HTML Tables and Forms

Chapter 5

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Fundamentals of Web Development

Chapter 5

1 Introducing Tables

2 Styling Tables

3 Introducing Forms

4 Form Control Elements

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Introducing Tables

Basic Table Structure

Introducing Tables

Basic Table Structure

<table>

<tr>	The Death of Marat *<td>*	Jacques-Louis David *<td>*	1793 *<td>*	162cm *<td>*	128cm *<td>*
<tr>	Burial at Ornans *<td>*	Gustave Courbet *<td>*	1849 *<td>*	314cm *<td>*	663cm *<td>*

```
<table>
    <tr>
        <td>The Death of Marat</td>
        <td>Jacques-Louis David</td>
        <td>1793</td>
        <td>162cm</td>
        <td>128cm</td>
    </tr>
    <tr>
        <td>Burial at Ornans</td>
        <td>Gustave Courbet</td>
        <td>1849</td>
        <td>314cm</td>
        <td>663cm</td>
    </tr>
</table>
```
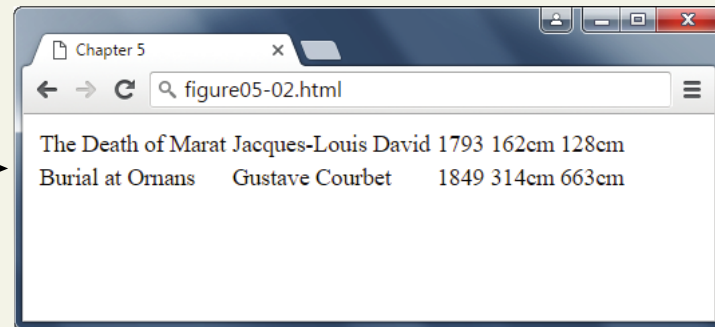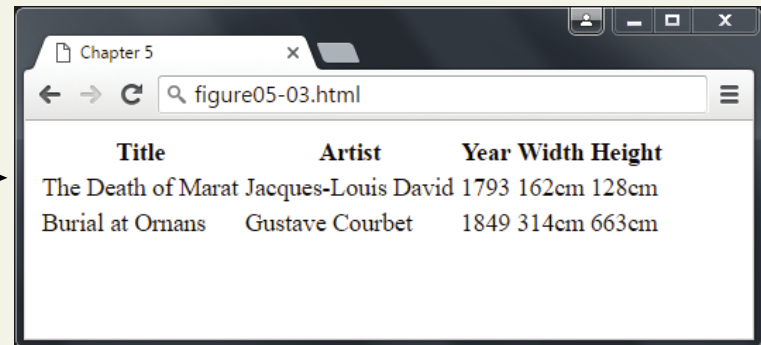
Chapter 5

figure05-02.html

The Death of Marat Jacques-Louis David 1793 162cm 128cm
Burial at Ornans   Gustave Courbet   1849 314cm 663cm

Introducing Tables

Adding Headings

Title	Artist	Year	Width	Height
The Death of Marat	Jacques-Louis David	1793	162cm	128cm
Burial at Ornans	Gustave Courbet	1849	314cm	663cm

`<table>` `<tr>` `<th>` `<td>`

```html
<table>
    <tr>
        <th>Title</th>
        <th>Artist</th>
        <th>Year</th>
        <th>Width</th>
        <th>Height</th>
    </tr>
    <tr>
        <td>The Death of Marat</td>
        <td>Jacques-Louis David</td>
        <td>1793</td>
        <td>162cm</td>
        <td>128cm</td>
    </tr>
    <tr>
        <td>Burial at Ornans</td>
        <td>Gustave Courbet</td>
        <td>1849</td>
        <td>314cm</td>
        <td>663cm</td>
    </tr>
</table>
```


Chapter 5 — figure05-03.html

Title	Artist	Year	Width	Height
The Death of Marat	Jacques-Louis David	1793	162cm	128cm
Burial at Ornans	Gustave Courbet	1849	314cm	663cm

Introducing Tables

Spanning Columns

Title	Artist	Year	Size (width x height)	
The Death of Marat	Jacques-Louis David	1793	162cm	128cm
Burial at Ornans	Gustave Courbet	1849	314cm	663cm

<table>

<tr> ... *<th>* ... *<th>* ... *<th>* ... *<th colspan=2>*

<tr> ... *<td>* ... *<td>* ... *<td>* ... *<td>* ... *<td>*

<tr> ... *<td>* ... *<td>* ... *<td>* ... *<td>* ... *<td>*

```
<table>
    <tr>
        <th>Title</th>
        <th>Artist</th>
        <th>Year</th>
        <th colspan="2">Size (width x height)</th>
    </tr>
    <tr>
        <td>The Death of Marat</td>
        <td>Jacques-Louis David</td>
        <td>1793</td>
        <td>162cm</td>
        <td>128cm</td>
    </tr>
    ...
</table>
```

Notice that this row now only has four cell elements.

