



UNIVERSITY OF SANTO TOMAS

HTML

Part 1

TOPICS

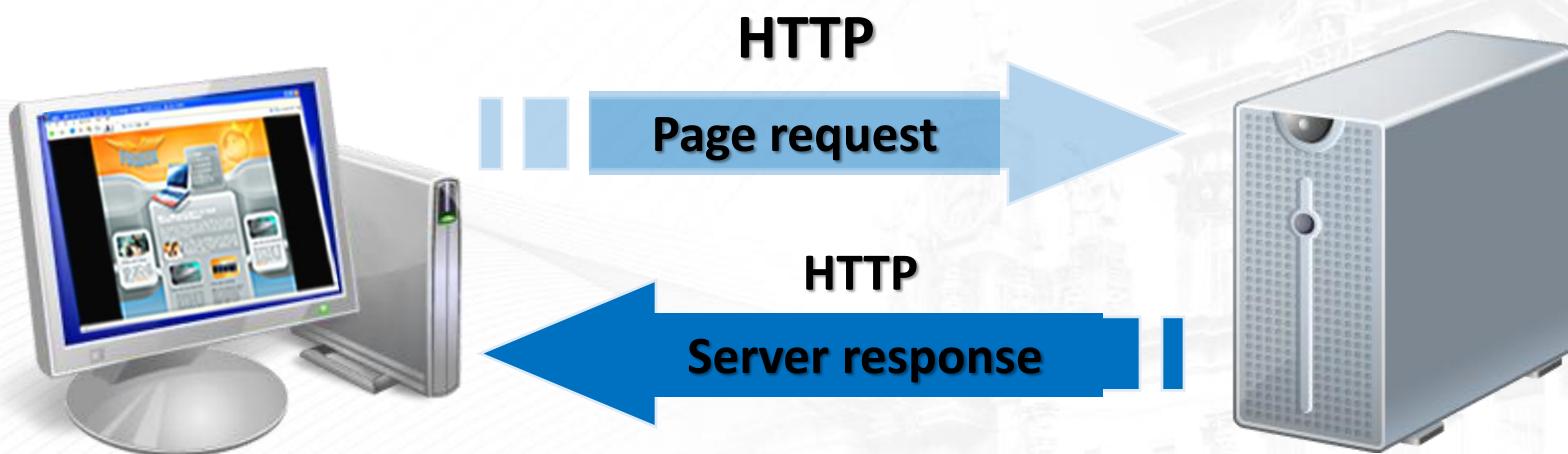
- Introduction to HTML
 - How the Web Works?
 - What is a Web Page?
 - My First HTML Page
 - Basic Tags: Hyperlinks, Images, Formatting
 - Headings and Paragraphs
- HTML in Details
 - The <!DOCTYPE> Declaration
 - The <head> Section: Title, Meta, Script, Style

TOPICS

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

How the Web Works?

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



**Client running a
Web Browser**

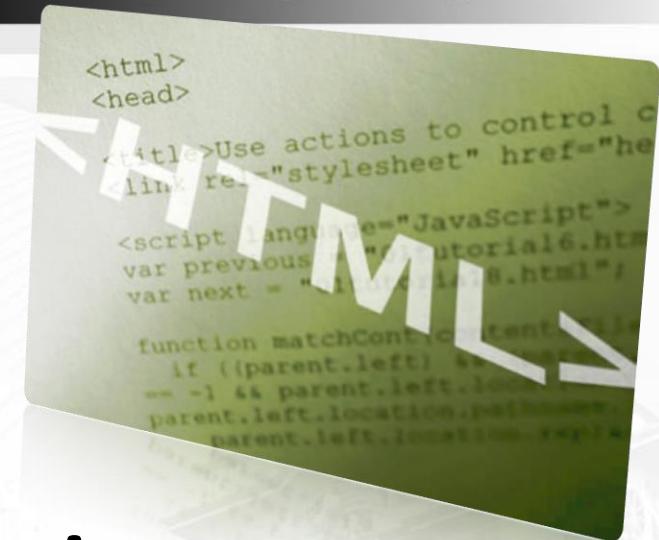
**Server running Web
Server Software
(IIS, Apache, etc.)**

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

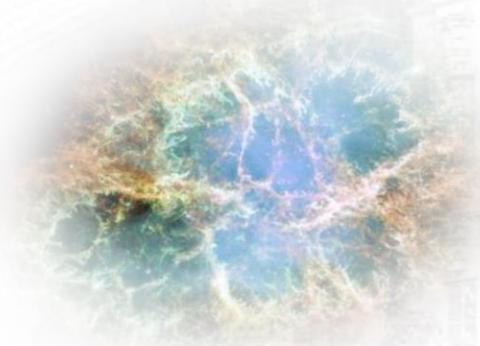
- An HTML file must have an .htm or .html file extension
- HTML files can be created with text editors:
 - NotePad, NotePad ++, PSPad
- Or HTML editors (WYSIWYG Editors):
 - Microsoft FrontPage
 - Macromedia Dreamweaver
 - Netscape Composer
 - Microsoft Word
 - Visual Studio



