

Tutorial 5: Working with Web Tables



Computer Science Department
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COP 3175 – Internet Applications



Working with Overflow and Clipping

- Just reduce the height of the box?
 - Unfortunately, this wouldn't work.
 - Why?
 - If you simply decrease the height of the box, the height would still expand to accommodate the content
 - If you want to force an element into a specified height and width, you have to define how the browser should handle a situation where content overflows the space allotted to the object



Objectives

- Explore the structure of a Web table
- Create headings and cells in a table
- Create cells that span multiple rows and columns
- Create row and column groups
- Add a caption and a summary to a table
- Format a table using HTML attributes



Objectives

- Format a table using CSS styles
- Collapse table borders
- Display page elements in tabular form
- Create a jigsaw layout
- Explore the use of tables for page layout
- Create rounded borders



Tutorial 5 Website – KPAF Radio

- Upgrading KPAF Radio Website
 - “Kyle” wants listeners to have quick and easy access to info about the station and its programs
 - Web site should include pages listing the KPAF morning, afternoon, and evening schedules
 - Kyle feels this info is best conveyed in a table
 - with each column of the table displaying one day’s program schedule
 - and each row displaying the broadcast times for the various programs

- CGS 3175 students to the rescue!



Tutorial 5 Website – KPAF Radio

- Current KPAF website layout:



- You should study the HTML and CSS sheet to fully understand the current design and styles



Tutorial 5 Website – KPAF Radio

■ Upgrading KPAF Radio Website

- Initially, Kyle simply wants to add the night schedule in the form of a table
- He gives us a printout of the KPAF nightly schedule, shown to the right

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
6:00	National News	National News	National News	National News	National News	National News	National News
6:30	Local News	Local News	Local News	Local News	Local News	Local News	Local News
7:00	Opera Fest	Radio U	Science Week	The Living World	Word Play	Agri-Week	Folk Fest
7:30					Brain Stew	Bismarck Forum	
8:00	The Classical Music Connection				Old Time Radio	Saturday Nite Jazz	The Indie Connection
8:30					The Inner Mind		
9:00					Open Mike Nite		
9:30							
10:00	World News Feed	World News Feed	World News Feed	World News Feed	World News Feed	World News Feed	World News Feed



Introducing Web Tables

- Marking Tables and Table Rows
 - Each table in a Web page follows a basic structure consisting of two things:
 - 1) the actual table element itself
 - 2) and a collection of table rows nested in the table element



Introducing Web Tables

■ Marking Tables and Table Rows

■ Syntax is shown to the right

- where `<table>` marks the table element, `<tr>` marks each row, and table cells are the cells within each row.

■ Note:

- dimensions of a Web table are defined by the total number of rows and the number of cells in each row
- Tables are block level elements
 - You can float tables and resize them using the same styles you've already studied

```
<table>  
  <tr>  
    table cells  
  </tr>  
  <tr>  
    table cells  
  </tr>  
  ...  
</table>
```



Tutorial 5 Website

- Inserting `<table>` and `<tr>` elements
 - Kyle's table has 10 rows
 - With the first row showing the days of the week
 - For now, we just insert the first three rows
 - And we'll assign the table a "class" called schedule
 - At this point, we have a table with three rows but nothing within those rows

```
<table class="schedule">
  <tr>
  </tr>
  <tr>
  </tr>
  <tr>
  </tr>
</table>

<address>
  KPAF &#183;
  4300 Magnolia Lane, Bismarck ND 58504 &#183;
  (701) 555 - 5611
</address>
```



Introducing Web Tables

- Marking Table Headings and Table Data
 - There are two main types of cells
 - 1) Those that contain headings
 - 2) Those that contain data

 - The two cell types use different tags, which allows the headings of a table to be formatted differently than the rest of the table cells



Introducing Web Tables

- Marking Table Headings and Table Data
 - Table headings, the cells that identify the contents of a row or column, are marked using a `<th>` tag
 - `<th>` tags can be placed anywhere in the table
 - but you'll usually see them at the top of a column or beginning of a row
 - Considering it is a “heading”, most browsers will display the content of `<th>` tags in a bold font, centered within the table cell



Introducing Web Tables

- Marking Table Headings and Table Data
 - Data cells are marked with the `<td>` tag and are used for any content that is not considered a heading
 - most table cells will be “content” cells
 - and will therefore use the `<td>` tag
 - Most browsers display data cells as unformatted text, left-aligned within the cell



Tutorial 5 Website

- Insert table headings:
 - Kyle wants the cells of the first row to be headings
 - Because the text identifies the content of each column
 - He also wants the first cell in each remaining row to be displayed as a heading
 - It will be used to display the time of the show

table headings

```
<table class="schedule">
  <tr>
    <th>Time</th>
    <th>Monday</th>
    <th>Tuesday</th>
    <th>Wednesday</th>
    <th>Thursday</th>
    <th>Friday</th>
    <th>Saturday</th>
    <th>Sunday</th>
  </tr>
  <tr>
    <th>6:00</th>
  </tr>
  <tr>
    <th>6:30</th>
  </tr>
</table>
```



Tutorial 5 Website

- Inserting data cells:
 - KPAF airs national news at 6:00 PM
 - And the local news starts at 6:30 PM
 - every night of the week
 - So we simply add in those data cells

table data cells



```
<table class="schedule">
  <tr>
    <th>Time</th>
    <th>Monday</th>
    <th>Tuesday</th>
    <th>Wednesday</th>
    <th>Thursday</th>
    <th>Friday</th>
    <th>Saturday</th>
    <th>Sunday</th>
  </tr>
  <tr>
    <th>6:00</th>
    <td>National News</td>
    <td>National News</td>
    <td>National News</td>
    <td>National News</td>
    <td>National News</td>
    <td>National News</td>
  </tr>
  <tr>
    <th>6:30</th>
    <td>Local News</td>
    <td>Local News</td>
    <td>Local News</td>
    <td>Local News</td>
    <td>Local News</td>
    <td>Local News</td>
  </tr>
</table>
```



Tutorial 5 Website – Result

| Listener supported *since* 1966

Home Schedule Programs Music News Events Listen Live Contact Us Support KPAF

KPAF Nightly Schedule

KPAF airs listener-supported public radio in Bismarck, North Dakota from 5:00 a.m. to 10:30 p.m. You can [Listen Live](#) to streaming audio of our broadcast. Please refer below for our current nightly schedule.

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
6:00	National News	National News	National News	National News	National News	National News	National News
6:30	Local News	Local News	Local News	Local News	Local News	Local News	Local News



Tutorial 5 Website

- KPAF schedule table
 - Note that it has three rows and eight columns
 - Remember:
 - The number of columns is determined by the maximum number of cells within each row
 - So if one row has four cells
 - and another row has five cells
 - The table will ultimately have five columns
 - The row with only four cells will have any empty space (cell) at the end where the fifth cell should be



Introducing Web Tables

■ Adding a Table Border

- By default, there are no gridlines/borders displayed in a Web table
 - Can be difficult to see the table structure without them
- To add a border to a Web table using HTML, use the border attribute

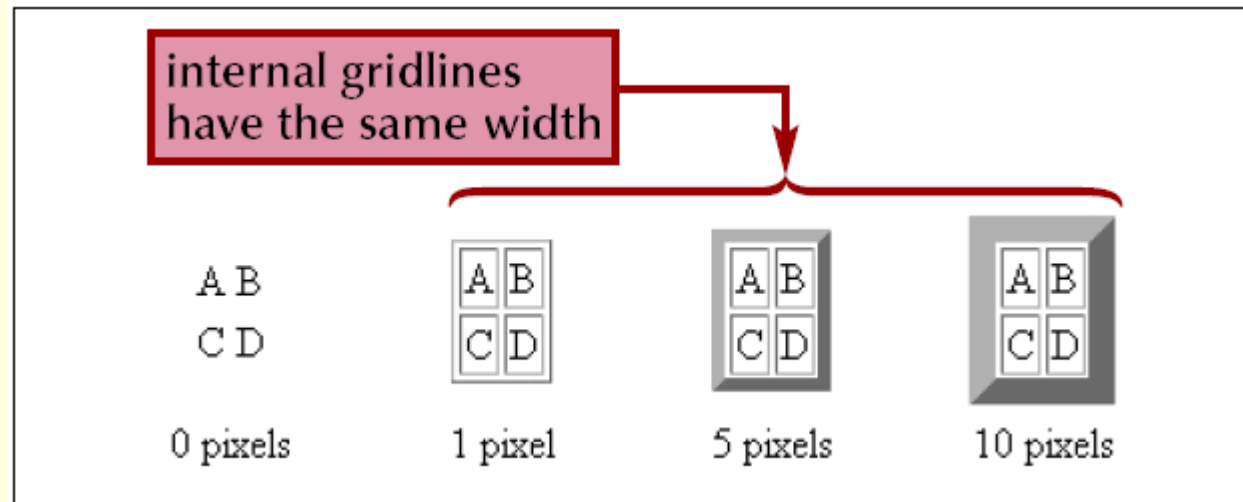
```
<table border="value"> ... </table>
```

- where *value* is the size of the border in pixels



Introducing Web Tables

- Adding a Table Border
 - The following graphic shows how different border values affect the appearance of a sample table



- Note that the border attribute does not control the width of the internal gridlines



Tutorial 5 Website

- Adding a border to the schedule
 - We simply add a 1-pixel border to the schedule

```
<table class="schedule" border="1">  
  <tr>  
    <th>Time</th>  
    <th>Monday</th>  
    <th>Tuesday</th>  
    <th>Wednesday</th>  
    <th>Thursday</th>  
    <th>Friday</th>  
    <th>Saturday</th>  
    <th>Sunday</th>  
  </tr>
```

table cells will be surrounded by a 1-pixel-wide border



Tutorial 5 Website – Result

| Listener supported since 1966

[Home](#) [Schedule](#) [Programs](#) [Music](#) [News](#) [Events](#) [Listen Live](#) [Contact Us](#) [Support KPAF](#)



KPAF Nightly Schedule

KPAF airs listener-supported public radio in Bismarck, North Dakota from 5:00 a.m. to 10:30 p.m. You can [Listen Live](#) to streaming audio of our broadcast. Please refer below for our current nightly schedule.