Introducing Tables

Spanning Rows

`<table>`

Artist `<th>`	Title `<th>`	Year `<th>`	`<tr>`
Jacques-Louis David `<td rowspan=3>`	The Death of Marat `<td>`	1793 `<td>`	`<tr>`
	The Intervention of the Sabine Women `<td>`	1799 `<td>`	`<tr>`
	Napoleon Crossing the Alps `<td>`	1800 `<td>`	`<tr>`

```
<table>
    <tr>
        <th>Title</th>
        <th>Artist</th>
        <th>Year</th>
    </tr>
    <tr>
        <td rowspan="3">Jacques-Louis David</td>
        <td>The Death of Marat</td>
        <td>1793</td>
    </tr>
    <tr>
        <td>The Intervention of the Sabine Women</td>
        <td>1799</td>
    </tr>
    <tr>
        <td>Napoleon Crossing the Alps</td>
        <td>1800</td>
    </tr>
</table>
```

Notice that these two rows now only have two cell elements.

Introducing Tables

Additional Table Elements

A title for the table is good for accessibility.

These describe our columns, and can be used to aid in styling.

Table header could potentially also include other <tr> elements.

Yes, the table footer comes *before* the body.

Potentially, with styling the browser can scroll this information, while keeping the header and footer fixed in place.

```html
<table>
    <caption>19th Century French Paintings</caption>
    <col class="artistName" />
    <colgroup id="paintingColumns">
        <col />
        <col />
    </colgroup>

    <thead>
        <tr>
            <th>Title</th>
            <th>Artist</th>
            <th>Year</th>
        </tr>
    </thead>

    <tfoot>
        <tr>
            <td colspan="2">Total Number of Paintings</td>
            <td>2</td>
        </tr>
    </tfoot>

    <tbody>
        <tr>
            <td>The Death of Marat</td>
            <td>Jacques-Louis David</td>
            <td>1793</td>
        </tr>
        <tr>
            <td>Burial at Ornans</td>
            <td>Gustave Courbet</td>
            <td>1849</td>
        </tr>
    </tbody>

</table>
```
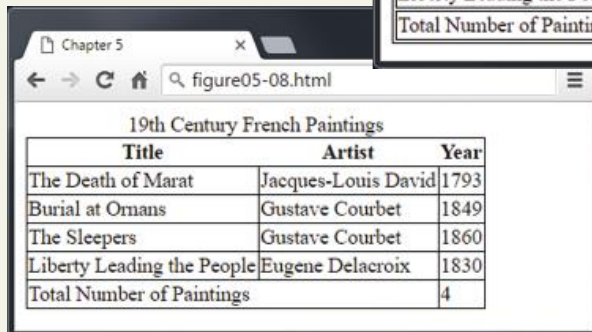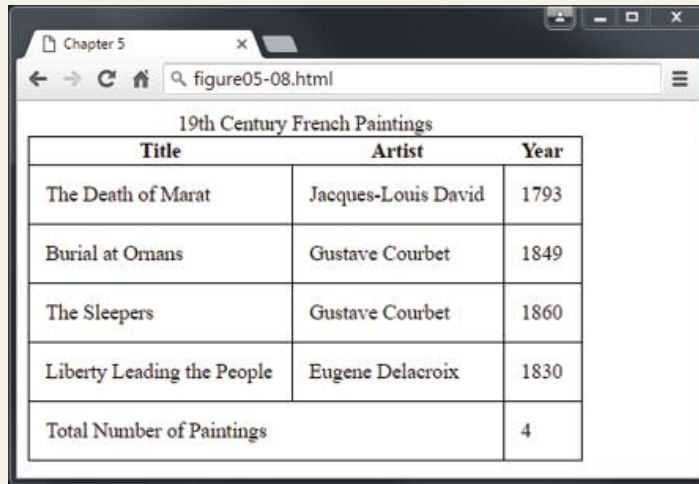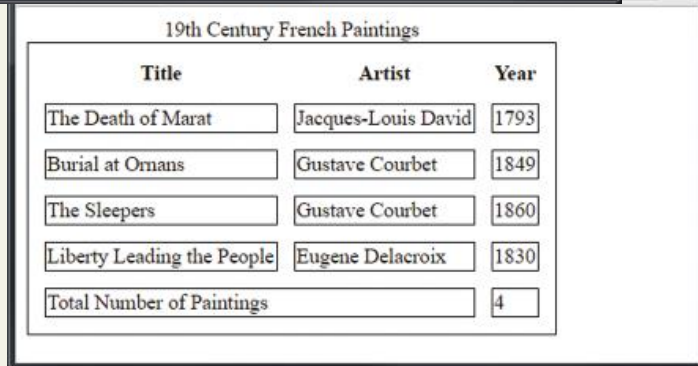
Chapter 5 — figure05-06.html

