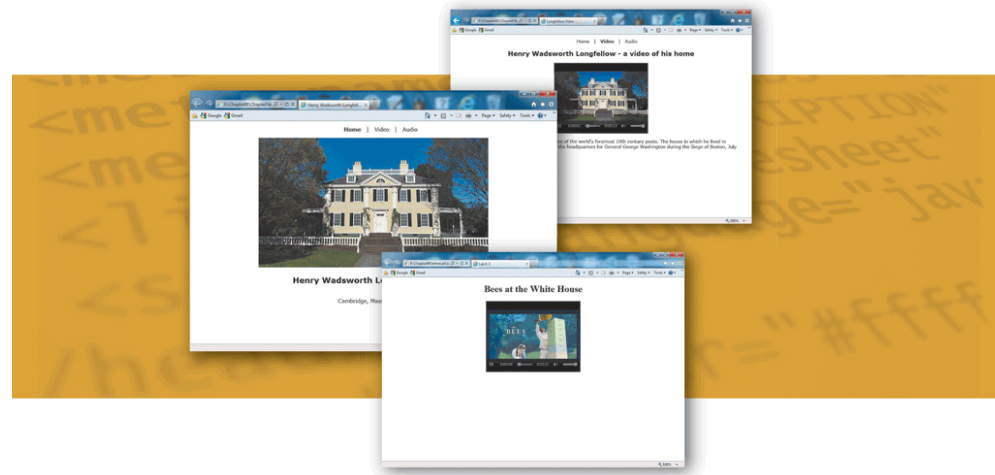


Web Design with HTML5 & CSS3 8th Edition

Chapter 8 Creating Tables and Forms



Chapter Objectives

1. Define table elements
2. Describe the steps used to plan, design, and code a table
3. Create a table with rows and data
4. Insert a table caption
5. Style a table for tablet and desktop viewports
6. Describe form controls and their uses

Chapter Objectives

7. Use the form and input elements
8. Create text input controls, labels, and check boxes
9. Create a selection menu with multiple options
10. Use the textarea element
11. Create a Submit button
12. Create a Reset button

Topics

1. Introduction
2. Project – Create a Table and a Form
3. Discovering Tables
4. Styling Table Elements
5. Creating Webpage Forms
6. Summary

3. Discovering Tables

- Tables
 - Compare data or outline a detailed topic in a compact format
 - Consist of rows, columns, and cells
- **Row** – a horizontal line of information
- **Column** – a vertical line of information

3. Discovering Tables

- **Cell**

- the intersection of a row and a column and usually contains data
- The two types of cell are: a heading cell or a data cell
 - A **heading cell** displays text as bold and center-aligned
 - A **data cell** displays normal, left-aligned text and contains information appropriate for the column and row

3. Discovering Tables

- Figure 8–4 shows examples of the three elements: rows, columns, and cells

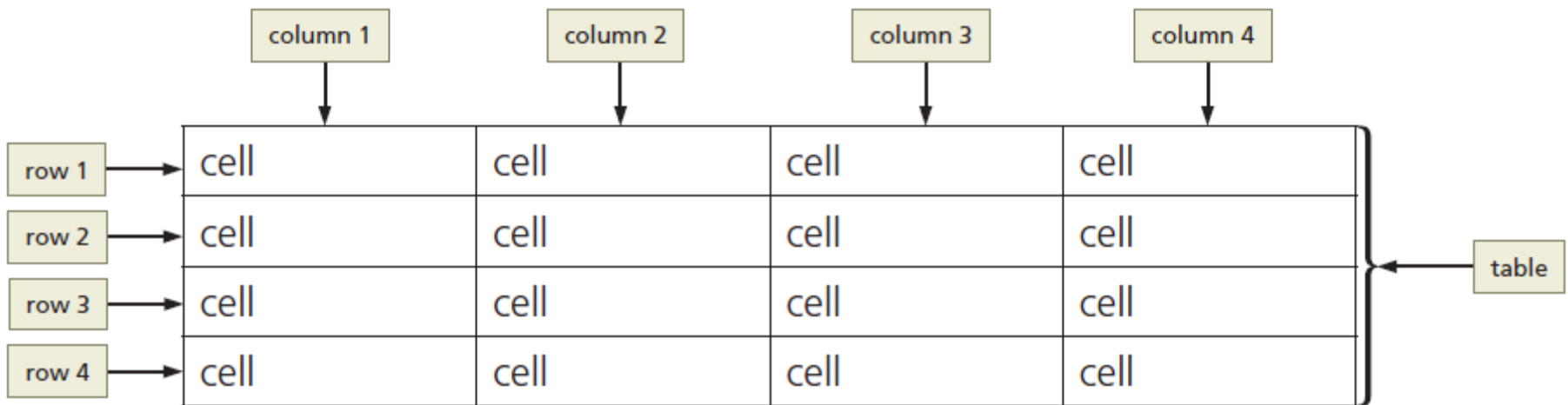


Figure 8–4

3.1 Creating a Table with HTML Elements

- Table 8–1 lists the HTML elements used to create a table

Table 8–1 HTML Table Elements

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

3.1 Creating a Table with HTML Elements

- Creating a table on a webpage
 - The `<table>` and `</table>` tags indicate the starting and ending of a table
 - The `<tr>` and `</tr>` tags indicate the starting and ending of each table row
 - The `<td>` and `</td>` tags indicate the starting and ending tags for data elements within the table row elements