HTML Basics

Text, Images, Tables, Forms

ROW	RNDM. DATE	RNDM. NUMBER	RNDM. ALPHABET SUBSTRINGS
0	04/01/1994	367	abcdeghijklmnpqrstuvwxyz
1	25/04/1993	382	abcdeghijklmnpqrstuvwxyz
2	13/03/1991	64	abcdeghijklmnpqrstuvwxyz
3	15/05/1995	189	abcdeghijklmnpqrstuvwxyz
4	09/09/2005	351	abcdeghijklmnpqrstuvwxyz
5	27/07/2004	300	abcdeghijklmnpqrstuvwxyz
6	01/09/2004	300	abcdeghijklmnpqrstuvwxyz



HTML Structure

- HTML is comprised of “elements” and “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>`

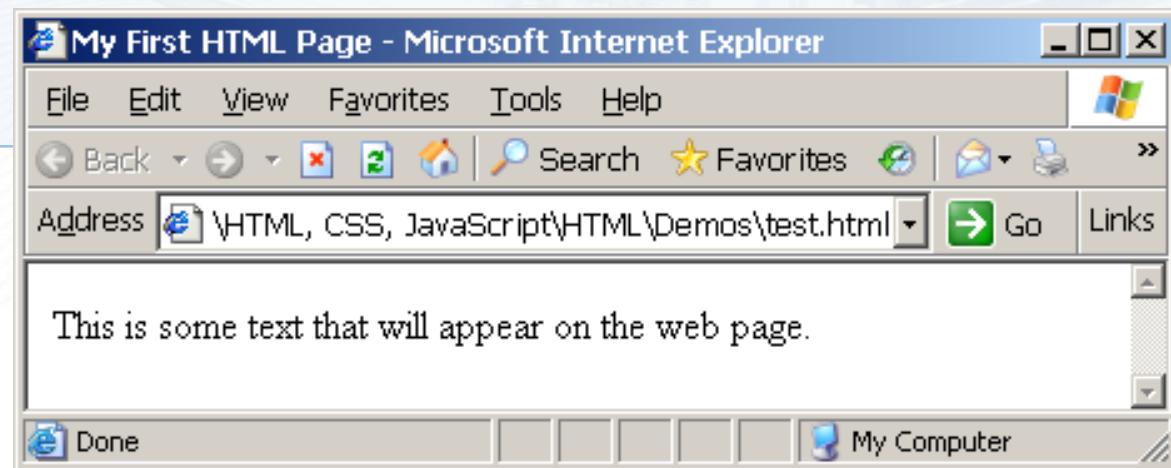
HTML Code Formatting

- 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 that will appear on the web page</p>
  </body>
</html>
```



First HTML Page: Tags

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

Opening tag

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 ***emphasized.***

new line

This one is ***more emphasized.***

Some Simple Tags – Example

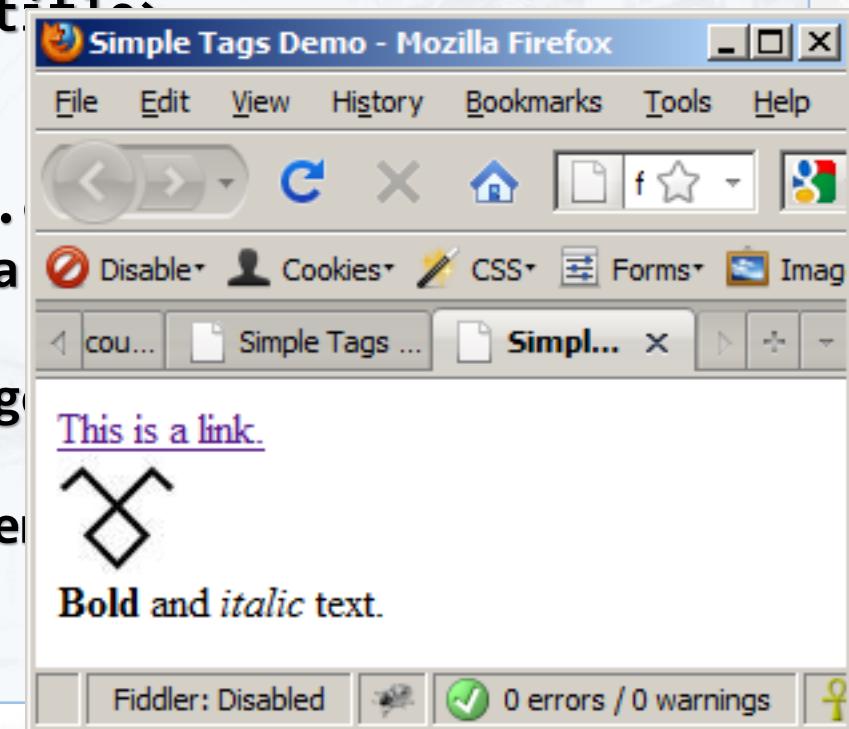
some-tags.html

