

23CSCI03P

Web Programming

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Chapter 10

Form Basics

Key Concepts

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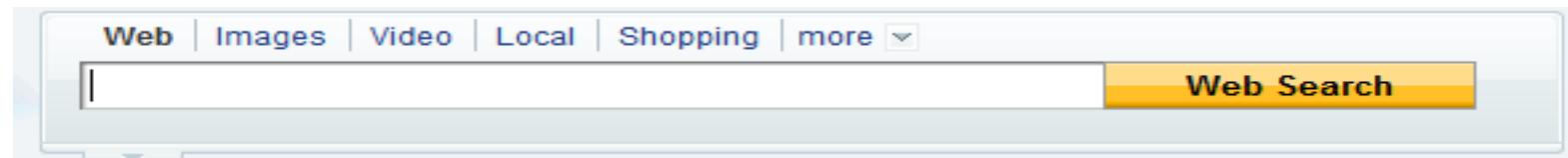
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Learning Outcomes

- Describe **common uses of forms** on web pages
- Create forms on web pages using the form, input, textarea, and select elements
- Associate **form controls** and **groups** using label, fieldset, and legend elements
- Configure new **HTML5** form **controls** and **attributes**

Overview of Forms

- Forms are **used** all over the Web to
 - **Accept information**
 - **Provide interactivity**



- Types of forms:
 - **Search form, Order form, Newsletter sign-up form, Survey form, Add to Cart form, and so on...**

Two Components of Using Forms

1. The **web page form**

An **HTML element** that **contains** and **organizes form controls** such as text boxes, check boxes, and buttons that can accept information from website visitors.

2. The **server-side processing**

Server-side processing works with the form data and sends e-mail, writes to a text file, **updates a database**, or performs some other **type of processing** on the server.

Sample Form HTML



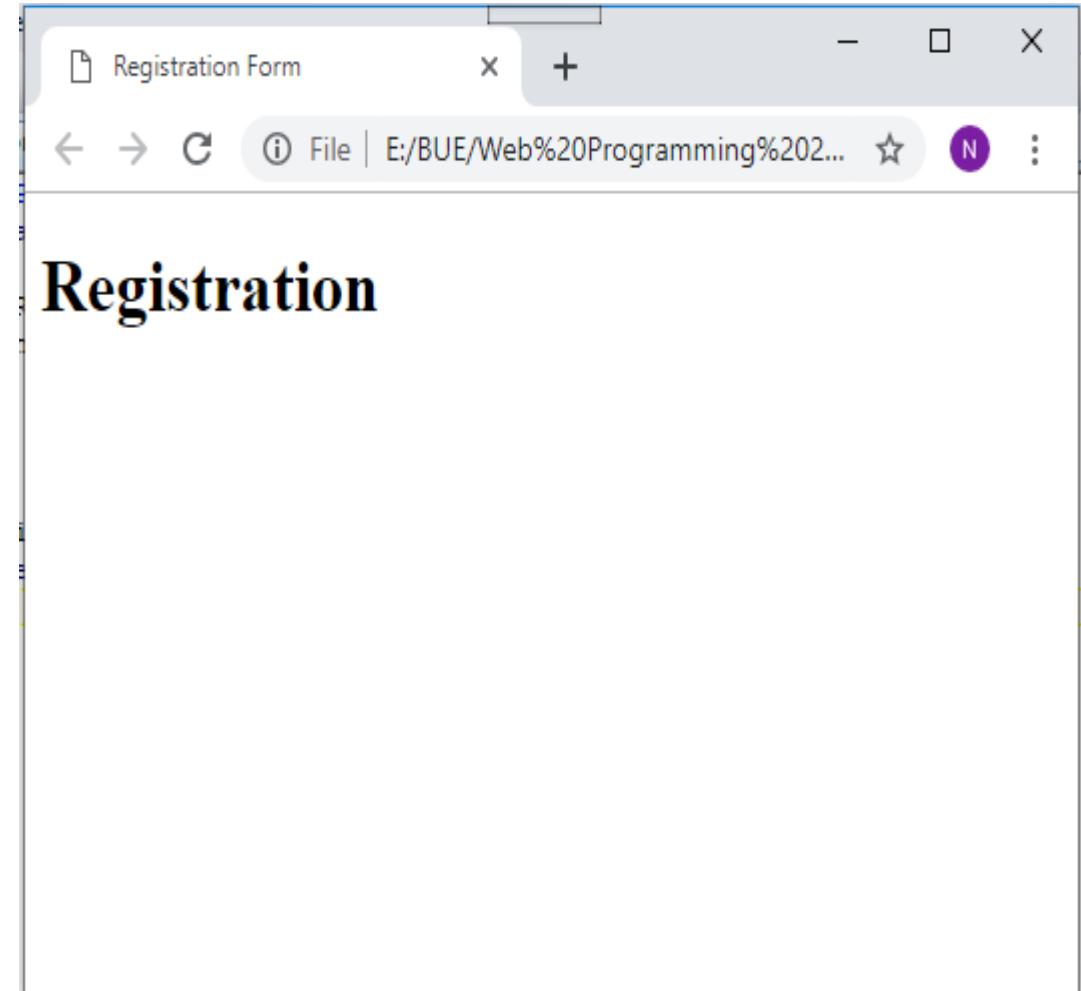
```
<form>  
  
E-mail: <input type="text" name="email" id="email" >  
  
<br><br>  
<input type="submit" value="Sign Me Up!"> <input type="reset">  
</form>
```

The Form Element <form>

- Container Tag
- The form element attributes:
 - **Action:** Specifies the **server-side program or script** that will process your form data
 - Specifies **where to send the form-data** when a form is submitted
 - **Method:**
 - get – default value, form data passed in URL
 - post – more secure, form data passed in HTTP Entity Body
 - **Name:** Identifies the form

