

HTML5 and CSS3 Complete

Second Edition

Unit J

Creating and Processing Web Forms

Objectives

- Design a form
- Create a form
- Create text fields
- Customize text fields

Objectives (continued)

- Create check boxes
- Create option buttons
- Add drop-down menus
- Enable form submission



Design a Form

Unit J

- Useful to plan out a form before coding it
- To increase usability:
 - Understand what information you need to collect
 - Identify the type of data required for each item
 - Ensure your form is logically organized and includes explanations

Design a Form (continued)

Unit J

- Fields/Controls: form elements in which users enter or select data
- Identify the types of information you need to collect
 - Ask for information in distinct pieces
 - Example: ask for first and last names in two separate fields
 - Clarify what you are likely to need to do with the information
 - Break down into multiple fields only if necessary for processing

Design a Form (continued)

Unit J

- **Create a logical flow**
 - Display related fields near each other
 - Display fields in an order users are accustomed to
 - Example: first name, last name, street, city
 - If fields should be completed in a specific order, place them in top-to-bottom order on the form
 - Place fields for questions or information at the bottom of the form

Design a Form (continued)

Unit J

- **Integrate labels and legends**

- **Label:** element containing descriptive text that is associated with a field
 - Associate each field with a label to make the significance of the field clear to users
- **Fieldset:** group of fields that forms a logical unit
- **Legend:** a descriptive title for a fieldset
 - Add legends to fieldsets to further increase usability of the form

Design a Form (continued)

Unit J

Figure J-1: Sketch of Lakeland Reeds contact form

The form is titled "Contact Us" and is divided into several sections. Annotations explain the purpose of various form elements:

- Contact Information:** Includes fields for Name, Email, and Phone. A bracket indicates these are single-line text boxes.
- Reservation Information:** Includes a "Schedule" section with a "Check-in date" (dropdown) and "Number of nights" (text box). A legend describes the content of this fieldset.
- Room(s) to reserve:** Includes checkboxes for Sun Room, Reed Room, Treehouse, and Garden Room. A bracket indicates this is a fieldset grouping related form fields.
- What's the occasion for your visit?:** Includes radio buttons for Vacation, Celebration, and Special event. An annotation states that option buttons allow users to make just one choice from a set.
- Additional Information:** Includes a text area for "Feedback, special requests, or other information". An annotation states that a text area allows users to enter multiple lines of text.
- Submit:** A button at the bottom. An annotation states that a submit button executes linked instructions for submitting information entered in the form.

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Create a Form

Unit J

- Web page form contains a series of nested elements
- form element: marks form contents
- fieldset element: contains elements in each section of the form
 - Includes a `legend` element describing the contents of the fieldset

Create a Form (continued)

Unit J

Figure J-2: Structuring code for the contact form

```
40      <h2>Contact Us</h2>
41      <form>
42          <fieldset class="contactinfo">
43              <legend>Contact Information</legend>
44          </fieldset>
45          <fieldset class="reserveinfo">
46              <legend>Reservation Information</legend>
47              <fieldset class="schedule">
48                  <legend>Schedule</legend>
49              </fieldset>
50              <fieldset class="roominfo">
51                  <legend>Room(s) to reserve</legend>
52              </fieldset>
53              <fieldset class="occasioninfo">
54                  <legend>What's the occasion for your visit?</legend>
55              </fieldset>
56          </fieldset>
57          <fieldset class="additionalinfo">
58              <legend>Additional Information</legend>
59          </fieldset>
60          <fieldset class="submitbutton">
61              <legend>Submit</legend>
62          </fieldset>
63      </form>
```

fieldset elements
nested within
reserveinfo
fieldset

Create a Form (continued)

Unit J

Figure J-4: Styled form outline in browser

Contact Us

Contact Information

Reservation Information

Schedule

Room(s) to reserve

What's the occasion for your visit?

Additional Information

Final fieldset element has no legend

legend elements in nested fieldset elements have different styles than other legend elements

Create Text Fields

Unit J

- input element: used to create many types of fields in a form
 - Determine which type of field by setting the `type` attribute
 - For text box, set `type` attribute to `text`
 - Other `type` values create text boxes with specific semantic meanings
- textarea element: creates a multiline text area
 - Visible size set using `rows` and `cols`

Create Text Fields (continued)

Unit J

Figure J-6: Text fields and associated labels displayed in form

Contact Us

Contact Information
Name Email Phone

Reservation Information
Schedule
Number of nights
Room(s) to reserve
What's the occasion for your visit?

