MIS3690 WEB TECHNOLOGIES

BABSON COLLEGE

TOIM DIVISION

EXTERNAL AND IN-LINE STYLES

TYPES OF STYLE DECLARATIONS

- Internal – We know how to do this

- In-line – Can be used in the opening part of any tag

- External – Puts styles in a separate file

SYNTAX OF IN-LINE STYLES

Syntax:

```
<tag style="attribute: value;
         attribute: value; …">
```

Example:

```
<p style="font-size: small; color: blue">
```

ANOTHER IN-LINE STYLE EXAMPLE

ATTENTION

```html
<!DOCTYPE html>
<html>
<head>
    <title>CSS demo 1</title>
    <meta http-equiv="content-type" content="text/html; charset=utf-8" />
<!--Notice no styles here -->
</head>
<body>
            <h1>This is a header of type h1</h1>
            <h2>This is a <span
style="color:green">
                    header of type</span> h2</h2>
            <hr />
            <p>This is a normal paragraph</p>
            <p style="border:red; border-
style:solid">
                This is a bordered paragraph</p>
</body>
</html>
```
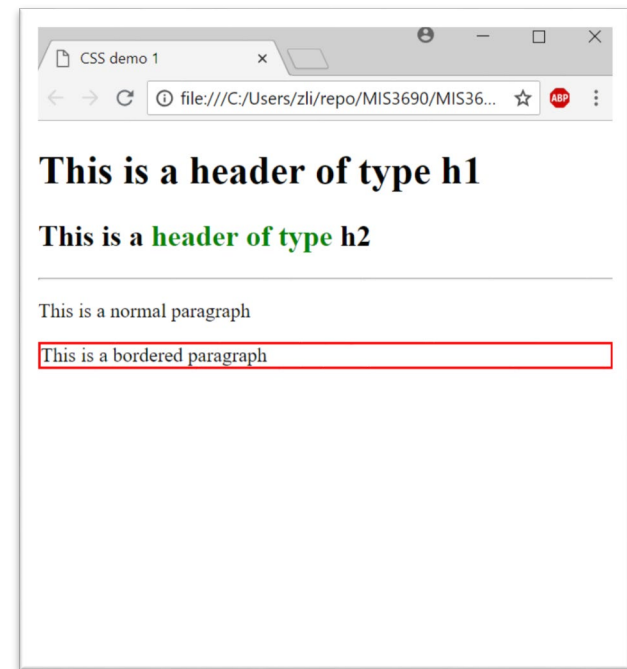
CSS demo 1   ×

file:///C:/Users/zli/repo/MIS3690/MIS36...

This is a header of type h1

This is a header of type h2

This is a normal paragraph

This is a bordered paragraph

PROS/CONS OF IN-LINE STYLES

- Pros
  - Puts style near text or image it modifies
  - Avoids the need to create tag ids
- Cons
  - All styles no longer in one place
  - Not a good alternative when same style is used multiple times (prefer class)
  - Harder to modify with JavaScript

IN-LINE STYLE ACTIVITY

- For CS06-InClass-1.htm (from *Resources/templates* folder)
  - View the page in your browser
  - Add a background-color style to one of the <p> tags using an in-line style.
  - View it again in your browser to make sure that the in-line style works. If not, fix it.
  - Notice the 12pt font-size style for <p> in the internal style sheet
  - Using an in-line style, override this for one of the <p> tags so that the paragraph appears in an 18pt font
  - View it again to make sure it works.

EXTERNAL STYLE SHEET

- Same syntax as that of internal style sheet

- Styles appear in separate file

  - `<style>` tag is not used

  - File name extension is .css

PROS/CONS OF EXTERNAL STYLES

- Pros
  - Assures consistency across website
  - Easier to change look and feel of website
- Cons
  - Distance (separate files) between styles and their use

APPLYING EXTERNAL STYLE SHEETS

■ Insert one or more `<link>` tags into the `<head>` section:

```
<link rel="stylesheet" type="text/css" href="xxx.css" />
```

Where xxx is the filename of the external stylesheet.

■ `<link>` tags should not be placed between the `<style>` and `</style>` tags.

