# Introduction to HTML

Web Design - Hands-on CSS

# Lesson FIVE

# What will we cover in this lesson?

# Lesson 5: Form markup

What are forms?
<form> element
<fieldset> element
<legend> element
<label> element
<input> elements
input type="text"
input type="email"
input type="url"
input type="tel"
input type="password"
input type="file"
input type="checkbox"
input type="radio"
input type="hidden"
input type="reset"
input type="image"
input type="submit"
input type="button"
<button> element
<select> & <option>
<optgroup> element
<textarea> element

Open the
exercise folder

Open the folder called “start” and then open the file called **“lesson05.htm”** using some sort of HTML editor.

Note:
What are forms?

**HTML forms** are forms that are placed in web pages. These forms contain special elements called “form controls” (checkboxes, radio buttons, menus, etc.) and their associated labels.

Users “complete” a form by **modifying the various form controls** (entering text, selecting menu items, etc.), and then submitting the form to the server.

# Step 1:
# <form> element

The **<form> element** is used to create an HTML form.

The <form> element requires a **start and end tag**.

There are a **range of attributes** you can use within the <form> element.

The **ACTION attribute** is used to specify where the form data is sent after it is submitted. The value is normally a URL.

```
<form action="submit.php">
</form>
```

The **METHOD attribute** specifies the HTTP method to be used when sending the form data. The two values are “get” and “post”.

```
<form method="get">
</form>
```

# Exercise

Let’s add some form attributes...

```
<form>
    ...
</form>
```

```
<form action="#" method="get">
    ...
</form>
```

# Step 2:
# <fieldset> element

The **<fieldset> element** is used to group related parts of a form. It is mainly used in complex forms.

The <fieldset> element requires a **start and end tag**.

```
<fieldset>
</fieldset>
```

**More than one** <fieldset> element can be used inside a form.

```
<fieldset>
</fieldset>
<fieldset>
</fieldset>
```

The <fieldset> element can also contain **nested <fieldset> elements**.

```
<fieldset>
   <fieldset>
   </fieldset>
</fieldset>
```

By default, the <fieldset> element will **draw a box** around the content inside.

# Exercise

Let’s add two fieldsets...

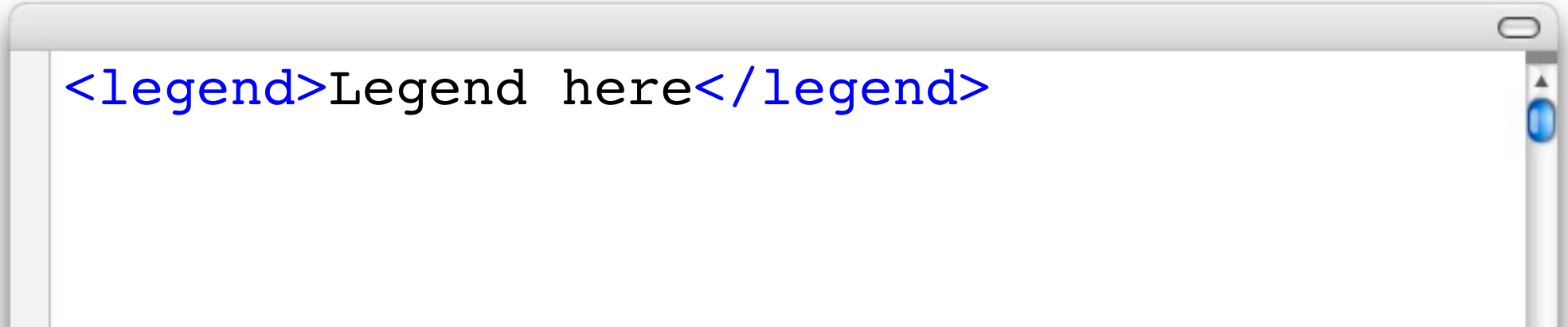
```
<form action="#" method="get">
    <fieldset>

    </fieldset>
    <fieldset>

    </fieldset>
</form>
```

# Step 3:
# <legend> elements

The **<legend> element** defines a caption for the <fieldset>.

```
<fieldset>
   <legend>Legend here</legend>
</fieldset>
```

The <legend> element requires a **start and end tag**.

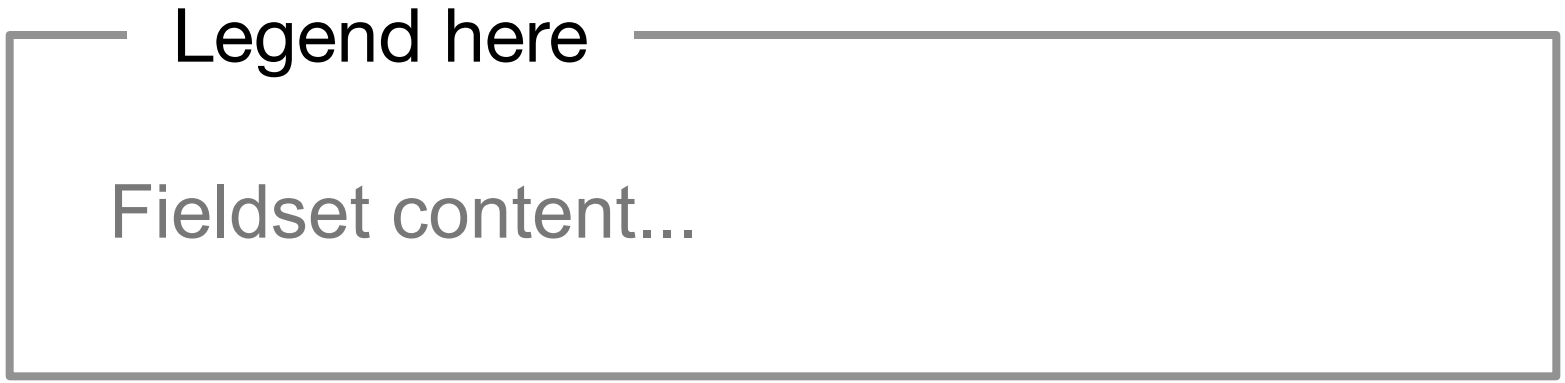


The **<legend> element** can only contain inline content.

```
<fieldset>
   <legend>Legend here</legend>
</fieldset>
```

There can only be **one <legend>** inside each <fieldset>. The <legend> must be placed directly after the <fieldset> start tag.

By default, the <legend> element is **rendered on top** of the <fieldset> border.



# Exercise

Let’s add legends to our fieldsets...

```
<form action="#" method="get">
    <fieldset>
        <legend>Your details</legend>
    </fieldset>
    <fieldset>
        <legend>Your information</legend>
    </fieldset>
</form>
```

Note:
<label> element

The **<label> element** defines a label for individual form controls.

```
<label>Email address</label>
<input type="text">
```

The **<label> element** requires a start and end tag.

```
<label>Email address</label>
```

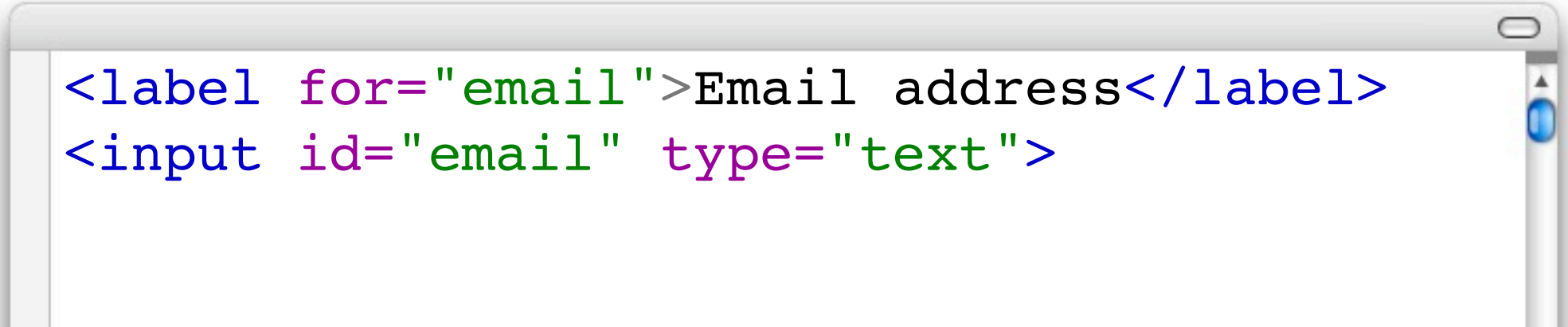
# Tying the <label> to its form control

Ideally, the <label> element should be **tied to the relevant form control**. This can be achieved using two different methods.