Additional Information
Feedback, special requests, or other information

Label text entered within label elements

Text boxes created with different type values

Some browsers add up and down arrows to boxes created with the number type

textarea element sized to display 4 rows of text and approximately 55 characters across

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Customize Text Fields

Unit J

- Labels and fields require styling
 - Good layout makes relationship between fields clear to users
- Multiple options for organizing:
 - Positioning
 - CSS table styling
- Use attributes to add usability features
 - Example: `placeholder` attribute

Customize Text Fields (continued)

Unit J

Figure J-7: Field and label styles

```
143 .schedule {
144     position: relative;
145 }
146
147 /* field styles */
148 .contactinfo input, #stay-nights, textarea {
149     border: 1px solid #ccc;
150     padding: 0.2em;
151     font-size: 1em;
152 }
153 select {
154     margin-bottom: 0.6em;
155 }
156 .contactinfo input {
157     position: absolute;
158     left: 5em;
159 }
160 .schedule input {
161     position: absolute;
162     left: 10em;
163 }
```

Code continued with line 164 in figure to the right

```
164 #nameinput, #emailinput {
165     width: 25em;
166 }
167 #phoneinput {
168     width: 12em;
169 }
170 #stay-nights {
171     width: 3em;
172 }
173
174 /* label styles */
175 label {
176     font-size: 1em;
177     line-height: 1.6em;
178 }
179 .contactinfo label {
180     display: block;
181     position: relative;
182     margin: 0.8em 0;
183 }
184
185 /* footer section */
```

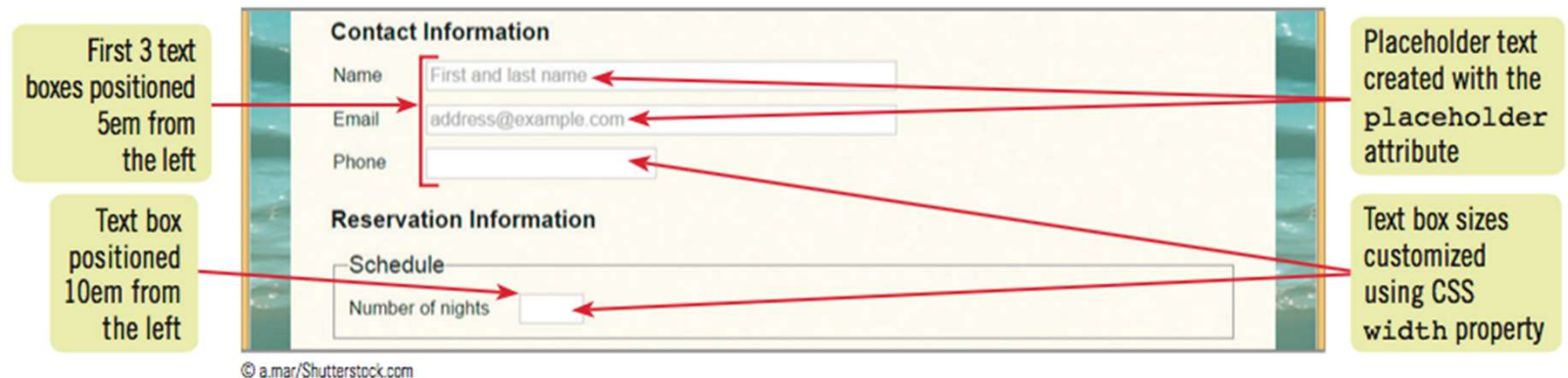
Code continued from figure on the left

Customize Text Fields (continued)

Figure J-8: placeholder attributes added to input elements

```
44      <label for="nameinput">
45      Name
46      <input type="text" name="name" id="nameinput" placeholder="First and
47      last name">
48      </label>
49      <label for="emailinput">
50      Email
51      <input type="email" name="email" id="emailinput"
52      placeholder="address@example.com">
53      </label>
```