■ If multiple external style sheets are used, later `<link>` tags override and add to earlier `<link>` tags

EXTERNAL STYLE SHEET EXAMPLE

```
<head>
        <title>CSS Exercise 1</title>
        <meta http-equiv="content-type" content="text/html; charset=utf-8" />
        <link rel="stylesheet" href="ex1.css"
type="text/css" />
</head>
<body>
        <h1>This is a header of type h1</h1>
        <h2>This is a header of type h2</h2>
        <hr />
        <p>This is a paragraph.  I've tried to make it long enough to scroll onto
a second line.  If it's still two short, please resize your window so that you can observe whether
or not it's indented properly.</p>
        <p class="bord">This is a bordered paragraph</p>
</body>
</html>
```
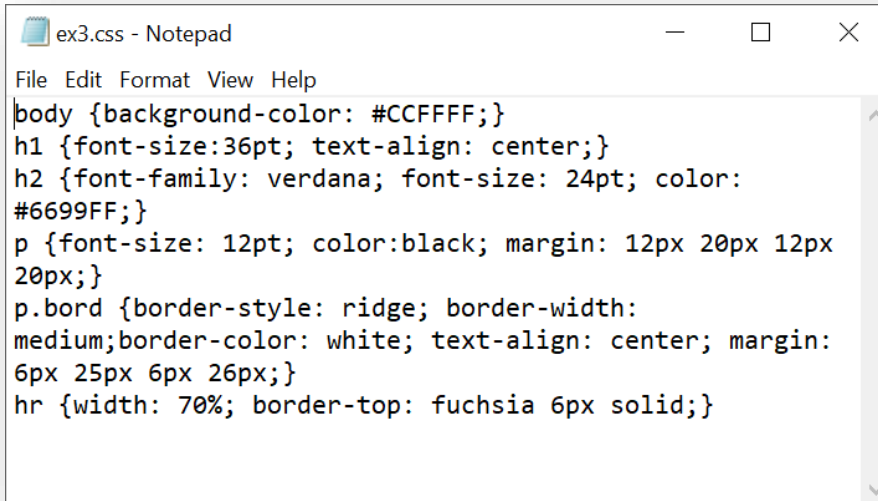
Note absence of <style> and </style> tags in .css file


```
ex1.css - Notepad
File  Edit  Format  View  Help
body {
    background-color: yellow;
}

h1{
    font-size: 36pt;
}
h2 {
    color:blue;
}
p{
    margin-left: 50px;
}
hr{
    width: 80%;
    border-top: 10px solid green;
}
```
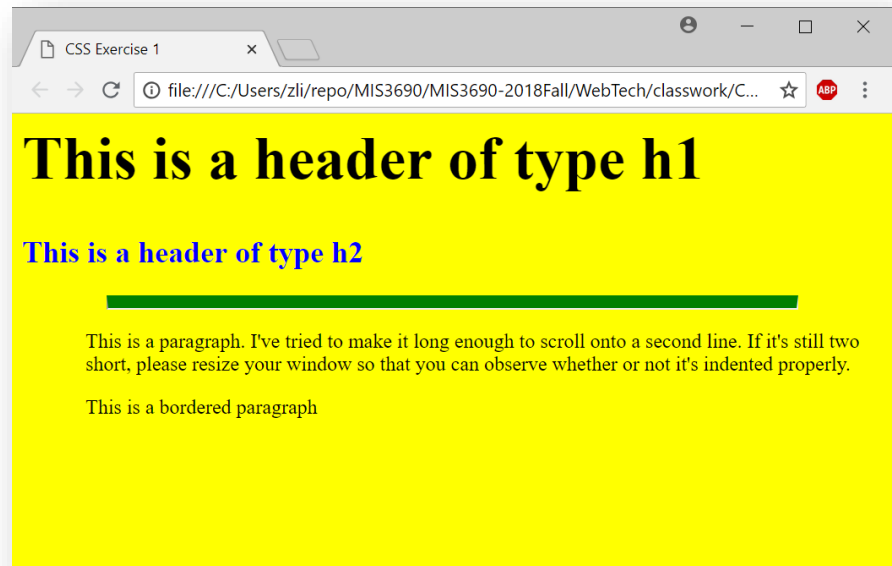
EXTERNAL STYLE SHEET EXAMPLE

```
<head>
          <title>CSS Exercise 1</title>
          <meta http-equiv="content-type" content="text/html; charset=utf-8" />
          <link rel="stylesheet" href="ex2.css"
type="text/css" />
</head>
<body>
          <h1>This is a header of type h1</h1>
          <h2>This is a header of type h2</h2>
          <hr />
          <p>This is a paragraph.  I've tried to make it long enough to scroll onto
a second line.  If it's still two short, please resize your window so that you can observe whether
or not it's indented properly.</p>
          <p class="bord">This is a bordered paragraph</p>

</body>
</html>
```