3.2 Table Borders, Headers, and Captions

- **Table border** – It is the line that defines the perimeter of the table
- **Table header**
 - a heading cell and identifies the row or column content
 - defined with a starting `<th>` tag and an ending `</th>` tag

3.2 Table Borders, Headers, and Captions

- **Table caption**
 - a descriptive text that serves as a title or identifies the table's purpose
 - defined with a starting `<caption>` tag and an ending `</caption>` tag
 - inserted after the starting `<table>` tag
 - A table can have only one caption
- Tables can include headers and captions individually or in combination

3.2 Table Borders, Headers, and Captions

- Figure 8–6 shows a table created with the following code, which includes a table caption and table headers

```
<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>
```

3.2 Table Borders, Headers, and Captions

```
<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>
```

3.2 Table Borders, Headers, and Captions

```
<tr>
  <td>Physical Science</td>
  <td>Biology</td>
  <td>Humanities</td>
  <td>World History</td>
</tr>
</table>
```

3.2 Table Borders, Headers, and Captions

The diagram shows a table with a caption, a header row, and three data rows. Three labels on the left point to the caption, the header row, and the table border respectively.

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

3.4 Use of Tables

- Tables
 - Display data in rows and columns
 - Should not be used to design a layout for a webpage
 - Help organize information so that it is easier for the user to read
 - Useful if the webpage needs to display a structured, organized list of information

3.5 Planning the Table

- To create effective tables
 - Plan the information that will appear in columns and rows
 - Create a design that presents the information clearly
- When planning a table for responsive web design, give careful consideration to the mobile viewport because of its screen size

3.5 To Add a Table Element to the Classes Page

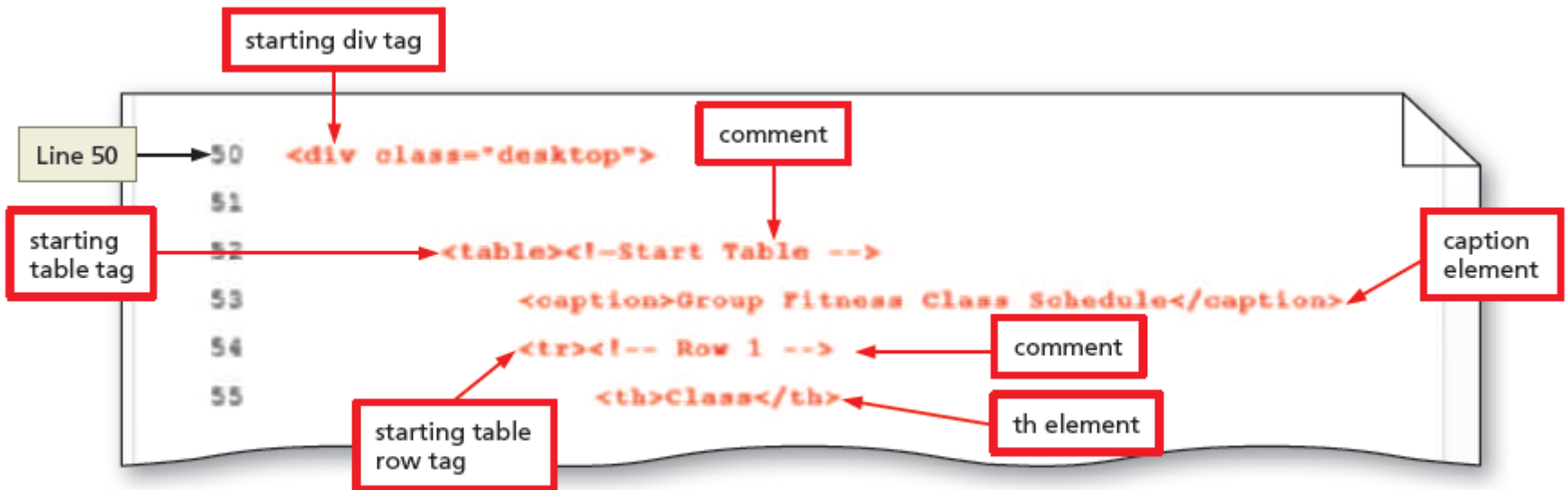


Figure 8-11

4. Styling Table Elements

Table 8–2 Common CSS Table Properties

Property	Example	Explanation
background-color	<pre>th { background-color: #F5F5F0; }</pre>	Displays the table header with a light gray background
border	<pre>table, th, td { border: 0.1em solid #000000; }</pre>	Displays the table, table header, and data cells with a thin solid black border
border-collapse	<pre>table { border-collapse: collapse; }</pre>	Collapses borders in the table so that adjacent cells share borders
color	<pre>caption { color: #003300; }</pre>	Displays the table caption in dark green text
height	<pre>td { height: 2em; }</pre>	Sets the height of a table data cell to 2em
margin	<pre>table { margin-top: 2em; }</pre>	Applies a 2em top margin to the table
padding	<pre>caption, th, td { padding: 1em; }</pre>	Applies 1em of padding to the table caption, header, and data cells
text-align	<pre>td { text-align: center; }</pre>	Aligns the table data in the center of the cell
vertical-align	<pre>td { vertical-align: center; }</pre>	Aligns the table data vertically in the middle of the cell
width	<pre>table { width: 80%; }</pre>	Sets the width of the table to 80% of the page width