```
<!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
 - 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>
```

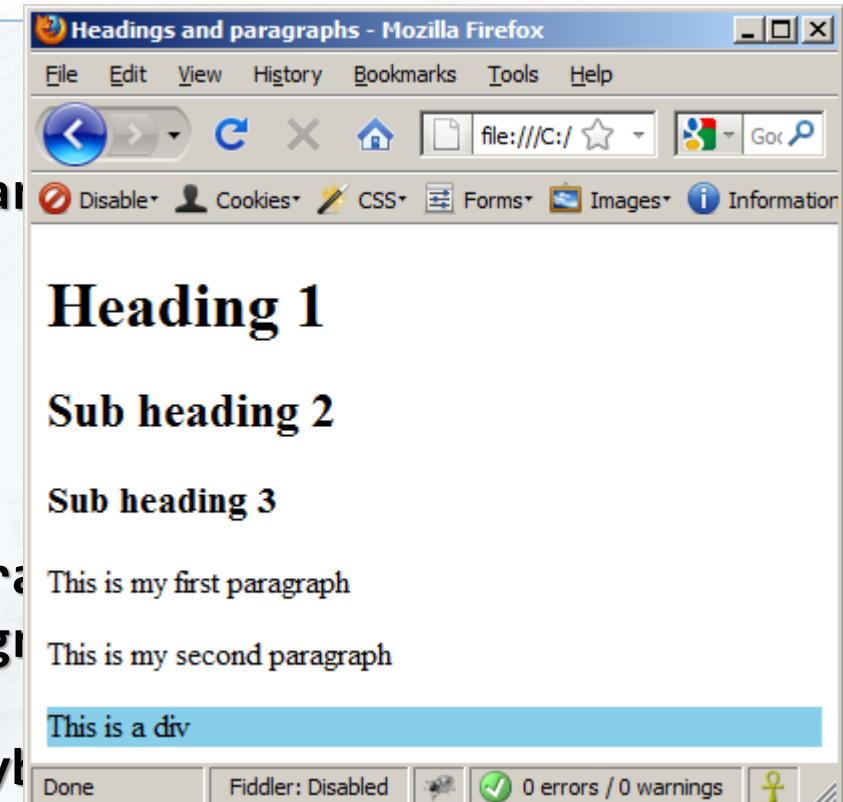
Headings and Paragraphs – Example (2)

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>

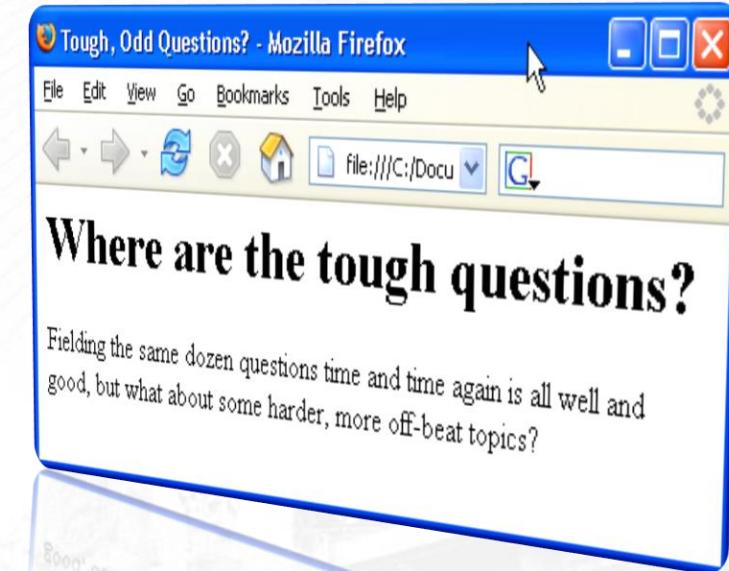
    <div style="background:skyblue">
      This is a div</div>
  </body>
</html>
```



```
1 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
2   "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
3 <html xmlns="http://www.w3.org/1999/xhtml">
4   <head>
5     <title>Tabview - Demo</title>
6
7     <script src="prototype.js" type="text/javascript"></script>
8     <script src="tabview.js" type="text/javascript"></script>
9
10    <link href="tabview.css" rel="stylesheet" type="text/css" />
11
12  </head>
13  <body id="body">
14
15    <ul class="tab-collection">
16      <li class="tab" title="Tab1">
17        <h1>Tab 1</h1>
18        
19      </li>
20
21      <li class="tab" title="Tab2">
22        <h1>Tab 2</h1>
23        
24      </li>
25
26      <li class="tab" title="Tab3">
27        <h1>Tab 3</h1>
28        
29      </li>
30
31    <script type="text/javascript">
32      UI.Tabview.init('body', { width: 500px });
33    </script>
34
35  </body>
36  </html>
37
38  <!-->
39  <!-->
40  <!-->
41  <!-->
42  <!-->
43  <!-->
```

