

Client Side Programming: HTML

Introduction:

- | Web technologies can be categorized into two types:
 - Client side
 - Server side
 - Client side technologies are used for designing and performing client side validations.
 - Server side technologies are used for fetching the data from database and implementing business logic.

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HTML (Hyper Text Markup Language)

- ▯ Commonly used to create the web page.
- ▯ Provides a means to describe the structure of text and graphics on a web page.
- ▯ HTML is developed and maintained by World Wide Web Consortium(W3C).

HTML Document Structure

```
⌋ <!DOCTYPE>  
  | <Html>  
    ⌋ <Head>  
      ⌋ <Title>  
      ⌋ </Title>  
    ⌋ </Head>  
    ⌋ <Body>  
    ⌋ </Body>  
⌋ </Html>
```

| <!DOCTYPE>

- ▯ Is the first tag in HTML document which specifies DTD used by the document.
- ▯ A DTD is separate file containing formal definition of grammar used in markup language.
- ▯ The browser checks the code of document against the rule in <!DOCTYPE> declaration.
- ▯ Tells the browser about the version of language.
- ▯ Does not have a closing tag

The <!DOCTYPE> declaration helps the browser to display a web page correctly.

- ▯ There are many different documents on the web, and a browser can only display an HTML page 100% correctly if it knows the HTML type and version used.
- ▯ The `<title>` tag contains the title of HTML document that appears in the title bar of web page.
- ▯ It is used by search engine to refer the document.
- ▯ `<body>` tag contains body of html document.
- ▯ It includes entire content that will appear in the web browser.
- ▯ Can also include text, images and multimedia elements.

• 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">
```


• **<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

• 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 -->`

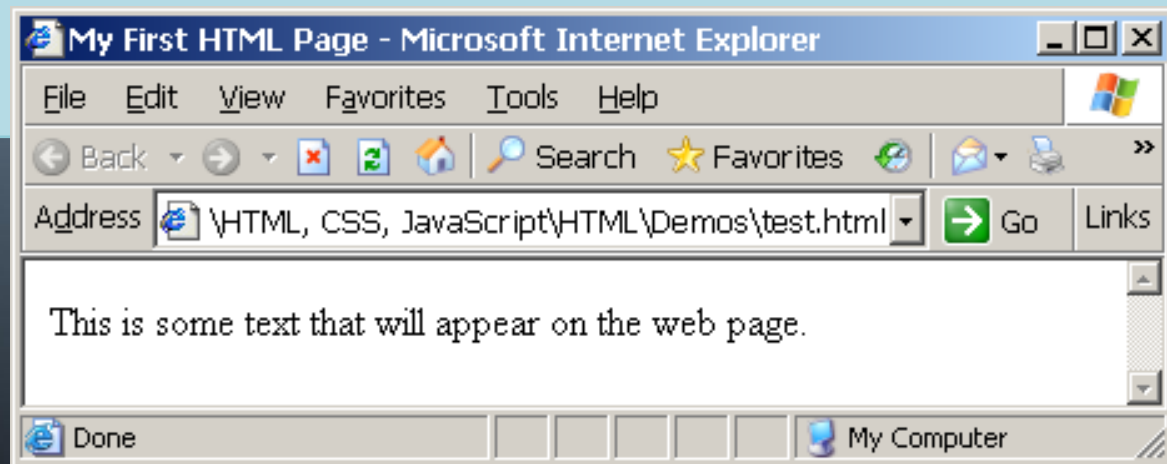
```
| <!DOCTYPE html>
| <html>
| <body>
| <p>My first paragraph.</p>
| </body>
| </html>
```

- Internet Programming

- **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 web page`
- `</p>`
- `</body>`
- `</html>`



HTML Headings

| HTML headings are defined with the `<h1>` to `<h6>` tags.

| `<!DOCTYPE html>`

| `<html>`

| `<body>`

| `<h1>`This is heading 1`</h1>`

| `<h2>`This is heading 2`</h2>`

| `<h3>`This is heading 3`</h3>`

| `<h4>`This is heading 4`</h4>`

| `<h5>`This is heading 5`</h5>`

| `<h6>`This is heading 6`</h6>`

| `</body>`

| `</html>`

HTML Headings

