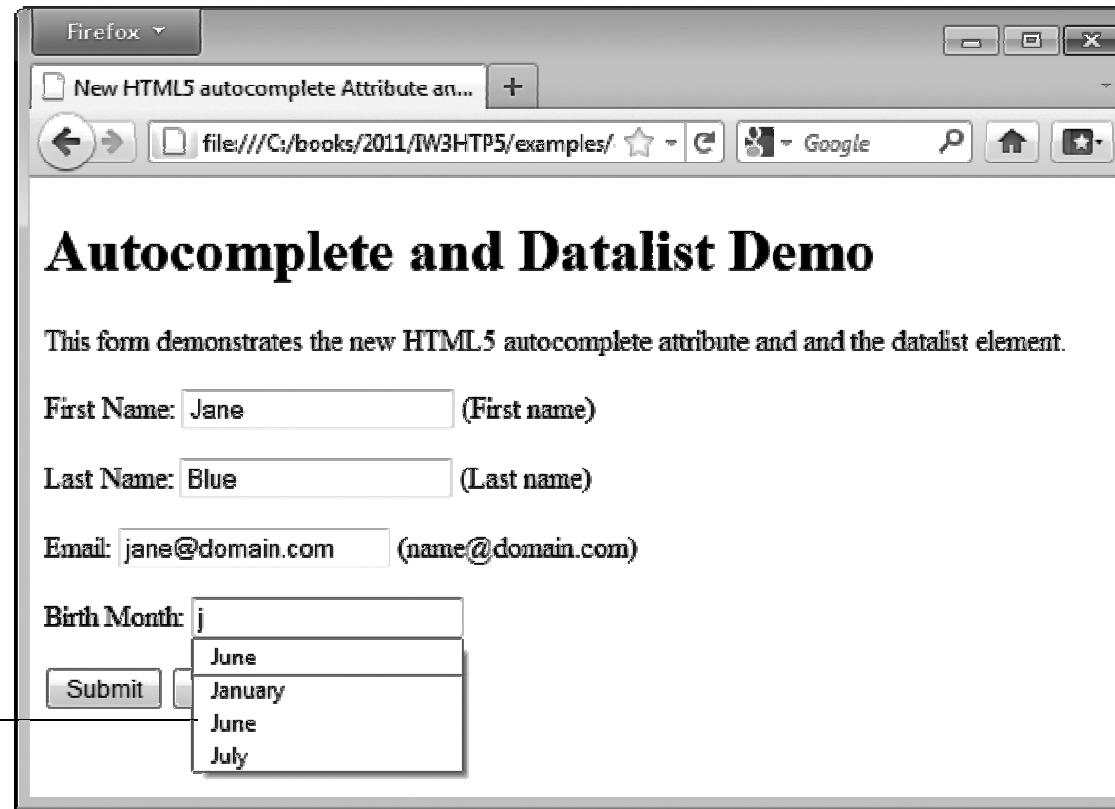
- First Name: An input field containing "J" with the placeholder "(First name)". A dropdown menu below it shows "Jane".
- Last Name: An input field containing "Last name" with the placeholder "(Last name)".
- Email: An input field containing "name@domain.com" with the placeholder "(name@domain.com)".
- Birth Month: A dropdown menu showing "Select a month".

At the bottom are two buttons: "Submit" and "Clear".

Fig. 3.17 | New HTML5 form autocomplete attribute and datalist element. (Part 5 of 6.)

c) **autocomplete**
with a **datalist**
showing the
previously entered
value (June)
followed by all items
that match what the
user has typed so far;
clicking an item in the
autocomplete list
inserts that value in
the **input**

datalist
values
filtered by
what's been
typed so far



Firefox

New HTML5 autocomplete Attribute an...

file:///C:/books/2011/IW3HTP5/examples/ C Google

Autocomplete and Datalist Demo

This form demonstrates the new HTML5 autocomplete attribute and the datalist element.

First Name: Jane (First name)

Last Name: Blue (Last name)

Email: jane@domain.com (name@domain.com)

Birth Month: j

Submit

June
January
June
July

Fig. 3.17 | New HTML5 form autocomplete attribute and datalist element. (Part 6 of 6.)