Introduction to HTML

HTML Document Structure in Depth



Preface

- 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" />
```

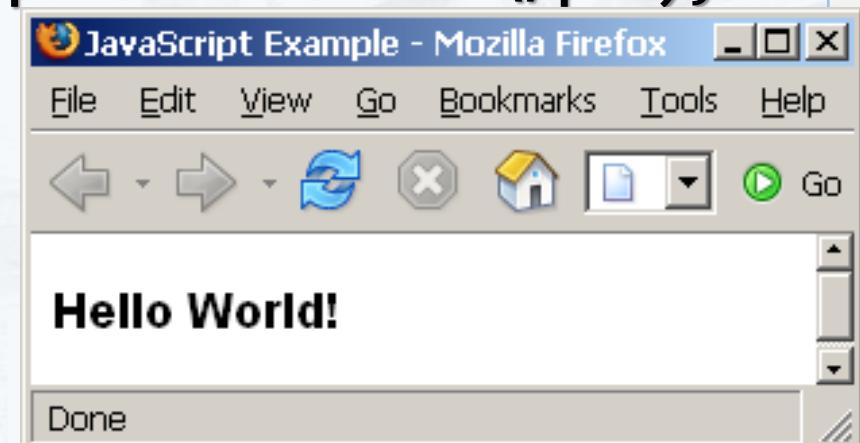
<head> Section: <script>

- The <script> element is used to embed scripts into an HTML document
 - Scripts 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

[scripts-example.html](#)

```
<!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>
```

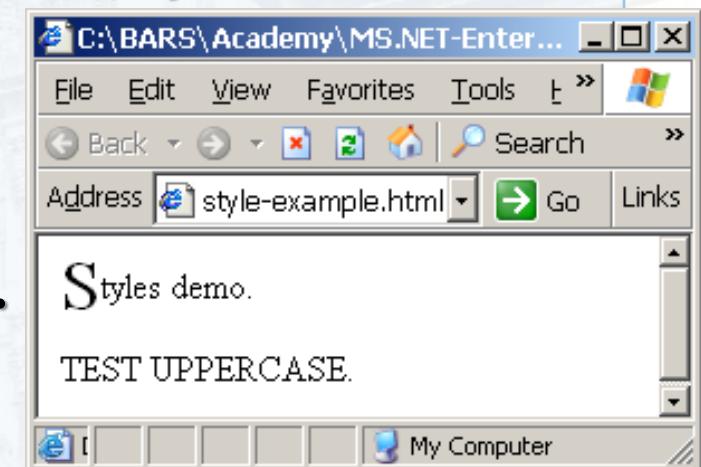


<head> Section: <style>

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

Text Formatting – Example

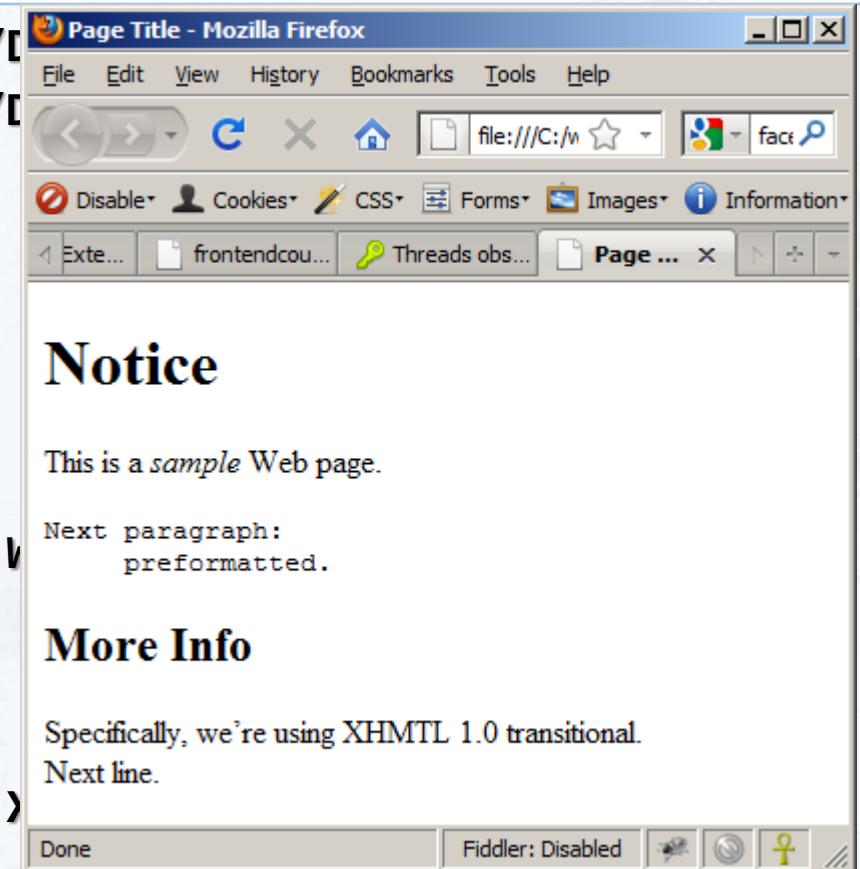
text-formatting.html

