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Introduction to HTML5:
Part 2

Form ever follows function.
—Louis Sullivan

I listen and give input only if somebody asks.
—Barbara Bush

Objectives

In this chapter you'll:

■ Build a form using the new HTML5 `input` types.

■ Specify an `input` element in a form as the one that should receive the focus by default.

■ Use self-validating `input` elements.

■ Specify temporary `placeholder` text in various `input` elements

■ Use `autocomplete` `input` elements that help users re-enter text that they've previously entered in a form.

■ Use a `datalist` to specify a list of values that can be entered in an `input` element and to autocomplete entries as the user types.

■ Use HTML5's new page-structure elements to delineate parts of a page, including headers, sections, figures,

Self-Review Exercises

3.1   Fill in the blanks in each of the following:

   a) The color input type enables the user to enter a color. At the time of this writing, most browsers render the color input type as a text field in which the user can enter a

   ANS: hexadecimal code.

   b) The _____ attribute allows you to place temporary text in a text field.
   ANS: placeholder.

   c) If you want to bypass validation, you can add the formnoval idate attribute to input
       ᵗypᵉ----------------.
   ANS: submit.

   d) The _____ attribute forces the user to enter a value before submitting the form.
   ANS: required.

   e) The _____ control is typically displayed for the number input type and includes only the valid numbers.
   ANS: spinner.

   f) The _____ input type enables the user to enter an hour, minute, second and frac tion of second.
   ANS: time.

   g) The _____ element provides input options for a text input element.
   ANS: datalist.

   h) The _____ element describes content that's separate from the main content of the page and could potentially be used or distributed elsewhere, such as a news article, forum post or blog entry.
   ANS: article.

   i) The _____ element describes the text that usually appears at the bottom of the content or the bottom of a section element.
   ANS: footer.

   j) The _____ element indicates the appropriate place to break a word when the text wraps to multiple lines.
   ANS: wbr.

3.2   State whether each of the following is *true* or *false.* If *false,* explain why.

   a) Any particular HTML5 form input types must render identically in every HTML5- compliant browser.
   ANS: False. The rendering of input types can vary among browsers.

   b) When the focus is placed in the text field (i.e., the cursor is in the text field), the placeholder text is submitted to the server.
   ANS: False. When the focus is placed in the text field, the placeholder text disappears. It's not "submitted" when the user clicks the Submit button (unless the user types the same text).

   c) You do not need to include autofocus in your forms.
   ANS: True.

   d) The new HTML 5 input types are self validating on the client side, eliminating the need to add complicated scripts to your forms to validate user input and reducing the amount of invalid data submitted.
   ANS: True.

   e) The range input type is inherently self-validating when it's rendered by the browser as a slider control, because the user is unable to move the slider outside the bounds of the minimum or maximum value.
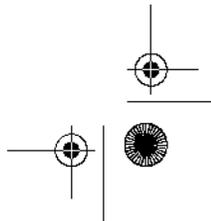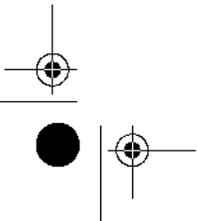   ANS: True.

      f)   HTML5 self validates the tel input type.

ANS: False. The length and format of telephone numbers varies greatly based on location, making validation quite complex, so HTML5 does not self validate the tel input type. To ensure that the user enters a phone number in a proper format, we use the pattern attribute.

      g)   If the user enters an improperly formatted URL in a url input type, it will not validate. HTML5 does not validate that the URL entered actually exists.

ANS: True.

      h)   The nav element displays a drop-down menu of hyperlinks.

ANS: False. The nav element groups navigation links.

      i)   The header element may be used only one time on a page.

ANS: False. The header element may be used multiple times on a page and often includes HTML headings (<h1> through <h6>).

      j) nav elements can be nested in an aside element.

ANS: True.

      k) You might use the brk to prevent awkward word breaks.

ANS: False. You might use the wbr to prevent awkward word breaks.

Exercises

Instructor Note: This PDF contains only the solutions to the short answer and discussion questions. The solutions for coding exercises are provided as source code files that you can open directly in a web browser or text editor.

3.3   Fill in the blanks in each of the following:

      a)   The _____ attribute —used in a single input element on a form—automatically highlights the input element and, if appropriate, places the cursor in the text field after the browser loads and renders the page.

ANS: autofocus.

      b)   The new HTML 5 input types are_____ on the client side.

ANS: self validating.

      c)   For the date input type, Opera displays a date control. When the user clicks the down arrow, the control brings up a _____ .

