



```
1 <!DOCTYPE HTML PUBLIC "-//W3C//DTD
2      "http://www.w3.org/TR/html4/strict.
3 <html>
4   <head>
5     <title>Example</title>
6     <link rel="stylesheet" href="s
7   </head>
8   <body>
9     <div id="header">
10       <h1><a href="#" title="Back
11     </div>
12     <div id="toolbar">
13       <span class="left">Today <sp
14       <span class="right">
15       <span id="time">&ampnbsp</sp
16       <select id="timezone">
17         <option value="-12">(GMT-
18         <option value="-11">(GMT-
```

HTML Basics

HTML, Text, Images, Tables

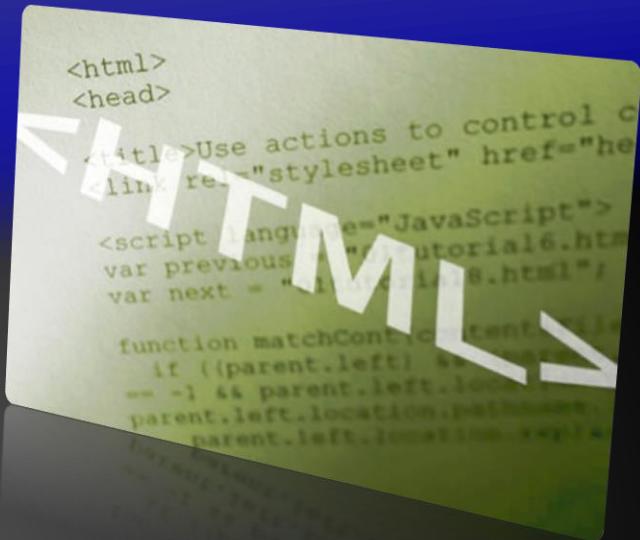
10101010100101010101010101
1010101010100101010101010100
10101010101010101010101110101
101010101010111010110101010111
101010101010010101010101010101
1010101010101010101010101010101
1010101010101010101010101010101
10101010101001010101110101010101
HTML 101
100

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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



Introduction to HTML

ROW	RNDM. DATE	RNDM. NUMBER	RNDM. ALPHABET SUBSTRING
0	04/01/1994	367	abcdeghijklmnpqrstuvwxyz
1	12/04/1991	382	abcdeghijklmnpqrstuvwxyz
2	13/05/1991	64	abcdeghijklmnpqrstuvwxyz
3	15/05/1983	189	abcdeghijklmnpqrstuvwxyz
4	09/09/1995	351	abcdeghijklmnpqrstuvwxyz
5	22/05/2004	300	abcdeghijklmnpqrstuvwxyz
6	27/07/2004	320	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>
```

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

First HTML Page: Tags

```
<html>
  <head>
    <title>My First HTML Page</title>
  </head>
  <body>
    Hello World!
  </body>
</html>
```

Opening tag

Closing tag

First HTML Page: Header

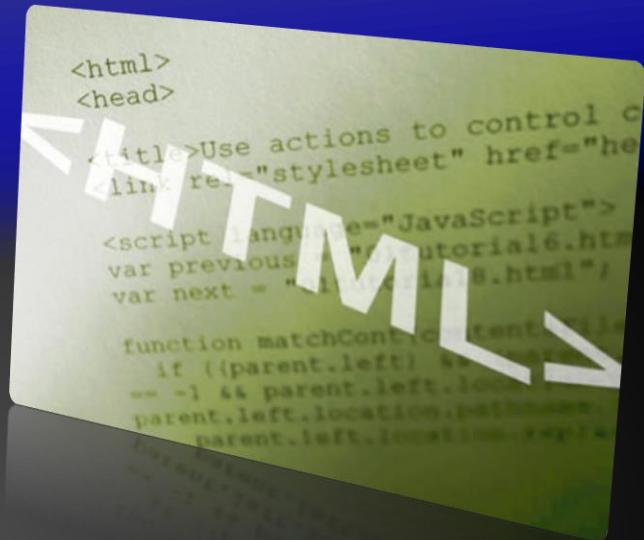
```
<html>
  <head>
    <title>My First HTML Page</title>
  </head>
  <body>
    Hello World!
  </body>
</html>
```

HTML header

First HTML Page: Body