3.2.1 `input` Element `autocomplete` Attribute

- The `autocomplete` attribute can be used on `input` types to automatically fill in the user's information based on previous input—such as name, address or e-mail.
- You can enable `autocomplete` for an entire form or just for specific elements.
- For example, an online order form might set `autocomplete = "on"` for the name and address `inputs` and set `autocomplete = "off"` for the credit card and password `inputs` for security purposes.

3.2.2 `datalist` Element

- The `datalist` element provides input options for a `text` `input` element.
- At the time of this writing, `datalist` support varies by browser.
- In this example, we use a `datalist` element to obtain the user's birth month.
- Using Opera, when the user clicks in the text field, a drop-down list of the months of the year appears. If the user types "M" in the text field, the list of months is narrowed to March and May.
- When using Firefox, the drop-down list of months appears only after the user begins typing in the text field. If the user types "M", all months containing the letter "M" or "m" appear in the drop-down list—March, May, September, November and December.

3.3 Page-Structure Elements

- HTML5 introduces several new page-structure elements that meaningfully identify areas of the page as headers, footers, articles, navigation areas, asides, figures and more.
-

```
1 <!DOCTYPE html>
2
3 <!-- Fig. 3.18: sectionelements.html -->
4 <!-- New HTML5 section elements. -->
5 <html>
6   <head>
7     <meta charset="utf-8">
8     <title>New HTML5 Section Elements</title>
9   </head>
10
11 <body>
12   <header> <!-- header element creates a header for the page -->
13     <img src = "deitellogo.png" alt = "Deitel logo" />
14     <h1>Welcome to the Deitel Buzz Online<h1>
15
16     <!-- time element inserts a date and/or time -->
17     <time>2012-01-17</time>
18
19   </header>
20
21   <section id = "1"> <!-- Begin section 1 -->
22     <nav> <!-- nav element groups navigation links -->
23       <h2> Recent Publications</h2>
```

Fig. 3.18 | New HTML5 section elements. (Part 1 of 13.)

```
24 <ul>
25   <li><a href = "http://www.deitel.com/books/iw3htp5">
26     Internet & World Wide Web How to Program, 5/e</a></li>
27   <li><a href = "http://www.deitel.com/books/androidfp/">
28     Android for Programmers: An App-Driven Approach</a>
29   </li>
30   <li><a href = "http://www.deitel.com/books/iphonfp">
31     iPhone for Programmers: An App-Driven Approach</a></li>
32   <li><a href = "http://www.deitel.com/books/jhtp9/">
33     Java How to Program, 9/e</a></li>
34   <li><a href = "http://www.deitel.com/books/cpphtp8/">
35     C++ How to Program, 8/e</a></li>
36   <li>
37     <a href = "http://www.deitel.com/books/vcsharp2010htp">
38       Visual C# 2010 How to Program, 4/e</a></li>
39   <li><a href = "http://www.deitel.com/books/vb2010htp">
40     Visual Basic 2010 How to Program</a></li>
41 </ul>
42 </nav>
43 </section>
44
45 <section id = "2"> <!-- Begin section 2 -->
46   <h2>How to Program Series Books</h2>
47   <h3><em>Java How to Program, 9/e</em></h3>
```

Fig. 3.18 | New HTML5 section elements. (Part 2 of 13.)

```
48
49  <figure> <!-- figure element describes the image -->
50    <img src = "jhtp.jpg" alt = "Java How to Program, 9/e" />
51
52    <!-- figurecaption element inserts a figure caption -->
53    <figcaption><em>Java How to Program, 9/e</em>
54      cover.</figcaption>
55
56  </figure>
57
58  <!--article element represents content from another source -->
59  <article>
60    <header>
61      <h5>From
62        <em>
63          <a href = "http://www.deitel.com/books/jhtp9/">
64            Java How to program, 9/e: </a>
65        </em>
66      </h5>
67    </header>
```

Fig. 3.18 | New HTML5 section elements. (Part 3 of 13.)

```
68 <p>Features include:  
69 <ul>  
70   <li>Rich coverage of fundamentals, including  
71     <!-- mark element highlights text -->  
72     <mark>two chapters on control statements.</mark></li>  
73   <li>Focus on <mark>real-world examples.</mark></li>  
74   <li><mark>Making a Difference exercises set.</mark></li>  
75   <li>Early introduction to classes, objects,  
76     methods and strings.</li>  
77   <li>Integrated exception handling.</li>  
78   <li>Files, streams and object serialization.</li>  
79   <li>Optional modular sections on language and  
80     library features of the new Java SE 7.</li>  
81   <li>Other topics include: Recursion, searching,  
82     sorting, generic collections, generics, data  
83     structures, applets, multimedia,  
84     multithreading, databases/JDBC&trade;, web-app  
85     development, web services and an optional  
86     ATM Object-Oriented Design case study.</li>  
87 </ul>  
88
```

