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:

```
<img src="logo.jpg" alt="logo" />
```

- 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

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 />
<img src="logo.gif" alt="logo" />
<br />
<strong>Bold</strong> and <em>italic</em> text.
</body>
</html>
```

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 />
<img src="logo.gif" alt="logo" />
<br />
<strong>Bold</strong> and <em>italic</em> text.
</body>
</html>
```

TAGS ATTRIBUTES

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

```
<img src="logo.gif" alt="logo" />
```

Attribute alt with value "logo"

  - 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

- 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 –

```
<!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 –

```
<!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>
```

INTRODUCTION TO HTML

HTML Document Structure in Depth

- 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.

PREFACE

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 (`<br/>`, `<img/>`) while HTML allows `<br>` and `<img>` 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>
```

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

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

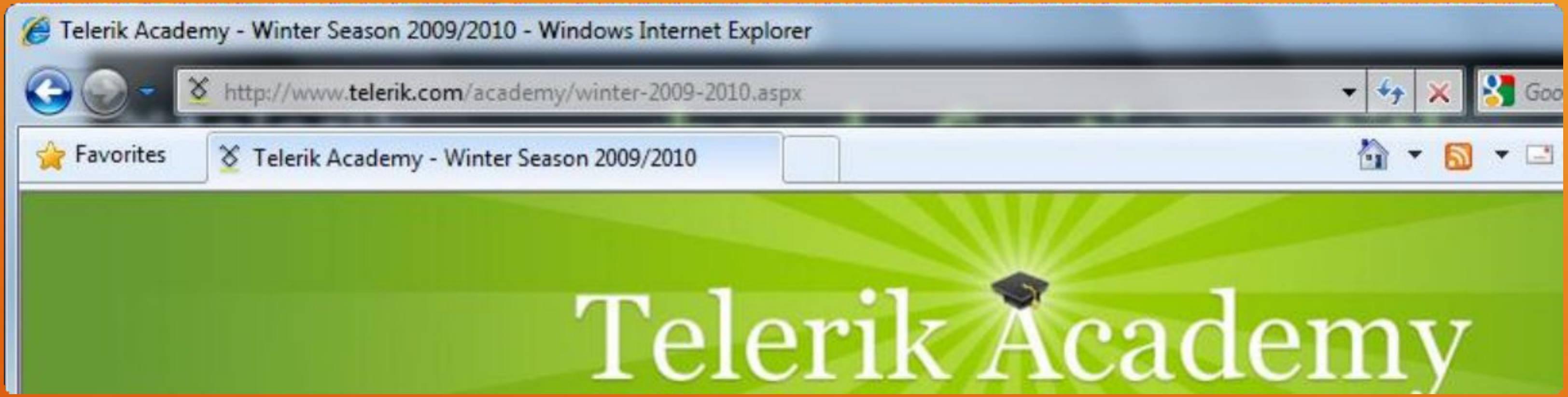
THE <HEAD> SECTION

- 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>
```



Telerik Academy - Winter Season 2009/2010 - Windows Internet Explorer

http://www.telerik.com/academy/winter-2009-2010.aspx
Goo
Favorites
Telerik Academy - Winter Season 2009/2010
Telerik Academy

- 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;
```

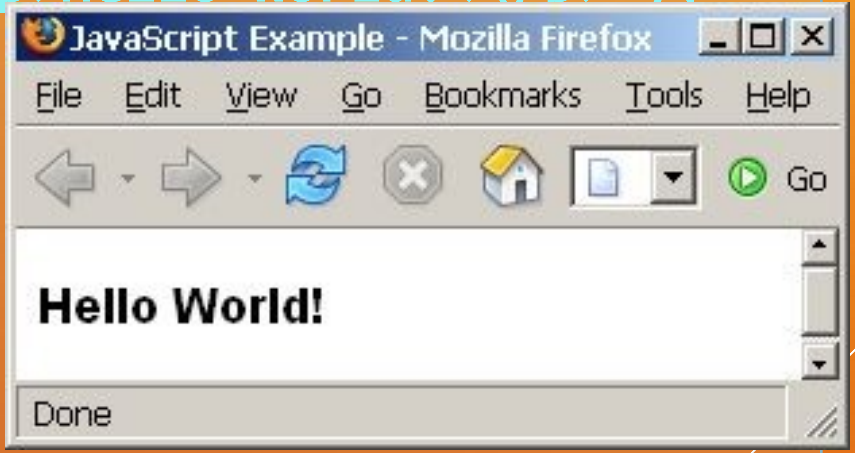
- The <script> element is used to embed scripts into an HTML document
  - Script are executed in the client's Web browser
  - Scripts can live in the <head> and in the <body> sections
- Supported client-side scripting languages:
  - JavaScript (it is not Java!)
  - VBScript
  - JScript

<HEAD> SECTION: <SCRIPT>

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>
```



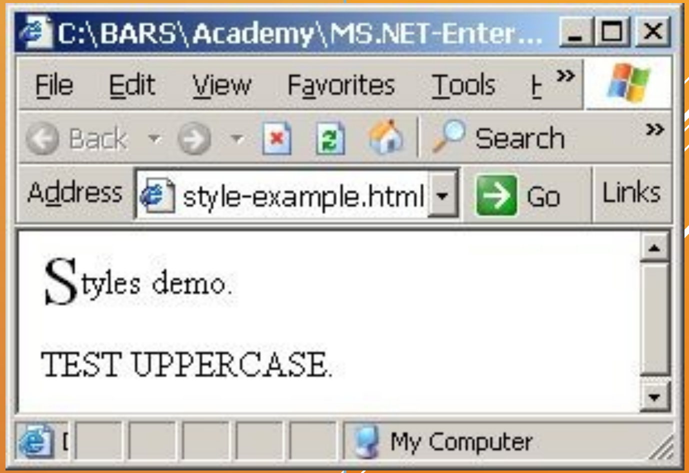
```
Hello World!
```

Done

<HEAD> SECTION: <STYLE>

```
<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>
```

s ty le -example.html



Styles demo.

TEST UPPERCASE.

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

COMMENTS: <!-- --> TAG

```
<!-- Telerik Logo (a JPG file) -->
<img src="logo.jpg" alt=“Telerik Logo">
<!-- Hyperlink to the web site -->
<a href="http://telerik.com/">Telerik</a>
<!-- Show the news table -->
<table class="newstable">
...
```

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

<BODY> SECTION: INTRODUCTION

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

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

TEXT FORMATTING

<b></b>	**bold**
<i></i>	*italicized*
<u></u>	underlined
<sup></sup>	Sample$^{\text{superscript}}$
<sub></sub>	Sample$_{\text{subscript}}$
<strong></strong>	**strong**
<em></em>	*emphasized*
<pre></pre>	Preformatted text
<blockquote></blockquote>	Quoted text block
<del></del>	Deleted text – ~~strike through~~

- Text formatting tags modify the text between the opening tag and the closing tag
  - Ex. <b>Hello</b> makes “Hello” bold

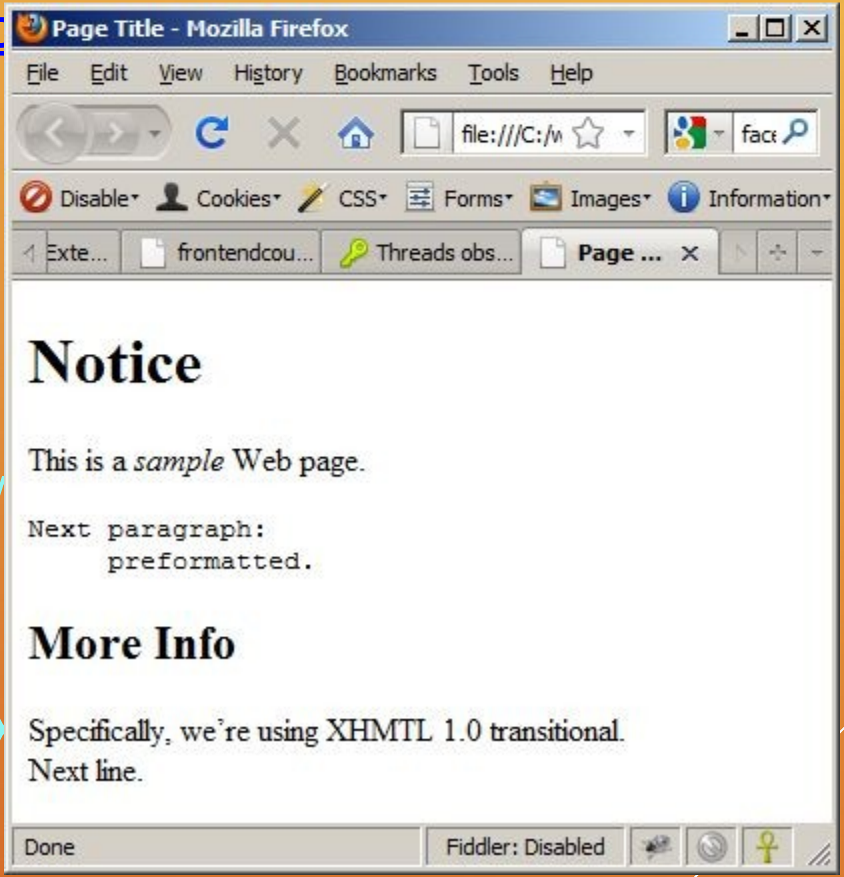
TEXT FORMATTING – EXAMPLE

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 XHMTL 1.0 transitional.<br
    />  Next line.</p>
  </body>
</html>
```

text-formatting.html

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



Notice

This is a *sample* Web page.

```
Next paragraph:
     preformatted.
```

More Info

Specifically, we’re using XHMTL 1.0 transitional.
Next line.

