



CENTER FOR TEXTUAL STUDIES AND DIGITAL HUMANITIES

DIGH 401 - Introduction to Computing

Fall Semester 2013

Week 13

Today's Class

- Basic web design (continued)
 - HTML
 - CSS
- HTML 5

HTML - working within the <body>

iFrame

- used to display a web page within a web page
- 'src' attribute and value for required URL of web page
- add height and width, style using 'class' and CSS....
- use 'name' attribute to create an anchor for linking

```
<iframe src="iframe1.html" width="600" height="400" name="iframe1"></iframe>
```

HTML - working within the <body>

Working with layout

- we can organise a web page into several logical sections
 - header, sidebar, content body, footer...
- we could use a table to organise this structure
- or better still we could use a series of DIV elements

```
<div id="container">  
<div id="header">...</div>  
<div id="sidebar" class="sidebar1">...</div>  
<div id="content" >...</div>  
<div id="footer">...</div>  
</div>
```

HTML - styling a document

- CSS styling can be added to HTML in three standard ways
 - external CSS style sheets
 - `<style>` element within the `<head>` section of the HTML document
 - style attribute within HTML elements

External

```
<link rel="stylesheet" type="text/css" href="style.css" />
```

`<style>`

- we can also embed CSS directly within our `<head>` section

style

- we can also add a 'style' attribute per HTML element to specify the required CSS

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HTML - <head>

- add our CSS styling as either <link> or <style>
- add javascript using <script> element

```
<script type="text/javascript" src="assets/default/script.js">
```

- add <title> of our page, which will be shown in the browser tab or window heading

```
<title>Our Page Title</title>
```

- <base /> can be used to specify a default address or target for all links on our page

```
<head>
```

```
<base href="http://www.w3schools.com/images/" target="_blank">
```

```
</head>
```

- <meta /> adds metadata about the HTML document

```
<meta name="description" content="Woolf Online Electronic Edition" />
```

```
<meta name="keywords" content="woolf, virginia woolf, electronic edition"
```

HTML - entities

- HTML also has reserved characters
- express reserved characters as HTML entities
- < and > shown as < and >

Full list of HTML entities available at [HTML ISO-8859-1 Reference](#)

CSS - Intro

- CSS = Cascading Style Sheets
- defines how HTML is displayed and rendered
- CSS can be stored in external files, added to the <style> element, and embedded as values in the 'style' attribute of an element
- all visual browsers now support CSS

CSS - Syntax

- CSS follows a defined syntax pattern
 - selector eg: p
 - declaration
 - property & value

```
p {  
  color: red;  
  font-size: 13px;  
}
```

- comments can be added to describe the selector and its properties etc

```
/*CSS Comment...*/
```

a comment can be added before the selector or within the curly braces

CSS - ID and Class selectors

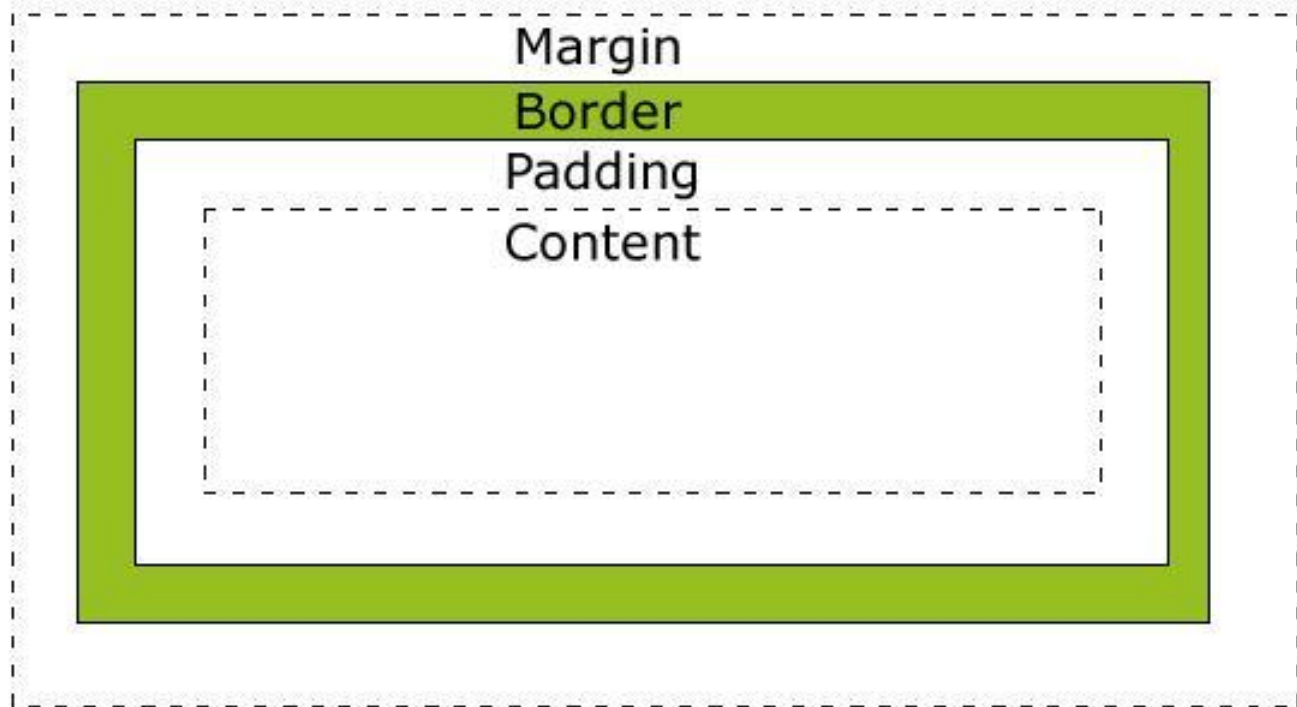
- ID is used to identify and style a unique HTML element
- the ID must match the required HTML element's ID and is defined with '#'

```
#sidebar1 {  
    color: blue;  
    text-align: center;  
}
```

- class is used to style any HTML elements containing the given class value
- the class must match the value of the class attribute in HTML and is defined with '.'

```
.sidebars {  
    border: 1px solid black;  
}
```

CSS - Box Model



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Design your page

- A few examples...