EXTERNAL STYLE SHEET EXAMPLE

```
<head>
        <title>CSS Exercise 1</title>
        <meta http-equiv="content-type" content="text/html; charset=utf-8" />
        <link rel="stylesheet" href="ex3.css"
type="text/css" />
</head>
<body>
        <h1>This is a header of type h1</h1>
        <h2>This is a header of type h2</h2>
        <hr />
        <p>This is a paragraph.  I've tried to make it long enough to scroll onto
a second line.  If it's still two short, please resize your window so that you can observe whether
or not it's indented properly.</p>
        <p class="bord">This is a bordered paragraph</p>
</body>
</html>
```


ex3.css - Notepad

File   Edit   Format   View   Help

```
body {background-color: #CCFFFF;}
h1 {font-size:36pt; text-align: center;}
h2 {font-family: verdana; font-size: 24pt; color:
#6699FF;}
p {font-size: 12pt; color:black; margin: 12px 20px 12px
20px;}
p.bord {border-style: ridge; border-width:
medium;border-color: white; text-align: center; margin:
6px 25px 6px 26px;}
hr {width: 70%; border-top: fuchsia 6px solid;}
```


CSS Exercise 1

file:///C:/Users/zli/repo/MIS3690/MIS3690-2018Fall/WebTech/class...

This is a header of type h1

This is a header of type h2

This is a paragraph. I've tried to make it long enough to scroll onto a second line. If it's still two short, please resize your window so that you can observe whether or not it's indented properly.

This is a bordered paragraph
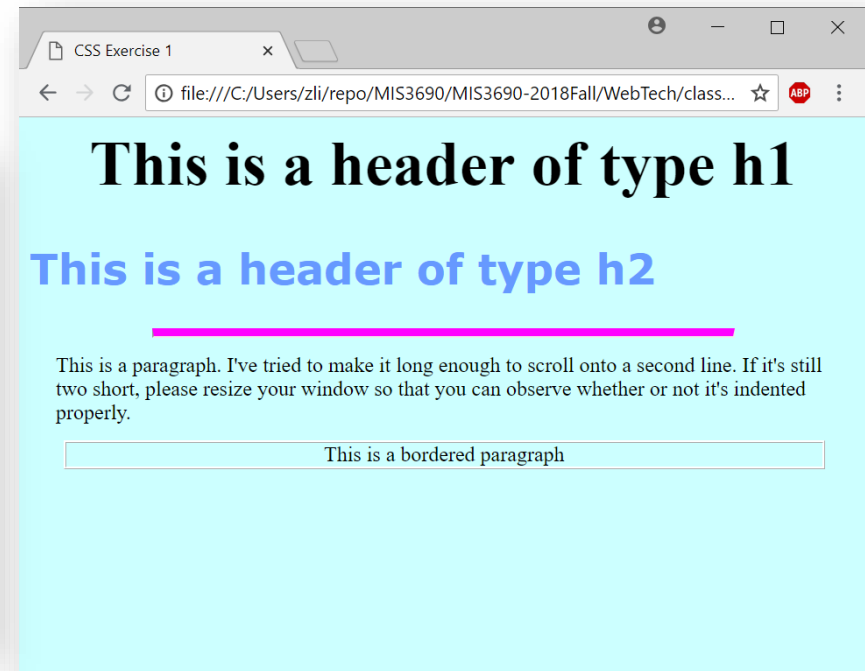
EXTERNAL STYLE SHEET ACTIVITY

- View file CS06-InClass-2.htm (from Resources/templates folder) in your browser

- Edit the file to remove the styles from the internal sheet an place them into an external style sheet stored in the css folder

- Remember to add the <link> tag to your CS06-InClass-2.htm file

- View CS06-InClass-2.htm again in your browser. Its appearance should not have changed.

CSS TEMPLATES

- CSS templates are external style sheets that provide a consistent look and feel to the pages on your site

- Free CSS templates are available on web

  - Search: free css templates

- You may not use CSS templates for your project

TEMPLATE EXAMPLE

```
*{ margin: 0; padding: 0; }*
body { font: .8em Arial, Sans-Serif; line-height: 1.8em;
        background: #333; color: #444; }
a {COLOR: #6587E0; text-decoration: none;}
a:visited {COLOR: #6587E0; text-decoration: none;}
a:hover {COLOR: #333; text-decoration: underline;}
h2 { margin: 0 0 10px; padding: 10px 0 3px; }
h3 { padding-left: 10px; color: #fff;
     background: #FE7B09 url(images/bg.jpg) repeat-x;
     font-size: 1em; height: 24px; line-height: 24px; }
ul {  padding: 0; margin: 0 0 10px;}
li { list-style-type: none;}
p { margin: 5px 0 10px 0; }
img { border: none; }

#header {
     background: #FE7B09 url(images/header.jpg) repeat-x;
     height: 215px;}
#header h1 {font-size: 30px; font-weight: 100;
     letter-spacing: -1px; padding: 22px 0 5px 10px;}
#header h1 a {color: #fff; text-decoration: none; }
#header h2 {color: #eee; font-size: 19px; font-weight: 100;
     padding: 0 0 0 11px; letter-spacing: -1px;
     line-height: 12px; }
...
```


