

Module - 2

UI Design



```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD
 "http://www.w3.org/TR/html4/strict
<html>
  <head>
    <title>Example</title>
    <link rel="stylesheet" href="s
  </head>
<body>
  <div id="header">
    <h1><a href="#" title="Back
  </div>
  <div id="toolbar">
    <span class="left">Today <sp
    <span class="right">
      <span id="time">&ampnbsp</sp>
      <select id="timezone">
        <option value="-12">(GMT-
        <option value="-11">(GMT-
      <option value="00">(GMT
      <option value="01">(GMT+1
      <option value="02">(GMT+2
      <option value="03">(GMT+3
      <option value="04">(GMT+4
      <option value="05">(GMT+5
      <option value="06">(GMT+6
      <option value="07">(GMT+7
      <option value="08">(GMT+8
      <option value="09">(GMT+9
      <option value="10">(GMT+10
      <option value="11">(GMT+11
      <option value="12">(GMT+12
    </select>
  </div>
</body>
</html>
```

HTML Basics

HTML, Text, Images, Tables

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2. HTML in Details

- The `<body>` Section
- Text Styling and Formatting Tags
- Hyperlinks: `<a>`, Hyperlinks and Sections
- Images: ``
- Lists: ``, `` and `<dl>`

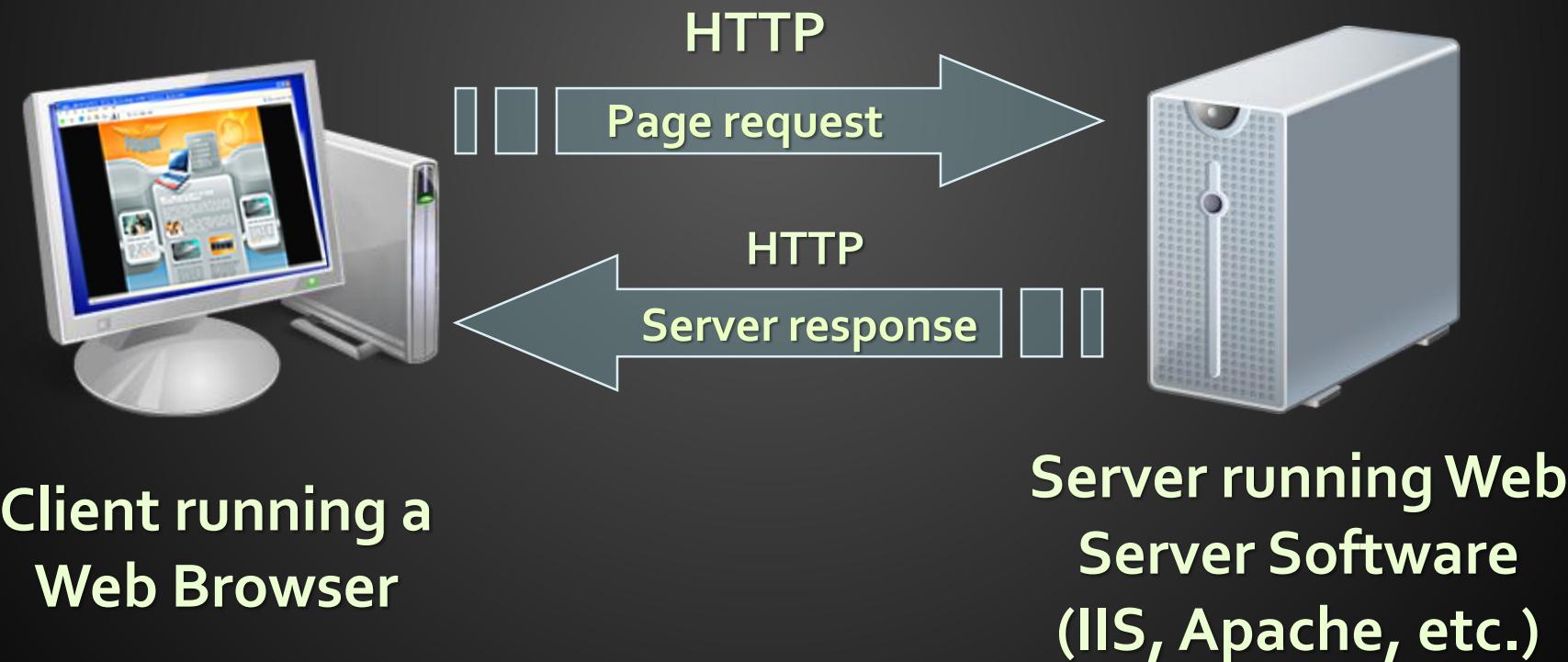
3. The `<div>` and `` elements

4. HTML Tables

5. HTML Forms

How the Web Works?

- ◆ WWW use classical client / server architecture
 - ◆ HTTP is text-based request-response protocol

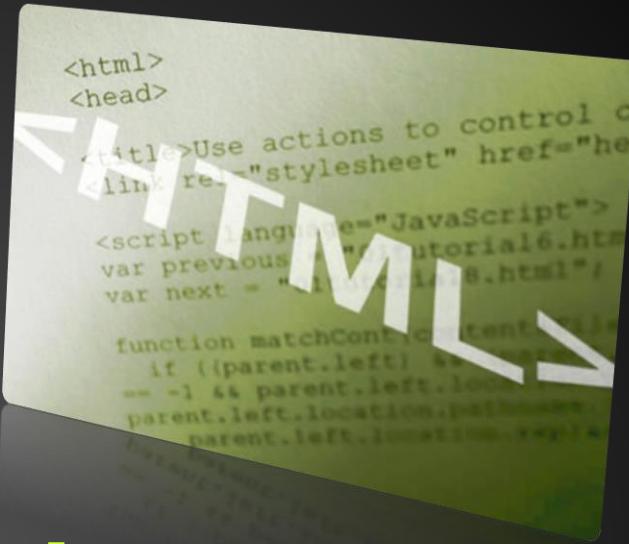


What is a Web Page?

- ◆ Web pages are text files containing HTML
- ◆ HTML – Hyper Text Markup Language
 - A notation for describing
 - document structure (semantic markup)
 - formatting (presentation markup)
 - Looks (looked?) like:
 - A Microsoft Word document
- ◆ The markup tags provide information about the page content structure

Creating HTML Pages

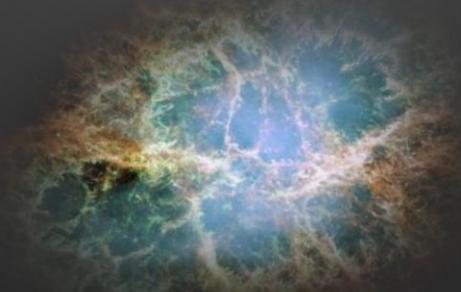
- ◆ An HTML file must have an **.htm** or **.html** file extension
- ◆ HTML files can be created with text editors:
 - ◆ NotePad, NotePad ++, PSPad
- ◆ Or HTML editors (WYSIWYG Editors):
 - ◆ Microsoft FrontPage
 - ◆ Macromedia Dreamweaver
 - ◆ Netscape Composer
 - ◆ Microsoft Word
 - ◆ Visual Studio



HTML Basics

Text, Images, Tables, Forms

Row	RNDM_DATE	RNDM_NUMBR	RNDM_ALPHABET	RNDM_SYMBOL
0	01/01/1994	362	abdeghjklm	!@#\$%^&*()
1	25/01/1979	363	abdeghjklm	!@#\$%^&*()
2	13/03/1991	364	abdeghjklm	!@#\$%^&*()
3	12/05/1983	365	abdeghjklm	!@#\$%^&*()
4	15/08/1985	366	abdeghjklm	!@#\$%^&*()
5	06/10/2005	367	abdeghjklm	!@#\$%^&*()
6	25/02/2007	368	abdeghjklm	!@#\$%^&*()
7	04/07/2009	369	abdeghjklm	!@#\$%^&*()
8	16/10/2011	370	abdeghjklm	!@#\$%^&*()
9	27/03/2013	371	abdeghjklm	!@#\$%^&*()
10	17/06/2015	372	abdeghjklm	!@#\$%^&*()
11	28/09/2017	373	abdeghjklm	!@#\$%^&*()
12	18/12/2019	374	abdeghjklm	!@#\$%^&*()
13	08/05/2021	375	abdeghjklm	!@#\$%^&*()
14	19/08/2023	376	abdeghjklm	!@#\$%^&*()
15	09/11/2025	377	abdeghjklm	!@#\$%^&*()
16	20/02/2027	378	abdeghjklm	!@#\$%^&*()
17	10/05/2029	379	abdeghjklm	!@#\$%^&*()
18	21/08/2031	380	abdeghjklm	!@#\$%^&*()
19	11/11/2033	381	abdeghjklm	!@#\$%^&*()
20	22/02/2035	382	abdeghjklm	!@#\$%^&*()
21	12/05/2037	383	abdeghjklm	!@#\$%^&*()
22	23/08/2039	384	abdeghjklm	!@#\$%^&*()
23	13/11/2041	385	abdeghjklm	!@#\$%^&*()
24	24/02/2043	386	abdeghjklm	!@#\$%^&*()
25	14/05/2045	387	abdeghjklm	!@#\$%^&*()
26	25/08/2047	388	abdeghjklm	!@#\$%^&*()
27	15/11/2049	389	abdeghjklm	!@#\$%^&*()
28	26/02/2051	390	abdeghjklm	!@#\$%^&*()
29	16/05/2053	391	abdeghjklm	!@#\$%^&*()
30	27/08/2055	392	abdeghjklm	!@#\$%^&*()
31	17/11/2057	393	abdeghjklm	!@#\$%^&*()
32	28/02/2059	394	abdeghjklm	!@#\$%^&*()
33	18/05/2061	395	abdeghjklm	!@#\$%^&*()
34	29/08/2063	396	abdeghjklm	!@#\$%^&*()
35	19/11/2065	397	abdeghjklm	!@#\$%^&*()
36	30/02/2067	398	abdeghjklm	!@#\$%^&*()
37	20/05/2069	399	abdeghjklm	!@#\$%^&*()
38	31/08/2071	400	abdeghjklm	!@#\$%^&*()
39	21/11/2073	401	abdeghjklm	!@#\$%^&*()
40	32/02/2075	402	abdeghjklm	!@#\$%^&*()
41	22/05/2077	403	abdeghjklm	!@#\$%^&*()
42	33/08/2079	404	abdeghjklm	!@#\$%^&*()
43	23/11/2081	405	abdeghjklm	!@#\$%^&*()
44	34/02/2083	406	abdeghjklm	!@#\$%^&*()
45	24/05/2085	407	abdeghjklm	!@#\$%^&*()
46	35/08/2087	408	abdeghjklm	!@#\$%^&*()
47	25/11/2089	409	abdeghjklm	!@#\$%^&*()
48	36/02/2091	410	abdeghjklm	!@#\$%^&*()
49	26/05/2093	411	abdeghjklm	!@#\$%^&*()
50	37/08/2095	412	abdeghjklm	!@#\$%^&*()
51	27/11/2097	413	abdeghjklm	!@#\$%^&*()
52	38/02/2099	414	abdeghjklm	!@#\$%^&*()
53	28/05/2101	415	abdeghjklm	!@#\$%^&*()
54	39/08/2103	416	abdeghjklm	!@#\$%^&*()
55	29/11/2105	417	abdeghjklm	!@#\$%^&*()
56	40/02/2107	418	abdeghjklm	!@#\$%^&*()
57	30/05/2109	419	abdeghjklm	!@#\$%^&*()
58	41/08/2111	420	abdeghjklm	!@#\$%^&*()
59	31/11/2113	421	abdeghjklm	!@#\$%^&*()
60	42/02/2115	422	abdeghjklm	!@#\$%^&*()
61	32/05/2117	423	abdeghjklm	!@#\$%^&*()
62	43/08/2119	424	abdeghjklm	!@#\$%^&*()
63	33/11/2121	425	abdeghjklm	!@#\$%^&*()
64	44/02/2123	426	abdeghjklm	!@#\$%^&*()
65	34/05/2125	427	abdeghjklm	!@#\$%^&*()
66	45/08/2127	428	abdeghjklm	!@#\$%^&*()
67	35/11/2129	429	abdeghjklm	!@#\$%^&*()
68	46/02/2131	430	abdeghjklm	!@#\$%^&*()
69	36/05/2133	431	abdeghjklm	!@#\$%^&*()
70	47/08/2135	432	abdeghjklm	!@#\$%^&*()
71	37/11/2137	433	abdeghjklm	!@#\$%^&*()
72	48/02/2139	434	abdeghjklm	!@#\$%^&*()
73	38/05/2141	435	abdeghjklm	!@#\$%^&*()
74	49/08/2143	436	abdeghjklm	!@#\$%^&*()
75	39/11/2145	437	abdeghjklm	!@#\$%^&*()
76	50/02/2147	438	abdeghjklm	!@#\$%^&*()
77	40/05/2149	439	abdeghjklm	!@#\$%^&*()
78	51/08/2151	440	abdeghjklm	!@#\$%^&*()
79	41/11/2153	441	abdeghjklm	!@#\$%^&*()
80	52/02/2155	442	abdeghjklm	!@#\$%^&*()
81	42/05/2157	443	abdeghjklm	!@#\$%^&*()
82	53/08/2159	444	abdeghjklm	!@#\$%^&*()
83	43/11/2161	445	abdeghjklm	!@#\$%^&*()
84	54/02/2163	446	abdeghjklm	!@#\$%^&*()
85	44/05/2165	447	abdeghjklm	!@#\$%^&*()
86	55/08/2167	448	abdeghjklm	!@#\$%^&*()
87	45/11/2169	449	abdeghjklm	!@#\$%^&*()
88	56/02/2171	450	abdeghjklm	!@#\$%^&*()
89	46/05/2173	451	abdeghjklm	!@#\$%^&*()
90	57/08/2175	452	abdeghjklm	!@#\$%^&*()
91	47/11/2177	453	abdeghjklm	!@#\$%^&*()
92	58/02/2179	454	abdeghjklm	!@#\$%^&*()
93	48/05/2181	455	abdeghjklm	!@#\$%^&*()
94	59/08/2183	456	abdeghjklm	!@#\$%^&*()
95	49/11/2185	457	abdeghjklm	!@#\$%^&*()
96	60/02/2187	458	abdeghjklm	!@#\$%^&*()
97	50/05/2189	459	abdeghjklm	!@#\$%^&*()
98	61/08/2191	460	abdeghjklm	!@#\$%^&*()
99	51/11/2193	461	abdeghjklm	!@#\$%^&*()
100	62/02/2195	462	abdeghjklm	!@#\$%^&*()