**Method 1:** Wrap the <label> element around the relevant form control.

```
<label>
    Email address
    <input type="text">
</label>
```

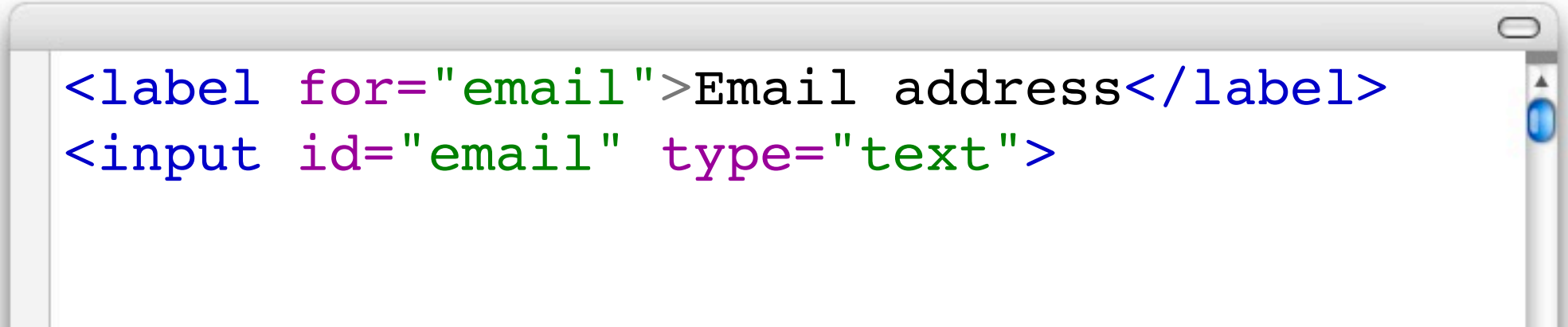
**Method 2:** Use the FOR and ID attributes to explicitly tie the label to the form control.



Method 2 is the preferred method as the FOR attribute **specifically tells devices** that this label is “for” the relevant form control.

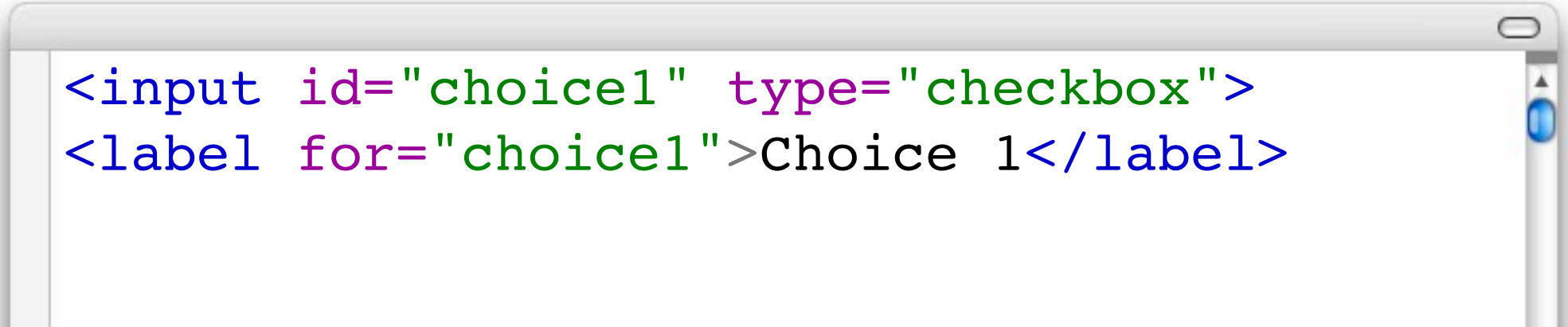
Label before or after?

The contents of the label should **come before all form controls** except in the case of checkboxes and radio buttons.



```
<label for="email">Email address</label>
<input id="email" type="text">
```

In the case of checkboxes and radio buttons, the contents of the label should **come after the form control**.



# Form controls that don’t require labels

Some form controls **do not require labels**.

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

In the cases below, browsers use the “value” as a label, so a **<label> is not required**.

```
<input type="button" value="Submit">
<input type="reset" value="Reset">
<input type="submit" value="Submit">
```

In the cases of <button> elements, the content inside the element is displayed, so a **<label> is not required**.

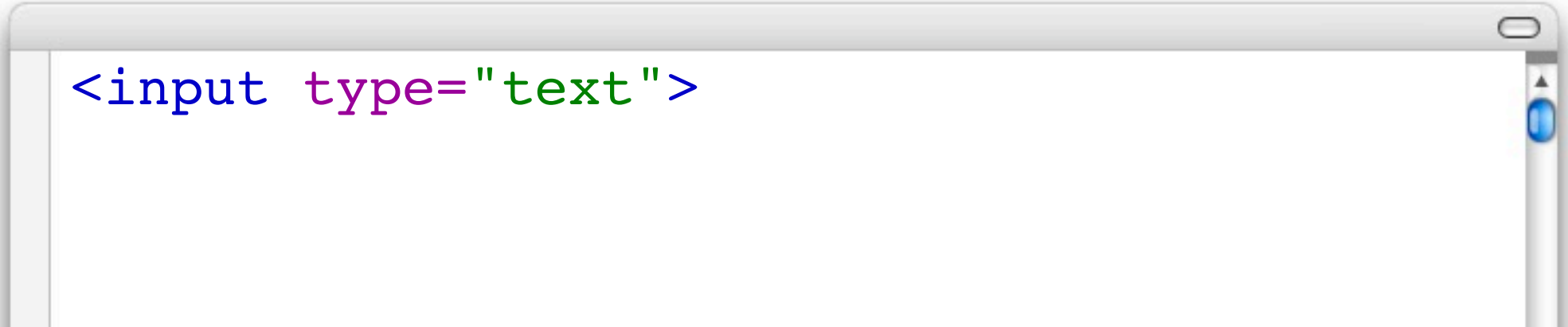
```
<button value="Submit">Submit</button>
```

In the case of input type=“hidden”, the form control is used to send instructions to the server, so a **<label> is not required**.

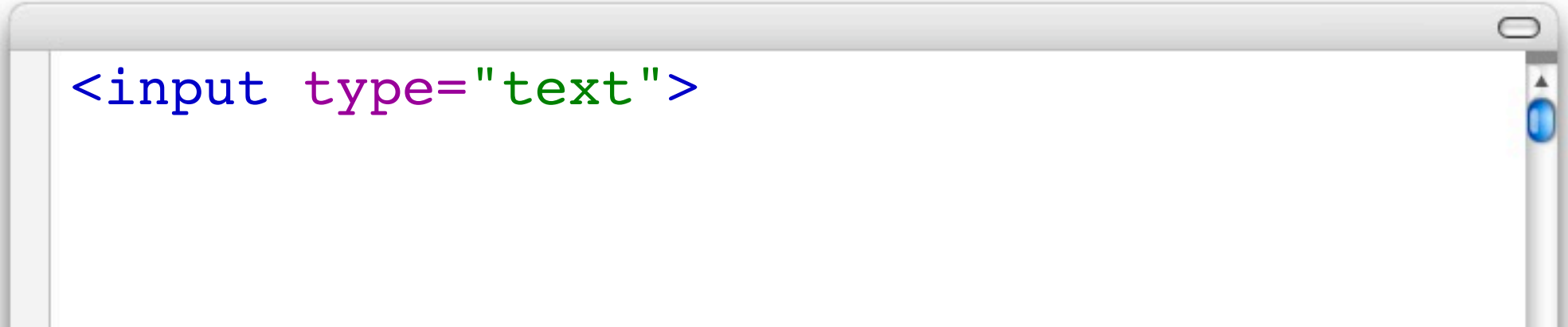
```
<input type="hidden" value="instructions-
to-server-here">
```

Note:
<input> elements

The **<input> element** specifies an input field where the user can enter data.



