



Web Development

Week 6: DOCTYPES, Validation and Tables



Overview

- ↗ W3C
- ↗ Doctypes
- ↗ HTML Versions and Doctypes
- ↗ Page Validation
- ↗ Tables

- World Wide Web Consortium (W3C)
- The W3C was founded in 1994 by Tim Berners-Lee.
- Works to develop Web standards.
- Its main goal is to develop open standards to keep keep the evolution of the web on a path that is consistent for all.

DOCTYPES

- The DOCTYPE is not a HTML tag.
- It tells the browser what version of HTML a page is written in.
- The DOCTYPE declaration must be the first thing on the HTML page. i.e. Before the `<html>` tag.
- It is important to add a Doctype declaration to a web page.
- This makes sure the document will be parsed the same way by different browsers.
- When a doctype is added to a page, it tells the browser to use a stricter standards mode.

HTML 4.01

- HTML 4.01 Specification - W3C Recommendation 24 December 1999
- In HTML 4.01, the `<!DOCTYPE>` declaration refers to a Document Type Definition (DTD).
- HTML 4.01 was based on SGML.
- The DTD specifies the rules for the markup language, so that the browsers render the content correctly.
- <http://www.w3.org/TR/html401/>

Strict

➤ <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN"

➤ "http://www.w3.org/TR/html4/strict.dtd">

➤ <http://www.w3.org/TR/html401/strict.dtd>

Strict

- *“This is HTML 4.01 Strict DTD, which excludes the presentation attributes and elements that W3C expects to phase out as support for style sheets matures. Authors should use the Strict DTD when possible, but may use the Transitional DTD when support for presentation attribute and elements is required. “*
- *“HTML 4 includes mechanisms for style sheets, scripting, embedding objects, improved support for right to left and mixed direction text, and enhancements to forms for improved accessibility for people with disabilities.”*
- Source: <http://www.w3.org/TR/html401/strict.dtd>

Transitional

- `<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"`
- `"http://www.w3.org/TR/html4/loose.dtd">`

Transitional

- *“This is the HTML 4.01 Transitional DTD, which includes presentation attributes and elements that W3C expects to phase out as support for style sheets matures. Authors should use the Strict DTD when possible, but may use the Transitional DTD when support for presentation attribute and elements is required. HTML 4 includes mechanisms for style sheets, scripting, embedding objects, improved support for right to left and mixed direction text, and enhancements to forms for improved accessibility for people with disabilities.”*
- *Source: <http://www.w3.org/TR/html401/loose.dtd>*

Frameset

- `<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Frameset//EN"`
- `"http://www.w3.org/TR/html4/frameset.dtd">`

HTML5

- At the very top of the page you will see the doctype declaration: `<!DOCTYPE html>`
- This means that the page is written in HTML5, and not a different version of HTML (eg HTML 4.01)

HTML5

- HTML5 - A vocabulary and associated APIs for HTML and XHTML
- W3C Recommendation 28 October 2014
- *“This specification defines the 5th major revision of the core language of the World Wide Web: the Hypertext Markup Language (HTML). In this version, new features are introduced to help Web application authors, new elements are introduced based on research into prevailing authoring practices, and special attention has been given to defining clear conformance criteria for user agents in an effort to improve interoperability.”*
- Source: <http://www.w3.org/TR/html5/>

HTML5 Doctype Example

```
<!DOCTYPE html>
<html>


<head>
  <title>Page Title</title>
  <meta charset="utf-8" />
</head>

<body>

  <p>Page Content</p>

</body>
</html>
```

Page Validation

**Markup Validation Service**
Check the markup (HTML, XHTML, ...) of Web documents

Validate by URI | **Validate by File Upload** | **Validate by Direct Input**


Validate by URI

Validate a document online:

Address:


▼ **More Options**

Character Encoding

(detect automatically) 

☐ Only if missing

Document Type

(detect automatically) 

☐ Only if missing

☒ List Messages Sequentially ☐ Group Error Messages by Type

☐ Show Source ☐ Clean up Markup with HTML-Tidy

☐ Show Outline ☐ Validate error pages ☐ Verbose Output

Check

↗ Source: https://validator.w3.org/#validate_by_uri+with_options

What is HTML Validation?