Fig. 3.18 | New HTML5 section elements. (Part 4 of 13.)

```
89      <!-- summary element represents a summary for the -->
90      <!-- content of the details element -->
91      <details>
92          <summary>Recent Edition Testimonials</summary>
93          <ul>
94              <li>"Updated to reflect the state of the
95                  art in Java technologies; its deep and
96                  crystal clear explanations make it
97                  indispensable. The social-consciousness
98                  [Making a Difference] exercises are
99                  something really new and refreshing."
100                 <strong>&mdash;Jos&acute; Antonio
101                     Gonz&aacute;lez Seco, Parliament of
102                     Andalusia</strong></li>
103                 <li>"Gives new programmers the benefit of the
104                     wisdom derived from many years of software
105                     development experience."<strong>
106                         &mdash;Edward F. Gehringer, North Carolina
107                         State University</strong></li>
108                 <li>"Introduces good design practices and
109                     methodologies right from the beginning.
110                     An excellent starting point for developing
111                     high-quality robust Java applications."
112                     <strong>&mdash;Simon Ritter,
113                         Oracle Corporation</strong></li>
```

Fig. 3.18 | New HTML5 section elements. (Part 5 of 13.)

```
114      <li>"An easy-to-read conversational style.  
115      Clear code examples propel readers to  
116      become proficient in Java."  
117      <strong>&mdash;Patty Kraft, San Diego State  
118      University</strong></li>  
119      <li>"A great textbook with a myriad of examples  
120      from various application domains&mdash;  
121      excellent for a typical CS1 or CS2 course."  
122      <strong>&mdash;William E. Duncan, Louisiana  
123      State University</strong></li>  
124      </ul>  
125      </details>  
126      </p>  
127      </article>  
128  
129      <!-- aside element represents content in a sidebar that's -->  
130      <!-- related to the content around the element -->  
131      <aside>  
132          The aside element is not formatted by the browsers.  
133      </aside>  
134
```

Fig. 3.18 | New HTML5 section elements. (Part 6 of 13.)

```
135 <h2>Deitel Developer Series Books</h2>
136 <h3><em>Android for Programmers: An App-Driven Approach
137 </em></h3>
138 Click <a href = "http://www.deitel.com/books/androidfp/">
139 here</a> for more information or to order this book.
140
141 <h2>LiveLessons Videos</h2>
142 <h3><em>C# 2010 Fundamentals LiveLessons</em></h3>
143 Click <a href = "http://www.deitel.com/Books/LiveLessons/">
144 here</a> for more information about our LiveLessons videos.
145 </section>
146
147 <section id = "3"> <!-- Begin section 3 -->
148 <h2>Results from our Facebook Survey</h2>
149 <p>If you were a nonprogrammer about to learn Java for the first
150 time, would you prefer a course that taught Java in the
151 context of Android app development? Here are the results from
152 our survey:</p>
153
154 <!-- meter element represents a scale within a range -->
155 0 <meter min = "0"
156 max = "54"
157 value = "14"></meter> 54
```

Fig. 3.18 | New HTML5 section elements. (Part 7 of 13.)

```
158      <p>Of the 54 responders, 14 (green) would prefer to
159      learn Java in the context of Android app development.</p>
160  </section>
161
162  <!-- footer element represents a footer to a section or page, -->
163  <!-- usually containing information such as author name, -->
164  <!-- copyright, etc. -->
165  <footer>
166      <!-- wbr element indicates the appropriate place to break a -->
167      <!-- word when the text wraps -->
168      <h6>&copy; 1992-2012 by Deitel &amp; Associates, Inc.
169      All Rights Reserved.<h6>
170      <!-- address element represents contact information for a -->
171      <!-- document or the nearest body element or article -->
172      <address>
173          Contact us at <a href = "mailto:deitel@deitel.com">
174              deitel@deitel.com</a>
175      </address>
176  </footer>
177  </body>
178 </html>
```

Fig. 3.18 | New HTML5 section elements. (Part 8 of 13.)