HTML Structure

- ◆ HTML is comprised of “elements” or “tags”
 - ◆ Begins with `<html>` and ends with `</html>`
- ◆ Elements (tags) are nested one inside another:

```
<html> <head></head> <body></body> </html>
```

- ◆ Tags have attributes:

```

```

- ◆ HTML describes structure using two main sections:
`<head>` and `<body>`

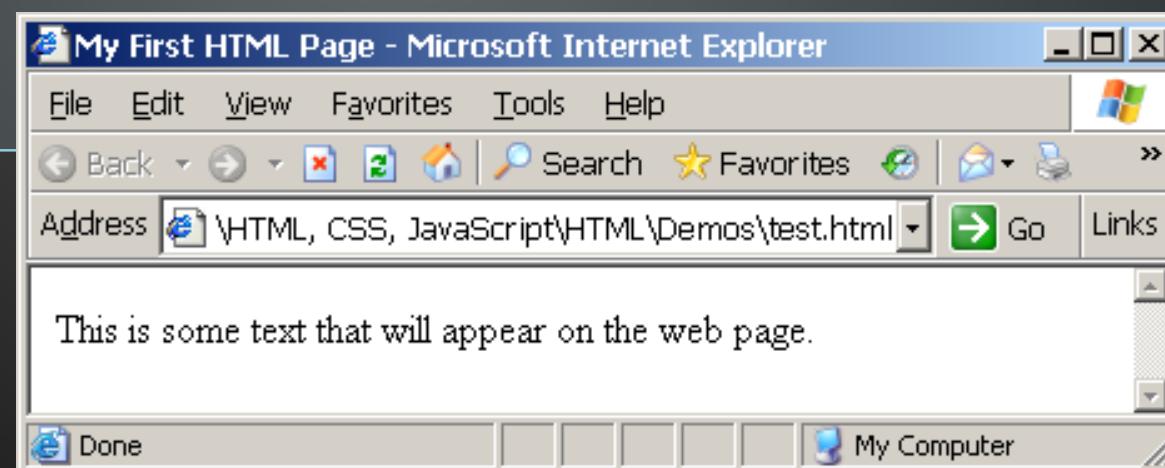
HTML Code Formatting

- ◆ The HTML source code should be formatted to increase readability and facilitate debugging.
 - ◆ Every block element should start on a new line.
 - ◆ Every nested (block) element should be indented.
 - ◆ Browsers ignore multiple whitespaces in the page source, so formatting is harmless.
- ◆ For performance reasons, formatting can be sacrificed

First HTML Page

test.html

```
<!DOCTYPE HTML>
<html>
  <head>
    <title>My First HTML Page</title>
  </head>
  <body>
    <p>This is some text...</p>
  </body>
</html>
```



First HTML Page: Tags

```
<!DOCTYPE HTML>
<html>      Opening tag
  <head>
    <title>My First HTML Page</title>
  </head>
  <body>
    <p>This is some text...</p>
  </body>
</html>
```

Closing tag

An HTML element consists of an opening tag, a closing tag and the content inside.

First HTML Page: Header

```
<!DOCTYPE HTML>
<html>
  <head>
    <title>My First HTML Page</title>
  </head>
  <body>
    <p>This is some text...</p>
  </body>
</html>
```

HTML header

First HTML Page: Body

```
<!DOCTYPE HTML>
<html>
  <head>
    <title>My First HTML Page</title>
  </head>
  <body>
    <p>This is some text...</p>
  </body>
</html>
```

HTML body

Some Simple Tags

- ◆ Hyperlink Tags

```
<a href="http://www.telerik.com/"  
    title="Telerik">Link to Telerik Web site</a>
```

- ◆ Image Tags

```

```

- ◆ Text formatting tags

```
This text is <em>emphasized.</em>  
<br />new line<br />  
This one is <strong>more emphasized.</strong>
```

Some Simple Tags – Example

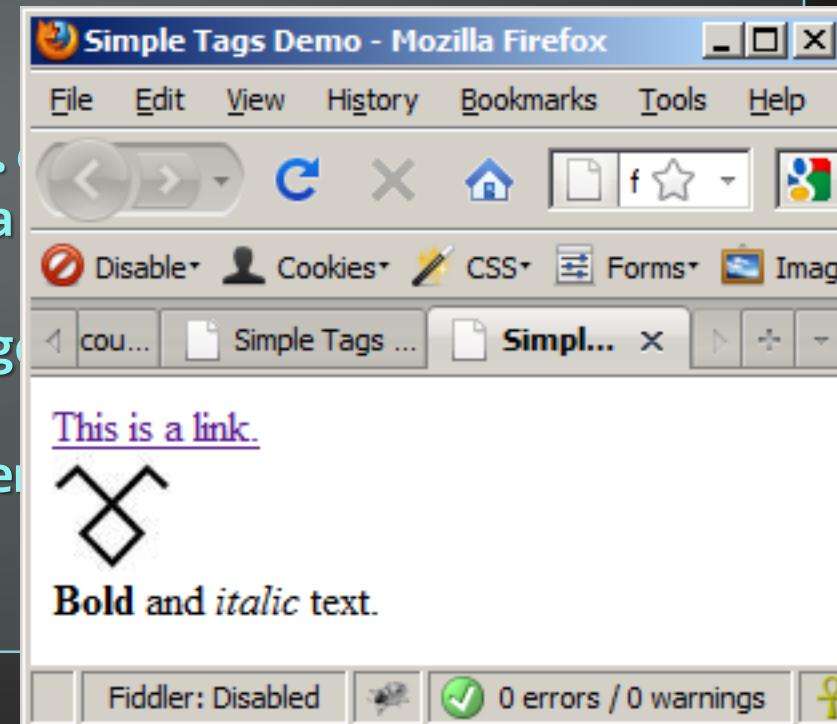
some-tags.html

```
<!DOCTYPE HTML>
<html>
<head>
    <title>Simple Tags Demo</title>
</head>
<body>
    <a href="http://www.telerik.com/" title=
        "Telerik site">This is a link.</a>
    <br />
    
    <br />
    <strong>Bold</strong> and <em>italic</em> text.
</body>
</html>
```

Some Simple Tags – Example (2)

some-tags.html

```
<!DOCTYPE HTML>
<html>
<head>
    <title>Simple Tags Demo</title>
</head>
<body>
    <a href="http://www.telerik.com">Telerik site</a>
    <br />
    
    <br />
    <strong>Bold</strong> and <em>italic</em>
</body>
</html>
```



Tags Attributes

- ◆ Tags can have attributes
 - ◆ Attributes specify properties and behavior
 - ◆ Example:

``
- ◆ Few attributes can apply to every element:
 - ◆ id, style, class, title
 - ◆ The id is unique in the document
 - ◆ Content of title attribute is displayed as hint when the element is hovered with the mouse
 - ◆ Some elements have obligatory attributes

Headings and Paragraphs

- ◆ Heading Tags (h1 – h6)

```
<h1>Heading 1</h1>
<h2>Sub heading 2</h2>
<h3>Sub heading 3</h3>
```

- ◆ Paragraph Tags

```
<p>This is my first paragraph</p>
<p>This is my second paragraph</p>
```

- ◆ Sections: div and span

```
<div style="background: skyblue;">
    This is a div</div>
```

Headings and Paragraphs – Example

headings.html

```
<!DOCTYPE HTML>
<html>
  <head><title>Headings and paragraphs</title></head>
  <body>
    <h1>Heading 1</h1>
    <h2>Sub heading 2</h2>
    <h3>Sub heading 3</h3>

    <p>This is my first paragraph</p>
    <p>This is my second paragraph</p>

    <div style="background:skyblue">
      This is a div</div>
  </body>
</html>
```