```
<!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 XHTML 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

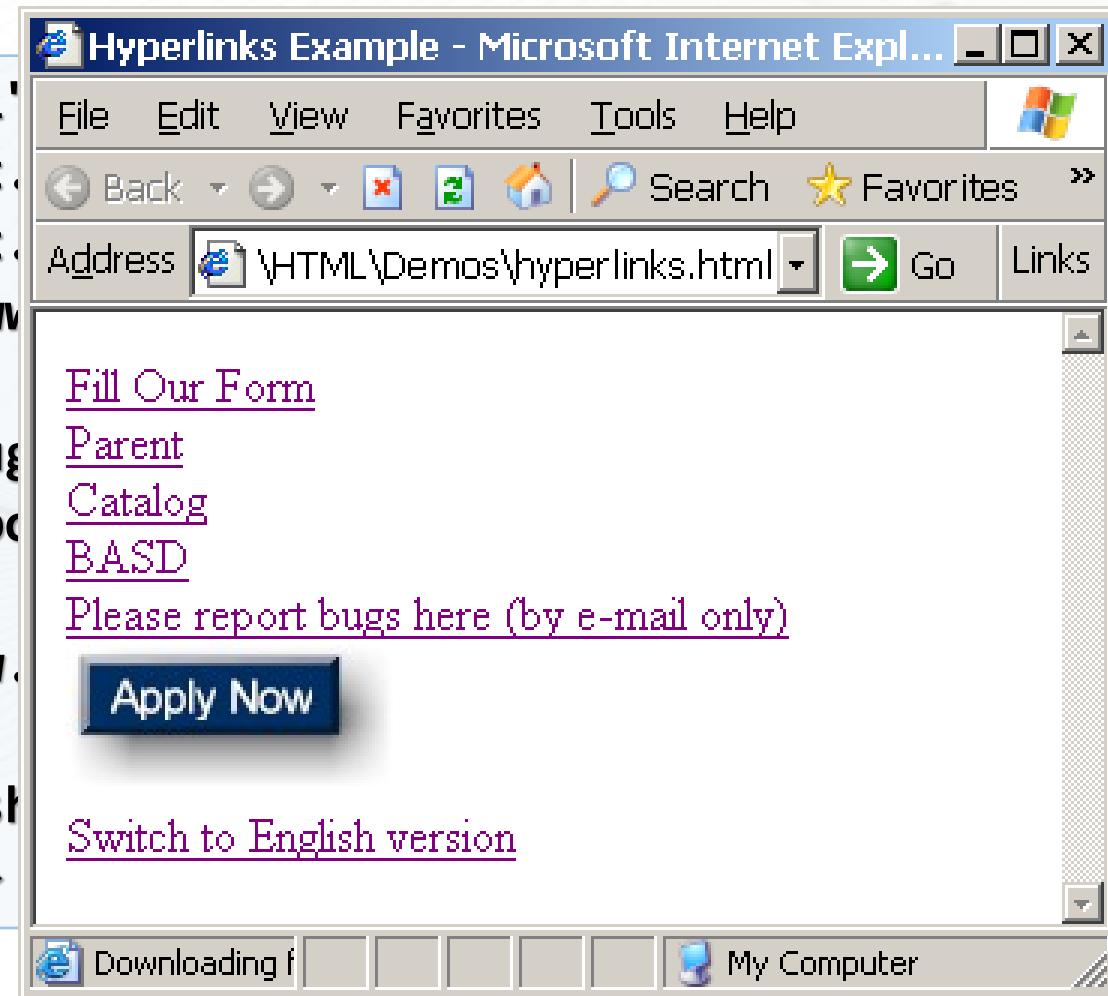
hyperlinks.html

```
<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/cat...
<a href="http://www...
<br />
<a href="mailto:bug...
Report">Please rep...
<br />
<a href="apply-now...
/></a> <br />
<a href="../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 ...
```