```
<html>
  <head>
    <title>My First HTML Page</title>
  </head>
  <body>
    Hello World!
  </body>
</html>
```

HTML body



HTML Basics

Text, Images, Tables, Forms

ROW	RNDM_DATE	RNDM_NUMBER	RNDM_ALPHABET_SUFFIX
0	04/01/1994	367	abcdeghijklm
1	12/04/1991	382	abcdeghijklm
2	13/05/1991	64	abcdeghijklm
3	15/05/1993	189	abcdeghijklm
4	09/09/1995	351	abcdeghijklm
5	22/05/1993	300	abcdeghijklm
6	27/07/2004	300	abcdeghijklm
7	27/07/2004	300	abcdeghijklm



The <!DOCTYPE> Declaration

- ◆ HTML documents can 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">
```

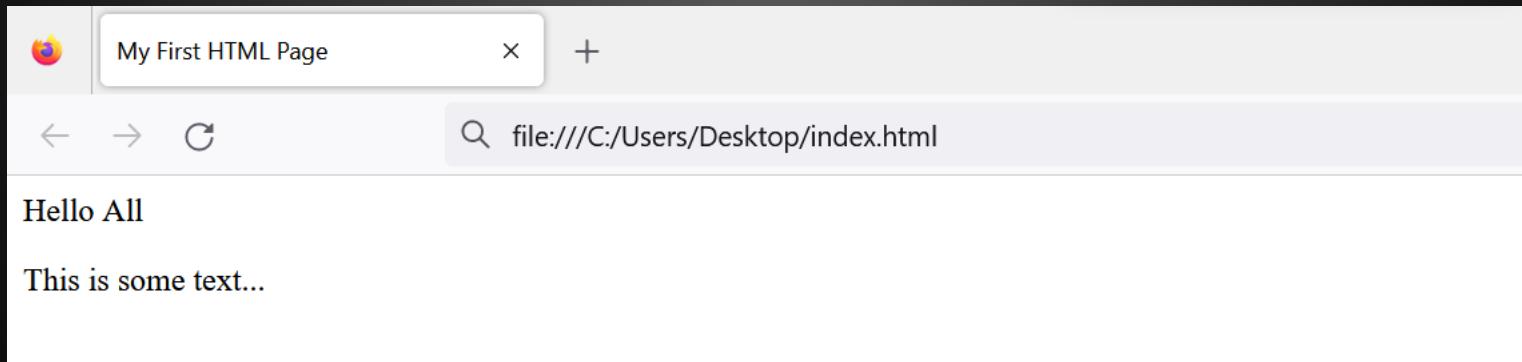
The <head> Section

- ◆ Contains information that doesn't show directly on the viewable page
- ◆ 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>My First HTML Page</title>
```



Comments: <!-- --> Tag

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

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

<!-- Hyperlink to the web site -->
<a href="http://google.com/">Google</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>
```

Some Simple Tags

- ◆ **Hyperlink Tags**

```
<a href="http://www.google.com/">Link to  
Google Web site</a>
```