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"><img
  src="apply-now-button.jpg"
  /></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:

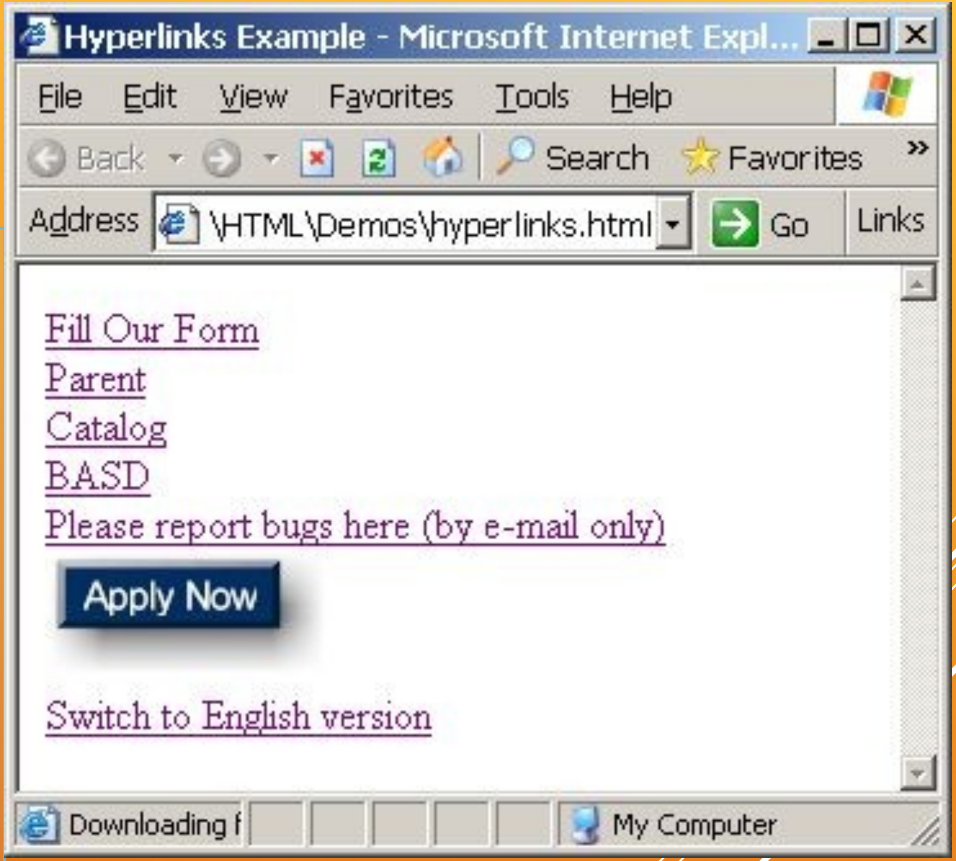
```
<a href="chapter3.html#section3.1.1">Go to
Section  3.1.1</a>

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

hyperlinks.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"><img
src="apply-now-button.jpg”
/></a> <br />
<a href="../english/index.html">Switch to
English  version</a> <br />
```

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"><img
src="apply-now-button.jpg” /></a> <br />
<a href="../english/index.html">Switch
```



Fill Our Form
Parent
Catalog
BASD
Please report bugs here (by e-mail only)

Switch to English version

LINKS TO THE SAME DOCUMENT – EXAMPLE

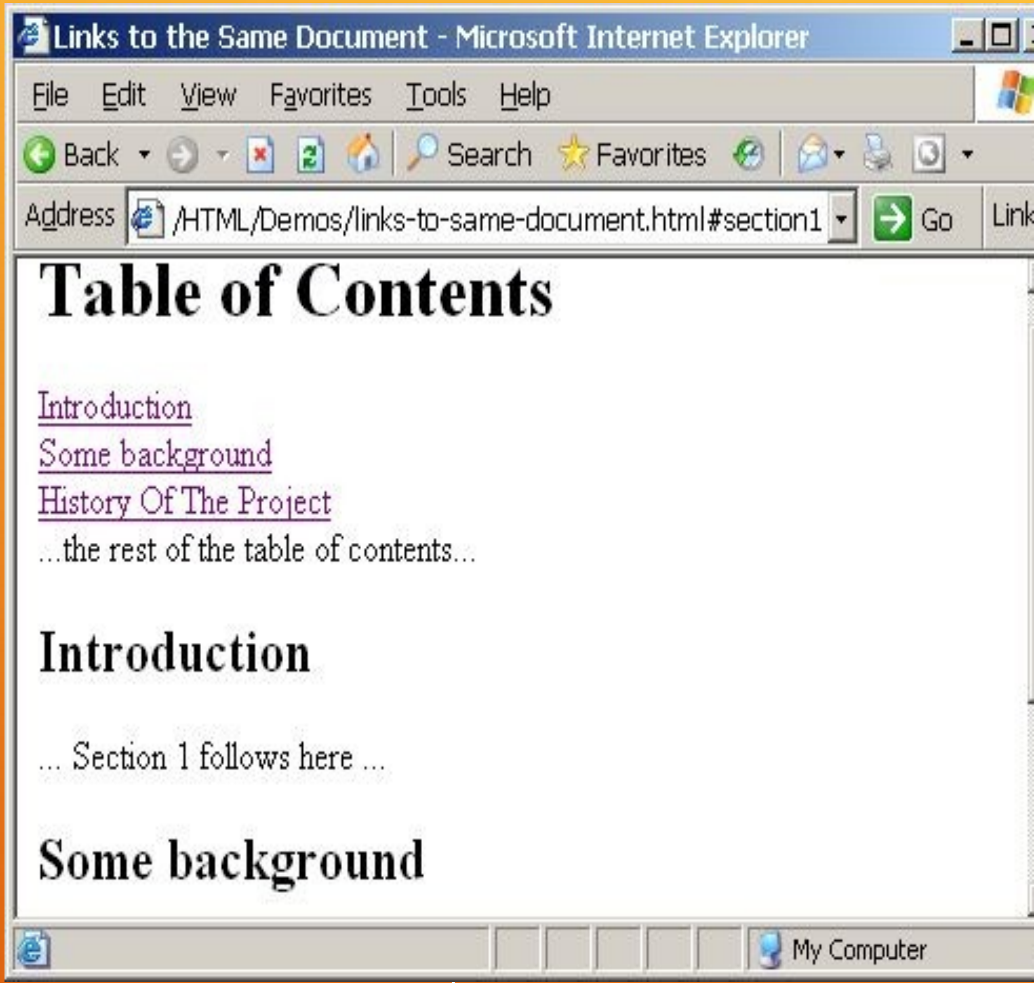
links-to-same-document.html

```
<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><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 ...
```



Address: /HTML/Demos/links-to-same-document.html#section1

Table of Contents

Introduction
Some background
History Of The Project
...the rest of the table of contents...

Introduction

... Section 1 follows here ...

Some background

IMAGES: <IMG> TAG

- Inserting an image with <img> tag:

```
<img src="/img/basd-logo.png">
```

- 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:

```
<img src="./php.png"
alt="PHP Logo" />
```

MISCELLANEOUS TAGS

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

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

- `<center></center>`: Deprecated!

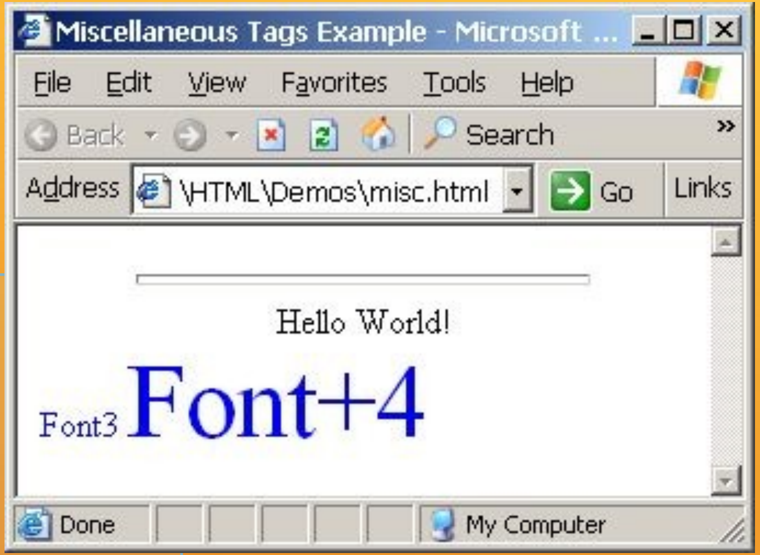
```
<center>Hello World!</center>
```

- `<font></font>`: Deprecated!

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

misc.html