19th Century French Paintings

Title	Artist	Year
The Death of Marat	Jacques-Louis David	1793
Burial at Ornans	Gustave Courbet	1849
Total Number of Paintings		2
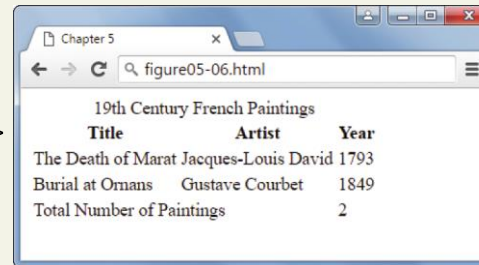
Introducing Tables

Using Tables for Layout
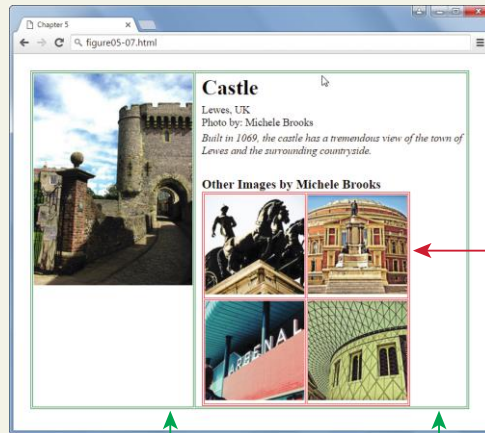

```html
<table>
  <tr>
    <td>
      <img src="images/959.jpg" alt="Castle"/>
    </td>
    <td>

      <h2>Castle</h2>
      <p>Lewes, UK</p>
      <p>Photo by: Michele Brooks</p>
      <p>Built in 1069, the castle has a tremendous
         view of the town of Lewes and the
         surrounding countryside.
      </p>


      <h3>Other Images by Michele Brooks</h3>

      <table>
        <tr>
          <td><img src="images/464.jpg" /></td>
          <td><img src="images/537.jpg" /></td>
        </tr>
        <tr>
          <td><img src="images/700.jpg" /></td>
          <td><img src="images/828.jpg" /></td>
        </tr>
      </table>
    </td>
  </tr>
</table>
```

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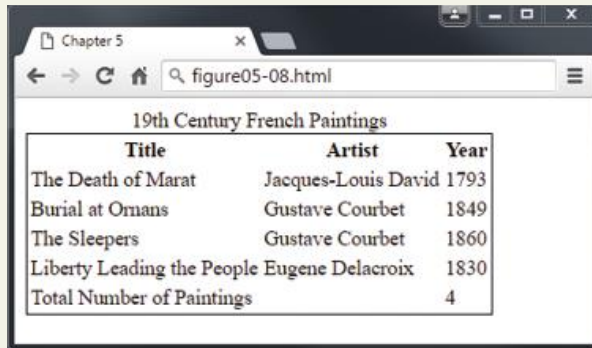
5 Table and Form Accessibility

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Styling Tables

Table Borders


```css
table {
    border: solid 1pt black;
}
```

```css
table {
    border: solid 1pt black;
}
td {
    border: solid 1pt black;
}
```

```css
table {
    border: solid 1pt black;
    border-collapse: collapse;
}
td {
    border: solid 1pt black;
}
```

Styling Tables

Table Borders


```
table {
    border: solid 1pt black;
    border-collapse: collapse;
}
td {
    border: solid 1pt black;
    padding: 10pt;
}
```

```
table {
    border: solid 1pt black;
    border-spacing: 10pt;
}
td {
    border: solid 1pt black;
}
```

Styling Tables

Boxes


```css
caption {
    font-weight: bold;
    padding: 0.25em 0 0.25em 0;
    text-align: left;
    text-transform: uppercase;
    border-top: 1px solid #DCA806;
}
table {
    font-size: 0.8em;
    font-family: Arial, sans-serif;
    border-collapse: collapse;
    border-top: 4px solid #DCA806;
    border-bottom: 1px solid white;
    text-align: left;
}
```

Styling Tables

Boxes


```css
thead tr {
    background-color: #CACACA;
}
th {
    padding: 0.75em;
}
```

Styling Tables

Boxes


```css
tbody tr {
    background-color: #F1F1F1;
    border-bottom: 1px solid white;
    color: #6E6E6E;
}
tbody td {
    padding: 0.75em;
}
```