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
6:00	National News	National News	National News	National News	National News	National News	National News
6:30	Local News	Local News	Local News	Local News	Local News	Local News	Local News



Tutorial 5 Website

■ Review the proposed table schedule

- Several programs are longer than one half hour
- Some programs are repeated across several days
- We need to use **spanning cells**

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
6:00	National News	National News	National News	National News	National News	National News	National News
6:30	Local News	Local News	Local News	Local News	Local News	Local News	Local News
7:00	Opera Fest	Radio U	Science Week	The Living World	Word Play	Agri-Week	Folk Fest
7:30					Brain Stew		
8:00	The Classical Music Connection				Old Time Radio	Saturday Nite Jazz	The Indie Connection
8:30					The Inner Mind		
9:00					Open Mike Nite		
9:30							
10:00	World News Feed	World News Feed	World News Feed	World News Feed	World News Feed	World News Feed	World News Feed



Spanning Rows and Columns

- A **spanning cell** is a single cell that occupies more than one row or one column in the table
 - Spanning cells are created by inserting a `rowspan` or `colspan` attribute into the `<th>` or `<td>` tag
 - Syntax:
 - `<th rowspan="value" colspan="value">...</th>`
 - or
 - `<td rowspan="value" colspan="value">...</td>`
 - where `value` is the number of rows or columns that you want the table cell to cover



Spanning Rows and Columns

■ Spanning Cells

■ Example:

- Create a data cell that spans two columns and three rows:
- `<td colspan="2" rowspan="3">...</td>`

■ Note:

- When a cell spans multiple rows or columns, you must adjust the number of cells elsewhere in the table
- Example:
 - If a row contains five columns, but one of the cells in the row spans three columns, you need only three cell elements
 - two cells that occupy a single column each
 - and one cell that spans the three remaining columns



Tutorial 5 Website

- Adding column-spanning cells to schedule

```
<table class="schedule" border="1">
  <tr>
    <th>Time</th>
    <th>Monday</th>
    <th>Tuesday</th>
    <th>Wednesday</th>
    <th>Thursday</th>
    <th>Friday</th>
    <th>Saturday</th>
    <th>Sunday</th>
  </tr>
  <tr>
    <th>6:00</th>
    <td colspan="7">National News</td>
  </tr>
  <tr>
    <th>6:30</th>
    <td colspan="7">Local News</td>
  </tr>
</table>
```

delete the other six cells in the table row

cell spans seven columns



Tutorial 5 Website – Result

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
6:00	National News						
6:30	Local News						

cells span seven columns



Spanning Rows and Columns

■ Spanning rows

- The radio show schedule has several shows that last an hour (or more)
- This means the show will have to span several rows
- Note:
 - For row-spanning cells, you need to remove extra cells from the rows below the spanning cell
- Examine the next picture...



Spanning Rows and Columns

four table cells in the first row

only three table cells are required for the second and third rows

```
<table>
<tr>
  <td rowspan="3">1: This cell spans three rows</td>
  <td>2</td>
  <td>3</td>
  <td>4</td>
</tr>
<tr>
  <td>5</td>
  <td>6</td>
  <td>7</td>
</tr>
<tr>
  <td>8</td>
  <td>9</td>
  <td>10</td>
</tr>
</table>
```

HTML code

1: This cell spans three rows	2	3	4
	5	6	7
	8	9	10

resulting table



Tutorial 5 Website

- Adding next two rows of schedule
 - The 7:00 to 8:00 section of the KPAF schedule has several programs that run for an hour
 - So we need row-spanning cells that span two rows in the schedule table
 - In order to keep the columns lined up, we reduce the number of cells entered in the subsequent row



Tutorial 5 Website

- Adding next two rows of schedule

```
<tr>
  <th>6:30</th>
  <td colspan="7">Local News</td>
</tr>
<tr>
  <th>7:00</th>
  <td rowspan="2">Opera Fest</td>
  <td rowspan="2">Radio U</td>
  <td rowspan="2">Science week</td>
  <td rowspan="2">The Living world</td>
  <td>word Play</td>
  <td>Agri-week</td>
  <td rowspan="2">Folk Fest</td>
</tr>
<tr>
  <th>7:30</th>
  <td>Brain Stew</td>
  <td>Bismarck Forum</td>
</tr>
</table>
```



Tutorial 5 Website – Result

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
6:00	National News						
6:30	Local News						
7:00	Opera Fest	Radio U	Science Week	The Living World	Word Play	Agri-Week	Folk Fest
7:30					Brain Stew	Bismarck Forum	

cells span two rows



Tutorial 5 Website

- Adding remaining rows of schedule

```
<tr>
  <th>7:30</th>
  <td>Brain Stew</td>
  <td>Bismarck Forum</td>
</tr>
<tr>
  <th>8:00</th>
  <td rowspan="4" colspan="4">The Classical Music Connection</td>
  <td>Old Time Radio</td>
  <td rowspan="4">Saturday Nite Jazz</td>
  <td rowspan="4">The Indie Connection</td>
</tr>
<tr>
  <th>8:30</th>
  <td>The Inner Mind</td>
</tr>
<tr>
  <th>9:00</th>
  <td rowspan="2">Open Mike Nite</td>
</tr>
<tr>
  <th>9:30</th>
</tr>
<tr>
  <th>10:00</th>
  <td colspan="7">World News Feed</td>
</tr>
</table>
```



Tutorial 5 Website – Result

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
6:00	National News						
6:30	Local News						
7:00	Opera	Radio U	Science Week	The Living World	Word Play	Agri-Week	Folk Fest
7:30	Fest				Brain Stew	Bismarck Forum	
8:00	The Classical Music Connection				Old Time Radio	Saturday Nite Jazz	The Indie Connection
8:30					The Inner Mind		
9:00					Open Mike Nite		
9:30							
10:00	World News Feed						

- The table matches the printout Kyle provided
- He now wants to caption to the table
 - Indicating that all times are based on CST



Creating a Table Caption

- To create a table caption, add the caption element directly below the opening `<table>` tag
 - Syntax:
 - `<caption>content</caption>`
 - where *content* is the content of the table caption
 - Only one caption element is allowed per table
 - Treated as a block-level element and placed directly above the table
 - Note: many developers prefer to use their own tags and style the caption with CSS



Tutorial 5 Website

- Adding caption:

```
<table class="schedule" border="1">  
  <caption>All times listed in central time</caption>  
  <tr>  
    <th>Time</th>  
    <th>Monday</th>  
    <th>Tuesday</th>  
    <th>Wednesday</th>  
    <th>Thursday</th>  
    <th>Friday</th>  
    <th>Saturday</th>  
    <th>Sunday</th>  
  </tr>
```



Tutorial 5 Website – Result

All times listed in central time

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
6:00	National News						
6:30	Local News						
7:00	Opera	Radio U	Science Week	The Living World	Word Play	Agri-Week	Folk Fest
7:30	Fest				Brain Stew	Bismarck Forum	
8:00	The Classical Music Connection				Old Time Radio	Saturday Nite Jazz	The Indie Connection
8:30					The Inner Mind		
9:00					Open Mike Nite		
9:30							
10:00	World News Feed						



Brief Interlude: Human Stupidity





Marking Row Groups

- You can divide a table's rows into **row groups**
 - each group element contains different types of content and can be formatted differently

■ Syntax:

```
<table>
  <thead>
    table rows
  </thead>
  <tfoot>
    table rows
  </tfoot>
  <tbody>
    table rows
  </tbody>
</table>
```

where table rows are rows from the Web table.



Marking Row Groups

■ Using Row Groups

- Example: the following code marks two rows as belonging to the table header row group:

```
<thead>
  <tr>
    <th colspan="2">KPAF Programs</th>
  </tr>
  <tr>
    <th>Time</th>
    <th>Program</th>
  </tr>
</thead>
```



Marking Row Groups

■ Using Row Groups

■ Note: order is important!

- The thead element must appear first, then the tfoot element, and then the tbody element
- A table can only contain one set of thead and tfoot elements
- But it can have any number of tbody elements
 - And this is why the tbody elements appear last
 - Allows the browser to render the footer group before possibly receiving numerous groups of table body rows



Marking Row Groups

- What is the purpose of these groups?
 - You can create different styles for each group!
 - And any style you create for the thead, tbody, and tfoot elements is inherited by the rows those elements contain

- Back to the KPAF web site...
 - We use a thead element to mark the header row
 - And tbody elements to mark the rows that include the broadcast times
 - No need for tfoot elements for this table



Tutorial 5 Website

- Adding thead and tbody groups to table:

```
<table class="schedule" border="1">
  <caption>All times listed in central time</caption>
  <thead>
    <tr>
      <th>Time</th>
      <th>Monday</th>
      <th>Tuesday</th>
      <th>Wednesday</th>
      <th>Thursday</th>
      <th>Friday</th>
      <th>Saturday</th>
      <th>Sunday</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <th>6:00</th>
      <td colspan="7">National News</td>
    </tr>
    <tr>
      <th>9:30</th>
    </tr>
    <tr>
      <th>10:00</th>
      <td colspan="7">world News Feed</td>
    </tr>
  </tbody>
</table>
```



Marking Column Groups

- There are no HTML tags to mark columns
 - Columns are created implicitly from the number of cells in each row
 - However, once the table columns have been determined by the browser, you can reference them through the use of **column groups**
 - Column groups give you the ability to assign a common format to all of the cells in a given column.



Marking Column Groups

- Column groups:

- Syntax:

- ```
<colgroup>
```

- ```
columns
```

- ```
</colgroup>
```

- where columns are the individual columns with the group.

- The columns themselves are referenced using the following empty element:

- ```
<col />
```



Marking Column Groups

- Column groups:
 - The number of col elements must match the number of columns in the table
 - Once you create a column group, you can add id or class attributes to classify individual columns
 - Example:
 - The following creates a column group consisting of three columns, each with a different class name:

```
<colgroup>  
    <col class="column1" />  
    <col class="column2" />  
    <col class="column3" />  
</colgroup>
```



Marking Column Groups

- Column groups:

- Now that the columns have classes, we can assign different background colors to them:

```
col.column1 {background-color: red}
```

```
col.column2 {background-color: blue}
```

```
col.column3 {background-color: yellow}
```

- The browser will display the first column with a background color of red, the second with blue, and the third with yellow



Marking Column Groups

- Column groups:

- The col element also supports the span attribute
- Syntax:

```
<col span="value" />
```

- where value is the # of columns referenced by the col element

- Example:

```
<colgroup>  
    <col class="column1" />  
    <col class="nextColumns" span="2" />  
</colgroup>
```

- This references a group of three columns; the first column belongs to the column 1 class, and the next two columns belong to the nextColumns class.