- A HTML validator is used to ensure that the markup is free from errors and is in compliance with the version of HTML the page is using.
- The HTML validator checks to make sure the HTML code on your web page complies with the standards set by the W3 Consortium

In Class Example

➤ Validating HTML markup using the W3C validator

Why Validate HTML and CSS?

➤ Cross-Browser Compatibility

- If your html page is free from errors is has the best chance to render correctly across browsers and platforms.
- Why? The browsers main goal is to comply with the existing HTML and CSS standards.
- If the page written is in full compliance with the standards, it should display as expected in all types of browsers!!

Tables

- What is a table?
- A table should be used to show tabular data.
- It preferably should not be used to layout a page. HTML5 does offer an attribute called role to allow a table to be used for presentation. `<table role="presentation">`
- Best practices and industry standards suggest that a table should be used to show tabular data.

Tables

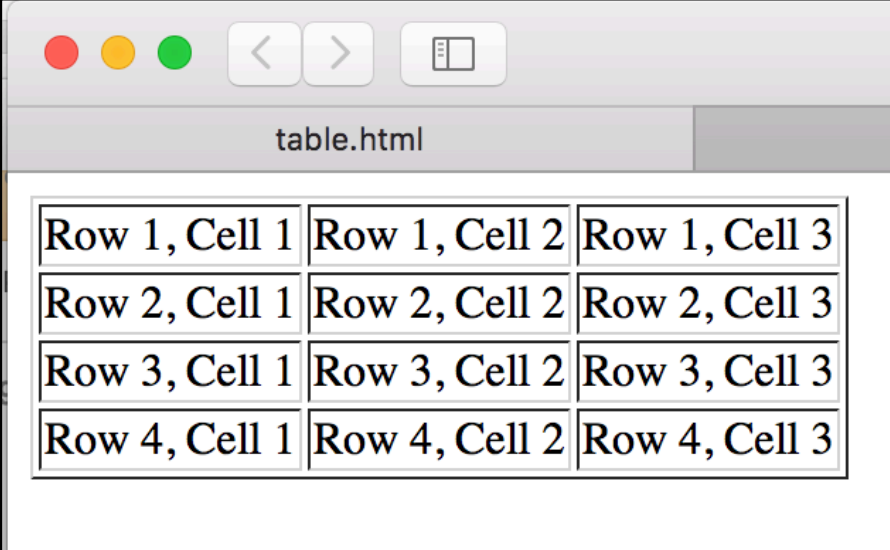
- ↗ The `<table>` element defines a table.
- ↗ `<th>` element defines the table headings
- ↗ `<tr>` element defines a **table row**.
- ↗ `<td>` element defines **table data**
- ↗ The content of the table is contained within the `<td>` cells.
- ↗

Tables

```

7  <table border=1>
8      <tr>
9          <td>Row 1, Cell 1</td>
10         <td>Row 1, Cell 2</td>
11         <td>Row 1, Cell 3</td>
12     </tr>
13     <tr>
14         <td>Row 2, Cell 1</td>
15         <td>Row 2, Cell 2</td>
16         <td>Row 2, Cell 3</td>
17     </tr>
18     <tr>
19         <td>Row 3, Cell 1</td>
20         <td>Row 3, Cell 2</td>
21         <td>Row 3, Cell 3</td>
22     </tr>
23     <tr>
24         <td>Row 4, Cell 1</td>
25         <td>Row 4, Cell 2</td>
26         <td>Row 4, Cell 3</td>
27     </tr>
28 </table>

```



Row 1, Cell 1	Row 1, Cell 2	Row 1, Cell 3
Row 2, Cell 1	Row 2, Cell 2	Row 2, Cell 3
Row 3, Cell 1	Row 3, Cell 2	Row 3, Cell 3
Row 4, Cell 1	Row 4, Cell 2	Row 4, Cell 3

Table border attribute

- A border helps distinguish your table from the rest of the page.
- To create a border with HTML:
- Inside the starting table tag, enter border as an attribute.
- The value for this attribute is a number which represents the thickness of the border in pixels. `<table border="1">`