```
<html>
  <head>
    <title>Miscellaneous Tags Example</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>
```



Hello World!

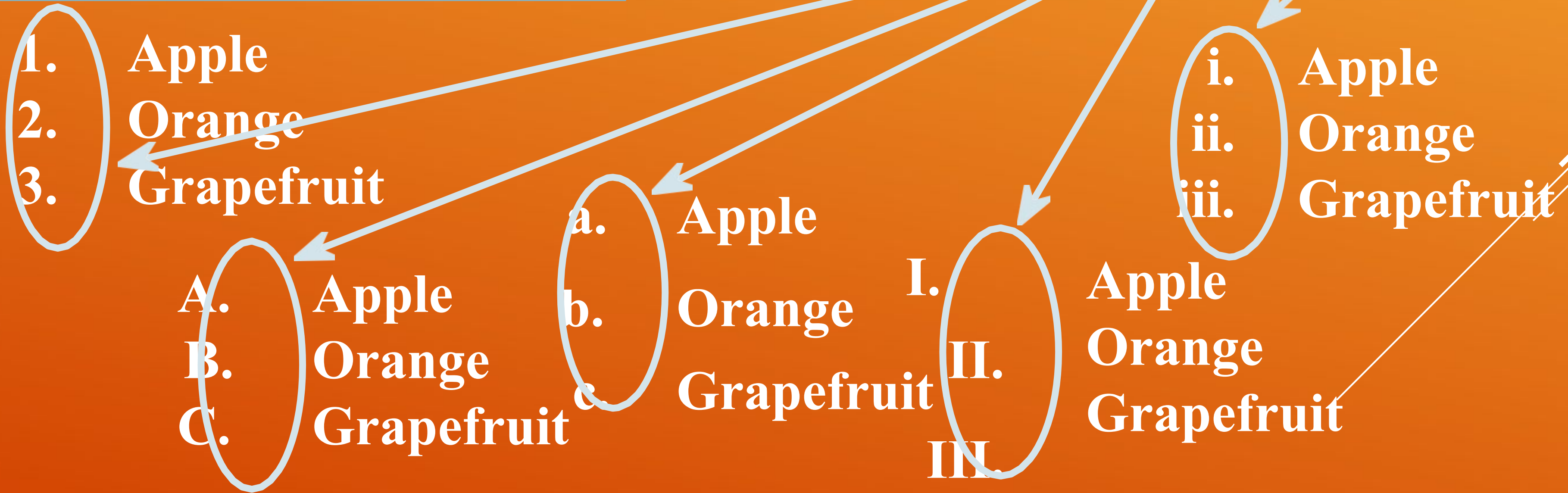
Font3 Font+4

ORDERED LISTS: <OL> TAG

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

Create an Ordered List using `<ol></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

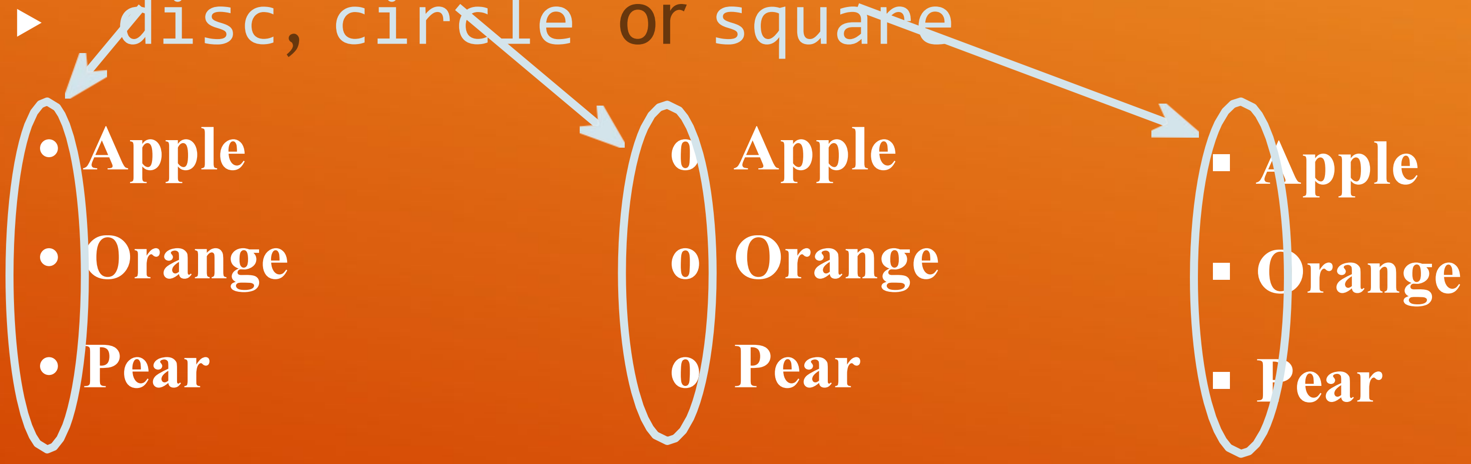
i. Apple
ii. Orange
iii. Grapefruit

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

- Create an Unordered List using `<ul></ul>`:

- Attribute values for `type` are:

  - `disc`, `circle` or `square`



- • Apple
- • Orange
- • Pear

- o Apple
- o Orange
- o Pear

- ▪ Apple
- ▪ Orange
- ▪ Pear

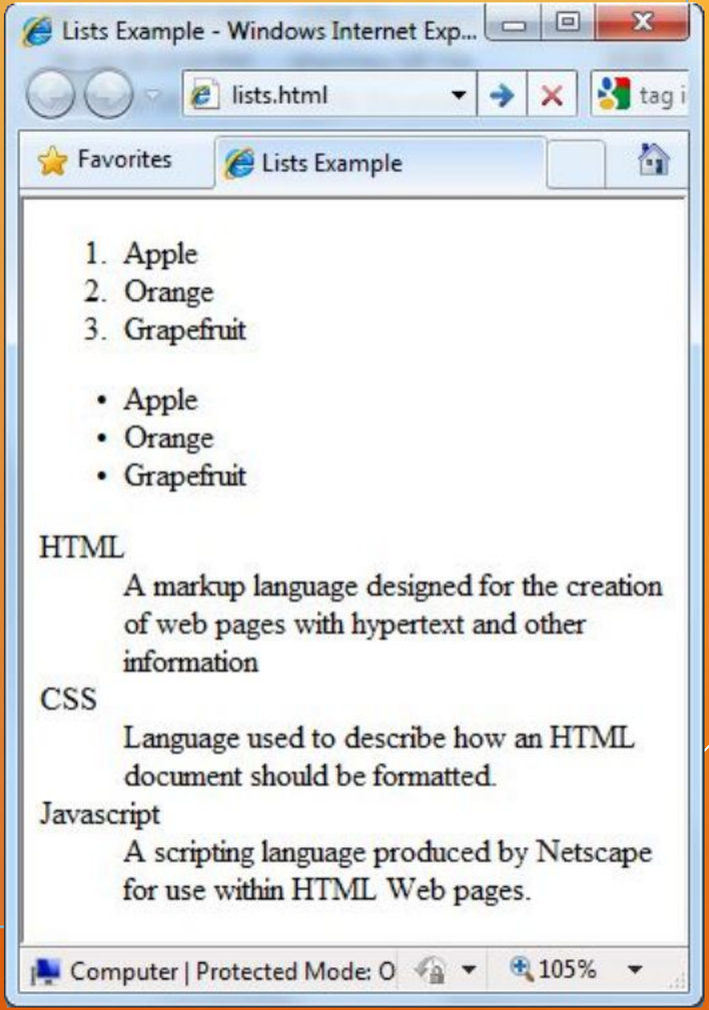
DEFINITION LISTS: <DL> TAG

- Create definition lists using <dl>
  - Pairs of text and associated definition; text is in <dt> tag, definition in <dd> tag
  - Renders without bullets
  - Definition is indented

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

```
<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>
```

lists.html


Lists Example - Windows Internet Exp...
lists.html
tag i
Favorites
Lists Example
Computer | Protected Mode: O
105%

1. Apple
2. Orange
3. Grapefruit

- Apple
- Orange
- Grapefruit

HTML
    A markup language designed for the creation of web pages with hypertext and other information
CSS
    Language used to describe how an HTML document should be formatted.
Javascript
    A scripting language produced by Netscape for use within HTML Web pages.

HTML SPECIAL CHARACTERS

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

SPECIAL CHARACTERS – EXAMPLE

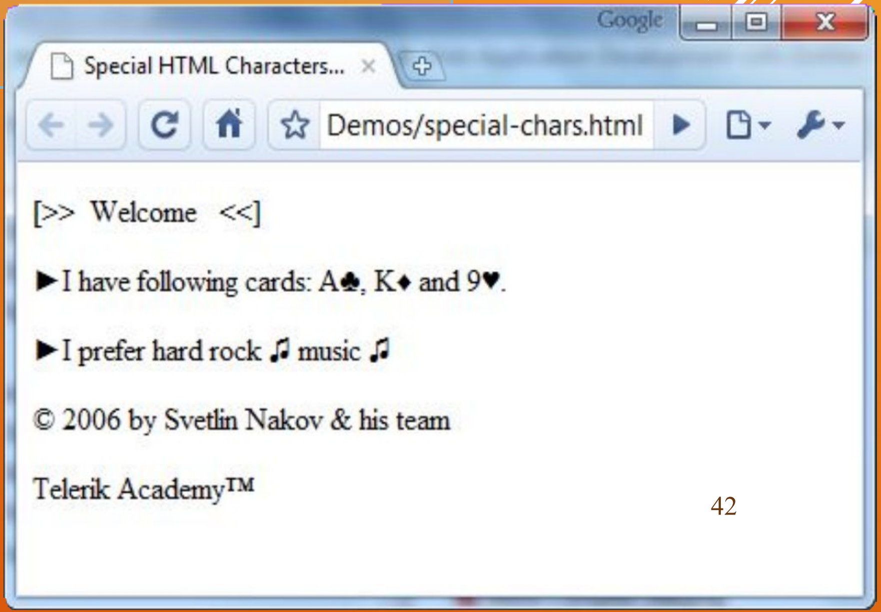
special-chars.html

```
<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 &amp;
his  team</p>
  <p>Telerik Academy™</p>
```

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 &amp;
his  team</p>
  <p>Telerik Academy™</p>
```

SPECIAL CHARS – EXAMPLE (2)



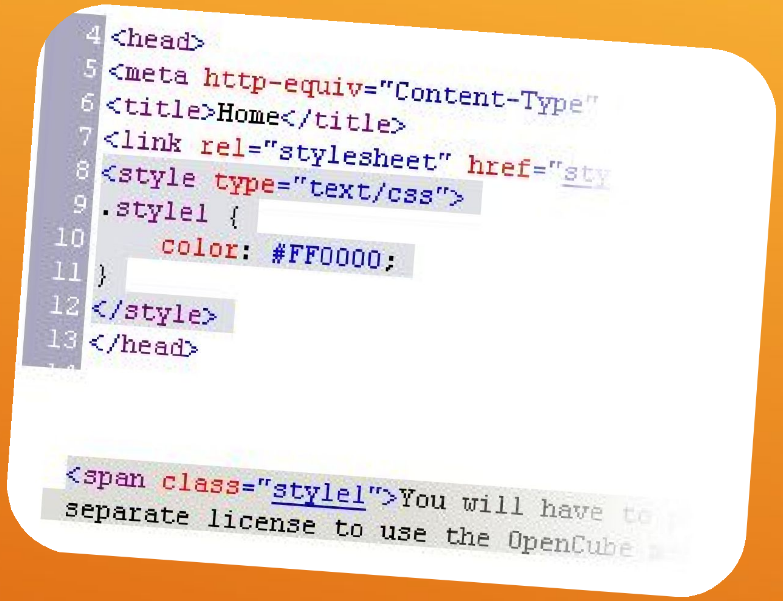
[>> Welcome <<]

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

►I prefer hard rock ♫ music ♫

© 2006 by Svetlin Nakov & his team

Telerik Academy™



```
<head>
<meta http-equiv="Content-Type"
<title>Home</title>
<link rel="stylesheet" href="sty
<style type="text/css">
.style1 {
    color: #FF0000;
}
</style>
</head>
```

```
<span class="style1">You will have to
separate license to use the OpenCube
```

USING <DIV> AND <SPAN> 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.
  - A block-level element always takes up the full width available (stretches out to the left and right as far as it can).
  - *Further tags: https://www.w3schools.com/html/html_blocks.asp*
- Inline elements don't break the text before and after them
  - <span> is an inline element
  - Most HTML elements are inline, e.g. <a>, <b>,<big>,<br>,<button>,<input>,<label>
  - **Note:** An inline element cannot contain a block-level element!
- An inline element only takes up as much width as necessary.