4. Styling Table Elements

- Separated border
 - When a border is applied to table elements, by default, each cell has its own border, making the table appear to use double lines between each table data cell
- Collapsed border
 - Use the `border-collapse` property with a value of `collapse` to display a table with single, consolidated borders

4.1 Styling Tables Responsive Web Design

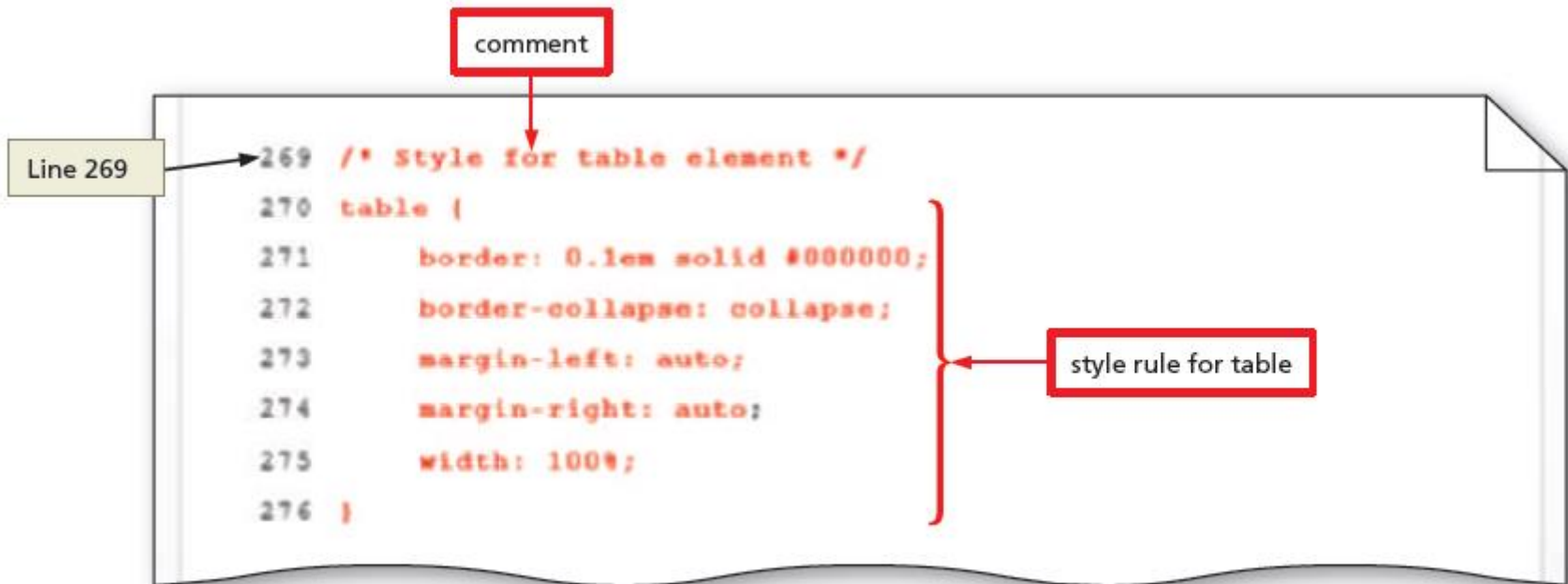


Figure 8-22

4.1 Styling Tables Responsive Web Design

Classes Designed to Meet Your Busy Schedule

Group Fitness Class Schedule

Class	Days	Times	Instructor	Room
Cardio	Mon, Wed, Fri	6:00am, 6:00pm	Schultz	B
Boot Camp	Tue, Thu	5:00am, 5:00pm	Taylor	B
Spinning	Tue, Thu	6:00am, 6:00pm	Roberts	A
Kickboxing	Mon, Wed, Fri	8:00am, 7:15pm	Lawrence	A
Yoga	Tue, Thu	6:00am, 6:00pm	Schultz	B
Zumba	Mon, Wed, Fri	7:00am, 6:00pm	Roberts	A