Tutorial 5 Website

- Adding column groups to KPAF site:
 - We make a column group for the programming table
 - First column, containing broadcast times, will have the class “firstCol”
 - Remaining seven columns, containing daily program listings, placed in a column group with the class name “dayCols”

```
<table class="schedule" border="1">
  <caption>All times listed in central time</caption>
  <colgroup>
    <col class="firstcol" />
    <col class="dayCols" span="7" />
  </colgroup>
```

col element spans
seven columns



Adding a Table Summary

- Nonvisual browsers (such as those used by visually impaired people) can't display tables
 - cumbersome to listen to each cell being read
 - The summary attribute allows you to include a more detailed description about the table in this situations
 - Syntax:
`<table summary="description"> ... </table>`
 - where description is a text string that describes the table's content and structure



Tutorial 5 Website

- Adding table summary element:

```
<table class="schedule" border="1"  
  summary="This table contains the nightly KPAF program schedule aired  
  from Bismarck, North Dakota. Program times are laid out in  
  thirty-minute increments from 6:00 p.m. to 10:00 p.m., Monday  
  through Sunday night.">  
  
<caption>All times listed in central time</caption>
```

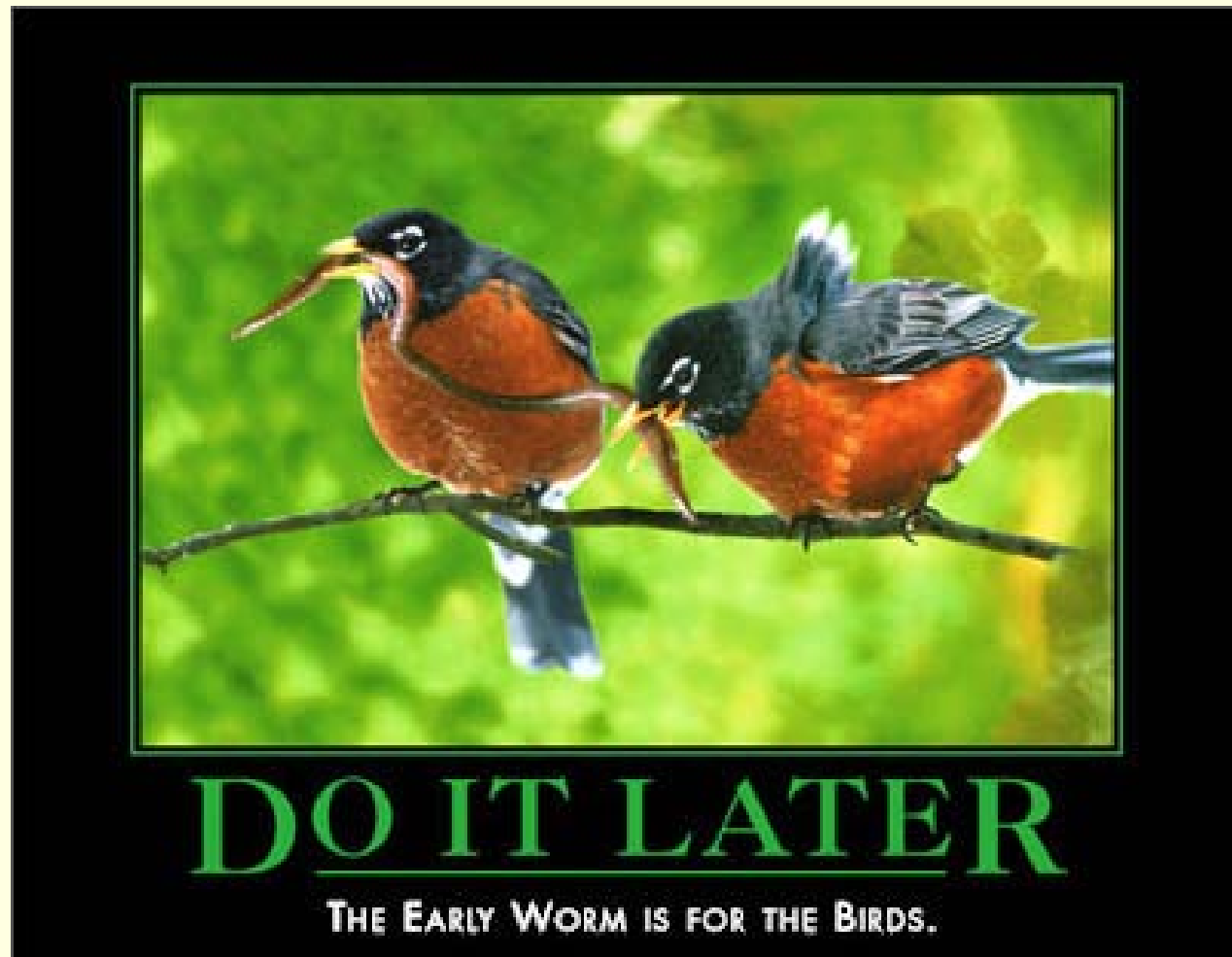


Tutorial 5: Working with Web Tables

**WASN'T
THAT
ELECTRIFYING!**



Daily Demotivator



Tutorial 5: Working with Web Tables



Computer Science Department
University of Central Florida

COP 3175 – Internet Applications



Formatting Tables with HTML Attributes

- Two approaches to formatting Web tables:
 - Using HTML attributes or using CSS styles
 - Because both are used extensively, we'll go over both approaches
 - Of course, always remember our goal:
 - Separate the design/styles from content
 - So we prefer, whenever possible, to use CSS

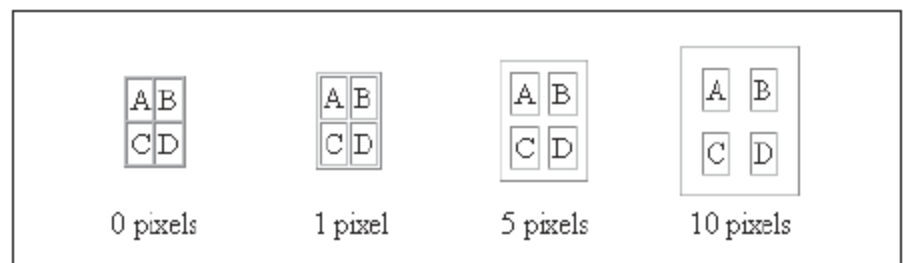
- We start by going over the HTML attribute approach...



Formatting Tables with HTML Attributes

- Setting Cell Spacing with HTML
 - The amount of space between table cells is known as the **cell spacing**
 - By default, browsers set cell spacing to 2 pixels
 - To set a different cell spacing, add the cellspacing attribute:
 - `<table cellspacing="value">...</table>`
 - where value is the size of the cell spacing in pixels

Example of different cell spacing values and the effect on the table border and internal gridlines:

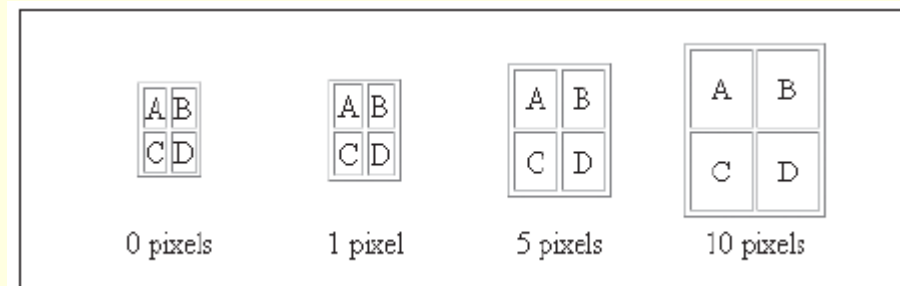




Formatting Tables with HTML Attributes

- Setting Cell Padding with HTML
 - Cell padding refers to the space between the cell contents and the cell border
 - To set the padding, use the HTML attribute:
 - `<table cellpadding="value">...</table>`
 - where value is the size of the cell padding in pixels
 - Note: cellspacing and cellpadding can ONLY be expressed in pixels

Example of different cell padding values and the effect on the table border and internal gridlines:





Tutorial 5 Website

- Adding cellpadding and cellspacing
 - Kyle wants us to add the following:
 - Cell spacing of 3 pixels
 - Cell padding of 5 pixels
 - Here's the modification:

```
<table class="schedule" border="1" cellspacing="3" cellpadding="5"
summary="This table contains the nightly KPAF program schedule aired
from Bismarck, North Dakota. Program times are laid out in
thirty-minute increments from 6:00 p.m. to 10:00 p.m., Monday
through Sunday night.">
```



Tutorial 5 Website – Result

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
6:00	National News						
6:30	Local News						
7:00	Opera Fest	Radio U	Science Week	The Living World	Word Play	Agri-Week	Folk Fest
7:30					Brain Stew	Bismarck Forum	
8:00	The Classical Music Connection				Old Time Radio	Saturday Nite Jazz	The Indie Connection
8:30					The Inner Mind		
9:00					Open Mike Nite		
9:30							
10:00	World News Feed						



Formatting Tables with HTML Attributes

- Setting Table Widths and Heights in HTML
 - To set the width of the table to a specific value, add the width attribute:

```
<table width="value"> ... </table>
```

 - where value is the width either in pixels or as a percentage of the width of the containing element
 - Ex: if the containing element is the page itself, you can set the table width to 100%
 - And the table will then fill the entire page width
 - Note: you cannot specify a width smaller than is required to display the content
 - If you do so, browsers will simply ignore it



Formatting Tables with HTML Attributes

- Setting Table Widths and Heights in HTML
 - Many browsers also support the height attribute:
 - `<table height="value"> ... </table>`
 - where value is the height of the table either in pixels or as a percentage of the height of the containing element
 - Note: the height attribute is widely supported
 - HOWEVER, it is NOT part of the HTML specifications and is not supported by XHTML
- You can also set the widths of columns
- And the heights of individual rows
 - See page 295 for more.