- | Browsers automatically add some empty space (a margin) before and after each heading.
- ▯ Use HTML headings for headings only. Don't use headings to make text BIG or bold.
- ▯ Search engines use your headings to index the structure and content of your web pages.
- ▯ H1 headings should be used as main headings, followed by H2 headings, then the less important H3 headings, and so.

images

- ▯ HTML images are defined with the `` tag.
- ▯ `<!DOCTYPE html>`
- ▯ `<html>`
- ▯ `<body>`
- ▯ `` `</body>`
- ▯ `</html>`

images

- ▯ The `` tag is empty, which means that it contains attributes only, and has no closing tag.
- ▯ To display an image on a page, you need to use the `src` attribute.
- ▯ `Src` stands for "source".
- ▯ The value of the `src` attribute is the URL of the image you want to display.

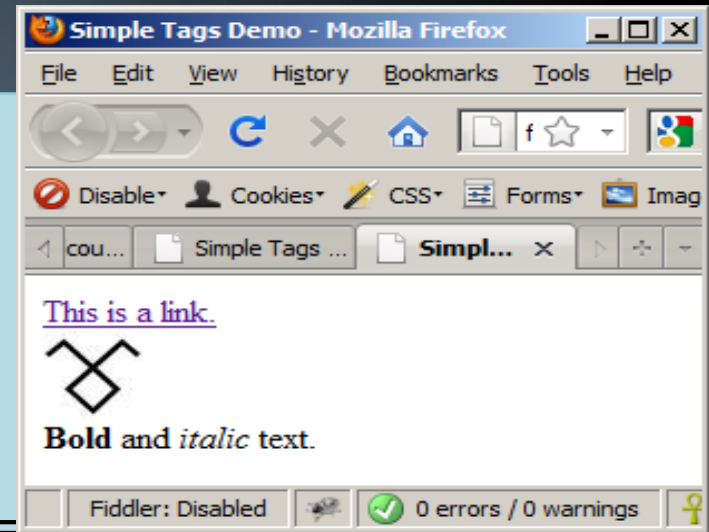
images

- ▮ The alt attribute specifies an alternate text for an image, if the image cannot be displayed.
- ▮ ``
- ▮ The alt attribute provides alternative information for an image if a user for some reason cannot view image.
- ▮ The height and width attributes are used to specify the height and width of an image.
- ▮ The attribute values are specified in pixels by default:

• Some Simple Tags – Example

• some-tags.html

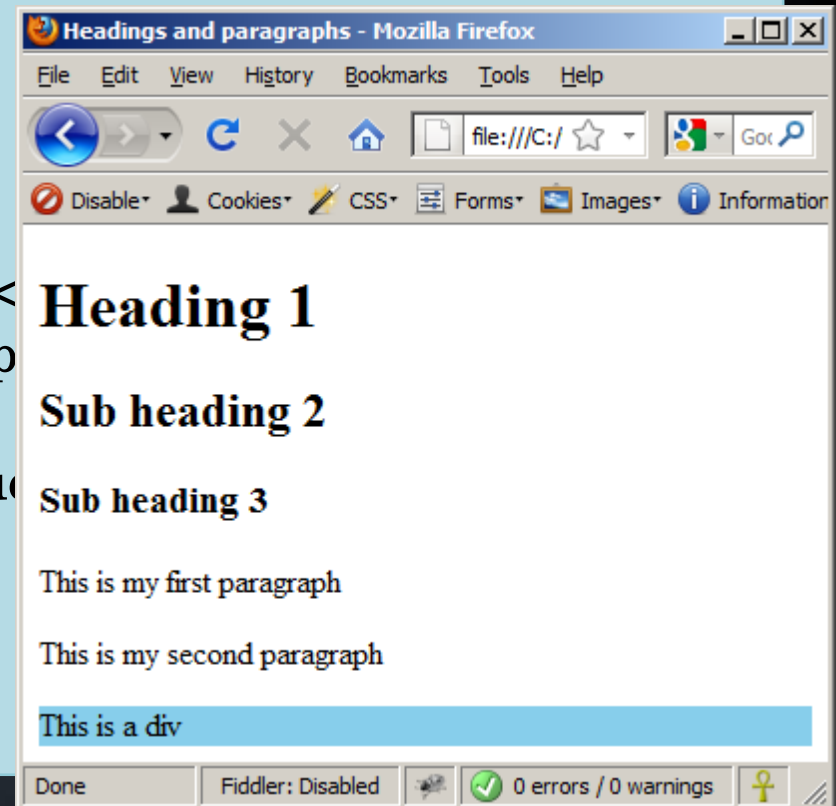
- `<!DOCTYPE HTML>`
- `<html>`
- `<head>`
- `<title>Simple Tags Demo</title>`
- `</head>`
- `<body>`
- `This is a link.`
- `
`
- ``
- `
`
- `Bold` and `italic` text.
- `</body>`
- `</html>`



• 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>`



- ▯ Attributes provide additional information about HTML elements.
- ▯ Attributes are always specified in the start tag
- ▯ Attributes come in name/value pairs like: `name="value"`
- ▯ Attribute values should always be enclosed in quotes.

- ▯ The `<hr>` tag creates a horizontal line in an HTML page.
- ▯ `
` tag is used for line break.

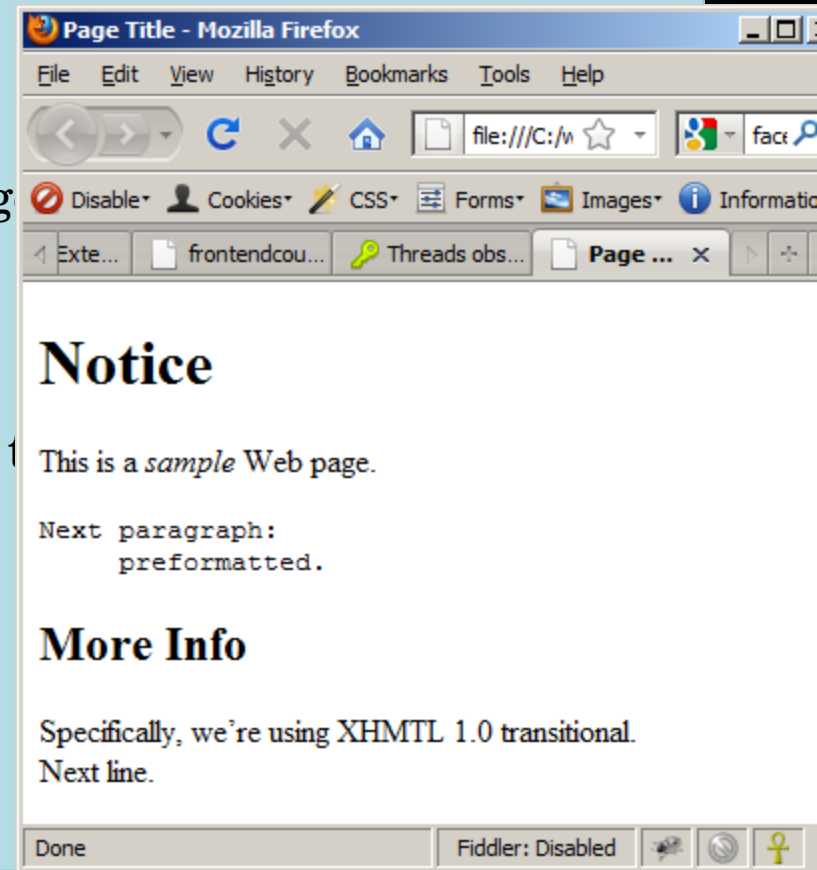
• Text Formatting

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

<code></code>	bold
<code><i></i></code>	<i>italicized</i>
<code><u></u></code>	<u>underlined</u>
<code><sup></sup></code>	Sample ^{superscript}
<code><sub></sub></code>	Sample _{subscript}
<code></code>	strong
<code></code>	<i>emphasized</i>
<code><pre></pre></code>	Preformatted text
<code><blockquote></blockquote></code>	Quoted text block
<code></code>	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><pre>Next paragraph:
  preformatted.</pre></p>
    <h2>More Info</h2>
    <p>Specifically, we're using XHTML 1.0 transitional.
    Next line.</p>
  </body>
</html>
```