Form Example

```
<body>  
<h1>Registration</h1>  
<form method="get">  
</form>  
</body>
```



The Input Element Text Box <input>

- Accepts text information
- Common Attributes:

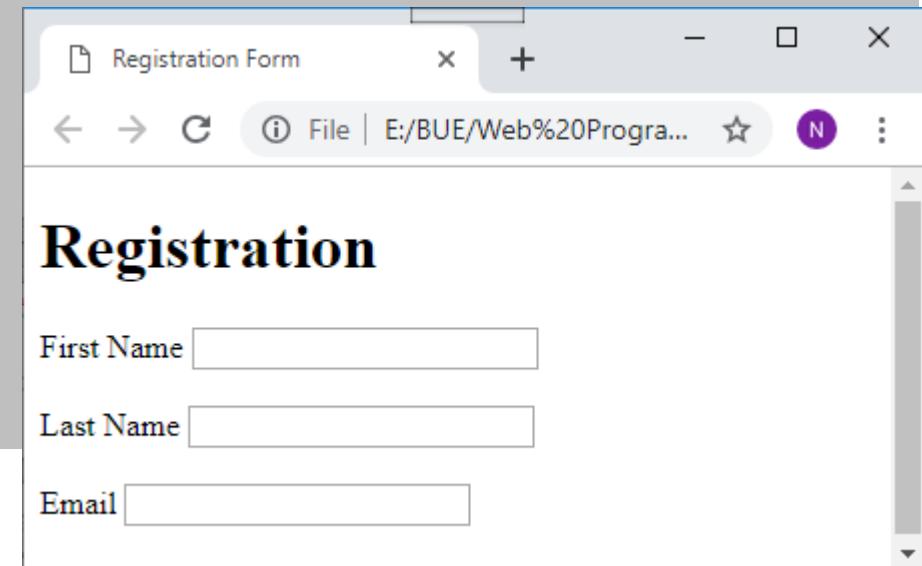
- Type="text"
- Name: **unique** to be accessed by the **server side**
- Id: **unique** to be used for **javascript**
- Size: configures **width** of textbox in the browser
- Maxlength: max no of characters as input
- Value: default value
- Required: (HTML5)
- Placeholder: tip or hint to user (HTML5)

Sample Text Box

Email:

<input type="text" > Example

```
<body>
<h1>Registration</h1>
<form method="get">
First Name <input type="text" name="FName" id="FName"><br><br>
Last Name <input type="text" name="LName" id="LName"><br><br>
Email <input type="text" name="email" id="email"><br><br>
</form>
</body>
```



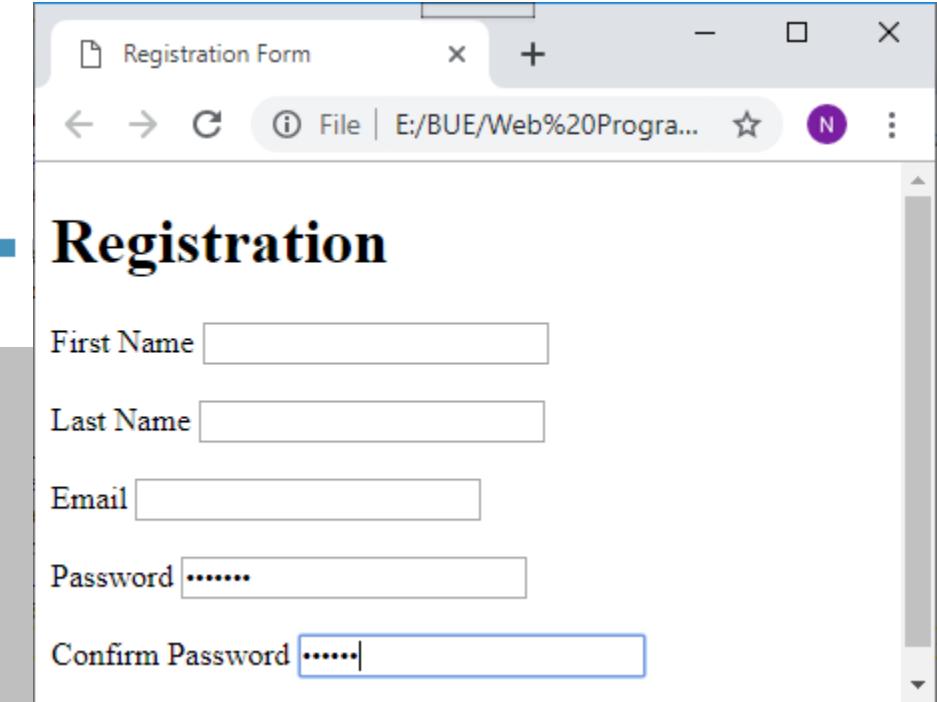
The Input Element Password Box <input>

- Accepts **text information** that needs to be **hidden** as it is entered.
- Common Attributes:
 - type="password"
 - name
 - id
 - size
 - maxlength
 - value
 - required (HTML5)
 - placeholder (HTML5)



Form Example

```
<body>  
<h1>Registration</h1>  
<form method="get">  
.....  
  
Password <input type="password" name="passw" id="passw"><br><br>  
Confirm Password <input type="password" name="cpass" id="cpass"><br><br>  
</form>  
</body>
```



The screenshot shows a web browser window titled "Registration Form". The page content is titled "Registration". It contains five input fields: "First Name" (empty), "Last Name" (empty), "Email" (empty), "Password" (containing "....."), and "Confirm Password" (containing "....."). The "Confirm Password" field has a blue border, indicating it is the active or selected field.