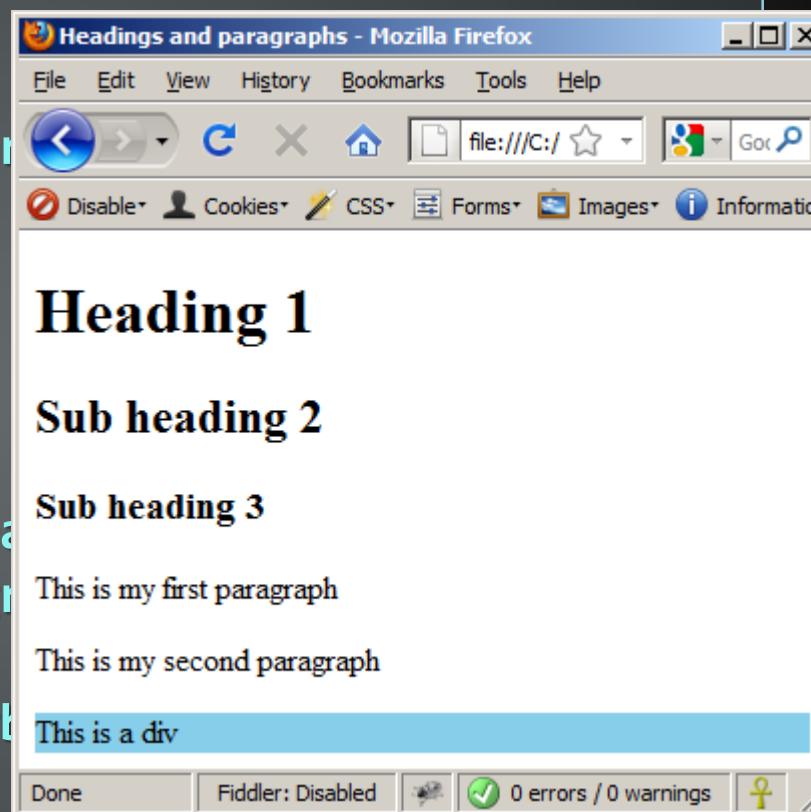
Headings and Paragraphs – Example (2)

headings.html

```
<!DOCTYPE HTML>
<html>
  <head><title>Headings and paragraphs</title>
  <body>
    <h1>Heading 1</h1>
    <h2>Sub heading 2</h2>
    <h3>Sub heading 3</h3>

    <p>This is my first paragraph</p>
    <p>This is my second paragraph</p>

    <div style="background:skyblue">
      This is a div</div>
  </body>
</html>
```



Introduction to HTML

HTML Document Structure in Depth

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
 "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
    <title>Tabview - Demo</title>

    <script src="prototype.js" type="text/javascript"></script>
    <script src="tabview.js" type="text/javascript"></script>

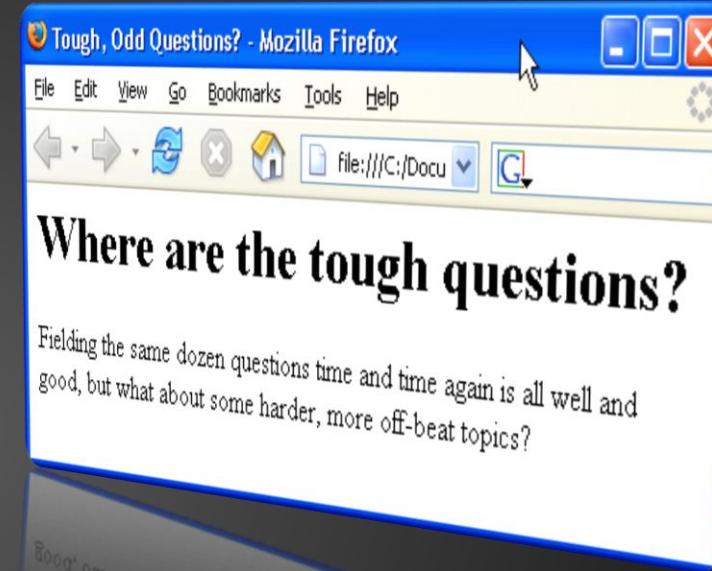
    <link href="tabview.css" rel="stylesheet" type="text/css" />
</head>
<body id="body">

<ul class="tab-collection">
    <li class="tab" title="Tab1">
        <h1>Tab 1</h1>
        
    </li>

    <li class="tab" title="Tab2">
        <h1>Tab 2</h1>
        
    </li>

    <li class="tab" title="Tab3">
        <h1>Tab 3</h1>
        
    </li>
</ul>

<script type="text/javascript">
    UI.Tabview.init('body', { width: '500px' });
</script>
</body>
</html>
```



- ◆ It is important to have the correct vision and attitude towards HTML
 - ◆ HTML is only about structure, not appearance
 - ◆ Browsers tolerate invalid HTML code and parse errors – you should not.

The <!DOCTYPE> Declaration

- ◆ HTML documents must start with a document type definition (DTD)
 - ◆ It tells web browsers what type is the served code
 - ◆ Possible versions: HTML 4.01, XHTML 1.0 (Transitional or Strict), XHTML 1.1, HTML 5
- ◆ Example:

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"  
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
```

- ◆ See <http://w3.org/QA/2002/04/valid-dtd-list.html> for a list of possible doctypes

HTML vs. XHTML



- ◆ XHTML is more strict than HTML
 - Tags and attribute names must be in lowercase
 - All tags must be closed (`
`, ``) while HTML allows `
` and `` and implies missing closing tags (`<p>par1 <p>par2`)
 - XHTML allows only one root `<html>` element (HTML allows more than one)

XHTML vs. HTML (2)

- ◆ Many element attributes are deprecated in XHTML, most are moved to CSS
- ◆ Attribute minimization is forbidden, e.g.

```
<input type="checkbox" checked>
```



```
<input type="checkbox" checked="checked" />
```

- ◆ Note: Web browsers load XHTML faster than HTML and valid code faster than invalid!

The <head> Section

- ◆ Contains information that doesn't show directly on the viewable page
 - ◆ Starts after the <!doctype> declaration
 - ◆ Begins with <head> and ends with </head>
 - ◆ Contains mandatory single <title> tag
 - ◆ Can contain some other tags, e.g.
 - ◆ <meta>
 - ◆ <script>
 - ◆ <style>
 - ◆ <!-- comments -->

<head> Section: <title> tag

- ◆ Title should be placed between <head> and </head> tags

```
<title>Telerik Academy - Winter Season 2009/2010</title>
```



- ◆ Used to specify a title in the window title bar
- ◆ Search engines and people rely on titles

<head> Section: <meta>

- ◆ Meta tags additionally describe the content contained within the page

```
<meta name="description" content="HTML  
tutorial" />  
  
<meta name="keywords" content="html, web  
design, styles" />  
  
<meta name="author" content="Chris Brewer" />  
  
<meta http-equiv="refresh" content="5;  
url=http://www.telerik.com" />
```

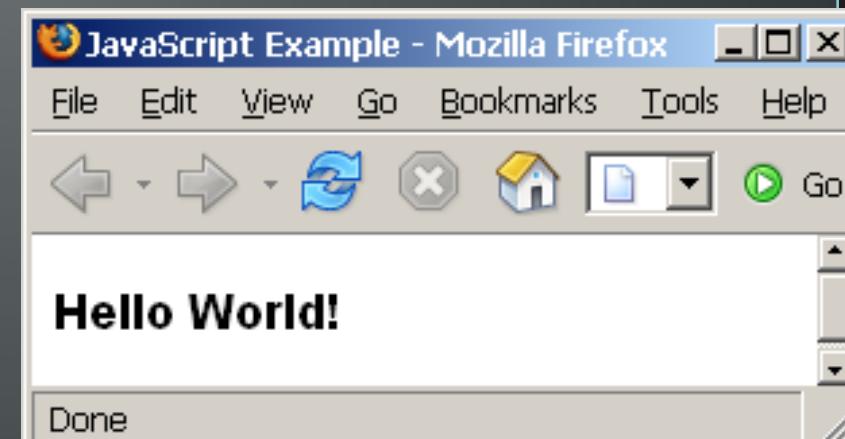
`<head>` Section: `<script>`

- ◆ The `<script>` element is used to embed scripts into an HTML document
 - ◆ Script are executed in the client's Web browser
 - ◆ Scripts can live in the `<head>` and in the `<body>` sections
- ◆ Supported client-side scripting languages:
 - ◆ JavaScript (it is not Java!)
 - ◆ VBScript
 - ◆ JScript

The <script> Tag – Example

```
<!DOCTYPE HTML>
<html>
  <head>
    <title>JavaScript Example</title>
    <script type="text/javascript">
      function sayHello() {
        document.write("<p>Hello World!</p>");
      }
    </script>
  </head>
  <body>
    <script type=
      "text/javascript">
      sayHello();
    </script>
  </body>
</html>
```

scripts-example.html

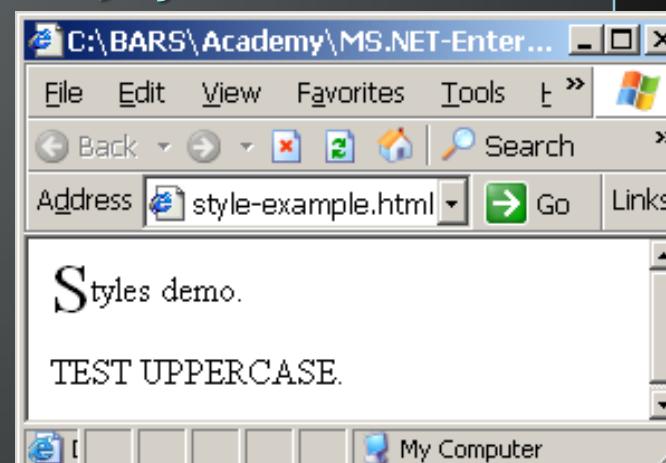


<head> Section: <style>

- ◆ The <style> element embeds formatting information (CSS styles) into an HTML page

```
<html>
  <head>
    <style type="text/css">
      p { font-size: 12pt; line-height: 12pt; }
      p:first-letter { font-size: 200%; }
      span { text-transform: uppercase; }
    </style>
  </head>
  <body>
    <p>Styles demo.<br />
      <span>Test uppercase</span>.
    </p>
  </body>
</html>
```

style-example.html



Comments: <!-- --> Tag

- ◆ Comments can exist anywhere between the `<html></html>` tags
- ◆ Comments start with `<!--` and end with `-->`

```
<!-- Telerik Logo (a JPG file) -->

<!-- Hyperlink to the web site -->
<a href="http://telerik.com/">Telerik</a>
<!-- Show the news table -->
<table class="newstable">
    ...