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Links to the Same Document – Example (2)

links-to-same-document.html

```
<h1>Table
```

```
<p><a href="#">
```

```
<a href="#">
```

```
<a href="#">
```

```
...the rest
```

```
<!-- The c
```

```
<h2 id="s
```

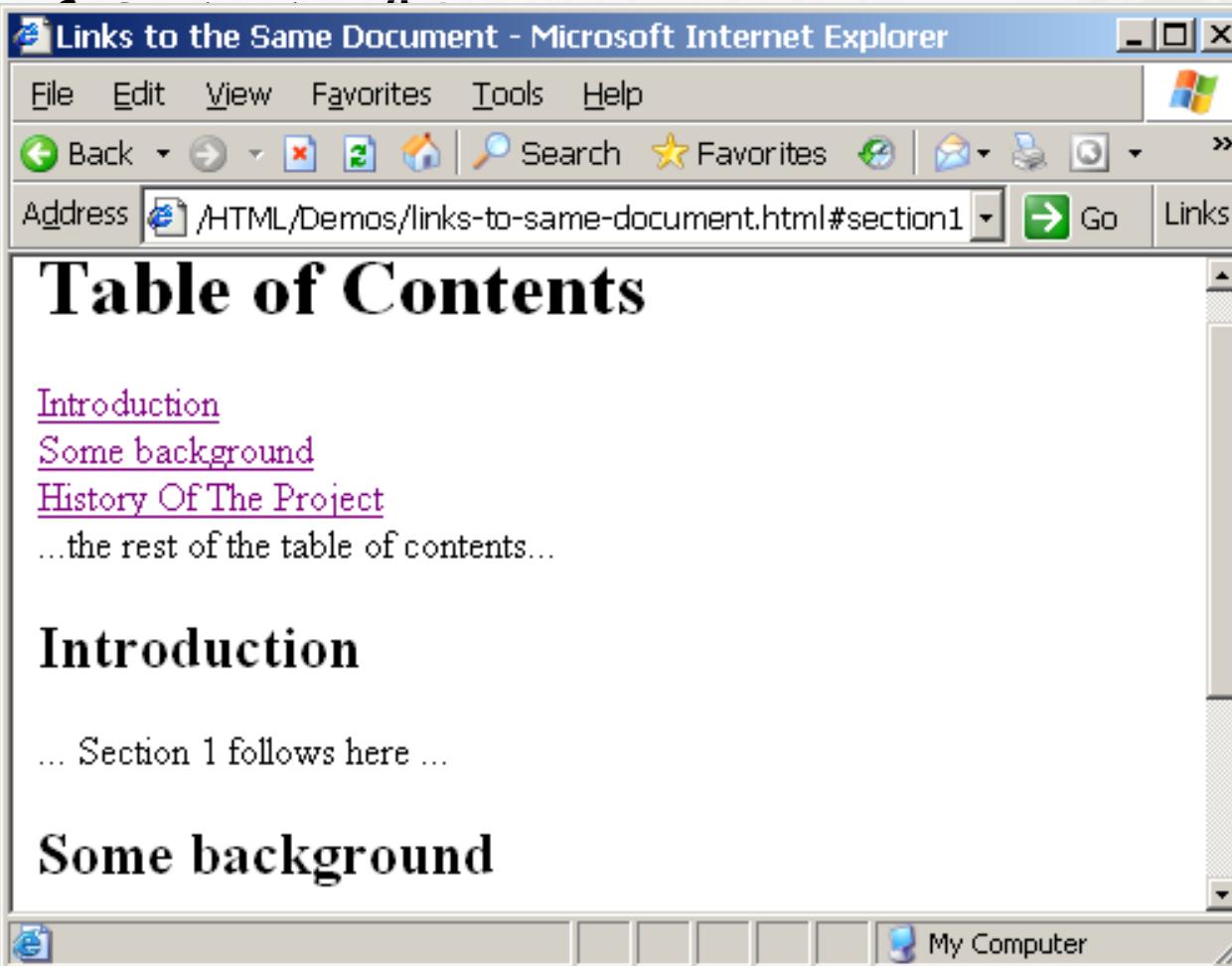
```
... Sectio
```

```
<h2 id="s
```

```
... Sectio
```

```
<h3 id="s
```

```
... Sectio
```