Formatting Tables with HTML Attributes

- Formatting Table Borders with HTML
 - We already showed how to add a border
 - You can modify the placement of the table borders using **table frames** and **table rules**
 - A **table frame** specifies which sides of the table (or which sides of the table cells) will have borders

```
<table border="value" frame="type"> ...  
</table>
```

 - where value is the width of the table border and type is box (the default), above, border, below, hside, lside, rside or void
 - The following two pages show the frame attributes and their impact on a sample table grid



Formatting Tables with HTML Attributes

■ Values of the Table Frame Attribute:

Frame Value	Border Appearance
above	only above the table
below	only below the table
border	around all four sides of the table
box	around all four sides of the table
hsides	on the top and bottom sides of the table (the horizontal sides)
lhs	only on the left side
rhs	only on the right side
void	no border is drawn around the table
vsides	on the left and right sides of the table (the vertical sides)



Formatting Tables with HTML Attributes

Frame examples

A	B	C
D	E	F
G	H	I

frame="above"

A	B	C
D	E	F
G	H	I

frame="below"

A	B	C
D	E	F
G	H	I

frame="border"

A	B	C
D	E	F
G	H	I

frame="box"

A	B	C
D	E	F
G	H	I

frame="hsides"

A	B	C
D	E	F
G	H	I

frame="lhs"

A	B	C
D	E	F
G	H	I

frame="rhs"

A	B	C
D	E	F
G	H	I

frame="vsides"

A	B	C
D	E	F
G	H	I

frame="void"



Formatting Tables with HTML Attributes

- Formatting Table Borders with HTML
 - A **table rule** specifies how the internal gridlines are drawn within the table

```
<table border="value" rules="type"> ...
</table>
```

 - where type is all (default), cols, groups, none, or rows
 - Impact on internal table gridlines:

Rules Value	Description of Rules
all	places gridlines around all table cells
cols	places gridlines around columns
groups	places gridlines around row groups
none	displays no gridlines
rows	places gridlines around rows



Formatting Tables with HTML Attributes

- Appearance of rules values in a sample table:

A	B	C
D	E	F
G	H	I

rules="all"

A	B	C
D	E	F
G	H	I

rules="cols"

A	B	C
D	E	F
G	H	I

rules="groups"

A	B	C
D	E	F
G	H	I

rules="none"

A	B	C
D	E	F
G	H	I

rules="rows"



Formatting Tables with HTML Attributes

- Aligning content within each table cell:
 - By default, browsers horizontally center the contents of table header cells and left-align the contents of table data cells
 - To control the horizontal alignment:
 - `align="position"`
 - where position is left, center, right, justify or char
 - To control the vertical alignment:
 - `valign="position"`
 - where position is top, middle, bottom, or baseline
- See page 297-298 for more info



Tutorial 5 Website

- Changing vertical alignment of cells
 - Kyle feels that having the program names placed in the middle of each cell makes the schedule hard to read
 - He prefers having the program names lined up with the top of the cells
 - So we use the `valign` attribute

```
<tbody valign="top">
  <tr>
    <th>6:00</th>
    <td colspan="7">National News</td>
  </tr>
```



Tutorial 5 Website – Result

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
6:00	National News						
6:30	Local News						
7:00	Opera Fest	Radio U	Science Week	The Living World	Word Play	Agri-Week	Folk Fest
7:30					Brain Stew	Bismarck Forum	
8:00	The Classical Music Connection				Old Time Radio	Saturday Nite Jazz	The Indie Connection
8:30					The Inner Mind		
9:00					Open Mike Nite		
9:30							
10:00	World News Feed						



Formatting Tables with HTML Attributes

- Using HTML attributes is pretty straightforward
 - What's the problem?
 - Imagine you have MANY tables that should have a similar appearance
 - You'll have to insert the various HTML attributes into each and every one of those tables!
- Again, we see the benefit of CSS!
 - Separate content from styles



Formatting Tables with CSS

- Starting with CSS2, Cascading Style Sheets included support for Web tables
 - Although many developers still use HTML table attributes, perhaps just out of habit, CSS has gradually replaced those HTML attributes
- Kyle wants us to the HTML attributes with an external style sheet that can be applied to all of the program schedule tables on the KPAF site



Formatting Tables with CSS

- Table Border Styles:
 - With CSS, you can apply one set of borders to the Web table itself and another set of borders to the individual cells within the table
 - Guess what:
 - Web tables use the same border styles you've already used with other page elements (in previous tutorials)
 - So nothing really new here!



Tutorial 5 Website

- Adding a border:
 - Kyle wants a 10-pixel purple border around the entire schedule table in the outset style
 - He also wants to add a 1-pixel solid gray border around each cell within the table

```
table.schedule           {border: 10px outset rgb(153,0,153)}  
table.schedule th, table.schedule td  
                        {border: 1px solid gray}
```

- Notice the usage of contextual selectors
 - These styles are ONLY applied to the schedule table and not other tables that may exist on the KPAF site



Tutorial 5 Website – Result

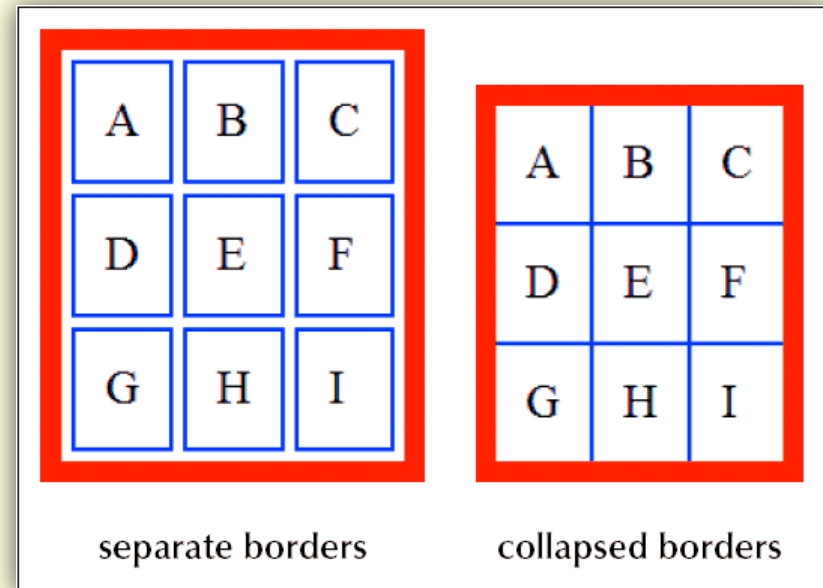
All times listed in central time

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
6:00	National News						
6:30	Local News						
7:00	Opera Fest	Radio U	Science Week	The Living World	Word Play	Agri-Week	Folk Fest
7:30					Brain Stew	Bismarck Forum	
8:00	The Classical Music Connection				Old Time Radio	Saturday Nite Jazz	The Indie Connection
8:30					The Inner Mind		
9:00					Open Mike Nite		
9:30							
10:00	World News Feed						



Formatting Tables with CSS

- Table Border Styles:
 - CSS provides two ways of drawing table borders
 - The default is to draw separate borders around the table cells and the entire table (as shown in the last graphic)
 - The other option is to collapse the borders in upon each other
 - Example of both:





Formatting Tables with CSS

- Table Border Styles:

- To define the border model used by the table, apply the table style

border-collapse: type

- where *type* is separate (the default) or collapse
- If the separate borders model is used, you can specify the distance between the borders:

border-spacing: value

- where *value* is the space between the borders in any of the CSS units of measure
- See p. 302-303 for more details (important)



Tutorial 5 Website

- Collapsing the cell borders:
 - Kyle doesn't want space between the cells
 - So we add styles to collapse the borders:

```
table.schedule          {border: 10px outset rgb(153,0,153); border-collapse: collapse}
table.schedule th, table.schedule td
                        {border: 1px solid gray}
```



Tutorial 5 Website – Result

All times listed in central time

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
6:00	National News						
6:30	Local News						
7:00	Opera	Radio U	Science Week	The Living World	Word Play	Agri-Week	Folk Fest
7:30	Fest				Brain Stew	Bismarck Forum	
8:00	The Classical Music Connection				Old Time Radio	Saturday Nite Jazz	The Indie Connection
8:30					The Inner Mind		
9:00					Open Mike		
9:30					Nite		
10:00	World News Feed						



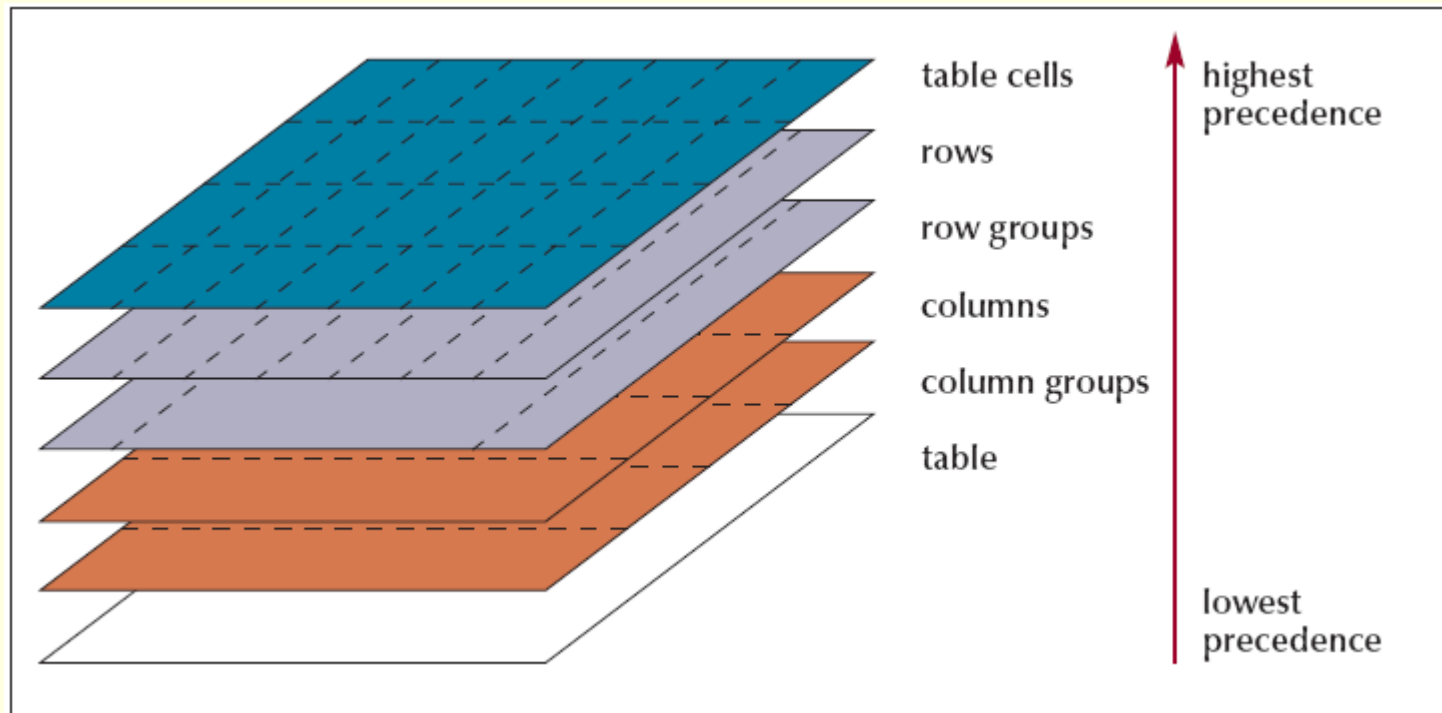
Tutorial 5 Website

- Applying Styles to Rows and Columns
 - We can use CSS to style our rows and columns with styles we've already learned
 - But we have to pay attention and be careful:
 - Example: imagine you style a row and a column in different ways.
 - So for the cell that intersects that row and column, how will it be styled?
 - Which style has precedence?
 - Will the cell take the style of the column?
 - Or will it take the style of the row?
 - Next page shows the levels of precedence...



