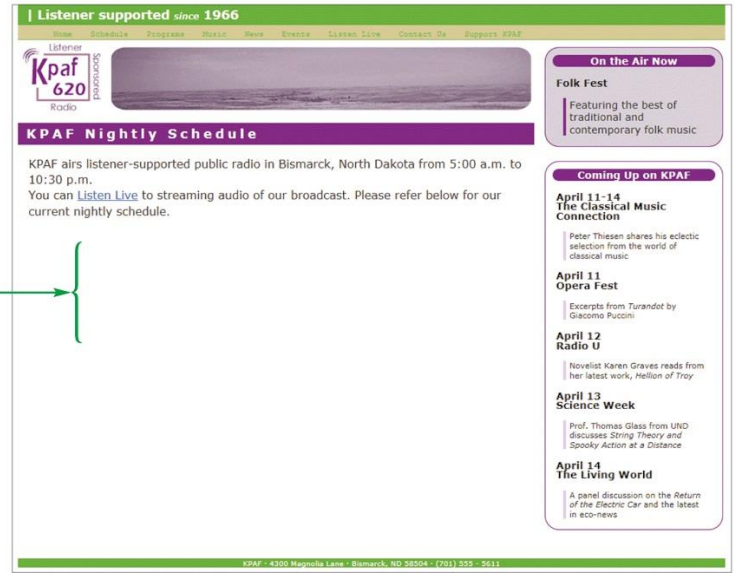
TUTORIAL 5

WORKING WITH TABLES AND COLUMNS

INSERTING A TABLE

Figure 5-1 Initial nightly schedule page



insert Web table containing programming schedule here

Figure 5-2 KPAF 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
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

MARKING A TABLE, ROWS, HEADING CELLS AND DATA

Figure 5-3 Marking a table and table rows

table element marking the Web table

table rows

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

</section>
```

Figure 5-4 Inserting table heading cells

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>
```

Figure 5-53 KPAF morning schedule

Figure 5-5 Inserting table data

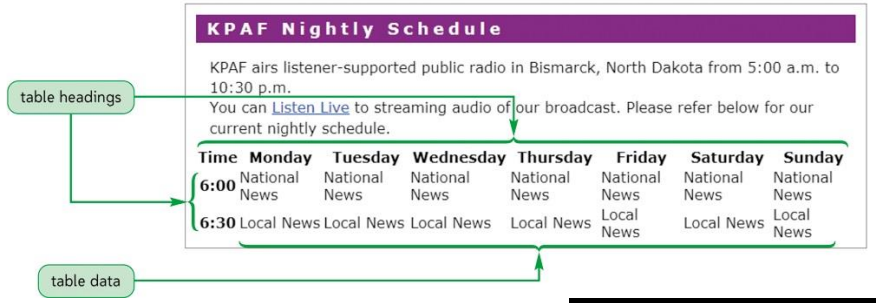
#7

table data

```
<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>
    <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>
    <td>Local News</td>
  </tr>
</table>
```

ADDING TABLE BORDERS AND CELL GRIDLINES

Figure 5-6 Viewing the Web table



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

Figure 5-7 Tables with different border sizes

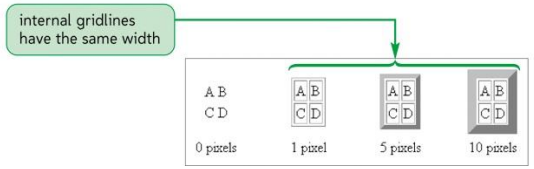


Figure 5-8 Adding a table border

#3

```
<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

Figure 5-9 Web table borders and cell gridlines

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

COLUMN-SPANNING CELLS

Figure 5-10 Marking cells to span several columns

