

SOEN 287

WEB

PROGRAMMING



<http://www.switched.com/2010/05/11/what-is-html5-and-why-should-you-care/>

Topics

❖ Part1:

- Evolution of HTML
- HTML syntax & tags
- Character Entities
- Meta data
- Images
- Links
- Lists
- Tables

❖ Part2:

- **Forms – a first look**
- `<audio>` element
- `<video>` element



Forms

- Allow user interaction
- Will start by looking at how to create a form.
- To make them do something we need a programming language like JavaScript and PHP
- `<form></form>` is used to transmit information to the server

Welcome to Millenium Gynmastics Booster Club
Popcorn Sales

Buyer's Name:
 Street Address:
 City, State, Zip:

Product Name	Price	Quantity
Unpopped Popcorn (1 lb.)	\$3.00	<input type="text"/>
Caramel Popcorn (2 lb. cannister)	\$3.50	<input type="text"/>
Caramel Nut Popcorn (2 lb. cannister)	\$4.50	<input type="text"/>
Toffey Nut Popcorn (2 lb. cannister)	\$5.00	<input type="text"/>

Payment Method:

☒ Visa
☐ Master Card
☐ Discover
☐ Check

Done

Forms ...

form tag is a container for form elements

- Text boxes
- Password boxes
- Text areas
- Select lists
- Check boxes
- Radio buttons
- Buttons
- Labels

The image displays several examples of HTML form elements:

- Login Form:** A form with a label "UserName :", a text input field, and "Submit" and "Reset" buttons. A red error message "Name is required." is shown above the input field.
- Field Labels:** Two labels, "Field 1 :" and "Field 2 :", are shown next to their respective input fields.
- Select List:** A dropdown menu with options "option 2", "option 1", and "option 2".
- Radio Buttons:** A group of radio buttons for selecting an age range: "0-15", "16-30", "31-45" (selected), "46-60", and "61+". An "Enter" button is also present.
- Selection Modes:** A comparison of "Single Selection Mode" and "Multiple Selection Mode" for planets.

Single Selection Mode	Multiple Selection Mode
<input type="radio"/> Mercury	<input type="checkbox"/> Mercury
<input type="radio"/> Venus	<input checked="" type="checkbox"/> Venus
<input checked="" type="radio"/> Earth	<input type="checkbox"/> Earth
<input type="radio"/> Mars	<input checked="" type="checkbox"/> Mars
<input type="radio"/> Jupiter	<input type="checkbox"/> Jupiter
<input type="radio"/> Saturn	<input checked="" type="checkbox"/> Saturn
<input type="radio"/> Uranus	<input type="checkbox"/> Uranus
<input type="radio"/> Neptune	<input type="checkbox"/> Neptune

Components of a form

- `<form> </form>` tags define the form as a part of the page

- How to use:

```
<form action = "">  
</form>
```

action attribute indicates what should happen when the form is submitted

- `<label>` to set a chunk of text as a label
- `<input></input>` tags to collect data

Form 1: Coffee1.html



Welcome to Bahareh's Coffee Shop

Buyer's Name:

Address:

Password

(6 to 20 characters)

Syntax for the different input Widgets (or controls)

- **text field/box** with a **label**



Name is required.

UserName :

