Apply your knowledge of Web tables and table styles to create a puzzle page with nested tables.

Case Problem 1

Data Files needed for this Case Problem: gold.jpg, green.jpg, jpf.css, jpf.jpg, modernizr-1.5.js, stabletxt.css, sudokutxt.htm

The Japanese Puzzle Factory   Rebecca Peretz has a passion for riddles and puzzles. Her favorites are the Japanese logic puzzles that have become very popular in recent years. Rebecca and a few of her friends have begun work on a new Web site called *The Japanese Puzzle Factory (JPF)*, where they plan to create and distribute Japanese-style puzzles. Eventually, the JPF Web site will include interactive programs to enable users to solve the puzzles online, but for now Rebecca is interested only in the design and layout of the pages. You've been asked to help by creating a draft version of the Web page describing the Sudoku puzzle. Figure 5-54 shows a preview of the design and layout you'll create for Rebecca.

Figure 5-54 **The Japanese Puzzle Factory Sudoku page**
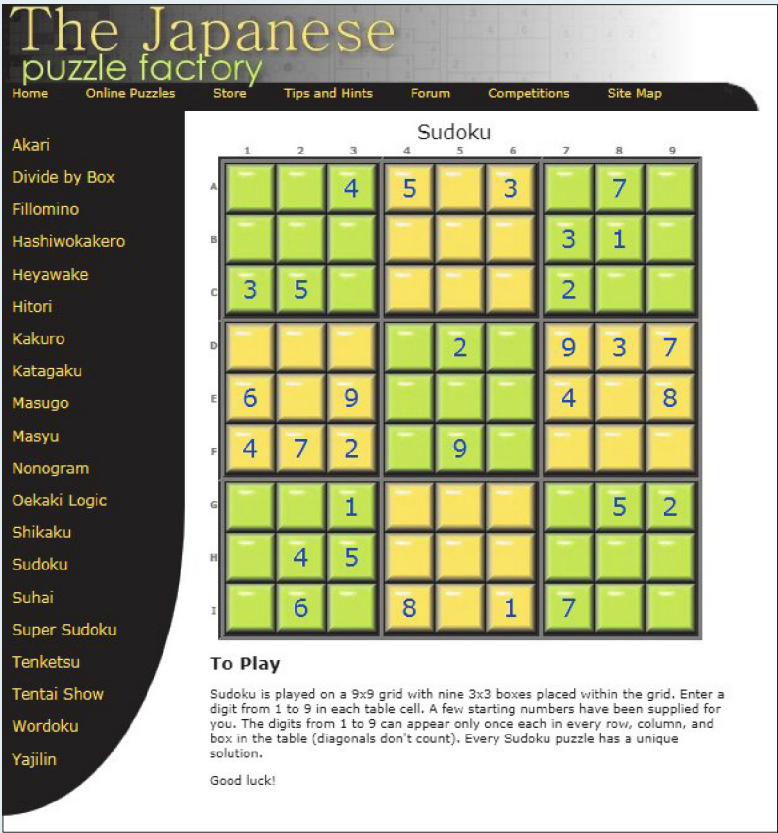
Rebecca has created some of the content and designs for this page. Your task is to complete the page by entering the code and styles for the Sudoku table, as well as adding some background images to other sections of the page layout.

Complete the following:

1. Use your text editor to open the files **stabletxt.css** and **sudokutxt.htm** from the tutorial.05\case1 folder. Enter *your name* and *the date* in the comment section of each file. Save the files as **stable.css** and **sudoku.htm**, respectively, in the same folder.

2. Return to the **sudoku.htm** file in your text editor. Add links to the **jpf.css** and **stable. css** style sheets.

3. Scroll down to the `section` element. Directly below the opening `<section>` tag, insert a `table` element that will be used to display the Sudoku puzzle. Give the `table` element the class name **spuzzle**.

4. Add a caption to the spuzzle table containing the text **Sudoku**.

5. Create a table head row group containing a single row. The row should display 10 heading cells. The first heading cell should be blank and the remaining nine cells should display the digits from 1 to 9.

6. Create the table body row group containing nine table rows with the first cell in each row containing a table heading cell displaying the letters A through I.

