

HTML Tables and Forms

Abdallah Karakra & Sobhi Ahmed

Chapter 4

Objectives

1 Introducing **Tables**

2 **Styling** Tables

3 Introducing **Forms**

4 **Form Control**
Elements

5 Table and Form
Accessibility

Section 1 of 6

INTRODUCING TABLES

HTML Tables

A grid of cells

A [table](#) in HTML is created using the `<table>` element

Tables can be used to display:

- Many types of content
 - Calendars, financial data, lists, etc...
- Any type of data
 - Images
 - Text
 - Links
 - Other tables

HTML Tables

Example usages

The image displays four browser windows illustrating different uses of HTML tables:

- Chapter 4 (top left):** A pricing table with columns for 'Free', 'Basic', and 'Premium' and rows for 'Upload Space', 'Daily Uploads', 'Total Uploads', 'Social Sharing', 'Analytics', and 'Price per year'.
- Chapter 4 (top middle):** An 'Artist Inventory' table with columns for 'Artist', 'Work Details', 'Title', 'Year', and 'Home'. It features a portrait of Jacques-Louis David and two rows of artwork details.
- Chapter 4 (bottom left):** A 'Paintings' table listing various artworks with columns for 'Title', 'Artist', 'Year', and 'Genre'. Each row includes a small image of the painting and an 'Edit' button.
- Chapter 4 (bottom right):** A calendar for October 2014, showing a grid of days with the 14th highlighted.

Tables Basics

Rows and cells

- an HTML **<table>** contains any number of rows (**<tr>**)
- each row contains any number of table data cells (**<td>**)
- Content goes inside of **<td></td>** tags

<table>

<tr>

<td>The Death of Marat</td>

</tr>

</table>



A basic Example

`<table>`

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

`<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>`

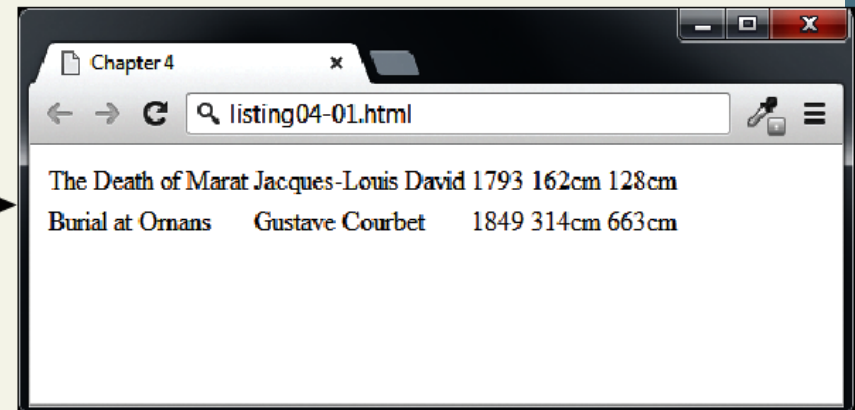
`<td>1849</td>`

`<td>314cm</td>`

`<td>663cm</td>`

`</tr>`

`</table>`

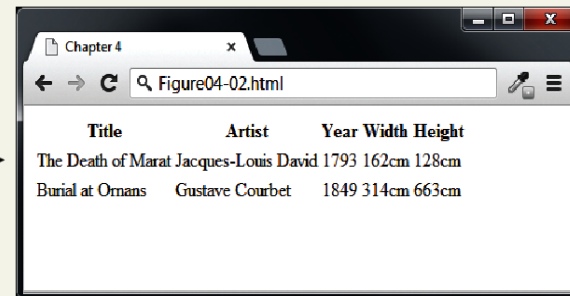


With Table Headings

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>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>
```

th



Why Table Headings

A table heading `<th>`

- Browsers tend to make the content within a `<th>` **element bold**
- `<th>` element for accessibility (it helps those using screen readers)
- Provides some **semantic info about the row being a row of headers**

Tables

- tables are common tools for arranging complex layout on a Web page
 - a table divides contents into rows and columns
 - by default, column entries are left-justified, so provide for alignment

```
<html>
<!-- Dave Reed  page11.html  1/16/04  -->

<head>
  <title>Tables</title>
</head>

<body>
  <table>
    <tr>
      <td>foo</td> <td>bar</td>
    </tr>
    <tr>
      <td>hihi</td> <td>booboo</td>
    </tr>
  </table>
</body>
</html>
```

`<table>...</table>` specify a table element

`<tr>...</tr>` specify a row in the table

`<td>...</td>` specify table data (i.e., each column entry in the table)

foo bar

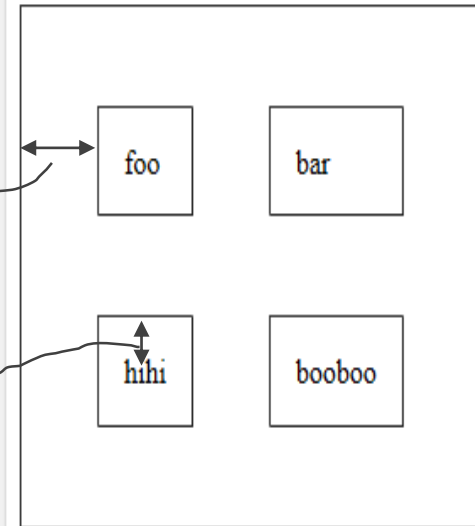
hihi booboo

[view page in browser](#)

```
<html>
<!-- Dave Reed page11.html 1/16/04 -->

<head>
  <title>Tables</title>
</head>

<body >
  <table border=1 cellspacing=45 cellpadding=15>
    <tr>
      <td>foo</td> <td>bar</td>
    </tr>
    <tr>
      <td>hihi</td> <td>booboo</td>
    </tr>
  </table>
</body>
</html>
```



Spanning Rows and Columns

Span Span Span a Row

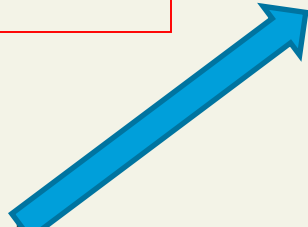
Each row must have the same number of `<td>` or `<th>` containers. If you want a given cell to cover several columns or rows,

```
<table>
```

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

Notice that this row now only has four cell elements.