The Input Element Check box <input>

- Allows the user to **select one or more** of a group of **predetermined items**

- Common Attributes:

- type="checkbox"
- name
- id
- Checked: **Specifies** that an <input> **element** should be **pre-selected** when the **page loads**
- value

Sample Check Box

Choose the browsers you use:

- Internet Explorer
- Firefox
- Opera

Form Example

```
<body>
<h1>Registration</h1>
<form method="get">
.....
<br>
</form>
</body>
```

Registration Form

File | E:/BUE/Web%20Program...

Registration

First Name

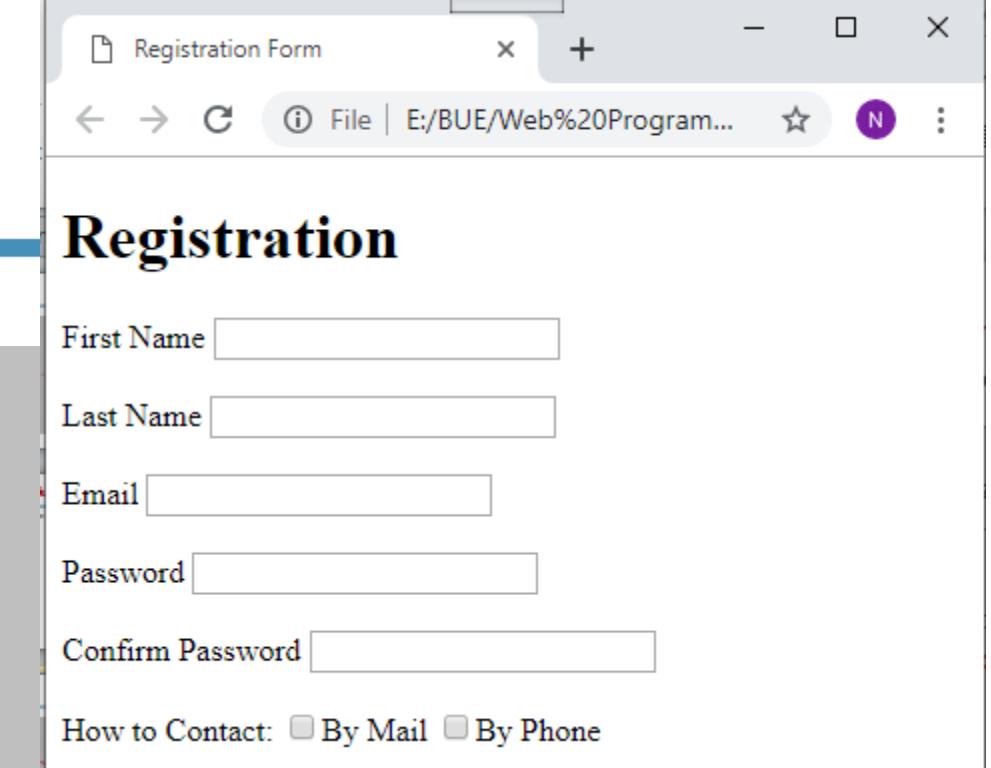
Last Name

Email

Password

Confirm Password

How to Contact: By Mail By Phone



How to Contact: By Mail
 By Phone

</form>

</body>

The Input Element Radio Button <input>

- Allows the user to **select exactly one from a group of predetermined items**
- Each radio button in a group is **given the same name** and a **unique value**
- Common Attributes:
 - type="radio"
 - name
 - id
 - checked
 - value

Sample Radio Buttons

Select your favorite browser:

- Internet Explorer
- Firefox
- Opera

Form Example

```
<body>
<h1>Registration</h1>
<form method="get">
.....
Gender <br>
<input type="radio" name="Gender" id="Male" value="male">Male<br>
<input type="radio" name="Gender" id="Female" value="female">Female<br><br>
</form>
</body>
```

Registration Form

File | E:/BUE/Web%20Program... N :

Registration

First Name

Last Name

Gender

Male

Female

Email

Password

Confirm Password

How to Contact: By Mail By Phone

The Textarea Element <textarea>

- Configures a scrolling text box
- Common Attributes:
 - name
 - id
 - cols
 - rows

Sample Scrolling Text Box

Comments:

Enter your comments here



The image shows a sample HTML form with a title "Sample Scrolling Text Box". Below it is a label "Comments:" followed by a text area. The text area contains the placeholder text "Enter your comments here". It has a standard Windows-style scroll bar on the right side.

Form Example

```
<body>
<h1>Registration</h1>
<form method="get">
.....
Additional Information <br>
<textarea name="Add" id="Add" cols="40"
rows="2"></textarea><br><br>
</form>
</body>
```