- ◆ **Image Tags**

```

```

- ◆ **Text formatting tags**

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

Some Simple Tags – Example

some-tags.html

```
<html>
<head>
    <title>Simple Tags Demo</title>
</head>
<body>
<a href="http://www.google.com/">This is a link.</a>
<br />

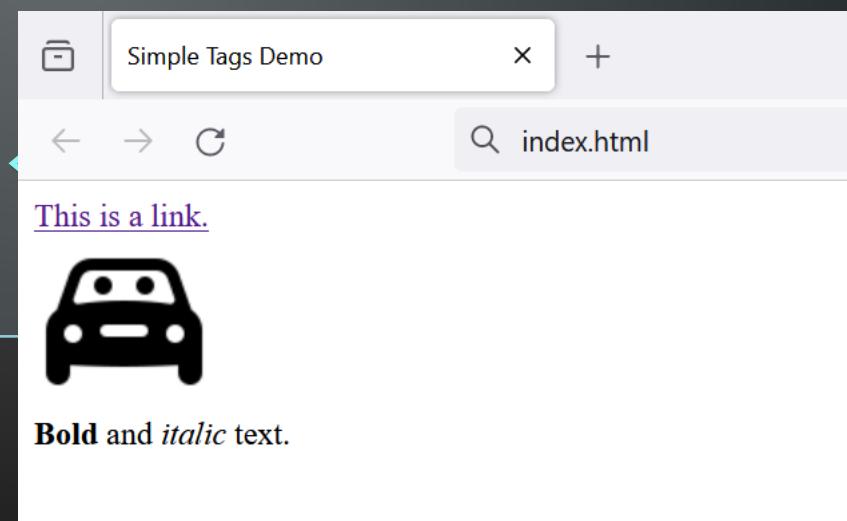
<br />
<strong>Bold</strong> and <em>italic</em> text.
</body>
</html>
```

Some Simple Tags – Example (2)

some-tags.html

```
<html>
<head>
    <title>Simple Tags Demo</title>
</head>
<body>
<a href="http://www.google.com/">This is a link.</a>
<br />

<br />
<strong>Bold</strong> and
</body>
</html>
```



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

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

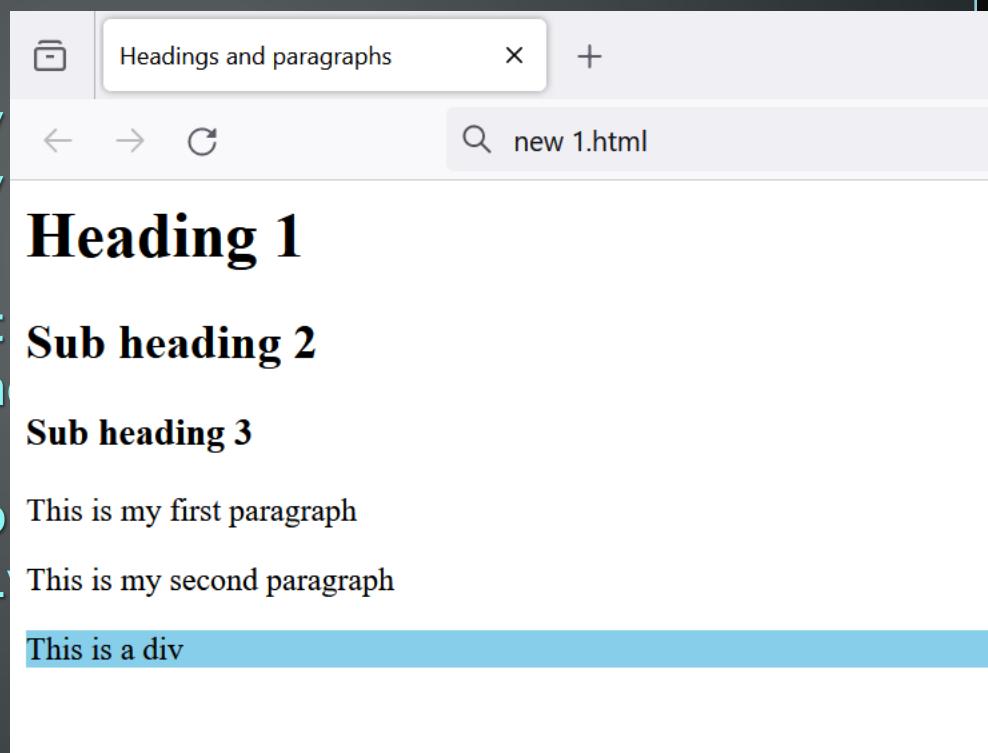
    <p>This is my first paragraph</p>
    <p>This is my second paragraph</p>