```
<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>
```



use the **colspan** or **rowspan** attributes

Other table options

HEAD1	HEAD2	HEAD3
one	two	three
four	five	
	six	seven

```
<html>
<!-- Dave Reed page14.html 1/16/04 -->
<head>
  <title>Table Formatting</title>
</head>
<body>
  <table border=1 cellspacing=4 cellpadding=8>
    <tr>
      <th>HEAD1</th> <th>HEAD2</th> <th>HEAD3</th>
    </tr>
    <tr>
      <td>one</td> <td>two</td> <td>three</td>
    </tr>
    <tr>
      <td rowspan=2 align="center"> four </td>
      <td colspan=2 align="center"> five </td>
    </tr>
    <tr>
      <td> six </td> <td> seven </td>
    </tr>
  </table>
</body>
</html>
```

[view page in browser](#)

- can control the space between cells & margins within cells

```
<table cellspacing=5>
```

```
<table cellpadding=5>
```

- can add headings

`<th>` is similar to `<td>` but displays heading centered in bold

- can have data that spans more than one column

```
<td colspan=2>
```

- similarly, can span more than one row

```
<td rowspan=2>
```

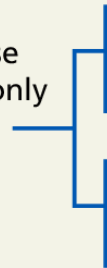
Using Tables for Layout

`<table>`

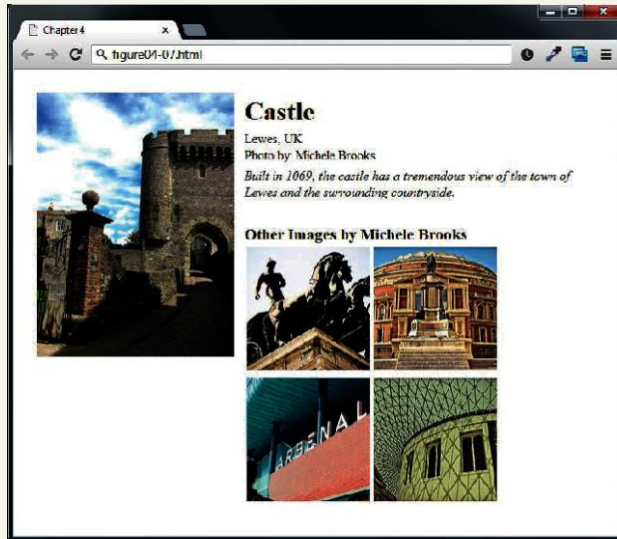
Artist	Title	Year
Jacques-Louis David	The Death of Marat	1793
	The Intervention of the Sabine Women	1799
	Napoleon Crossing the Alps	1800

```
<table>
  <tr>
    <th>Artist</th>
    <th>Title</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.



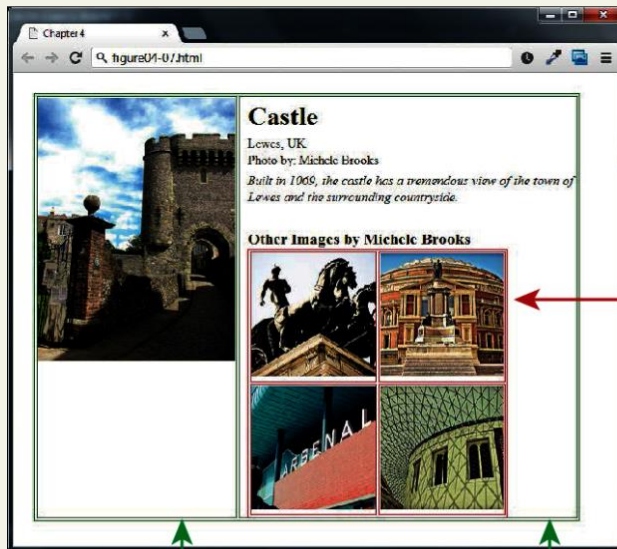
Example Table layouts



```
<table>
  <tr>
    <td>
      
    </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></td>
    <td></td>
  </tr>
  <tr>
    <td></td>
    <td></td>
  </tr>
</table>
</td>
</tr>
</table>
```

Additional table tags

- `<caption>`

A title for the table is good for accessibility.

```
<table>
```

```
<caption>19th Century French Paintings</caption>
```

```
<col class="artistName" />
```

```
<colgroup id="paintingColumns">
```

```
<col />
```

```
<col />
```

```
</colgroup>
```

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

- `<col>`, `<colgroup>`

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

```
<thead>
```

```
<tr>
```

```
<th>Title</th>
```

```
<th>Artist</th>
```

```
<th>Year</th>
```

```
</tr>
```

```
</thead>
```

- `<thead>`

- `<tfoot>`

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

```
<tfoot>
```

```
<tr>
```

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

```
<td>2</td>
```

```
</tr>
```

```
</tfoot>
```

- `<tbody>`

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

```
<tbody>
```

```
<tr>
```

```
<td>The Death of Marat</td>
```

```
<td>Jacques-Louis David</td>
```

```
<td>1793</td>
```

```
</tr>
```

```
<tr>
```

```
<td>Burial at Ornans</td>
```

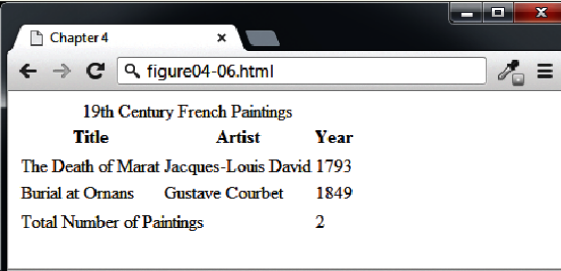
```
<td>Gustave Courbet</td>
```

```
<td>1849</td>
```

```
</tr>
```

```
</tbody>
```

```
</table>
```