a) Chrome browser showing the `header` element and a `nav` element that contains an unordered list of links



Fig. 3.18 | New HTML5 section elements. (Part 9 of 13.)

b) Chrome browser showing the beginning of a section containing a figure and a figurecaption

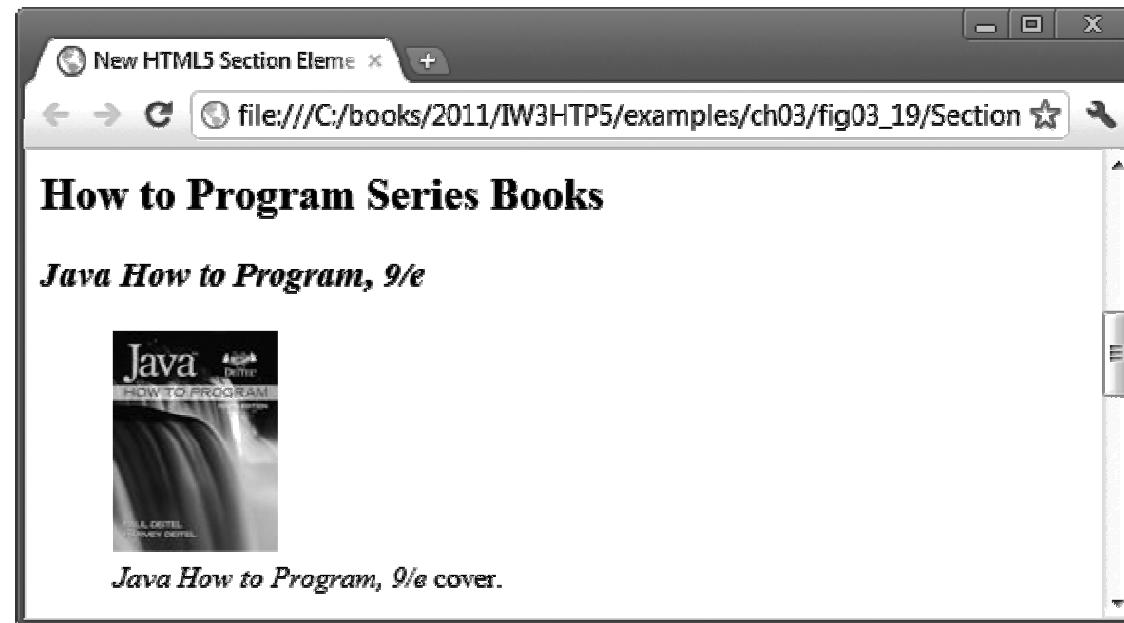


Fig. 3.18 | New HTML5 section elements. (Part 10 of 13.)

c) Chrome browser showing an **article** containing a **header**, some content and a collapsed **details** element, followed by an **aside** element