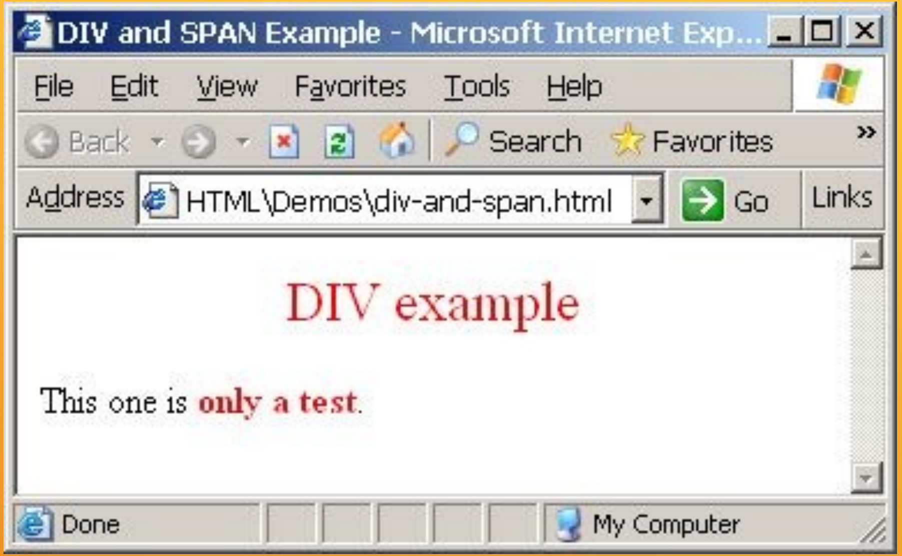
BLOCK AND INLINE ELEMENTS

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>
```



DIV and SPAN Example - Microsoft Internet Exp...

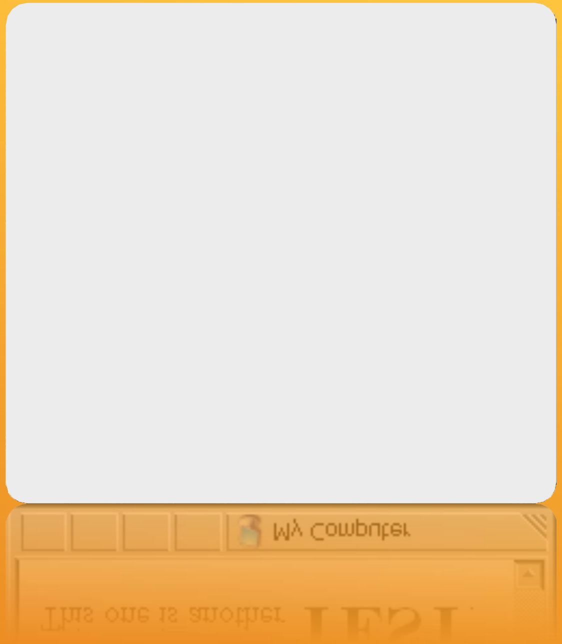
Address HTML\Demos\div-and-span.html

DIV example

This one is **only a test**.

THE <SPAN> TAG

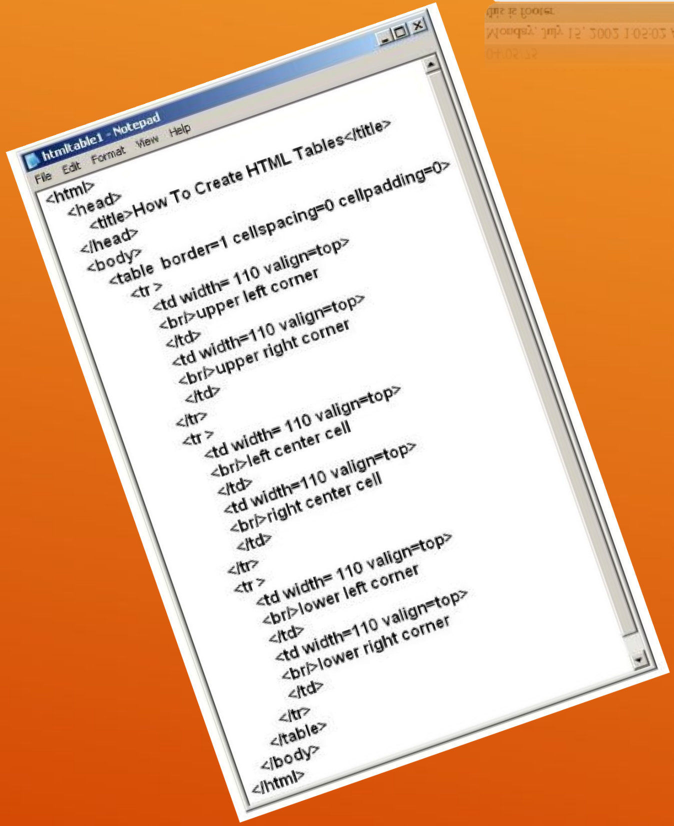
- Inline style element
- Useful for modifying a specific portion of text
  - Don't create a separate area (paragraph) in the document
- Very useful with CSS



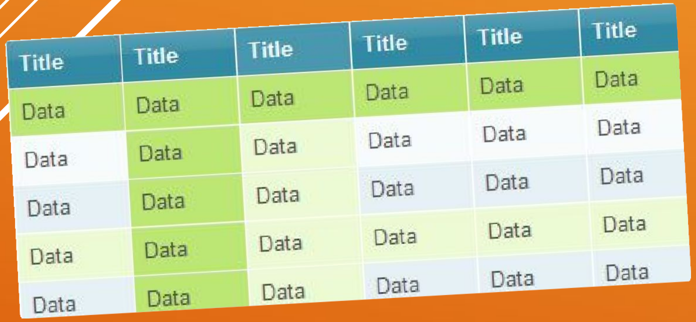
span.html

```
<p>This one is <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

- 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

HTML TABLES (2)

- Start and end of a table

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

- Start and end of a row

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

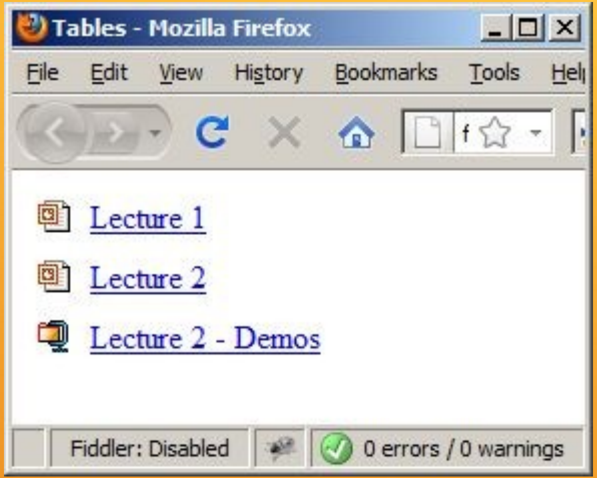
- Start and end of a cell in a row

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

SIMPLE HTML TABLES – EXAMPLE

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

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



Lecture 1

Lecture 2

Lecture 2 - Demos

- 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 TABLES

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><t
  d>Footer 2</td></tr>
</tfoot>
```

columns

header

th

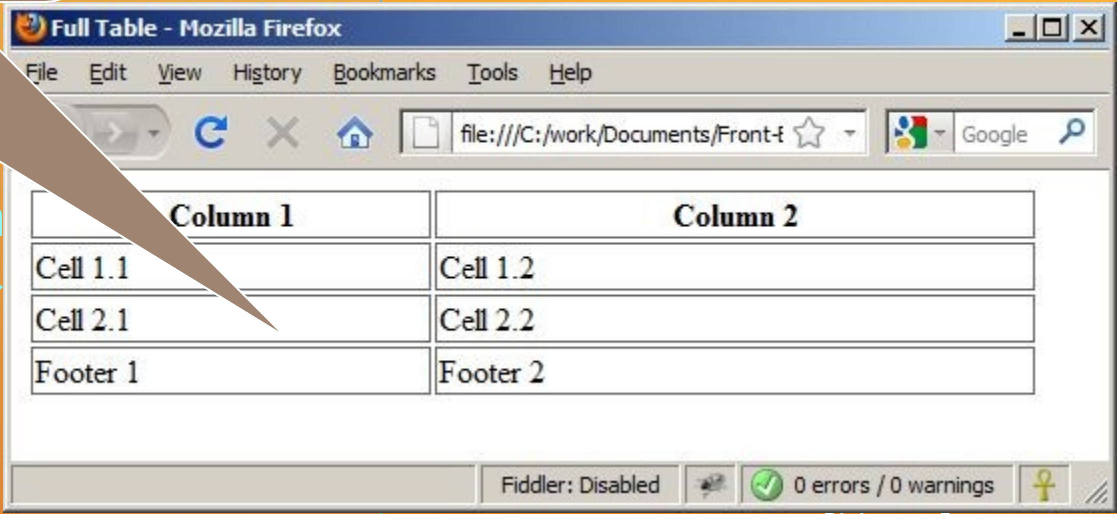
footer

Last comes the body (data)

table-full.html