HTML Links(Hyperlink)

- ▯ The HTML `<a>` tag defines a hyperlink.
- ▯ A hyperlink (or link) is a word, group of words, or image that you can click on to jump to another document.
- ▯ When you move the cursor over a link in a Web page, the arrow will turn into a little hand.
- ▯ The most important attribute of the `<a>` element is the href attribute, which indicates the link's destination.

• Hyperlinks: `<a>` Tag

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

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

- **`Fill Our Form`**

- `Parent`

- `Catalog`

• Hyperlinks: <a> Tag

- ♦ Link to an external Web site:
 - 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= "http://www.debug.org"
  target= "_blank"> BASD </a>
```

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

• Hyperlinks: <a> Tag

- ♦ Link to a document called `apply-now.html`
 - On the same server, in same directory
 - Using an image as a link button:
- ♦ Link to a document called `index.html`
 - On the same server, in the subdirectory `english` of the parent directory:

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

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

• Hyperlinks and Sections

- ♦ Link to another location in the same document:
- ♦ Link to a specific location in another document:

- `< a href= "# section1"> G o to I n t r o d u c t i o n< /a>`
- ...
- `< h2 id= "section1"> I n t r o d u c t i o n< /h2>`

- `< a href= "chapter3.htm l# section3.1.1"> G o to
S e c t i o n 3 . 1 . 1< /a>`
- `< !-- I n c h a p t e r 3 . h t m l -->`
- ...
- `< d i v id= "section3.1.1">`
- `< h3> 3 . 1 . 1 . T e c h n i c a l B a c k g r o u n d< /h3>`
- `< /d i v>`

- hyperlinks.html

- `Fill Our Form
`
- `Parent
`
- `Catalog
`
- `BASD

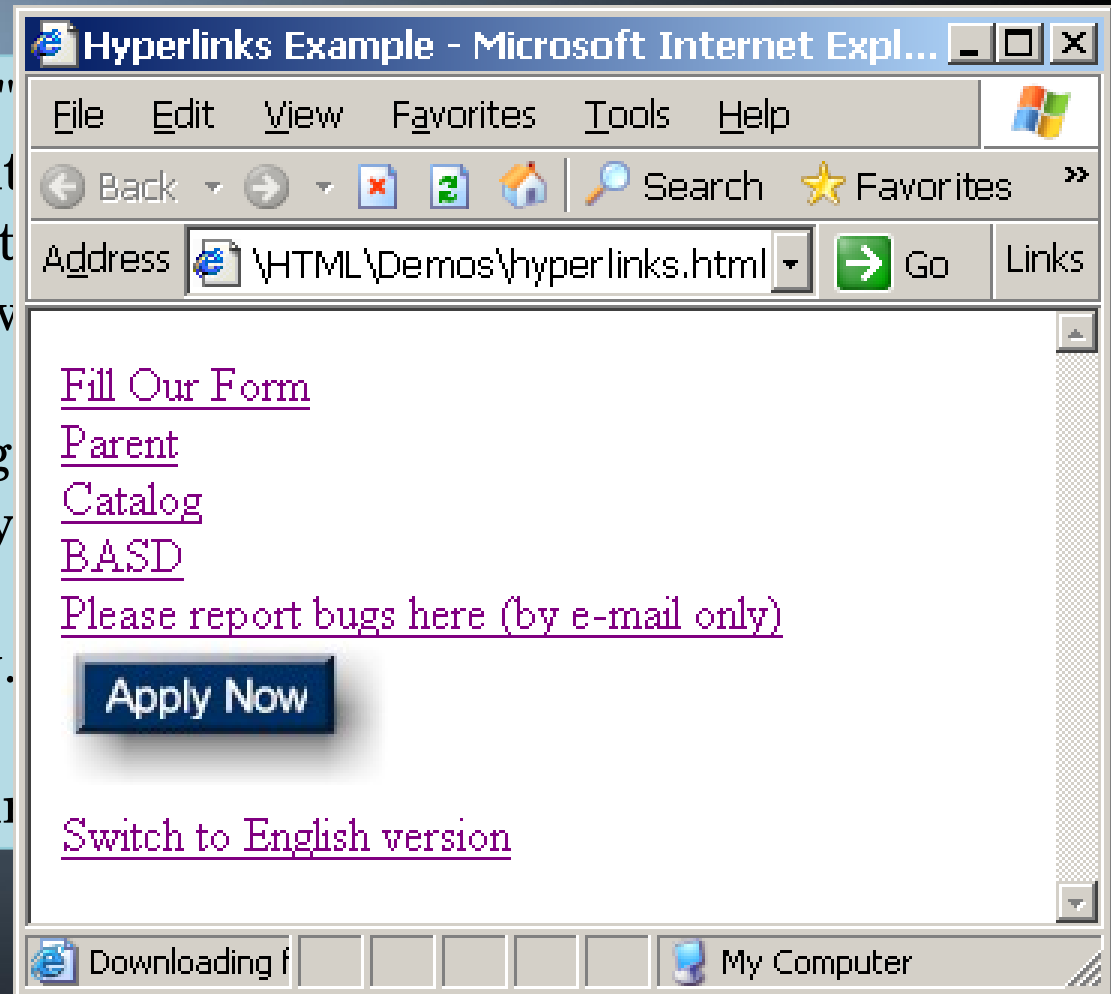
`
- `Please
report bugs here (by e-mail only)`
- `
`
- `
`
- `Switch to English version

`

Hyperlinks – Example

- hyperlinks.html

- ``
- `<a href=" ../parent.ht`
- `<a href="stuff/cat.ht`
- `<a href="http://www`
`
`
- `<a href="mailto:bug`
report bugs here (by
- `
`
- `<a href="apply-now.`
`/>
`
- `<a href=" ../english/in`
`
`



• Links to the Same Document – Example

- links-to-same-document.html