Styling Tables

Hover & Zebras


```
tbody tr:hover {
    background-color: #9e9e9e;
    color: black;
}
```



```
tbody tr:nth-child(even) {
    background-color: lightgray;
}
```

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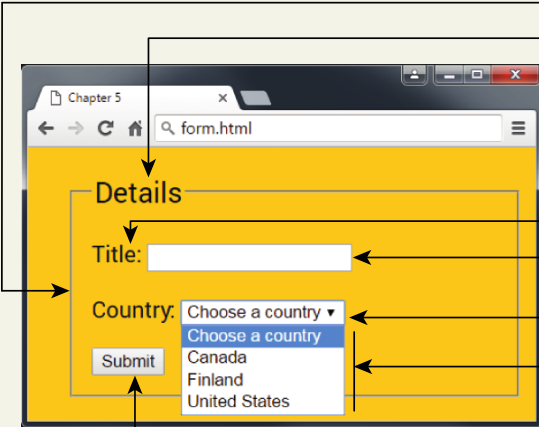# Introducing Forms

Form Structure


```html
<form method="post" action="process.php">
  <fieldset>
    <legend>Details</legend>
    <p>
      <label>Title: </label>
      <input type="text" name="title" />
    </p>
    <p>
      <label>Country: </label>
      <select name="where">
        <option>Choose a country</option>
        <option>Canada</option>
        <option>Finland</option>
        <option>United States</option>
      </select>
    </p>
    <input type="submit" />
  </fieldset>
</form>
```
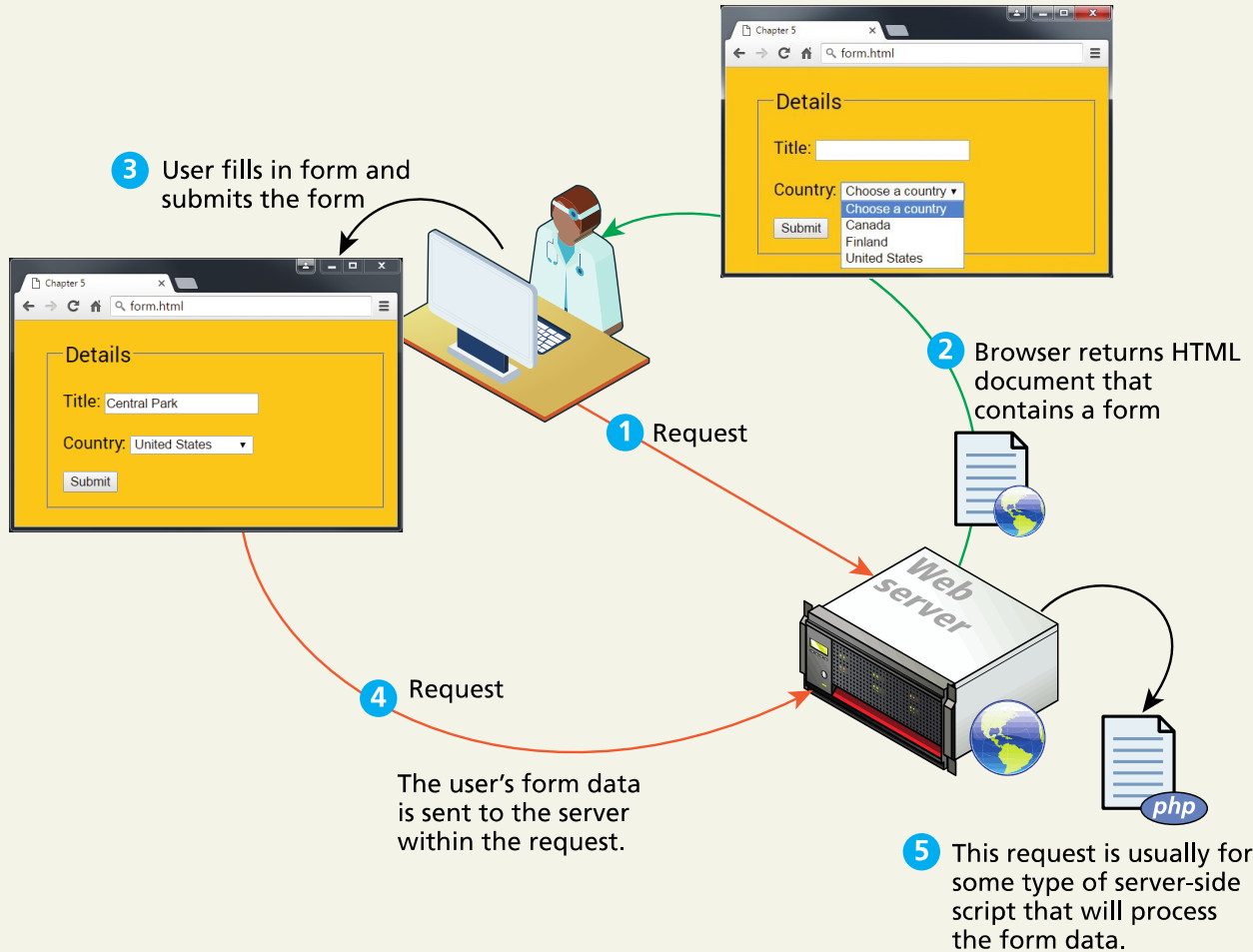
Introducing Forms