```

<body> Section: Introduction

- ◆ The <body> section describes the viewable portion of the page
- ◆ Starts after the <head> </head> section
- ◆ Begins with <body> and ends with </body>

```
<html>
  <head><title>Test page</title></head>
  <body>
    <!-- This is the Web page body -->
  </body>
</html>
```

Text Formatting

- ◆ Text formatting tags modify the text between the opening tag and the closing tag
 - ♦ Ex. **Hello** makes “Hello” bold

	bold
<i></i>	<i>italicized</i>
<u></u>	<u>underlined</u>
	Sample ^{superscript}
	Sample _{subscript}
	strong
	<i>emphasized</i>
<pre></pre>	Preformatted text
<blockquote></blockquote>	Quoted text block
	Deleted text – strike through

Text Formatting – Example

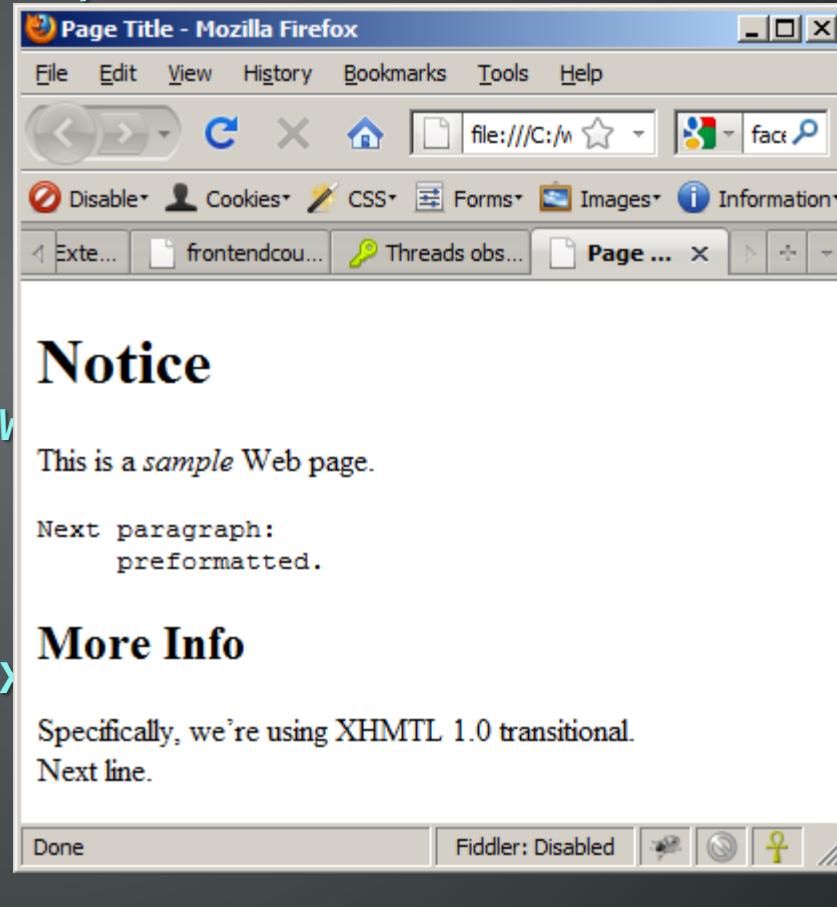
text-formatting.html

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"  
    "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">  
<html>  
    <head>  
        <title>Page Title</title>  
    </head>  
    <body>  
        <h1>Notice</h1>  
        <p>This is a <em>sample</em> Web page.</p>  
        <p><pre>Next paragraph:  
            preformatted.</pre></p>  
        <h2>More Info</h2>  
        <p>Specifically, we're using XHTML 1.0 transitional.<br />  
            Next line.</p>  
    </body>  
</html>
```

Text Formatting – Example (2)

text-formatting.html

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"  
    "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">  
<html>  
    <head>  
        <title>Page Title</title>  
    </head>  
    <body>  
        <h1>Notice</h1>  
        <p>This is a <em>sample</em> Web page.  
        <p><pre>Next paragraph:  
            preformatted.</pre></p>  
        <h2>More Info</h2>  
        <p>Specifically, we're using XHMTL 1.0 transitional.  
            Next line.</p>  
    </body>  
</html>
```



Hyperlinks: <a> Tag

- ◆ Link to a document called `form.html` on the same server in the same directory:

```
<a href="form.html">Fill Our Form</a>
```

- ◆ Link to a document called `parent.html` on the same server in the parent directory:

```
<a href="../parent.html">Parent</a>
```

- ◆ Link to a document called `cat.html` on the same server in the subdirectory `stuff`:

```
<a href="stuff/cat.html">Catalog</a>
```

Hyperlinks: <a> Tag (2)

- ◆ Link to an external Web site:

```
<a href="http://www.devbg.org" target="_blank">BASD</a>
```

- Always use a full URL, including "http://", not just "www.somesite.com"
- Using the target="_blank" attribute opens the link in a new window
- ◆ Link to an e-mail address:

```
<a href="mailto:bugs@example.com?subject=Bug+Report">  
Please report bugs here (by e-mail only)</a>
```

Hyperlinks: <a> Tag (3)

- ◆ Link to a document called `apply-now.html`

- ◆ On the same server, in same directory
 - ◆ Using an image as a link button:

```
<a href="apply-now.html"></a>
```

- ◆ Link to a document called `index.html`

- ◆ On the same server, in the subdirectory `english` of the parent directory:

```
<a href=".../english/index.html">Switch to  
English version</a>
```

Hyperlinks and Sections

- ◆ Link to another location in the same document:

```
<a href="#section1">Go to Introduction</a>
...
<h2 id="section1">Introduction</h2>
```

- ◆ Link to a specific location in another document:

```
<a href="chapter3.html#section3.1.1">Go to Section
3.1.1</a>

<!-- In chapter3.html -->
...
<div id="section3.1.1">
    <h3>3.1.1. Technical Background</h3>
</div>
```

Hyperlinks – Example

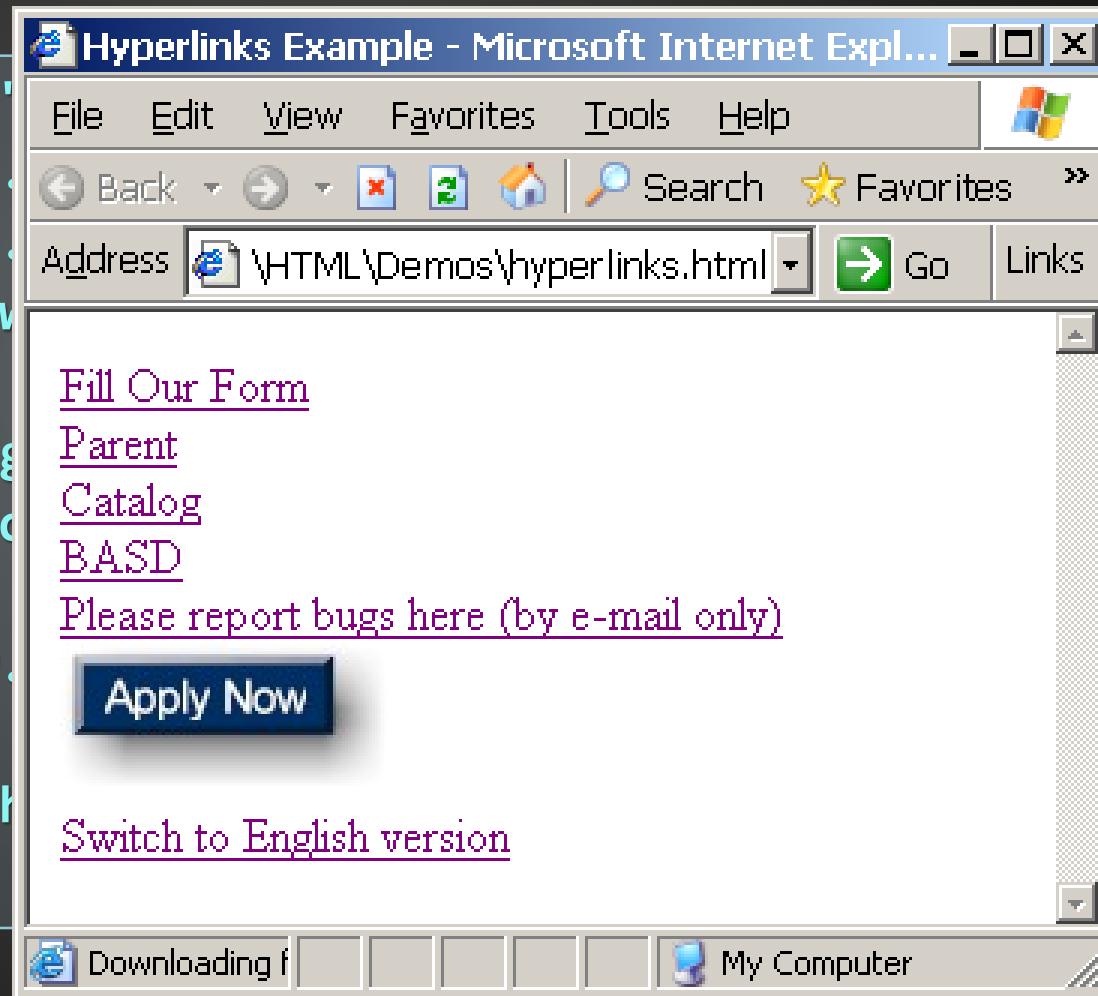
hyperlinks.html

```
<a href="form.html">Fill Our Form</a> <br />
<a href="../parent.html">Parent</a> <br />
<a href="stuff/cat.html">Catalog</a> <br />
<a href="http://www.devbg.org" target="_blank">BASD</a>
<br />
<a href="mailto:bugs@example.com?subject=Bug
Report">Please report bugs here (by e-mail only)</a>
<br />
<a href="apply-now.html"></a> <br />
<a href="../english/index.html">Switch to English
version</a> <br />
```

Hyperlinks – Example (2)

hyperlinks.html

```
<a href="form.html">  
<a href="..../parent">  
<a href="stuff/catalog">  
<a href="http://www.basd.com">  
<br />  
<a href="mailto:bug-report@basd.com">Please report bugs here (by e-mail only)<br />  
<a href="apply-now.html">Apply Now</a> <br />  
<a href="..../english-version">Switch to English version</a> <br />
```



Links to the Same Document – Example

links-to-same-document.html

```
<h1>Table of Contents</h1>

<p><a href="#section1">Introduction</a><br />
<a href="#section2">Some background</A><br />
<a href="#section2.1">Project History</a><br />
...the rest of the table of contents...

<!-- The document text follows here -->

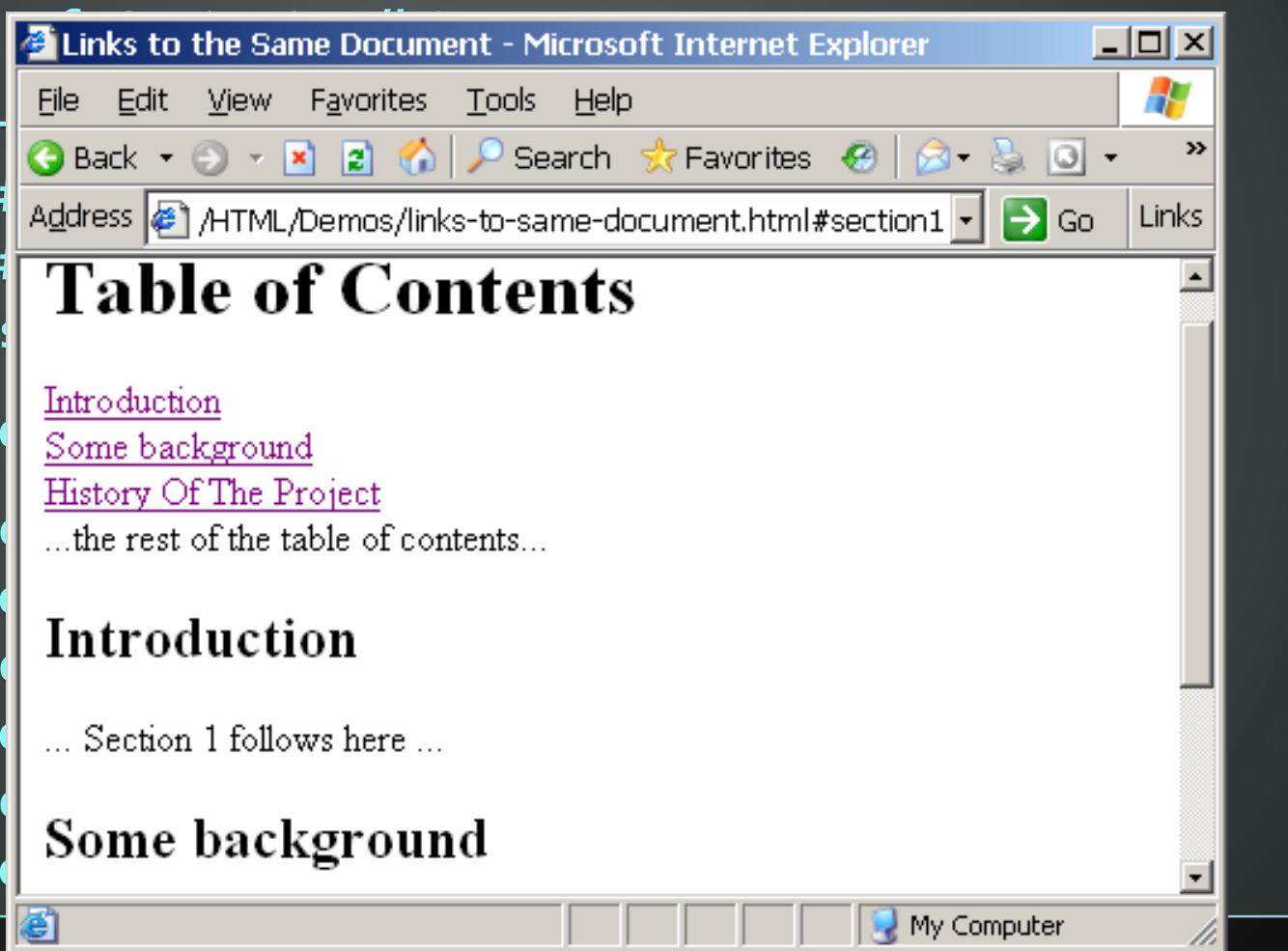
<h2 id="section1">Introduction</h2>
... Section 1 follows here ...
<h2 id="section2">Some background</h2>
... Section 2 follows here ...
<h3 id="section2.1">Project History</h3>
... Section 2.1 follows here ...
```