Source: http://www.free-css-templates.com/preview/Flower/
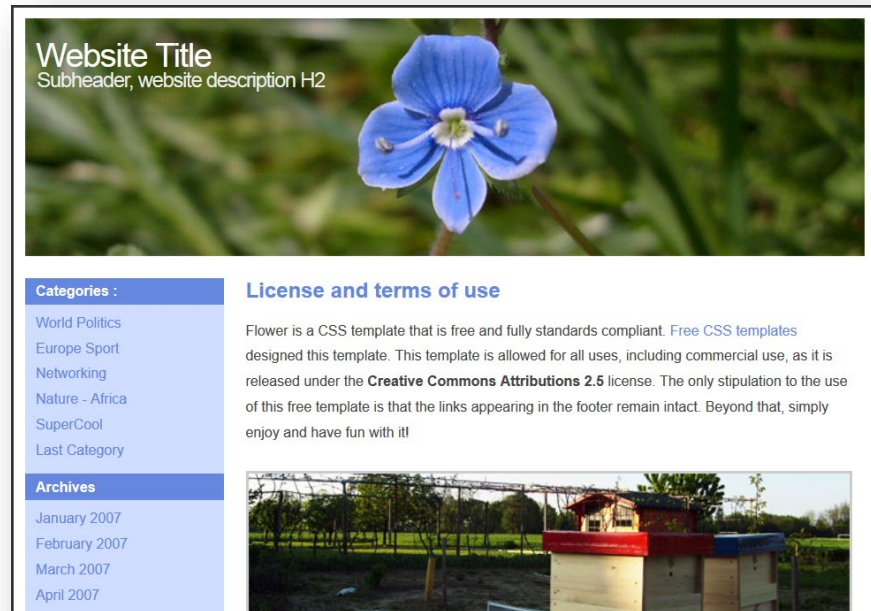
HTML TABLES

WHY TABLES?

- Allows you to define a structure to display your content.

- Makes it easy to "fit" content (especially, images).

- Allows you to display more content in a page.

TYPES OF HTML TABLES

- Regular tables
    - Each row has the same number of cells
    - Each column has the same number of cells
    - Standard format – the tabular structure
- Irregular tables
    - Each row need not have the same number of cells
    - Each column need not have the same number of cells
    - Gives you more freedom to organize the content of a web page
    - Must "span" rows and/or columns

REGULAR LAYOUT EXAMPLE

Regular Table

Product ID	Product Name	Price
P3765	Whole Wheat- Loaf	$2.80
M6689	Dinner Rolls - 12	$4.60
D3345	Milk -2% - Gal	$3.89
D4467	Milk - Skim - Gal	$4.29

IRREGULAR LAYOUT EXAMPLE

Irregular tables often blend images and text. Generally they don't use borders.

IRREGULAR LAYOUT EXAMPLE

The Truth About Elephants

A baby elephant hanging out with its mom, aunts and great-aunts, and maybe even its grandmother

Why is it so easy for them? Are they better parents? Do they just not worry about every little detail? I've never known a gorilla to read and study carefully seventeen books on bringing up baby gorillas. And they seem to know just what to do. They never worry about spoiling their little gorilla babies. They never worry about not having enough time with them. Now, don't get me wrong, I'd rather be human than a gorilla any day. Just imagine.

It's hard to tell what goes through a baby elephant's mind when its mom is trying to put it to sleep. Do you think baby elephants wake up in the middle of the night and cry?