Registration Form

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Registration

First Name

Last Name

Gender
 Male
 Female

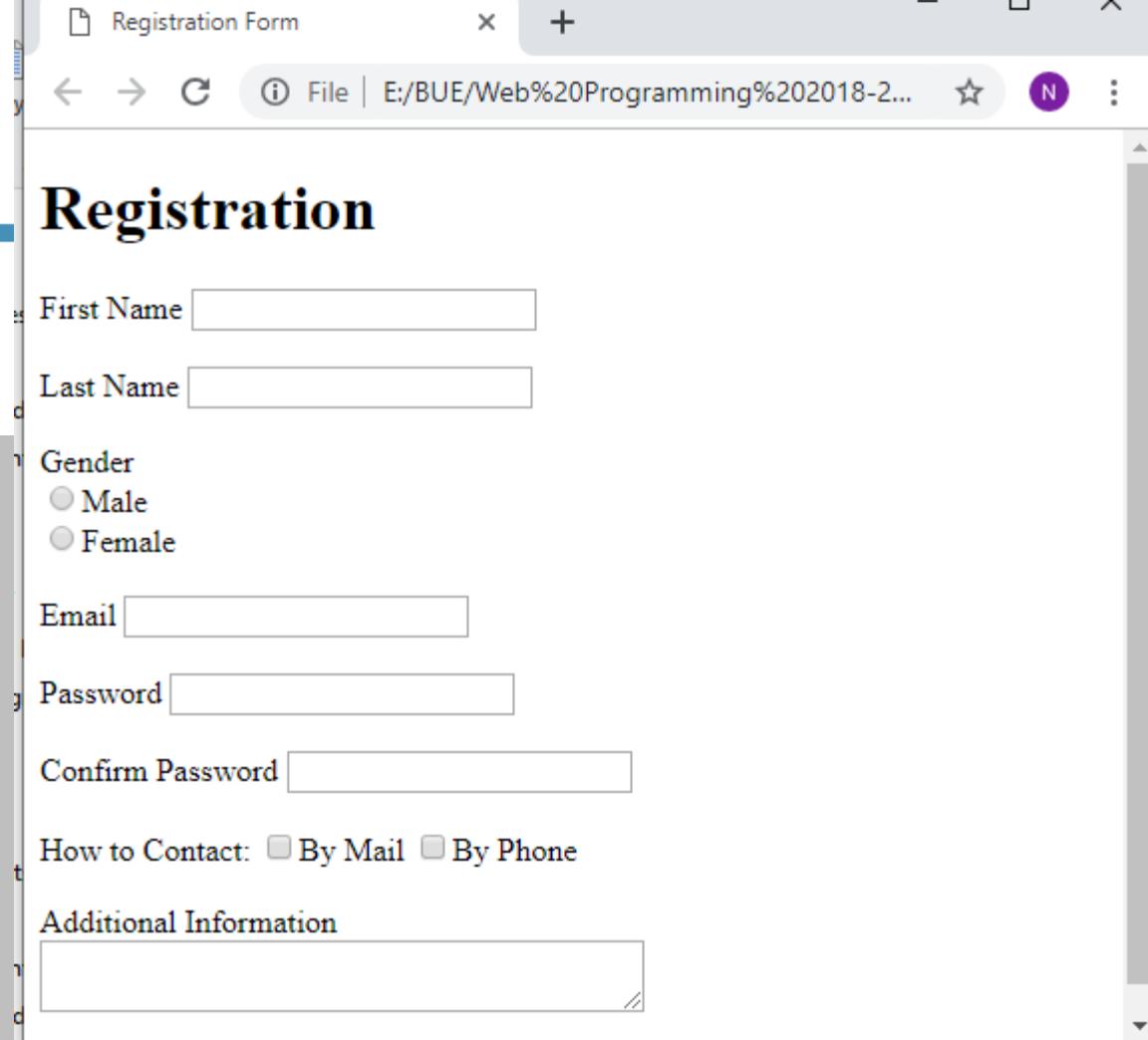
Email

Password

Confirm Password

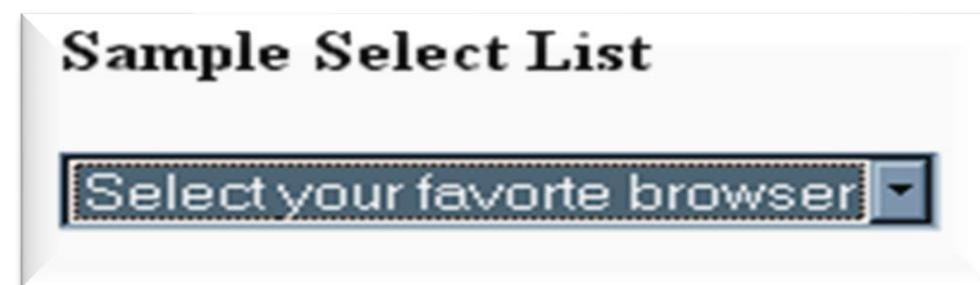
How to Contact: By Mail By Phone

Additional Information



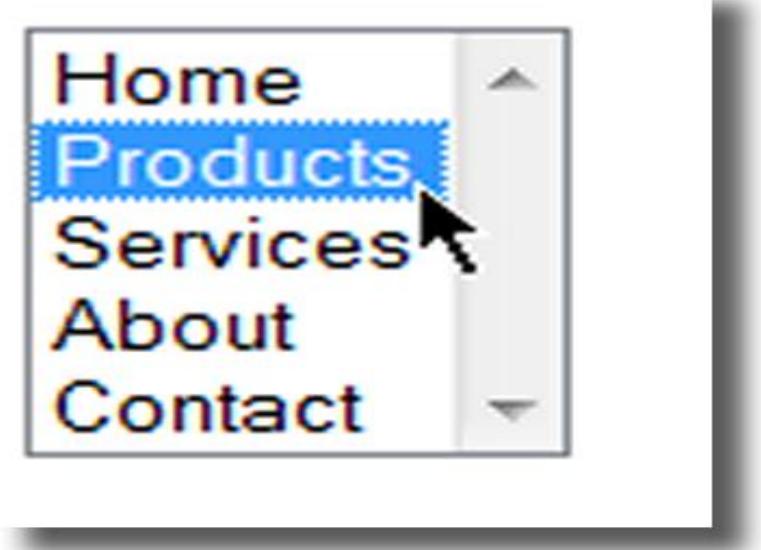
The Select Element <select>

- Configures a **select list** (along with <option> tags)
- Also known as: Select Box, Drop-Down List, Drop-Down Box, and Option Box.
- Allows the user to **select one or more items** from a list of predetermined choices.
- Common Attributes:
 - name
 - id
 - Size: **Defines** the **number of visible options** in a drop-down list