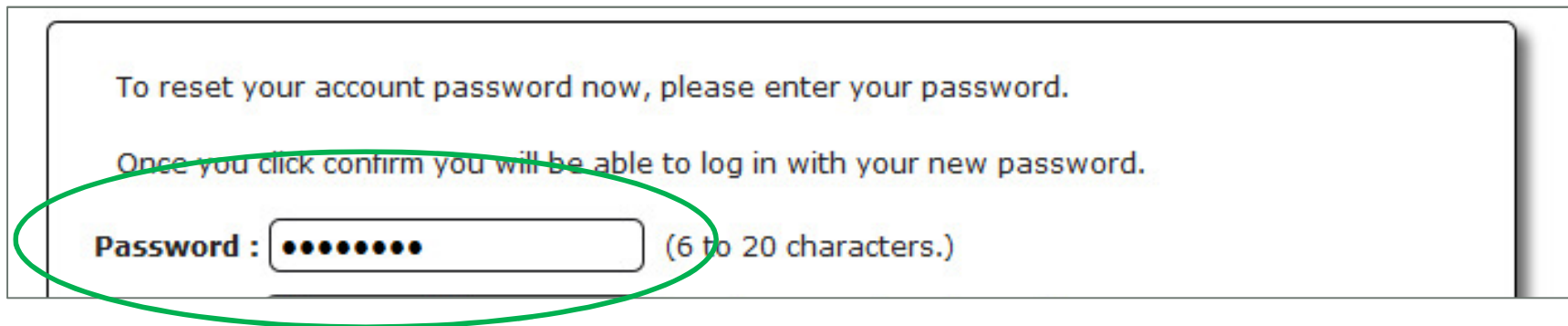
```
<label>User Name</label>
```

```
<input type ="text" name="usrNm" />    or
```

```
<input type ="text" name ="usrNm" value="Enter  
your name"/>
```

Syntax for the different input Widgets (or controls)

- **password field** with a **label**



To reset your account password now, please enter your password.

Once you click confirm you will be able to log in with your new password.

Password : (6 to 20 characters.)

<p>

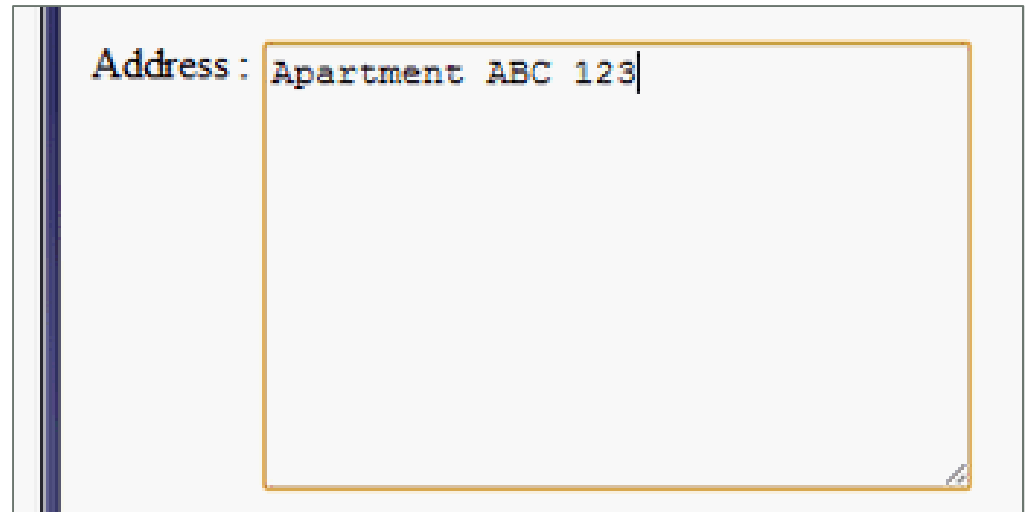
<label>Password</label>

<input type = "password" name="usrNm"/>(6 to
20 characters))

</p>

Syntax for the different input Widgets (or controls)

- **textarea** with a **label**

A screenshot of a web form. On the left, there is a vertical blue bar. To its right, the text 'Address:' is displayed. Further right is a large rectangular text area with a thin orange border. Inside the text area, the text 'Apartment ABC 123' is written in a monospaced font, and a cursor is visible at the end of the line.

<p>

<label>Address:</label>

<textarea name = "address"

rows = "10"

columns = "20"></textarea>

Syntax for the different input Widgets (or controls)

- Drop Down Menu**

Welcome to Bahareh's Coffee Shop

What type of coffee would you like?

Welcome to Bahareh's Coffee Shop

What type of coffee would you like?