7. After the initial table heading cell in the first, fourth, and seventh rows, insert three table data cells spanning three rows and three columns each. Altogether, these nine data cells will store the nine 3×3 boxes that are part of the Sudoku puzzle.

8. In the first row of the table body, put the three table data cells in the greenBox, goldBox, and greenBox classes, respectively. In the fourth row, the three data cells belong to the goldBox, greenBox, and goldBox classes. In the seventh row, the three data cells belong to the greenBox, goldBox, and greenBox classes.

⊕ **EXPLORE**

9. Go to each of the nine table data cells you created in the last two steps. Within each data cell, insert a nested table belonging to the subTable class. Within each nested table, insert three rows and three columns of data cells. Enter the digits from Figure 5-54 in the appropriate table cells. Where there is no digit, leave the table cell empty.

10. Save your changes to the file, and then go to the **stable.css** style sheet in your text editor.

11. Create a style rule to collapse the borders of the spuzzle and subTable tables.

12. Add a 5-pixel outset gray border to the table data cells within the spuzzle table.

13. Set the font size of table header cells within the spuzzle table to 8 pixels and the font color to gray.

14. Set the height of table header cells within the table body row group of the spuzzle table to 40 pixels.

15. For table data cells within the subTable table, add the following styles: a) set the font size to 20 pixels and the font color to blue; b) set the width and height to 40 pixels and center the cell text both horizontally and vertically; and c) add a 1-pixel solid black border around the cell.

⊕ **EXPLORE**

16. For table data cells nested within the goldBox class of table data cells, display the background image file *gold.jpg* centered within the cell and not tiled. (Hint: Use background position values of 50% for both the horizontal and vertical directions.)

17. For table data cells nested within the greenBox class of data cells, set the background image to the *green.jpg* file, once again centered within the cell without tiling.

18. Add descriptive comments throughout your style sheet to document your work.

19. Save your changes to the file and then reload **sudoku.htm** in your Web browser. Verify that the layout and design of the Sudoku table resemble that shown in Figure 5-54.

20. Submit your completed files to your instructor, in either printed or electronic form, as requested.

Case Problem 2

Data Files needed for this Case Problem: bottom.jpg, bottomleft.jpg, bottomright.jpg, caltxt.css, ccc.css, ccc.jpg, febtxt.htm, left.jpg, modernizr-1.5.js, right.jpg, tab.jpg, tabred.jpg, top.jpg, topleft.jpg, topright.jpg

The Chamberlain Civic Center Lewis Kern is an events manager at the Chamberlain Civic Center in Chamberlain, South Dakota. The center is in the process of updating its Web site, and Lewis has asked you to work on the pages detailing events in the upcoming year. He's asked you to create a calendar page for the month of February. Lewis wants the page design to catch the reader's eye, so he suggests that you create a Web table with a background showing a spiral binding. The spiral binding graphic must be flexible enough to accommodate calendars of different sizes, so you'll build the borders by using eight different background images that are placed on the four corners and four sides of the table. The February calendar must list the following events:

- Every Sunday, the Carson Quartet plays at 1:00 p.m. ($8)
- February 1, 8:00 p.m.: Taiwan Acrobats ($16/$24/$36)
- February 5, 8:00 p.m.: Joey Gallway ($16/$24/$36)
- February 7-8, 7:00 p.m.: West Side Story ($24/$36/$64)
- February 10, 8:00 p.m.: Jazz Masters ($18/$24/$32)
- February 13, 8:00 p.m.: Harlem Choir ($18/$24/$32)
- February 14, 8:00 p.m.: Chamberlain Symphony ($18/$24/$32)
- February 15, 8:00 p.m.: Edwin Drood ($24/$36/$44)
- February 19, 7:00 p.m.: The Yearling ($8/$14/$18)
- February 21, 8:00 p.m.: An Ellington Tribute ($24/$32/$48)
- February 22, 8:00 p.m.: Othello ($18/$28/$42)
- February 25, 8:00 p.m.: Madtown Jugglers ($12/$16/$20)
- February 28, 8:00 p.m.: Ralph Williams ($32/$48/$64)
- March 1, 8:00 p.m.: Othello ($18/$28/$42)

Lewis wants the weekend events (Friday and Saturday night) to be displayed with a light red background. A preview of the page you'll create is shown in Figure 5-55.