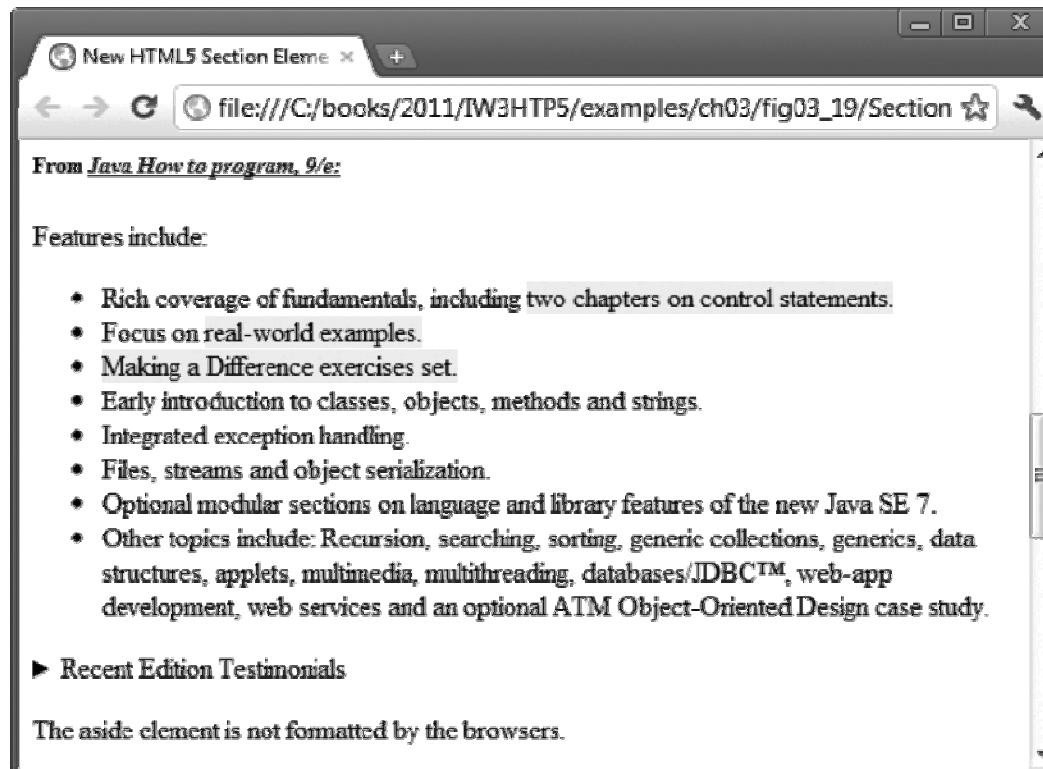


Fig. 3.18 | New HTML5 section elements. (Part 11 of 13.)

d) Chrome browser showing the end of the **section** that started in part (b)

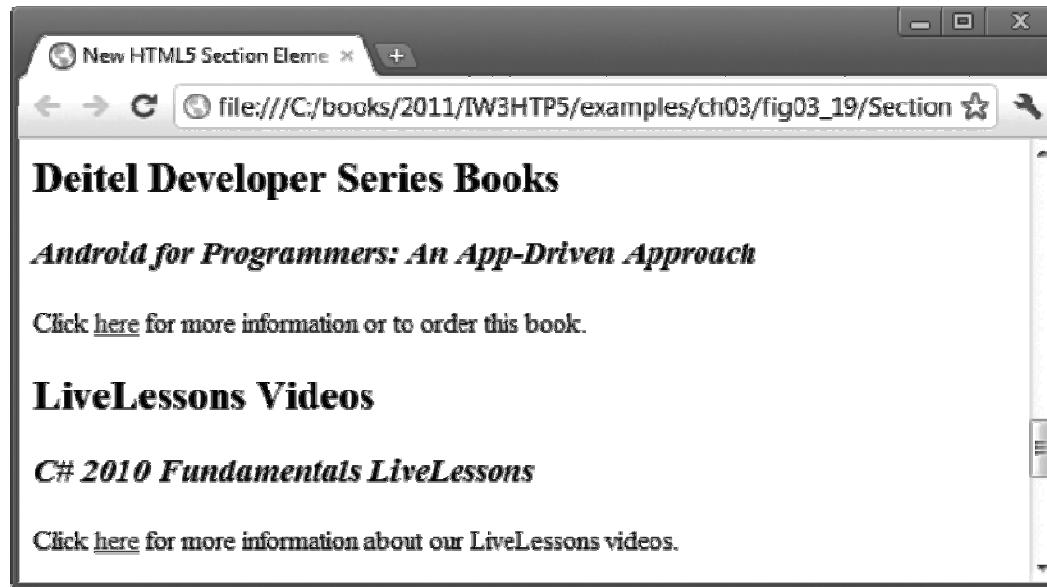


Fig. 3.18 | New HTML5 section elements. (Part 12 of 13.)

e) Chrome browser showing the last section containing a meter element, followed by a footer element



Fig. 3.18 | New HTML5 section elements. (Part 13 of 13.)

3.3.1 header Element

- The **header element** creates a header for this page that contains both text and graphics.
- The **header** element can be used multiple times on a page and can include HTML headings (**<h1>** through **<h6>**), navigation, images and logos and more.

time Element

- The **time element**, which does not need to be enclosed in a **header**, enables you to identify a date (as we do here), a time or both.

3.3.2 nav Element

- The `nav element` groups navigation links.
- In this example, we used the heading Recent Publications and created a `ul` element with seven `li` elements that link to the corresponding web pages for each book.

3.3.3 figure Element and figcaption Element

- The **figure element** describes a figure (such as an image, chart or table) in the document so that it could be moved to the side of the page or to another page.
- The **figcaption element** provides a caption for the image in the **figure** element.