```
<table>
<colgroup>
  <col style="w
  />
</colgroup>
<thead>
  <tr><th>Column 1</th><th>Column          h
  2</t                                    >
</thead>
<tfoot>
  <tr><td>Footer 1</td><td>Footer         d></tr
  2</t                                    >
</tfoot>
<tbody>
  <tr><td>Cell 1.1</
  1.2</td></tr>
  <tr><td>Cell 2.1</
  2.2</td></tr>
</tbody>
```

By default, header text is bold and centered.


Full Table - Mozilla Firefox
File Edit View History Bookmarks Tools Help
file:///C:/work/Documents/Front-E
Google
Fiddler: Disabled
0 errors / 0 warnings

Column 1	Column 2
Cell 1.1	Cell 1.2
Cell 2.1	Cell 2.2
Footer 1	Footer 2

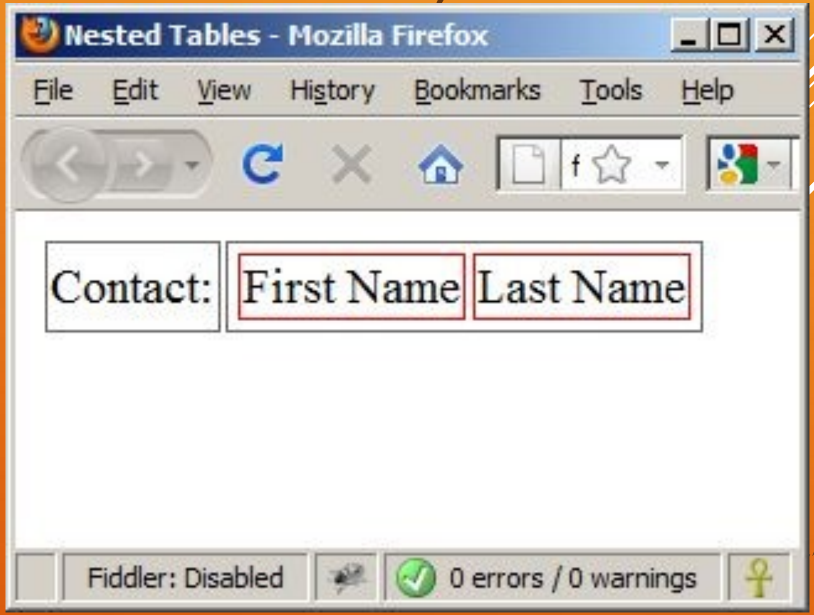
Although the footer is before the data in the code, it is displayed last

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

NESTED TABLES

nested-tables.html

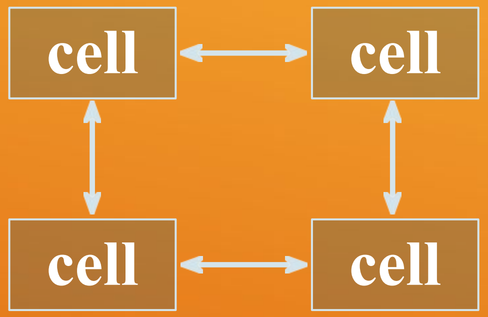
- Table data "cells" (<td>) can contain nested tables (tables within tables):


Nested Tables - Mozilla Firefox
File Edit View History Bookmarks Tools Help
Fiddler: Disabled
0 errors / 0 warnings

Contact:	First Name	Last Name

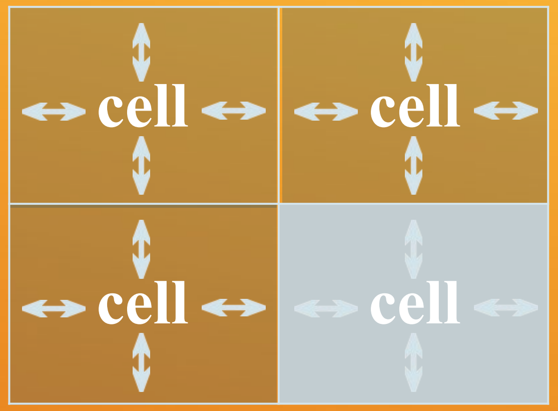
- Tables have two important attributes:

- cellspacing



- Defines the empty space between cells

- cellpadding



- Defines the empty space around the cell content

CELL SPACING AND PADDING

CELL SPACING AND PADDING – EXAMPLE

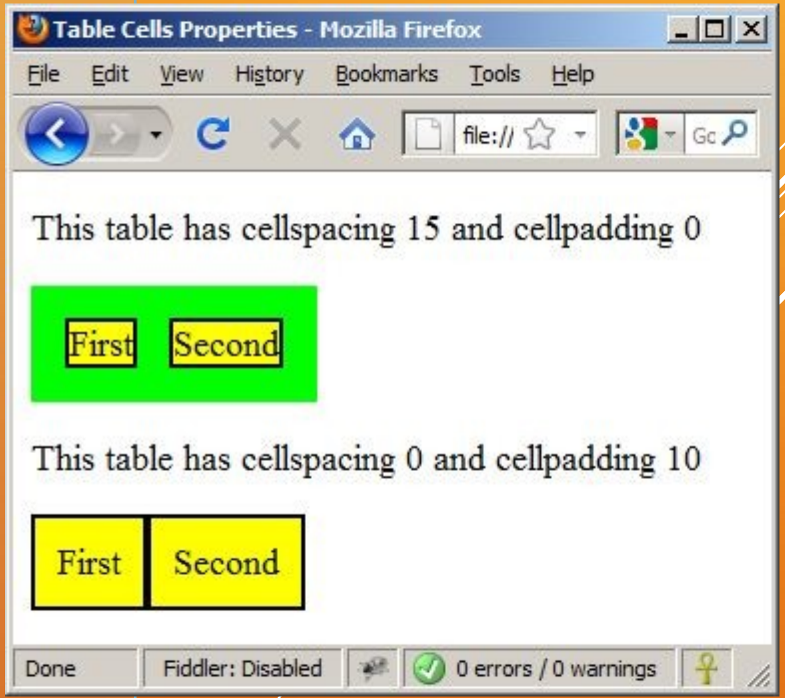
table-cells.html

```
<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>
```



This table has cellspacing 15 and cellpadding 0

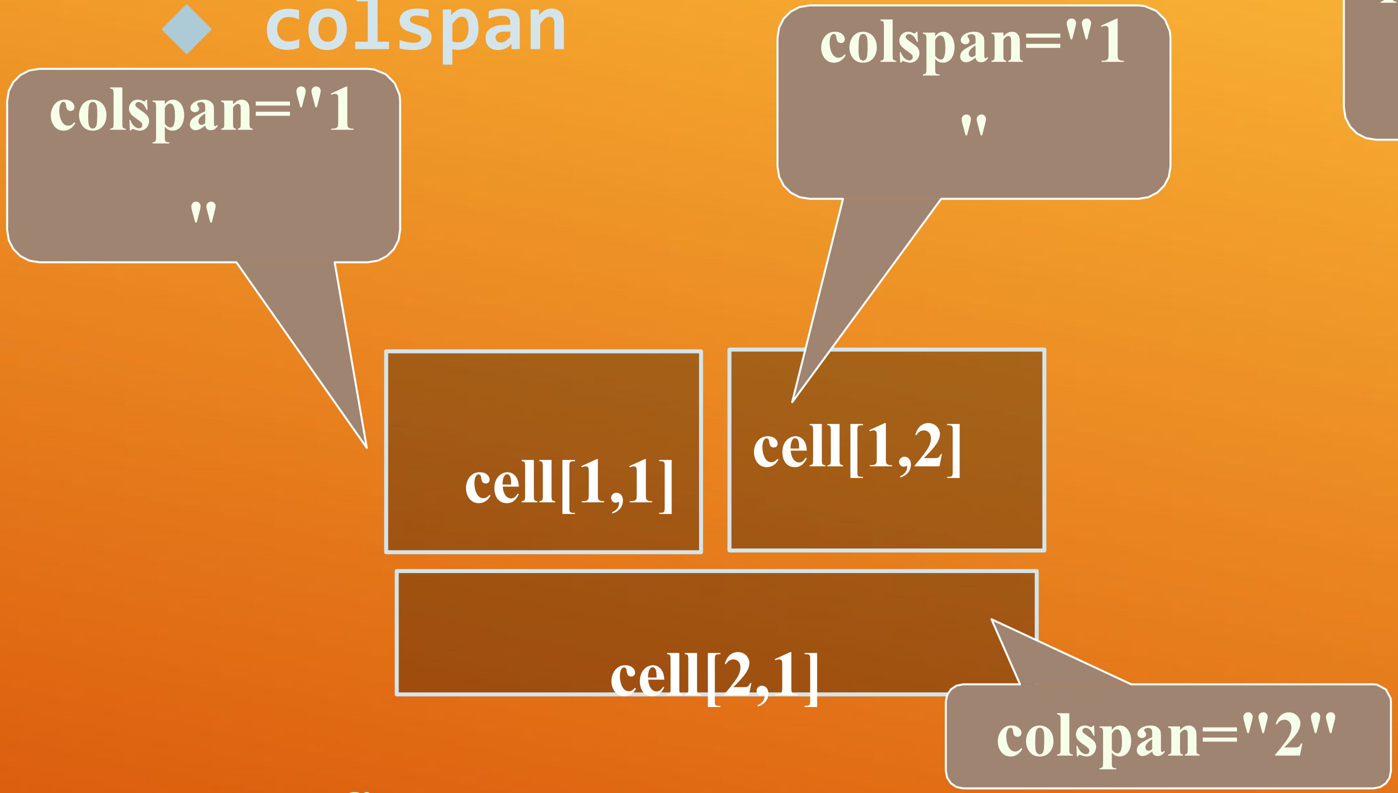
First Second

This table has cellspacing 0 and cellpadding 10

First Second

- Table cells have two important attributes:

- colspan



colspan="1
"

colspan="1
"

cell[1,1]

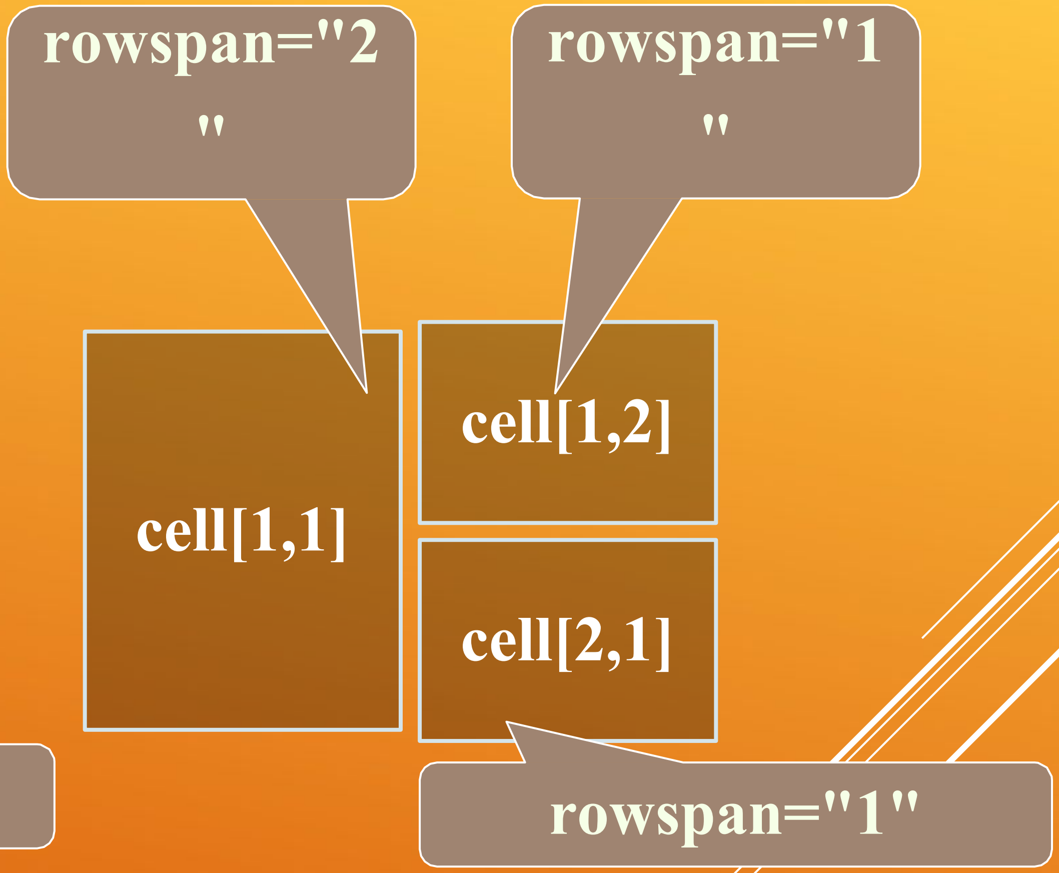
cell[1,2]

cell[2,1]

colspan="2"

- Defines how many columns the cell

- rowspan



rowspan="2
"

rowspan="1
"

cell[1,1]

cell[1,2]

cell[2,1]

rowspan="1"

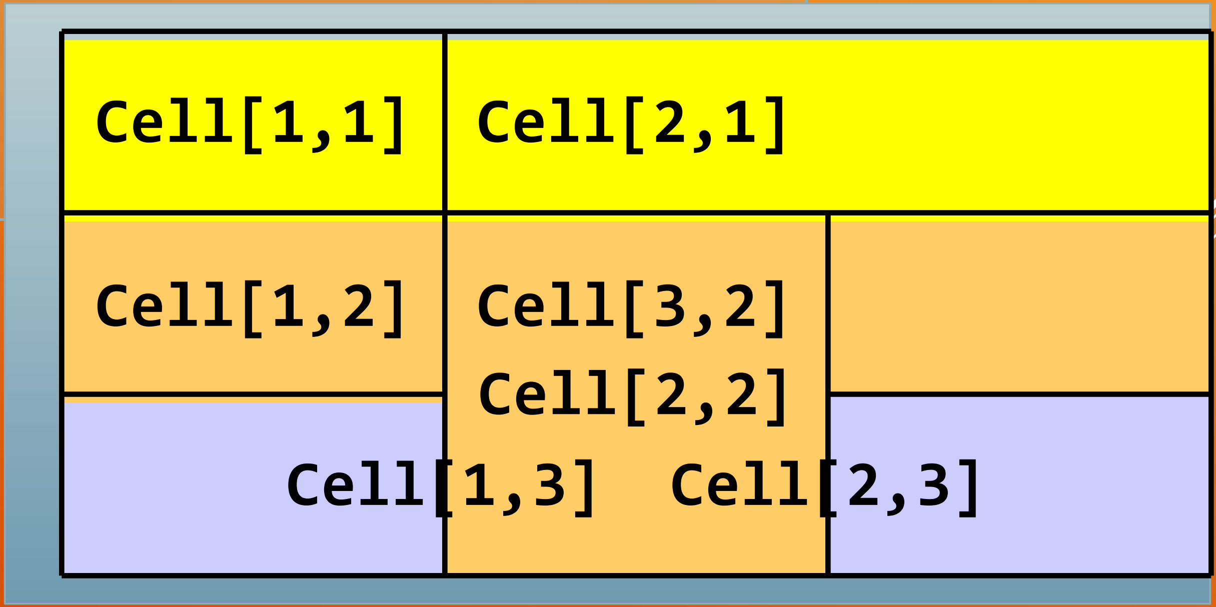
- Defines how many rows the cell occupies table-colspan-rowspan.html