Figure 5-55   **The Chamberlain Civic Center February calendar**

Complete the following:

1. In your text editor, open the **caltxt.css** and **febtxt.htm** files from the tutorial.05\case2 folder. Enter *your name* and *the date* in the comment section of each file. Save the files as **calendar.css** and **feb.htm**, respectively.

2. Go to the **feb.htm** file in your text editor. Create links to the **calendar.css** and **ccc.css** style sheets.

3. Scroll down to the events `section` element. Within the element, insert a table with the class name **calendar**. Add the table caption **Events in February at the CCC** to the calendar.

4. Create a column group for the calendar consisting of two `col` elements. The first `col` element should belong to the weekdays class and span five columns. The second `col` element should belong to the weekends class and span two columns.

5. Create a table header row group consisting of one row of table headings displaying the three-letter abbreviations for the days of the week, starting with *Sun* and ending with *Sat*.

6. Create a table body row group containing the days in the month of February. The row group should contain five rows and seven columns of table data cells. There are no spanning cells in any of the rows or columns.

7. Each table data cell should have the following content:
   - The day of the month should be marked as an `h3` heading (refer to Figure 5-55 for the starting and ending days in the calendar).
   - On the days when there is a CCC event, enter the event information as a definition list with the name of the event marked as a `dt` element, and the time and price of the event each marked with a `dd` element.

8. Save your changes to the file and then go to the **calendar.css** file in your text editor. Create a style rule for the calendar table to: a) create separate borders for the different parts of the table with a 5-pixel space between the borders; b) set the font size to 8 pixels; c) set the top margin to 20 pixels, the bottom margin to 5 pixels, and the left and right margins to `auto`; d) set the padding space to 40 pixels; and e) set the width to 650 pixels.

⊕ EXPLORE

9. In the style rule you created in the previous step, add a style that specifies multiple background images for the calendar table in the following order:
   - the *topleft.jpg* image in the top-left corner of the table with no tiling
   - the *topright.jpg* image in the top-right corner with no tiling
   - the *bottomleft.jpg* image in the bottom-left corner with no tiling
   - the *bottomright.jpg* image in the bottom-right corner with no tiling
   - the *top.jpg* image in the top-left corner, tiled only in the horizontal direction
   - the *left.jpg* image in the top-left corner, tiled only in the vertical direction
   - the *right.jpg* image in the top-right corner, tiled only in the vertical direction
   - the *bottom.jpg* image in the bottom-left corner, tiled only in the horizontal direction

10. Create a style rule to center the table caption along the top of the calendar table and do the following: a) set the bottom padding to 10 pixels; b) set the font size to 16 pixels; c) set the kerning to 3 pixels; and d) set the width to 650 pixels.

11. Set the width of the table columns to 14% of the width of the table. For columns belonging to the weekends class, change the background color to the value (255, 232, 232).

12. For table heading cells in the table header row group, set the background color to red, the font color to white, and the letter spacing to 5 pixels.

13. Set the height of the table row within the table header row group of the calendar table to 5%. Set the height of the table rows within the table body row group to 19% each.

14. Add a 1-pixel solid gray border to every table data cell within the calendar table. Set the vertical alignment of the cell content to the top of the cell.

15. Set the font size of `h3` headings within the data table cells of the calendar table to 8 pixels.

16. The paragraphs in the summary section are enclosed within a `div` element. Create a style rule for this `div` element to: a) display the contents in a columnar layout with the column width set to 300 pixels; b) set the column gap to 20 pixels; and c) add a 1-pixel solid black divider rule between columns.

17. Save your changes to the file and then open **feb.htm** in your Web browser. Verify that the layout and design of the page resemble that shown in Figure 5-55. (Note: If you are running Internet Explorer or Opera, you might not see multiple columns in the description of the upcoming February events.)