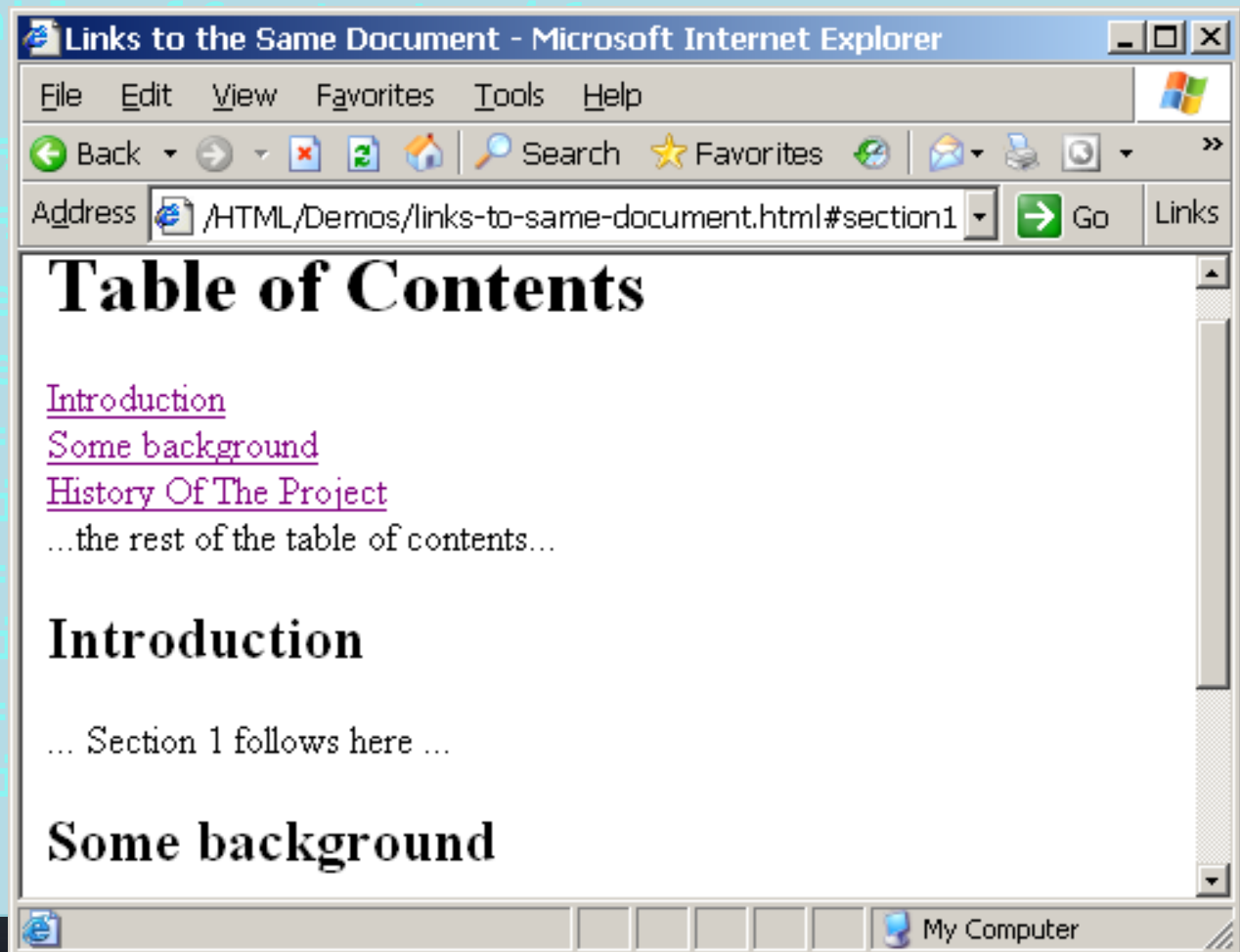
- `< h1> Table of Contents< /h1>`
- `< p> < a href= "# section1"> Introduction< /a> < br />`
- `< a href= "# section2"> Som e backg round< /a> < br />`
- `< a href= "# section2.1"> Project H istory< /a> < br />`
- ...the rest of the table of contents...
- `<!-- The docum ent text follow s here -->`
- `< h2 id= "section1"> Introduction< /h2>`
- ...Section 1 follow s here ...
- `< h2 id= "section2"> Som e backg round< /h2>`
- ...Section 2 follow s here ...
- `< h3 id= "section2.1"> Project H istory< /h3>`
- ...Section 2.1 follow s here ...

- | By default, links will appear as follows in all browsers:
 - ▯ An unvisited link is underlined and blue
 - ▯ A visited link is underlined and purple
 - ▯ An active link is underlined and red
- ▯ `click here`

- **Links to the Same Document – Example**

- **links-to-same-document.html**

- `<h1> Table of Contents`
- `<p>Introduction`
- `Some background`
- `History Of The Project`
- `...the rest of the table of contents...`
- `<!-- The rest of the table of contents -->`
- `<h2 id="section1">Introduction`
- `... Section 1 follows here ...`
- `<h2 id="section2">Some background`
- `... Section 2 follows here ...`



• Miscellaneous Tags

- ♦ `< h r />` : Draws a horizontal rule (line):
- ♦ `< cen te r> < /cen te r>` : Deprecated!
- ♦ `< fon t> < /fon t>` : Deprecated!

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

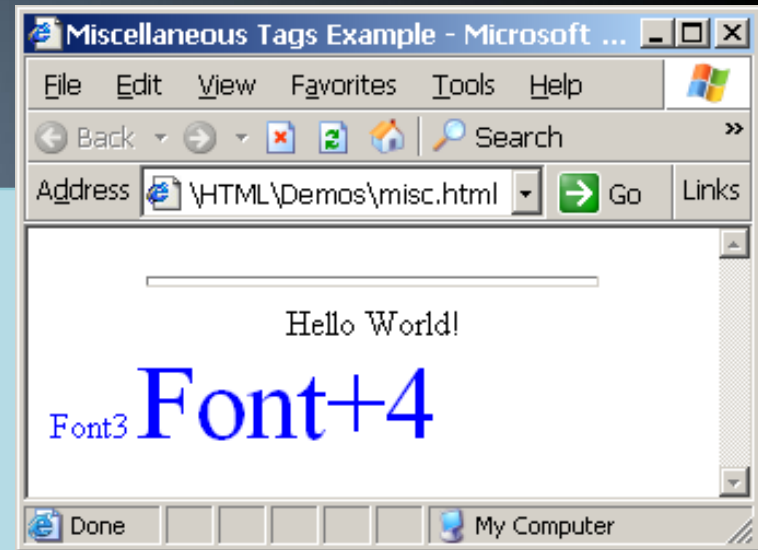
- `<center>Hello World!</center>`

- `Font3`

- `Font+4`

- Miscellaneous Tags – Example

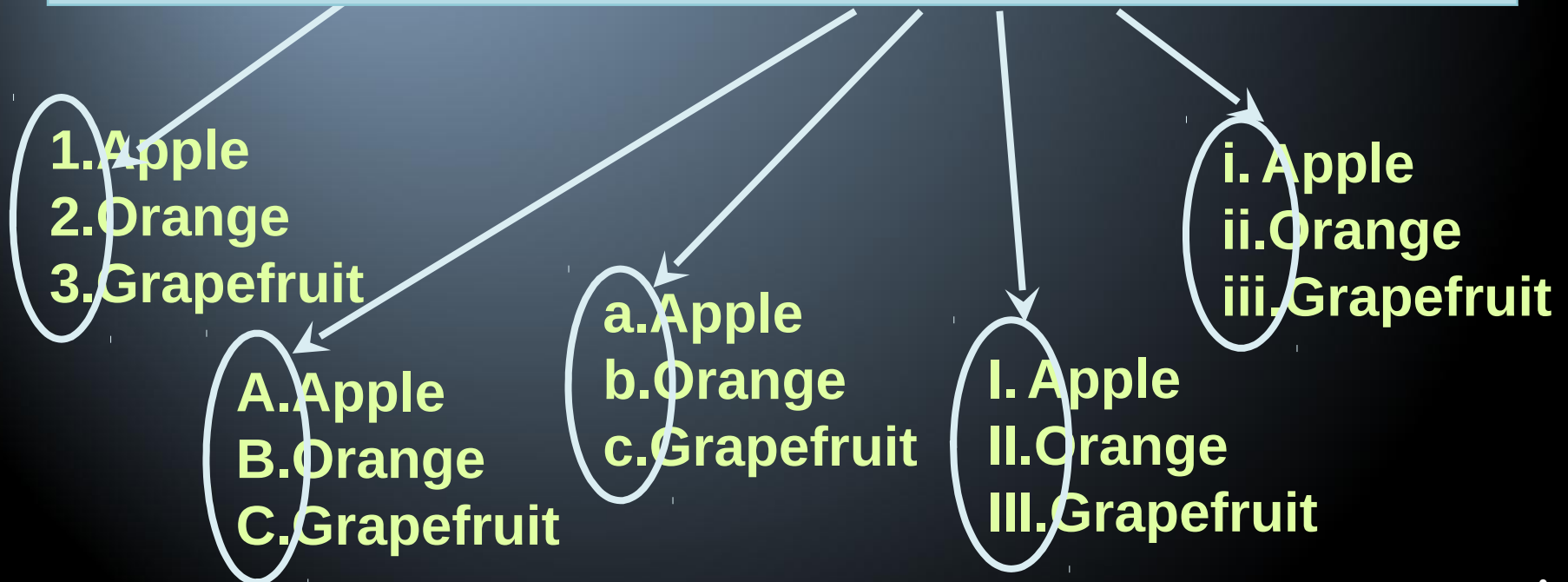
- misc.html



• Ordered Lists: `` Tag

- ♦ Create an Ordered List using `` `` :
- ♦ Attribute values for type are 1, A, a, I, or i

- `<ol type="1">`
- `Apple`
- `Orange`
- `Grapefruit`
- ``

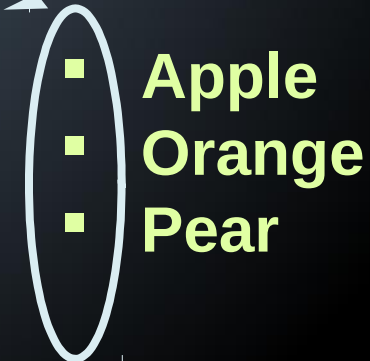
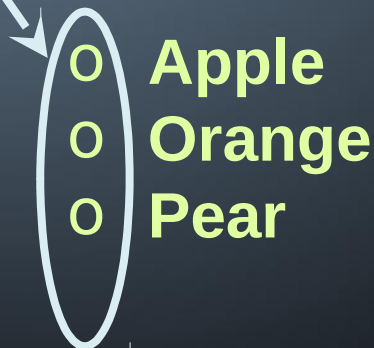
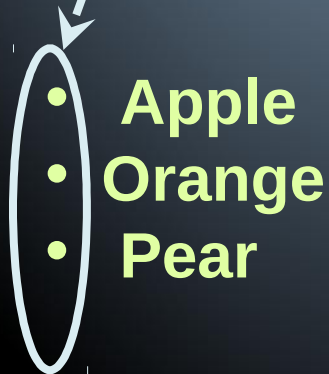


♦ Create an Unordered List using :

- <ul type="disk">
- Apple
- Orange
- Grapefruit
-

♦ Attribute values for type are:

- disc, circle or square



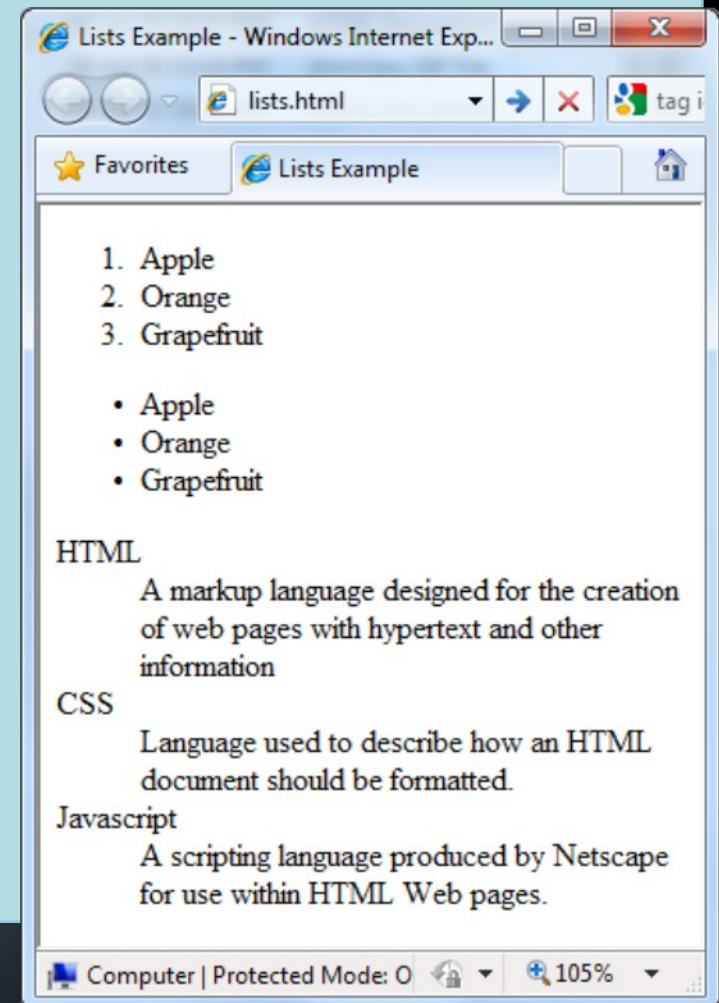
- ♦ Create definition lists using <dl>
 - Pairs of text and associated definition; text is in <dt> tag, definition in <dd> tag