How Forms Work

3 User fills in form and submits the form

1 Request

2 Browser returns HTML document that contains a form

4 Request

The user's form data is sent to the server within the request.

5 This request is usually for some type of server-side script that will process the form data.

Introducing Forms

Query Strings
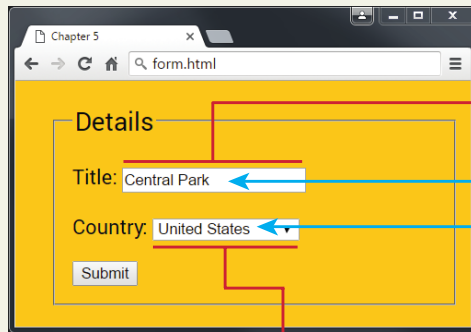
```
<input type="text" name="title" />
```



```
title=Central+Park&where=United+States
```

```
<select name="where">
```

Introducing Forms

GET and POST


```
<form method="get" action="process.php">
```

```
GET /process.php?title=Central+Park&where=United+States http/1.1
```
query string

```
<form method="post" action="process.php">
```

```
POST /process.php http/1.1
Date: Sun, 21 May 2017 23:59:59 GMT
Host: www.mysite.com
User-Agent: Mozilla/4.0
Content-Length: 47

title=Central+Park&where=United+States
```
HTTP Header

query string

Introducing Forms

HTML Form elements

- \<button\>

- \<datalist\>

- \<fieldset\>

- \<form\>

- \<input\>

- \<label\>

- \<legend\>

- \<option\>

- \<optgroup\>

- \<select\>

- \<textarea\>

- \<output\>

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Form Control Elements

Text Input Controls

```
<input type="text" ... />
```
Text: [   ]

```
<textarea>                    <textarea placeholder="enter some text">
  enter some text             </textarea>
</textarea>
```

TextArea: [enter some text]   TextArea: [Enter some text]

```
<input type="password" ... />
```
Password: [   ]   Password: [••••   ]

```
<input type="search" placeholder="enter search text" ... />
```
Search: [enter search text]   Search: [HTML   ✖]

```
<input type="email" ... />
```
Email: [fdsdfs]   *In Opera*
    [Please enter a valid email address]

Email: [sdasdas]   *In Chrome*
    [⚠ Please enter an email address.]

```
<input type="url" ... />
```
url: [sdsdfdf]
    [⚠ Please enter a URL.]

```
<input type="tel" ... />
```
Tel: [   ]

Form Control Elements

New in HTML5 – pattern and datalist

```
<input type="text" ... placeholder="L#L #L#" pattern="[a-z][0-9][a-z] [0-9][a-z][0-9]"  />
```

Postal: [L#L #L#]   Postal: [abcd]
⚠ Please match the requested format.

Search City: [P]
Paris
Prague

```
<input type="text" name="city" list="cities"  />

<datalist id="cities">
    <option>Calcutta</option>
    <option>Calgary</option>
    <option>London</option>
    <option>Los Angeles</option>
    <option>Paris</option>
    <option>Prague</option>
</datalist>
```

Form Control Elements

Choice Controls (<select>)

```
<select name="choices">
  <option>First</option>
  <option selected>Second</option>
  <option>Third</option>
</select>
```

```
<select size="3" ... >
```

```
<select ... >
 <optgroup label="North America">
   <option>Calgary</option>
   <option>Los Angeles</option>
 </optgroup>
 <optgroup label="Europe">
   <option>London</option>
   <option>Paris</option>
   <option>Prague</option>
 </optgroup>
</select>
```

Form Control Elements

Choice Controls <select> using value attribute

```
?choices=Second
```

```
<select name="choices">
  <option>First</option>
  <option>Second</option>
  <option>Third</option>
</select>
```