table border

table is centered on the page

table width is 100% within the main element

Figure 8-23

© Rob Marmion/Shutterstock.com

4.1 Styling Tables Responsive Web Design

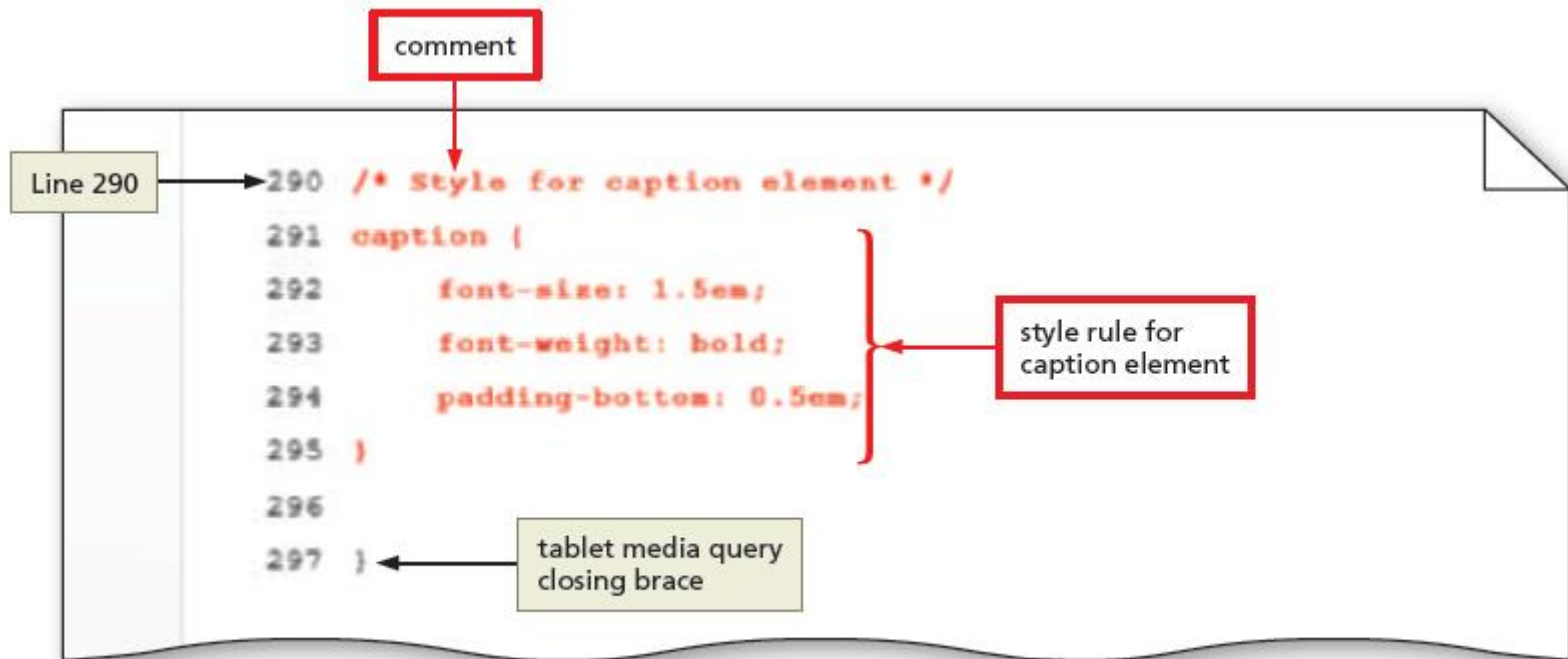


Figure 8-28

4.1 Styling Tables Responsive Web Design

formatting
applied
to caption
element

Class	Days	Times	Instructor	Room
Cardio	Mon, Wed, Fri	6:00am, 6:00pm	Schultz	B
Boot Camp	Tue, Thu	5:00am, 5:00pm	Taylor	B
Spinning	Tue, Thu	6:00am, 6:00pm	Roberts	A
Kickboxing	Mon, Wed, Fri	8:00am, 7:15pm	Lawrence	A
Yoga	Tue, Thu	6:00am, 6:00pm	Schultz	B
Zumba	Mon, Wed, Fri	7:00am, 6:00pm	Roberts	A