```
<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>
```

remaining six cells in each row deleted

each cell spans seven columns

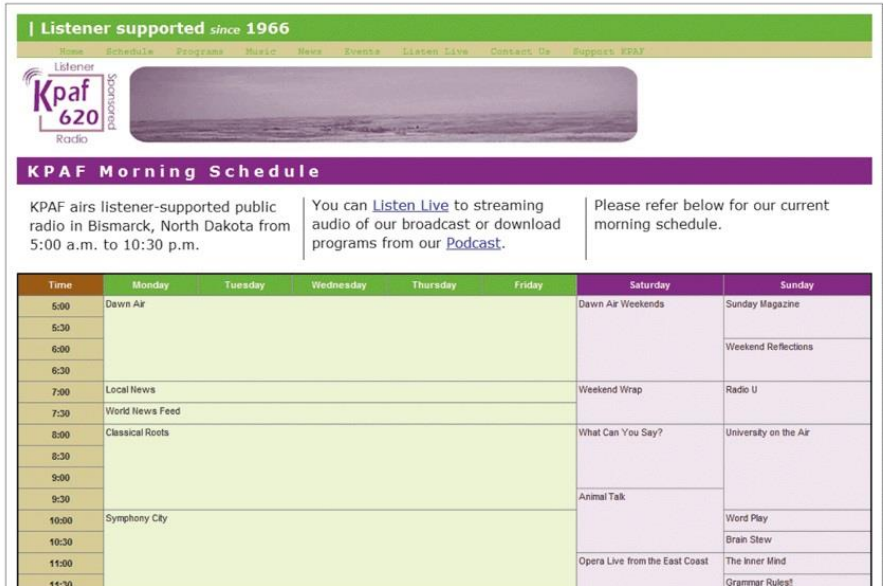
#8

Figure 5-11 Column-spanning cells

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

cells span seven columns

Figure 5-53 KPAF morning schedule



ROW-SPANNING CELLS

Figure 5-12 Row-spanning cell

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

Figure 5-13 Inserting cells that span two rows

#8

cells span two rows

```
   <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>
```

Figure 5-14 Schedule table with several one-hour programs spanning two rows

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

ADDING MORE ROWS

Figure 5-15 Adding the remaining KPAF evening programs

four programs start at 8:00

one program starts at 8:30 lasting 30 minutes

one program starts at 9:00 lasting 1 hour

no programs start at 9:30

one program starts at 10:00

```
    <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>
```

Figure 5-16 The complete KPAF evening schedule

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						

INSERTING TABLE CAPTION

Figure 5-17 Inserting a table caption

#3,4

```
<table class="schedule" border="1">
   <caption>All Times Central</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>
```

Figure 5-18 Table caption for the KPAF programming schedule

caption

All Times Central

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						

TABLE BODY ROW AND COLUMN GROUPS

Figure 5-19 Marking the table head and table body row groups

```
<table class="schedule" border="1">
   <caption>All Times Central</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>10:00</th>
      <td colspan="7">World News Feed</td>
   </tr>
   </tbody>

</table>
```

table head row group

table body row group

Figure 5-20 Inserting a column group

#5

```
<table class="schedule" border="1">
   <caption>All Times Central</caption>

   <colgroup>
      <col class="firstCol" />
      <col class="dayCols" span="7" />
   </colgroup>
```

column group

first column in the group

next seven columns grouped together

INSERTING A TABLE SUMMARY

#6

Figure 5-21 Inserting a table summary

table summary

```
<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 Central</caption>
```

CELL SPACING AND PADDING VALUES

Figure 5-22 Cell spacing values

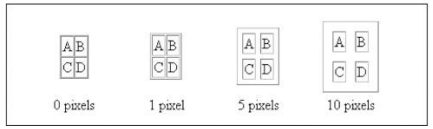
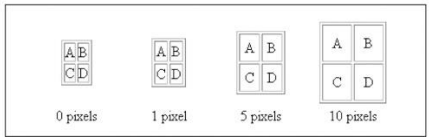


Figure 5-23 Cell padding values



CELL SPACING AND PADDING VALUES

Figure 5-24 Setting the cell spacing and padding values

space between cells in pixels

space within cells in pixels