```
<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

COLUMN AND ROW SPAN –

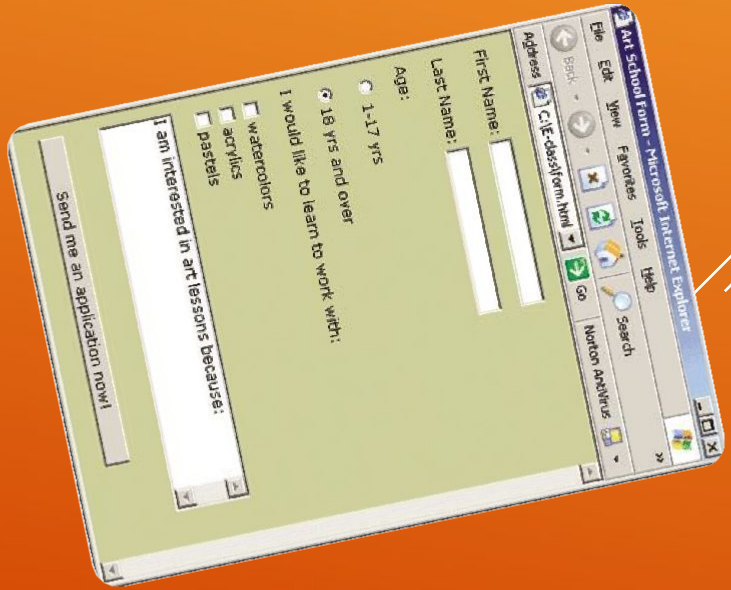
```
<table cellspacing="0">
    <tr class="1"><td>Cell[1,1]</td>
        <td colspan="2">Cell[2,1]</td></tr>
    <tr class=“2"><td>Cell[1,2]</td>
        <td rowspan="2">Cell[2,2]</td>
        <td>Cell[3,2]</td></tr>
    <tr class=“3"><td>Cell[1,3]</td>

         <td>Cell[2,3]
 </table>
```



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

HTML FORMS

Entering User Data from a Web Page


Art School Form - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back
Search
Address
Go
Norton AntiVirus

C:\IE-classform.html

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:

Send me an application now!

HTML FORMS

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

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

- Example:

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

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

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

FORM FIELDS

- 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>
</form>
```

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

FIELDSETS

FORM INPUT CONTROLS

- Checkboxes:

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

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

- Radio buttons:
- 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>
```

LABELS

- 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

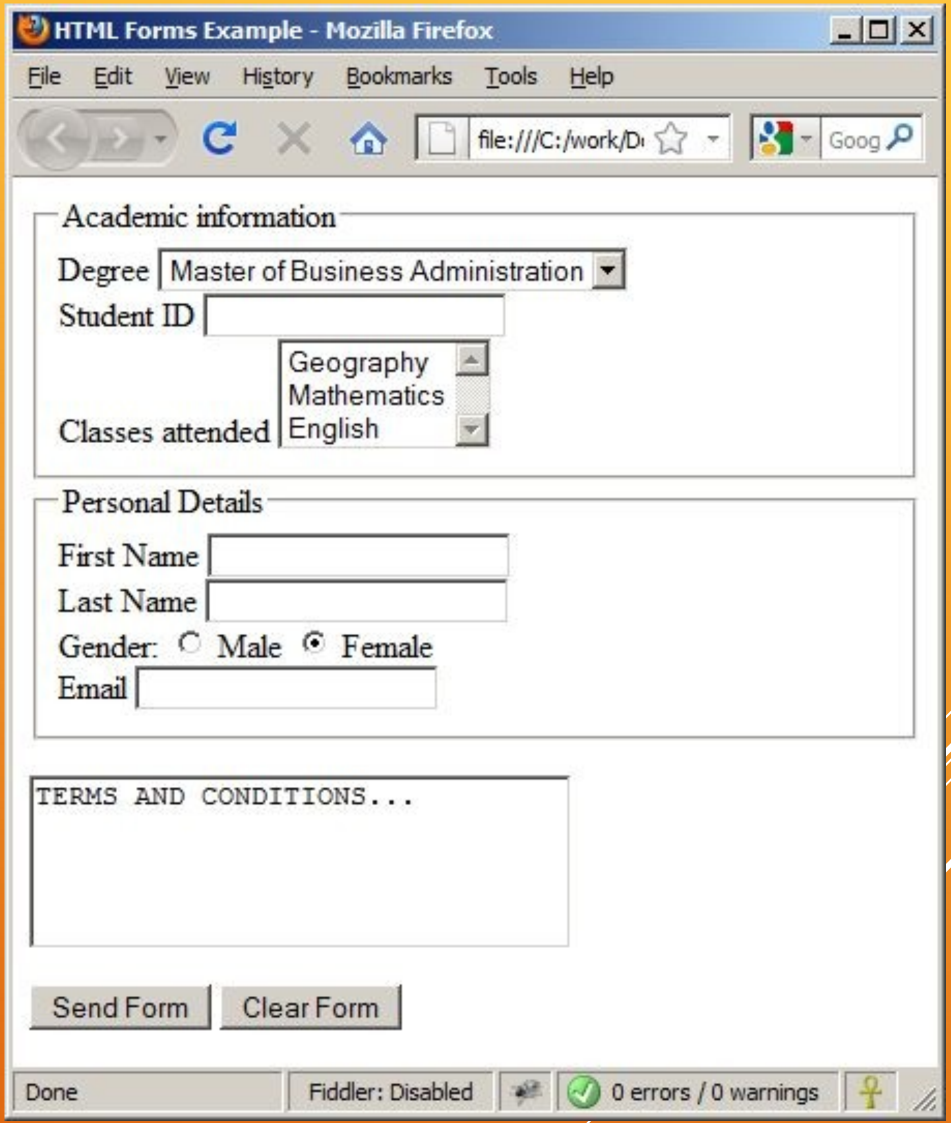
```
<form method="post" action="apply-now.php">
  <input name="subject" type="hidden" value="Class" />
  <fieldset><legend>Academic information</legend>
    <label for="degree">Degree</label>
    <select name="degree" id="degree">
      <option value="BA">Bachelor of Art</option>
      <option value="BS">Bachelor 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" value="Send Form" />
     <input type="reset" value="Clear Form"
     />
   </p>
```

form.html (continued)