3.3.4 `article` Element

- The `article` element describes standalone content that could potentially be used or distributed elsewhere, such as a news article, forum post or blog entry.
- You can nest `article` elements. For example, you might have reader comments about a magazine nested as an `article` within the magazine `article`.

3.3.5 summary Element and details Element

- The **summary element** displays a right-pointing arrow next to a summary or caption when the document is rendered in a browser (Fig. 3.19).
- When clicked, the arrow points downward and reveals the content in the **details element**.



Fig. 3.19 | Demonstrating the summary and detail elements.
(Part I of 2.)

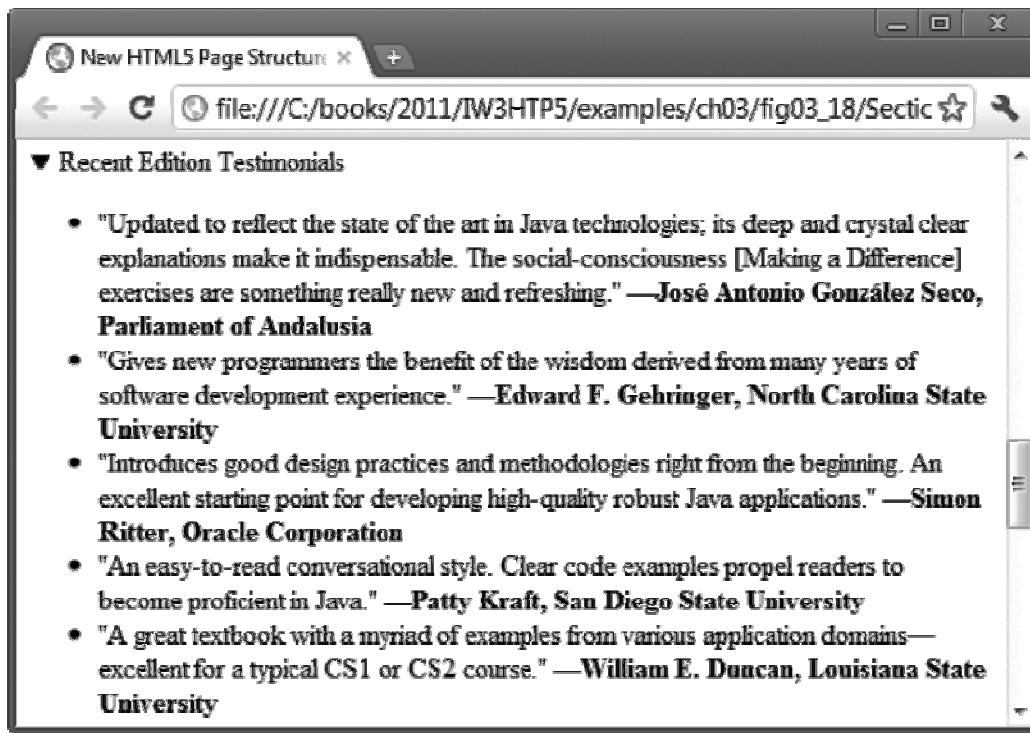


Fig. 3.19 | Demonstrating the summary and detail elements.
(Part 2 of 2.)

3.3.6 section Element

- The **section element** describes a section of a document, usually with a heading for each section—these elements can be nested.
- In this example, we broke the document into three **sections**—the first is Recent Publications.
- The **section element** may also be nested in an article.

3.3.7 aside Element

- The **aside element** describes content that's related to the surrounding content (such as an **article**) but is somewhat separate from the flow of the text.
- For example, an **aside** in a news story might include some background history.

3.3.8 meter Element

- The **meter element** renders a visual representation of a measure within a range (Fig. 3.20).
- In this example, we show the results of a recent web survey we did.
- The **min** attribute is "0" and a **max** attribute is "54" — indicating the total number of responses to our survey.
- The **value** attribute is "14", representing the total number of people who responded “yes” to our survey question.



Fig. 3.20 | Chrome rendering the `meter` element.

3.3.9 footer Element

- The **footer element** describes a *footer*—content that usually appears at the bottom of the content or section element.
- In this example, we use the **footer** to describe the copyright notice and contact information.

3.3.10 Text-Level Semantics: mark Element and wbr Element

- The [mark element](#) highlights the text that's enclosed in the element.
- The [wbr element](#) indicates the appropriate place to break a word when the text wraps to multiple lines.
- You might use `wbr` to prevent a word from breaking in an awkward place.