18. Submit your completed files to your instructor, in either printed or electronic form, as requested.

CHALLENGE

Case Problem 3

Data Files needed for this Case Problem: bottom.jpg, bottomleft.jpg, bottomright.jpg, dhomelogo.png, dhometxt.htm, dome.css, dtabletxt.css, left.jpg, modernizr-1.5.js, right.jpg, tableback.png, top.jpg, topleft.jpg, topright.jpg

dHome, Inc. Olivia Moore is the director of advertising for dHome, one of the nation's newest manufacturers of geodesic dome houses. She's hired you to work on the company's Web site. Olivia has provided you with all of the text you need for the Web page, and your job is to design the page's layout. You'll start by designing a draft of the company's home page. Olivia wants the page to include information about dHome's pricing structure for various dome models. The page also contains links to other pages on the Web site.

Olivia also wants you to add some visual effects to the table's appearance. She would like a semi-transparent table background showing the pattern of a geodesic dome, and she would like banded rows colored with alternating bands of semi-transparent white and green. Finally, she'd like you to add rounded corners to the table using some graphic image files she's created.

A preview of the design you'll create for Olivia is shown in Figure 5-56.

Figure 5-56   **dHome Web page**

Complete the following:

1. Use your text editor to open the **dhometxt.htm** and **dtabletxt.css** files from the tutorial.05\case3 folder. Enter *your name* and *the date* in the comment section of each file. Save the files as **dhome.htm** and **dtable.css**, respectively.

2. Go to the **dhome.htm** file in your text editor. Create links to the **dome.css** and **dtable.css** style sheets.

3. Scroll down to the `section` element. Above the paragraphs within that element, insert a table with the class name *domeSpecs*. Add a table summary with the text **A table describing six dome models sold by dHome, Inc.** and add the table caption **Building Models**.

4. Create a column group containing three `col` elements with class names of *firstColumn*, *middleColumns*, and *lastColumn*. The *middleColumns* `col` element should span two columns in the table.

5. Create a table header row group containing a single table row with four table heading cells. The cells should contain the headings **Model**, **Total Sq. Ft.**, **Sphere Size**, and **Price**.

6. Insert a table footer row group containing a single row and three data cells. The first and third cells should be left blank. The middle cell should contain the text **Call us about custom pricing!** and should span two columns.

7. Create a table body row group consisting of six table rows with four cells each. Insert the model, square feet, sphere size, and price values from Figure 5-56.

8. Save your changes to the **dhome.htm** file and then go to the **dtable.css** file in your text editor.

9. Create a style for the `domeSpecs` table that: a) sets the font size to 16 pixels; b) sets the bottom and left margins to 20 pixels; c) floats the table on the right; and d) collapses the border.

EXPLORE 10. Add code to the style rule from the previous step to display the file *tableback.png* as the table background aligned with the bottom-right corner without tiling. Set the size of the background image to cover the table.

11. For every data cell in the `domeSpecs` table, set the top and bottom padding to 0 pixels and the left and right padding to 5 pixels.

12. Create a style rule for the table caption to: a) set the font size to 18 pixels and the kerning to 5 pixels; b) center the caption text above the table; and c) set the bottom margin to 10 pixels.

13. For the table header row group, create a style rule to: a) display a 2-pixel solid gray bottom border; and b) display the image file *top.jpg* tiled horizontally across the top of the row group.

14. Set the height of the table row in the header row group to 40 pixels.

15. For heading cells within the header row group: a) set the top/bottom padding to 0 pixels and the left/right padding to 5 pixels; and b) set the kerning to 2 pixels.

EXPLORE 16. Olivia wants a graphic image used for the top-left and top-right corners of the table header row group. Use the `first-of-type` pseudo-class to set the background image of the first heading cell in the header row group, placing the image file *topleft.jpg* in the top-left corner of the cell with no tiling. In the same way, use the `last-of-type` pseudo-class to place the image file *topright.jpg* as the background image for the last heading cell in the table header row group, positioning the image in the top-right corner of the cell with no tiling.

17. Create a style rule for the table footer row group that: a) adds a 2-pixel solid gray top border; b) centers the text of the row group; and c) adds the background image file *bottom.jpg* repeated horizontally along the bottom of the row group.