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

- Renders without bullets
- Definition is indented

- `<ol type="1">`
- `Apple`
- `Orange`
- `Grapefruit`
- ``
- `<ul type="disc">`
- `Apple`
- `Orange`
- `Grapefruit`
- ``
- `<dl>`
- `<dt>HTML</dt>`
- `<dd>A markup lang...</dd>`
- `</dl>`

- `lists.html`



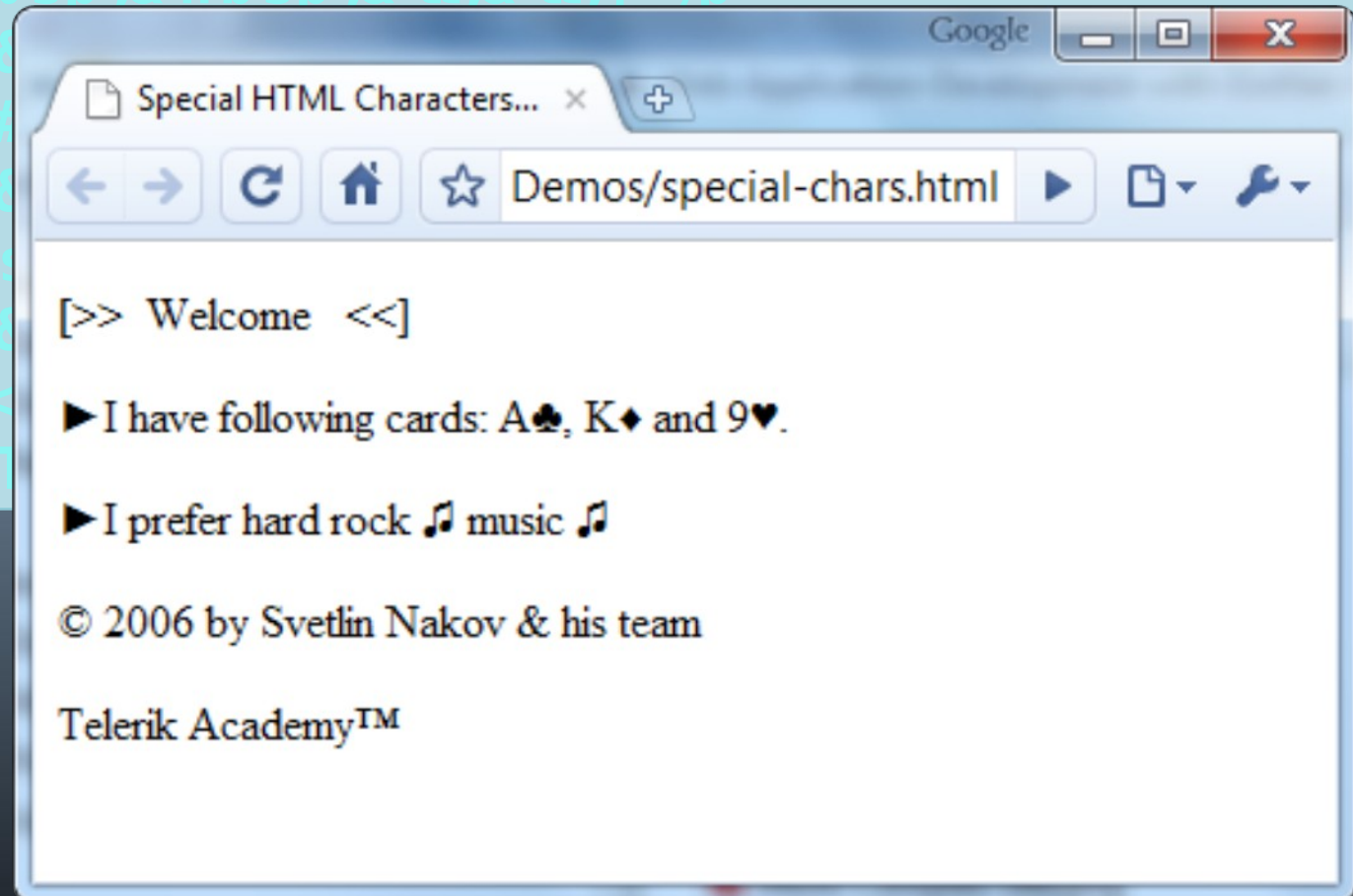
Symbol Name	HTML Entity	Symbol
Copyright Sign	<code>& copy ;</code>	©
Registered Trademark Sign	<code>& reg ;</code>	®
Trademark Sign	<code>& trade ;</code>	™
Less Than	<code>& lt ;</code>	<
Greater Than	<code>& gt ;</code>	>
Ampersand	<code>& am p ;</code>	&
Non-breaking Space	<code>& nb sp ;</code>	
Em Dash	<code>& m dash ;</code>	—
Quotation Mark	<code>& quot ;</code>	"
Euro	<code>& # 8364 ;</code>	€
British Pound	<code>& pound ;</code>	£
Japanese Yen	<code>& yen ;</code>	¥

• Special Characters – Example

special-chars.html

- [illegible]

- [special-chars.html](#)



• 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>`

• Web Programming

• The <div> Tag

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

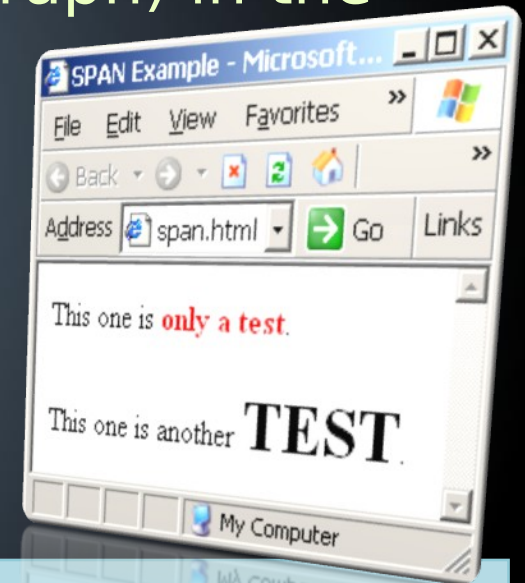


• div-and-span.html

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

• The Tag

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



• span.html

- `<p>This one is only a test.</p>`
- `<p>This one is another TEST.</p>`

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 -\$1.38	162.117.253.34	dyse chiäi	
Thu, 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	-191.45E-05
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		chäte maie	- 125.19 E -03
Sat, 9 Jan 1982 05:45:06 UTC	04/06/68	74-10-20	\$20.47		121.169.225.22	dyma bama	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 1:05:02 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!	asdf	asdf	asdf	asdf

• 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

• HTML Tables

- ♦ 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

- ♦ Start and end of a table
- ♦ Start and end of a row
- ♦ Start and end of a cell in a row

• `< table> ... < /table>`

• `< tr> ... < /tr>`

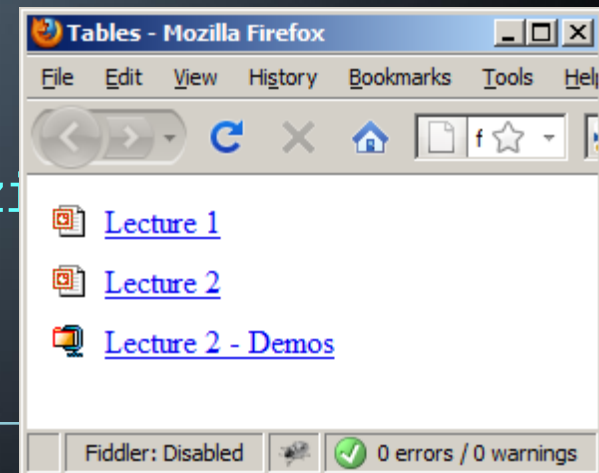
• `< td> ... < /td>`

• Simple HTML Tables – Example