Academic information

Degree: Master of Business Administration

Student ID

Classes attended: Geography, Mathematics, English

Personal Details

First Name

Last Name

Gender: ○ Male ● Female

Email

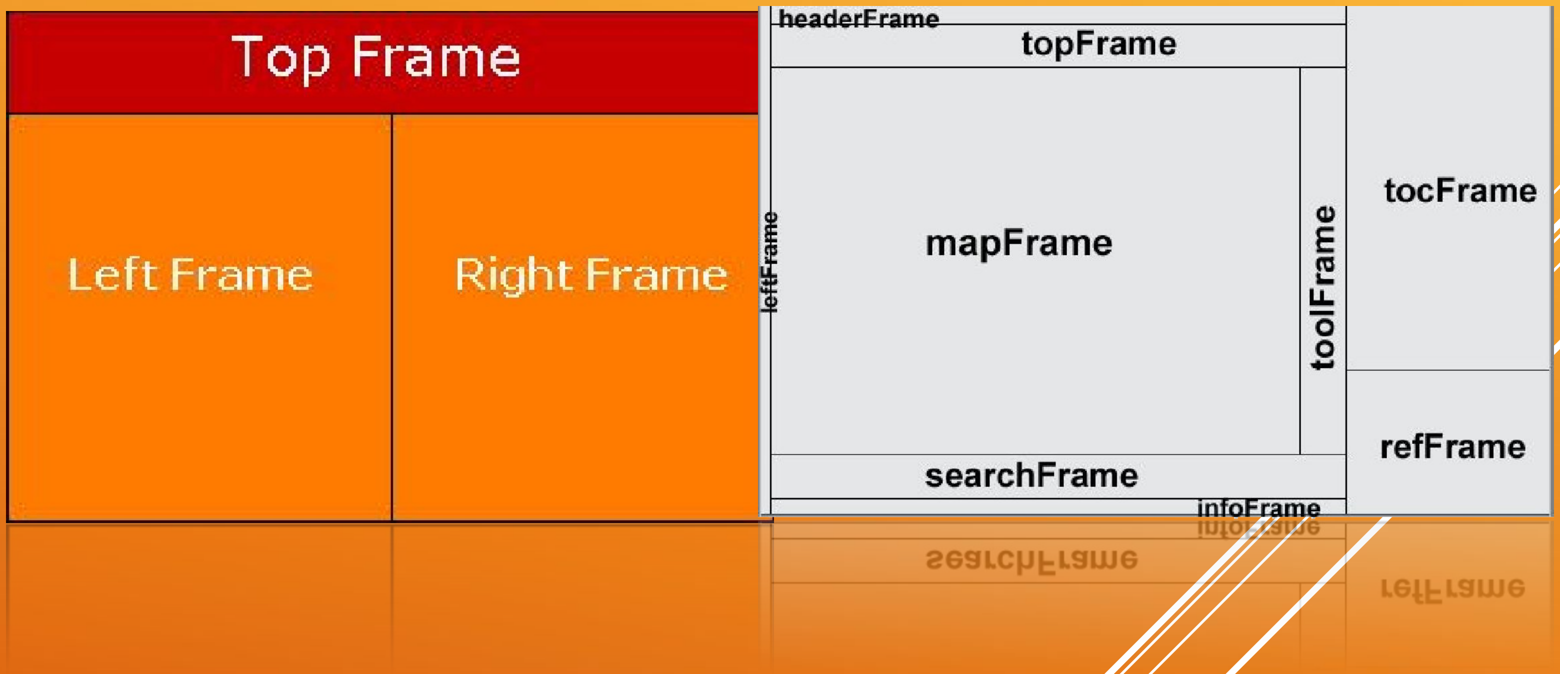
```
TERMS AND CONDITIONS...
```

HTML FORMS – EXAMPLE (3)

TABINDEX

- 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>

- 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

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>
```

HTML FRAMES – DEMO

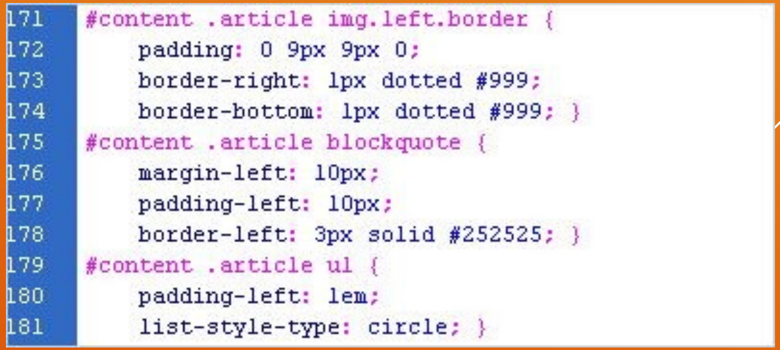
INLINE FRAMES: <IFRAME>

- 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>
```

Cascading Style Sheets (CSS)



```css
#content .article img.left.border {
    padding: 0 9px 9px 0;
    border-right: 1px dotted #999;
    border-bottom: 1px dotted #999; }
#content .article blockquote {
    margin-left: 10px;
    padding-left: 10px;
    border-left: 3px solid #252525; }
#content .article ul {
    padding-left: 1em;
    list-style-type: circle; }
```

TABLE OF CONTENTS

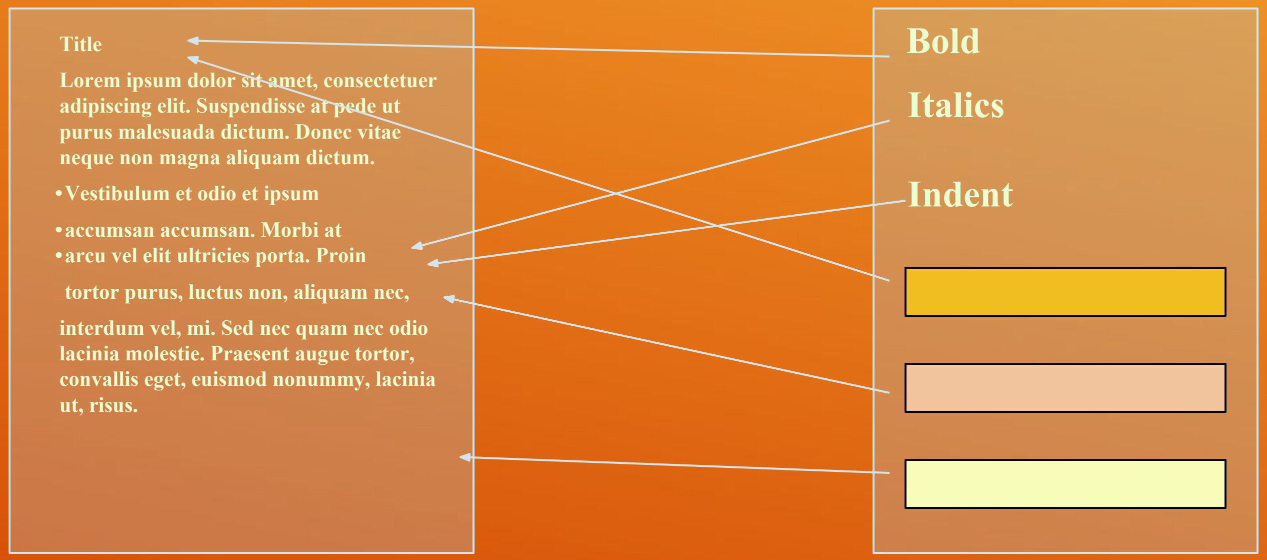
- What is CSS?
- Styling with Cascading Stylesheets (CSS)
- Selectors and style definitions
- Linking HTML and CSS
- Fonts, Backgrounds, Borders
- The Box Model
- Alignment, Z-Index, Margin, Padding
- Positioning and Floating Elements
- Visibility, Display, Overflow
- CSS Development Tools

CSS: A NEW PHILOSOPHY

Separate content from presentation!

Content
(HTML document)

Presentation
(CSS Document)



Title

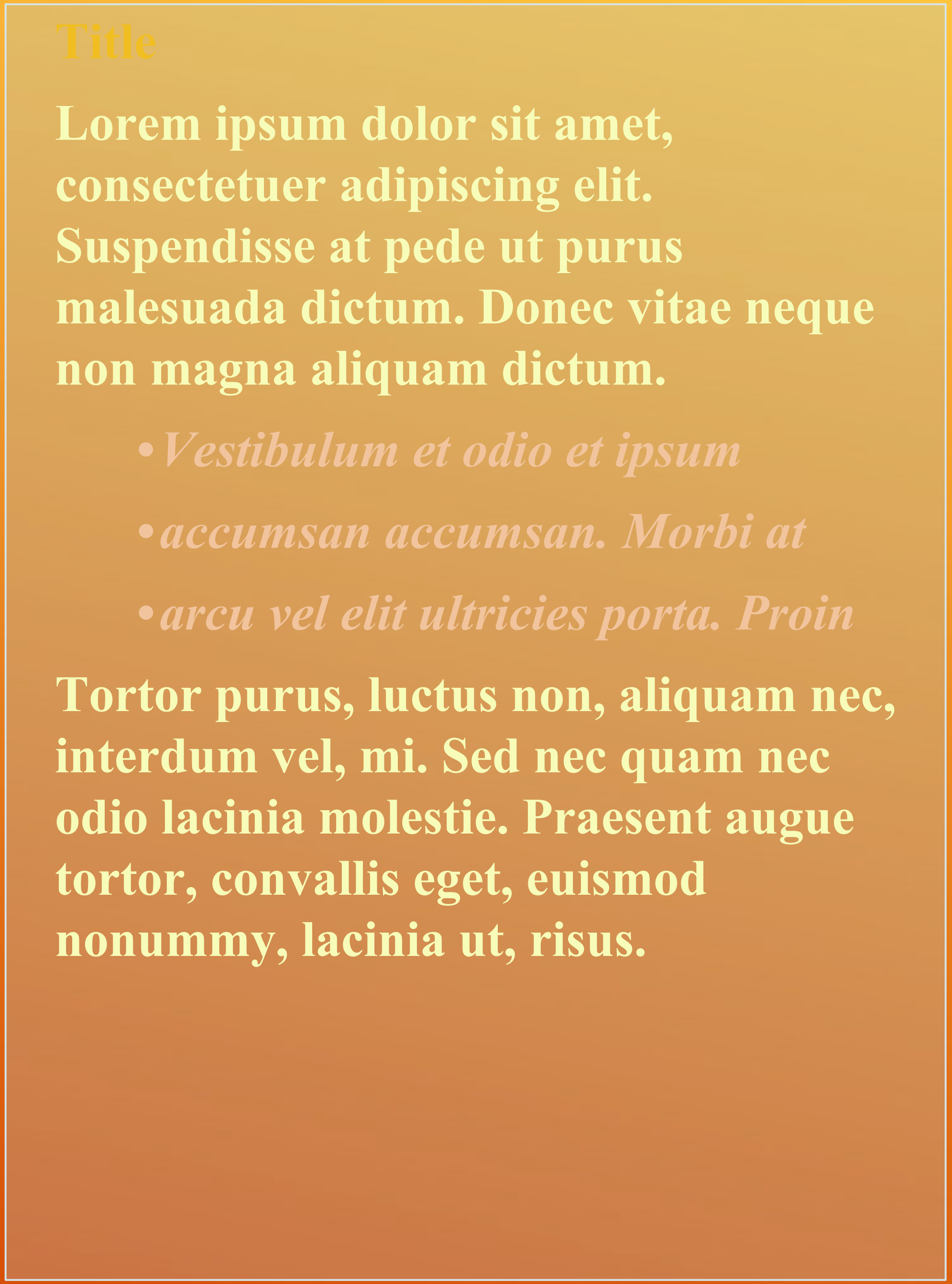
Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Suspendisse at pede ut purus malesuada dictum. Donec vitae neque non magna aliquam dictum.