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

Headings and Paragraphs – Example (2)

headings.html

```
<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-color: #00FFFF; color: black; padding: 10px;">
      This is a div</div>
  </body>
</html>
```



Text Formatting

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

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

Text Formatting – Example

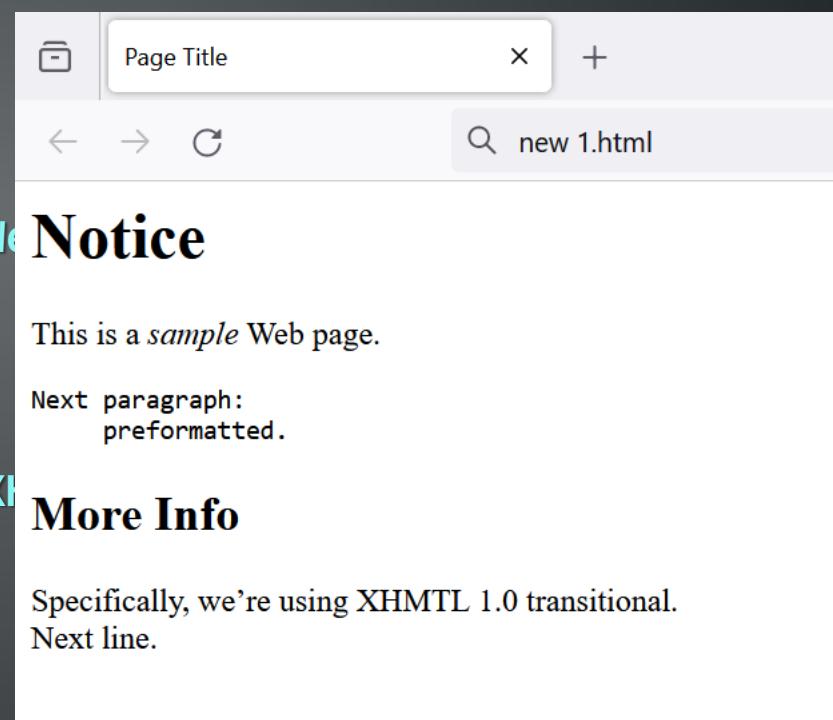
text-formatting.html

```
<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 – Example (2)

text-formatting.html

```
<html>
  <head>
    <title>Page Title</title>
  </head>
  <body>
    <h1>Notice</h1>
    <p>This is a <em>sample</em> Web page.
    <p><pre>Next paragraph:
      preformatted.</pre></p>
    <h2>More Info</h2>
    <p>Specifically, we're using XHMTL.
      Next line.</p>
  </body>
</html>
```



Hyperlinks: <a> Tag

- ◆ Link to an external Web site:

```
<a href="http://www.google.com" target="_blank">Link</a>
```

- ◆ Always use a full URL, including "http://", not just "www.google.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 (2)

- ◆ 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 **form.html** on the same server in the same directory:

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

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

Images: tag

- ◆ Inserting an image with tag:

```

```

- ◆ Image attributes:

src	Location of image file (relative or absolute)
height	Number of pixels of the height
width	Number of pixels of the width
border	Size of border, 0 for no border

Miscellaneous Tags

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

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

- ◆ <center></center>

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

- ◆

```
<font size="3" color="blue">Font3</font>
<font size="4" color="blue">Font4</font>
```

Miscellaneous Tags – Example

misc.html

```
<html>
  <head>
    <title>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">Font4</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