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

Additional table tags

<caption>

```
<!DOCTYPE html>
<html>
<head>
<style>
table, th, td {
    border: 1px solid black;
}
</style>
</head>
<body>

<table>
<caption>Monthly savings</caption>
<tr>
    <th>Month</th>
    <th>Savings</th>
</tr>
<tr>
    <td>January</td>
    <td>$100</td>
</tr>
<tr>
    <td>February</td>
    <td>$50</td>
</tr>
</table>

</body>
```

Monthly savings

Month	Savings
January	\$100
February	\$50

```
<style>
table, th, td { border: 1px solid black; }
</style>
</head>
<body>
<table>
  <thead>
    <tr>
      <th>Month</th> <th>Savings</th>
    </tr>
  </thead>
  <tfoot>
    <tr>
      <td>Sum</td> <td>$180</td>
    </tr>
  </tfoot>
  <tbody>
    <tr>
      <td>January</td> <td>$100</td>
    </tr>
    <tr>
      <td>February</td> <td>$80</td>
    </tr>
  </tbody>
</table>
```

Additional table tags

An HTML table with a
<thead>,
<tfoot>,
<tbody> element:

Month	Savings
January	\$100
February	\$80
Sum	\$180

Additional table tags

An HTML table with a
<thead>,
<tfoot>,
<tbody> element:

```
<html>
<head>
<style>
thead {color:green;}
tbody {color:blue;}
tfoot {color:red;}
table, th, td { border: 1px solid black; }
</style>
</head>
<body>
<table>
  <thead>
    <tr>
      <th>Month</th> <th>Savings</th>
    </tr>
  </thead>
  <tfoot>
    <tr>
      <td>Sum</td> <td>$180</td>
    </tr>
  </tfoot>
  <tbody>
    <tr>
      <td>January</td> <td>$100</td>
    </tr>
    <tr>
      <td>February</td> <td>$80</td>
    </tr>
  </tbody>
</table>
</body>
</html>
```

Month	Savings
January	\$100
February	\$80
Sum	\$180

Section 2 of 6

STYLING TABLES

```
<style>
table, th, td {
  border: 1px solid black;
}
</style>
</head>
<body>
<table>
  <colgroup>
    <col span="2" style="background-color:red">
    <col style="background-color:yellow">
  </colgroup>
  <tr>
    <th>ISBN</th>
    <th>Title</th>
    <th>Price</th>
    <th>Note</th>
  </tr>
  <tr>
    <td>3476896</td>
    <td>My first HTML</td>
    <td>$53</td>
    <td>.....</td>
  </tr>
  <tr>
    <td>5869207</td>
    <td>My first CSS</td>
    <td>$49</td>
    <td>.....</td>
  </tr>
</table>
</body>
```

The <col> and <colgroup> elements are also mainly used to aid in the eventual styling of the table. Rather than styling each column, you can style all columns within a <colgroup> with just a single style.

ISBN	Title	Price	Note
3476896	My first HTML	\$53
5869207	My first CSS	\$49

Styling Tables

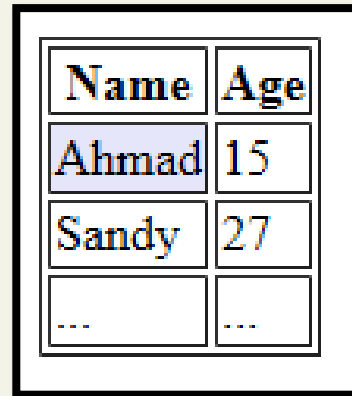
The old way's deprecated

In HTML5 it is left to CSS, However legacy support for deprecated HTML attributes still exist

- **width, height**—for setting the width and height of cells
- **cellspacing**—for adding space between every cell in the table
- **cellpadding**—for adding space between the content of the cell and its border
- **bgcolor**—for changing the background color of any table element
- **background**—for adding a background image to any table element
- **align**—for indicating the alignment of a table in relation to the surrounding container

Styling Tables

bgcolor—for changing the background color of any table element

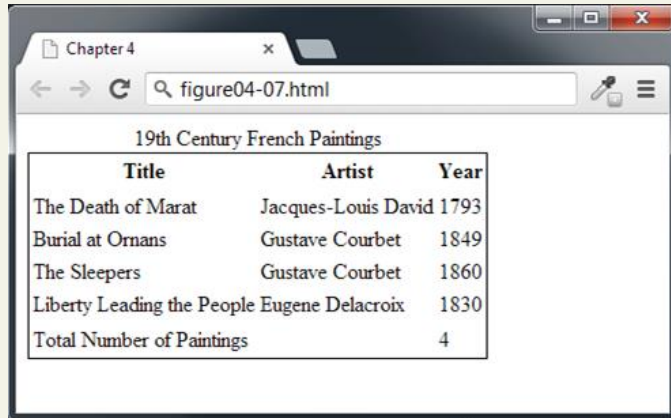


Name	Age
Ahmad	15
Sandy	27
...	...

```
<!DOCTYPE html>
<html>
<body>
<table border=1>
<thead>
  <th>Name</th>
  <th>Age</th>
</thead>
<tbody>
  <tr>
    <td bgcolor="#E6E6FA">Ahmad</td>
    <td>15</td>
  </tr>
  <tr>
    <td>Sandy</td>
    <td>27</td>
  </tr>
</tbody>
<tfoot>
  <tr>
    <td>...</td>
    <td>...</td>
  </tr>
</tfoot>
</table>
</body>
</html>
```