Today in the paper there's a story about a new gorilla that was just born in Franklin Park. Its mom is holding on to it just like any proud human mom. And I have to

There is a table that defines the layout of this page – with rows and columns

HTML TABLE– MANDATORY TAGS

- `<table>…</table>`
    - Defines table object – should be the outermost
- `<tr>…</tr>`
    - Defines table row – one set for each row
- `<td>…</td>`
    - Defines table cell – one set for each cell.
- Remember: ***Table contains rows, rows contain cells with data.***
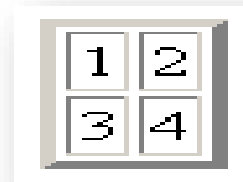- In HTML, table *columns* are not explicitly defined. You only define table cells – columns are implicit.
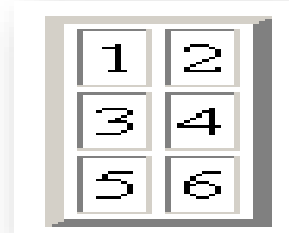
HOW ARE THESE TAGS PLACED?

Table Row

Table Cell

Table

```
<table>

    <tr>

    </tr>
    <tr>

    </tr>
</table>
```

`<td>…</td><td>…</td>`

`<td>…</td><td>…</td>`
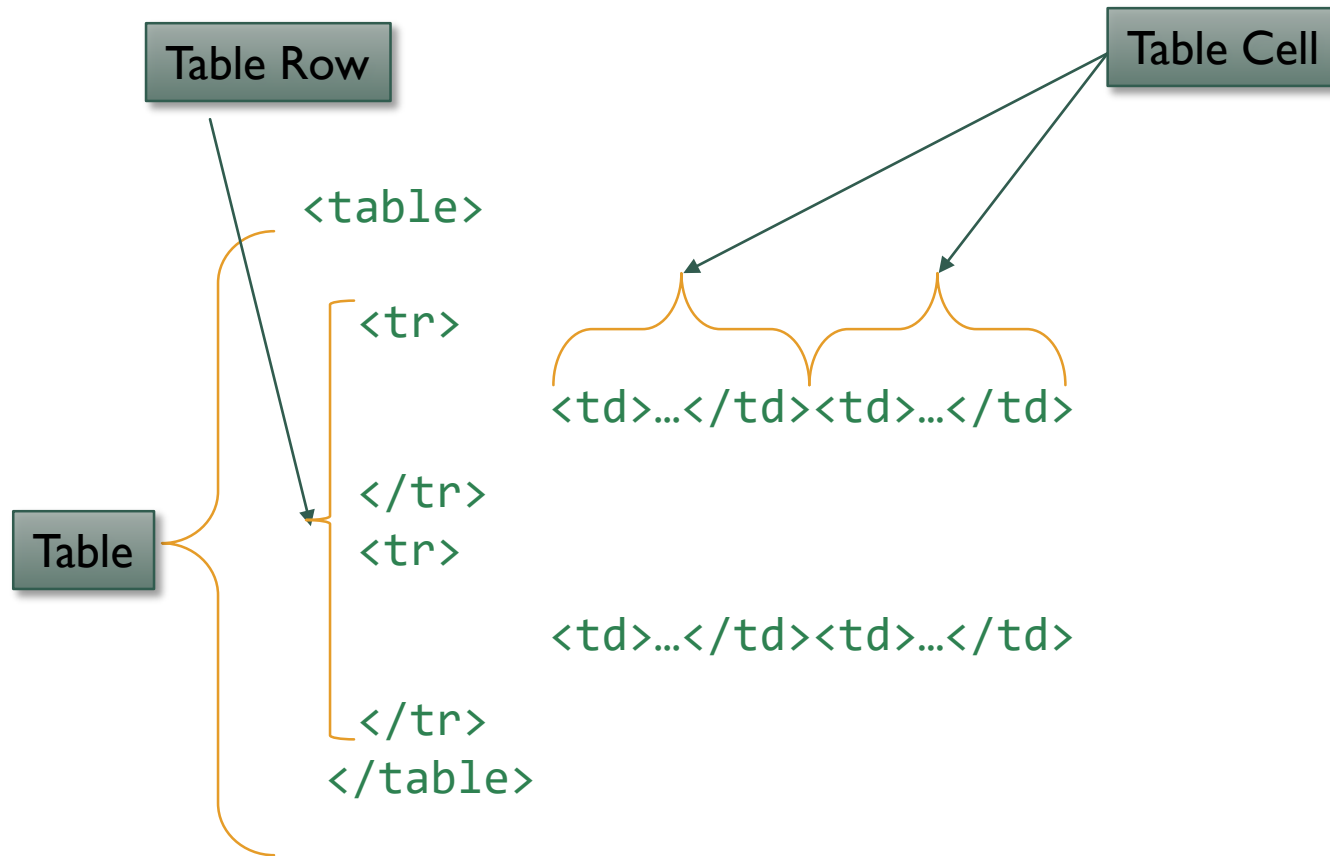
REGULAR TABLES – MORE EXAMPLES

```
<table>
<tr><td>1</td><td>2</td></tr>
<tr><td>3</td><td>4</td></tr>
</table>
```
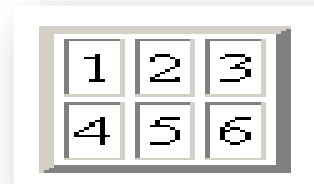


```
<table>
<tr><td>1</td><td>2</td></tr>
<tr><td>3</td><td>4</td></tr>
<tr><td>5</td><td>6</td></tr>
</table>
```