- Vestibulum et odio et ipsum
- accumsan accumsan. Morbi at
- arcu vel elit ultricies porta. Proin

tortor purus, luctus non, aliquam nec,

interdum vel, mi. Sed nec quam nec odio lacinia molestie. Praesent augue tortor, convallis eget, euismod nonummy, lacinia ut, risus.

THE RESULTING PAGE



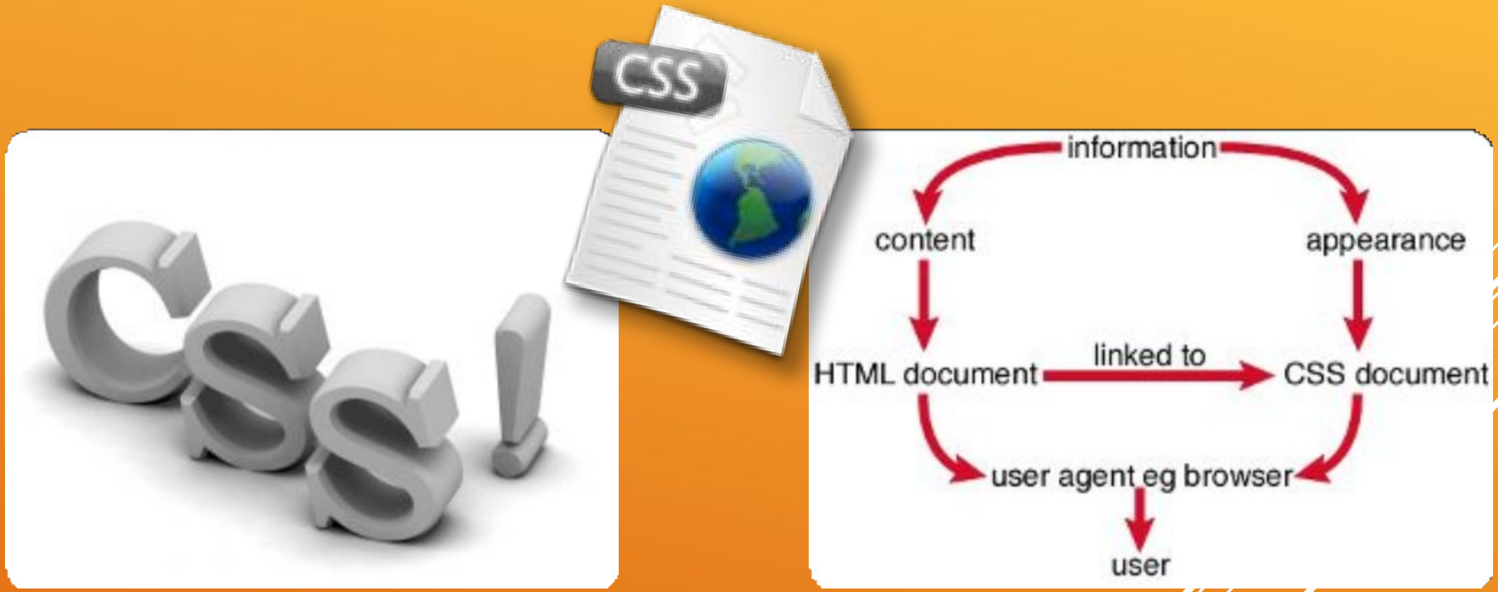
Title

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Suspendisse at pede ut purus malesuada dictum. Donec vitae neque non magna aliquam dictum.

- ***Vestibulum et odio et ipsum***
- ***accumsan accumsan. Morbi at***
- ***arcu vel elit ultricies porta. Proin***

Tortor purus, luctus non, aliquam nec, interdum vel, mi. Sed nec quam nec odio lacinia molestie. Praesent augue tortor, convallis eget, euismod nonummy, lacinia ut, risus.

CSS INTRO



information

content

appearance

HTML document

linked to

CSS document

user agent eg browser

user

Styling with Cascading Stylesheets

CSS INTRODUCTION

- Cascading Style Sheets (CSS)
  - Used to describe the presentation of documents
  - Define sizes, spacing, fonts, colors, layout, etc.
  - Improve content accessibility
  - Improve flexibility
- Designed to separate presentation from content
- Due to CSS, all HTML presentation tags and attributes are deprecated, e.g. `font`, `center`, etc.

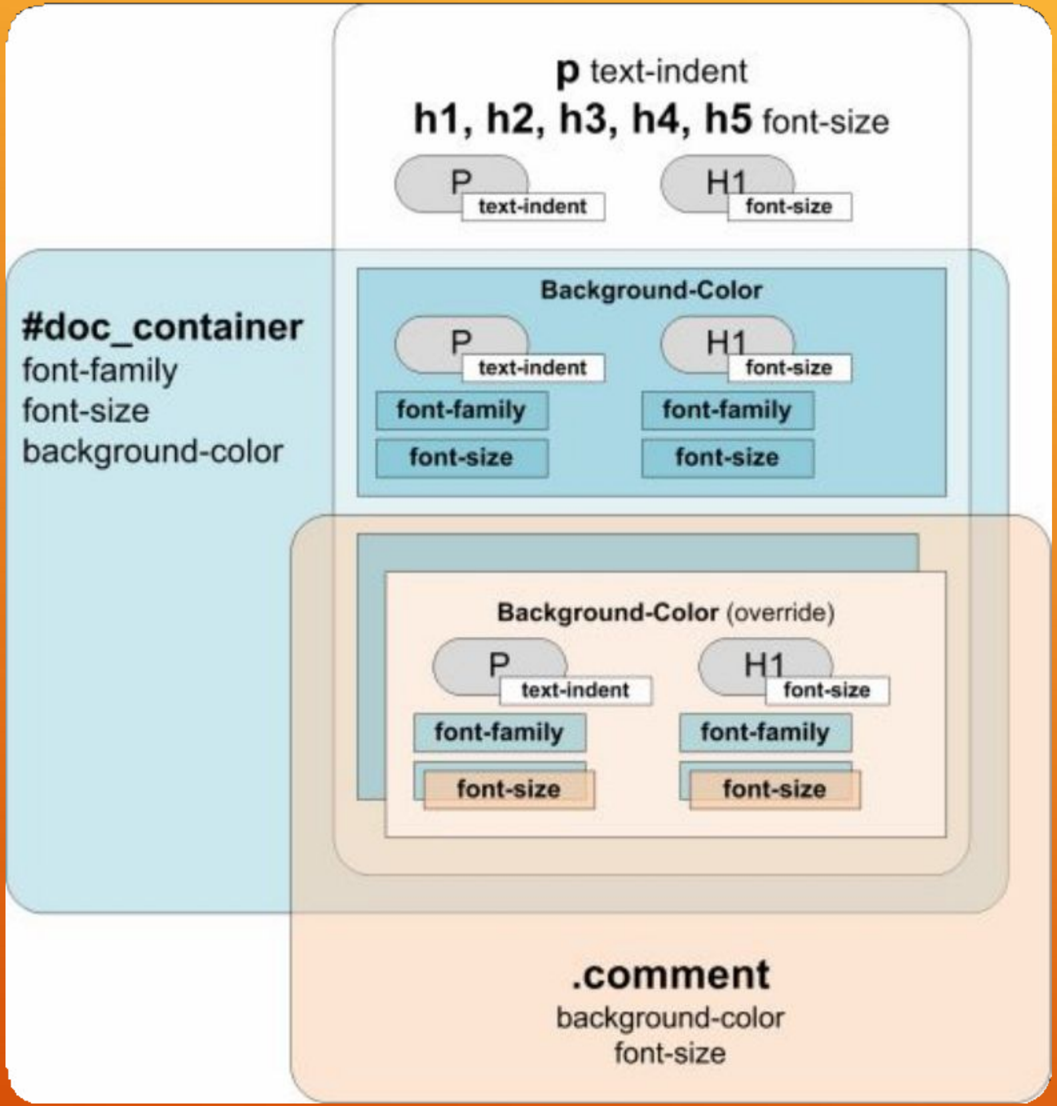
- CSS can be applied to any XML document
  - Not just to HTML / XHTML
- CSS can specify different styles for different media
  - On-screen
  - In print
  - Handheld, projection, etc.
  - … even by voice or Braille-based reader

CSS INTRODUCTION (2)

WHY “CASCADING”?

- Priority scheme determining which style rules apply to element
  - Cascade priorities or specificity (weight) are calculated and assigned to the rules
  - Child elements in the HTML DOM tree inherit styles from their parent
    - Can override them
    - Control via `!important` rule

WHY "CASCADING"? (2)

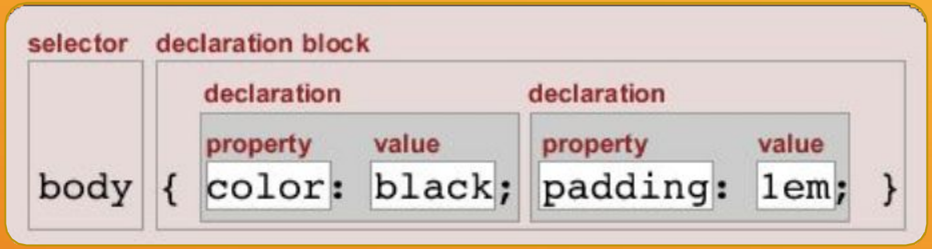


- Some CSS styles are inherited and some not
  - Text-related and list-related properties are inherited - `color`, `font-size`, `font-family`, `line-height`, `text-align`, `list-style`, etc
  - Box-related and positioning styles are not inherited - `width`, `height`, `border`, `margin`, `padding`, `position`, `float`, etc
  - `<a>` elements do not inherit color and text-decoration

WHY "CASCADING"? (3)

STYLE SHEETS SYNTAX

- Stylesheets consist of rules, selectors, declarations, properties and values



```
body { color: black; padding: 1em; }
```

- Selectors are separated by commas

http://css.maxdesign.com.au/

- Declarations are separated by semicolons
- Properties and values are separated by colons

```
h1,h2,h3 { color: green; font-weight: bold; }
```