The Option Element <option>

- Configures the **options** in a **Select List**
- Attributes:
 - value



The Select Element <select> Example

```
<body>
<h1>Registration</h1>
<form method="get">
.....
Country <select size="1" name="country" id="country">
    <option>Select Your Country</option>
    <option value="Egypt">Egypt</option>
    <option value="US">United States</option>
    <option value="china">China</option>
    <option value="India">India</option>
</select><br><br>
</form>
</body>
```

Registration

First Name

Last Name

Gender

- Male
 Female

Country

Email

Password

Confirm Password

How to Contact: By Mail By Phone

Additional Information

The Input Element Submit Button <input>

- Submits the **form information**
- When clicked:
 - Triggers the **action** method on the <form> tag
 - Sends the **form data** (the name=value pair for each form element) to the web server.
- Attributes:
 - type="submit"
 - name
 - id
 - value

Sample Submit Button

Submit Query

The Input Element Reset Button <input>

- Resets the form fields to their initial values
- Attributes:
 - type="reset"
 - name
 - id
 - value

Sample Reset Button

Reset

Form Example

```
<body>
<h1>Registration</h1>
<form method="get">
.....
<input type="submit" name="submit"
       id="submit" value="Submit">
<input type="reset">
</form>
</body>
```

Registration

First Name

Last Name

Gender
 Male
 Female

Country

Email

Password

Confirm Password

How to Contact: By Mail By Phone

Additional Information

The Label Element <label>

- Associates a **text label** with a **form control**
- Two Different Formats:

```
<label>Email: <input type="text" name="CustEmail" id="CustEmail"></label>
```

Or

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

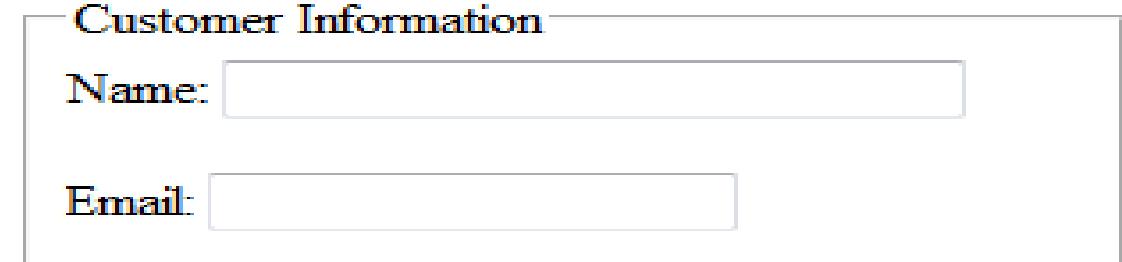
The Fieldset & Legend Elements

- The Fieldset Element <fieldset>
 - Container tag
 - Creates a **visual group** of form controls on a web page
- The Legend Element <legend>
 - Container tag
 - Creates a **text label** within the **fieldset**

Customer Information

Name:

Email:

A screenshot of a web form titled "Customer Information". It contains two input fields: one for "Name" and one for "Email". Each input field has a corresponding label: "Name:" and "Email:". The entire form is enclosed in a light gray border.

```
<fieldset><legend>Customer Information</legend>
<label>Name:
<input type="text" name="CName" id="CName" size="30"></label> <br><br>
<label>Email:
<input type="text" name="CEmail" id="CEmail"></label>
</fieldset>
```

The Fieldset & Legend Elements Example

```
<body>
<h1>Registration</h1>
<form method="get">
.....
<fieldset><legend>Gender</legend>
<input type="radio" name="Gender" id="Male"
value="male">Male<br>
<input type="radio" name="Gender" id="Female"
value="female">Female
</fieldset><br>
</form>
</body>
```

Registration

First Name

Last Name

Gender

- Male
 Female

Country

Email:

Password

Confirm Password

How to Contact: By Mail By Phone

Additional Information

HTML5: Email Text Box <input>

- Accepts text information in e-mail address format
- Common Attributes:
 - type="email"
 - name
 - id
 - size
 - maxlength
 - value
 - placeholder
 - required



HTML5: URL Text Box <input>

- Accepts text information in URL format
- Common Attributes:
 - type="url"
 - name
 - id
 - size
 - maxlength
 - value
 - placeholder
 - required



HTML5: Datalist Control

```
<label for="country">Country</label>
<input type="text" name="country" id="country"
list="countries" >
<datalist id="countries">
    <option value="Egypt">
    <option value="US">
    <option value="china">
    <option value="India">
</datalist><br><br>
```