Select: Second
First
Second
Third

```
<select name="choices">
  <option value="1">First</option>
  <option value="2">Second</option>
  <option value="3">Third</option>
</select>
```

```
?choices=2
```
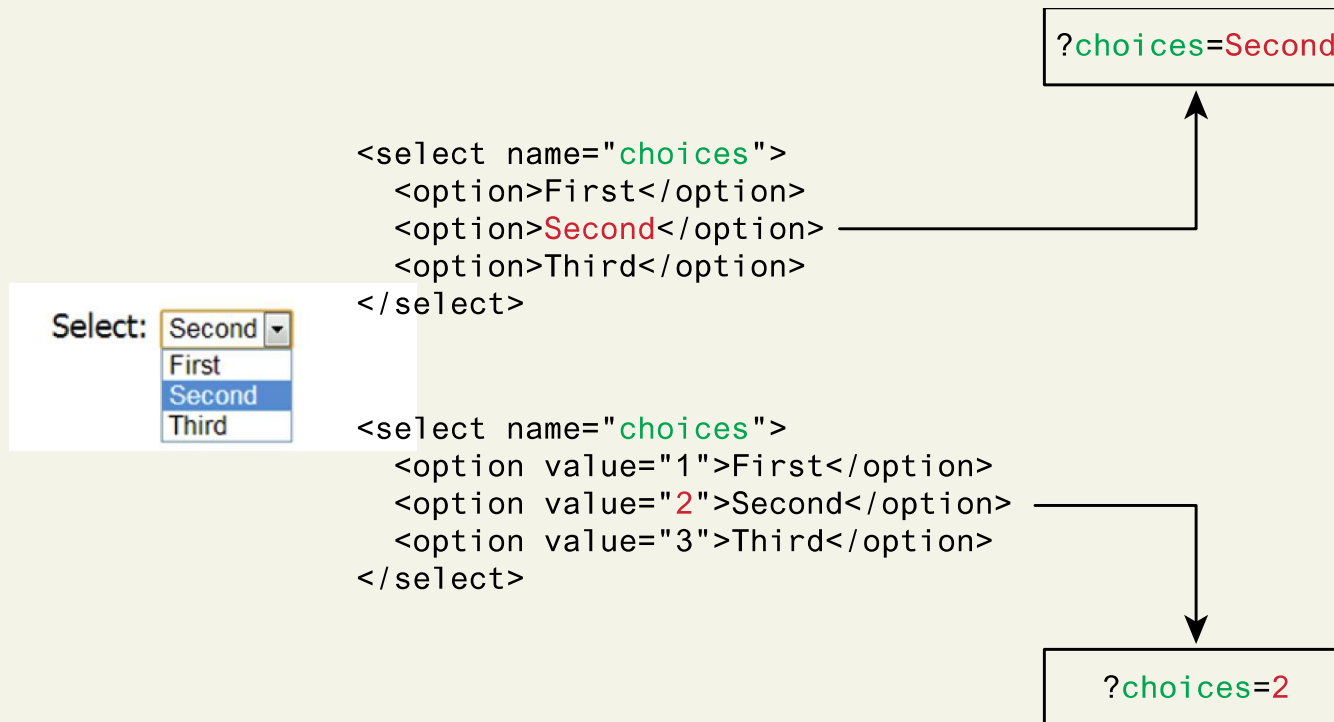
Form Control Elements

Button Controls (radio)

Continent:
- ○ North America
- ◉ South America
- ○ Asia

```
<input type="radio" name="where" value="1">North America<br/>
<input type="radio" name="where" value="2" checked>South America<br/>
<input type="radio" name="where" value="3">Asia
```

Form Control Elements

Button Controls (checkbox)

I accept the software license ☑
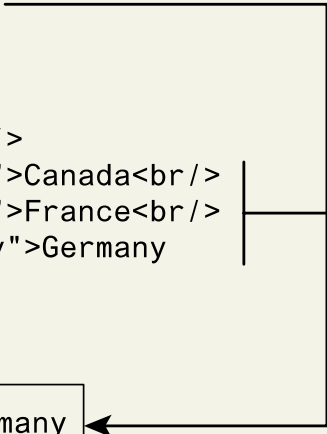
Where would you like to visit?
☑ Canada
☐ France
☑ Germany

```
<label>I accept the software license</label>
<input type="checkbox" name="accept" >



<label>Where would you like to visit? </label><br/>
<input type="checkbox" name="visit" value="canada">Canada<br/>
<input type="checkbox" name="visit" value="france">France<br/>
<input type="checkbox" name="visit" value="germany">Germany
```

```
?accept=on&visit=canada&visit=germany
```

Form Control Elements

Button Controls (checkbox)

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

Submit Reset

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

```
<input type="button" value="Click Me" />
```