```
• < table cellspacing= "0" cellpadding= "5 ">
•   < tr>
•     < td> < in g src= "ppt.gif"> < /td>
•     < td> < a href= "lecture1.ppt"> Lecture 1< /a> < /td>
•   < /tr>
•   < tr>
•     < td> < in g src= "ppt.gif"> < /td>
•     < td> < a href= "lecture2.ppt"> Lecture 2< /a> < /td>
•   < /tr>
•   < tr>
•     < td> < in g src= "zip.gif"> < /td>
•     < td> < a href= "lecture2-demos.zip">
•       Lecture 2 - Dem os< /a> < /td>
•   < /tr>
• < /table>
```

• Simple HTML Tables – Example

```
• <table cellpadding="0" cellspacing="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>
```



• 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 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>`
 - `<col style="width:100px" /> </col>`
 - `</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> Cell1.1</td> <td> Cell1.2</td> </tr>`
 - `<tr> <td> Cell2.1</td> <td> Cell2.2</td> </tr>`
 - `</tbody>`
 - `</table>`

• columns

• header

• th

• footer

• Last comes the body (data)

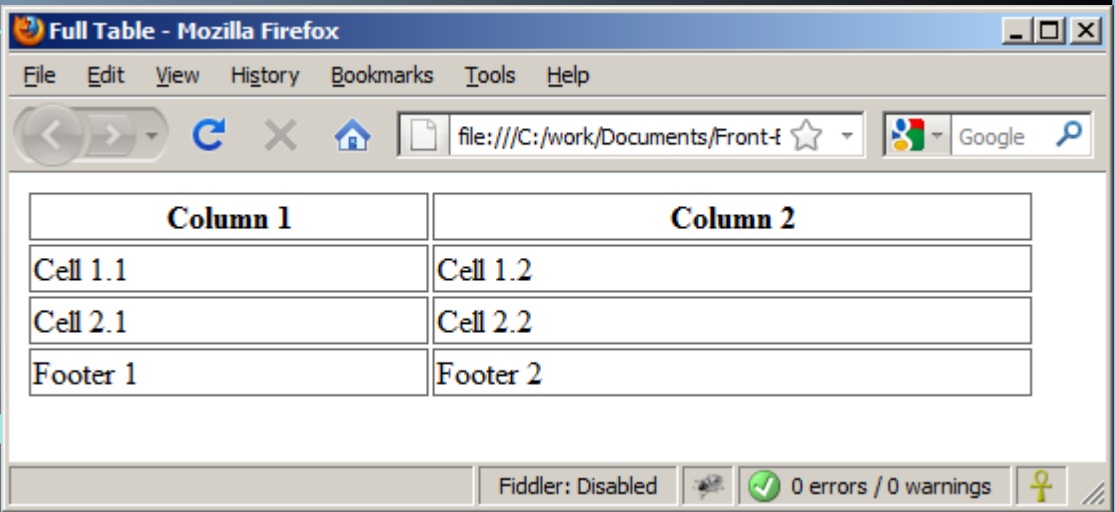
Complete HTML Table:

• Example

• By default, header text is bold and centered.

• **table-full.html**

- `<table>`
- `<colgroup>`
- `<colstyle= "width">`
- `</colgroup>`
- `<thead>`
- `<tr> <th> Column 1`
- `</thead>`
- `<tfoot>`
- `<tr> <td> Footer 1`
- `</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>`
- `</tbody>`
- `</table>`



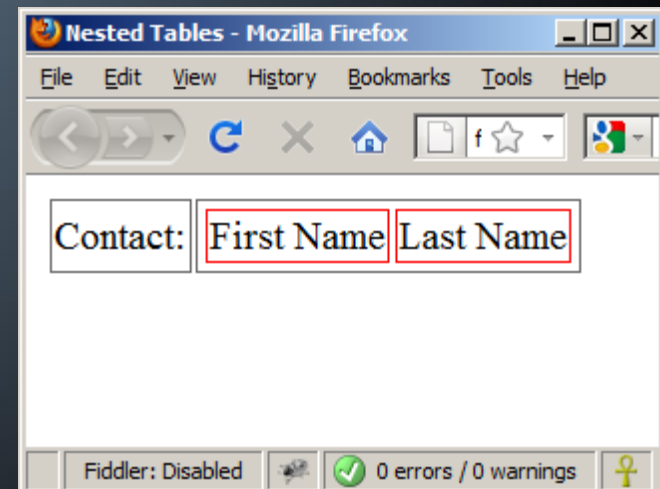
• Although the footer is before the data in the code, it is displayed last

• 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>
```

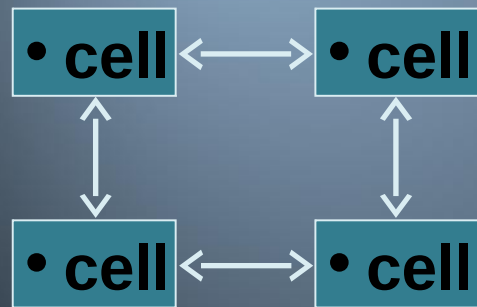
• nested-tables.html



• Cell Spacing and Padding

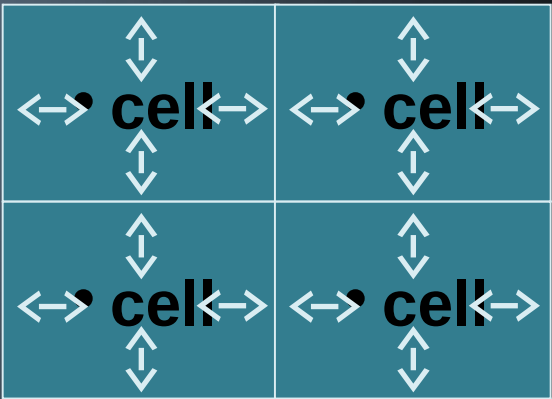
♦ Tables have two important attributes:

♦ cellspacing



♦ Defines the empty space between cells

♦ cellpadding



♦ Defines the empty space around the cell content

• Cell Spacing and Padding – Example

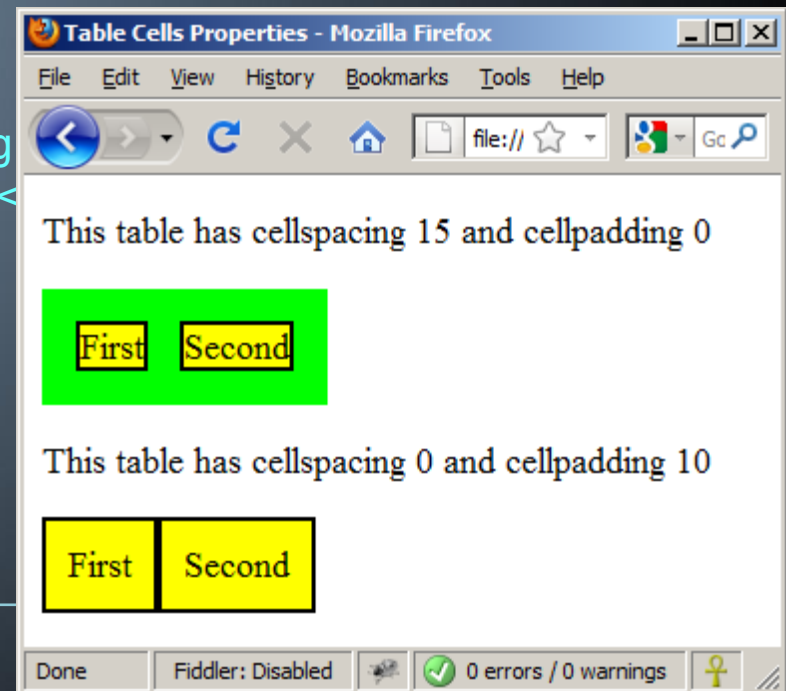
• table-cells.html

```
• <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>
```