ANS: calendar for the current month.

      d)   The _____ input type enables the user to enter a numerical value.

ANS: number.

      e)   The _____ input type is inherently self-validating when it's rendered by the browser as a slider control because the user is unable to move the slider outside the bounds of the minimum or maximum value.

ANS: range.

      f)   The _____ attribute can be used on input types to automatically fill in the user's information based on previous input.

ANS: autocomplete.

      g)   The _____ element provides a caption for the image in the figure element.

ANS: figcaption.

      h)   The summary element displays a right-pointing arrow next to a summary or caption when the document is rendered in a browser. When clicked, the arrow points downward and reveals the content in the _____ element.

ANS: details.

      i)   The mark element enables you to _____ .

ANS: highlight text.

3.4   State whether each of the following is *true* or *false*. If *false*, explain why.

a)   Browsers that render the color input type as a text field require the user to enter a color name.

ANS: False: The user must enter the color as a hexadecimal color code.

b)   When a user enters data into a form then submits the form (typically, by clicking the Submit button), the browser immediately checks that the data is correct.

ANS: True.

c)   HTML5 can validate whether an e-mail address entered by the user actually exists. ANS: False. HTML5 does not validate if an e-mail address entered by the user actually exists—rather it just validates that the information is in the proper format.

d)   You can add required to any of the input types.

ANS: True.

e)   You can enable autocompl ete only for specific input elements.

ANS: False. You can enable autocomplete for an entire form or just for specific elements.

f)   The time element enables you to indentify a date (as we do here), a time or both.

ANS: True.

g)   The caption element provides a caption for the image in a figure element.

ANS: False. The name of the element is figcaption.

h)   The details element displays a right-pointing arrow next to a summary or caption when the document is rendered in a browser. When clicked, the arrow points downward and reveals the content in the summary element.

ANS: False. The summary element displays a right-pointing arrow next to a summary or caption when the document is rendered in a browser. When clicked, the arrow points downward and reveals the content in the details element.

i)   The footer element describes content that usually appears at the bottom of the content or section element.

ANS: True.

j) The highlight element enables you to highlight text.

ANS: False. The mark element enables you to highlight text.

3.5   Write an HTML5 element (or elements) to accomplish each of the following tasks:

a)   Students were asked to rate the food in the cafeteria on a scale of 1 to 10. Use a meter element with text to its left and right to indicate that the average rating was 7 out of 10.

ANS: `<p>1 <meter min = "1" max = "10" value = "7"></meter> 10</p>`

b)   Create a details element that displays the summary text "Survey Results" for Part (a). When the user clicks the arrow next to the summary text, an explanatory paragraph about the survey should be displayed.

ANS: `<details>`

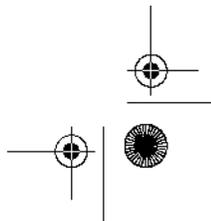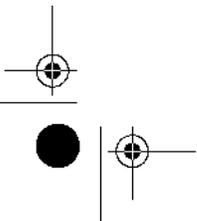`<summary>Survey Results</summary>`

`<p>Students were asked to rate the food in the cafeteria on a scale of 1 to 10. The average result was 7.</p>`

`</details>`

c)   Create a text input element for a first name. The element should automatically receive the focus when the form is rendered in a browser.

ANS: `<p><label>First name: <input type = "text" autofocus/></label></p>`

d)   Modify Part (c) to eliminate the label element and use placeholder text in the input element.

ANS: `<p><input type = "text" placeholder = "First name" autofocus/></p>`

e)   Use a datali st to provide an autocomplete list for five states.

ANS: <input type = "text" id = "state" autocomplete = "on" list = "statelist"/> <datalist>

       <option   value   =   "Connecticut">
       <option value = "Maine">
       <option   value   =   "Massachusetts'^
       <option value = "New Hampshire">
       <option value = "Vermont">
    </datalist>

f)   Create a range input element that allows the user to select a number from 1 to 100. ANS:
<label>Range: 1 <input type = "range" min = "1" max = "20"
     value = "10" /> 100</label>

g)   Specify that autocomplete should not be allowed for a form. Show only the form's opening
   tag.

ANS: <form action = "post" automcomplete = "off">

h)   Use a mark element to highlight the second sentence in the following paragraph.

   <p>Students were asked to rate the food in the cafeteria on a scale of
              1 to 10. The average result was 7.</p>

ANS: <p>Students were asked to rate the food in the cafeteria
     on a scale of 1 to 10. <mark>The average result was 7.</mark></p>