What type of coffee would you like? ☒ Regular

```
<label> What type of coffee would you like?
  <select name = "coffee">
    <option value = "reg"> Regular </option>
    <option value = "lat"> Latte </option>
    <option value = "chocMoc"> Chocolate
Mocha</option>
    <option value = "whtChocMoc"> White Chocolate
Mocha </option>
  </select>
</label>
```

Syntax for the different input Widgets (or controls)

- **Check boxes** with a **label**

```
<form action="">
  ...
```

```
  <label>What type of coffee would you like?
    <input type ="checkbox" name="coffee"
      value = "reg" checked/>
```

Regular

```
  </label><br />
```

```
  <label><input type ="checkbox" name="coffee"
    value = "lat" />Latte
  </label><br />
```

...

```
</form>
```

What type of coffee would you like?

☒ Regular

☐ Latte

☐ Chocolate Mocha

☐ White Chocolate Mocha

Syntax for the different input Widgets (or controls)

- Radio buttons**

```
<form action="">
```

```
  <label><input type ="radio" name="coffee"
    value = "reg" checked/>
```

```
    Regular
```

```
  </label><br />
```

```
  <label><input type ="radio" name="coffee"
    value = "lat"  />Latte
```

```
</label><br />
```

```
  ...
```

```
</form>
```

What type of coffee would you like?

☒ Regular

☐ Latte

☐ Chocolate Mocha

☐ White Chocolate Mocha

Syntax for the different input Widgets (or controls)

- **Action buttons**



A screenshot of a web form. At the top, there is a red error message: "Name is required.". Below it is a label "UserName :" followed by an empty text input field. At the bottom of the form, there are two buttons: "Submit" and "Reset". These two buttons are circled in green.

```
<form action="">
```

```
...
```

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

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

```
...
```

```
</form>
```

Demo - Forms

- Selection: Coffee2.html

Welcome to Bahareh's Coffee Shop

What type of coffee would you like?

What type of coffee would you like?

- ☒ Regular
- ☐ Latte
- ☐ Chocolate Mocha
- ☐ White Chocolate Mocha

What type of coffee would you like?

- ☒ Regular
- ☐ Latte
- ☐ Chocolate Mocha
- ☐ White Chocolate Mocha



Forms with Legend and Fieldset

- `<fieldset>` is used to group several controls as well as labels.
- `<legend>` provides a label/title for the `<fieldset>`
- (form.legend.html)

`<form>`

`<fieldset>`

`<legend>Choose your favorite food</legend>`

`<label> <input type="radio" name="Pizza"/>Pizza</label>
`

`<label><input type="radio" name="sandwich"/>Sandwich</label>
`

`<label><input type="radio" name="Fish and Chips"/>Fish and Chips</label>`

`</fieldset>`

`</form>`

Topics

- Evolution of HTML
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- Character Entities
- Meta data
- Images
- Links
- Lists
- Tables
- Forms – a first look
- `<audio>` **element**
- `<video>` **element**



The <audio> element

- Prior to HTML5, a plug-in was required to play sound while a document was being displayed such as Flash or Microsoft's Media Player
- New in HTML5 is the <audio> tag



```
<audio attributes>
```

```
  <source src = "filename1" >
```

```
  ...
```

```
  <source src = "filenamen" >
```

```
    Your browser does not support the audio element  
</audio>
```

- Browser chooses the first audio file it can play and skips the rest of the content of audio element content

The <audio> element (cont'd)



- Different browsers have different audio capabilities

HTML Audio - Browser Support (updated Sept/2018)

Currently, there are 3 supported file formats for the <audio> element: MP3, Wav, and Ogg:

Browser	MP3	Wav	Ogg
Internet Explorer	YES	NO	NO
Chrome	YES	YES	YES
Firefox	YES	YES	YES
Safari	YES	YES	NO
Opera	YES	YES	YES

http://www.w3schools.com/html/html5_audio.asp

The <audio> element (cont'd)