Figure 8-29

4.1 Styling Tables Responsive Web Design

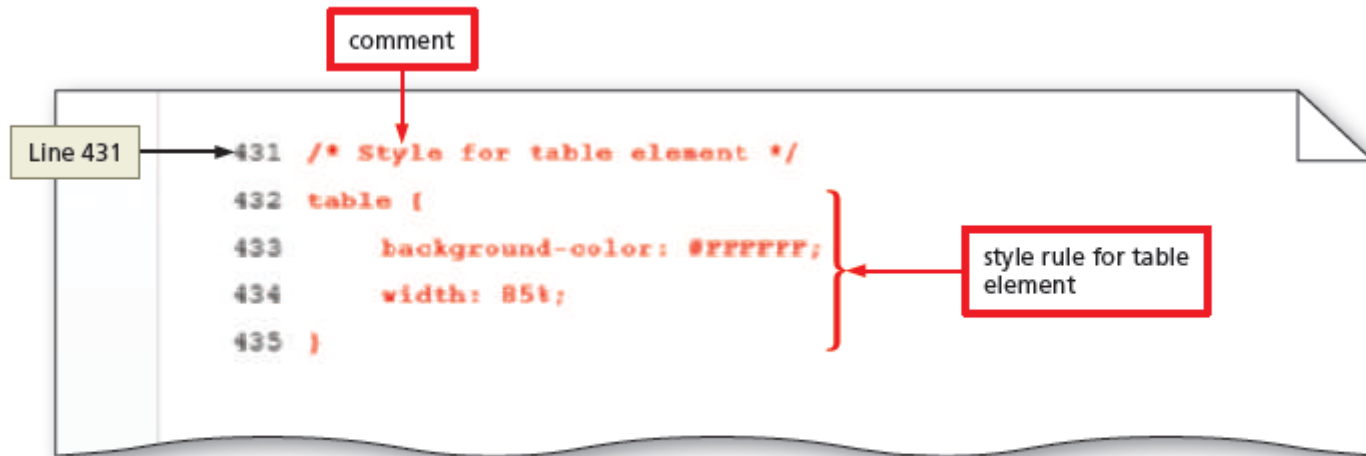


Figure 8-30

4.1 Styling Tables Responsive Web Design

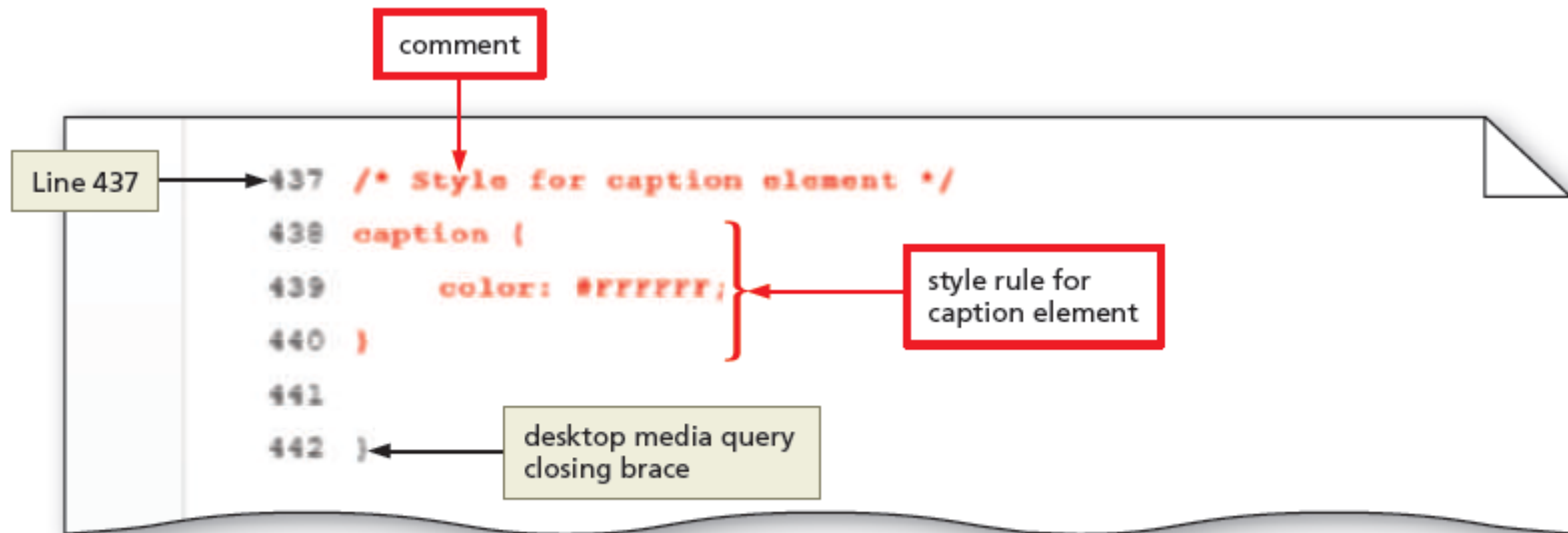


Figure 8-31

4.1 Styling Tables Responsive Web Design

Classes Designed to Meet Your Busy Schedule

font color applied to caption element → **Group Fitness Class Schedule**

Class	Days	Times	Instructor	Room
Cardio	Mon, Wed, Fri	6:00am, 6:00pm	Schultz	B
Boot Camp	Tue, Thu	5:00am, 5:00pm	Taylor	B
Spinning	Tue, Thu	6:00am, 6:00pm	Roberts	A
Kickboxing	Mon, Wed, Fri	8:00am, 7:15pm	Lawrence	A
Yoga	Tue, Thu	6:00am, 6:00pm	Schultz	B
Zumba	Mon, Wed, Fri	7:00am, 6:00pm	Roberts	A

background color and width applied to table

© Rob Marmion/Shutterstock.com

Figure 8-32

Break

Break

5. Creating Webpage Forms

- Forms provide a structured way to collect information from webpage visitors
- Visitors complete webpage forms to register for an account or to make a purchase.
- Businesses use forms to gather visitor or customer information and store it in a database for future use

5.1 Form Controls

- All form elements are contained with the starting `<form>` tag and the ending `</form>` tag
- **Input control** – It is an interactive mechanism for users to enter text or make selections on a form
 - A label is text describing the type of information to enter with an input control.
- Most controls in an HTML form are defined by using the `type` attribute of the `input` element