```
<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.">
   <caption>All Times Central</caption>
```

Figure 5-25 Increased padding and spacing within the Web table

All Times Central

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						

VALUES OF THE FRAME & RULES ATTRIBUTE

Figure 5-26 Values of the frame attribute

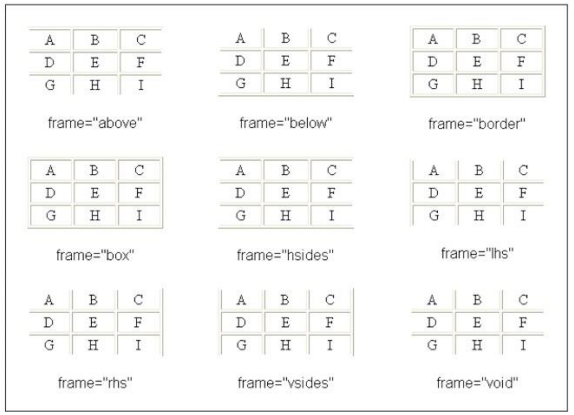
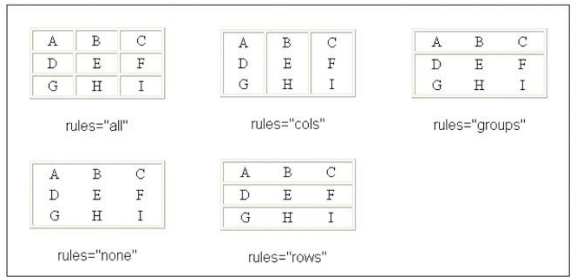


Figure 5-27 Values of the rules attribute



APPLYING THE VALIGN ATTRIBUTE

Figure 5-28 Applying the valign attribute

aligns the text of cells in the table body with the top of each cell

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

#12

```
/* Table body cell styles */
table.programs tbody td {
   border: 1px solid gray;
   font-size: 0.7em;
   vertical-align: top;
   padding: 2px;
}
```

Figure 5-29 Cell content aligned with the top of each cell

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						

TABLE AND CELL BORDERS

Figure 5-30 Setting the table border styles

border style for the Web table

border style for cells within the Web table

