

CP1406 – Week 7

Creating Tables and Forms



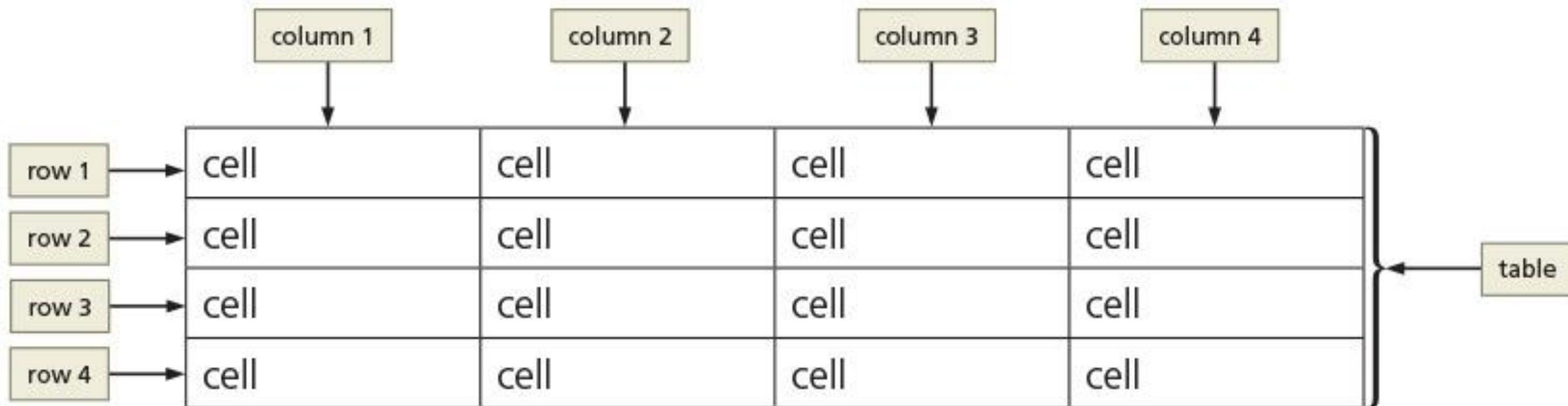
Introduction

- **Tables** present related information in rows and columns
 - Useful when comparing types of data or listing topics and details
 - Helpful when you need to provide a lot of content in a compact form
- Many businesses use **forms** to collect information about their customers
 - Common information includes a customer's first and last names, address, email address, and phone number

Discovering Tables

- Tables compare data or outline a detailed topic, such as a schedule or menu, in a compact format
 - Row: horizontal line of information
 - Column: vertical line of information
 - Cell: intersection of a row and a column and usually contains data
 - Header cell displays text as bold and center-aligned
 - Data cell displays normal, left-aligned text and contains information appropriate for the column and row

Discovering Tables



Creating a Table with HTML 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> ... </tfooter ></code>	Table footer area	Grouped footer content

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

Table Borders, Headers, and Captions

- Table border
 - Line that defines the perimeter of the table
- Table header
 - Heading cell
 - Identifies the row or column content
 - Defined with a starting `<th>` tag and an ending `</th>` tag

Table Borders, Headers, and Captions

- Table caption
 - 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

Table Borders, Headers, and Captions

table caption → College Course Recommendations by Semester

table header → Semester 1 Semester 2 Semester 3 Semester 4

table border → English I English II Spanish I Spanish II
College Algebra College Geometry Calculus Trigonometry
Physical Science Biology Humanities World History

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

Table Element Attributes

- Three primary attributes can be used within a table
 - The `id` attribute is used to specify a unique id for a table when necessary
 - The `colspan` attribute is used to span text or other content across two or more columns

```
<td colspan="2"
```

- The `rowspan` attribute is used to span across two or more rows

```
<td rowspan="2"
```

Use of Tables

- Before you add a table, first determine whether it is necessary on the webpage
 - As general rule, use a table when it will help organise information so that it is easier for the user to read
 - Tables are also useful if the webpage needs to display a structured, organised list of information