All these tables have borders defined using CSS – not shown here

```
<table>
<tr><td>1</td><td>2</td><td>3</td></tr>
<tr><td>4</td><td>5</td><td>6</td></tr>
</table>
```

CAPTION

■ `<caption></caption>` can be used to title a table

■ Must be first item in `<table>`

■ Appears only in first page printed or shown

CS06-INCLASS-TABLE-1.HTM

- Suppose you are CEO of a start-up. You want to create a web page for a catalog of your products.

- The table should have three columns:

    - Product Code; Product Description; and Price.

    - The top row of the table should be a heading saying "Product Code", "Product Description", and "Price".

    - Each subsequent row should provide the value for one of the catalog items.

    - Include four catalog items – data can be made up or use what is on the screen.

- Add a caption.

- Name your file CS06-InClass-table-1.htm .

- We will stylize it next.

CSS-STYLES FOR TABLES

- `<table>` tag supports
  - background,
  - border,
  - margin,
  - padding,
  - font,
  - text,
  - positioning styles
- `<td>` tag support all of above except margin and positioning. You may also use the width style.
- `<tr>` tag seems to support only background, font, and text styles

CSS-STYLES FOR TABLES

- To center a table on a page

  - `table {margin-right:auto; margin-left:auto}`

- Width of the table

  - `table {width:600px;}` or `table {width:70%;}`

- Width of individual columns

  - Use CLASS to set width of individual columns

CSS FOR TABLES - EXAMPLE

- **`table`** `{`

  `border:2px solid black;` /*defines the outside border*/

  `font-family: Arial;`

  `color: navy;`

  `width:50%;` /* sets the width of table to 50% of width of web-page*/

  `margin-right:auto; margin-left:auto;` /* centers table on page*/

  `background: url(music.gif); }`

- **`td`** `{`

  `border: 2px solid black;` /* defines the border for each cell*/

  `vertical-align:top;` /* defines the vertical alignment of text in each cell*/

  `text-align:center; }`

- **`tr#top`** `{background-color:yellow; font-weight:bold;}`

CS06-INCLASS-TABLE-1.HTM (CONT.)

- Add styles to the catalog table.

- Save CS06-InClass-table-1.htm and commit/push to GitHub.
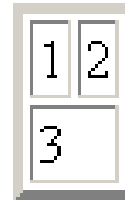
IRREGULAR TABLES

IRREGULAR TABLES

- Irregular tables have cells that cross over one or more rows or columns

- For a cell that covers two or more columns, use `<td colspan="x">data</td>`, where x is the number of columns spanned

- For a cell that covers two or more rows, use `<td rowspan="x">data</td>`, where x is the number of rows spanned

IRREGULAR TABLES USING "COLSPAN"

```
<table>
<tr><td>1</td><td>2</td></tr>
<tr><td colspan="2">3</td></tr>
</table>
```
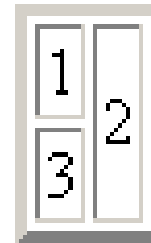

All these tables have borders defined using CSS – not shown here

```
<table>
<tr><td>1</td><td>2</td><td>3</td></tr>
<tr><td>4</td><td colspan="2">5</td></tr>
<tr><td colspan="3">6</td></tr>
</table>
```

IRREGULAR TABLES USING "ROWSPAN"

```
<table>
<tr><td>1</td>
     <td rowspan="2">2</td></tr>
<tr><td>3</td></tr>
</table>
```


All these tables
have borders
defined using CSS
– not shown here

```
<table>
<tr><td>1</td><td>2</td>
     <td rowspan="3">3</td></tr>
<tr><td>4</td><td rowspan="2">5</td></tr>
<tr><td>6</td></tr>
</table>
```

IRREGULAR TABLE EXAMPLE WITH ROWSPAN AND COLSPAN

```
<table>
<tr><td>1</td><td colspan="2">2</td></tr>
<tr><td rowspan="2"> 3</td><td>4</td><td>5</td></tr>
<tr><td>6</td><td>7</td></tr>
</table>
```