Table border example

xhtmlsample.htm X

Client Objects & Events

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
```

```
<html xmlns="http://www.w3.org/1999/xhtml" >
```

```
<head>
```

```
<title>Page title</title>
```

```
</head>
```

```
<body>
```

```
<table border="1">
```

```
<tr>
```

```
<td>Row 1, Cell 1</td>
```

```
<td>Row 1, Cell 2</td>
```

```
<td>Row 1, Cell 3</td>
```

```
</tr>
```

```
<tr>
```

```
<td>Row 2, Cell 1</td>
```

```
<td>Row 2, Cell 2</td>
```

```
<td>Row 2, Cell 3</td>
```

```
</tr>
```

```
<tr>
```

```
<td>Row 3, Cell 1</td>
```

```
<td>Row 3, Cell 2</td>
```

```
<td>Row 3, Cell 3</td>
```

```
</tr>
```

```
<tr>
```

```
<td>Row 4, Cell 1</td>
```

```
<td>Row 4, Cell 2</td>
```

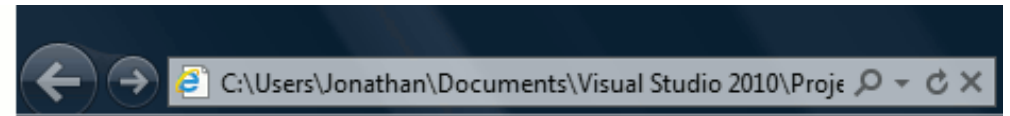
```
<td>Row 4, Cell 3</td>
```

```
</tr>
```

```
</table>
```

```
</body>
```

```
</html>
```



Row 1, Cell 1	Row 1, Cell 2	Row 1, Cell 3
Row 2, Cell 1	Row 2, Cell 2	Row 2, Cell 3
Row 3, Cell 1	Row 3, Cell 2	Row 3, Cell 3
Row 4, Cell 1	Row 4, Cell 2	Row 4, Cell 3

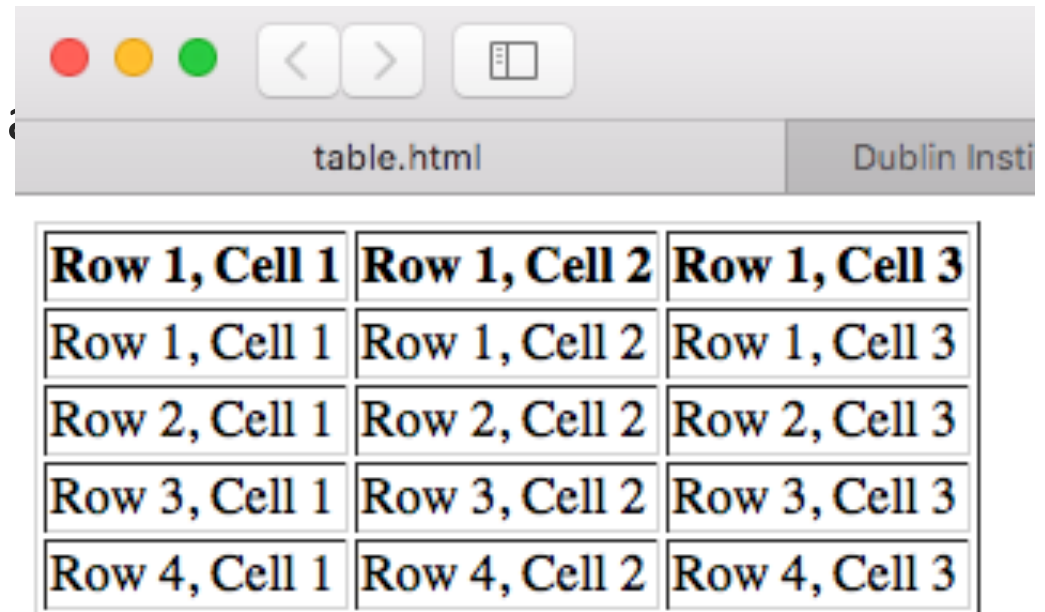
Table Headings <th>