Links to the Same Document – Example (2)

links-to-same-document.html

```
<h1>Table of Contents</h1>
<p><a href="#section1">Introduction</a>
<a href="#section2">Some background</a>
<a href="#section3">History Of The Project</a>
...the rest of the table of contents...

<h2 id="section1">Introduction</h2>
... Section 1 follows here ...
<h2 id="section2">Some background</h2>
... Section 2 follows here ...
<h3 id="section3">History Of The Project</h3>
... Section 3 follows here ...
```



Images: tag

- ◆ Inserting an image with tag:

```

```

- ◆ Image attributes:

src	Location of image file (relative or absolute)
alt	Substitute text for display (e.g. in text mode)
height	Number of pixels of the height
width	Number of pixels of the width
border	Size of border, 0 for no border

- ◆ Example:

```

```

Miscellaneous Tags

- ◆ <hr />: Draws a horizontal rule (line):

```
<hr size="5" width="70%" />
```

- ◆ <center></center>: Deprecated!

```
<center>Hello World!</center>
```

- ◆ : Deprecated!

```
<font size="3" color="blue">Font3</font>
<font size="+4" color="blue">Font+4</font>
```

Miscellaneous Tags – Example

misc.html

```
<html>
  <head>
    <title>Miscellaneous Ta
  </head>
  <body>
    <hr size="5" width="70%" />
    <center>Hello World!</center>
    <font size="3" color="blue">Font3</font>
    <font size="+4" color="blue">Font+4</font>
  </body>
</html>
```



Ordered Lists: Tag

- ◆ Create an Ordered List using :

```
<ol type="1">
  <li>Apple</li>
  <li>Orange</li>
  <li>Grapefruit</li>
</ol>
```

- ◆ Attribute values for type are 1, A, a, I, or i

1. Apple
2. Orange
3. Grapefruit

A. Apple
B. Orange
C. Grapefruit

a. Apple
b. Orange
c. Grapefruit

I. Apple
II. Orange
III. Grapefruit

i. Apple
ii. Orange
iii. Grapefruit

Unordered Lists: Tag

- ◆ Create an Unordered List using :

```
<ul type="disk">
  <li>Apple</li>
  <li>Orange</li>
  <li>Grapefruit</li>
</ul>
```

- ◆ Attribute values for type are:

- disc, circle or square

- Apple
- Orange
- Pear

- Apple
- Orange
- Pear

- Apple
- Orange
- Pear

Definition lists: <dl> tag

- ◆ Create definition lists using <dl>

- ◆ Pairs of text and associated definition; text is in <dt> tag, definition in <dd> tag

```
<dl>
  <dt>HTML</dt>
  <dd>A markup language ...</dd>
  <dt>CSS</dt>
  <dd>Language used to ...</dd>
</dl>
```

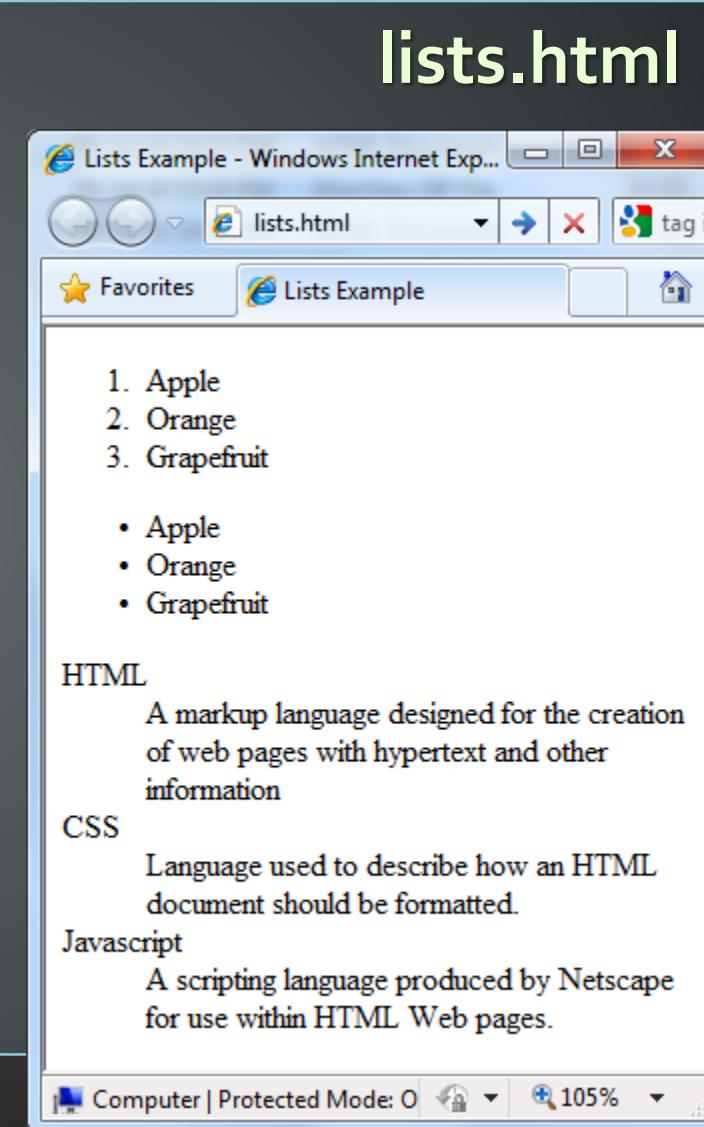
- ◆ Renders without bullets
 - ◆ Definition is indented

Lists – Example

```
<ol type="1">
  <li>Apple</li>
  <li>Orange</li>
  <li>Grapefruit</li>
</ol>

<ul type="disc">
  <li>Apple</li>
  <li>Orange</li>
  <li>Grapefruit</li>
</ul>

<dl>
  <dt>HTML</dt>
  <dd>A markup lang...</dd>
</dl>
```



HTML Special Characters

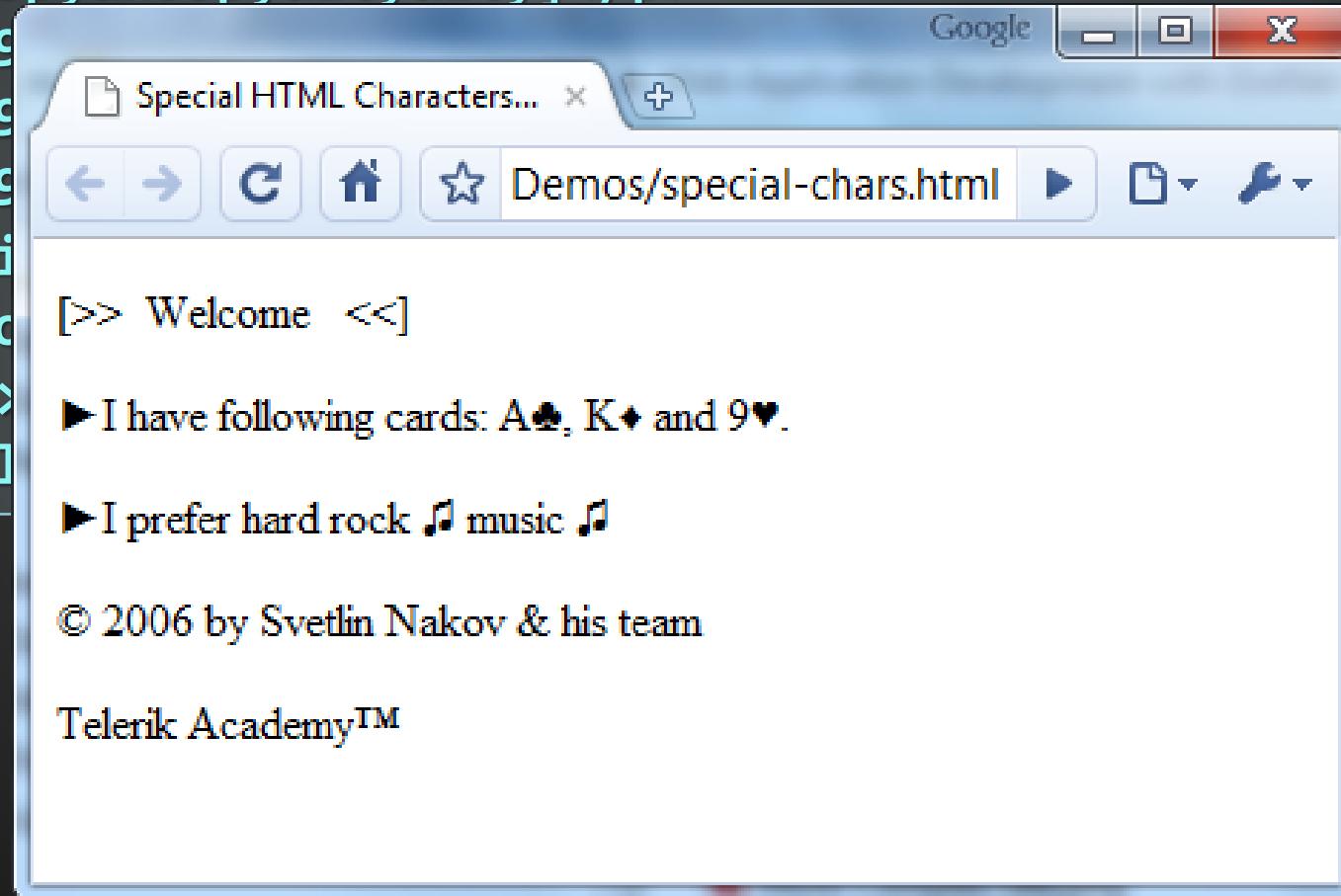
Symbol Name	HTML Entity	Symbol
Copyright Sign	©	©
Registered Trademark Sign	®	®
Trademark Sign	™	™
Less Than	<	<
Greater Than	>	>
Ampersand	&	&
Non-breaking Space	 	
Em Dash	—	—
Quotation Mark	"	"
Euro	€	€
British Pound	£	£
Japanese Yen	¥	¥