5.1 Form Controls

- Define other controls using separate elements, such as the `textarea` and `select` elements
- The two input controls are:
 - **Data input control** – It is used to make a selection or perform a command
 - **Text input control** – It accepts text, such as names, dates, and passwords, and is called an input field

5.1 Form Controls

Table 8–3 Input Types

Input Type	Description	Code Example
button	Creates a button; typically used to run a script when clicked	<code><input type="button" onclick="alert('Good Morning!');" value="My Button"></code>
checkbox	Creates a single item or a list of items	<code><input type="checkbox" name="fruit" value="banana"></code>
date	Creates an input field used to contain a date; the field may appear as a date picker, depending on the browser	<code><input type="date" name="birthday"></code>
datetime	Creates an input field for a date and time with a time zone	<code><input type="datetime" name="bdaydatetime"></code>
datetime-local	Creates an input field for a date and time without a time zone	<code><input type="datetime-local" name="bddatetime"></code>
email	Creates an input field for an email address	<code><input type="email" name="email" id="email"></code>
file	Creates a file-select field and a Browse button	<code><input type="file" name="doc"></code>
hidden	Creates a control that is hidden from the user but contains information to process the form	<code><input type="hidden" name="ship"></code>
image	Creates a graphical button instead of the default button	<code><input type="image" name="reset" src="reset.png" alt="Reset"></code>
month	Creates an input field for a month and year; the field may appear as a date picker, depending on the browser	<code><input type="month" name="bdaymth"></code>
number	Creates an input field for a numeric value	<code><input type="number" name="cost"></code>
password	Creates a single-line field for a relatively small amount of text and masks the entered text as asterisks or bullets	<code><input type="password" name="pw" id="pw"></code>
radio	Creates a list item	<code><input type="radio" name="state" value="AL"> <input type="radio" name="state" value="AK"> <input type="radio" name="state" value="AZ"></code>
range	Creates an input field for a value within a range; the field may appear as a slider control, depending on the browser	<code><input type="range" name="survey" min="0" max="10"></code>
reset	Resets the form	<code><input type="reset" value="Reset Form"></code>
search	Creates an input field used as a search field	<code><input type="search" name="search"></code>
submit	Submits a form for processing	<code><input type="submit" value="Submit Form"></code>
tel	Creates an input field for a telephone number	<code><input type="tel" name="phone" id="phone"></code>
text	Creates a single-line field for text	<code><input type="text" name="fName" id="fName"></code>
time	Creates an input field for a time without a time zone; the field may appear as a time picker, depending on the browser	<code><input type="time" name="time"></code>
url	Creates an input field for a URL	<code><input type="url" name="page"></code>
week	Creates an input field for a week and year; the field may appear as a date picker, depending on the browser	<code><input type="week" name="week"></code>

5.1 Form Controls

- Each input control has attributes that are used more frequently than the others:
 - **name** – It identifies the specific information that is being sent when the form is submitted for processing. All controls have a name
 - **id** – It provides a unique ID for the element. Use the `id` attribute with input controls
 - **value** – It specifies the value of an `input` element and varies depending on input type

5.1 Form Controls

- Common input controls used with a form include text, password, email, checkbox, select, submit, reset, etc.
- Text input controls include the following types:
 - **text box** (text control), for small amounts of text
 - **password text box** (password control), for entering a password
 - **email text box** (email control), for entering an email address

5.1 Form Controls

- **telephone text box** (tel control), for entering a telephone number
- **date text box** (date control), for entering a date
- **text area box** (textarea control), for larger amounts of text
- These text input controls have two frequently used attributes:
 - **size** – It determines the width of the control in characters
 - **maxlength** – It specifies the maximum number of characters accepted

5.1 Form Controls

– Example:

- The first line of the following code creates a 25-character text box for the user's last name and the second line creates an eight-character text box for the user's password:

```
<p>Last Name:
```

```
  <input name="lastname" type="text" size="25">
```

```
</p>
```

```
<p>Password:
```

```
  <input name="password" type="password" size="8">
```

```
</p>
```

5.1 Form Controls

- **Password control** – It is a text control as it provides a text box for the password a visitor enters
- **Email control** – It is a text box where visitors enter an email address
- **Tel control** – It is a text box where visitors enter a telephone number
- **Date control** – It is a text box that accepts a date

5.1 Form Controls

- **Textarea control** – It creates a text box that allows multiple lines of input
 - To create a textarea control, use the `textarea` element instead of the `input` element
 - It has two primary attributes, which set the size of the textarea control:
 - **rows**, which specifies the number of rows, or lines, in the textarea control
 - **cols**, which sets the width of the textarea control as the number of columns, with each column containing one character

5.1 Form Controls

- The following is an example of HTML code defining a textarea control:

```
<label>What products would you like to see us  
offer?</label>
```

```
<textarea name="feedback" rows="3" cols="100">  
</textarea>
```