All these tables have borders defined using CSS – not shown here

CELL (<td>) ALIGNMENT ATTRIBUTES

- `Vertical-align:` (Vertical Alignment)
  - `top, center, bottom`
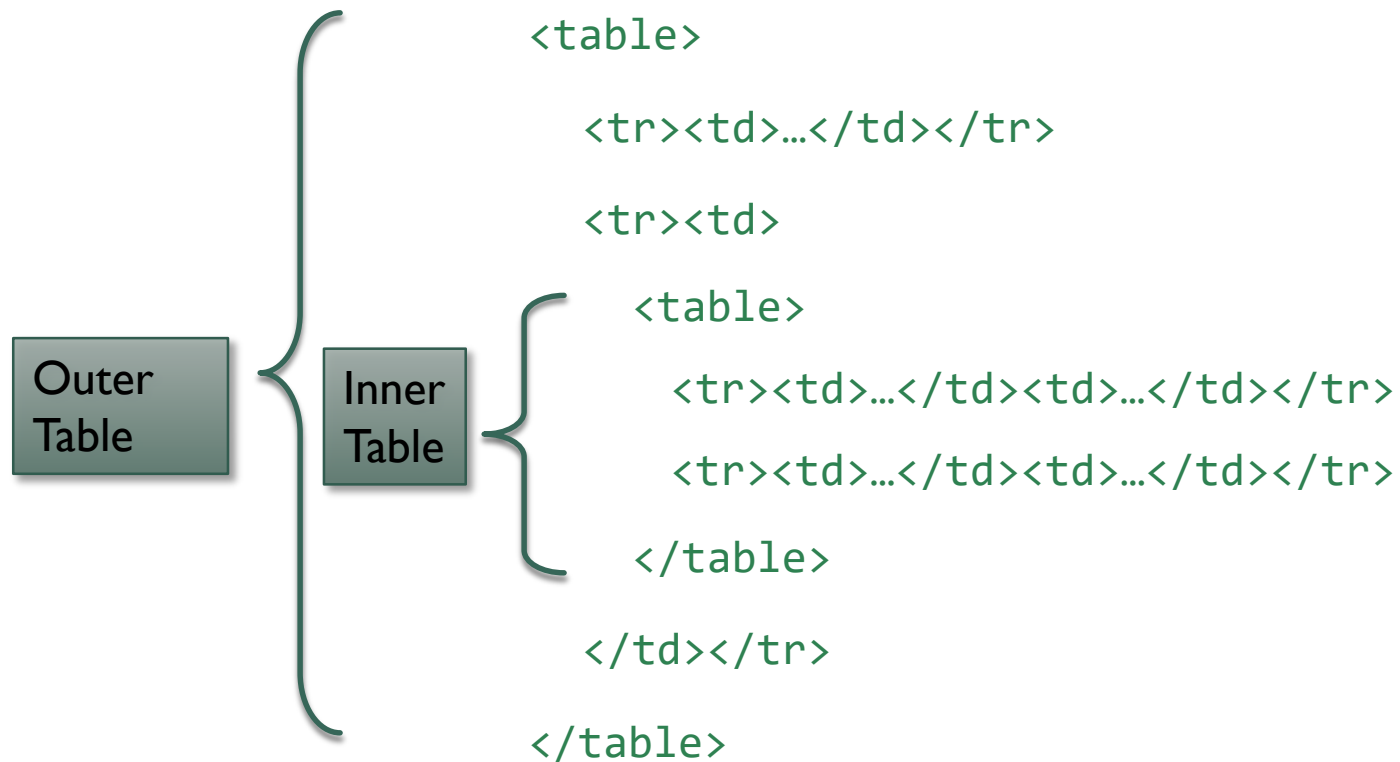
NESTING TABLES

- Outer Table
  - 2 rows, 1 column

- Inner Table
  - 2 rows, 2 columns

NESTING TABLES

Outer Table

Inner Table

```
<table>

    <tr><td>…</td></tr>

    <tr><td>

      <table>

        <tr><td>…</td><td>…</td></tr>

        <tr><td>…</td><td>…</td></tr>

      </table>

    </td></tr>

</table>
```

NEXT ..

- We will walk through the design of this page.

- We can then review the different types of Lists (that may have been covered earlier). Come prepared to ask questions.

LET'S ANALYZE THIS "ELEPHANT" TABLE

- To design the "elephant" table, some thinking is required.