Use of Tables

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

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
- Planning a table for responsive web design
 - Give careful consideration to the mobile viewport because of its screen size

Styling Table Elements

- After creating a table, style it by adding new style rules to the style sheet for the website
 - You can specify style rules for each table element

Table 8–2 Common CSS Table Properties

Property	Example	Explanation
background-color	th { background-color: #ccc; } tr:nth-child(even) { background-color: #ccc; }	Displays the table header with a light gray background Applies a light gray background to even rows within the table
border	table, th, td { border: 0.1em solid #000; }	Displays the table, table header, and data cells with a thin solid black border

Table 8–2 Common CSS Table Properties

color	caption { color: #003300; }	Displays the table caption in dark green text
height	td { height: 2em; }	Sets the height of a table data cell to 2em
margin	table { margin-top: 2em; }	Applies a 2em top margin to the table
padding	caption, th, td { padding: 1em; }	Applies 1em of padding to the table caption, header, and data cells
text-align	td { text-align: center; }	Aligns the table data in the center of the cell
vertical-align	td { vertical-align: center; }	Aligns the table data vertically in the middle of the cell
width	table { width: 80%; }	Sets the width of the table to 80% of the page width

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

Collapsing Table Borders

Name	Contact(Home)	Contact(Work)	Location
Jane Bradley	02380 123123	02380 577566	Southampton
Fred Bradley	01273 177166	01273 177167	Brighton

"Separated" borders with cellspacing

Best-Selling Albums Worldwide

Artist	Album	Released	Genre	Sales (millions)
Michael Jackson	Thriller	1982	Pop	110
AC/DC	Back in Black	1980	Hard Rock	49
Pink Floyd	The Dark Side of the Moon	1973	Rock	45
Whitney Houston	The Bodyguard	1992	Soundtrack	44
Eagles	Greatest Hits	1976	Rock	42

Styling Tables for Responsive Web Design

- It can be difficult to style a table for a mobile viewport, especially when the table consists of several columns
 - Determine whether you can format the table, so it is still easy to read in a mobile viewport
 - If the table is too large or complex to format, you can display the content in a different format such as a list or a chart in a mobile viewport

Style a Table for a Tablet Viewport



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

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Style a Table for a Tablet Viewport



formatting applied to th 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

Style a Table for a Tablet Viewport

```
307     th {  
308         background-color: #000;  
309         color: #fff;  
310         font-size: 1.15em;  
311     }  
312  
Line 313 → 313     tr:nth-child(odd) {  
314         background-color: #ccc;  
315     }  
316  
317 } ← tablet media query closing brace
```

style rule for tr element

Style a Table for a Tablet Viewport

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

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background color applied to odd rows



Style a Table for a Tablet Viewport

```
392 /* Media Query for Large Desktop Viewports */  
393 @media screen and (min-width: 1921px) {  
394  
395     #container {  
396         width: 1920px;  
397         margin: 0 auto;  
398     }  
399  
400     table {  
401         width: 80%;  
402     }  
403  
404 }
```

Line 400 → 400 style rule for table
large desktop media query closing brace

Style a Table for a Tablet Viewport



**Classes Designed to Meet
Your Busy Schedule**

Group Fitness Class Schedule

Class	Days	Times	Instructor	Room
Cardio	Mon, Wed, Fri	8:00am, 9:00am	Schultz	B
Zumba	Tues, Thurs	9:00am, 10:00am	Taylor	B
Spinning	Tues, Thurs	9:30am, 10:30am	Roberts	A
Kickboxing	Mon, Wed, Fri	8:30am, 9:30am	Lariviere	A
Yoga	Tues, Thurs	9:00am, 10:00am	Schultz	B
Zumba	Mon, Wed, Fri	7:00am, 8:00am	Roberts	A

table width is
80% for a large
desktop viewport

Rob Marmion/Shutterstock.com

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

Form Controls

- All form elements are contained within the starting `<form>` tag and the ending `</form>` tag
 - Input control: interactive mechanism for users to enter text or make selections on a form
 - Label: text describing the type of information to enter with an input control