The screenshot shows a Microsoft Internet Explorer window titled "Links to the Same Document - Microsoft Internet Explorer". The address bar displays the URL "/HTML/Demos/links-to-same-document.html#section1". The page content is a "Table of Contents" section. It contains several links, some of which are purple (indicating they have been visited) and others are black. The visited links include "Introduction", "Some background", and "History Of The Project". Below these, there is a link "...the rest of the table of contents...". The main content area shows three sections: "Introduction", "Some background", and "History Of The Project". The "Introduction" section has the text "... Section 1 follows here ...". The "Some background" section is currently active, indicated by a blue border around its heading.

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 Tags</title>
  </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

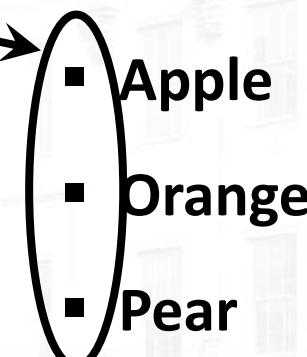
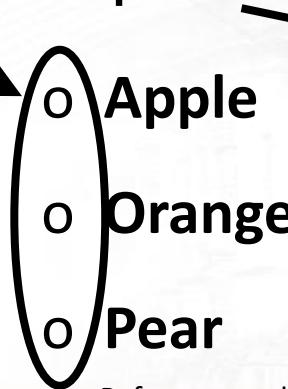
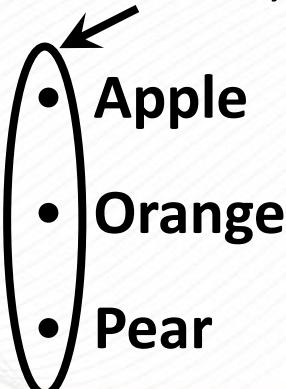
Unordered Lists: Tag