The **<input> element** is a void element, so there is no end tag.



# input types

There are a range of different <input> elements that serve different purposes. The type of input is **defined by the TYPE attribute**.

```
<input type="button">
<input type="checkbox">
<input type="file">
```

The <input type="text">
is the **default input type**.
If the type attribute is
omitted or not supported by
the device, <input
type="text"> will be used.

In HTML 4.01 there were **ten different input types**.

```
<input type="button">
<input type="checkbox">
<input type="file">
<input type="hidden">
<input type="image">
<input type="password">
<input type="radio">
<input type="reset">
<input type="submit">
<input type="text">
```

In HTML5, **thirteen new input types** have been introduced. We will cover the three most practical of these new inputs.

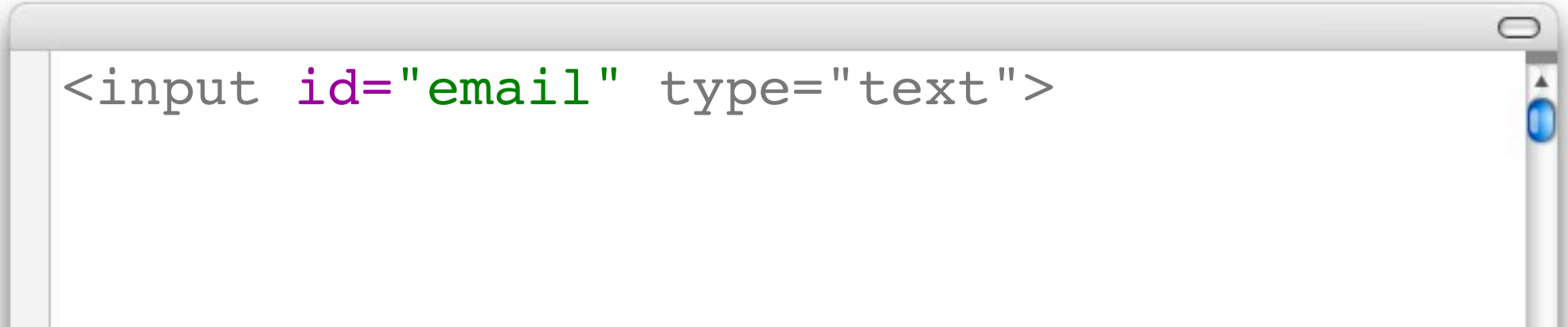
```
<input type="email">
<input type="url">
<input type="tel">
```

input attributes

There are a **wide range of different attributes** that can be used with the <input> element.

```
<input type="text">
```

We will include the **ID attribute** to link the input to the relevant <label> element.



In some cases, we will include the **NAME attribute** as this helps to describe the data being submitted to the server.

```
<label for="email">Email</label>
<input type="text" id="email" name="email">
```

In some cases, we will include the **VALUE attribute** as the name information being submitted to the server is not enough on its own.

```
<input id="brochure" name="print"
type="checkbox" value="brochure">
```

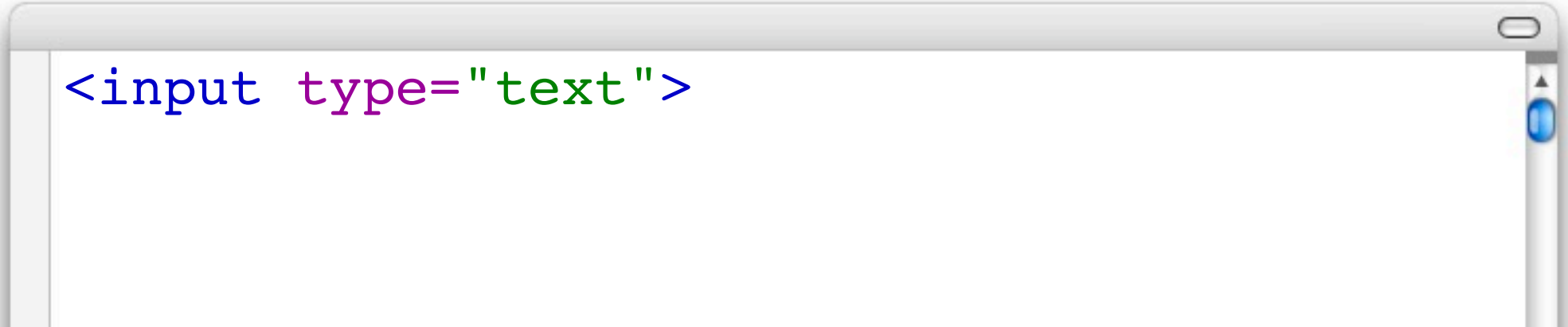
# Wrapping things in a 

In our exercise, you can see that we have wrapped **each label and form control inside a **, as this gives us greater control of the layout.

## Step 4:

input type= "text"

The input type="text" creates a **single-line text input control**.



# Exercise

Let’s add input type=“text”

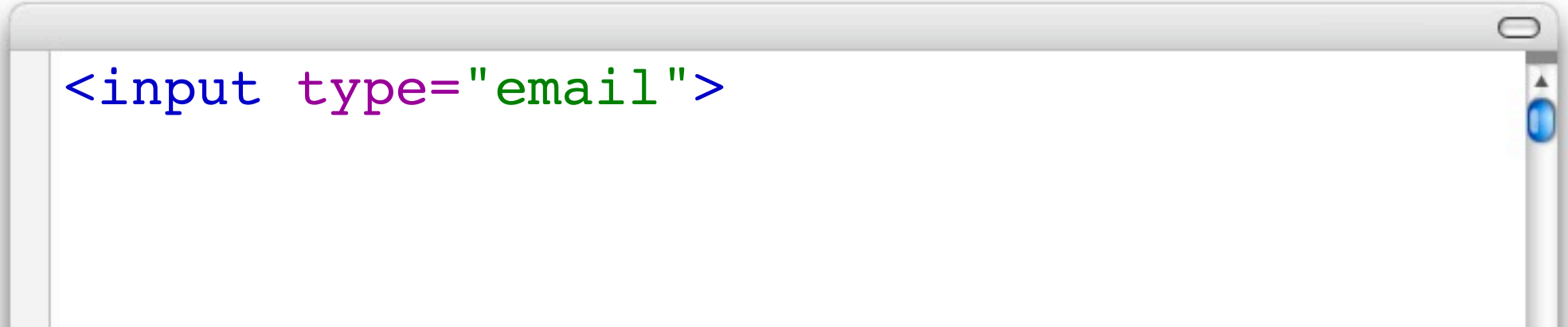
```
<div>
    <label for="nm">Name</label>
    <input id="nm" name="nm">
</div>
```

```
<div>
    <label for="nm">Name</label>
    <input id="nm" name="nm" type="text">
</div>
```

## Step 5:

input type= "email"

The input type="email" creates an input control for **one or more email addresses**.