```
/* Styles for the schedule table */

table.schedule {
   border: 10px outset rgb(153, 0, 153);
}

table.schedule th, table.schedule td {
   border: 1px solid gray;
}
```

Figure 5-31 Table and cell borders

All Times Central

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						

SEPARATE AND COLLAPSED BORDERS

Figure 5-32 Separate and collapsed borders

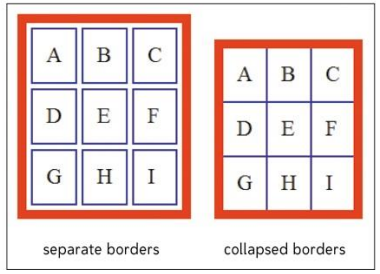


Figure 5-33 Reconciling hidden borders

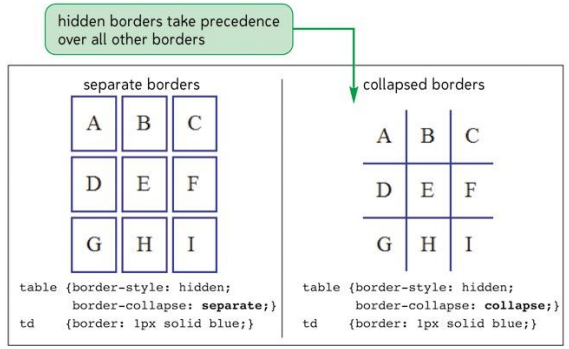
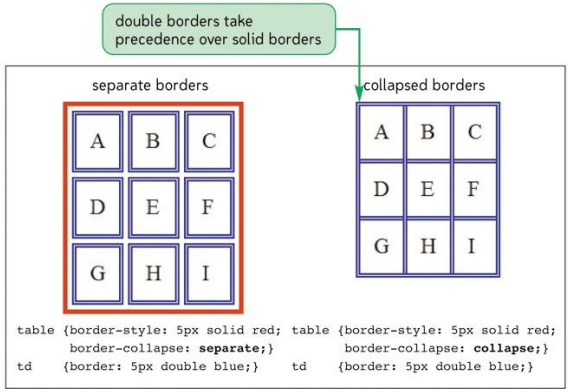


Figure 5-34 Reconciling different border styles



ADDING THE BORDER-COLLAPSE STYLE

Figure 5-35 Adding the border-collapse style

#10

collapses adjacent borders in the table into a single border

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

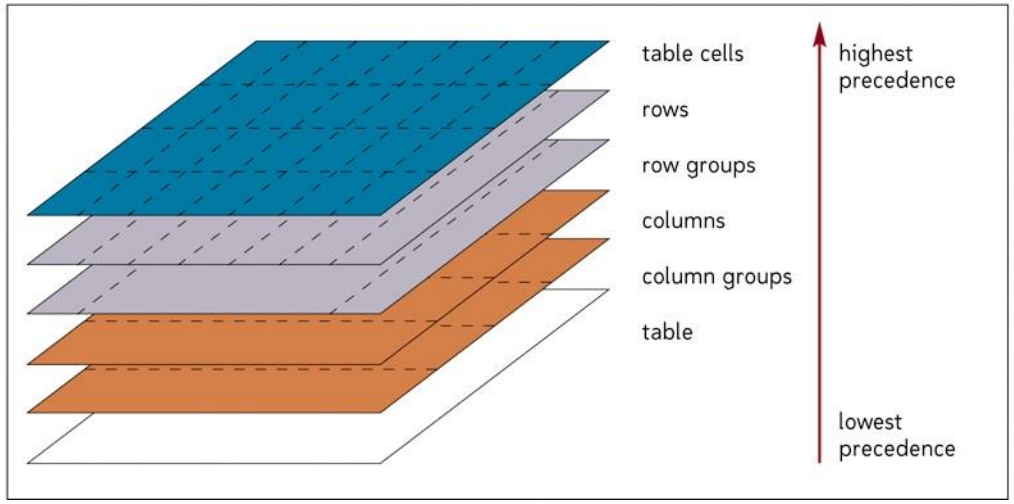
Figure 5-36 Schedule table with collapsed borders

All Times Central

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						

LEVELS OF PRECEDENCE IN WEB TABLE STYLES

Figure 5-37 Levels of precedence in Web table styles



ADDING FONT AND COLOR STYLES TO TABLE

#10

Figure 5-38 Adding font and color styles to the schedule table

font styles for the table text

styles for the table header row group

styles for the first column of the table

```
table.schedule {
   border: 10px outset rgb(153, 0, 153);
   border-collapse: collapse;
   font-family: Arial, Helvetica, sans-serif;
   font-size: 0.75em;
}

table.schedule th, table.schedule td {
   border: 1px solid gray;
}

/* Table header styles */

table.schedule thead {
   background-color: rgb(203, 50, 203);
   color: white;
   color: rgba(255, 255, 255, 0.5);
}

/* Styles for the first column */

table.schedule col.firstCol {
   background-color: rgb(255, 255, 192);
}
```

REFORMATTED TABLE

Figure 5-39 Reformatted schedule table

table caption inherits the text styles from the table

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 Central

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						

SETTING TABLE WIDTH

#10

Figure 5-40 Setting the width of the schedule table