18. Set the height of the table rows within the table footer row group to 40 pixels.

19. As with the table header row group, add background graphic images to the corners of the footer. Use the `first-of-type` pseudo-class to add the image file *bottomleft.jpg* as the background image for the first data cell in the table footer row group, set along the bottom-left corner without tiling. Use the `last-of-type` pseudo-class to add the image file *bottomright.jpg* as the background image of the last data cell in the table footer row group, positioning it along the bottom-right corner of that cell without tiling.

20. Create a style rule for the table rows within the table body row group that: a) sets the height of each row to 50 pixels; and b) adds a 1-pixel dotted gray bottom border.

21. As with the table header and table footer row groups, create a graphic border for the first and last cells in each row of the table body row group. Use the `first-of-type` pseudo-class to display the image file *left.jpg* as the background image for the first data cell in each row, positioned at the top-left corner and tiled vertically. Use the `last-of-type` pseudo-class to display the image file *right.jpg* as the background image for the last data cell, positioned along the top-right corner of the cell and tiled vertically. In addition, for the last data cell in every row of the table body row group, right-align the cell contents.

⊕ EXPLORE 22. Olivia would like the table to display semi-transparent banded rows. Use the `nth-of-type` pseudo-class to display every even row in the body section with the background color (152, 228, 215) at 60% opacity. In the same way, display every odd row in the body section with the background color (255, 255, 255) at 60% opacity.

23. Set the width of the `firstColumn` column group to 22% of the table width. Set the width of the columns in the `middleColumns` column group to 28% of the table width. Finally, set the width of the `lastColumn` column group to 22% of the width of the table.

24. Add style comments to document your work.

25. Save your changes to the file and then open **dhome.htm** in your Web browser. Verify that the appearance of the product information table matches that shown in Figure 5-56. (Note: If you are using earlier versions of the major browsers, you will not see the semi-transparent effect in the rows and in the table background, nor will you see rounded graphic corners and edges.)

26. Submit your completed files to your instructor, in either printed or electronic form, as requested.

CREATE

Case Problem 4

Data Files needed for this Case Problem: hcclogo.jpg, modernizr-1.5.js, rooms.txt

Hamilton Conference Center   Yancy Inwe is the facilities manager at the Hamilton Conference Center in Hamilton, Ohio. The conference center, a general-use facility for the community, hosts several organizations and clubs as well as special events and shows by local vendors. The center recently upgraded its intranet capabilities, and Yancy would like to create a Web site where employees and guests can easily track which conference rooms are available and which are being used. She would like this information displayed in a Web table that lays out the room use for seven rooms and halls from 8:00 a.m. to 5:00 p.m. in half-hour increments. Eventually, this process will be automated by the conference's Web server; but for now, she has come to you for help in setting up a sample Web page layout and design.

Complete the following:

1. Use your text editor to create an HTML file named **conference.htm** and two style sheets named **hcc.css** and **schedule.css**. Enter *your name* and *the date* in a comment section of each file. Include any other comments you think aptly document the purpose and content of the files. Save the files in the tutorial.05\case4 folder.

2. Use the text files provided to create a Web page containing the reservation information. The design of the Web page is up to you, and you may supplement your Web page with any material you feel is appropriate. Place the styles for the page layout in the **hcc.css** style sheet.

3. Create a table containing the room reservation information. The table structure should contain the following elements:
   - a table caption and summary
   - table row and column groups
   - examples of row- and/or column-spanning cells
   - examples of both table heading and table data cells

4. Create a style for your table in the **schedule.css** style sheet. The layout and appearance of the table are up to you, but the table should include the following:
   - a border style applied to one or more table objects
   - a style that defines whether the table borders are separate or collapsed
   - styles applied to table rows and column groups
   - use of horizontal and vertical alignment of the table cell contents
   - different widths applied to different table columns
   - styles applied to the table caption

5. Document your style choices with appropriate comments.

6. Add a columnar layout to one section of your document. The number of columns and its appearance are up to you.

7. Submit your completed files to your instructor, in either printed or electronic form, as requested.

ENDING DATA FILES

tutorial.05 →

tutorial
schedule.htm
tables.css
kpaf.css

review
morning.htm
programs.css

case1
stable.css
sudoku.htm

case2
calendar.css
feb.htm

case3
dhome.htm
dtable.css

case4
conference.htm
hcc.css
schedule.css