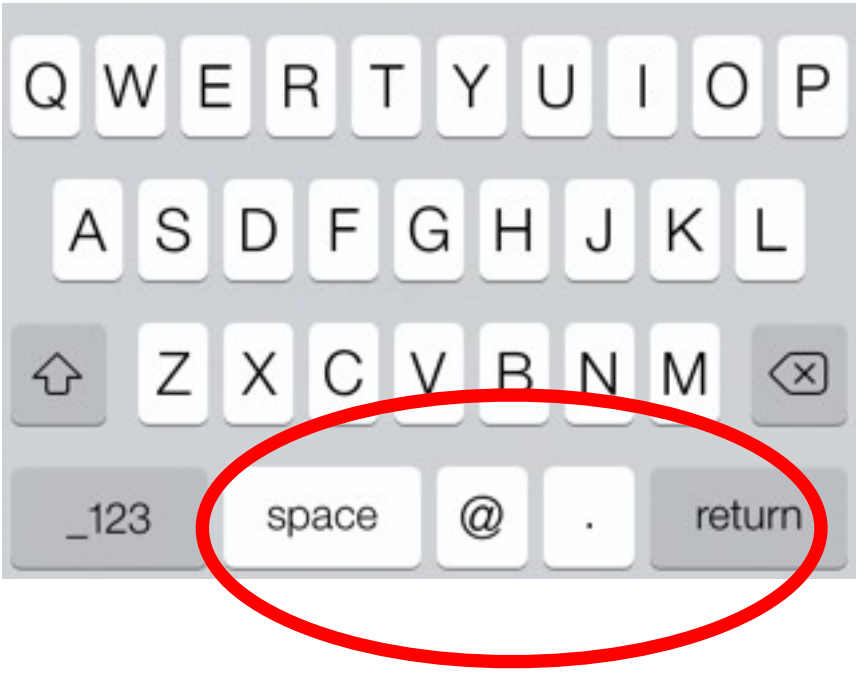
As users apply content into this field, some devices look for the “@” symbol and **flag the field red if this symbol is not present**.

Email: Jeff.smith

In some mobile devices such as the iPhone, this field triggers the keyboard to **change from a standard keyboard** to an email keyboard.

Standard keyboard


Email keyboard



# Exercise

Let’s add input type=“email”

```
<div>
    <label for="em">Email address</label>
    <input id="em" name="em" type="email">
</div>
```


```
<div>
    <label for="em">Email address</label>
    <input id="em" name="em" type="email">
</div>
```

## Step 6:

input type= "url"

The input type="url" creates an **input control for a web address**.

```
<input type="url">
```

As users apply content into this field, some devices look for the “http://” symbol and **flag the field red if this content is not present**.

URL: sample.com

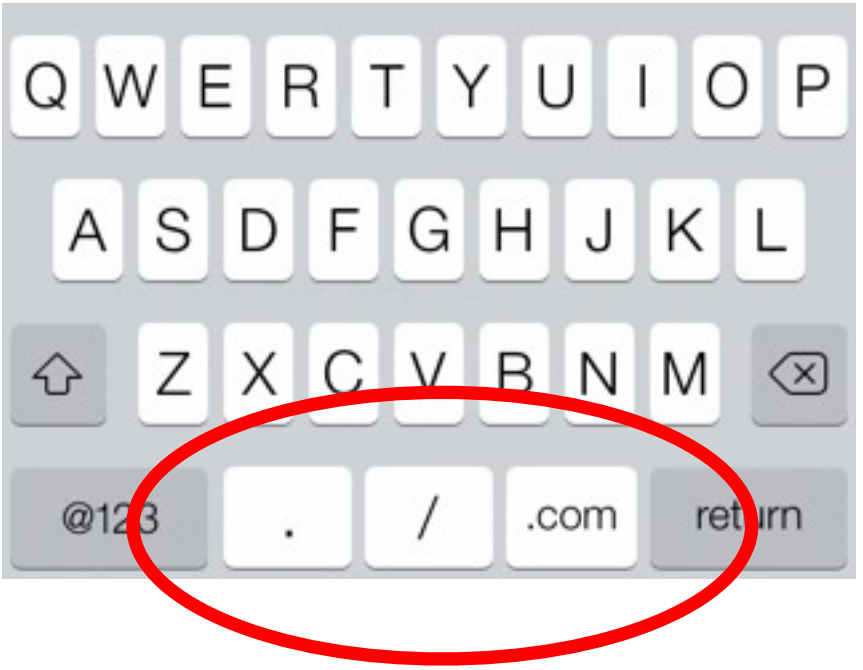
Other devices add **“http://”** **automatically** for users.

URL: http://sample.com

In some mobile devices such as the iPhone, this field triggers the keyboard to **change from a standard keyboard** to a URL keyboard.

Standard keyboard


URL keyboard



# Exercise

Let’s add input type=“url”

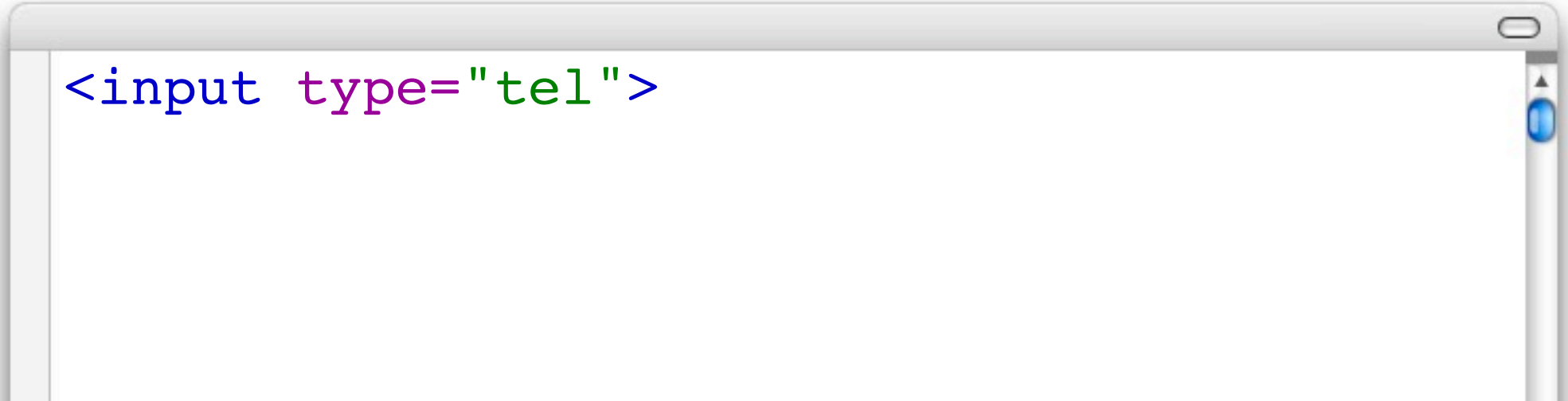
```
<div>
    <label for="wb">Website</label>
    <input id="wb" name="wb">
</div>
```

```
<div>
    <label for="wb">Website</label>
    <input id="wb" name="wb" type="url">
</div>
```

## Step 7:

input type= "tel"