HTML 5 - Intro

- cooperation between W3C and WHATWG
- replacement for current HTML 4
- still a work in progress but becoming increasingly popular
- most modern browsers have at least some support for HTML 5 and this is improving with each new browser release

In developing HTML 5 a few rules were established,

- new features should be based on HTML, CSS, DOM, and JavaScript
- reduce the need for external plugins (like Flash)
- better error handling
- more markup to replace scripting
- device independent

HTML 5 - New features

[Test your browser's support for HTML5](#)

- a new canvas element has been added for drawing
 - video and audio support is now available as an embedded feature of a web page
 - improved support for local offline storage
 - new markup elements such as
 - article, footer, header, nav, section, figure, mark...
 - new media elements such as
 - audio, video...
 - new form controls such as
 - calendar, date, time, email, url, search...
- and
- new input type attribute values such as
 - search, url, email, month, date, tel...

HTML 5 - Video

- embedding video in HTML 4 requires a plugin such as Flash
- HTML 5 introduces its own element tag specifically for embedding video content for playback

```
<video width="320" height="240" controls="controls">
```

```
  <source src="movie.mp4" type="video/mp4" />
```

```
  <source src="movie.webm" type="video/webm" />
```

```
  <source src="movie.ogv" type="video/ogg" />
```

Sorry, but your browser does not support HTML 5 video playback.

```
</video>
```

Example

[Check browser support for <video> element and video codecs](#)

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```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<video width="320" height="240" controls="controls">
```

```
  <source src="movie.mp4" type="video/mp4" />
```

```
  <source src="movie.ogg" type="video/ogg" />
```

```
  Your browser does not support the video tag.
```

```
</video>
```

```
</body>
```

```
</html>
```


HTML 5 - Audio

- standardised element for audio playback and streaming

`<audio>`

- many supported codecs including MP3 & 4, WAV, OGG Vorbis, 3GP, M4A....

```
<audio controls="controls">
```

```
  <source src="call_the_man.ogg" type="audio/ogg" />
```

```
  <source src="call_the_man.mp3" type="audio/mpeg" />
```

Sorry, but your browser does not support HTML 5 audio playback.

```
</audio>
```

[test of <audio> element](#)

[Check browser support for <audio> element and audio codecs](#)

HTML 5 - Canvas

- canvas element enables graphics to be drawn on a web page
- uses Javascript to draw the graphics within a specified rectangle area
- you can use any of the pixels within the specified rectangle for the drawing
- several methods available for drawing paths, boxes, circles, characters, and adding images

```
<canvas id="canvas1" width="200" height="100">
```

Sorry, but your browser does not support the HTML 5 canvas element.

```
</canvas>
```

```
<script type="text/javascript">
```

```
var can1 = document.getElementById("canvas1");
```

```
var context1 = can1.getContext("2d");
```

```
context1.fillStyle="#000000";
```

```
context1.fillRect(0,0,150,75);
```

```
</script>
```

[Example](#)

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```
<!DOCTYPE html>
<html>
<head>
<title>HTML5 Canvas Demo</title>

<script type="text/javascript">
function draw() {
/*black cube*/
var can2 = document.getElementById("canvas2");
var context2 = can2.getContext("2d");
context2.fillStyle="#000000";
context2.fillRect(0,0,50,50);
}
</script>

</head>
<body onload="draw()">

<h5>Cube</h5>
<canvas id="canvas2" width="200" height="100" style="border:1px solid #c3c3c3;">
Your browser does not support the canvas element.
</canvas>

</body>
</html>
```

[Example](#)

HTML 5 - Canvas

```
<script type="text/javascript">  
var can2 = document.getElementById("canvas2");  
var context2 = can2.getContext("2d");  
context2.moveTo(10,30);  
context2.lineTo(150,50);  
context2.lineTo(10,50);  
context2.stroke();  
</script>
```

Example

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```
<!DOCTYPE html>
<html>
<head>
<title>HTML5 Canvas Demos</title>

<script type="text/javascript">
function draw() {
/*triangle*/
var can4 = document.getElementById("canvas4");
var context4 = can4.getContext("2d");
context4.moveTo(10,30);
context4.lineTo(150,50);
context4.lineTo(10,50);
context4.lineTo(10,30);
context4.stroke();
}
</script>

</head>
<body onload="draw()">

<h5>Triangle</h5>
<canvas id="canvas4" width="200" height="100" style="border:1px solid #c3c3c3;">
Your browser does not support the canvas element.
</canvas>

</body>
</html>
```

HTML 5 - Canvas

- WebGL can also be used with <canvas> to create complex drawings, animations, games, interactive environments.....

[Breakout](#)