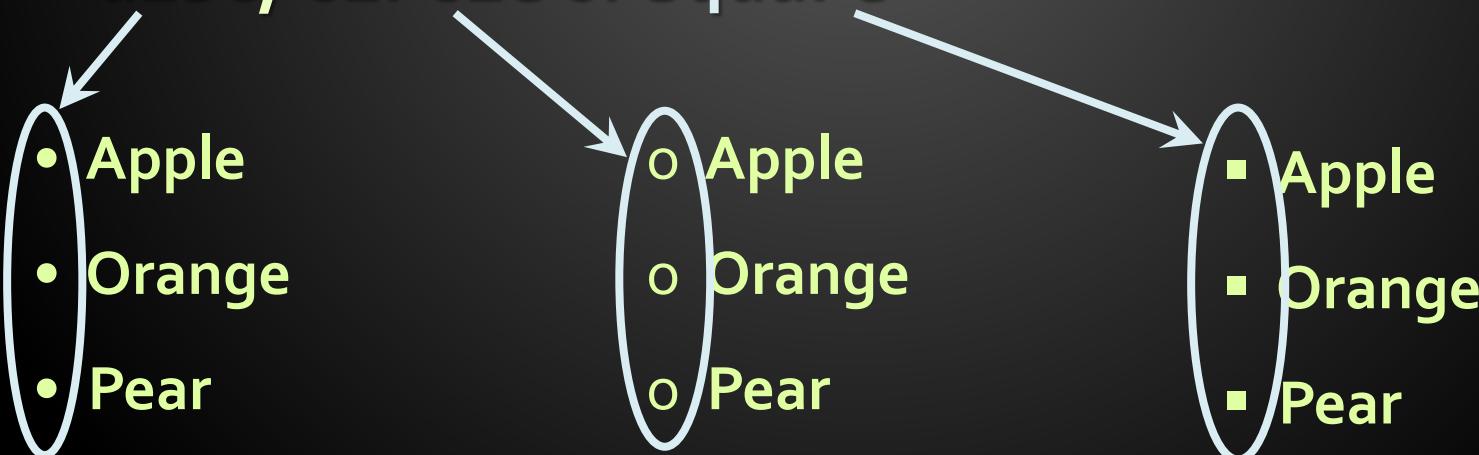
Unordered Lists: Tag

- ◆ Create an Unordered List using :

```
<ul type="disc">
  <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