Formatting Tables with CSS

- Levels of precedence in Web table styles
 - The more specific object has priority over the more general





Tutorial 5 Website

- Styling the rows and columns:
 - Kyle wants:
 - text to be sans-serif at size 0.7 em
 - Header row should be white font on purple background
 - First column of schedule: light yellow background

```
table.schedule {border: 10px outset rgb(153,0,153); border-collapse: collapse;
                font-family: Arial, Helvetica, sans-serif; font-size: 0.7em}
table.schedule th, table.schedule td {border: 1px solid gray; font-family: Arial}
table.schedule thead {color: white; background-color: rgb(203,50,203)}
table.schedule col.firstCol {background-color: rgb(255,255,192)}
```

table font styles

style applied to
thead row group

style applied to
first table column



Tutorial 5 Website – Result

the Time cell takes the style of the header row rather than the first column

All times listed in central time

the table caption adopts the font styles of the table

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
6:00	National News						
6:30	Local News						
7:00	Opera Fest	Radio U	Science Week	The Living World	Word Play	Agri-Week	Folk Fest
7:30					Brain Stew	Bismarck Forum	
8:00					Old Time Radio		
8:30	The Classical Music Connection				The Inner Mind	Saturday Nite Jazz	The Indie Connection
9:00					Open Mike Nite		
9:30							
10:00	World News Feed						



Tutorial 5 Website

- Width of table:
 - Currently the text is squished together
 - cause browsers will only make a table as wide as it needs to be to fit the content
 - Kyle wants the width set at 100%
 - which will allow the table to cover the entire width of the div container that it resides in

```
table.schedule {border: 10px outset rgb(153,0,153); border-collapse: collapse;
font-family: Arial, Helvetica, sans-serif; font-size: 0.7em;
width: 100%}
```



Tutorial 5 Website – Result

| Listener supported since 1966

Home Schedule Programs Music News Events Listen Live Contact Us Support KPAF




KPAF Nightly Schedule

KPAF airs listener-supported public radio in Bismarck, North Dakota from 5:00 a.m. to 10:30 p.m. You can [Listen Live](#) to streaming audio of our broadcast. Please refer below for our current nightly schedule.

All times listed in central time

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
6:00	National News						
6:30	Local News						
7:00	Opera Fest	Radio U	Science Week	The Living World	Word Play	Agri-Week	Folk Fest
7:30					Brain Stew	Bismarck Forum	
8:00					Old Time Radio	Saturday Nite Jazz	The Indie Connection
8:30	The Classical Music Connection				The Inner Mind		
9:00					Open Mike Nite		
9:30							
10:00	World News Feed						

KPAF 4300 Magnolia Lane Bismarck, ND 58504 - (701) 555-5611



Tutorial 5 Website

- Width of columns

- The column widths are inconsistent

- Kyle wants the data columns to have uniform width and the time column to have a slightly smaller width
 - We simply use the same width style that we applied to the table itself

```
table.schedule col.firstCol
                    {background-color: rgb(255,255,192); width: 7%}
table.schedule col.dayCols
                    {width: 13%}
```



Tutorial 5 Website – Result

widths for the
day columns
are equal

All times listed in central time

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
6:00	National News						
6:30	Local News						
7:00	Opera Fest	Radio U	Science Week	The Living World	Word Play	Agri-Week	Folk Fest
7:30					Brain Stew	Bismarck Forum	
8:00	The Classical Music Connection				Old Time Radio	Saturday Nite Jazz	The Indie Connection
8:30					The Inner Mind		
9:00					Open Mike Nite		
9:30							
10:00	World News Feed						



Tutorial 5 Website

■ Height of Rows

- Kyle wants the height of the rows increased

```
table.schedule col.daycols
    {width: 13%}

table.schedule thead tr {height: 20px}
table.schedule tbody tr {height: 30px}
```

- Notice that the height is applied to the actual rows
- He also wants the text vertical aligned to the top
 - with cell padding of 5px

```
table.schedule thead tr {height: 20px}
table.schedule tbody tr {height: 30px}

table.schedule tbody td {vertical-align: top; padding: 5px}
```



Tutorial 5 Website – Result

table header row is 20 pixels high

table body rows are 30 pixels high

All times listed in central time

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
6:00	National News						
6:30	Local News						
7:00	Opera Fest	Radio U	Science Week	The Living World	Word Play	Agri-Week	Folk Fest
7:30					Brain Stew	Bismarck Forum	
8:00	The Classical Music Connection				Old Time Radio	Saturday Nite Jazz	The Indie Connection
8:30				The Inner Mind			
9:00				Open Mike Nite			
9:30							
10:00	World News Feed						

cell text is aligned with the top of the cell with 5 pixels of padding



Tutorial 5 Website

- Finally, Kyle wants the caption aligned with the top-right corner of the table
 - We use the style:
caption-side: *position*
 - where *position* is top or bottom
 - Then to horizontally align the caption, we simply use the CSS text-align STYLE

```
table.schedule tbody td {vertical-align: top; padding: 5px}  
table.schedule caption {caption-side: top; text-align: right}
```



Tutorial 5 Website – Result

All times listed in central time

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
6:00	National News						
6:30	Local News						
7:00	Opera Fest	Radio U	Science Week	The Living World	Word Play	Agri-Week	Folk Fest
7:30					Brain Stew	Bismarck Forum	
8:00	The Classical Music Connection				Old Time Radio	Saturday Nite Jazz	The Indie Connection
8:30					The Inner Mind		
9:00					Open Mike Nite		
9:30							
10:00	World News Feed						

caption is aligned with the top-right corner of the table



Brief Interlude: Human Stupidity





Applying Table Styles to Other Page Elements

- Tables are very useful!
 - There's no reason to limit the table structure to actual Web tables
 - Using the display style, CSS allows you to apply to the table layout to other HTML elements
 - paragraphs, block quotes, lists, etc.

- The next table details the various CSS display styles and their HTML equivalents...



Applying Table Styles to Other Page Elements

■ Table Display Styles:

Display Style	Equivalent HTML Element
<code>display: table</code>	table (treated as a block-level element)
<code>display: table-inline</code>	table (treated as an inline element)
<code>display: table-row</code>	tr
<code>display: table-row-group</code>	tbody
<code>display: table-header-group</code>	thead
<code>display: table-footer-group</code>	tfoot
<code>display: table-column</code>	col
<code>display: table-column-group</code>	colgroup
<code>display: table-cell</code>	td or th
<code>display: table-caption</code>	caption



Applying Table Styles to Other Page Elements

- Example: make a list appear as a table

- Given the following definition list:

```
<d1>
    <dt>bandwidth</dt>
    <dd>A measure of data transfer speed over a network</dd>
    <dt>HTTP</dt>
    <dd>The protocol used to communicate with Web servers</dd>
</d1>
```

- Rather than accepting the default browser layout for this list, we can display the text in a table
 - But we don't want to lose the markup tags, as the help define the content
 - So we enclose parts of the list in div tags and then we style those tags accordingly



Applying Table Styles to Other Page Elements

```
<dl>
  <div>
    <dt>bandwidth</dt>
    <dd>A measure of data transfer speed over
      a network</dd>
  </div>
  <div>
    <dt>HTTP</dt>
    <dd>The protocol used to communicate with
      web servers</dd>
  </div>
</dl>
```

definition list code

```
d1      {display: table; border-collapse: collapse;
        width: 300px}
d1 div  {display: table-row}
dt, dd {display: table-cell; border: 1px solid black;
        vertical-align: top; padding: 5px}
```

table styles

bandwidth	A measure of data transfer speed over a network
HTTP	The protocol used to communicate with Web servers

definition list displayed as table



Tutorial 5 Website

- Kyle wants a list of upcoming broadcasts to be shown on the right side of the page
 - So we make a div container in the HTML code
 - And we then style that container
 - So that it appears at the right side of the page
 - We'll then look at design options for this container
 - We can lay it out using tables
 - Or we can lay it out using CSS

- But first, here's the code used for the container
- and a mockup of what Kyle wants...



Tutorial 5 Website

■ Right-side Container:

```
<address>
  KPAF &#183;
  4300 Magnolia Lane &#183;
  Bismarck, ND 58504 &#183;
  (701) 555 - 5611
</address>

</div>

<div id="right_col">
</div>

</body>
```

```
body {margin: 0px}
#heading {color: white; background-color: rgb(215, 205, 151);
border-bottom: 1px solid rgb(105, 177, 60)}
#page_content {width: 730px; position: absolute; top: 55px; left: 20px}
#right_col {width: 200px; position: absolute; top: 55px; left: 770px}
```



Tutorial 5 Website – Mockup

Listener supported since 1966

Home Schedule Programs Music News Events Listen Live Contact Us Support KPAF

Listener Sponsored Kpaf 620 Radio

KPAF Nightly Schedule

KPAF airs listener-supported public radio in Bismarck, North Dakota from 5:00 a.m. to 10:30 p.m. You can [Listen Live](#) to streaming audio of our broadcast. Please refer below for our current nightly schedule.

All times listed in central time

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
6:00	National News						
6:30	Local News						
7:00	Opera Fest	Radio U	Science Week	The Living World	Word Play	Agri-Week	Folk Fest
7:30					Brain Stew	Bismarck Forum	
8:00	The Classical Music Connection				Old Time Radio	Saturday Nite Jazz	The Indie Connection
8:30					The Inner Mind		
9:00					Open Mike Nite		
9:30							
10:00	World News Feed						

KPAF - 4300 Magnolia Lane - Bismarck, ND 58504 - (701) 555 - 5611

Coming up on KPAF

April 11

April 12

April 13

April 14



Tutorial 5 Website

- “Coming Up” box on right side of page
 - Notice that the box has rounded corners
 - There is no HTML element or CSS style to make rounded corners
 - To simulate this effect, we can use images and a Web table
- Which brings us to the idea of using tables for layout purposes...



Using Tables for Page Layout

- Introducing the Jigsaw Layout
 - Tables can contain any page content
 - Inline images, headings, paragraphs, other tables, etc.
 - Because of this flexibility, developers used tables for page layout
 - Allowed a greater control over the placement of different page options
 - Example:
 - A three column layout could be simulated by enclosing the entire page within a table containing three columns
 - You then hide the borders from the user, leaving on the table content visible
 - Layout complete!



