

## Roadmap

In this chapter, you will learn how to create the webpages shown in Figures 8-1 and 8-2. The following roadmap identifies general activities you will perform as you progress through this chapter:

1. **CREATE** the **CLASSES PAGE** AND its **TABLE**.
2. **STYLE** the **TABLE** for tablet and desktop viewports.
3. **CREATE** a **FORM** on the Contact Us page.
4. **STYLE** the **FORM** for mobile, tablet, and desktop viewports.

At the beginning of step instructions throughout the chapter, you will see an abbreviated form of this roadmap. The abbreviated roadmap uses colors to indicate chapter progress: gray means the chapter is beyond that activity; blue means the task being shown is covered in that activity, and black means that activity is yet to be covered. For example, the following abbreviated roadmap indicates the chapter would be showing a task in the 3 **CREATE FORM** activity.

1 CREATE CLASSES PAGE & TABLE | 2 STYLE TABLE  
3 CREATE FORM | 4 STYLE FORM

Use the abbreviated roadmap as a progress guide while you read or step through the instructions in this chapter.

## Discovering Tables

Tables compare data or outline a detailed topic, such as an event in a compact format. For example, Figure 8-3 shows how the White House uses a table on its website to list the president's daily schedule.

Wednesday, July 1, 2015	
10:00 AM	The President and the Vice President receive the Presidential Daily Briefing Oval Office Closed Press
11:00 AM	The President delivers a statement; the Vice President also attends Rose Garden Open Press
11:45 AM	The President departs the White House en route Joint Base Andrews South Lawn Open Press
12:00 PM	The President departs Joint Base Andrews en route Nashville, TN Travel Pool Coverage
1:35 PM	The President arrives Nashville, TN Local Event Time: 12:35 PM CDT Nashville International Airport Open to pre-credentialed media
2:30 PM	The President participates in a discussion Local Event Time: 1:30 PM CDT Taylor Stratton Elementary School - Madison, Tennessee Open to pre-credentialed media
4:35 PM	The President departs Nashville, TN Local Event Time: 3:35 PM CDT Nashville International Airport Open to pre-credentialed media
6:05 PM	The President arrives Joint Base Andrews Travel Pool Coverage

Source: whitehouse.gov

Figure 8-3

A table consists of rows, columns, and cells, much like a spreadsheet. A **row** is a horizontal line of information. A **column** is a vertical line of information. A **cell** is the intersection of a row and a column and usually contains data. Figure 8-4 shows examples of these three elements.

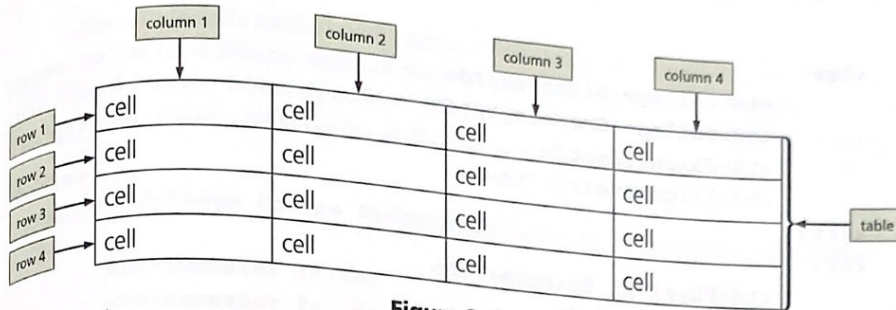


Figure 8-4

A cell can be one of two types: a heading cell or a data cell. A **heading cell** displays text as bold and center-aligned. For example, you use heading cells to display column headings that identify the information in each column. A **data cell** displays normal, left-aligned text and contains information appropriate for the column and row. You should understand the differences among table row, heading cell, and data cell elements so you can use HTML to create a table that matches your design.

## Creating a Table with HTML Elements

Table 8-1 lists the HTML elements you use to create a table.