Styling Tables

Borders

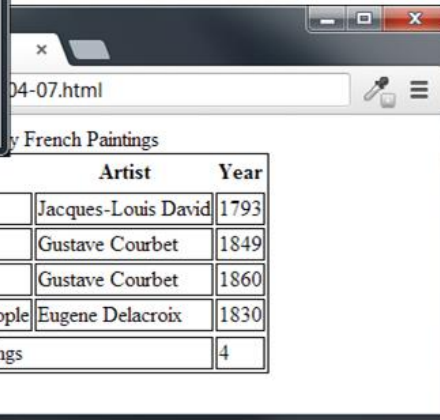


Chapter 4 x
figure04-07.html

19th Century French Paintings

Title	Artist	Year
The Death of Marat	Jacques-Louis David	1793
Burial at Ornans	Gustave Courbet	1849
The Sleepers	Gustave Courbet	1860
Liberty Leading the People	Eugene Delacroix	1830
Total Number of Paintings		4

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

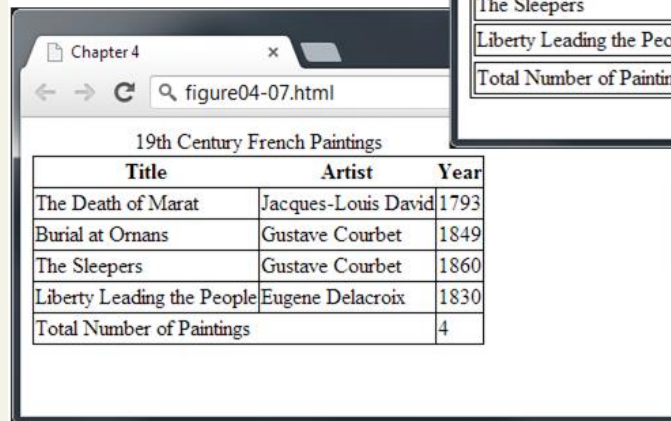


Chapter 4 x
figure04-07.html

19th Century French Paintings

Title	Artist	Year
The Death of Marat	Jacques-Louis David	1793
Burial at Ornans	Gustave Courbet	1849
The Sleepers	Gustave Courbet	1860
Liberty Leading the People	Eugene Delacroix	1830
Total Number of Paintings		4

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



Chapter 4 x
figure04-07.html

19th Century French Paintings

Title	Artist	Year
The Death of Marat	Jacques-Louis David	1793
Burial at Ornans	Gustave Courbet	1849
The Sleepers	Gustave Courbet	1860
Liberty Leading the People	Eugene Delacroix	1830
Total Number of Paintings		4

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


Styling Tables

border-spacing: 15px:

When using "border-collapse: separate", the border-spacing property can be used to set the space between the cells:

Firstname	Lastname
Peter	Griffin
Lois	Griffin

border-spacing: 15px 50px:

Using two values (the first sets the horizontal spacing and the second sets the vertical spacing):

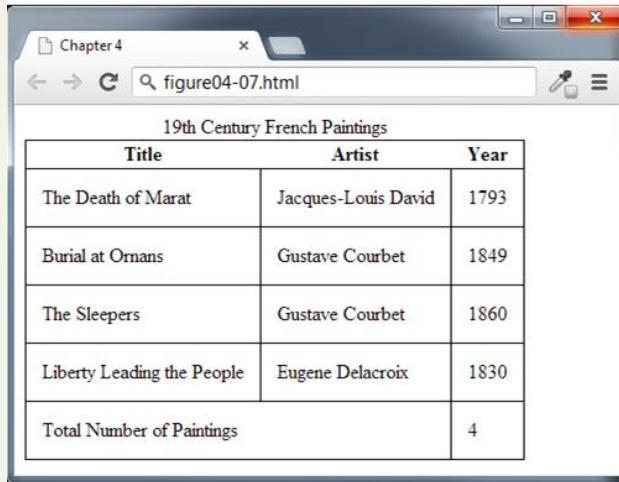
Firstname	Lastname
Peter	Griffin
Lois	Griffin

separate	Borders are separated; each cell will display its own borders. This is default.
collapse	Borders are collapsed into a single border when possible (border-spacing and empty-cells properties have no effect)

https://www.w3schools.com/cssref/tryit.asp?filename=trycss_border-spacing

Styling Tables

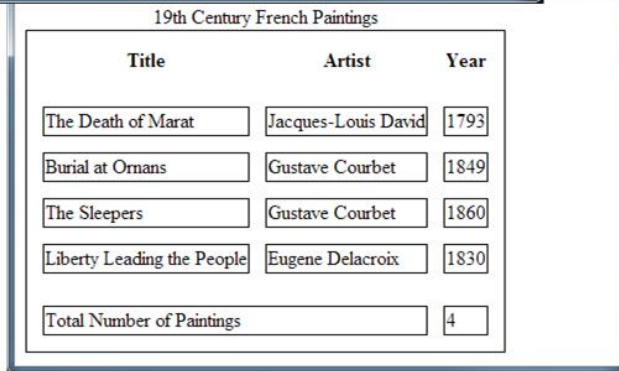
Padding and spacing



A screenshot of a web browser window titled "Chapter 4" showing a table with the following data:

Title	Artist	Year
The Death of Marat	Jacques-Louis David	1793
Burial at Ornans	Gustave Courbet	1849
The Sleepers	Gustave Courbet	1860
Liberty Leading the People	Eugene Delacroix	1830
Total Number of Paintings		4

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



A screenshot of a web browser window showing the same table as above, but with 10pt padding applied to each cell. The text is clearly separated from the borders.