Using Tables for Page Layout

■ Introducing the Jigsaw Layout

■ The **jigsaw layout** involves several steps:

- 1) Analyze a page to determine where the table cells should be placed (ideally)
- 2) Make a table with the appropriate number of rows and columns
 - Based on the previous analysis
- 3) Break up the page content, based on the number of rows and cells
- 4) Finally, like a jigsaw puzzle, join then pieces back together in the cells of the table



Using Tables for Page Layout

■ A Jigsaw Layout

The	Park	City	Sporting	News
 <h3 style="text-align: center;">Local Woman Wins Marathon</h3>				
<p>Park City native, Laura Blake, won the 27th Front Range Marathon over an elite field of the best long distance runners in the country. Laura's time of 2 hr. 28 min. 21 sec. was only 2 minutes off the women's course record set last year by Sarah Rawlings.</p> 		<p>In an exciting race, Peter Teagan of San Antonio, Texas, used a finishing kick to win the men's marathon for the second straight year, in a time of 2 hr. 12 min. 34 sec.</p> <p>Ahead for much of the race, Kyle Wills of Billings, Montana, finished second, when he could not match Teagan's finishing pace. Jason Wu of Cutler, Colorado, placed third in a very competitive field.</p>		
<p>This year's race through downtown Boulder boasted the largest field in the marathon's history, with over 9,000 men and 6,700 women competing. Race conditions were perfect with low humidity and temperatures that never exceeded 65°.</p> <p>Kathy Lasker and Lisa Peterson finished second and third, respectively. Laura's victory came on the heels of her performance at the NCAA Track and Field Championships, in which she placed second running for Colorado State.</p>				



The	Park	City	Sporting	News
 <h3 style="text-align: center;">Local Woman Wins Marathon</h3>				
<p>Park City native, Laura Blake, won the 27th Front Range Marathon over an elite field of the best long distance runners in the country. Laura's time of 2 hr. 28 min. 21 sec. was only 2 minutes off the women's course record set last year by Sarah Rawlings.</p> 		<p>In an exciting race, Peter Teagan of San Antonio, Texas, used a finishing kick to win the men's marathon for the second straight year, in a time of 2 hr. 12 min. 34 sec.</p> <p>Ahead for much of the race, Kyle Wills of Billings, Montana, finished second, when he could not match Teagan's finishing pace. Jason Wu of Cutler, Colorado, placed third in a very competitive field.</p>		
<p>This year's race through downtown Boulder boasted the largest field in the marathon's history, with over 9,000 men and 6,700 women competing. Race conditions were perfect with low humidity and temperatures that never exceeded 65°.</p> <p>Kathy Lasker and Lisa Peterson finished second and third, respectively. Laura's victory came on the heels of her performance at the NCAA Track and Field Championships, in which she placed second running for Colorado State.</p>				

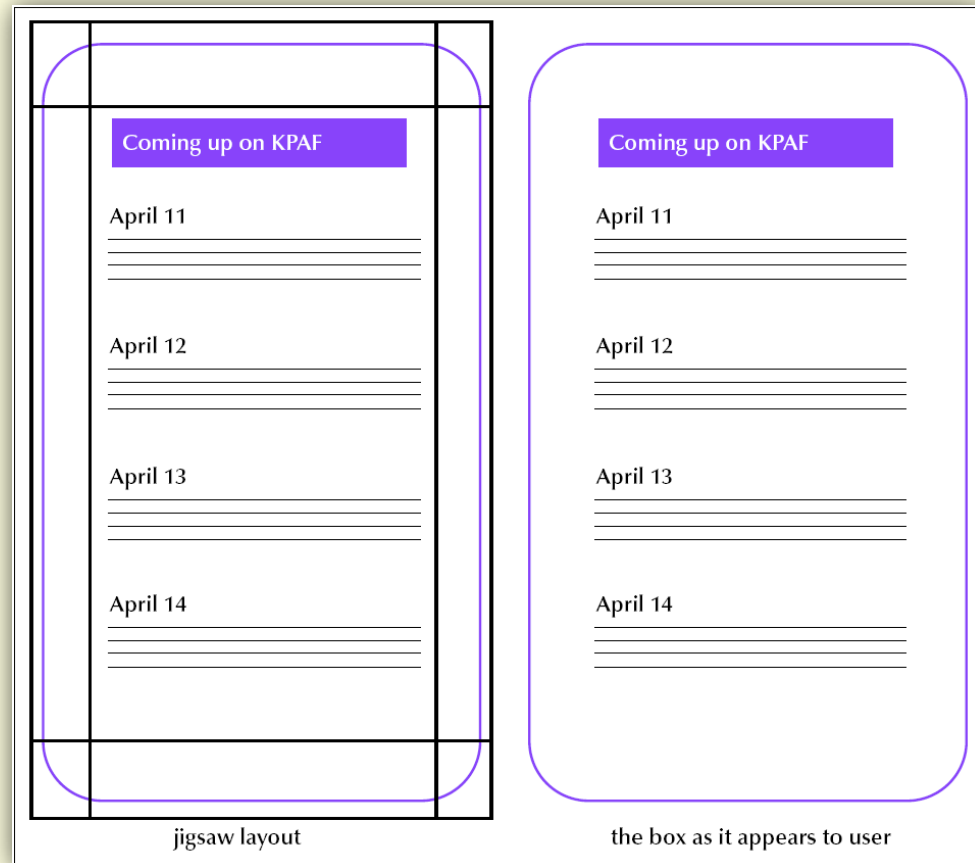
table grid



Using Tables for Page Layout

■ Creating rounded-corner box (jigsaw layout):

- We need three rows and three columns
- Top row has the three top pieces
- Middle row has two side pieces and content piece
- Final row has bottom 3 pieces





Using Tables for Page Layout

- Creating rounded-corner box (jigsaw layout):
 - We add a class to the entire table and then to each of the cells
 - Representing each portion of the box

```
<div id="right_col">
  <table class="roundedBox">
    <tr>
      <td></td>
      <td></td>
      <td></td>
    </tr>
    <tr>
      <td></td>
      <td></td>
      <td></td>
    </tr>
    <tr>
      <td></td>
      <td></td>
      <td></td>
    </tr>
  </table>
</div>
```

```
<div id="right_col">
  <table class="roundedBox">
    <tr>
      <td class="topLeft"></td>
      <td class="top"></td>
      <td class="topRight"></td>
    </tr>
    <tr>
      <td class="left"></td>
      <td class="boxContent"></td>
      <td class="right"></td>
    </tr>
    <tr>
      <td class="bottomLeft"></td>
      <td class="bottom"></td>
      <td class="bottomRight"></td>
    </tr>
  </table>
</div>
```



Using Tables for Page Layout

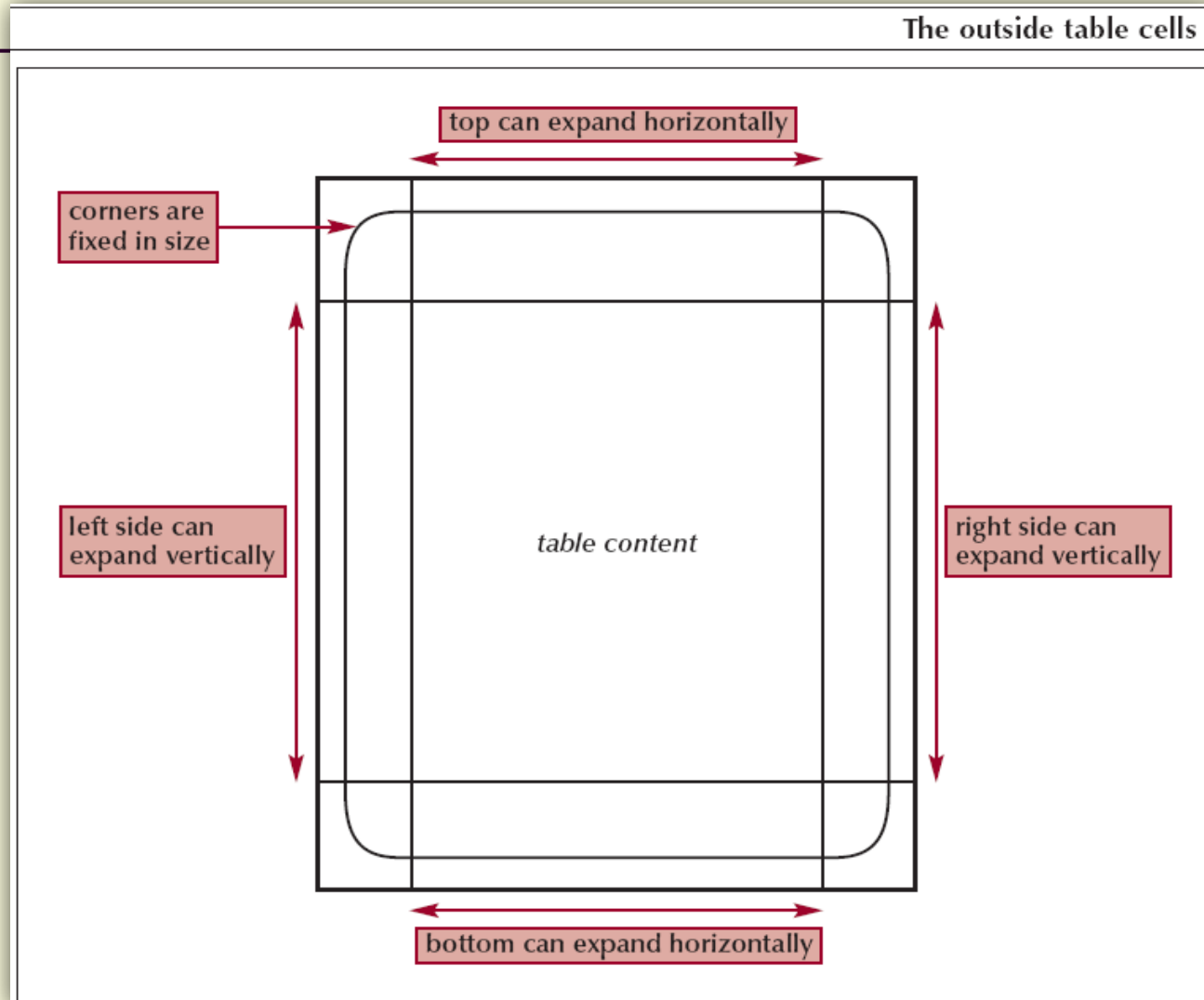
- Creating rounded-corner box (jigsaw layout):
 - Rounded boxes are useful and common elements
 - So we make a separate CSS file just for them
 - In this file, we add the following styles:

```
table.roundedBox {margin: 5px; border-collapse: collapse}
table.roundedBox td {padding: 0px}
```

- Now we define the sizes of the eight outer cells:
 - The box will vary in width and height based on the content
 - The top, right, bottom, and left edges should be able to free expand as needed, and the corners should be fixed in size