- Most important – when designing the table, figure out how the text content is organized.

  - The first row spans all the columns!

  - The first cell in the second row spans 2 columns and contains the elephant image.

  - The second cell spans 3 rows and contains text (the last paragraph)!

  - The first cell in the third row spans 2 columns and has the "caption".

  - The third row does not have any other cells!

  - The fourth row has two cells with text – the first cell has the first paragraph and the second has the second paragraph.

CS07-INCLASS.HTM

- We need the following files:

  - elephant. jpg, elephanttext.txt,

- Create CS07-InClass.htm in VSCode and we are set to go…….

```
<table>
   <tr>
      <th colspan="3">The Truth About Elephants</th>
   </tr>
   <tr>
      <td colspan="2"><img src="elephant.jpg"> </td>
      <td rowspan="3">Copy the entire paragraph starting with "Why is it so easy
      …</td>
   </tr>
```

- Two rows done and 2 more to go!!

CS07-INCLASS.HTM (CONT.)

```
<tr>
    <td colspan="2">Copy the small paragraph starting with A baby elephant
hanging out with…</td>
</tr>
<tr>
    <td>  Copy first para starting with Its' hard to tell…</td>
    <td >  Copy second para starting with Today in the newspaper…</td>
</tr>
</table>
```

■ Save the file as "CS07-InClass.htm". Take a look using Chrome.

LETS' STYLE IT…

- Style it with External Style Sheet

- Keep CS07-InClass.htm open and saved.

- Create a new file, **CS07-InClass.css**, and save it to the **css** folder

- Type the style definitions in this empty file, CS07-InClass.css

- For the "table" tag:

    - Set width of the table to 500px;

    - Set the right and left margins to "auto";

    - Set the font to Arial;

- tr, td {border:1px solid black; padding:3px; vertical-align: top;}

- img { width:100%;}

LINKING AN EXTERNAL CSS TO HTM FILE

■ In your HTM file (CS07-InClass.htm), add the following in the <head> section, above the `<style type="text/css">` tag.

`<link rel="stylesheet" type="text/css" href="css/CS07-InClass.css" />`

   ■ do not copy and paste from PowerPoint.

■ You can continue to keep the `<style type="text/css">` and `</style>` tags. This can contain additional CSS definitions (INTERNAL styles)!

MORE STYLES – IN YOUR CSS FILE

■ Let us challenge you….

- ■ Set the cell with the image to be 70% width

- ■ Set the last column to be 30% width

- ■ Set the cell with the caption to be 70% width

- ■ Set the first cell in the last row to be 35%

- ■ Set the second cell to be 35%

- ■ Set the background for the page using any image

- ■ You can also set the background for the table – use a color instead of an image.

STYLING OPTIONS

- **overflow:** choice, where choice is `visible`, `hidden`, `scroll`, or `auto`
  - Allows you to display content (say, a paragraph) in a separate smaller scrollable window within your web page
- You can set `background-color`, `width`, `height` of that window and float it right/left on a page.
- **z-index: value**
  - When two elements overlap on a page, the element with a higher z-index value will appear over the element with the lower z-index value
  - We tried this in class last week.
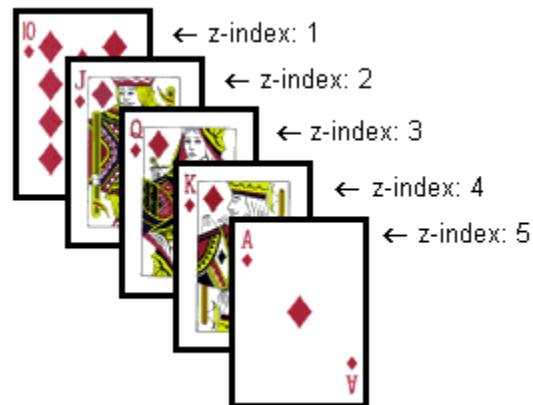
ADDING TO CS07-INCLASS.HTM

■ Create two horizontal rules below your table in CS07-InClass.htm

■ Copy the paragraph from **MoreaboutElephants.txt** to CS07-InClass.htm, below the horizontal lines.

■ Define <p> and </p> tags around the paragraph

■ Define class="scroll" for this paragraph in the opening <p class="scroll"> tag.

■ In your CSS file, CS07-InClass.css, define the following:

```
p.scroll {
    Background-color: lime;
    Width: 250px; height: 300px;
    Overflow: scroll;
    Padding-right:10px;
    Padding-left:10px;
}
```

■ Save both files and view it in Chrome and commit/push to GitHub