Click Me

```
<input type="image" src="appointment.png" />
```

Edit Email

```
<button>
    <a href="email.html">
        <img src="images/email.png" alt="..."/>
        Email
    </a>
</button>
```

```
<button type="submit"  >
    <img src="images/edit.png" alt="..."/>
    Edit
</button>
```
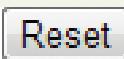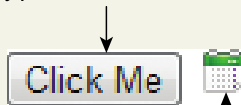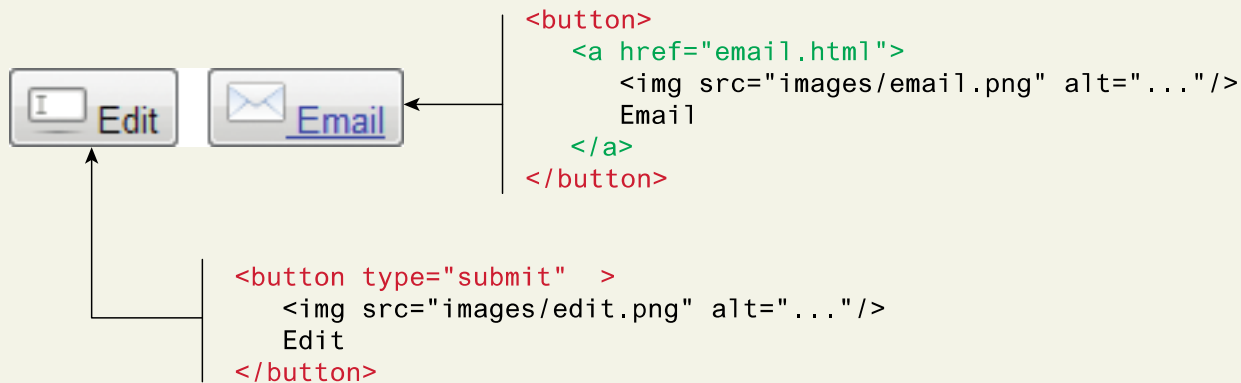
Form Control Elements

Specialized Controls (file upload)


```
<form method="post" enctype="multipart/form-data" ... >
   ...
   <label>Upload a travel photo</label>
   <input type="file" name="photo" />
   ...
</form>
```

Form Control Elements

Specialized Controls (number and range controls)


```
<label>Rate this photo: <br/>
<input type="number" min="1" max="5" name="rate" />


Grumpy
<input type="range" min="0" max="10" step="1" name="happiness" />
Ecstatic
```

Controls as they appear in browser
that doesn't support these input types

Form Control Elements

Specialized Controls (colour)

Background Color:

```
<label>Background Color: <br/>
<input type="color" name="back" />
```

Color

Basic colors:

Custom colors:

Define Custom Colors >>

OK   Cancel

Color|Solid

Hue: 152   Red: 52
Sat: 142   Green: 82
Lum: 120   Blue: 203

Add to Custom Colors
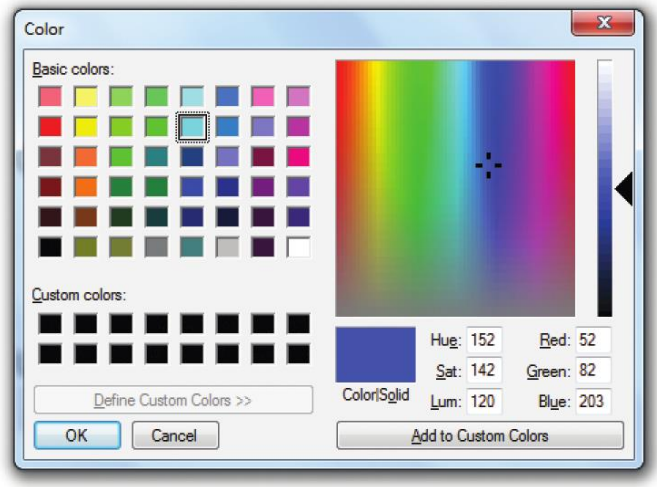
Background Color:
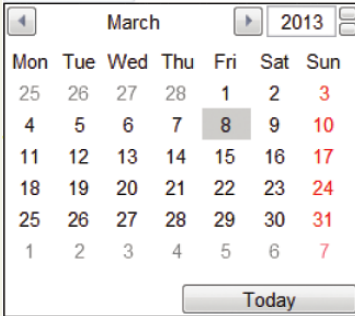
_____ Control as it appears in browser that
doesn't support this input type

Form Control Elements

Date and Time Controls


```
<label>Date: <br/>
<input type="date" ... />
```

```
<input type="time" ... />
```

```
<input type="datetime" ... />
```

```
<input type="datetime-local" ... />
```

Form Control Elements

Date and Time Controls

```
<input type="month" ... />
```

```
<input type="week" ... />
```

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Table and Form Accessibility