Using Tables for Page Layout





Using Tables for Page Layout

- Creating rounded-corner box (jigsaw layout):
 - Now we define the sizes of the eight outer cells
 - Here's what we add to the CSS file:

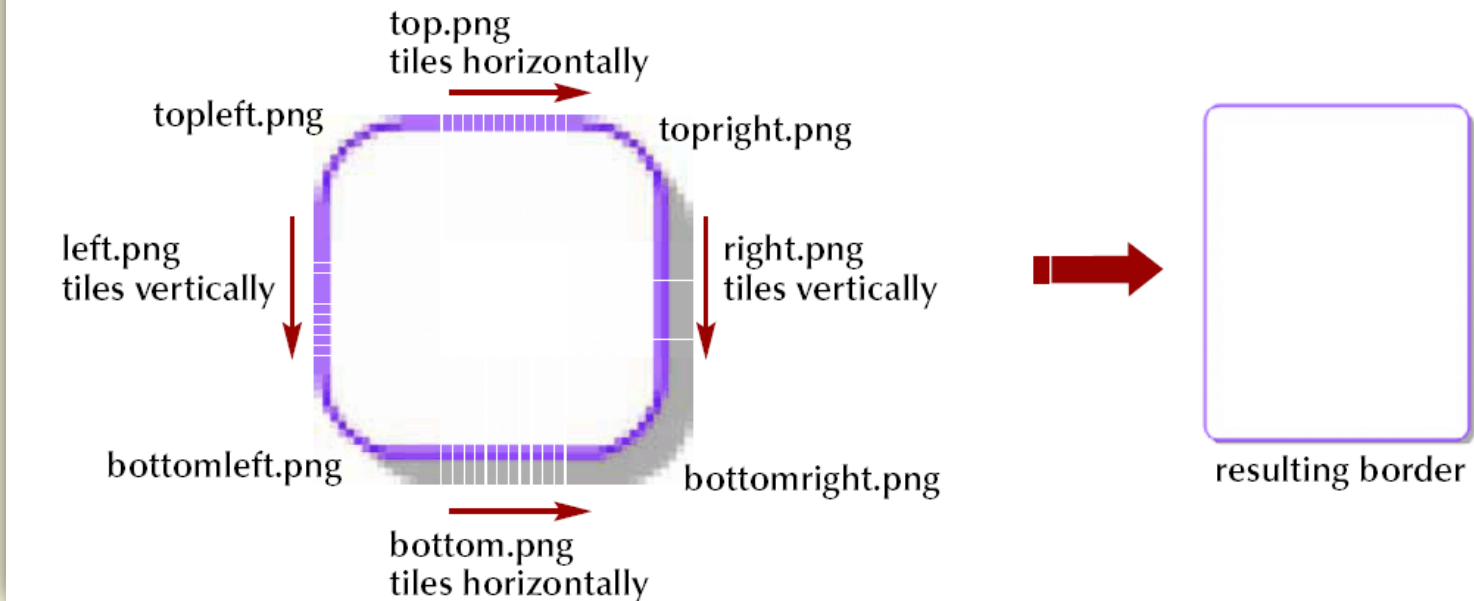
	<pre>table.roundedBox {margin: 5px; border-collapse: collapse} table.roundedBox td {padding: 0px}</pre>
corner cells	<pre>{table.roundedBox td.topLeft {width: 16px; height: 16px} table.roundedBox td.topRight {width: 16px; height: 16px} table.roundedBox td.bottomLeft {width: 16px; height: 16px} table.roundedBox td.bottomRight {width: 16px; height: 16px}}</pre>
top and bottom cells	<pre>{table.roundedBox td.top {width: auto; height: 16px} table.roundedBox td.bottom {width: auto; height: 16px}}</pre>
left and right cells	<pre>{table.roundedBox td.left {width: 16px; height: auto} table.roundedBox td.right {width: 16px; height: auto}}</pre>



Using Tables for Page Layout

- Creating rounded-corner box (jigsaw layout):
 - Last part is to insert the background images that make up the box:

The layout of the eight border images





Using Tables for Page Layout

■ Creating rounded-corner box (jigsaw layout):

```
table.roundedBox {margin: 5px; border-collapse: collapse}
table.roundedBox td {padding: 0px}

table.roundedBox td.topLeft {width: 16px; height: 16px}
table.roundedBox td.topRight {width: 16px; height: 16px}
table.roundedBox td.bottomLeft {width: 16px; height: 16px}
table.roundedBox td.bottomRight {width: 16px; height: 16px}

table.roundedBox td.top {width: auto; height: 16px}
table.roundedBox td.bottom {width: auto; height: 16px}

table.roundedBox td.left {width: 16px; height: auto}
table.roundedBox td.right {width: 16px; height: auto}
```

corners

```
{.topLeft {background: url(topleft.png) no-repeat top left}
.topRight {background: url(topright.png) no-repeat top right}
.bottomLeft {background: url(bottomleft.png) no-repeat bottom left}
.bottomRight {background: url(bottomright.png) no-repeat bottom right}}
```

top and
bottom sides

```
{.top {background: url(top.png) repeat-x top}
.bottom {background: url(bottom.png) repeat-x bottom}}
```

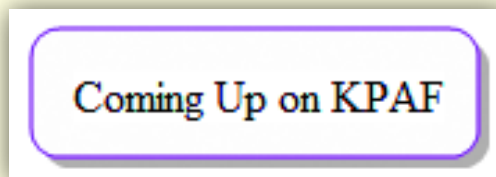
left and
right sides

```
{.left {background: url(left.png) repeat-y left}
.right {background: url(right.png) repeat-y right}}
```



Using Tables for Page Layout

- Creating rounded-corner box (jigsaw layout):
 - So now we just add the box content
 - ...in the **correct** cell of the table
- And this is what we get:



```
<address>
  KPAF &#183;
  4300 Magnolia Lane &#183;
  Bismarck, ND 58504 &#183;
  (701) 555 - 5611
</address>

</div>

<div id="right_col">
  <table class="roundedBox">
    <tr>
      <td class="topLeft"></td>
      <td class="top"></td>
      <td class="topRight"></td>
    </tr>
    <tr>
      <td class="left"></td>
      <td class="boxContent">Coming up on KPAF</td>
      <td class="right"></td>
    </tr>
    <tr>
      <td class="bottomLeft"></td>
      <td class="bottom"></td>
      <td class="bottomRight"></td>
    </tr>
  </table>
</div>

</body>
```



Using Tables for Page Layout

■ Creating rounded-corner box (jigsaw layout):

- Now we add real content:
- This is ALL within the one table cell shown in black
- which has the class called “boxcontent”

```
<td class="boxContent">
<h1 class="newshows">Coming up on KPAF</h1>
<ul class="newshows">
  <li>
    <h2 class="newshows">April 11 - 14</h2>
    <h3 class="newshows">The Classical Music Connection</h3>
    <p>Peter Thiesen shares his eclectic
      selections from the world of classical
      music.</p>
  </li>
  <li>
    <h2 class="newshows">April 11</h2>
    <h3 class="newshows">Opera Fest</h3>
    <p>Excerpts from <i>Turandot</i> by Giacomo Puccini.</p>
  </li>
  <li>
    <h2 class="newshows">April 12</h2>
    <h3 class="newshows">Radio U</h3>
    <p>Novelist Karen Graves reads from her latest
      work, <i>Hellion of Troy</i>.</p>
  </li>
  <li>
    <h2 class="newshows">April 13</h2>
    <h3 class="newshows">Science week</h3>
    <p>Prof. Thomas Glass from UND discusses
      <i>String Theory and Spooky Action at a Distance</i>.</p>
  </li>
  <li>
    <h2 class="newshows">April 14</h2>
    <h3 class="newshows">The Living world</h3>
    <p>A panel discussion on
      the <i>Return of the Electric Car</i> and the latest
      in eco-news.</p>
  </li>
</ul>
</td>
```




Tutorial 5 Website – Result

| Listener supported since 1966

Home | Community | Support | Music | News | Events | About Us | Contact Us | Support Us

Listener Sponsored Radio **Kpaf 620**



KPAF Nightly Schedule

KPAF airs listener-supported public radio in Bismarck, North Dakota from 5:00 a.m. to 10:30 p.m. You can [Listen Live](#) to streaming audio of our broadcast. Please refer below for our current nightly schedule.

All times listed in central time

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
6:00	National News						
6:30	Local News						
7:00	Opera Fest	Radio U	Science Week	The Living World	Word Play	Agri-Week	Folk Fest
7:30					Brain Stew	Bismarck Forum	
8:00	The Classical Music Connection				Old Time Radio	Saturday Nite Ja77	The Indie Connection
8:30					The Inner Mind		
9:00					Open Mike Nite		
9:30							
10:00	World News Feed						

Coming Up on KPAF

April 11 - 14
The Classical Music Connection
Peter Thiesen shares his eclectic selections from the world of classical music.

April 11
Opera Fest
Excerpts from *Turandot* by Giacomo Puccini.

April 12
Radio U
Novelist Karen Graves reads from her latest work, *Hellion of Troy*.

April 13
Science Week
Prof. Thomas Glass from UND discusses *String Theory and Spooky Action at a Distance*.

April 14
The Living World
A panel discussion on the *Return of the Electric Car* and the latest in eco-news.