Figure J-9: Text boxes with positioning, size, and text applied



Create Check Boxes

Unit J

- Check box: allows user to select one or more predefined choices independent of one another
 - User can click to select or deselect the checkbox
 - Defined using the `type value checkbox`
 - `value` attribute specifies text to be submitted with the form if a check box is selected

Create Check Boxes (continued)

Unit J

Figure J-10: HTML code for check boxes

```
66         <fieldset class="roominfo">
67             <legend>Room(s) to reserve</legend>
68             <label for="sun">
69                 <input type="checkbox" id="sun" value="Sun Room" name="room">
70                 Sun Room
71             </label>
72             <label for="reed">
73                 <input type="checkbox" id="reed" value="Reed Room" name="room">
74                 Reed Room
75             </label>
76             <label for="tree">
77                 <input type="checkbox" id="tree" value="Treehouse" name="room">
78                 Treehouse
79             </label>
80             <label for="garden">
81                 <input type="checkbox" id="garden" value="Garden Room"
82                 name="room">
83                 Garden Room
84             </label>
85         </fieldset>
```

Figure J-11: CSS code to add space to the right of check box labels

```
183 .roominfo label {
184     margin-right: 1.6em;
185 }
186
187 /* footer section */
```

Creates a space of 1.6em
to the right of each label

Create Check Boxes (continued)

Unit J

Figure J-12: Check boxes displayed in form



Create Option Buttons

Unit J

- Option button: allows user to select **only one** of a predefined set of choices
 - Also known as a radio button
 - User can click to select the option button
 - Defined using the `type` value `radio`
 - Each item in set must have the same value for the `name` attribute as all other members of the set
 - Use `checked` attribute for one option to be selected by default

Create Option Buttons (continued)

Figure J-13: HTML code for option buttons

```
86      <fieldset class="occasioninfo">
87          <legend>What's the occasion for your visit?</legend>
88          <label for="vacation">
89              <input type="radio" name="occasion" id="vacation"
90                  value="Vacation" checked>
91              Vacation
92          </label>
93          <label for="celebration">
94              <input type="radio" name="occasion" id="celebration"
95                  value="Celebration">
96              Celebration
97          </label>
98          <label for="event">
99              <input type="radio" name="occasion" id="event" value="Special
100              Event">
101              Special Event
102          </label>
103      </fieldset>
```

All 3 input elements in the set share the same name value

The checked attribute indicates that the option is selected by default

Figure J-14: CSS code to add space to the right of option button labels

```
184 .roominfo label, .occasioninfo label {
185     margin-right: 1.6em;
186 }
187
188 /* footer section */
```

Creates a space of 1.6em to the right of each label

Create Option Buttons (continued)

Figure J-15: Option buttons displayed in form

The Vacation option is selected by default because its `<input>` tag includes the `checked` attribute

What's the occasion for your visit?

☒ Vacation ☐ Celebration ☐ Special Event

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1.6em margin creates space to right of label text

Add Drop-Down Menus

Unit J

- Drop-down menu: method for creating a list of options from which user can select
 - Displayed as text box with arrowhead
 - User can select only one value from list
 - Created using the `select` element
 - Each of the options is created using an `option` element nested within the `select` element

Add Drop-Down Menus (continued)