Special Characters – Example

```
<p>[&gt;&gt;&ampnbsp&ampnbspWelcome    special-chars.html  
&ampnbsp&ampnbsp&lt;&lt;]</p>  
<p>&#9658;I have following cards:  
A&#9827;, K&#9830; and 9&#9829;. </p>  
<p>&#9658;I prefer hard rock &#9835;  
music &#9835;</p>  
<p>&copy; 2006 by Svetlin Nakov & his  
team</p>  
<p>Telerik Academy™</p>
```

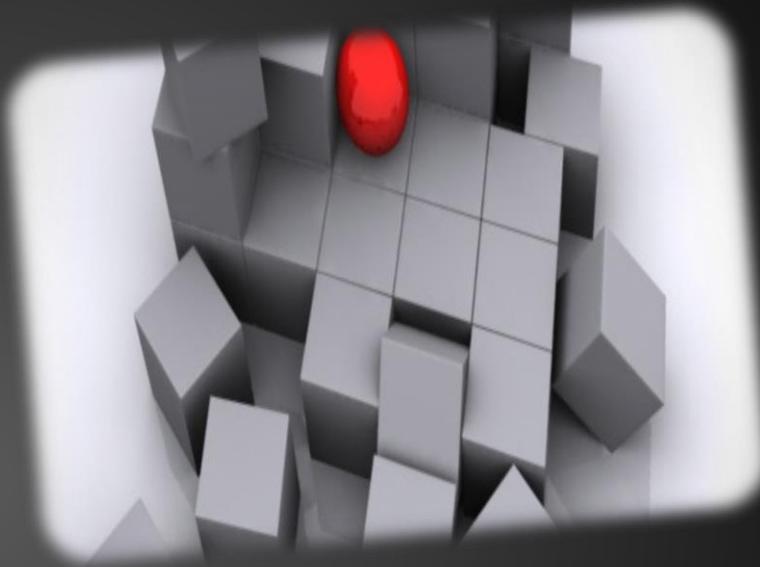
Special Chars – Example (2)

```
<p>[&gt;&gt;&ampnbsp&ampnbspWelcome    special-chars.html  
     &ampnbsp&ampnbsp&lt;&lt;]</p>  
<p>&#9824;  
     A&#9824;  
<p>&#9824;  
     music  
<p>&ccurlyeq;  
team</p>  
<p>Te]
```



```
4 <head>
5 <meta http-equiv="Content-Type"
6 <title>Home</title>
7 <link rel="stylesheet" href="sty
8 <style type="text/css">
9 .style1 {
10   color: #FF0000;
11 }
12 </style>
13 </head>
```

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Using <DIV> and Block and Inline Elements

Block and Inline Elements

- ◆ Block elements add a line break before and after them
 - <div> is a block element
 - Other block elements are <table>, <hr>, headings, lists, <p> and etc.
- ◆ Inline elements don't break the text before and after them
 - is an inline element
 - Most HTML elements are inline, e.g. <a>

The <div> Tag

- ◆ <div> creates logical divisions within a page
- ◆ Block style element
- ◆ Used with CSS
- ◆ Example:

div-and-span.html

```
<div style="font-size:24px; color:red">DIV  
example</div>  
  
<p>This one is <span style="color:red; font-  
weight:bold">only a test</span>.</p>
```



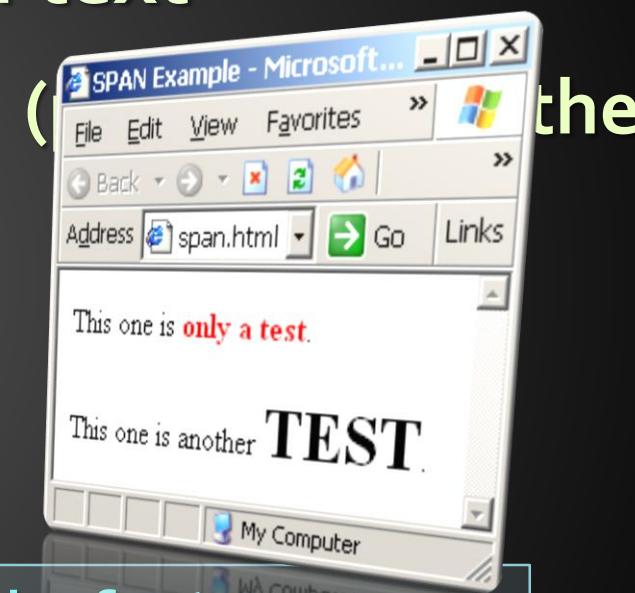
The Tag

- ◆ **Inline style element**
- ◆ **Useful for modifying a specific portion of text**
 - ◆ **Don't create a separate area document**
- ◆ **Very useful with CSS**

span.html

```
<p>This one is <span style="color:red; font-weight:bold">only a test</span>.</p>

<p>This one is another <span style="font-size:32px; font-weight:bold">TEST</span>.</p>
```



HTML Tables

```
<html>
<head>
<title>How To Create HTML Tables</title>
</head>
<body>
<table border=1 cellspacing=0 cellpadding=0>
<tr>
<td width=110 valign=top>
<br>upper left corner
</td>
<td width=110 valign=top>
<br>upper right corner
</td>
</tr>
<tr>
<td width=110 valign=top>
<br>left center cell
</td>
<td width=110 valign=top>
<br>right center cell
</td>
</tr>
<tr>
<td width=110 valign=top>
<br>lower left corner
</td>
<td width=110 valign=top>
<br>lower right corner
</td>
</tr>
</table>
</body>
</html>
```

Title	Title	Title	Title	Title	Title
Data	Data	Data	Data	Data	Data
Data	Data	Data	Data	Data	Data
Data	Data	Data	Data	Data	Data
Data	Data	Data	Data	Data	Data
Data	Data	Data	Data	Data	Data

US time	European date (D/M/Y) & time	Y-M-D date & time	Dollar	Chinese money	IP addresses	Names	Numbers
	29/10/1965	83-03-24	YMB 4	98.176.35.80		26.32 E +03	
Fri Mar 22 21:48:49 UTC+0200 1957		1967-08-22 06:07:16 PM	YMB -81.38	162.117.253.34	dyse chidi	-191.45E-05	
Fri, 14 Feb 2002 04:24:20 UTC	06/07/99 06:46:01 AM	81-02-04 09:09:54 AM	YMB -108.83	122.205.50.6	bochai dychai	-131.20E+01	
Monday, May 30, 1994 4:47:31 PM	06/09/05 05:11:16 AM		YMB 33.16		dydy balie	-131.20E+01	
09/28/2000	24/11/1957		\$-38.77	YMB 112.42	15.192.151.209		
		97-08-13 00:01:33 AM	\$14.5	YMB -1.75	99.93.147.150	dychai tonchai	-187.28E-05
Mon, 29 Oct 1979 00:44:03 UTC		87-10-16	\$14.66	YMB 61.14	chite manie	-125.19 E -03	
Sat, 9 Jan 1982 05:45:06 UTC	04/06/68	74-10-20	\$20.47		121.169.225.22	dyna bema	138.11E+02
04/05/75		2000-03-20	\$68.84	YMB 88.19	239.133.227.68	made liete	195.44 E +03
Monday, July 15, 2002 10:51:02 AM	01/02/1961 09:40:16 AM		\$97.9	YMB 44.28	223.66.228.116	mava sete	-107
this is footer	row	number	ONE!	adsf	adsf	adsf	adsf

- ◆ Tables represent tabular data
 - ◆ A table consists of one or several rows
 - ◆ Each row has one or more columns
- ◆ Tables comprised of several core tags: <table></table>:
begin / end the table
<tr></tr>: create a table row
<td></td>: create tabular data (cell)
- ◆ Tables should not be used for layout. Use CSS floats and positioning styles instead

HTML Tables (2)

- ◆ Start and end of a table

```
<table> ... </table>
```

- ◆ Start and end of a row

```
<tr> ... </tr>
```

- ◆ Start and end of a cell in a row

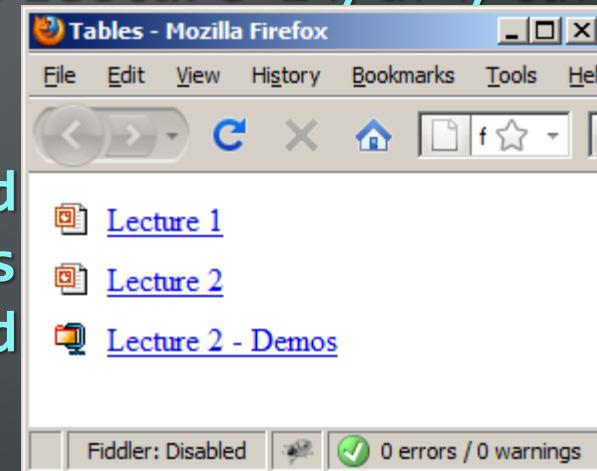
```
<td> ... </td>
```

Simple HTML Tables – Example

```
<table cellspacing="0" cellpadding="5">
  <tr>
    <td></td>
    <td><a href="lecture1.ppt">Lecture 1</a></td>
  </tr>
  <tr>
    <td></td>
    <td><a href="lecture2.ppt">Lecture 2</a></td>
  </tr>
  <tr>
    <td></td>
    <td><a href="lecture2-demos.zip">
      Lecture 2 - Demos</a></td>
  </tr>
</table>
```

Simple HTML Tables – Example (2)

```
<table cellspacing="0" cellpadding="5">
  <tr>
    <td></td>
    <td><a href="lecture1.ppt">Lecture 1</a></td>
  </tr>
  <tr>
    <td></td>
    <td><a href="lecture2.ppt">Lecture 2</a></td>
  </tr>
  <tr>
    <td></td>
    <td><a href="lecture2-demos">
      Lecture 2 - Demos</a></td>
  </tr>
</table>
```



Complete HTML Tables

- ◆ Table rows split into three semantic sections: header, body and footer
 - <thead> denotes table header and contains <th> elements, instead of <td> elements
 - <tbody> denotes collection of table rows that contain the very data
 - <tfoot> denotes table footer but comes BEFORE the <tbody> tag
 - <colgroup> and <col> define columns (most often used to set column widths)