```
<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

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

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

You will have to purchase a separate license to use the OpenCube me

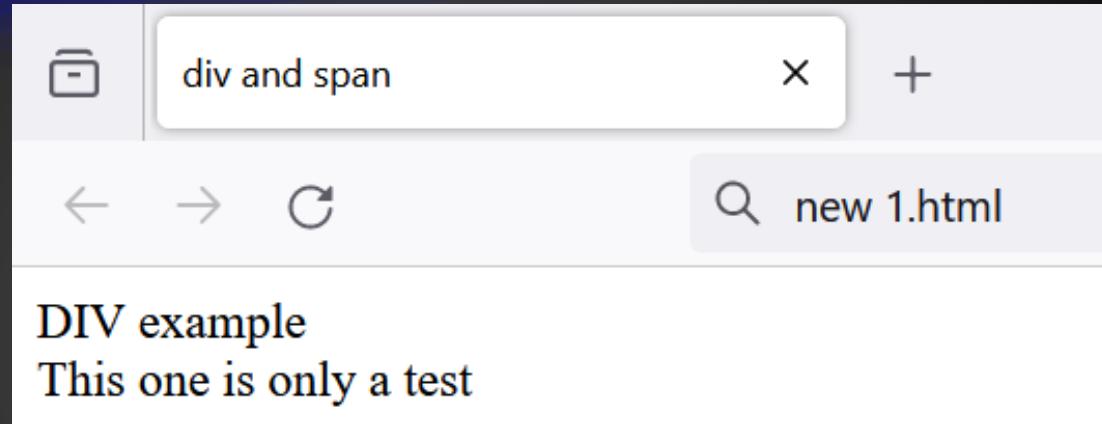


Using <DIV> and Block and Inline Elements

Block and Inline Elements

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

<div> vs



div-and-span.html

```
<div>DIV example</div>  
<span>only a test</span>
```

HTML Tables

humtable1 Notepad

```

<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>

```

US time	European date (D/M/Y) & time	Y-M-D date & time	Dollar	Chinese money	IP addresses	Names	Numbers
29/10/1965	83-03-24	YMB 4	98.176.35.80		26.32 E +03		
Fri Mar 22 21:48:49 UTC+0200 1957		1967-08-22 06:07:16 PM	YMB -81.38	162.117.253.34	dyse chidi		
Fri, 14 Feb 2002 04:24:20 UTC	06/07/99 06:46:01 AM	81-02-04 09:09:54 AM	YMB -108.83	122.205.50.6	bochai dychai	-191.45E-05	
Monday, May 30, 1994 4:47:31 PM	06/09/05 05:11:16 AM		YMB 33.16		dydy bale	-131.20E+01	
09/28/2000	24/11/1957		\$-38.77	YMB 112.42	15.192.151.209		
		97-08-13 00:01:33 AM	\$14.5	YMB -1.75	99.93.147.150	dychai tonchai	-187.28E-05
Mon, 29 Oct 1979 00:44:03 UTC		87-10-16	\$14.66	YMB 61.14		chite malie	- 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!	adsf	adsf	adsf	adsf

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)

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

Simple HTML Tables – Example

```
<table>
  <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="lecture2demos.ppt">Lecture 2 - Demos</a></td>
  </tr>
</table>
```

	Lecture 1
	Lecture 2
	Lecture 2 - Demos

Complete HTML Tables

- ◆ Table rows split into three semantic sections: header, body and footer
 - <thead> denotes table header and contains <th> elements, instead of <td> elements
 - <tbody> denotes collection of table rows that contain the very data
 - <tfoot> denotes table footer but comes BEFORE the <tbody> tag

Complete HTML Table: Example

```
<table border="1">
  <thead>
    <tr><th>Column 1</th><th>Column 2</th></tr>
  </thead>
  <tfoot>
    <tr><td>Footer 1</td><td>Footer 2</td></tr>
  </tfoot>
  <tbody>
    <tr><td>Cell 1.1</td><td>Cell 1.2</td></tr>
    <tr><td>Cell 2.1</td><td>Cell 2.2</td></tr>
  </tbody>
</table>
```

header

th

footer

Last comes the body (data)