Table 8-1 HTML Table Elements

Element	Indicates the start and end of:	Contains:
<code>&lt;table&gt; ... &lt;/table&gt;</code>	Table within a webpage	All related table elements
<code>&lt;tr&gt; ... &lt;/tr&gt;</code>	Table row within a table	Table data cells
<code>&lt;th&gt; ... &lt;/th&gt;</code>	Table header cell	Table header content
<code>&lt;td&gt; ... &lt;/td&gt;</code>	Table data	Table cell content
<code>&lt;caption&gt; ... &lt;/caption&gt;</code>	Table caption	Table caption or title
<code>&lt;thead&gt; ... &lt;/thead&gt;</code>	Table header area	Grouped header content
<code>&lt;tbody&gt; ... &lt;/tbody&gt;</code>	Table body area	Grouped body content
<code>&lt;tfoot&gt; ... &lt;/tfoot&gt;</code>	Table footer area	Grouped footer content

To create a table on a webpage, start with the `<table>` and `</table>` tags and then add table rows and table data within those tags. The following is an example of code used to create the table shown in Figure 8-5, which consists of four rows and four columns.

```
<table>
  <tr>
    <td>Semester 1</td>
    <td>Semester 2</td>
    <td>Semester 3</td>
    <td>Semester 4</td>
  </tr>
  <tr>
    <td>English I</td>
    <td>English II</td>
    <td>Spanish I</td>
    <td>Spanish II</td>
  </tr>
```



```

<tr>
  <td>College Algebra</td>
  <td>College Geometry</td>
  <td>Calculus</td>
  <td>Trigonometry</td>
</tr>
<tr>
  <td>Physical Science</td>
  <td>Biology</td>
  <td>Humanities</td>
  <td>World History</td>
</tr>
</table>

```

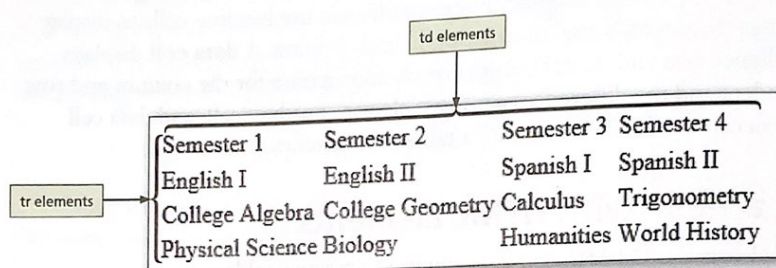


Figure 8-5

The `<table>` tag indicates the beginning of the table. Likewise, the `</table>` tag indicates the end of a table. Each table row is indicated by a starting `<tr>` tag and an ending `</tr>` tag. The table shown in Figure 8-5 has four table row elements. Each table row element contains table data elements, indicated by a starting `<td>` tag and an ending `</td>` tag. The number of table data elements in each table row element determines the number of columns in the table. In this example, four table data elements are used within each table row element, which means this table consists of four columns.

The table shown in Figure 8-5 does not have any applied style rules, so typical table formatting, such as borders and spacing, is not included by default. You specify properties, such as borders, margins, and padding in a style sheet.

## Table Borders, Headers, and Captions

In addition to columns and rows, tables also include features such as borders, headers, and captions. A **table border** is the line that defines the perimeter of the table. You display table borders using a style rule in a style sheet. A **table header** is a heading cell, which is formatted with bold, centered text that indicates the purpose of the row or column. Headers are typically used to identify row or column content. Nonvisual browsers also use headers to identify table content. (See the guidelines in Appendix D for specific information about making your webpages accessible to those with disabilities.) Define a table header with a starting `<th>` tag and an ending `</th>` tag. A **table caption** is descriptive text that serves as a title or identifies the table's purpose. The table caption text appears above a table, spans its length, and is center-aligned by default. Define a table caption with a starting `<caption>` tag and an ending `</caption>` tag. When using a table caption, insert it after the starting `<table>` tag. A table can have only one caption.