Registration

First Name

Last Name

Gender Male Female

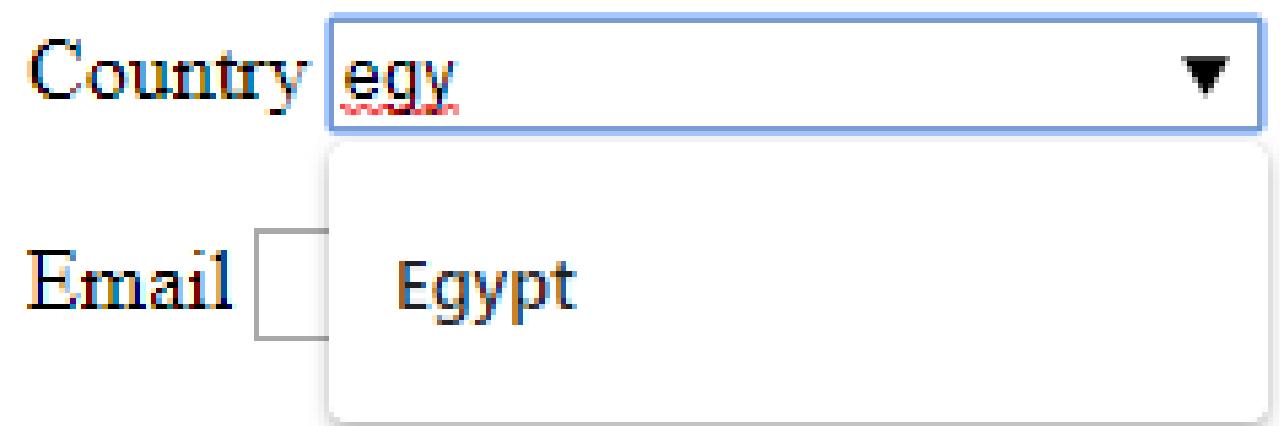
Country ▾

Email Egypt

Password

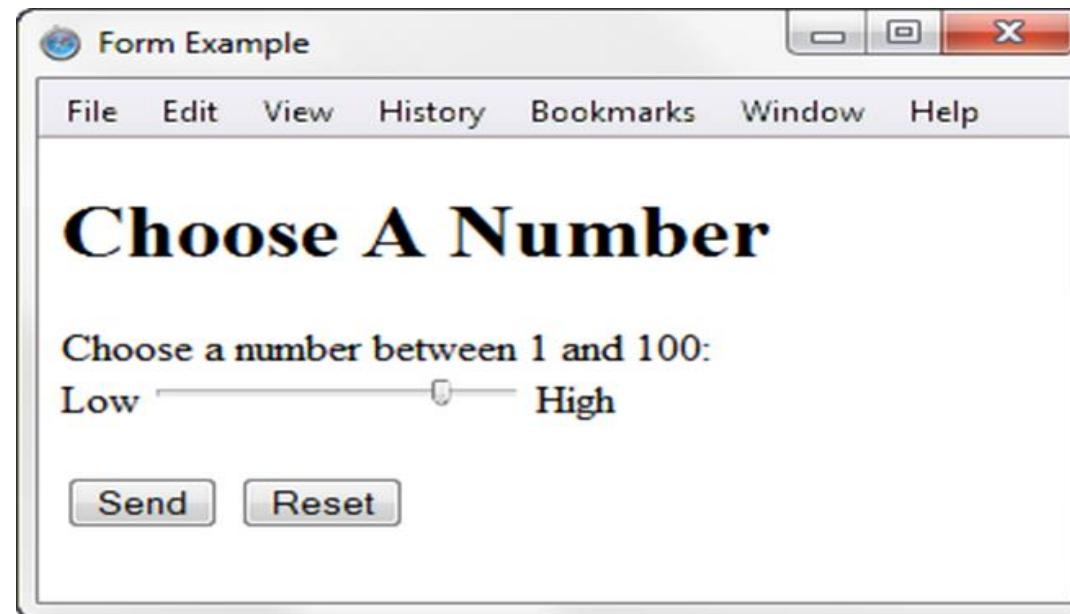
Confirm Password

How to Contact By Mail By Phone



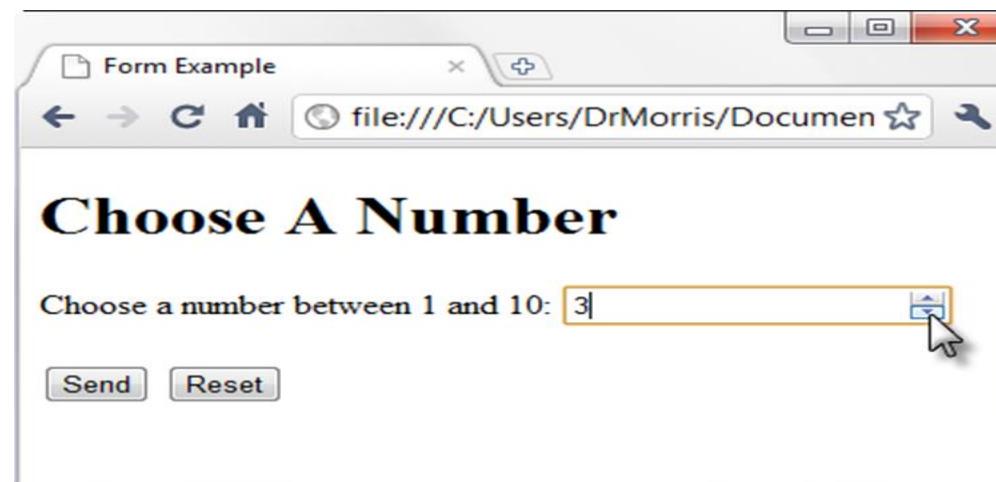
HTML5: Slider Control <input>

```
<label for="myChoice">  
Choose a number between 1 and 100:</label><br>  
Low <input type="range" name="myChoice" id="myChoice" min="0" max="100" /> High
```



HTML5: Spinner Control <input>

```
<label for="myChoice">Choose a number between 1 and 10:</label>
<input type="number" name="myChoice" id="myChoice"
       min="1" max="10">
```