Unit J

Figure J-16: HTML code for check-in drop-down menus

```
61 <fieldset class="schedule">
62   <legend>Schedule</legend>
63   <p>Check-in date</p>
64   <div class="date-picker">
65     <label for="checkin-month">Check-in Month
66     </label>
67     <select id="checkin-month"
68     name="checkin-month">
69       <option value="01">January</option>
70       <option value="02">February</option>
71       <option value="03">March</option>
72       <option value="04">April</option>
73       <option value="05">May</option>
74       <option value="06">June</option>
75       <option value="07">July</option>
76       <option value="08">August</option>
77       <option value="09">September</option>
78       <option value="10">October</option>
79       <option value="11">November</option>
80       <option value="12">December</option>
81     </select>
82     <label for="checkin-day">Check-in Day
83     </label>
84     <select id="checkin-day"
85     name="checkin-day">
86       <option value="01">1</option>
87       <option value="02">2</option>
88       <option value="03">3</option>
89       <option value="04">4</option>
90       <option value="05">5</option>
91       <option value="06">6</option>
92       <option value="07">7</option>
93       <option value="08">8</option>
94       <option value="09">9</option>
95       <option value="10">10</option>
96       <option value="11">11</option>
97       <option value="12">12</option>
98       <option value="13">13</option>
99       <option value="14">14</option>
100      <option value="15">15</option>
101      <option value="16">16</option>
102      <option value="17">17</option>
103      <option value="18">18</option>
104      <option value="19">19</option>
105      <option value="20">20</option>
106      <option value="21">21</option>
107      <option value="22">22</option>
108      <option value="23">23</option>
109      <option value="24">24</option>
110      <option value="25">25</option>
111      <option value="26">26</option>
112      <option value="27">27</option>
113      <option value="28">28</option>
114      <option value="29">29</option>
115      <option value="30">30</option>
116      <option value="31">31</option>
117    </select>
118    <label for="checkin-year">Check-in Year
119    </label>
120    <select id="checkin-year"
121    name="checkin-year">
122      <option value="2019">2019</option>
123      <option value="2020">2020</option>
124      <option value="2021">2021</option>
125    </select>
126  </div>
```

Each option element defines a single menu option

Code continued with line 94 in figure to the right

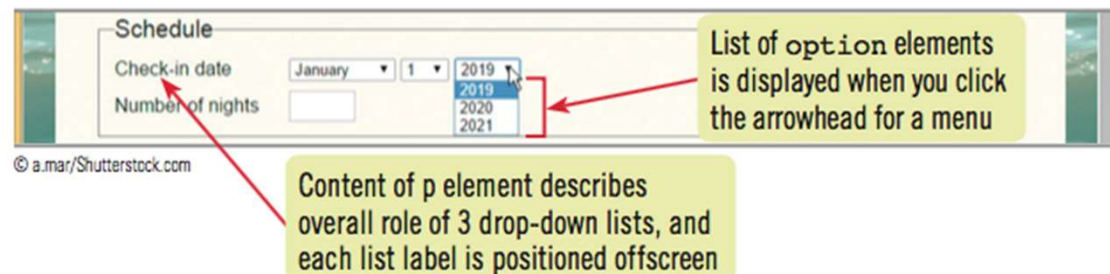
Each select element creates a drop-down menu

Code continued from figure on the left

Add Drop-Down Menus (continued)

Unit J

Figure J-18: Drop-down menus for check-in date in browser



- Submit button: Form button that users click to submit their data
 - Created using the `type` value `submit`
 - Can use other `type` values for specialized submit buttons
 - `action` attribute used to specify name and location of script that will accept form data
 - User agents submit the `name` attribute of a field with its associated value

Enable Form Submission (continued)

Unit J

Figure J-19: HTML code for form action and submit button

```
40      <h2>Contact Us</h2>
41      <form action="results.html">
42          <fieldset class="contactinfo">

171      <fieldset class="submitbutton">
172          <input type="submit" id="submit" value="Submit">
173      </fieldset>
```

Figure J-22: results.html page showing submitted form data

You entered the following data:

name=Faduma Egal
email=fegal@example.com
phone=218-555-3080
checkin-month=08
checkin-day=10
checkin-year=2020
nights=2
room=Sun Room
room=Treehouse
occasion=Celebration
feedback=Looking forward to coming back

Value of name attribute for set of option buttons

Value of value attribute for selected option button

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Summary

- Forms need to be planned and designed before coding
 - Identify types of information to be collected
 - Create logical flow
 - Use labels and legends
- Form is created using `form` element
- `fieldset` element groups fields in sections of the form

Summary (continued)

Unit J

- Text boxes are created with `input` element using `type` value of `text`
- Text areas are created using `textarea` elements
- Layout of text fields can be customized using CSS and attributes
- Check boxes allow user to select multiple options and are created using the `type` value `checkbox`

Summary (continued)

Unit J

- Option buttons and drop-down menus allow a user to select one of several options
 - For option button, use `type` value `radio`
 - For drop-down menu, use `select` element and nested `option` elements
- A submit button is clicked when user wants to submit data in a form, and is created using the `type` value `submit`