```

7  <table border=1>
8      <tr>
9          <th>Row 1, Cell 1</th>
10         <th>Row 1, Cell 2</th>
11         <th>Row 1, Cell 3</th>
12     </tr>
13     <tr>
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22     </tr>
23     <tr>
24         <td>Row 3, Cell 1</td>
25         <td>Row 3, Cell 2</td>
26         <td>Row 3, Cell 3</td>
27     </tr>
28     <tr>
29         <td>Row 4, Cell 1</td>
30         <td>Row 4, Cell 2</td>
31         <td>Row 4, Cell 3</td>
32     </tr>
33 </table>

```

igs 6



Row 1, Cell 1	Row 1, Cell 2	Row 1, Cell 3
Row 1, Cell 1	Row 1, Cell 2	Row 1, Cell 3
Row 2, Cell 1	Row 2, Cell 2	Row 2, Cell 3
Row 3, Cell 1	Row 3, Cell 2	Row 3, Cell 3
Row 4, Cell 1	Row 4, Cell 2	Row 4, Cell 3

Empty Cells in a Table

- ↗ Table cells with no content are not displayed very well in most browsers
- ↗ A **special character**, non-breaking space (** **) can be added to empty data cells, to make the borders visible
- ↗ ** ** between the `<td>` tags
- ↗ i.e. `<td> </td>`

Merging Cells - colspan

➤ The colspan attribute, which means 'column span' will span the cell over the number of cells that is specified.

➤ – `<td colspan = "2">`

Row 1, Cell 1	Row 1, Cell 2	Row 1, Cell 3
Row 1, Cell 1	Joined Cells	
Row 2, Cell 1	Row 2, Cell 2	Row 2, Cell 3
Row 3, Cell 1	Row 3, Cell 2	Row 3, Cell 3
Row 4, Cell 1	Row 4, Cell 2	Row 4, Cell 3

```

7  <table border=1>
8      <tr>
9          <th>Row 1, Cell 1</th>
10         <th>Row 1, Cell 2</th>
11         <th>Row 1, Cell 3</th>
12     </tr>
13     <tr>
14         <td>Row 1, Cell 1</td>
15         <td colspan=2>Joined Cells</td>
16     </tr>
17     <tr>
18         <td>Row 2, Cell 1</td>
19         <td>Row 2, Cell 2</td>
20         <td>Row 2, Cell 3</td>
21     </tr>
22     <tr>
23         <td>Row 3, Cell 1</td>
24         <td>Row 3, Cell 2</td>
25         <td>Row 3, Cell 3</td>
26     </tr>
27     <tr>
28         <td>Row 4, Cell 1</td>
29         <td>Row 4, Cell 2</td>
30         <td>Row 4, Cell 3</td>
31     </tr>
32 </table>
33

```

Merging Cells - rowspan

➤ The rowspan will span across rows rather than columns.

➤ – `<td rowspan = "2">`

Row 1, Cell 1	Row 1, Cell 2	Row 1, Cell 3
Row 1, Cell 1	Joined Cells	
Row 2, Cell 1	Row 2, Cell 2	Row 2, Cell 3
	Row 3, Cell 2	Row 3, Cell 3
Row 4, Cell 1	Row 4, Cell 2	Row 4, Cell 3

```

7  <table border=1>
8      <tr>
9          <th>Row 1, Cell 1</th>
10         <th>Row 1, Cell 2</th>
11         <th>Row 1, Cell 3</th>
12     </tr>
13     <tr>
14         <td>Row 1, Cell 1</td>
15         <td colspan=2>Joined Cells</td>
16     </tr>
17     <tr>
18         <td rowspan="2">Row 2, Cell 1</td>
19         <td>Row 2, Cell 2</td>
20         <td>Row 2, Cell 3</td>
21     </tr>
22     <tr>
23         <td>Row 3, Cell 2</td>
24         <td>Row 3, Cell 3</td>
25     </tr>
26     <tr>
27         <td>Row 4, Cell 1</td>
28         <td>Row 4, Cell 2</td>
29         <td>Row 4, Cell 3</td>
30     </tr>
31 </table>

```

Questions