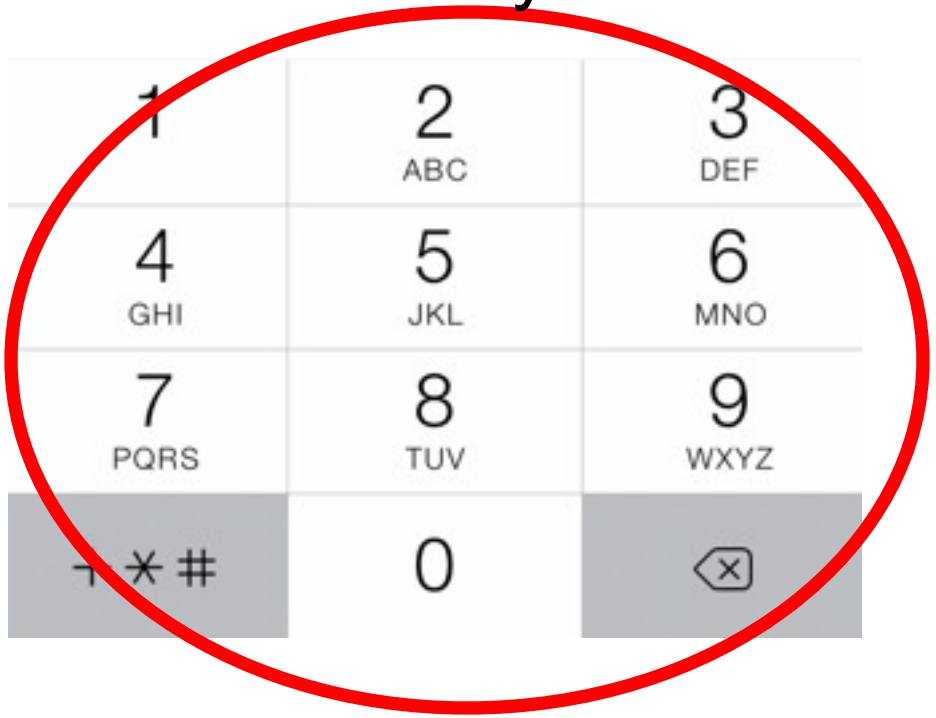
The input type="tel" creates an **input control for telephone numbers**.



In some mobile devices such as the iPhone, this field triggers the keyboard to **change from a standard keyboard** to a number keyboard.

## Standard keyboard


## Number keyboard



# Exercise

Let’s add input type=“tel”

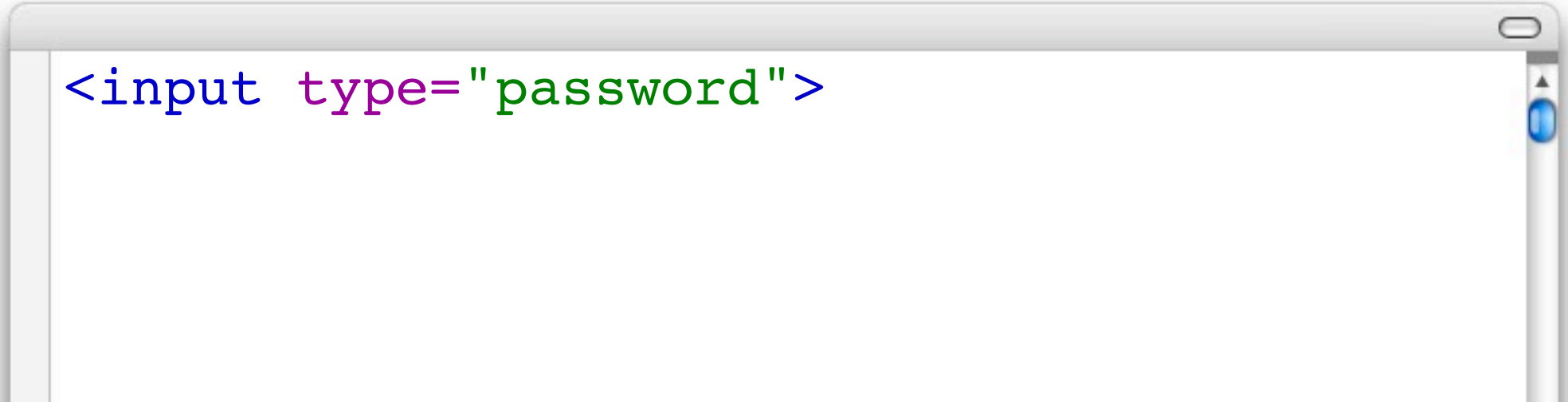
```
<div>
    <label for="ph">Phone number</label>
    <input id="ph" name="ph">
</div>
```

```
<div>
    <label for="ph">Phone number</label>
    <input id="ph" name="ph" type="tel">
</div>
```

## Step 8:

input
type="password"

The input type="password" is like “text” **except input characters are blocked on screen**.



# Exercise

Let’s add input type=“password”

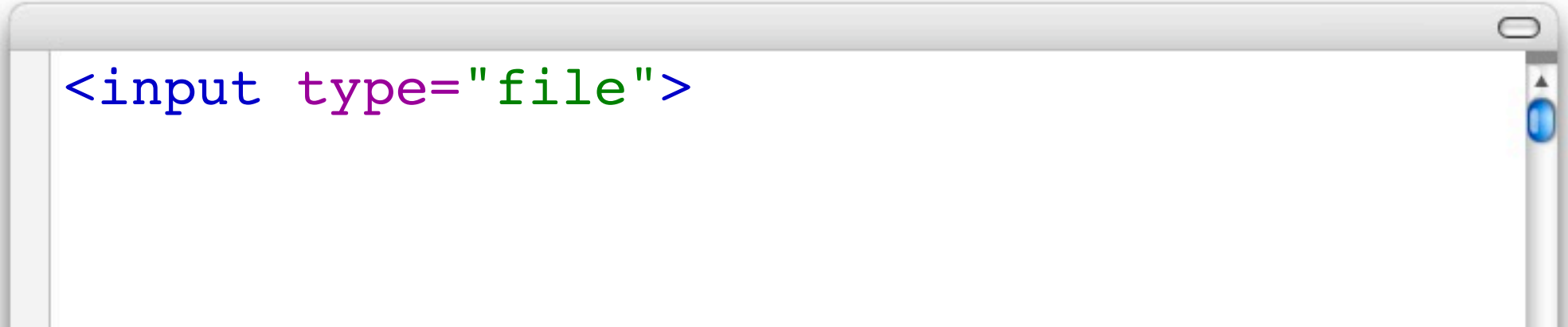
```
<div>
    <label for="ps">Password</label>
    <input id="ps" name="ps">
</div>
```

```
<div>
    <label for="ps">Password</label>
    <input id="ps" name="ps" type="password">
</div>
```

# Step 9:

input type="file"

The input type="file" creates a **file select control** that allows the user to select files and submit them with a form.



The input type="file" **may look different** based on individual browsers and operating systems.


# Exercise

Let’s add input type=“file”

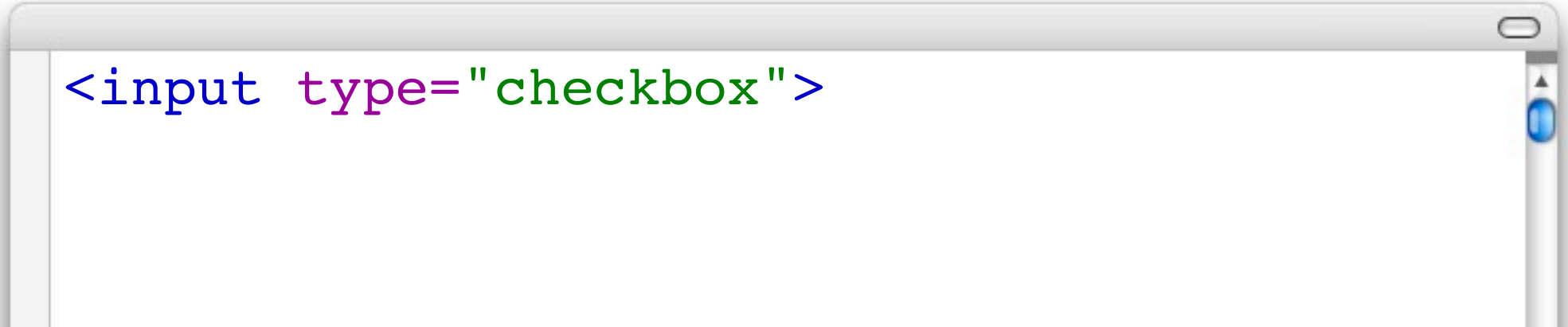
```
<div>
    <label for="upload">Upload photo</label>
    <input id="upload" name="upload">
</div>
```

```
<div>
    <label for="upload">Upload photo</label>
    <input id="upload" name="upload"
type="file">
</div>
```