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>
```

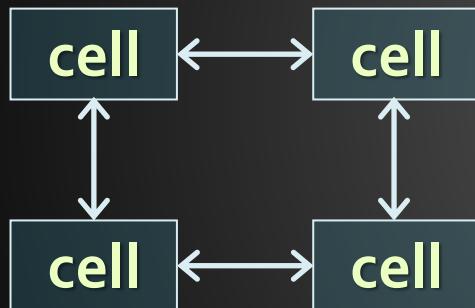
nested-tables.html

Contact:	First Name	Last Name
----------	------------	-----------

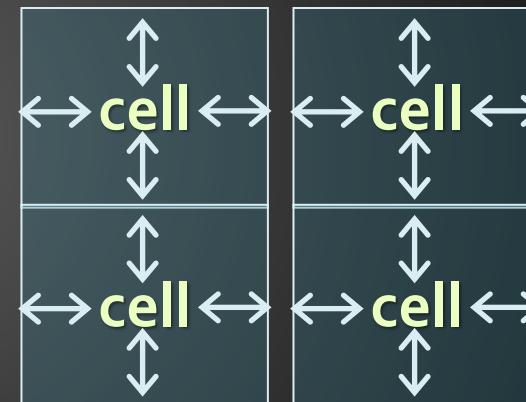
Cell Spacing and Padding

- ◆ Tables have two important attributes:

- ◆ cellspacing



- ◆ cellpadding



- ◆ Defines the empty space between cells

- ◆ Defines the empty space around the cell content

Cell Spacing and Padding – Example

table-cells.html

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

Cell Spacing and Padding – Example (2)

table-cells.html

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

This table has cellspacing 15 and cellpadding 0

First	Second
-------	--------

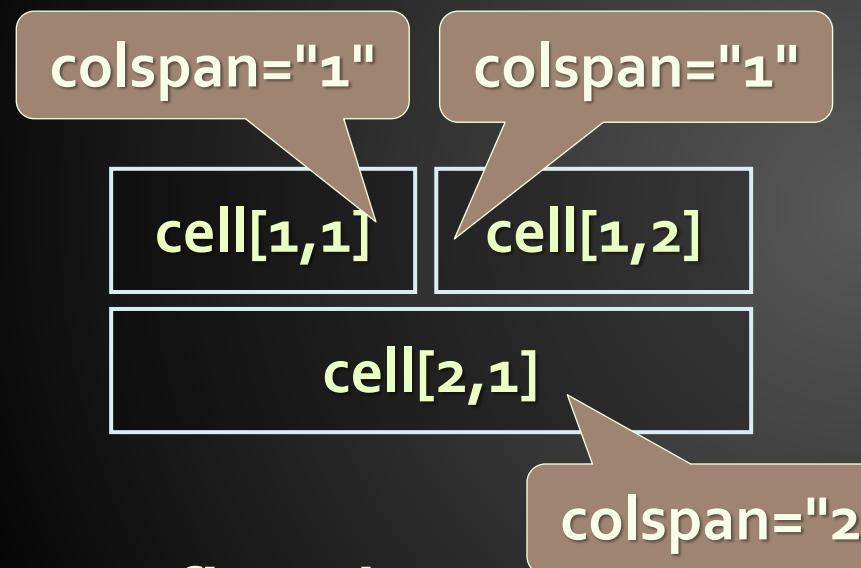
This table has cellspacing 0 and cellpadding 10

First	Second
-------	--------

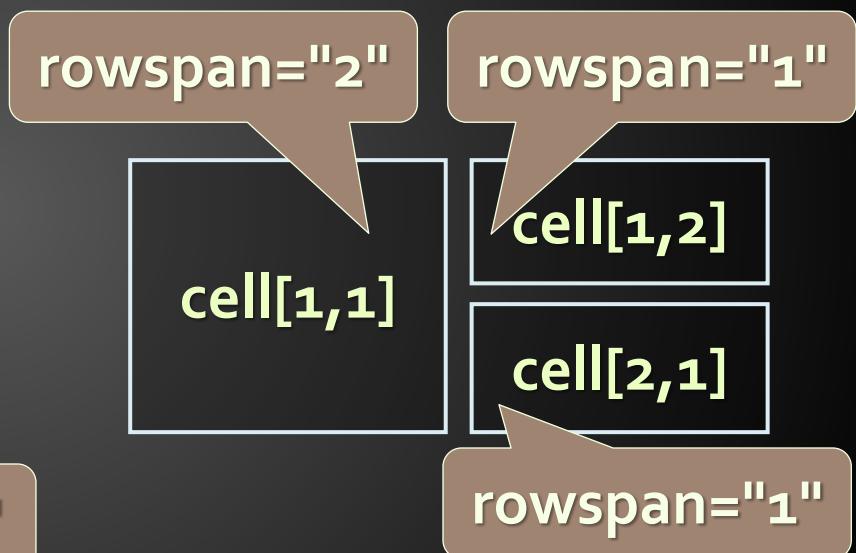
Column and Row Span

- ◆ Table cells have two important attributes:

- ◆ **colspan**



- ◆



- ◆ Defines how many columns the cell occupies

- ◆ Defines how many rows the cell occupies

Column and Row Span – Example

table-colspan-rowspan.html

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

Column and Row Span – Example (2)

table-colspan-rowspan.html

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

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