Title	Artist	Year
The Death of Marat	Jacques-Louis David	1793
Burial at Ornans	Gustave Courbet	1849
The Sleepers	Gustave Courbet	1860
Liberty Leading the People	Eugene Delacroix	1830
Total Number of Paintings		4

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

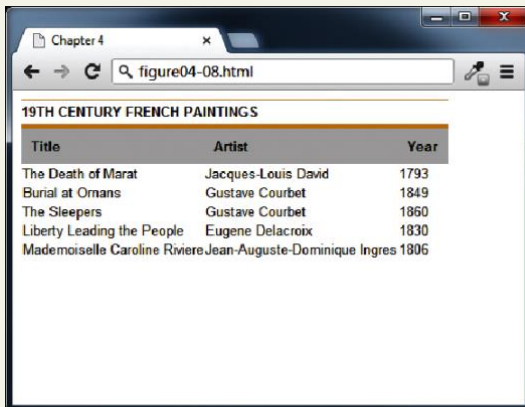
Styling Tables



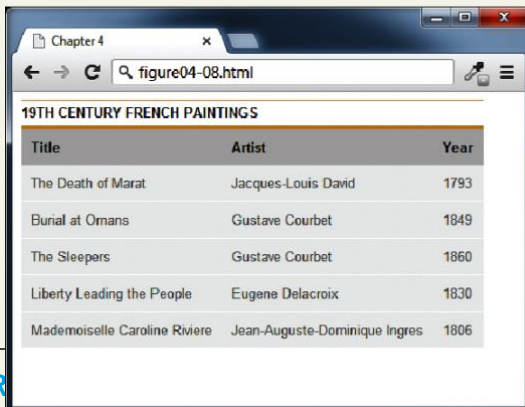
```
table {
  font-size: 0.8em;
  font-family: Arial, Helvetica, sans-serif;
  border-collapse: collapse;
  border-top: 4px solid #DCA806;
  border-bottom: 1px solid white;
  text-align: left;
}
caption {
  font-weight: bold;
  padding: 0.25em 0 0.25em 0;
  text-align: left;
  text-transform: uppercase;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

text-transform:

none	No capitalization. The text renders as it is. This is default
capitalize	Transforms the first character of each word to uppercase
uppercase	Transforms all characters to uppercase
lowercase	Transforms all characters to lowercase

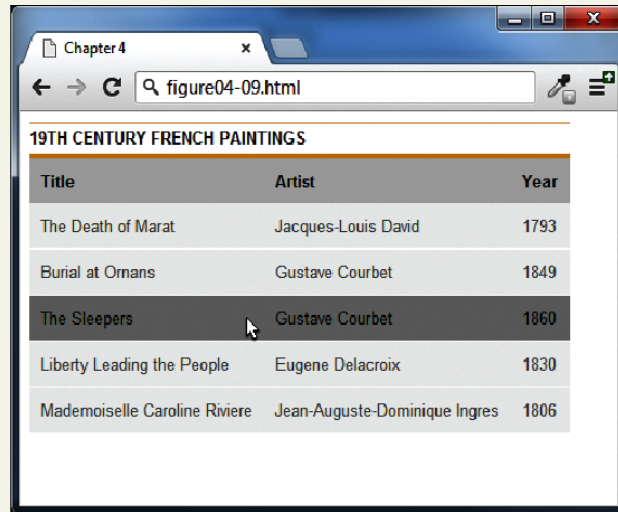


```
thead tr {
  background-color: #CACACA;
}
th {
  padding: 0.75em;
}
```



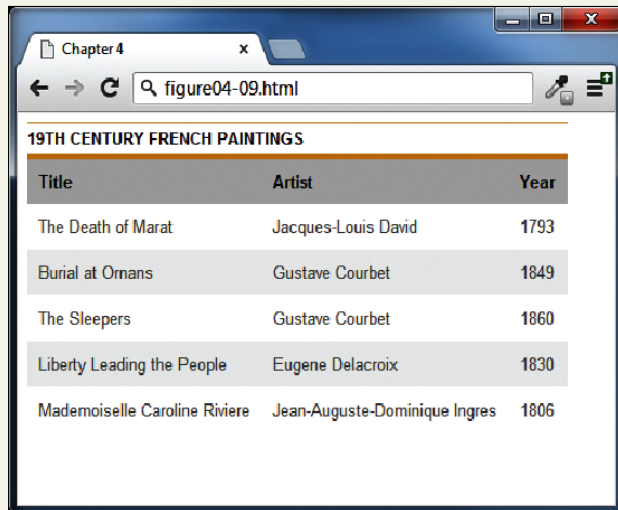
```
tbody tr {
  background-color: #F1F1F1;
  border-bottom: 1px solid white;
  color: #6E6E6E;
}
tbody td {
  padding: 0.75em;
}
```

Nth-Child



Title	Artist	Year
The Death of Marat	Jacques-Louis David	1793
Burial at Omans	Gustave Courbet	1849
The Sleepers	Gustave Courbet	1860
Liberty Leading the People	Eugene Delacroix	1830
Mademoiselle Caroline Riviere	Jean-Auguste-Dominique Ingres	1806

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



Title	Artist	Year
The Death of Marat	Jacques-Louis David	1793
Burial at Omans	Gustave Courbet	1849
The Sleepers	Gustave Courbet	1860
Liberty Leading the People	Eugene Delacroix	1830
Mademoiselle Caroline Riviere	Jean-Auguste-Dominique Ingres	1806

```
tbody tr:nth-child(odd) {  
    background-color: white;  
}
```

Nth-Child

https://www.w3schools.com/cssref/sel_nth-child.asp

Specify a background color for every `<p>` element that is the second child of its parent:

```
<!DOCTYPE html>
<html>
<head>
<style>
p:nth-child(2) {
    background: red;
}
</style>
</head>
<body>

<p>The first paragraph.</p>
<p>The second paragraph.</p>
<p>The third paragraph.</p>
<p>The fourth paragraph.</p>

<div>
<p>The first paragraph.</p>
<p>The second paragraph.</p>
<p>The third paragraph.</p>
</div>
</body>
</html>
```

The first paragraph.

The second paragraph.

The third paragraph.

The fourth paragraph.

The first paragraph.

The second paragraph.

The third paragraph.

The `:nth-child(n)` selector matches every element that is the *n*th child, regardless of type, of its parent. *n* can be a number, a keyword, or a formula

Section 3 of 6

INTRODUCING FORMS

HTML Forms

- **HTML forms** are used to pass data to a server.
- An HTML form can contain **input elements** like **text fields, checkboxes, radio-buttons, submit buttons** and more.
- The **<form>** tag is used to create an HTML form:

provide the user with an alternative way to interact with a web server.