## Step 10:

input
type="checkbox"

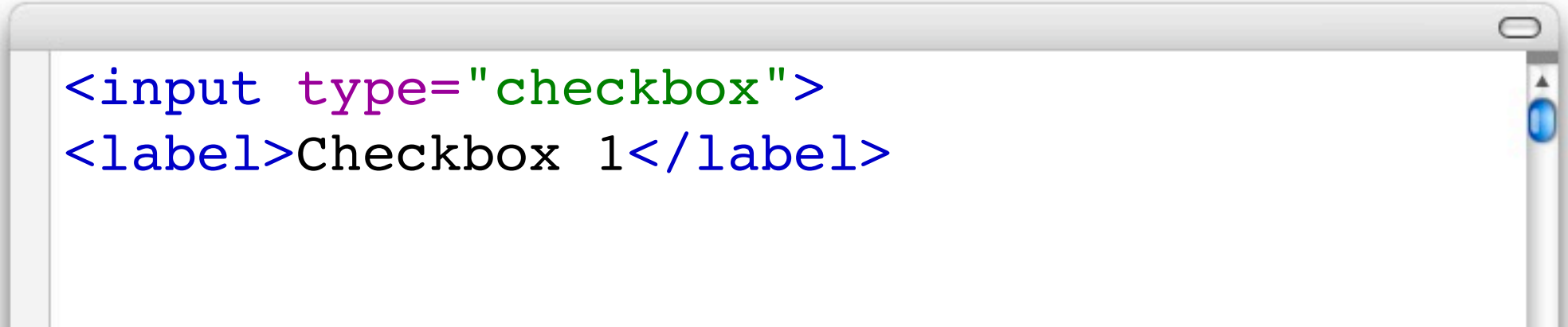
The input type="checkbox" is an **on/off switch that may be toggled by the user**.



If a checkbox is selected, the name and value attribute values will be **submitted as a name/value pair**.

```
<input id="brochure" type="checkbox"
name="print" value="brochure">
```

The <label> associated with the checkbox **should be placed after** the checkbox.



```
<input type="checkbox">
<label>Checkbox 1</label>
```

When adding multiple checkboxes into a form, an unordered list can be used to mark them up as they are **list of options**.

# Exercise

Let’s add input type=“checkbox”

```
<li><input id="br" name="print" value="br">
<label for="br">Brochure</label></li>
<li><input id="po" name="print" value="po">
<label for="po">Poster</label></li>
```

```
<li><input id="br" name="print"
type="checkbox" value="br">
<label for="br">Brochure</label></li>
<li><input id="po" name="print"
type="checkbox" value="po">
<label for="po">Poster</label></li>
```

# Step 11:
input type="radio"

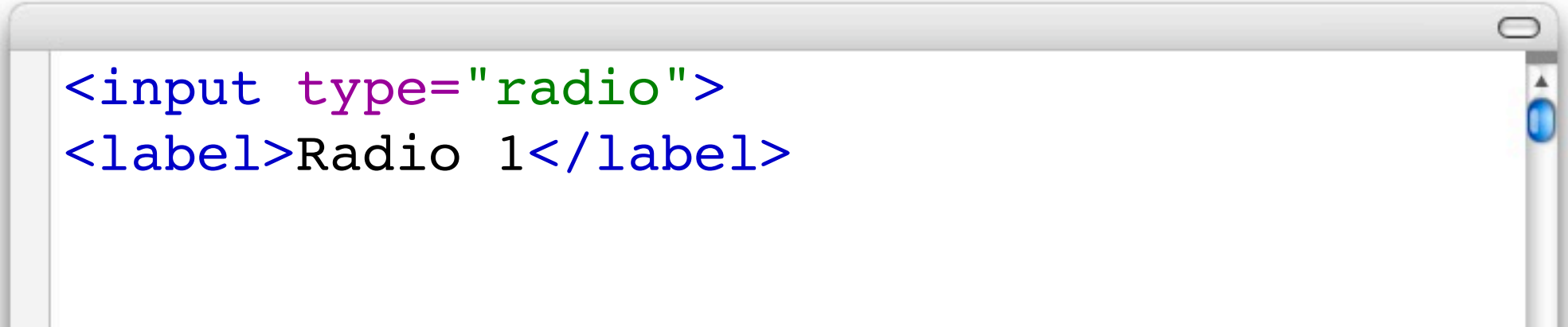
The input type="radio" is like a checkbox except that when several inputs share the same name value, **they are mutually exclusive**.

```
<input type="radio" name="cx" value="ch1">
<input type="radio" name="cx" value="ch2">
<input type="radio" name="cx" value="ch3">
```

If a radio button is selected, the name and value attribute values will be **submitted as a name/value pair**.

```
<input id="brochure" type="checkbox"
name="delivery" value="monthly">
```

The <label> content associated with the radio button **should be placed after** the radio button.



```
<input type="radio">
<label>Radio 1</label>
```

When adding multiple radio buttons into a form, an unordered list can be used to mark them up as they are **list of options**.

# Exercise

Let’s add input type=“radio”

```
<li><input id="wk" name="del"  value="wk">
<label for="wk">Weekly</label></li>
<li><input id="mn" name="del" value="mn">
<label for="mn">Monthly</label></li>
```

```
<li><input id="wk" name="del" type="radio"
value="wk">
<label for="wk">Weekly</label></li>
<li><input id="mn" name="del" type="radio"
value="mn">
<label for="mn">Monthly</label></li>
```

# Step 12:

input type="hidden"

The input type="hidden" creates a control that is **not rendered** (hidden). However, its values are submitted with other form data.

```
<input type="hidden">
```

**No <label> element is required** for hidden inputs.

# Exercise

Let’s add input type=“hidden”

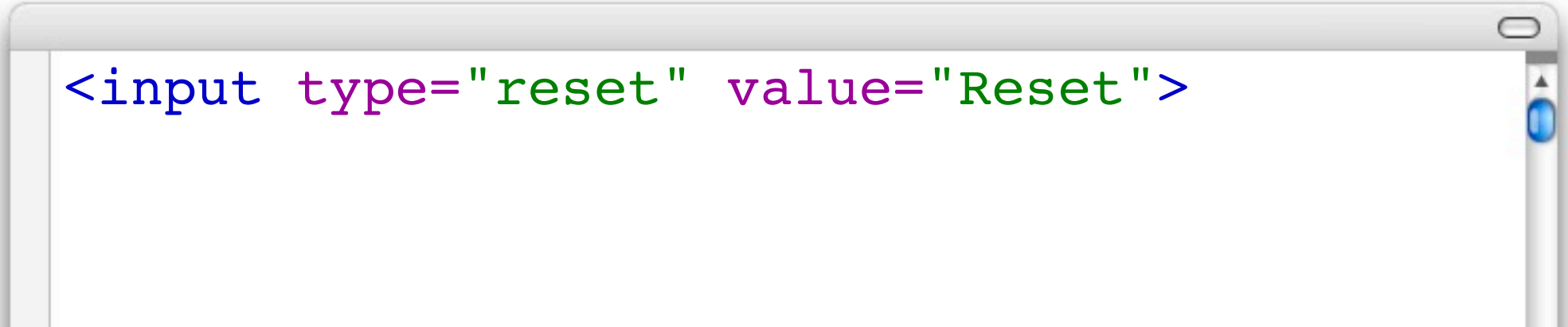
```
<div>
    <input name="loc" value="en-US">
</div>
```

```
<div>
    <input type="hidden" name="loc"
    value="en-US">
</div>
```

# Step 13:

input type="reset"

The input type="reset" creates a **reset button** that resets all controls to their initial values.