Accessible Tables

- Use tables for data, not layout

- Use the <caption> element

- Connect cells with a textual description in the header

```
<caption>Famous Paintings</caption>
<tr>
<th scope="col">Title</th>
<th scope="col">Artist</th>
<th scope="col">Year</th>
<th scope="col">Width</th>
<th scope="col">Height</th>
</tr>
```

Table and Form Accessibility

Accessible Form

```html
<label for="f-title">Title: </label>


<input type="text" name="title" id="f-title"/>



<label for="f-country">Country: </label>


<select name="where" id="f-country">
    <option>Choose a country</option>
    <option>Canada</option>
    <option>Finland</option>
    <option>United States</option>
  </select>
```

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Microformats
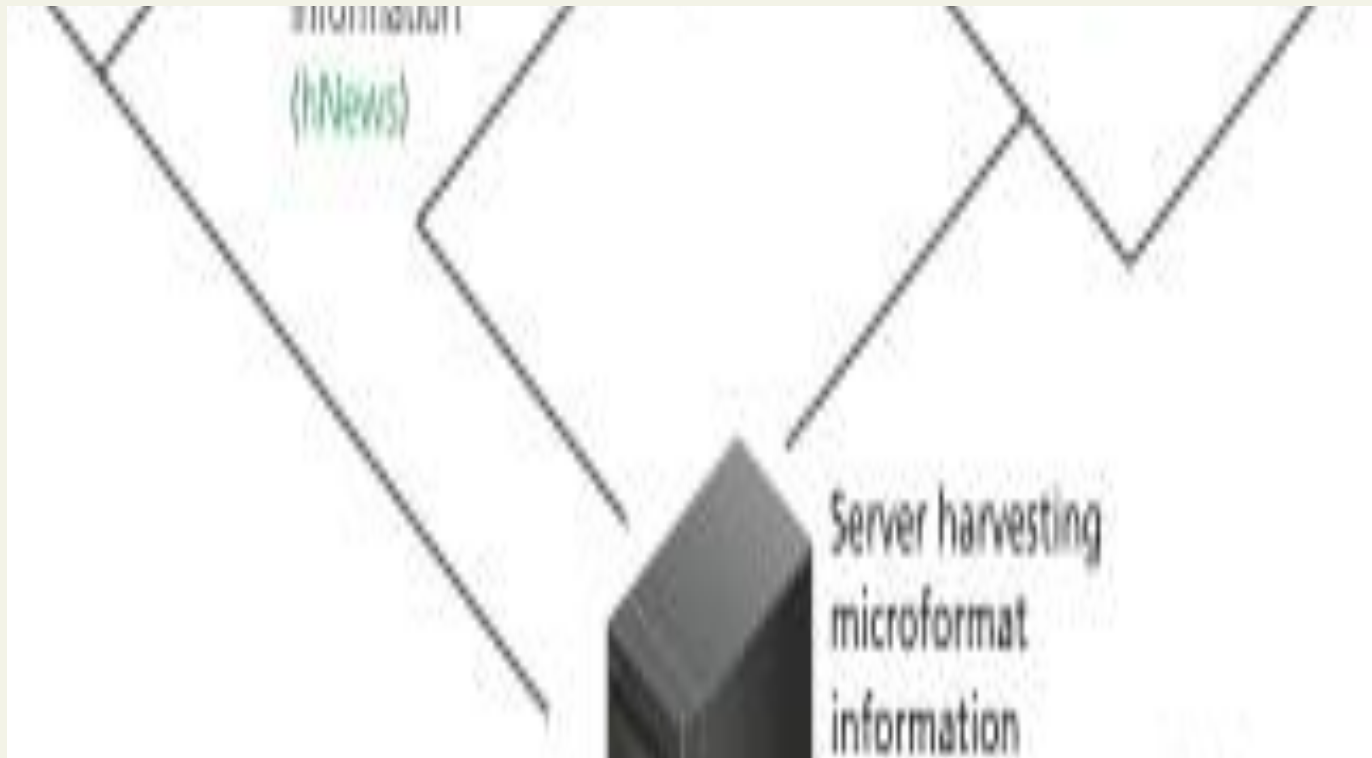
Microformats

Schema.org

Search engines use the information marked up using vocabulary from schema.org to provide additional structured information.

Microformats

References

hCard, which is used to semantically mark up contact information for a person

- http://microformats.org/wiki/hcard.

Schema.org aims to create and promote schemas for structured data on the Web. Google's on-line testing tool helps developers test their semantic markup and microformats

- https://search.google.com/structured-data/testing-tool/u/0/

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Summary

Key Terms

- checkbox
- colspan
- form
- GET
- hCard
- microformat
- POST
- query string
- radio buttons
- rowspan
- schema.org
- table
- URL encoded
- web accessibility
- Web Accessibility
- Initiative (WAI)

Questions