- 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



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

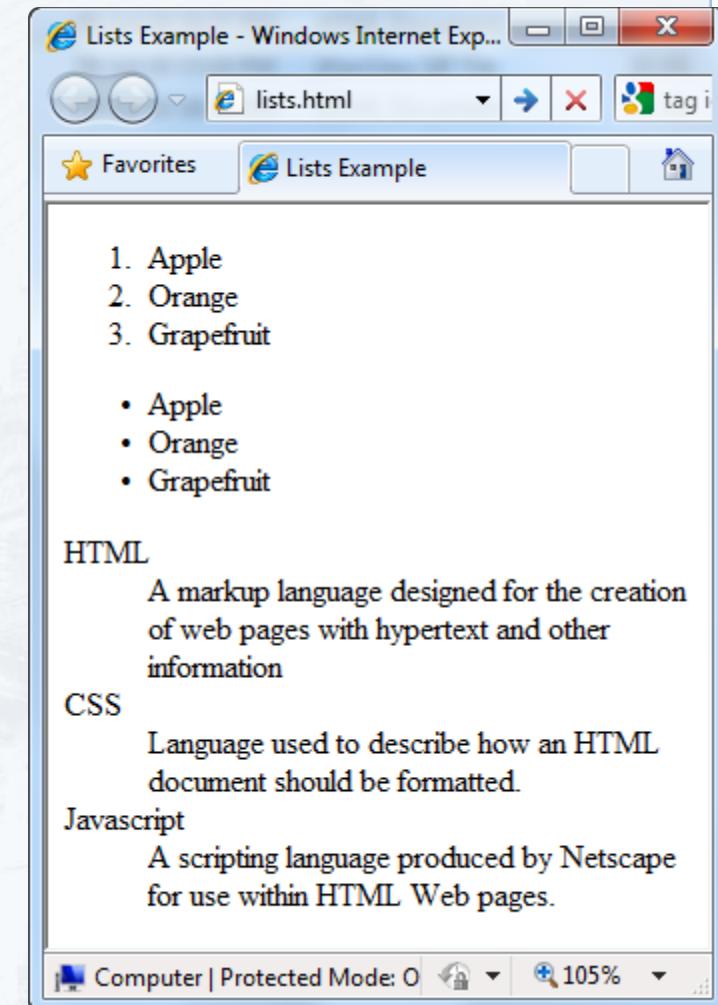
Lists – Example

lists.html

```
<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	&nbsp	
Em Dash	—	—
Quotation Mark	"	"
Euro	€	€
British Pound	£	£
Japanese Yen	¥	¥



Special Characters – Example

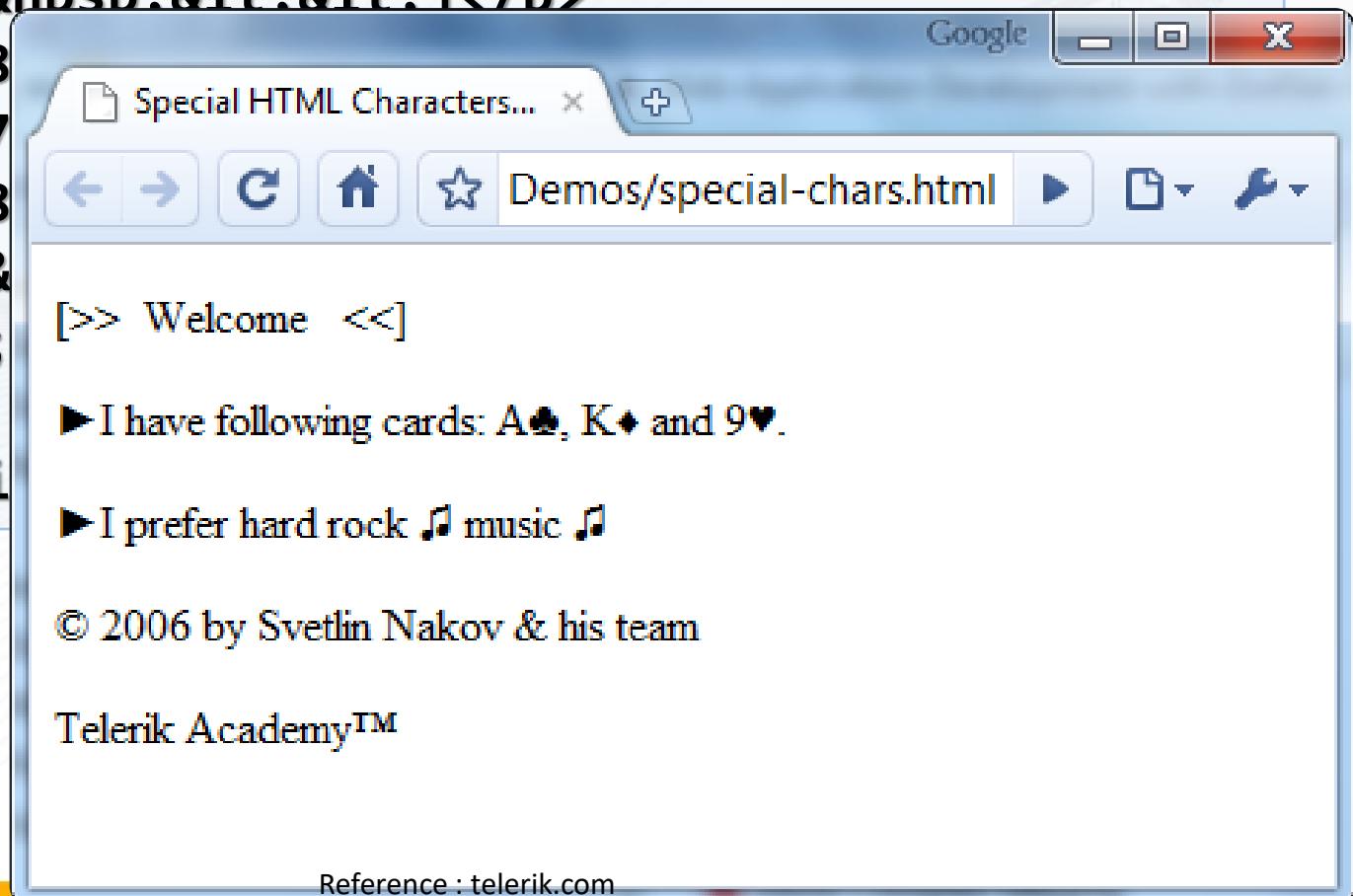
special-chars.html

```
<p>[&gt;&gt;&nbsp;&nbsp;Welcome  
  &nbsp;&nbsp;&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)

special-chars.html

```
<p>[&gt;&gt;&nbsp;&nbsp;Welcome  
&nbsp;&nbsp;&lt;&lt;1</p>  
<p>#9658  
A#9827  
<p>#9658  
music &  
<p>&copy;  
team</p>  
<p>Teleri
```



Google

Special HTML Characters...

Demos/special-chars.html

[>> Welcome <<]

▶ I have following cards: A♣, K♦ and 9♥.

▶ I prefer hard rock ♫ music ♫

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Reference : telerik.com