**No <label> element is required** for the reset input.

If used, the reset button should be placed carefully on any form as it **can be confused for a submit form**.

Users can become frustrated if they think they have clicked “submit” only to find they have **wiped all of their carefully entered data**.

# Exercise

Let’s add input type=“reset”

```
<div>
    <input value="Reset">
</div>
```

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

# Step 14:

input type="image"

The input type="image" creates a **graphical submit button** that is used to submit form data.

```
<input type="image" src="btn.png"
alt="Submit">
```

The **SRC attribute** is required. It tells the browser where to find the image.

```
<input type="image" src="btn.png"
alt="Submit">
```

The **ALT attribute** is required. It provides a text alternative for devices that cannot load the image.

```
<input type="image" src="btn.png"
alt="Submit">
```

**No <label> element is required** for the image input.

# Exercise

Let’s create an image...

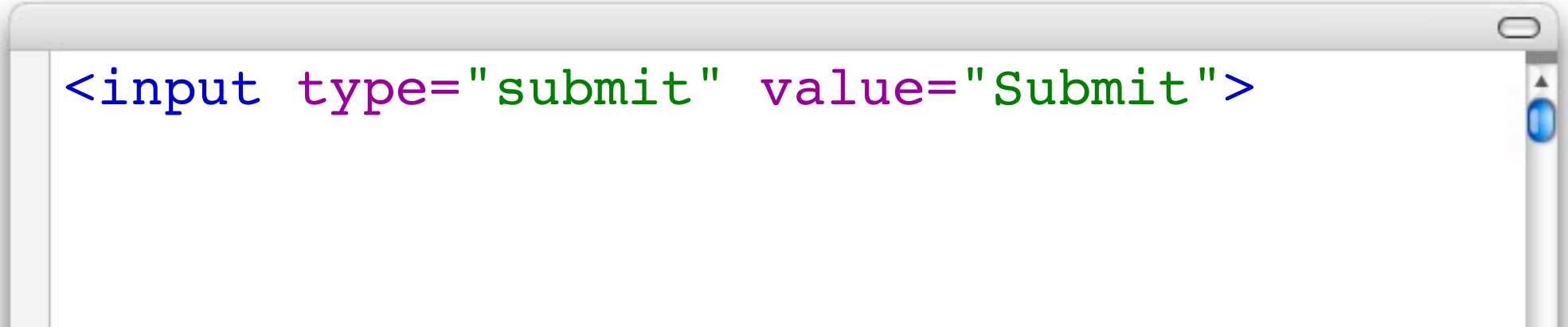
```
<div>
    <input src="button.png">
</div>
```

```
<div>
    <input type="image" src="button.png"
alt="Submit">
</div>
```

## Step 15:

input type="submit"

The input type="submit" creates a **submit button** that is used to submit form data.



**No <label> element is required** for the submit input.

# Exercise

Let’s add input type=“submit”

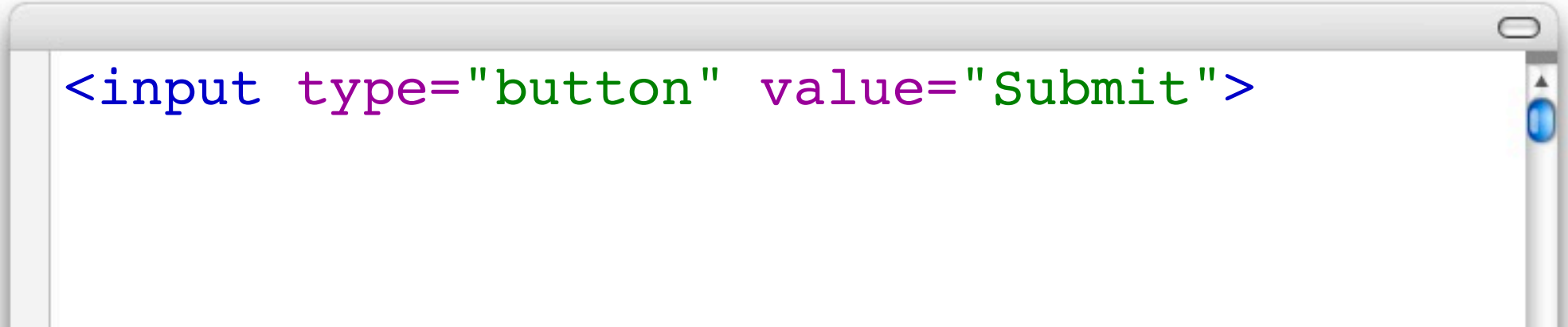
```
<div>
    <input value="Submit">
</div>
```

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

## Step 16:

input type="button"

The input type="button" creates a **push button**. Unlike the submit button, push buttons have no default behavior.



**No <label> element is required** for the button input.

# Exercise

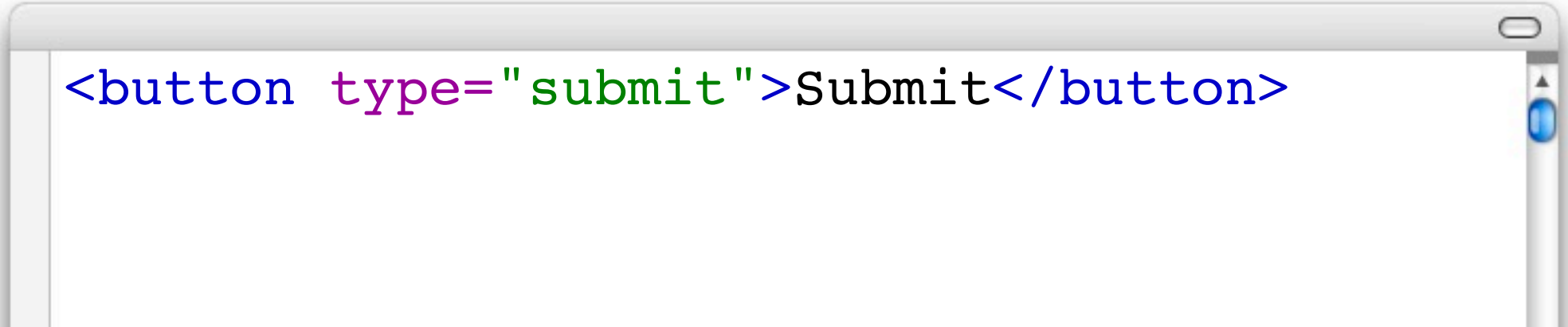
Let’s add input type=“image”, SRC and ALT

```
<div>
    <input value="Submit">
</div>
```

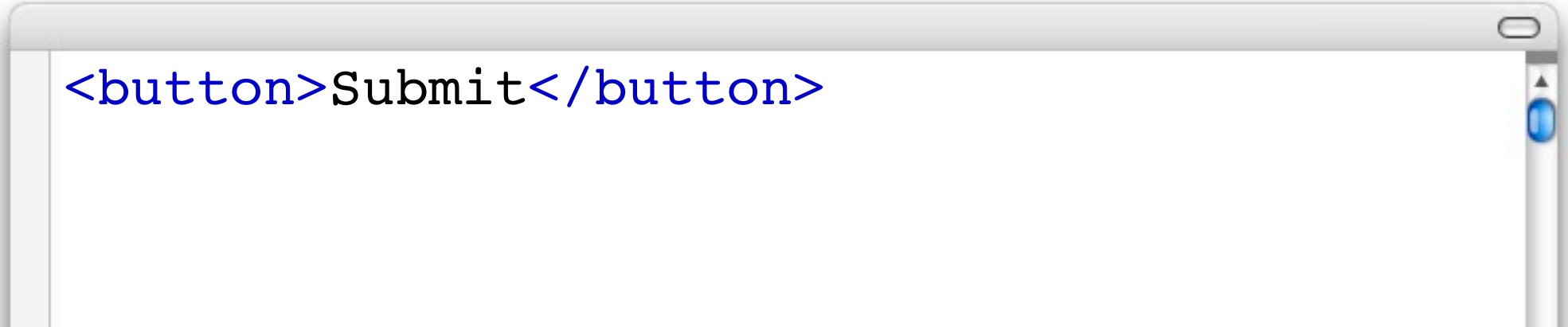
```
<div>
    <input type="button" value="Submit">
</div>
```

# Step 17:
# <button> element

The button element creates a **button** just like input type="button".