5.1 Form Controls

- **Checkbox control**

- It allows a webpage visitor to select items from a list of one or more choices
- The following code is an example for two checkbox controls that might appear on a form for a grocery store website

```
<input name="fruit" type="checkbox" value="apple" checked="checked">Apple
```

```
<input name="fruit" type="checkbox" value="peach">Peach
```


5.1 Form Controls

- **Radio control**

- It limits the webpage visitor to only one choice from a list of choices
- Each choice has a **radio button**, or option button, which appears as an open circle
- By default, all radio buttons are deselected
- To set a particular button as the default, use the `checked` attribute and value within the `<input>` tag

5.1 Form Controls

- The following is sample code to create two radio controls that might appear in a rental car website form:

```
<input name="car" type="radio"
checked="checked" value="car">Car
<input name="truck" type="radio"
value="truck">Truck
```

- A visitor can choose to rent a car or a truck, with the Car radio button already selected when the form opens

5.1 Form Controls

- **Select control**

- It creates a selection menu from which the visitor makes one or more choices and is suitable when a limited number of choices are available
- It appears on a form as a text box with a list arrow
- The following is sample code for a select control:

```
<select name="station">  
  <option>Pandora</option>  
  <option>Internet Radio</option>  
  <option>Live365</option>  
  <option>Jango</option>  
</select>
```

5.1 Form Controls

- **Submit button**

- It sends the form information to the appropriate location for processing
- When it is clicked on the form, the name of each control and the value of its data are sent to the server to be processed
- The submit control is created with the following code:

```
<input type="submit" value="Submit">
```

5.1 Form Controls

- **Reset button**

- Clears any input entered in the form, resetting the input controls to their defaults
- A webpage form must include a submit control and a reset control
- The `value` attribute specifies the text that appears on the button
- The reset control is created with the following code:

```
<input type="reset" value="Reset">
```

5.1 Form Controls

- Figure 8–34 shows an example of a form with several input controls, including text, email, tel, date, select, and textarea

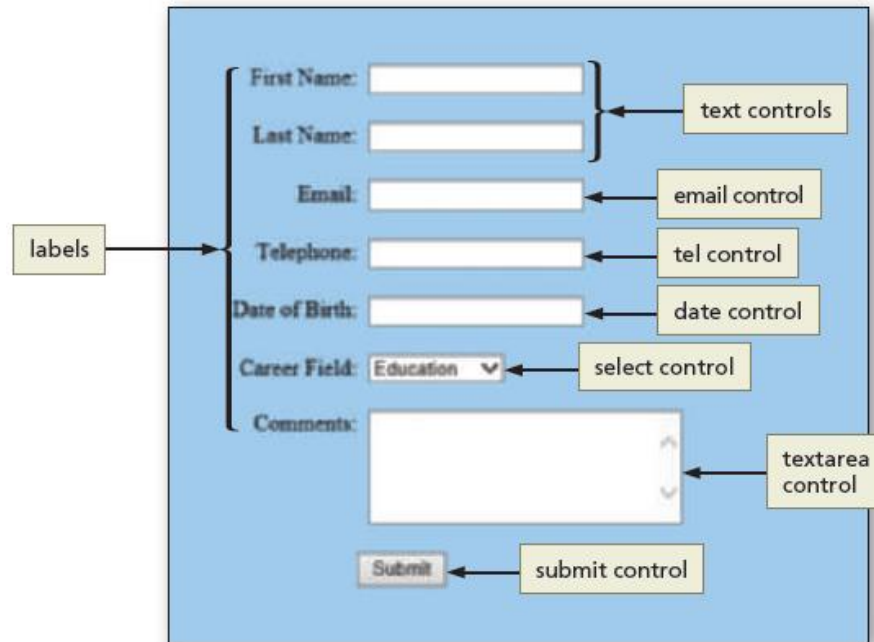


Figure 8–34

5.1 Form Controls

- **Form Labels**

- They identify the type of information to enter into or select from an input control
- They are added to a form using the `label` element
- To connect them to their controls, include the `for` attribute with the same value as the input control's `id` value

5.1 Form Controls

- The following code creates a label and a text box for a visitor's first name:

```
<label for="fName">First Name:</label>  
<input type="text" name="fName"  
id="fName">
```