```
<form>
.
  input elements
.
</form>
```

Section 4 of 6

FORMS CONTROL ELEMENTS

Form-Related HTML Elements

Type	Description
<code><button></code>	Defines a clickable button.
<code><datalist></code>	An HTML5 element form defines lists to be used with other form elements.
<code><fieldset></code>	Groups related elements in a form together.
<code><form></code>	Defines the form container.
<code><input></code>	Defines an input field. HTML5 defines over 20 different types of input.
<code><label></code>	Defines a label for a form input element.
<code><legend></code>	Defines the label for a fieldset group.
<code><option></code>	Defines an option in a multi-item list.
<code><optgroup></code>	Defines a group of related options in a multi-item list.
<code><select></code>	Defines a multi-item list.
<code><textarea></code>	Defines a multiline text entry box.

Text Input Controls

Type	Description
text	Creates a single line text entry box. <code><input type="text" name="title" /></code>
textarea	Creates a multiline text entry box. <code><textarea rows="3" ... /></code>
password	Creates a single line text entry box for a password <code><input type="password" ... /></code>
search	Creates a single-line text entry box suitable for a search string. This is an HTML5 element. <code><input type="search" ... /></code>
email	Creates a single-line text entry box suitable for entering an email address. This is an HTML5 element. <code><input type="email" ... /></code>
tel	Creates a single-line text entry box suitable for entering a telephone. This is an HTML5 element. <code><input type="tel" ... /></code>
url	Creates a single-line text entry box suitable for entering a URL. This is an HTML5 element. <code><input type="url" ... /></code>

Text Input Controls

Classic

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

Text:

```
<textarea>  
  enter some text  
</textarea>
```

TextArea:

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

TextArea:

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

Password: Password:

```
<button type="button" >Click Me!</button>
```

Click Me!

Button type=	button reset submit
--------------	---------------------------

```
<form>  
<fieldset>  
  Name: <input type="text"><br>  
  Email: <input type="text"><br>  
  Date of birth: <input type="text">  
</fieldset>  
</form>
```

Groups related elements in a form together.

Name:
Email:
Date of birth:

```
First Name: <input type="text" />
```

First Name:

```
Details:  
<textarea>  
  Information .....  
</textarea>
```

Details:

```
password: <input type="password"/>
```

password:

```
<!DOCTYPE html>
<html>
<body>

<form>
  <fieldset>
    <legend>Personal Information:</legend>
    Name: <input type="text"><br>
    Email: <input type="text"><br>
    Date of birth: <input type="text">
  </fieldset>
</form>

</body>
</html>
```

Personal Information:

Name:

Email:

Date of birth:

Text Input Controls

```
<input type="search" placeholder="enter search text" ... />
```

Search: Search:

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

Email: *In Opera*

Please enter a valid email address

Email: *In Chrome*

Please enter an email address.

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

url:

Please enter a URL.

Text Input Controls

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

Tel:

HTML5 advanced controls

Pattern attribute

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

Postal:

Postal:

⚠ Please match the requested format.

datalist

```
<form>  
  Select Browser<input list="browsers" name="browser">  
  <datalist id="browsers">  
    <option value="Internet Explorer">  
    <option value="Firefox">  
    <option value="Chrome">  
    <option value="Opera">  
    <option value="Safari">  
  </datalist>  
</form>
```

Select Browser

Select Browser

- Internet Explorer
- Firefox
- Chrome
- Opera
- Safari

Select Browser in

- Internet Explorer

Select Lists

Chose an option, any option.

- **<select> element** is used to create a multiline box for selecting one or more items
 - The options are defined using the **<option> element**
 - can be hidden in a dropdown or multiple rows of the list can be visible
 - Option items can be grouped together via the **<optgroup> element**.

Select: Second ▾

Select: Second ▾
First
Second
Third

Select: First
Second
Third
Fourth

Cities: London ▾
North America
Calgary
Los Angeles
Europe
London
Paris
Prague

Select Lists

Select:

Select:
First
Second
Third

Select:
First
Second
Third
Fourth

Cities:
North America
Calgary
Los Angeles
Europe
London
Paris
Prague

```
<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>
```

Select Lists

```
<select size="2">  
  <option value="first">First</option>  
  <option value="second">Second</option>  
  <option value="third">Third</option>  
  
</select>
```



```
<select size="2">  
  <option value="first" selected>First</option>  
  <option value="second">Second</option>  
  <option value="third">Third</option>  
  