Table Cell Spacing and Padding – Example

- **table-cells.html**

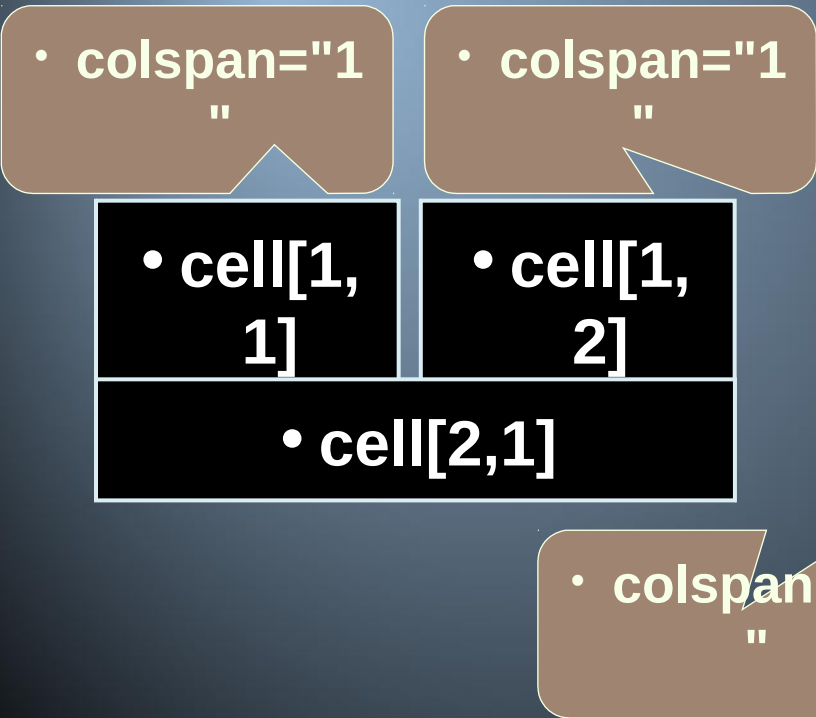
- `<html>`
- `<head> <title> Table Cells</title> </head>`
- `<body>`
- `<table cellpadding="15" cellspacing="0">`
- `<tr> <td> First</td>`
- `<td> Second</td> </tr>`
- `</table>`
- `
`
- `<table cellpadding="10" cellspacing="0">`
- `<tr> <td> First</td> <td> Second</td>`
- `</table>`
- `</body>`
- `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



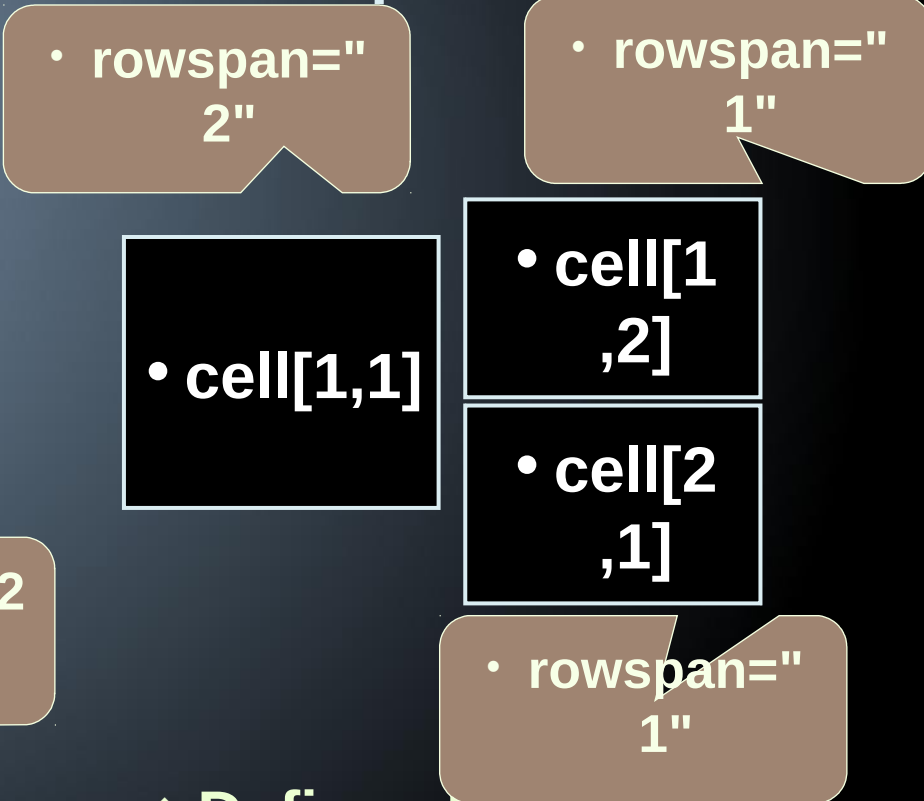
• Column and Row Span

♦ Table cells have two important attributes:

♦ colspan



♦ rowspan



♦ Defines how many columns the cell occupies

♦ Defines how many rows the cell occupies

• Column and Row Span – Example

- **table-colspan-rowspan.html**

```
• <table cellpadding="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>
```

• Example

• table-colspan-rowspan.html

```
• <table cellpadding="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>
```

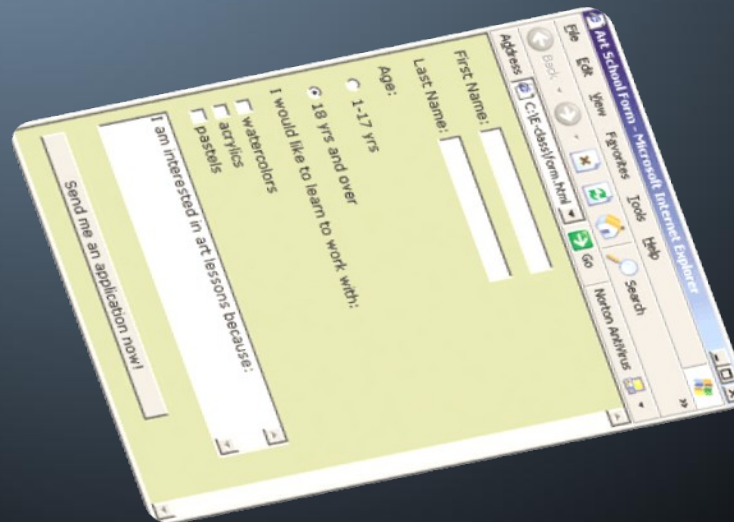
• Cell[1,1]	• Cell[2,1]	
• Cell[1,2]	• Cell[2,2]	• Cell[3,2]
• Cell[1,3]		• Cell[2,3]

```
<!DOCTYPE html>
<html>
<head>
<title>HTML Table Caption</title>
</head>
<body>
<table border="1" width="100%">
<caption>This is the caption</caption>
<tr>
<td>row 1, column 1</td><td>row 1, columnn
2</td>
</tr>
<tr>
<td>row 2, column 1</td><td>row 2, columnn
2</td>
</tr>
</table>
</body>
</html>
```

- ▮ The caption tag will serve as a title or explanation for the table and it shows up at the top of the table.
- ▮ This tag is deprecated in newer version of HTML/XHTML.



- **HTML Forms**
- Entering User Data from a Web Page



- ▯ HTML forms are used to pass data to a server.
- ▯ A basic form has three important parts:
 - ▯ The `<form>` tag
 - ▯ The form elements
 - ▯ And the submit button which sends the data on the server.
- ▯ An HTML form can contain input elements like text fields, checkboxes, radio-buttons, submit buttons.

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

- `<form></form>`

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

HTML Forms

- ▯ HTML forms contain form elements.
- ▯ Form elements are different types of input elements, checkboxes, radio buttons, submit buttons, and more.

HTML Forms

- ▯ The `<input>` element is the most important form element.
- ▯ The `<input>` element has many variations, depending on the type attribute.

- ♦ Single-line text input fields:
- ♦ Multi-line textarea fields:
- Often used by JavaScript code

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

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

```
| <!DOCTYPE html>
| <html>
| <body>
| <form>
| First name:<br>
| <input type="text" name="firstname">
| <br>
| Last name:<br>
| <input type="text" name="lastname">
| </form>
| </body>
| </html>
```

First name:

Last name:

- ▯ Password Field:
- ▯ `<input type="password">` defines a password field:
 - ▯ `<form>`
 - ▯ Password: `<input type="password" name="pwd">`
 - ▯ `</form>`

- ▯ Radio Buttons:

- ▯ Allows user to select only one value from number of choices.