```
table.schedule {
   border: 10px outset rgb(153, 0, 153);
   border-collapse: collapse;
   font-family: Arial, Helvetica, sans-serif;
   font-size: 0.75em;
   width: 100%;
}
```

Figure 5-41 Table width set to 100%

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 Central

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						

SETTING TABLE COLUMN WIDTHS

Figure 5-42 Setting the widths of the schedule table columns

the first column is 7% of the table width

each of the remaining seven columns is 13% of the table width

```
/* Styles for the first column */

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

/* Styles for the remaining columns */

table.schedule col.dayCols {
   width: 13%;
}
```

Figure 5-43 Revised table column widths

first column width is 7% of the total width

the seven days of the week columns are each 13% of the total width of the table

All Times Central

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						

SETTING TABLE ROW HEIGHT & ALIGNING TABLE DATA CELLS

#13,14

Figure 5-44 Setting the height of the table rows

```
table.schedule thead {
   background-color: rgb(203, 50, 203);
   color: white;
   color: rgba(255, 255, 255, 0.5);
}

table.schedule thead tr {
   height: 50px;
}

/* Table body styles */

table.schedule tbody tr {
   height: 40px;
}
```

height of the row within the table header

heights of the rows within the table body

Figure 5-45 Vertically aligning the table data cells in the table body

```
/* Table body styles */

table.schedule tbody tr {
   height: 40px;
}

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

Figure 5-46 Revised table layout

table header row is 50 pixels high

table body rows are each 40 pixels high

cell text is aligned with the top of each cell

All Times Central

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						

TABLE CAPTION

Figure 5-47 Setting the caption position

#11

displays the caption in the bottom-right corner of the table

```
/* Styles for the table caption */
table.schedule caption {
   caption-side: bottom;
   text-align: right;
}
```

Figure 5-48 Table caption in the bottom-right corner

9:30				
10:00	World News Feed			

All Times Central

Header & Column Groups (#15,16)

Header Row Group

```
table.programs th {
  font-size: 0.9em;
  border: 2px solid black;
}

table.programs thead th:first-of-type {
  background-color: rgb(xxx, xxx, xxx);
}

table.programs thead th:nth-of-type(7) {
  background-color: rgb(xxx, xxx, xxx);
}

table.programs thead th:nth-of-type(8) {
  background-color: rgb(xxx, xxx, xxx);
}
```

Column Group

```
/* Styles for the table columns */

table.programs col.timeColumn {
  background-color: rgb(xxx, xxx, xxx);
  width: xx%;
}

table.programs col.wDayColumns {
  background-color: rgb(xxx, xxx, xxx);
  width: xx%;
}

table.programs col.wEndColumns {
  width: xx%;
  background-color: rgb(xxx, xxx, xxx);
}
```

Three-Column Layout #17

```
/* Three column layout for the introductory paragraph */

#intro p {
   -moz-column-count: 3;
   -webkit-column-count: 3;
    column-count: 3;

   -moz-column-gap: 20px;
   -webkit-column-gap: 20px;
    column-gap: 20px;

   -moz-column-rule: 1px solid black;
   -webkit-column-rule: 1px solid black;
    column-rule: 1px solid black;
}
```

TABLE DISPLAY STYLES

Figure 5-49 Table display styles

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

Figure 5-50 Applying table styles to a definition list

```
<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

```
dl {
 display: table;
 border-collapse: collapse;
 width: 300px;
}
dl 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