Tables can include headers and captions individually or in combination. The purpose for the table dictates which of these features you use. Figure 8-6 shows a table created with the following code, which includes a table caption and table headers. The figure also shows a table border as defined by an external style sheet.

```
<table>
  <caption>College Course Recommendations by Semester</caption>
  <tr>
    <th>Semester 1</th>
    <th>Semester 2</th>
    <th>Semester 3</th>
    <th>Semester 4</th>
  </tr>
  <tr>
    <td>English I</td>
    <td>English II</td>
    <td>Spanish I</td>
    <td>Spanish II</td>
  </tr>
  <tr>
    <td>College Algebra</td>
    <td>College Geometry</td>
    <td>Calculus</td>
    <td>Trigonometry</td>
  </tr>
  <tr>
    <td>Physical Science</td>
    <td>Biology</td>
    <td>Humanities</td>
    <td>World History</td>
  </tr>
</table>
```

Semester 1	Semester 2	Semester 3	Semester 4
English I	English II	Spanish I	Spanish II
College Algebra	College Geometry	Calculus	Trigonometry
Physical Science	Biology	Humanities	World History

Figure 8-6

### What is the difference between the <th> and the <thead> tags?

The table header element uses the <th> and </th> tags to create table header cells. A header cell contains a header title, such as a column or row title, which describes the column or row content. The table head element uses the <thead> and </thead> tags to group table header content within a table and is used with the table body and table footer elements to identify each part of a table. When you use the table head, table body, and table footer elements, users can scroll the table body content separate from the table head and table footer. For a large table that spans more than one page, users can also print the table head at the top of the page and the table footer at the bottom.



CONSIDER THIS



## Table Tag Attributes

Prior to HTML5, the table tags had many attributes that could be used to format tables. However, HTML5 does not support the majority of those attributes. Instead of using table tag attributes, use CSS to style tables on a webpage. You will learn more about how to style a table later in this chapter.

### BTW

#### Avoid Using Tables for Layout

Many legacy webpages use tables to lay out content in columns or sections. If you assume the responsibility of such a website, analyze the site, draft a wireframe, and then redesign the site using HTML5 semantic elements. Create the site in a test environment before you publish it.

## Use of Tables

Using tables for web design and page layout was quite popular in the late 1990s; however, this was a misuse of the table elements. Tables are meant to display data in rows and columns and should not be used to design a layout for a webpage.

Before you add a table, you must first determine whether it is necessary on the webpage. As general rule, use a table when it will help organize information so that it is easier for the user to read. Tables are also useful if the webpage needs to display a structured, organized list of information. Figures 8-7a and 8-7b show examples of information displayed as text in a bulleted list and a table. The bulleted list (Figure 8-7a) provides the schedule information, but the table (Figure 8-7b) presents the same information more clearly.

- Work Schedule
  - T. Anderson: M 12-5pm, T 2-7pm, W Off, R 8-12pm, F 8-12pm
  - E. Davis: M 8-12pm, T 8-12pm, W 12-5pm, R Off, F 2-7pm
  - J. Smith: M 8-12pm, T 12-5pm, W 8-12pm, R 2-7pm, F Off
  - S. Watson: M 12-7pm, T Off, W 2-7pm, R 12-5pm, F 12-5pm

(a) Schedule as bulleted list

Work Schedule					
Employee	Mon	Tue	Wed	Thu	Fri
T. Anderson	12 - 5pm	2 - 7pm	Off	8 - 12pm	8 - 12pm
E. Davis	8 - 12pm	8 - 12pm	12 - 5pm	Off	2 - 7pm
J. Smith	8 - 12pm	12 - 5pm	8 - 12pm	2 - 7pm	Off
S. Watson	12 - 7pm	Off	2 - 7pm	12 - 5pm	12 - 5pm

(b) Schedule as table

Figure 8-7

## Planning the Table

To create effective tables, you must plan the information that will appear in columns and rows and then create a design that presents the information clearly. Before writing any HTML code, sketch the table on paper or in an electronic document to see how many rows and columns to create and determine whether the table needs headers or a caption. Conceptualizing the table first saves time when you are determining which HTML table elements to use to create the table. Because you enter the content of a table row by row in an HTML document, you also need a sketch of the finished table to create the table accurately as you are coding.