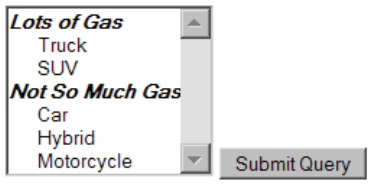
```
<form action="http://www.webstepbook.com/params.php">
  <div>
    <select name="vehicletype" size="7">
      <optgroup label="Lots of Gas">
        <option>Truck</option>
        <option>SUV</option>
      </optgroup>
      <optgroup label="Not So Much Gas">
        <option>Car</option>
        <option>Hybrid</option>
        <option>Motorcycle</option>
      </optgroup>
    </select>
    <input type="submit" />
  </div>
</form>
```



Example 6.14 Option groups

Style Suggestion

Radio buttons vs. check boxes vs. menus

If both checkboxes/radio buttons and menus can be used to allow a user to make choices and can both be set up to allow one or many selections, when should you use radio buttons and checkboxes and when should you use menus? Menus take up less space, especially if there are many choices. The downside to menus is that users cannot see all of their options at once. The number of options viewed in a menu can be adjusted using the size attribute, but for a long list of choices there will likely be some that are still hidden. However, this might not be important if the options are obvious and are ordered well. For example, if you want the user to choose the state they live in, it is likely not important that they see all the options if the options are listed in alphabetical order so it easy to find a state in the list.

Radio buttons/checkboxes have complementary benefits and drawbacks; the user can see all of their choices, but more screen space is taken to display the choices. In the end, you should weigh these factors and use good judgment to choose between radio buttons/checkboxes vs. menus, but a good rule of thumb is that when you have a lot of options to list or limited screen space, use menus. Otherwise, use radio buttons or checkboxes.

6.2.5 Reset Buttons

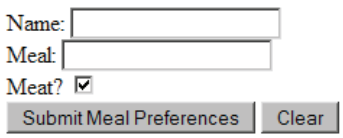
Element	`input`
Description	Reset button (inline)
Syntax	`<input type="reset" value="`**button text**`" />`

HTML supplies another kind of button that resets a form's data to its initial state. A reset button is an `input` element with a type of `reset`. The text on the button is specified by its `value` attribute. (If you don't specify a value, the text is "Reset".) Reset buttons are optional; they were once common,

but now many forms do not include them. Example 6.15 shows a form with a reset button. If you were to change some of the values in the controls and then click the Clear button, they would return to their original state.

```
<form action="http://www.webstepbook.com/params.php">
  <div>
    <label>Name: <input type="text" name="name" /></label> <br />
    <label>Meal: <input type="text" name="meal" /></label> <br />
    <label>Meat?
      <input type="checkbox" name="meat" checked="checked" />
    </label> <br />

    <input type="submit" value="Submit Meal Preferences" />
    <input type="reset" value="Clear" />
  </div>
</form>
```



Example 6.15 Reset button

6.2.6 New Form Controls in HTML5

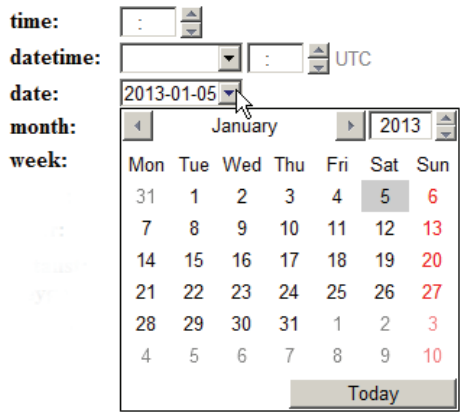
HTML5 provides several new types of form controls that can be created by specifying a given `type` attribute on an `input` tag. Many of them have to do with entering information about dates and times. These are useful options because they pop up a nice calendar widget on the screen that lets the user easily select a date or time. At the time of this writing, most of the current web browsers do not support the date/time input controls at all. But support will improve over time.

Input Type	Description
`color`	A color from a palette of available choices
`range`	A slider for selecting values in a given range
`date`	A date such as January 17, 2013
`time`	A time of day such as 11:15 AM
`datetime`	A date and time such as 11:15 AM, January 17, 2013
`month`	A month of a particular year, such as January, 2013
`week`	A week of a particular year, such as January 6-12, 2013

Table 6.6 Additional HTML5 input types

Example 6.16 demonstrates several of the input types for dates and times. When the user clicks one of the fields, it expands into a pop-up calendar or date/time chooser.

```
<div><strong>time:    </strong> <input type="time" />    </div>
<div><strong>datetime:</strong> <input type="datetime" /></div>
<div><strong>date:    </strong> <input type="date" />    </div>
<div><strong>month:   </strong> <input type="month" />   </div>
<div><strong>week:    </strong> <input type="week" />    </div>
```



Example 6.16 HTML5 input types for dates and times

HTML5 also introduces five new elements (not to be confused with new `type` values for the `input` tag) for new form-related controls. Some elements, such as `output` and `progress`, are more useful when combined with JavaScript programming, which we'll discuss later in this textbook. Others, like `keygen` (which generates public/private encryption codes to submit to a server), are for more advanced applications that are outside the scope of this textbook. At the time this textbook was written, support for these elements was spotty in current browsers, but it is improving all the time.

Element	Description
`datalist`	Text box with set of pre-defined choices
`keygen`	Encryption key code generator
`meter`	Horizontal bar of information
`output`	Area for displaying output
`progress`	Progress bar

Table 6.7 HTML5 new form element tags

The `datalist` is an interesting new element that allows you to create an input that is a bit of a cross between a text input box and a `select` box. The control will appear as a text box, but as the user begins to type on the box, a list of choices will appear below the box, which can be used as auto-completions of the text to enter into the text box. If the user doesn't want any of the existing choices, they can type a different value.

To use this element, create a `datalist` and fill it with `option` tags representing the auto-complete choices to present. But a `datalist` by itself has no appearance on the web page; to see the list of choices, you must attach the list to an input text box elsewhere in the page. So declare an `input` element and set its `list` attribute equal to the `id` of the `datalist`. This will connect the list of auto-complete choices to that text box. (The same list can be attached to multiple text boxes if you like.) XX demonstrates a basic data list.