Complete HTML Table: Example

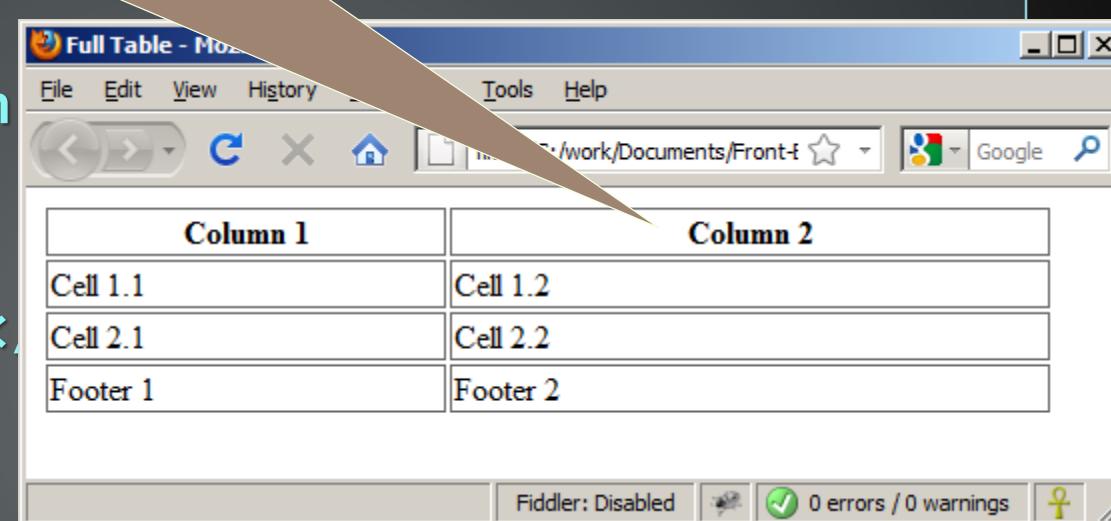
```
<table>
<colgroup>           columns
  <col style="width:100px" /><col />
</colgroup>
<thead>             header
  <tr><th>Column 1</th><th>Column 2</th></tr>
</thead>
<tfoot>             footer
  <tr><td>Footer 1</td><td>Footer 2</td></tr>
</tfoot>
<tbody>           Last comes the body (data)
  <tr><td>Cell 1.1</td><td>Cell 1.2</td></tr>
  <tr><td>Cell 2.1</td><td>Cell 2.2</td></tr>
</tbody>
</table>
```

Complete HTML Table: Example (2)

By default, header text
is bold and centered.

```
<table>
<colgroup>
    <col style="width: 150px;" />
</colgroup>
<thead>
    <tr><th>Column 1</th><th>Column 2</th></tr>
</thead>
<tfoot>
    <tr><td>Footer 1</td><td>Footer 2</td></tr>
</tfoot>
<tbody>
    <tr><td>Cell 1.1</td><td>Cell 1.2</td></tr>
    <tr><td>Cell 2.1</td><td>Cell 2.2</td></tr>
    <tr><td>Footer 1</td><td>Footer 2</td></tr>
</tbody>
</table>
```

table-full.html



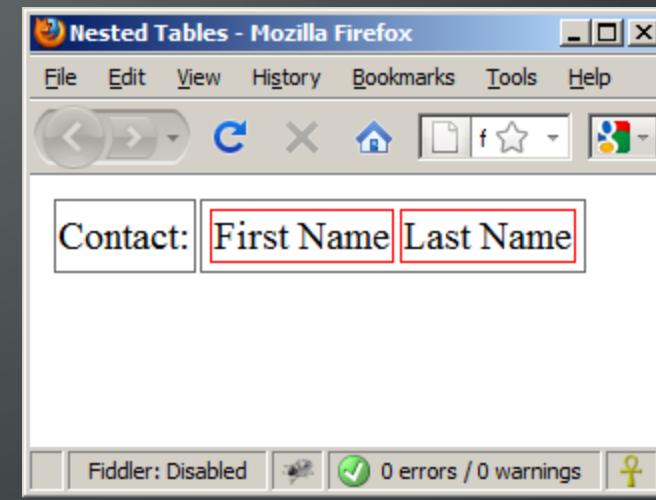
Although the footer is
before the data in the
code, it is displayed last

Nested Tables

- ◆ Table data “cells” (`<td>`) can contain nested tables (tables within tables):

```
<table>
  <tr>
    <td>Contact:</td>
    <td>
      <table>
        <tr>
          <td>First Name</td>
          <td>Last Name</td>
        </tr>
      </table>
    </td>
  </tr>
</table>
```

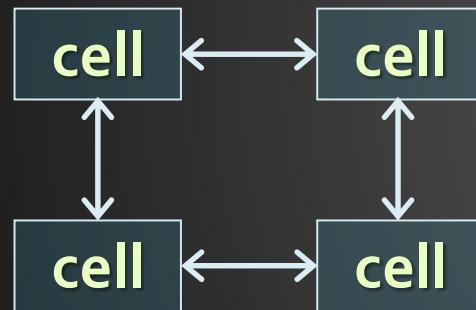
nested-tables.html



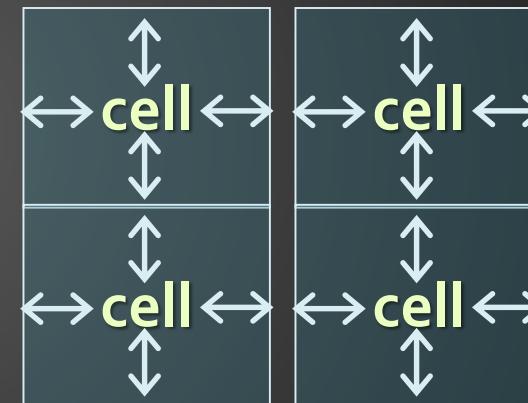
Cell Spacing and Padding

- ◆ Tables have two important attributes:

- ◆ **cellspacing**



- ◆ **cellpadding**



- ◆ Defines the empty space between cells

- ◆ Defines the empty space around the cell content

Cell Spacing and Padding – Example

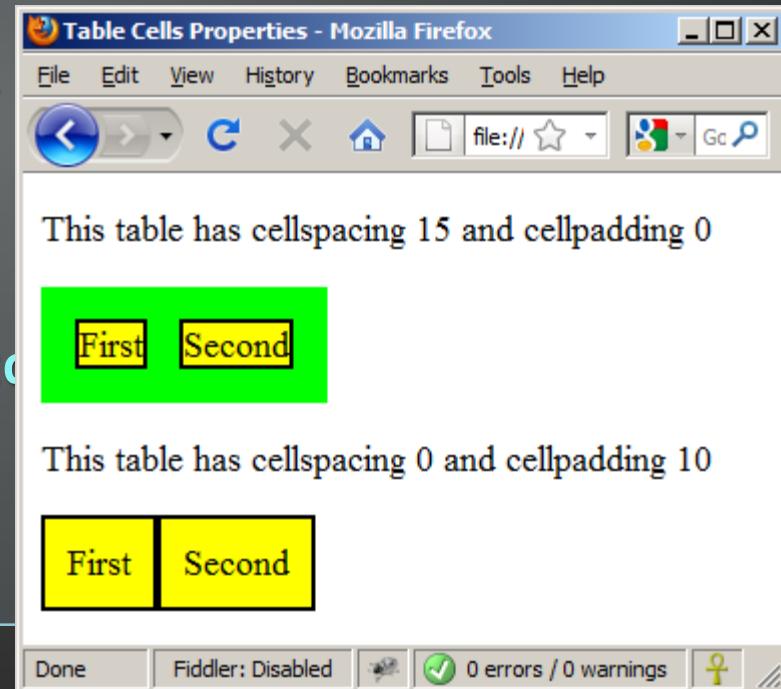
table-cells.html

```
<html>
  <head><title>Table Cells</title></head>
  <body>
    <table cellspacing="15" cellpadding="0">
      <tr><td>First</td>
      <td>Second</td></tr>
    </table>
    <br/>
    <table cellspacing="0" cellpadding="10">
      <tr><td>First</td><td>Second</td></tr>
    </table>
  </body>
</html>
```

Cell Spacing and Padding – Example (2)

table-cells.html

```
<html>
  <head><title>Table Cells</title></head>
  <body>
    <table cellspacing="15" cellpadding="0">
      <tr><td>First</td>
      <td>Second</td></tr>
    </table>
    <br/>
    <table cellspacing="0" cellpadding="10">
      <tr><td>First</td><td>Second</td></tr>
    </table>
  </body>
</html>
```



Column and Row Span

- ◆ Table cells have two important attributes:

- ◆ colspan

colspan="1"

cell[1,1]

colspan="1"

cell[1,2]

cell[2,1]

colspan="2"

- ◆ Defines how many columns the cell occupies

- ◆ rowspan

rowspan="2"

cell[1,1]

rowspan="1"

cell[1,2]

cell[2,1]

rowspan="1"

- ◆ Defines how many rows the cell occupies

Column and Row Span – Example

table-colspan-rowspan.html

```
<table cellspacing="0">
  <tr class="1"><td>Cell[1,1]</td>
    <td colspan="2">Cell[2,1]</td></tr>
  <tr class="2"><td>Cell[1,2]</td>
    <td rowspan="2">Cell[2,2]</td>
    <td>Cell[3,2]</td></tr>
  <tr class="3"><td>Cell[1,3]</td>
    <td>Cell[2,3]</td></tr>
</table>
```

Column and Row Span – Example (2)

table-colspan-rowspan.html

```
<table cellspacing="0">
  <tr class="1"><td>Cell[1,1]</td>
    <td colspan="2">Cell[2,1]</td></tr>
  <tr class="2"><td>Cell[1,2]</td>
    <td rowspan="2">Cell[2,2]</td>
    <td>Cell[3,2]</td></tr>
  <tr class="3">
    <td>Cell[1,3]</td>
    <td>Cell[2,3]</td>
  </tr>
</table>
```

Cell[1,1]	Cell[2,1]
Cell[1,2]	Cell[2,2]
Cell[1,3]	Cell[2,3]



HTML Forms

Entering User Data from a Web Page

Send me an application now!

First Name:

Last Name:

Age:

1-17 yrs
 18 yrs and over

I would like to learn to work with:

watercolors
 acrylics
 pastels

I am interested in art lessons because:

Registration Form - Mozilla Fi...

User name:

Password:

Gender: Male Female

Click to accept our terms:

Register Reset

Done

HTML

- ◆ Forms are the primary method for gathering data from site visitors
- ◆ Create a form block with

```
<form></form>
```

The "method" attribute tells how the form data should be sent – via GET or POST request

- ◆ Example:

```
<form name="myForm" method="post"  
action="path/to/some-script.php">  
...  
</form>
```

The "action" attribute tells where the form data should be sent

- ◆ Single-line text input fields:

```
<input type="text" name="FirstName" value="This  
is a text field" />
```

- ◆ Multi-line textarea fields:

```
<textarea name="Comments">This is a multi-line  
text field</textarea>
```

- ◆ Hidden fields contain data not shown to the user:

```
<input type="hidden" name="Account" value="This  
is a hidden text field" />
```

- ◆ Often used by JavaScript code

- ◆ Fieldsets are used to enclose a group of related form fields:

```
<form method="post" action="form.aspx">
    <fieldset>
        <legend>Client Details</legend>
        <input type="text" id="Name" />
        <input type="text" id="Phone" />
    </fieldset>
    <fieldset>
        <legend>Order Details</legend>
        <input type="text" id="Quantity" />
        <textarea cols="40" rows="10"
                  id="Remarks"></textarea>
    </fieldset>
```

- ◆ The **<legend></legend>** is the fieldset's title.