Form Controls

- Most controls in an HTML form are defined by using the type attribute of the input element
 - Define other controls using separate elements, such as the textarea and select elements

Form Controls

- Data input control: used to make a selection or perform a command
 - Can be:
 - a radio button (`input type="radio"`),
 - a check box (`input type="checkbox"`),
 - a Submit button (`input type="submit"`),
 - a Reset button (`input type="reset"`),
 - or a selection menu (`select` element).
- Text input control: accepts text, such as names, dates, and passwords
 - Often called an input field

Form Controls - Name, ID, and Value

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

Form Controls - Input Controls

- Common input controls used with a form
 - Text, password, email, checkbox, select, submit, reset, etc.
- Text input controls
 - Text box (text control)
 - Password text box (password control)
 - Email text box (email control)
 - Telephone text box (tel control)
 - Date text box (date control)
 - Text area box (textarea control)

Form Controls - Text Input

- These text input controls have two frequently used attributes:
 - Size: determines width of the control in characters
 - Maxlength: specifies maximum number of characters accepted

```
<input type="text" id="fname" name="fname" maxlength="4">
```

A screenshot of a web browser showing a text input field. The placeholder text "First name:" is visible inside the field, which is a rectangular box with a blue border.

Form Controls - Password, Email, Tel, Date Controls

- Password control: text control; provides a text box for the password a visitor enters
- Email control: text box where visitors enter an email address
- Tel control: text box where visitors enter a telephone number
- Date control: text box that accepts a date

Form Controls - Textarea Control

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

Form Controls - Textarea Control

- Example of HTML code defining a textarea control:

```
<label>Please tell us more about your shopping    experience  
with us today.</label>  
<textarea name="feedback" rows="5"  
cols="100"></textarea>
```

Please tell us more about your shopping experience with us today.

Submit

Form Controls - Checkbox Control

- Checkbox control allows a webpage visitor to select items from a list of one or more choices
 - Each choice appears with a graphical box, which can be checked (selected or on) or unchecked (deselected or off)
 - By default, all check boxes are deselected
 - To set a particular check box to be preselected as the default, use the `checked` attribute and value (`checked="checked"`) within the `<input>` tag

A screenshot of a web form. It contains three checkboxes, each preceded by a small square input field. The first checkbox is followed by the text "I have a bike". The second checkbox is followed by "I have a car". The third checkbox is followed by "I have a boat". Below these options is a rectangular button with the word "Submit" in blue text.

I have a bike
 I have a car
 I have a boat

Submit

Form Controls - Radio Control

- Radio control 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

Please select your favourite Web language:

- HTML
- CSS
- JavaScript

Form Controls - Select Control

- Select control creates a selection menu from which the visitor makes one or more choices
 - Prevents the visitor from having to type information into a text or textarea control
 - Suitable when a limited number of choices are available
 - Appears on a form as a text box with a list arrow

Form Controls - Submit Control

- Submit control and reset control create the Submit and Reset buttons
 - Submit button 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

Display a Reset Button

Click on the reset button to reset the form.

Enter your email:

Enter a PIN:

Form Controls - Reset Control

- 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

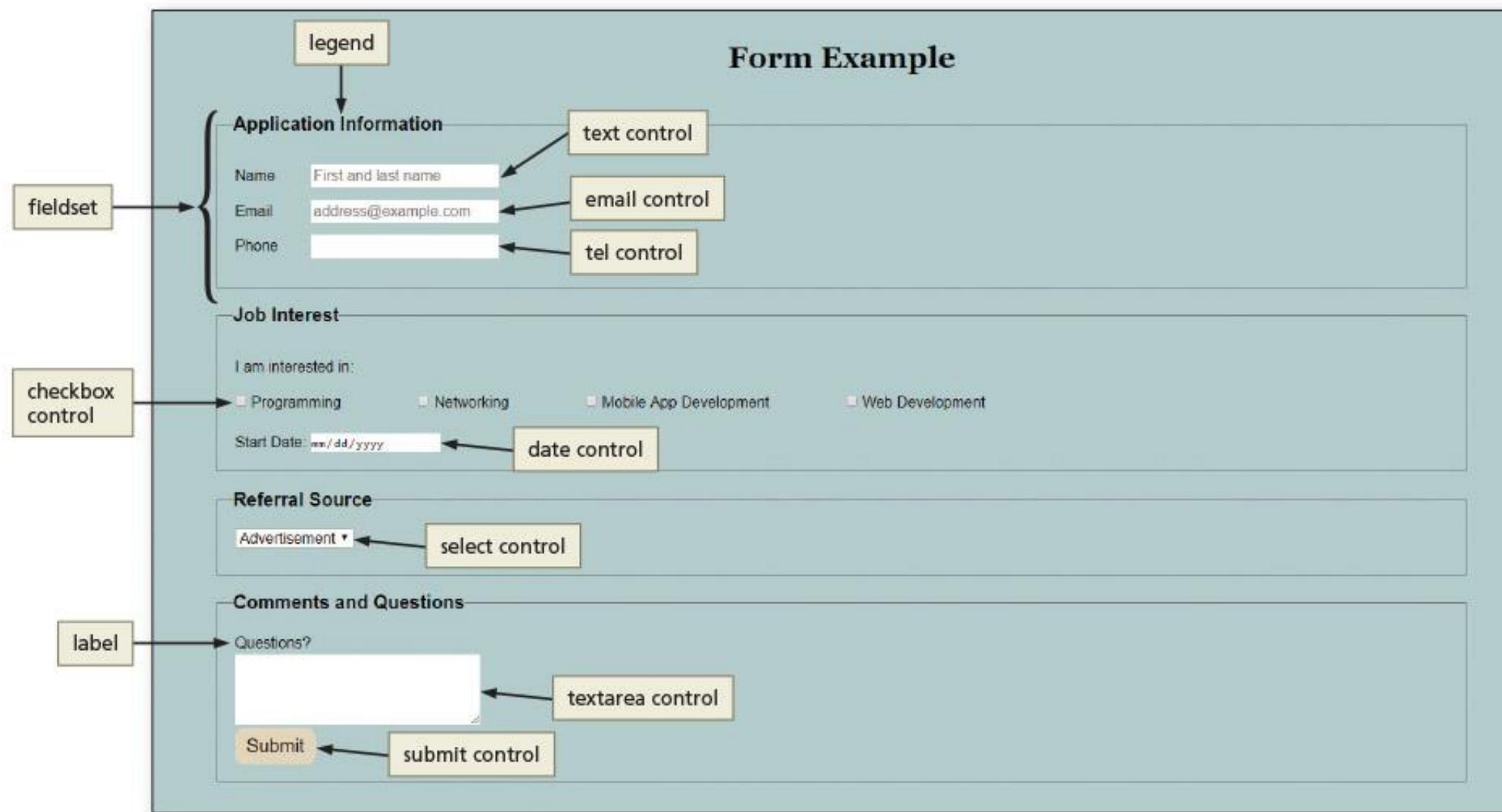
Display a Reset Button

Click on the reset button to reset the form.

Enter your email:

Enter a PIN:

Form Controls



Form Labels

- Form labels identify the type of information to enter into or select from an input control
 - 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

HTML CSS

```
1 <div class="preference">
2   <label for="cheese">Do you like cheese?</label>
3   <input type="checkbox" name="cheese" id="cheese">
4 </div>
5
6 <div class="preference">
7   <label for="peas">Do you like peas?</label>
8   <input type="checkbox" name="peas" id="peas">
9 </div>
10
```

Output

Do you like cheese?

Do you like peas?