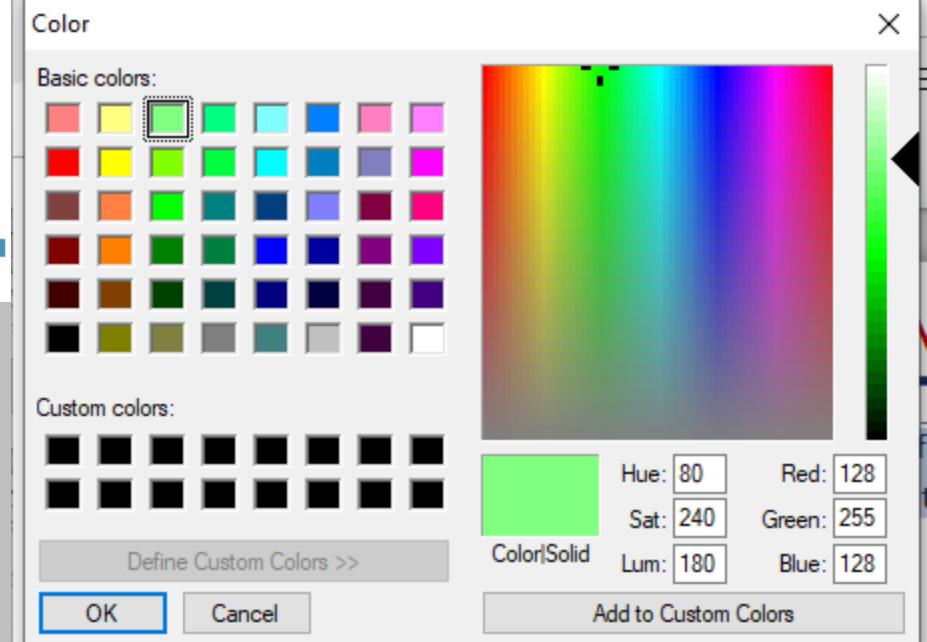
HTML5: Calendar Control <input>

```
<body>  
<h1>Registration</h1>  
<form method="get">  
.....  
<label for="BDate">Birth Date</label>  
<input type="date" name="BDate"  
id="BDate"><br><br>  
  
</form>  
</body>
```

The screenshot shows a registration form with various input fields. The 'Birth Date' field is highlighted in red, indicating it is the current focus or selected field. The calendar interface for this field shows April 2019, with the date '2' selected. Other visible fields include 'First Name', 'Last Name', 'Gender' (with radio buttons for Male and Female), 'Country' (with a dropdown menu showing 'April 2019'), 'Email', 'Password', 'Confirm Pa', 'How to Contact' (with radio buttons for 'By mail' and 'By phone'), and an 'Additional Information' text area. At the bottom are 'Submit' and 'Reset' buttons.

HTML5 Color Control

```
<body>  
  <h1>Registration</h1>  
  <form method="get">  
    .....  
    <label for="myColor">Your Favorite Color</label>  
    <input type="color" name="myColor"  
          id="myColor">  
  </form>  
</body>
```



Email

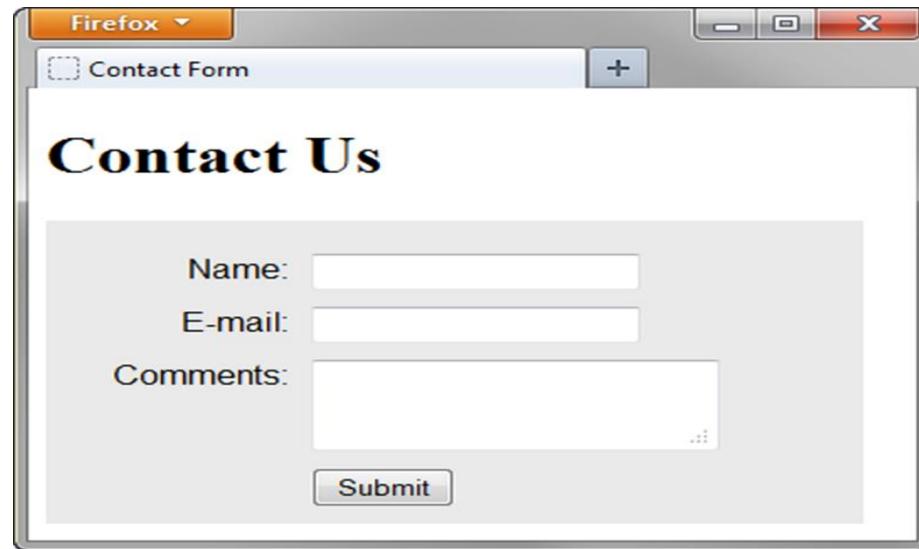
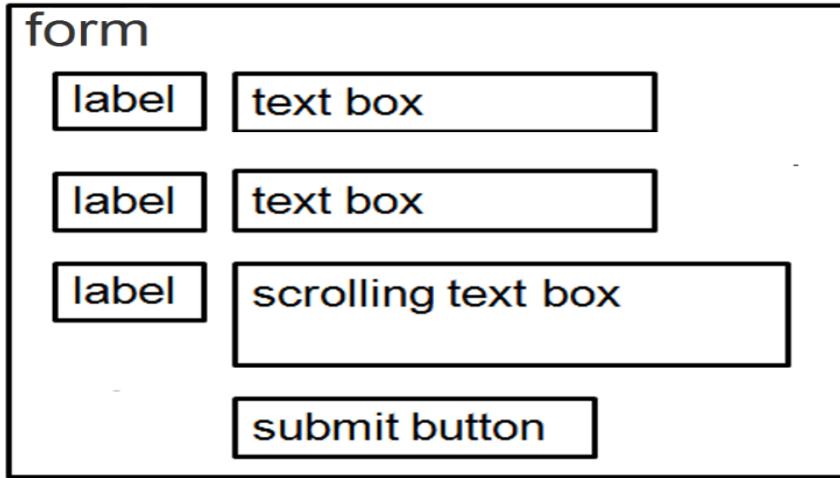
Password

Confirm Password

How to Contact By Mail By Phone

Your favorite color

Using CSS to Style a Form



```
form { background-color:#eaeaea; font-family: Arial, sans-serif;
       width: 350px; padding: 10px;}
label { float: left; clear: left; display: block; width: 100px;
        text-align: right; padding-right: 10px; margin-top: 10px; }
input, textarea { margin-top: 10px; display: block; }
#mySubmit { margin-left: 110px; }
```

Summary

- This chapter introduced the use of forms on web pages.
- You learned about how to configure form elements and provide for accessibility.
- You also learned about new HTML5 form controls and attributes.