Form Input Controls

- ◆ **Checkboxes:**

```
<input type="checkbox" name="fruit"  
value="apple" />
```

- ◆ **Radio buttons:**

```
<input type="radio" name="title" value="Mr." />
```

- ◆ **Radio buttons can be grouped, allowing only one to be selected from a group:**

```
<input type="radio" name="city" value="Lom" />  
<input type="radio" name="city" value="Ruse" />
```

Other Form Controls

- ◆ Dropdown menus:

```
<select name="gender">
  <option value="Value 1"
    selected="selected">Male</option>
  <option value="Value 2">Female</option>
  <option value="Value 3">Other</option>
</select>
```

- ◆ Submit button:

```
<input type="submit" name="submitBtn"
value="Apply Now" />
```

Other Form Controls (2)

- ◆ Reset button – brings the form to its initial state

```
<input type="reset" name="resetBtn"  
value="Reset the form" />
```

- ◆ Image button – acts like submit but image is displayed and click coordinates are sent

```
<input type="image" src="submit.gif"  
name="submitBtn" alt="Submit" />
```

- ◆ Ordinary button – used for Javascript, no default action

```
<input type="button" value="click me" />
```

Other Form Controls (3)

- ◆ Password input – a text field which masks the entered text with * signs

```
<input type="password" name="pass" />
```

- ◆ Multiple select field – displays the list of items in multiple lines, instead of one

```
<select name="products" multiple="multiple">
    <option value="Value 1"
           selected="selected">keyboard</option>
    <option value="Value 2">mouse</option>
    <option value="Value 3">speakers</option>
</select>
```

Other Form Controls (4)

- ◆ File input – a field used for uploading files

```
<input type="file" name="photo" />
```

- ◆ When used, it requires the form element to have a specific attribute:

```
<form enctype="multipart/form-data">
...
<input type="file" name="photo" />
...
</form>
```

- ◆ Form **labels** are used to associate an explanatory text to a form field using the field's ID.

```
<label for="fn">First Name</label>
<input type="text" id="fn" />
```

- ◆ Clicking on a label focuses its associated field (checkboxes are toggled, radio buttons are checked)
- ◆ Labels are both a usability and accessibility feature and are required in order to pass accessibility validation.

HTML Forms – Example

form.html

```
<form method="post" action="apply-now.php">
    <input name="subject" type="hidden" value="Class" />
    <fieldset><legend>Academic information</legend>
        <label for="degree">Degree</label>
        <select name="degree" id="degree">
            <option value="BA">Bachelor of Art</option>
            <option value="BS">Bachelor of Science</option>
            <option value="MBA" selected="selected">Master of
                Business Administration</option>
        </select>
        <br />
        <label for="studentid">Student ID</label>
        <input type="password" name="studentid" />
    </fieldset>
    <fieldset><legend>Personal Details</legend>
        <label for="fname">First Name</label>
        <input type="text" name="fname" id="fname" />
        <br />
        <label for="lname">Last Name</label>
        <input type="text" name="lname" id="lname" />
```

HTML Forms – Example (2)

form.html (continued)

```
<br />
    Gender:
    <input name="gender" type="radio" id="gm" value="m" />
    <label for="gm">Male</label>
    <input name="gender" type="radio" id="gf" value="f" />
    <label for="gf">Female</label>
<br />
    <label for="email">Email</label>
    <input type="text" name="email" id="email" />
</fieldset>
<p>
    <textarea name="terms" cols="30" rows="4"
        readonly="readonly">TERMS AND CONDITIONS...</textarea>
</p>
<p>
    <input type="submit" name="submit" value="Send Form" />
    <input type="reset" value="Clear Form" />
</p>
</form>
```

HTML Forms – Example (3)

form.html (continued)

HTML Forms Example - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Academic information

Degree Master of Business Administration

Student ID

Classes attended Geography
Mathematics
English

Personal Details

First Name

Last Name

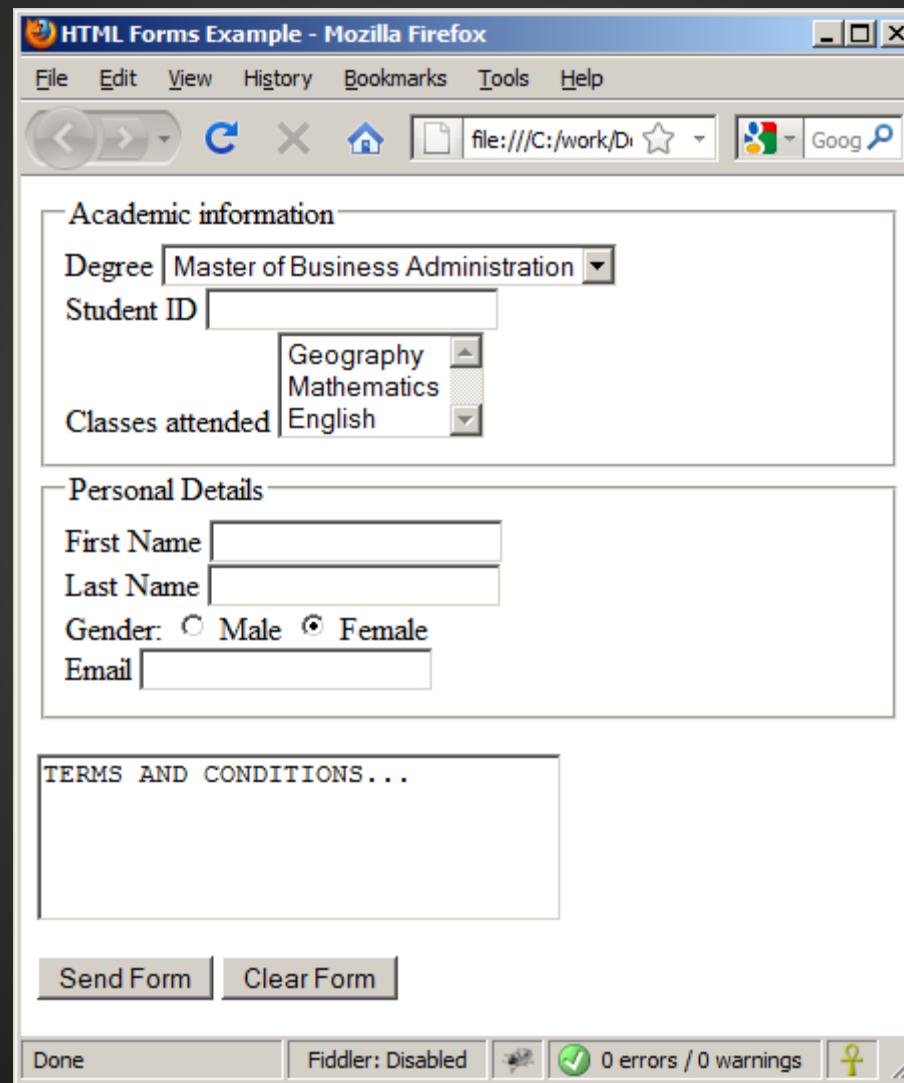
Gender: Male Female

Email

TERMS AND CONDITIONS...

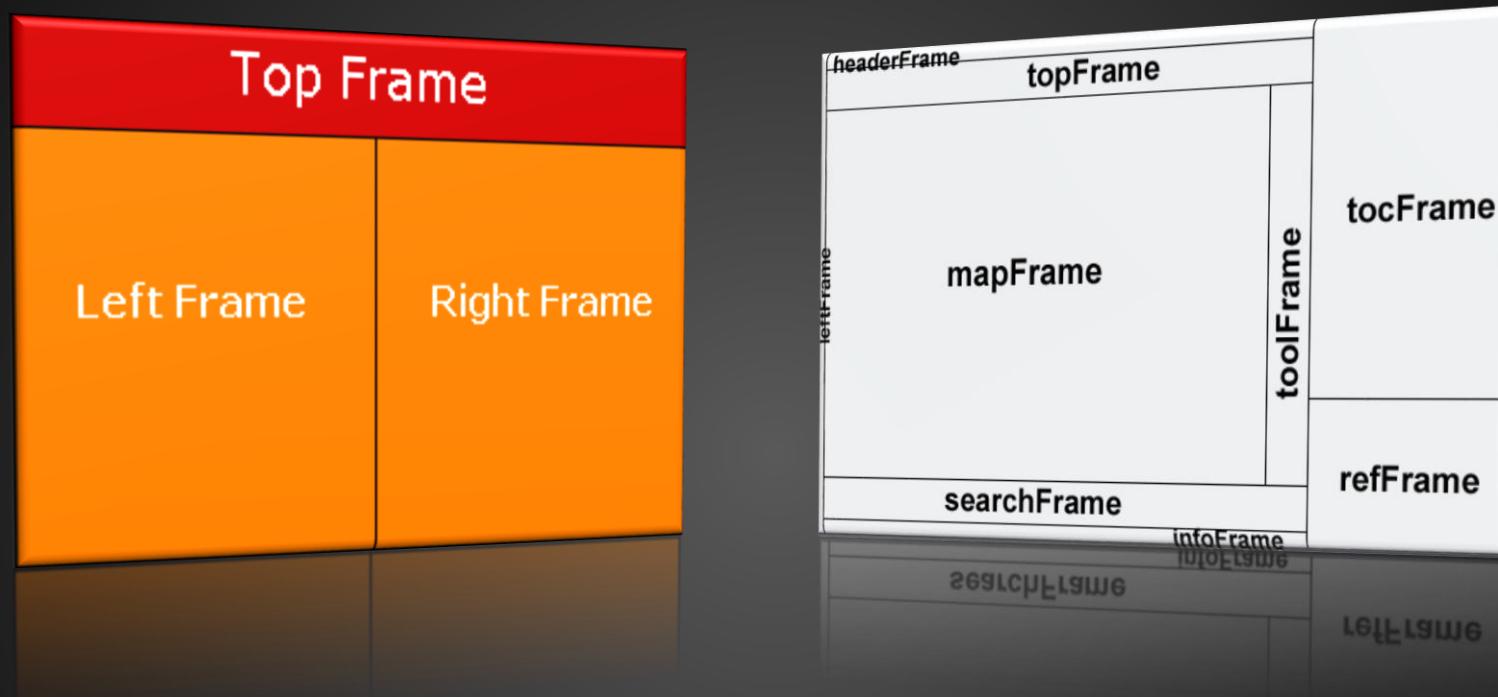
Send Form Clear Form

Done Fiddler: Disabled 0 errors / 0 warnings



- ◆ The tabindex HTML attribute controls the order in which form fields and hyperlinks are focused when repeatedly pressing the TAB key
 - ◆ tabindex="0" (zero) - "natural" order
 - ◆ If X > Y, then elements with tabindex="X" are iterated before elements with tabindex="Y"
 - ◆ Elements with negative tabindex are skipped, however, this is not defined in the standard

```
<input type="text" tabindex="10" />
```



HTML Frames

<frameset>, <frame> and <iframe>

HTML Frames

- ◆ Frames provide a way to show multiple HTML documents in a single Web page
- ◆ The page can be split into separate views (frames) horizontally and vertically
- ◆ Frames were popular in the early ages of HTML development, but now their usage is rejected
- ◆ Frames are not supported by all user agents (browsers, search engines, etc.)
 - A <noframes> element is used to provide content for non-compatible agents.

HTML Frames – Demo

frames.html

```
<html>  
  <head><title>Frames Example</title></head>  
  <frameset cols="180px,* ,150px">  
    <frame src="left.html" />  
    <frame src="middle.html" />  
    <frame src="right.html" />  
  </frameset>  
</html>
```

- ◆ Note the target attribute applied to the elements in the left frame.

Inline Frames: <iframe>

- ♦ Inline frames provide a way to show one website inside another website:

iframe-demo.html

```
<iframe name="iframeGoogle" width="600" height="400"  
src="http://www.google.com" frameborder="yes"  
scrolling="yes"></iframe>
```