Attributes of HTML Tags Used to Create Forms

- Many of the HTML tags used to create forms have several attributes
 - Many of the attributes are not supported by all major browsers, so be sure to test them first

Table 8–4 Common Form Attributes

Attribute	Description	Code Example
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>

Table 8–4 Common Form Attributes

Attribute	Description	Code Example
accept-charset	Specifies the character set used for the form submission	<form accept-charset="UTF-8">
action	Specifies where to submit the form data (a URL)	<form method="POST" action="form.php">
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	<form autocomplete="on">
autofocus	Specifies that an input field should have focus when the page is displayed, which places the insertion point within a specific input field	<input type="text" name="fName" id="fName" autofocus>
disabled	Specifies that the input field is disabled and not available for user input	<input type="radio" name="terms" value="Accept" disabled>
enctype	Specifies the encoding of the form for submitting data	<form enctype="app/urlencoded">
form	Specifies which form an input field belongs to when multiple forms are used within a website	<input type="text" name="fName" id="fName" form="form1">
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	<input type="submit" value="Submit" formaction="process.asp">
formenctype	Specifies how to encode form data during form submission; use the formenctype attribute with type="submit" and type="image" input types	<input type="submit" formenctype="multipart/form-data">
formmethod	Specifies the HTTP method used to transfer the form data, overriding the method attribute	<input type="submit" value="Submit" formmethod="post">
formnovalidate	Specifies to not validate an input element	<input type="submit" value="Submit" formnovalidate>
formtarget	Specifies a keyword that determines how to display a response when the form is submitted, such as a new, blank window	<input type="submit" value="Submit" formtarget="_blank">
height and width	Specifies the height and width for an image input type; always specify a height and width for the image input type	<input type="image" src="btn1" alt="button 1" height="25" width="30">
list	Used with the datalist element to specify predefined options for an input element	<input list="music"> <datalist id="music"> <option value="Country"> <option value="Classical"> <option value="Hip Hop"> <option value="Rock"> </datalist>

not be scanned, copied or

Form Processing

- The action attribute of the <form> tag is used to specify the browser's action when submitting the form
 - Browsers can send information entered in forms to a database on a web server or send it by email to an email address
 - Many websites use form processing software tools available from the web server or website hosting provider

Form Processing

- The method attribute of the <form> tag specifies how to send the data entered in the form to the server to be processed
 - The get method appends the name-value pairs to the URL indicated in the action attribute
 - The post method sends a separate data file with the name-value pairs to the URL (or email address) indicated in the action attribute

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

Styling Forms

```
348     tr:nth-child(odd) {  
349         background-color: #ccc;  
350     }  
351  
Line 352 → 352     /* Tablet Viewport: style rule for form element */  
353     form {  
354         width: 70%;  
355         margin: 0 auto;  
356     }
```

comment

style rule for
form element

Styling Forms

form is centered
on the page with a
width of 70%

Additional Information

I would like more information about:

- Group Fitness
- Personal Training
- Nutrition

Referral Source

How did you find us?

Advertisement ▾

Questions?

Submit

Styling Forms

Line 431

```
431     /* Desktop Viewport: style rules for form elements */  
432     form {  
433         width: auto;  
434     }  
435  
436     .form-grid {  
437         display: grid;  
438         grid-template-columns: auto auto auto;  
439         grid-gap: 20px;  
440     }  
441  
442     .btn {  
443         grid-column: 1 / span 3;  
444     }  
445  
446 }
```

comment

style rule for
form element

style rule for
form paragraph element

closing brace for
desktop media query

Styling Forms

form fieldsets arranged
in three columns

Complete the form below to begin your free trial.

Customer Information

First Name:

Last Name:

Email:

Phone:

Additional Information

I would like more information about:

- Group Fitness
- Personal Training
- Nutrition

Referral Source

How did you find us?

Questions?

Submit button
appears centered
below the fieldsets

Submit

Chapter Summary

- In this chapter, you learned how to:
 - Include tables and forms on webpages
 - Create a table that displays related information and format it using CSS properties
 - Use webpage forms and form controls, including the HTML elements, attributes, and values for creating the controls you need
 - Use CSS styles to format a form for mobile, tablet, and desktop viewports