Chapter 11

Media and Interactivity Basics

Key Concepts

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Learning Outcomes

- Describe **types** of **multimedia** files used on the Web
- Configure **hyperlinks** to **multimedia** files
- Configure **audio** and **video** on a web page with HTML5 elements
- Use the **CSS3 transform** and **transition** properties

Helper Applications & Plug-ins

- **Helper Application**
 - A program that can be designated to **handle** a particular **file type** (such as .wav or.mpg) to allow the user to view or otherwise utilize the special file.
 - The helper application runs in a **separate window** from the browser.
- **Plug-In**
 - A newer and more common method
 - Plug-ins **run right in** the browser window so that media objects can be **integrated** directly into the web page.

Commonly Used Plug-ins

- Adobe Reader
- Windows Media Player
- Apple Quicktime

Common Audio File Types

- .wav Wave File
- .aiff Audio Interchange File Format
- .mid Musical Instrument Digital Interface (MIDI)
- .au Sun UNIX sound file
- .mp3 MPEG-1 Audio Layer-3
- .ogg Ogg Vorbis (open-source)
- .m4a MPEG 4 Audio.
This audio-only MPEG-4 format is supported by Quicktime, iTunes, and iPods.

Common Video File Types

- .mov Quicktime
- .avi Microsoft Audio Video Interleaved
- .wmv Windows Media File
- .flv Flash Video File
- .mpg MPEG (Motion Picture Experts Group)
- .m4v .mp4 (MPEG-4)
- .ogv Ogg Theora (open-source)
- .webm VP8 codec (open video format, free)

Copyright Issues

- Only publish web pages, images, and other media that you have **personally created** or have obtained the rights or license to use.
- Ask permission to use media created by another person instead of simply “grabbing” it.
- All work (including web pages) are **automatically copyrighted** even if there is not copyright mark or date.
- Fair Use Clause of the Copyright Act

Configure Audio & Video

- Most basic method to provide audio or video files:
 - Hyperlink

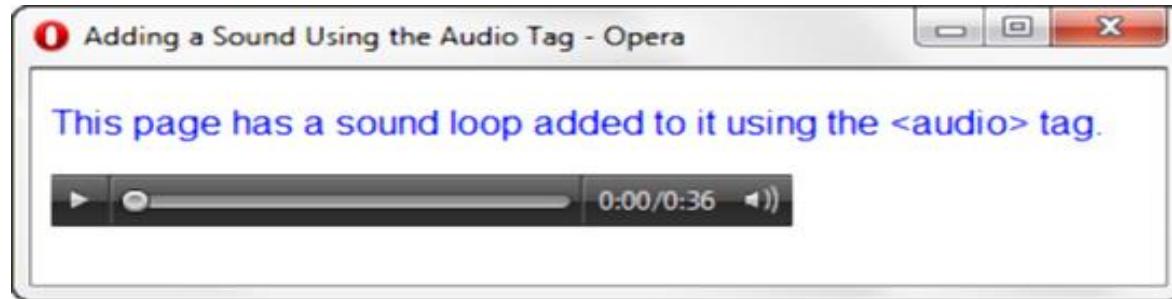
```
<a href="wdfpodcast.mp3" title="Web Design  
Podcast">Web Design Podcast</a>
```



Multimedia & Accessibility

- Provide alternate content
 - Transcript (for audio)
 - Captions (for video)
 - Text format

HTML5 Audio & Source Elements



```
<audio controls="controls">  
  <source src="soundloop.mp3" type="audio/mpeg">  
  <source src="soundloop.ogg" type="audio/ogg">  
  <a href="soundloop.mp3">Download the Audio File</a> (MP3)  
</audio>
```

HTML5 Video & Source Elements



```
<video controls="controls" poster="sparky.jpg"  
width="160" height="150">  
  <source src="sparky.m4v" type="video/mp4">  
  <source src="sparky.ogv" type="video/ogg">  
  <a href="sparky.mov">Sparky the Dog</a> (.mov)  
</video>
```

Use the iframe element to embed YouTube Video

```
<iframe src="http://www.youtube.com/embed/VIDEO_ID" width="640"  
height="385">
```

View the

```
<a href="http://www.youtube.com/watch?v=VIDEO_ID">YouTube Video</a>  
</iframe>
```



CSS3 Transform Property

- Allows you to rotate, scale, skew, or move an element

- Example:

```
rotate(3deg);  
scale (x,y)  
scaleX(x)  
scaleY(y)  
translate (x,y)  
translateX(x)  
translateY(y)
```



CSS3 Transition Property

- Provides for changes in **property values** to display in a smoother manner over a **specified time**.
- Example:

```
nav a:hover { color: #869dc7; background-color: #eaeaea;  
transition: background-color 2s linear; }
```

```
Transition {Transition property;  
Transition Duration ;  
Transition-Timing-Function}
```



HTML5 Details and Summary Element

- The **details element** and **summary element** are used together to configure an **interactive widget** that **hide** and **show** content.
- **Details Element** : To **configure** the browser to render an **interactive widget** that contains **one summary element** and **detailed information**.

<details></details>

- **Summary Element:** is coded within the details element. The purpose of the summary element is to **contain** the **summary text shown in the interactive widget**.

<summary></summary>

Principles of Visual Design

- ▶ Repetition
- ▶ Contrast
- ▶ Proximity
- ▶ Alignment

Principles of Visual Design

- ▼ Repetition

Repeat visual components throughout the design

- ▶ Contrast
- ▶ Proximity
- ▶ Alignment

Summary

- This chapter introduced the HTML techniques and technologies used to configure **sound**, **video**, and **interactivity** on web pages.
- Issues related to accessibility and copyright were also discussed.
- The number one reason for visitors to leave web pages is too long of a download time. When using multimedia, be careful to minimize this issue.