- | <form>

- ▯ <input type="radio" name="sex" value="male">Male

- ▯ <input type="radio" name="sex" value="female">Female

- ▯ </form>

• Form Input Controls

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

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

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

```
• <input type="radio" name="city" value="A" />
```

```
• <input type="radio" name="city" value="B" />
```

- ▯ Checkbox:
- ▯ Allows a user to select ZERO or MORE options of a limited number of choices.
- ▯ `<form>`
- ▯ `<input type="checkbox" name="option1" value="Milk"> Milk
`
- ▯ `<input type="checkbox" name="option2" value="Butter" checked> Butter
`
- ▯ `<input type="checkbox" name="option3" value="Cheese"> Cheese
`
- ▯ `
`
- ▯ `</form>`

• Fieldsets

- ♦ Fieldsets are used to enclose a group of related form fields:
- ♦ The `<legend>` is the fieldset's title.

```
• <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>
• </form>
```

Client Details

Order Details

- ♦ Dropdown menus:
- ♦ The `<select>` element defines a drop-down list:
- ♦ Submit button:

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

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

- ♦ Reset button – brings the form to its initial state
- ♦ Image button – acts like submit but image is displayed and click coordinates are sent
- ♦ Ordinary button – used for Javascript, no default action

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

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

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

- ♦ Password input – a text field which masks the entered text with * signs
- ♦ Multiple select field – displays the list of items in multiple lines, instead of one

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

- `<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>`

- ♦ File input – a field used for uploading files
 - When used, it requires the form element to have a specific attribute:

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

- `<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.
- ♦ 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.

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

HTML Input Attributes

- ▯ The value Attribute
 - ▯ The value attribute specifies the initial value for an input field:

```
▯ First name:<br>  
▯ <input type="text" name="firstname" value="John">  
▯ <br>  
▯ Last name:<br>  
▯ <input type="text" name="lastname">  
▯ </form>
```

▯ The readonly Attribute

- | The readonly attribute specifies that the input field is read only (cannot be changed):
- | The readonly attribute does not need a value. It is the same as writing `readonly="readonly"`.

| First name:

▯ <input type="text" name="firstname" value="John" readonly>

▯

▯ Last name:

▯ <input type="text" name="lastname">

▯ </form>

| The disabled Attribute

- | The disabled attribute specifies that the input field is disabled.
- ▯ A disabled element is un-usable and un-clickable.
- ▯ Disabled elements will not be submitted.
- ▯ The disabled attribute does not need a value.

```
<form action="">
```

```
First name:<br>
```

```
<input type="text" name="firstname" value="John" disabled>
```

```
<br>
```

```
Last name:<br>
```

```
<input type="text" name="lastname">
```

```
</form>
```

▯ The maxlength Attribute

- ▯ The maxlength attribute specifies the maximum allowed length for the input field:
- ▯ With a maxlength attribute, the input control will not accept more than the allowed number of characters.

```
▯ <form action="">  
▯ First name:<br>  
▯ <input type="text" name="firstname" maxlength="10">  
▯ <br>  
▯ Last name:<br>  
▯ <input type="text" name="lastname">  
▯ </form>
```

• 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" />
```

• form.html (continued)

- `
`
- 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>`
- `
`
- `<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

• form.html (continued)

HTML Forms Example - Mozilla Firefox

File Edit View History Bookmarks Tools Help

file:///C:/work/Di

Goog

Academic information

Degree Master of Business Administration

Student ID

Classes attended Geography
Mathematics
English

Personal Details

First Name

Last Name

Gender: ☐ Male ☒ Female

Email

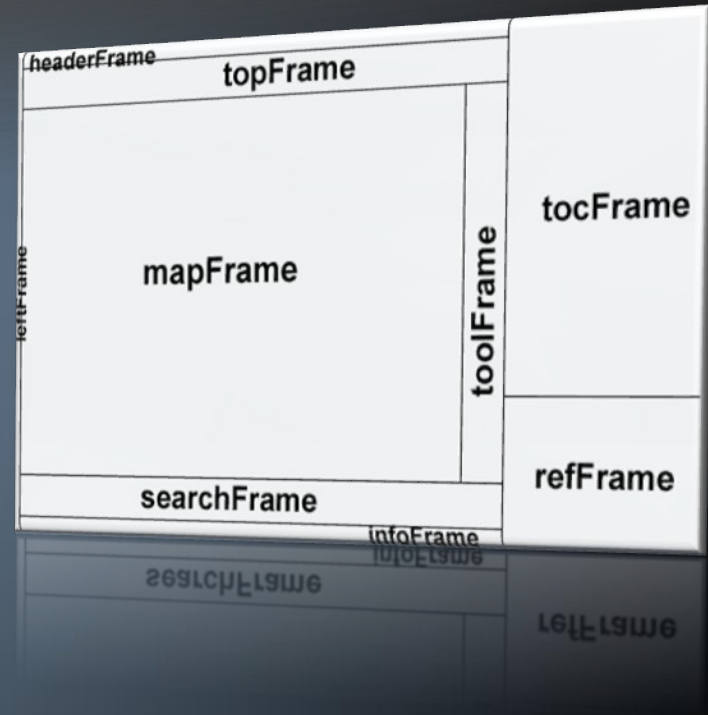
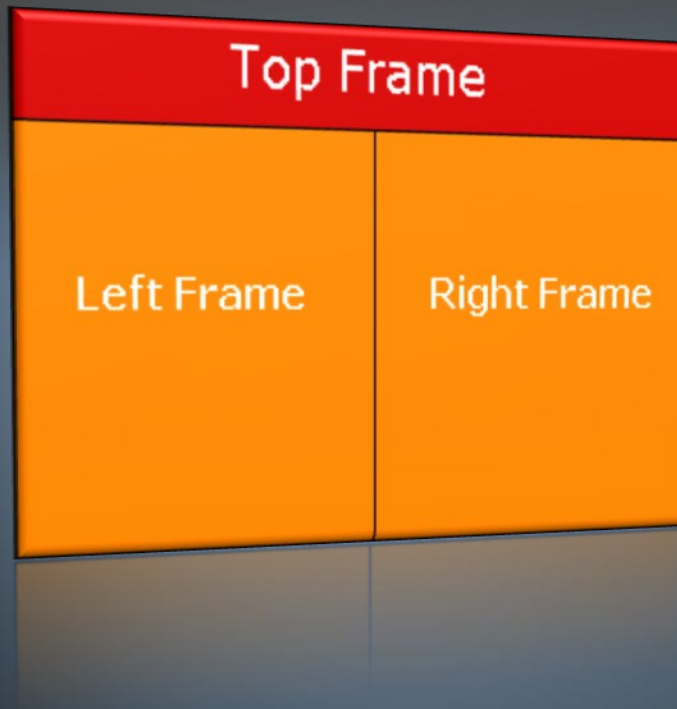
TERMS AND CONDITIONS...

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 e >` and `< iframe e >`

• 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.

- ▯ We can create a frame by using the `<frameset>` tag.
- ▯ Inside `<frameset>` tag use `<frame>` tag with `src` as attribute.
- ▯ It takes HTML file as input value which we want to upload to that frame.
- ▯ We can create multiple `<frame>` tag inside `<frameset>` tag.
- ▯ Not supported in HTML 5.

```
| <!DOCTYPE html>
| <html>
| <frameset cols="25%,50%,25%">
|   <frame src="frame1.htm">
|   <frame src="frame2.htm">
|   <frame src="frame3.htm">
|   <noframes>Sorry, your browser does not handle frames!
| </noframes>
| </frameset>
| </html>
```

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>
```

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>`

```
<html>
<body>
<iframe name="iframeGoogle" width="600" height="400"
src="style.html" frameborder="yes" scrolling="yes"></iframe>
<a href="try.html" target="iframeGoogle">Click Here</a>
</body>
</html>
```

- When we use frame tag then the current page constitutes of only frames whereas in iframe the current web page and the sub window (created by iframe) are treated like two separate entities.
- It just brings some other source to the current page.
- The inline frames are also known as floating frames.

Welcome to My Website

Student's Data

Roll No	Name	Phone No	
1	ABC	9820123456	123456789
2	XYZ		

Student's Data

Roll No	Name	Phone No	
1	ABC	9820123456	123456789
2	XYZ		

Name	Branch		
ICICI	Andheri	Bandra	Dadar

[Click Here](#)

Comments: `<!-- -->` Tag

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

- `<!-- (a JPG file) -->`
- ``
- `<!-- Hyperlink to the web site -->`
- `Telerik`
- `<!-- Show the news table -->`
- `<table class="newstable">`
- ...