</select>
```

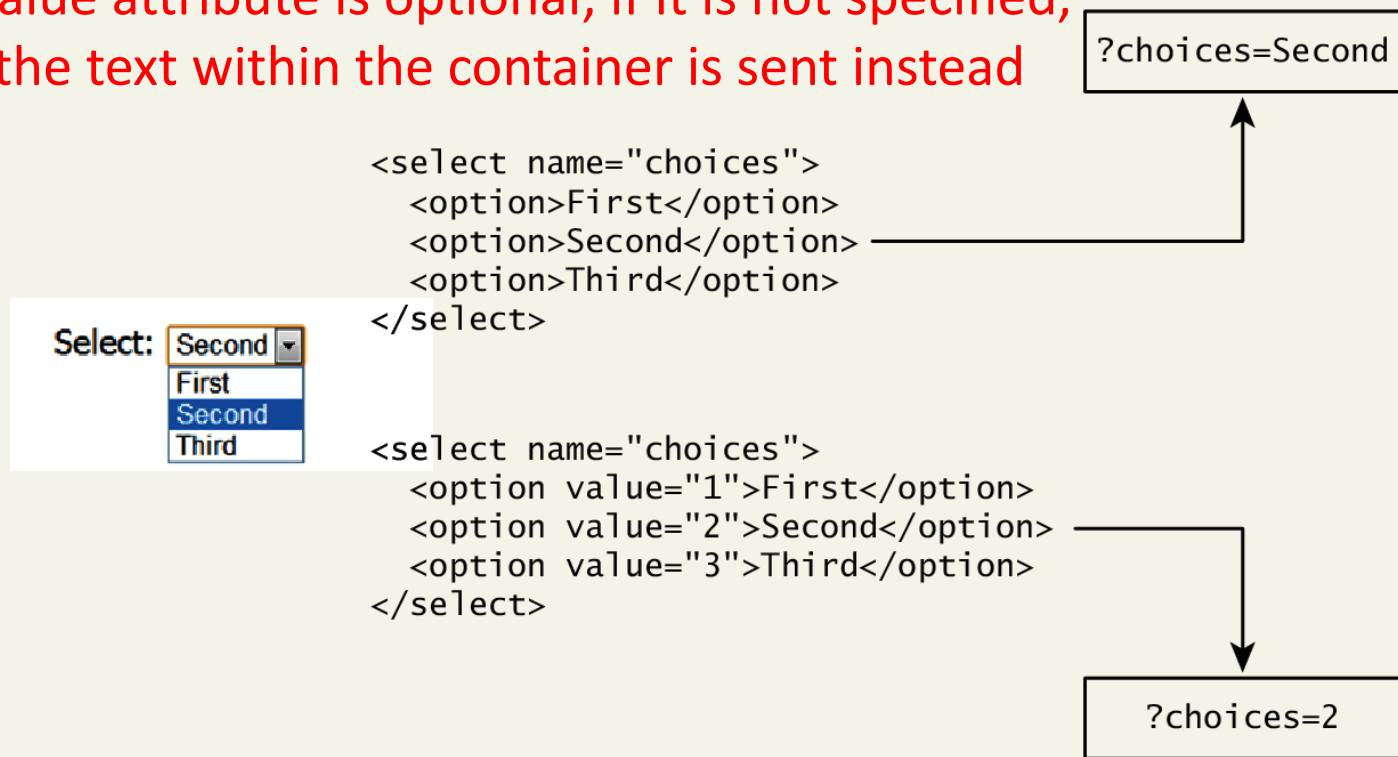


Which Value to send

Select Lists Cont.

The **value** attribute of the `<option>` element is used to specify what value will be sent back to the server.

The **value attribute is optional**; if it is not specified, then the text within the container is sent instead



Radio Buttons

Radio buttons are useful when you want the user to select a **single item** from a small list of choices and you want all the choices to be visible

- radio buttons are added via the `<input type="radio">` element
- The buttons are mutually exclusive (i.e., only one can be chosen) by **sharing the same name attribute**
- **The checked attribute** is used to indicate the default choice
- the **value attribute** works in the same manner as with the `<option>` element

Radio Buttons

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
```

- Male
- Female

```
<input type="radio" name="gender" value="male"> Male<br>  
<input type="radio" name="gender" value="female"> Female<br>
```

Checkboxes

Checkboxes are used for getting yes/no or on/off responses from the user.

- checkboxes are added via **the `<input type="checkbox">` Element**
- You can also **group checkboxes** together by having them share the **same name attribute**
- Each checked checkbox will have its value sent to the server
- Like with radio buttons, **the checked attribute** can be used to set the default value of a checkbox

Checkboxes

Where would you like to visit?

- Canada
- France
- Germany

```
<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
```

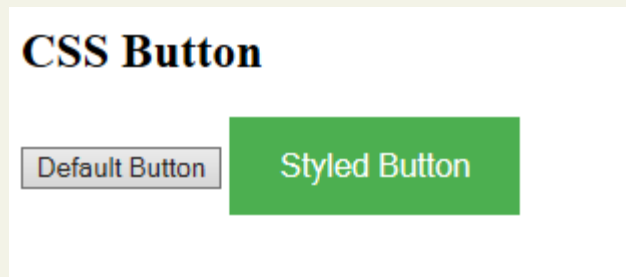
Button Controls

Type	Description
<code><input type="submit"></code>	Creates a button that submits the form data to the server.
<code><input type="reset"></code>	Creates a button that clears any of the user's already entered form data.
<code><input type="button"></code>	Creates a custom button. This button may require Javascript for it to actually perform any action.
<code><input type="image"></code>	Creates a custom submit button that uses an image for its display.
<code><button></code>	<p>Creates a custom button. The <code><button></code> element differs from <code><input type="button"></code> in that you can completely customize what appears in the button; using it, you can, for instance, include both images and text, or skip server-side processing entirely by using hyperlinks.</p> <p>You can turn the button into a submit button by using the <code>type="submit"</code> attribute.</p>

Button Controls

```
.button {  
  background-color: #4CAF50;  
  border: none;  
  color: white;  
  padding: 15px 25px;  
  text-align: center;  
  font-size: 16px;  
  cursor: pointer;  
}
```

```
.button:hover {  
  background: green;  
}
```

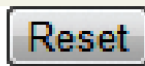


Button Controls

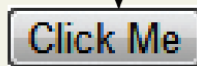
```
<input type="submit" />
```



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



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



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



```
<button>  
  <a href="email.html">  
      
    Email  
  </a>  
</button>
```

```
<button type="submit" >  
    
  Edit  
</button>
```

Specialized Controls

I'm so special

- `<input type=file>`

Upload a travel photo
 No file chosen



Upload a travel photo
 IMG_0020.JPG

```
...  
<label>Upload a travel photo</label>  
<input type="file" name="photo" />  
...
```

Number and Range

Typically input values need be **validated**. Although server side validation is required, optional client side pre-validation is good practice.