- The controls attribute, which is set to controls", creates a start/stop button, a clock, a progress slider, total time of the file, and a volume slider

HTML5 Audio Tags

Tag	Description
<u><audio></u>	Defines sound content
<u><source></u>	Defines multiple media resources for media elements, such as <video> and <audio>

http://www.w3schools.com/html/html5_audio.asp

The <audio> element (cont'd)



- The `controls` attribute of `<audio>`:
`<audio controls = "controls" >`
- Creates
 - a start/stop button
 - a clock
 - a progress slider
 - total time of the file
 - a volume slider



<audio> element (example)



```
<!DOCTYPE html>
<!-- audio.html - Test the audio element -->
<html lang = "en" >
  <head>
    <title> Test audio element </title>
    <meta charset = "utf-8" />
  </head>
  <body>
    This is a test of the audio element
    <audio controls= "controls" >
      <source src = "nineoneone.ogg" />
      <source src = "nineoneone.wav" />
      <source src = "nineoneone.mp3" />
    Your browser does not support the audio element
    </audio>
  </body>
</html>
```

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- `<video>` element





The <video> element

- Just like <audio> prior to HTML5, there was no standard way to play video clips while a document was being displayed

- New in HTML5 is the <video> tag

```
<video attributes>
```

```
  <source src = "filename1" >
```

```
  ...
```

```
  <source src = "filenamen" >
```

```
    Your browser does not support the video element  
</video>
```

- Browser chooses the first video file it can play and skips the content; if none, it displays the content



The <video> element (cont'd)

- Different browsers have different video capabilities

HTML Video - Browser Support (updated Sept/2018)

Currently, there are 3 supported video formats for the <video> element: MP4, WebM, and Ogg:

Browser	MP4	WebM	Ogg
Internet Explorer	YES	NO	NO
Chrome	YES	YES	YES
Firefox	YES	YES	YES
Safari	YES	NO	NO
Opera	YES (from Opera 25)	YES	YES



The `<video>` element (cont'd)

- Possible attributes of the `<video>` element
 - `autoplay`: play as soon as ready
 - `height`: of video player (pixels)
 - `loop`: play video non-stop
 - `muted`: video start off muted
 - `poster`: image to display while video is loading
 - `src`: url of video
 - `width`: of video player (pixels)

The video element (example)



```
<!DOCTYPE html>
<!-- testvideo.html test the video element -->
<html lang = "en">
  <head>
    <meta charset = "UTF-8" />
    <title> test video element </title>
  </head>
  <body>
    This is a test of the video element.....
    <video width = "600" height = "500"
      controls= "contrpls" loop= "loop" muted= "muted"
      poster = " logoc.png" >
      <source src = "NorskTippingKebab.mp4" />
      <source src = "NorskTippingKebab.ogv" />
      <source src = "NorskTippingKebab.webm" />
      Your browser does not support the video
      element
    </video>
  </body>
</html>
```

Demo – Audio & Video



- audio.html
- testvideo.html
- Testvideo2.html

HTML Validation

- Browsers are designed to be robust and deal with many errors in web pages
- Therefore, most pages on the web have errors
 - Lots and lots of errors
- How pages render, with errors, is browser dependent
- You can validate your pages online using <http://validator.w3.org/>
- Or offline using IDEs like IntelliJ or

List of tags we have seen ...

DISCUSS



You try! (Cont.)



- Design a form

Personal	
Name	<input type="text"/>
Email	<input type="text"/>
Phone	<input type="text"/>
Subject	<input type="text" value="Appointment"/>
Message	
Message	<input type="text"/>
	<input type="button" value="Submit"/>

You try!

- Design a form



Personal		
Name	<input type="text"/>	
Email	<input type="text"/>	
Phone	<input type="text"/>	
Subject	<div>Appointment ▼ Appointment Interview Regarding a post</div>	
Message	<input type="text"/>	
Message	<input type="text"/>	<input type="button" value="Submit"/>