KPAF - 4100 Magnolia Lane - Bismarck, ND 58504 - (701) 225-5611



Exploring the Controversy over Table Layouts

- Many arguments against using tables for layout:
 - Table layouts are not in the spirit of HTML
 - Table layouts are difficult to revise
 - Tables take longer to render
 - Tables can be code-heavy
 - Tables can be inaccessible to users with disabilities
- See pages 324-325 for a detailed explanation

- So instead of tables for layout, we use div containers...even for complex layouts



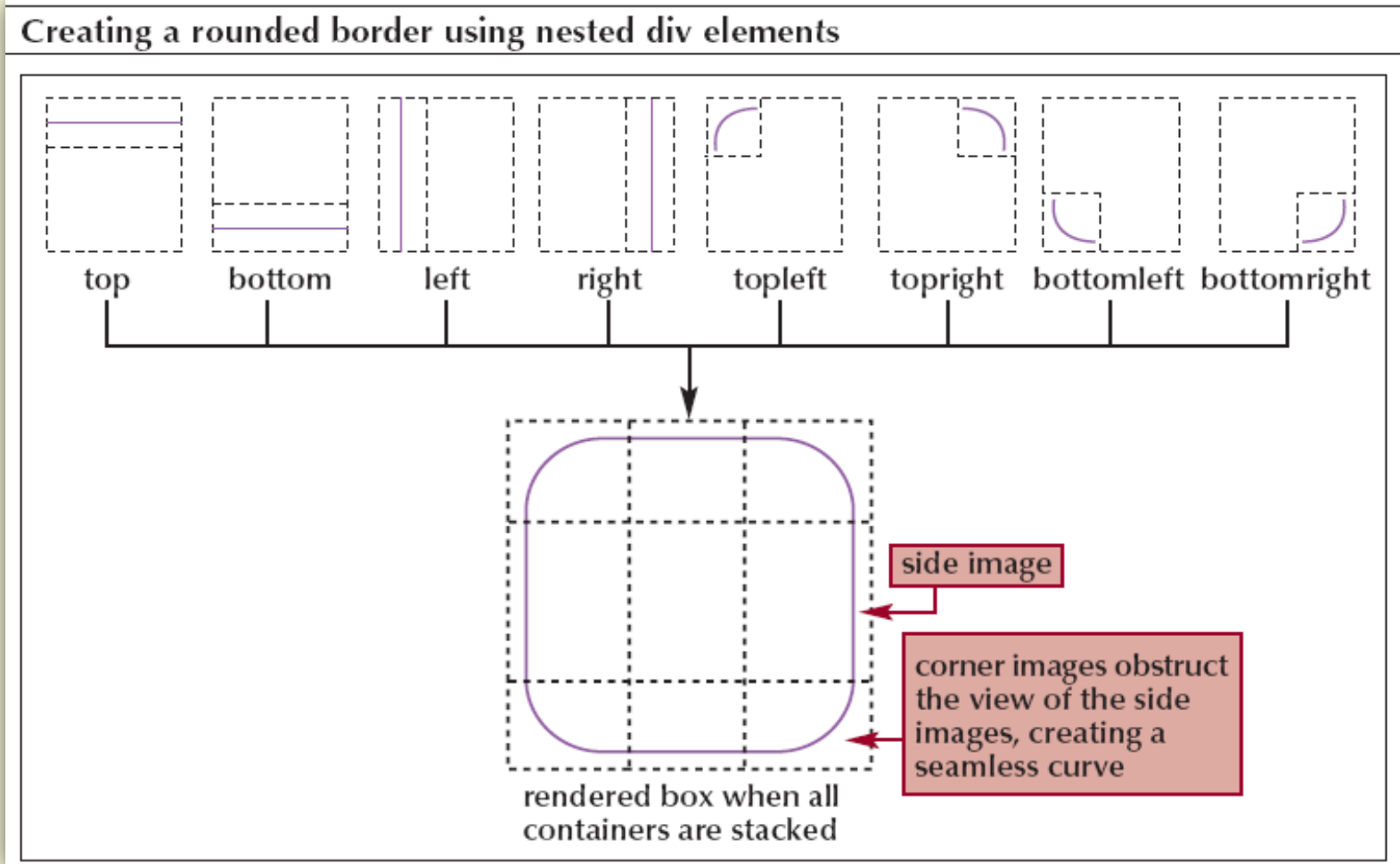
Creating a Rounded Box Using div Containers

■ Nesting div Containers

- The idea is to **nest** several levels of div elements **within one another**
 - the div elements have no padding and no margin spaces
 - So they will be **superimposed** on top of each other
 - Creating a stack of div elements that **ALL occupy the SAME space** on the Web page
 - Of course, that's not good!
 - But since they are stacked, when these div elements are displayed by the browser, **any background image** from an element **lower** in the stack will be **visible as long as** it is **not obstructed** by **another background image higher** in the stack



Creating a Rounded Box Using div Containers





Creating a Rounded Box Using div Containers

■ Nesting div Containers

- To create this effect in HTML, we nest these eight div elements

```
<div class="top"><div class="bottom">  
<div class="left"><div class="right">  
<div class="topLeft"><div class="topRight">  
<div class="bottomLeft"><div class="bottomRight">  
    <div class="boxContent">  
        content  
    </div>  
</div></div></div></div>  
</div></div></div></div>
```



Creating a Rounded Box Using div Containers

- We make a new box above the table version:

```
<div id="right_col">
  <div class="roundedBox">
    <div class="top"><div class="bottom">
      <div class="left"><div class="right">
        <div class="topLeft"><div class="topRight">
          <div class="bottomLeft"><div class="bottomRight">

            <div class="boxContent">
              </div>

            </div></div></div></div>
          </div></div></div></div>
        </div>
      <table class="roundedBox">
        <tr>
          <td class="topLeft"></td>
          <td class="top"></td>
          <td class="topRight"></td>
        </tr>
```

- Of course, there's no content yet



Creating a Rounded Box Using div Containers

- We make a new box above the table version:
 - We add a 5px margin around the box
 - We add a 16px padding space to the box content
 - And for Internet Explorer, we need to make the position relative...to ensure all the nested containers line up correctly

```
.topLeft      {background: url(topleft.png) no-repeat top left}
.topRight     {background: url(topright.png) no-repeat top right}
.bottomLeft   {background: url(bottomleft.png) no-repeat bottom left}
.bottomRight  {background: url(bottomright.png) no-repeat bottom right}

.top          {background: url(top.png) repeat-x top}
.bottom       {background: url(bottom.png) repeat-x bottom}

.left         {background: url(left.png) repeat-y left}
.right        {background: url(right.png) repeat-y right}

div.roundedBox {margin: 5px; position: relative}
div.boxContent {padding: 16px}
```



Creating a Rounded Box Using div Containers

- We make a new box above the table version:
 - Finally, we go back to the HTML file and add the box content to the specific div element

```
<div class="roundedBox">
  <div class="top"><div class="bottom">
    <div class="left"><div class="right">
      <div class="topLeft"><div class="topRight">
        <div class="bottomLeft"><div class="bottomRight">

          <div class="boxContent">
            <h1 class="newshows">On the Air Now</h1>
            <h2 class="newshows">Folk Fest</h2>
            <p class="newshows">Featuring the best of traditional
              and contemporary folk music</p>
          </div>

        </div></div></div></div>
      </div></div></div></div>
    </div>
  </div>
</div>
```



Creating a Rounded Box Using div Containers

Listener supported since 1966

Home Schedule Programs Music News Events Listen Live Contact Us Support KPAF

Listener Sponsored Kpaf 620 Radio



KPAF Nightly Schedule

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7:30					Brain Stew	Bismarck Forum	
8:00	The Classical Music Connection				Old Time Radio	Saturday Nite Jazz	The Indie Connection
8:30					The Inner Mind		
9:00					Open Mike Nile		
9:30							
10:00	World News Feed						

On the Air Now

Folk Fest

Featuring the best of traditional and contemporary folk music

Coming Up on KPAF

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The Classical Music Connection

Peter Thiesen shares his eclectic selections from the world of classical music.

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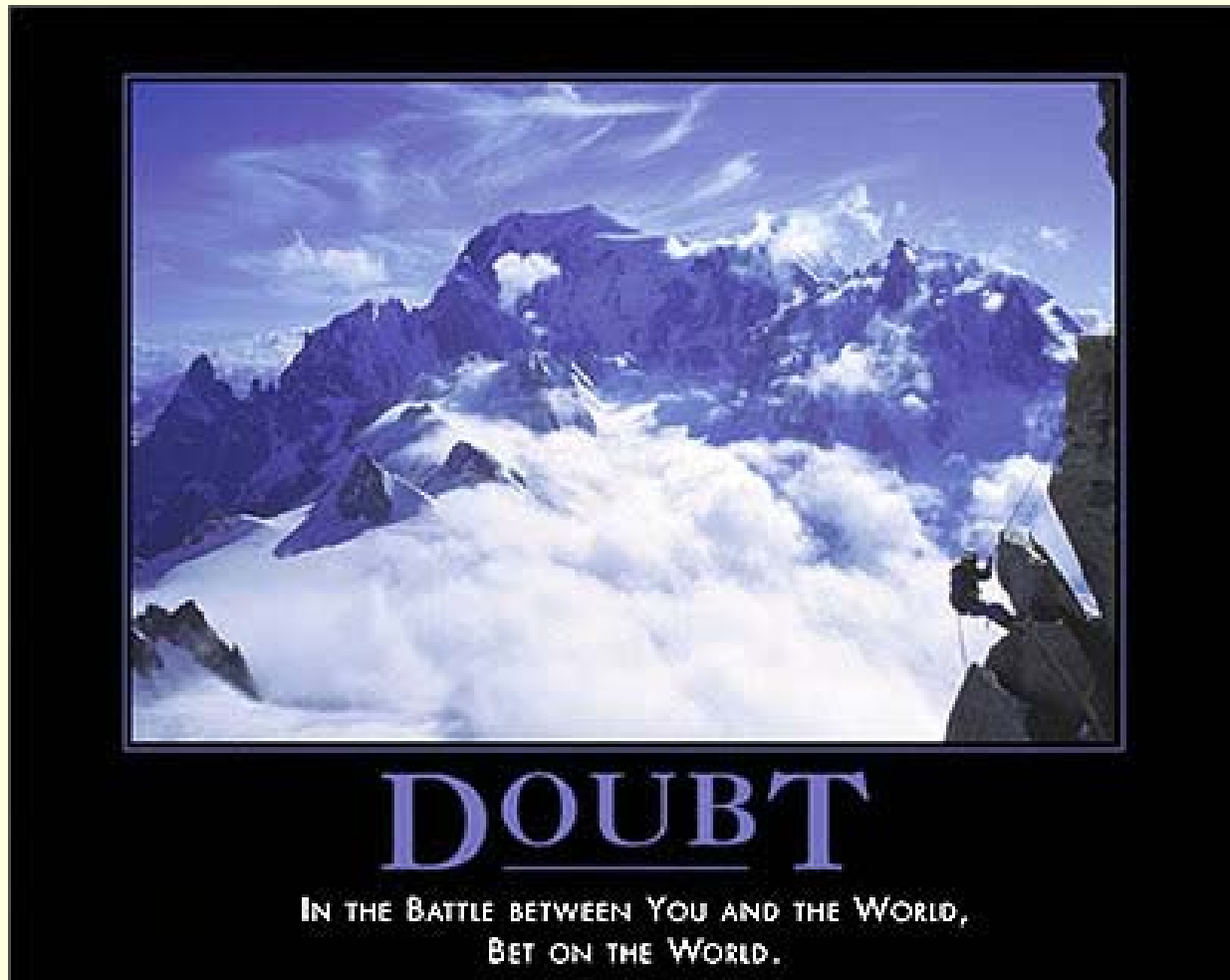


Tutorial 5: Working with Web Tables

**WASN'T
THAT
EXCELLENT!**



Daily Demotivator



Tutorial 5: Working with Web Tables



Computer Science Department
University of Central Florida

COP 3175 – Internet Applications