The number and range controls Added in HTML5 provide a way to input numeric values that **eliminates the need for JavaScript numeric validation!!!**

Number and Range

Rate this photo:

```
<label>Rate this photo: <br/>
```

```
<input type="number" min="1" max="5" name="rate" />
```

Grumpy Ecstatic

Grumpy

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

Ecstatic

Rate this photo:

Grumpy Ecstatic

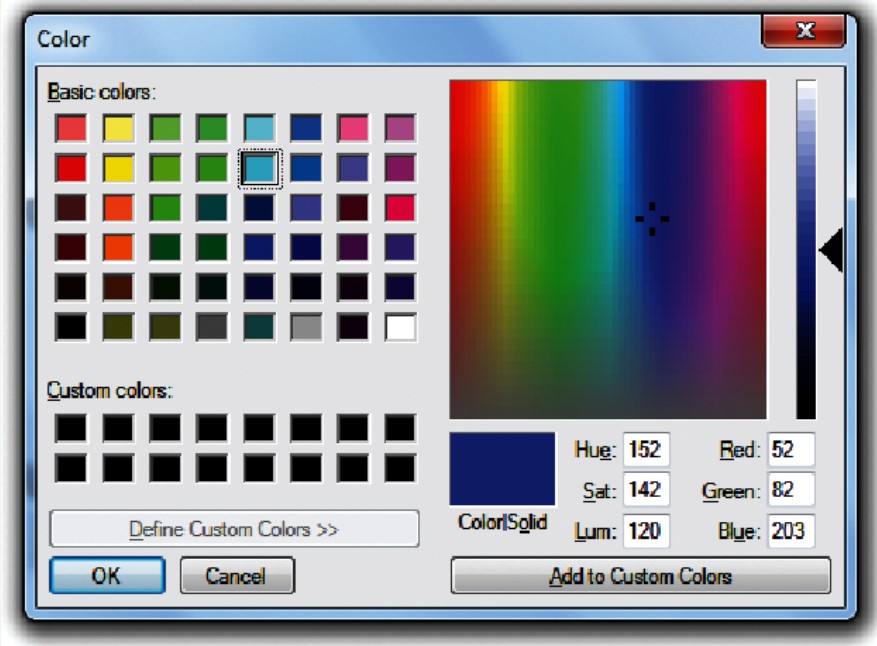
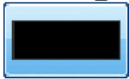
Controls as they appear in browser
that doesn't support these input types

```
<input type="range" min="0" max="7" step="1" />
```

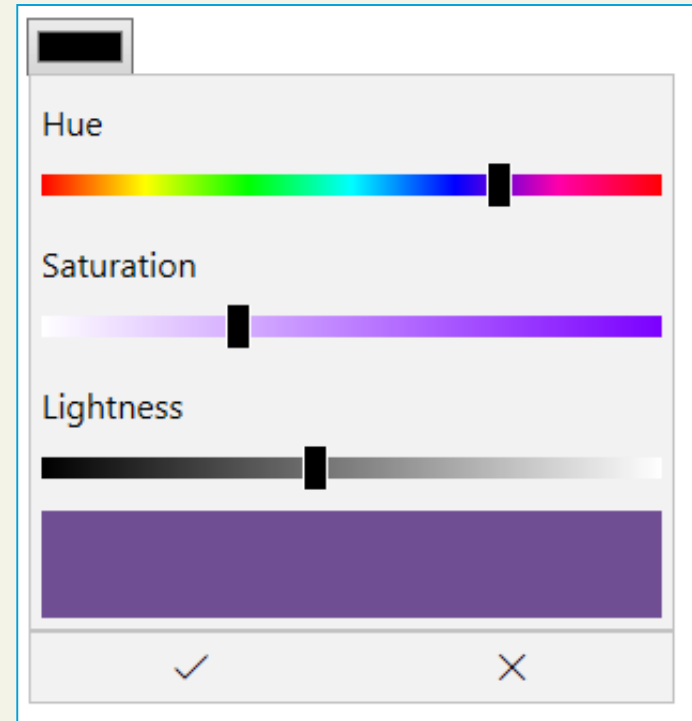
3

Color

Background Color:



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



Background Color:



Control as it appears in browser that doesn't support this input type


Date and Time Controls

Dates and times often need validation when gathering this information from a regular text input control.

From a user's perspective, entering dates can be tricky as well: you probably have wondered at some point in time when entering a date into a web form, what format to enter it in, whether the day comes before the month, whether the month should be entered as an abbreviation or a number, and so on.

HTML5 Date and Time Controls

Date:



The screenshot shows a date picker interface. At the top, there's a dropdown menu for the month, currently set to 'March', and a dropdown for the year, set to '2013'. Below this is a calendar grid with days of the week (Mon to Sun) as columns and dates as rows. The date '8' is highlighted in a darker grey. A 'Today' button is located at the bottom right of the calendar.

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

general date input control

Time:

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

DateTime:

 UTC

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

DateTime Local:


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

HTML5 Date and Time Controls

Month:

March, 2013

March, 2013

Sun	Mon	Tue	Wed	Thu	Fri	Sat
24	25	26	27	28	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6

This month Clear

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

a month in a year

Week:

2013-W10

March 2013

Week	Mon	Tue	Wed	Thu	Fri	Sat	Sun
9	25	26	27	28	1	2	3
10	4	5	6	7	8	9	10
11	11	12	13	14	15	16	17
12	18	19	20	21	22	23	24
13	25	26	27	28	29	30	31
14	1	2	3	4	5	6	7

Today

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

a week in a year

HTML Controls

Type	Description
<code>date</code>	Creates a general date input control. The format for the date is "yyyy-mm-dd".
<code>time</code>	Creates a time input control. The format for the time is "HH:MM:SS", for hours:minutes:seconds.
<code>datetime</code>	Creates a control in which the user can enter a date and time.
<code>datetime-local</code>	Creates a control in which the user can enter a date and time without specifying a time zone.
<code>month</code>	Creates a control in which the user can enter a month in a year. The format is "yyyy-mm".
<code>week</code>	Creates a control in which the user can specify a week in a year. The format is "yyyy-W##".

Other Controls

You mean there's more

- The `<progress>` and `<meter>` elements can be used to provide feedback to users,
 - but requires JavaScript to function dynamically.
- The `<output>` element can be used to hold the output from a calculation.
- The `<keygen>` element can be used to hold a private key for public-key encryption