TWO-COLUMN STYLE

Figure 5-51 Applying a two-column style

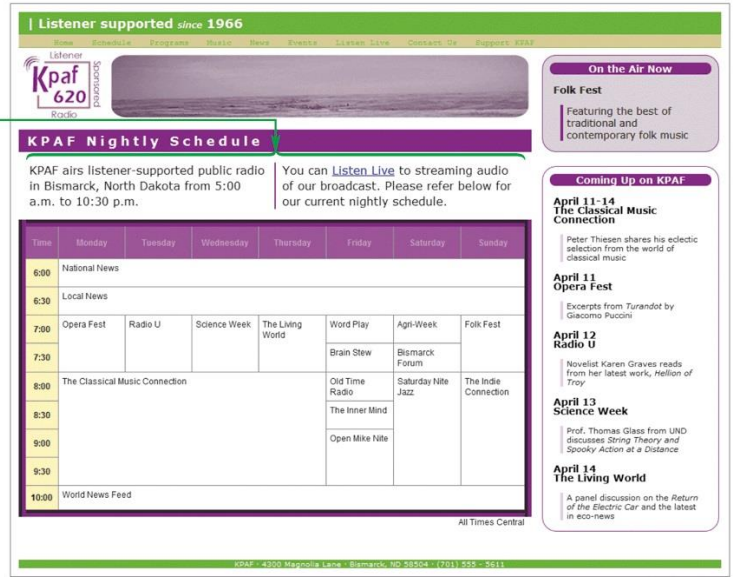
```
/* Two column layout for the introductory paragraph */

section#main p {
  -moz-column-count: 2;
  -webkit-column-count: 2;
  column-count: 2;

  -moz-column-gap: 20px;
  -webkit-column-gap: 20px;
  column-gap: 20px;

  -moz-column-rule: 2px solid rgb(153, 0, 153);
  -webkit-column-rule: 2px solid rgb(153, 0, 153);
  column-rule: 2px solid rgb(153, 0, 153);
}
```

creates a two-column layout

sets the gap between the columns to 20 pixels

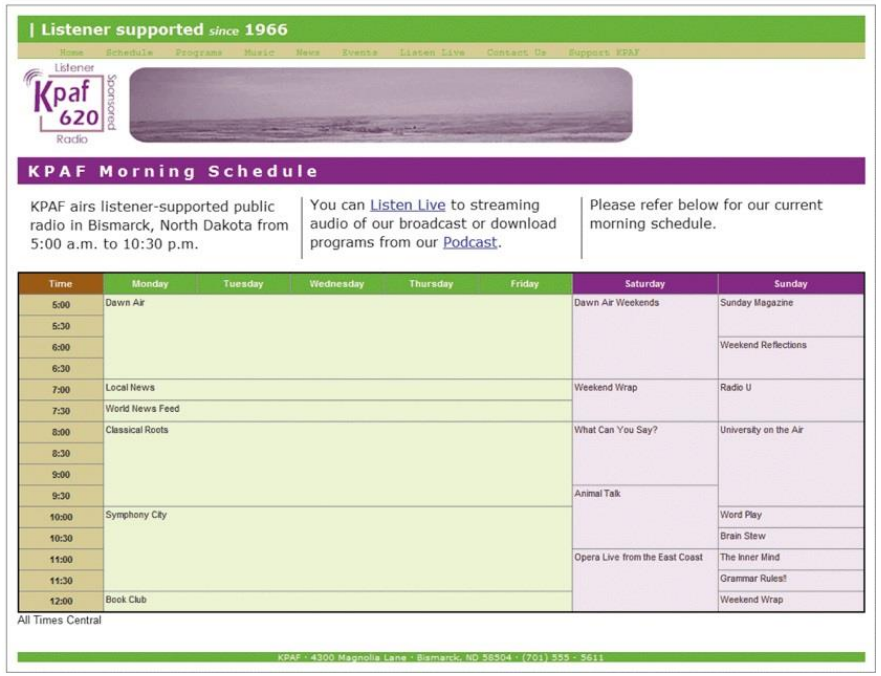
adds a 2-pixel solid purple border between the columns

Figure 5-52 Final KPAF nightly schedule page



COMPLETED TUTORIAL 5

Figure 5-53 KPAF morning schedule



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KPAF Morning 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 or download programs from our Podcast.

Please refer below for our current morning schedule.