The button element includes an **open and closing tag**.



The button element is very flexible as it allows **content as well as HTML markup** inside the element.

```
<button type="submit"><em>Submit</em></
button>
```

**No <label> element is required** for the <button> element.

# Exercise

Let’s add input type=“submit”

```
<div>
    <button>Submit</button>
</div>
```

```
<div>
    <button type="submit">Submit</button>
</div>
```

# Step 18:
# <select> and <option> elements

The **<select> element** creates a dropdown menu. Each choice offered by the menu is represented by an option element.

```
<select>
    <option>Item 1</option>
    <option>Item 2</option>
</select>
```

The <select> element includes start and end tags. The element must contain at least **one option element**.

The boolean **MULTIPLE attribute** can be used to change the element from a dropdown list to a multiple choice list.

```
<select multiple>
    <option>Item 1</option>
    <option>Item 2</option>
</select>
```

The **<option> element** is used to represent each option within the dropdown.

```
<select>
    <option>Item 1</option>
    <option>Item 2</option>
</select>
```

Each <option> element should include a unique **VALUE attribute**.

```
<select>
    <option value="item1">Item 1</option>
    <option value="item2">Item 2</option>
</select>
```

In the cases where the <option> is instructional (ie. “Choose an option”), **a blank value** can be used.

```
<select>
    <option value="">Choose</option>
    <option value="item1">Item 1</option>
    <option value="item2">Item 2</option>
</select>
```

The boolean **SELECTED attribute** can be used to determine the <option> that is displayed by default.

```
<select>
    <option value="" selected>Choose</option>
    <option value="item1">Item 1</option>
    <option value="item2">Item 2</option>
</select>
```

# Exercise

Let’s add a boolean attribute

```
<select id="car" name="car">
    <option value="">Choose</option>
    <option value="volvo">Volvo</option>
    <option value="saab">Saab</option>
    <option value="merc">Merc</option>
    <option value="audi">Audi</option>
</select>
```

```
<select id="car" name="car">
    <option value="" selected>Choose</option>
    <option value="volvo">Volvo</option>
    <option value="saab">Saab</option>
    <option value="merc">Merc</option>
    <option value="audi">Audi</option>
</select>
```

# Step 19: <optgroup> element

The **<optgroup> element** is used to group related options in a drop-down list.

```
<optgroup>
    <option value="volvo">Volvo</option>
    <option value="saab">Saab</option>
</optgroup>
<optgroup>
    <option value="merc">Merc</option>
    <option value="audi">Audi</option>
</optgroup>
```

Each <optgroup> element should be **given a LABEL attribute** to describe the group.

```
<optgroup label="Swedish Cars">
    <option value="volvo">Volvo</option>
    <option value="saab">Saab</option>
</optgroup>
<optgroup label="German Cars">
```

This label is **displayed as a greyed out label** (cannot be chosen by users) within the dropdown list.

# Exercise

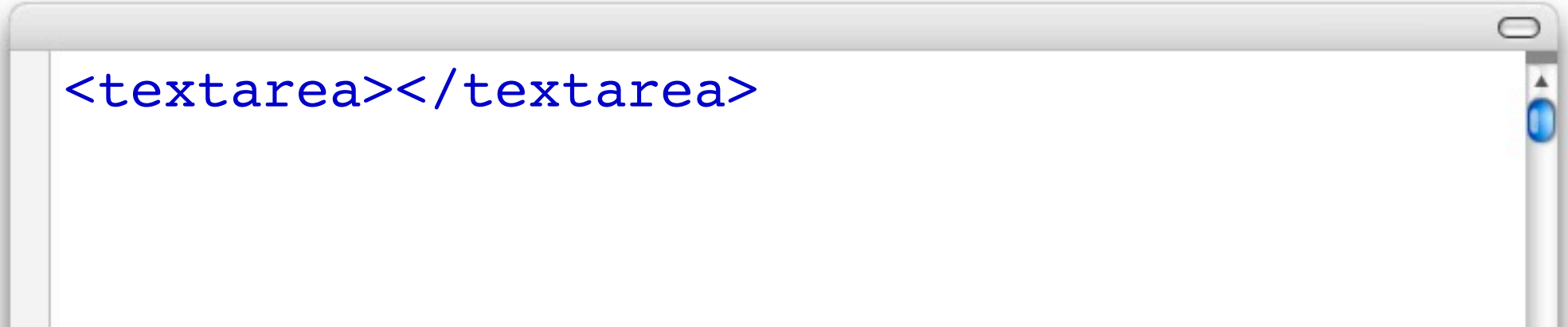
Let’s create some optgroups...

```
<option value="" selected>Choose</option>
<option value="volvo">Volvo</option>
<option value="saab">Saab</option>
<option value="merc">Merc</option>
<option value="audi">Audi</option>
```

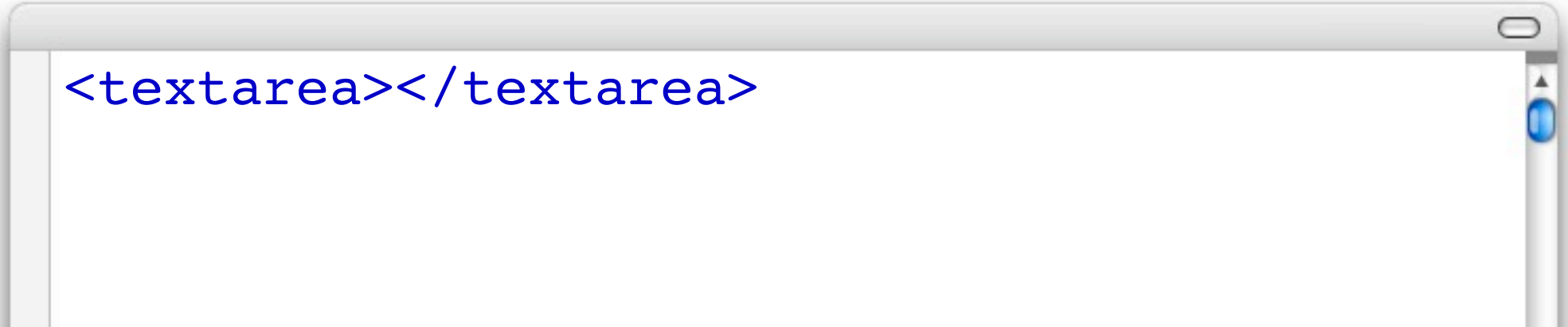
```
<option value="" selected>Choose</option>
<optgroup label="Swedish Cars">
    <option value="volvo">Volvo</option>
    <option value="saab">Saab</option>
</optgroup>
<optgroup label="German Cars">
    <option value="merc">Merc</option>
    <option value="audi">Audi</option>
</optgroup>
```

# Step 20:
# <textarea> element

The textarea element is used to create a **multi-line text input control**.



The textarea element includes an **open and closing tag**. No content is allowed between the opening and closing tags.



# Exercise

Let’s create a textarea...

```
<div>
    <label for="cm">Add a comment</label>
</div>
```

```
<div>
    <label for="cm">Add a comment</label>
    <textarea id="cm" name="cm">
    </textarea>
</div>
```

# Anoopkumar M

Web Design