5.1 Form Controls

Table 8–4 Common Form Attributes

Attribute	Description	Code Example
accept-charset	Specifies the character set used for the form submission	<code><form accept-charset="UTF-8"></code>
action	Specifies where to submit the form data (a URL)	<code><form method="POST" action="form.php"></code>
autocomplete	Specifies whether a form or input field should use autocomplete; when enabled, the browser can complete input fields based on information entered in previous input fields	<code><form autocomplete="on"></code>
autofocus	Specifies that an input field should have focus when the page is displayed, which places the insertion point within a specific input field	<code><input type="text" name="fName" id="fName" autofocus></code>
disabled	Specifies that the input field is disabled and not available for user input	<code><input type="radio" name="terms" value="Accept" disabled></code>
enctype	Specifies the encoding of the form for submitting data.	<code><form enctype="app/urencoded"></code>
form	Specifies which form an input field belongs to when multiple forms are used within a website	<code><input type="text" name="fName" id="fName" form="form1"></code>
formaction	Specifies the URL of a file that will process the input control when the form is submitted, overriding the form action attribute; use the formaction attribute with type="submit" and type="image" input types	<code><input type="submit" value="Submit" formaction="process.asp"></code>
formenctype	Specifies how to encode form data during form submission; use the formenctype attribute with type="submit" and type="image" input types	<code><input type="submit" formenctype="multipart/form-data"></code>
formmethod	Specifies the HTTP method used to transfer the form data, overriding the method attribute	<code><input type="submit" value="Submit" formmethod="post"></code>
formnovalidate	Specifies to not validate an input element	<code><input type="submit" value="Submit" formnovalidate></code>
formtarget	Specifies a keyword that determines how to display a response when the form is submitted, such as a new, blank window	<code><input type="submit" value="Submit" formtarget="_blank"></code>

5.1 Form Controls

Table 8–4 (continued)

Attribute	Description	Code Example
height and width	Specifies the height and width for an image input type; always specify a height and width for the image input type	<code><input type="image" src="btn1" alt="button 1" height="25" width="30"></code>
list	Used with the datalist element to specify predefined options for an input element	<code><input list="music"> <datalist id="music"> <option value="Country"> <option value="Classical"> <option value="Hip Hop"> <option value="Rock"> </datalist></code>
max and min	Specifies the maximum and minimum values for an input element	<code><input type="number" name="survey" min="1" max="10"></code>
maxlength	Specifies the maximum number of characters allowed within the input field	<code><input type="text" name="fName" id="fName" maxlength="15"></code>
method	Specifies the HTTP method used to submit the form data	<code><form method="POST"></code>
multiple	Specifies that user may input more than one value within an input element; used with email and file input types	<code><input type="email" name="email" id="email" multiple></code>
novalidate	A form attribute that specifies not to validate form data when the submit button is clicked	<code><form novalidate></code>
pattern	Specifies a regular expression for checking an input element value; used with text, search, url, tel, email, and password input types	<code><input type="password" name="pw" id="pw" pattern="[A-Za-z]{8}"></code>
placeholder	Specifies a hint of the type of information expected within an input field	<code><input type="email" name="email" id="email" placeholder="youremail@domain.com"></code>
readonly	Specifies that the input field is a read-only field and cannot be modified	<code><input type="text" name="ssn" id="ssn" value="555123654" readonly></code>
required	Specifies that an input field is required	<code><input type="text" name="fName" id="fName" required></code>
size	Specifies the size (length) of an input field	<code><input type="text" name="fName" id="fName" size="20"></code>
step	Specifies the legal number intervals for an <input> element	<code><input type="number" name="math" step="5"></code>
target	Specifies the target address in the action attribute	<code><form target="_blank"></code>
value	Specifies the value for an input field.	<code><input type="text" name="fName" id="fName" value="Kate"></code>

5.4 Form Processing

- `action`
 - It is an attribute of the `<form>` tag that specifies the browser's action when submitting the form
- **Common Gateway Interface (CGI) script**
 - It communicates with the web server and sends the information on the webpage form to the server for processing

5.4 Form Processing

- `method`
 - It is an attribute of the `<form>` tag that specifies how to send the data entered in the form to the server to be processed
- **Get method**
 - It appends the name-value pairs to the URL indicated in the action attribute
 - Example of a form tag with the get method and specified action is as follows:
`<form method="GET" action="formInfo.php">`

5.4 Form Processing

- **Post method**

- It sends a separate data file with the name-value pairs to the URL indicated in the action attribute
- It is used very commonly because it can be used to send sensitive form data and does not have a size limitation
- Example of a form tag with the post method and specified action is as follows:

```
<form method="POST" action="formInfo.php">
```

5.5 Styling Forms

- CSS styles are applied to forms to improve the appeal and usefulness of the form and its controls
- As with tables, consider forms in the context of responsive design
- Controls can be included to collect optional information, such as product feedback, in tablet and desktop viewports

5.5 To Style a Form for a Desktop Viewport

```
476 /* Style rule for form element */
477 form {
478     background-color: #FFFFFF;
479     padding: 1em;
480 }
481
482 /* Style rule for paragraph with form element */
483 form p {
484     color: #000000;
485 }
486
487 }
```

The diagram shows a code block with several annotations. A box labeled "Line 476" points to the first comment line. A box labeled "comment" points to the first comment line. A box labeled "style rule for form element" points to the "form {" block. A box labeled "comment" points to the second comment line. A box labeled "style rule for form paragraph element" points to the "form p {" block. A box labeled "closing brace for desktop media query" points to the closing brace at the end of line 487.

Figure 8-58

5.5 To Style a Form for a Desktop Viewport

First Name:

Last Name:

Email:

Phone:

I would like more information about:

Group Fitness

Personal Training

Nutrition

Referral Source:

Questions?

background color and padding applied to form

color applied to form paragraph element

Figure 8–59

HTML5 & CSS3

8th Edition

Chapter 8 Complete