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
5:00	Dawn Air					Dawn Air Weekends	Sunday Magazine
5:30							
6:00							Weekend Reflections
6:30							
7:00	Local News					Weekend Wrap	Radio U
7:30	World News Feed						
8:00	Classical Roots					What Can You Say?	University on the Air
8:30							
9:00							
9:30						Animal Talk	
10:00	Symphony City						Word Play
10:30							Brain Stew
11:00						Opera Live from the East Coast	The Inner Mind
11:30							Grammar Rules!
12:00	Book Club						Weekend Wrap

All Times Central

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COLUMN GROUP, ROWSPAN, COLSPAN

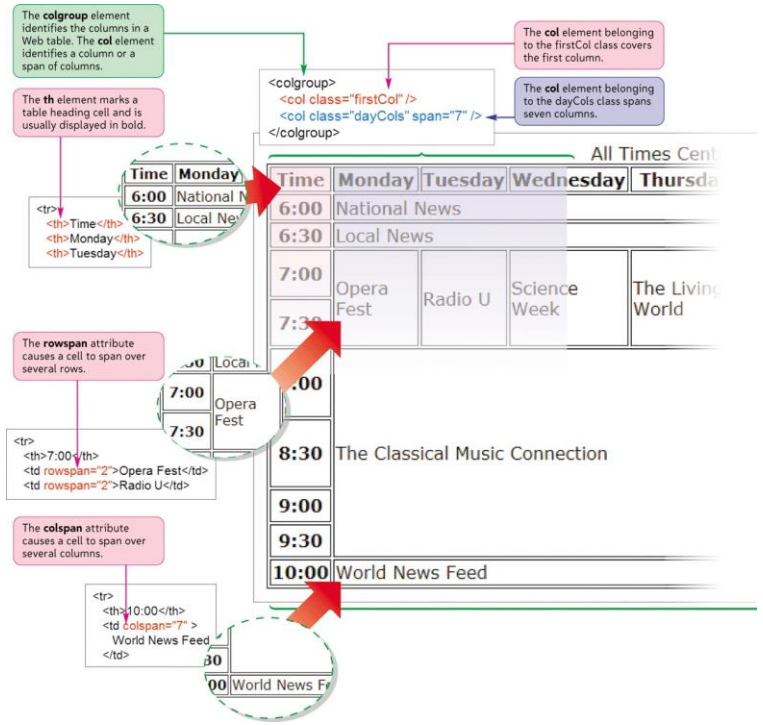
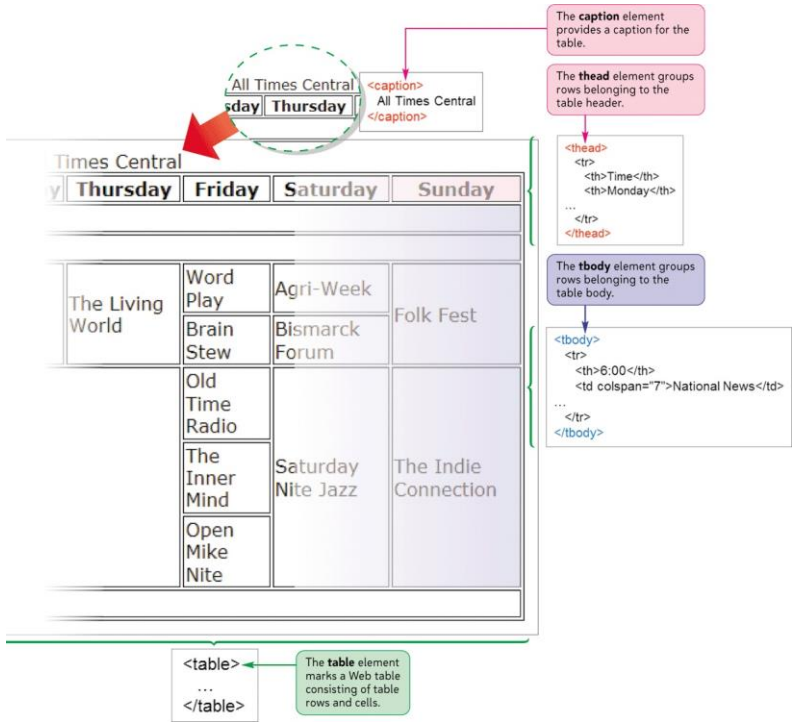
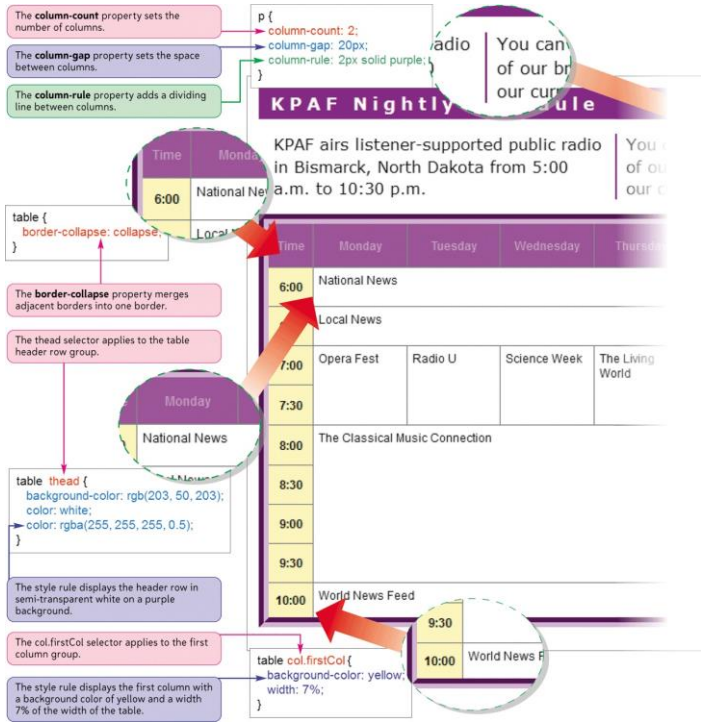
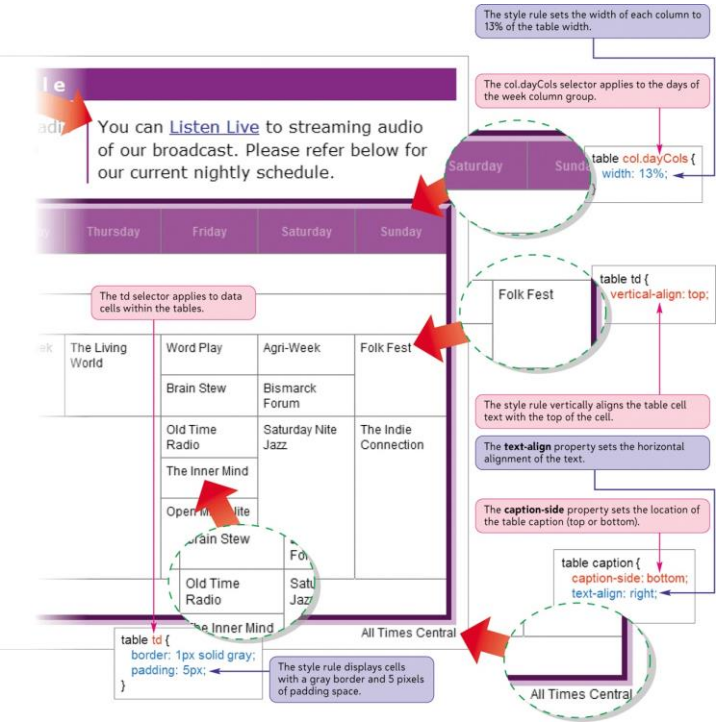


TABLE ELEMENT, CAPTION, TBODY, THREAD



COLUMN-COUNT, GAP, RULE & BORDER COLLAPSE



TD SELECTOR & STYLE RULES