

WEEK 7

Cascading Style Sheets

- Limitations of HTML for presentation
- Style control: requirements
- Development of CSS
- Cascading and Inheritance

- Limitations of HTML

- Design (and development process) of HTML emphasises structure over (instead of?) presentation
 - most tags are structural
 - only a few (e.g. **emphasis** and **strong**) are presentational
- Result: frustration for designers trying to create sophisticated site designs

- Limitations of HTML
 - Responses:
 - use proprietary (so non-standard) tags, such as ``
 - but:
 - inconsistent support
 - unpredictable outcomes
 - use images of text
 - compromised accessibility
 - longer downloads

- Limitations of HTML
 - use tables to position text and images
 - complexity of ‘code’
 - variable browser support
 - use *portable documents* (e.g. PDF) to control appearance
 - page-orientation is not necessarily what is required
 - no guarantee of immediate support (*via* plugin)
 - style system of the originating program may not be adequate

- Limitations of HTML

- Consequences

- pages are less likely to ‘work’ for a wide range of users (one component of “successful” sites)
 - pages are bigger and more complex than necessary
 - pages are harder to develop and more difficult to maintain

- Style control: Requirements
 - ‘Natural’ extension to existing HTML and its development process
 - Does not compromise fundamental emphasis on structure
 - Based on a familiar system (such as style sheets in word processing and DTP)

- Style control: Requirements
 - Easy to incorporate into new pages
 - Easy to ‘retro-fit’ to existing pages
 - Widely supported by browsers
 - Defined methods for non-supporting browsers to “degrade gracefully”

- Development of CSS
 - Simple style sheets were first created by Tim Berners-Lee in the 1990 NeXTStep implementation
 - Set aside when the web ‘exploded’
 - Current system - Cascading Style Sheets - developed by Håkon Wium Lie and Bert Bos at W3C and released in 1997 (CSS1)
 - Essentially what is in use today; CSS2 added various features that are not yet widely-supported

CASCADING STYLE SHEETS

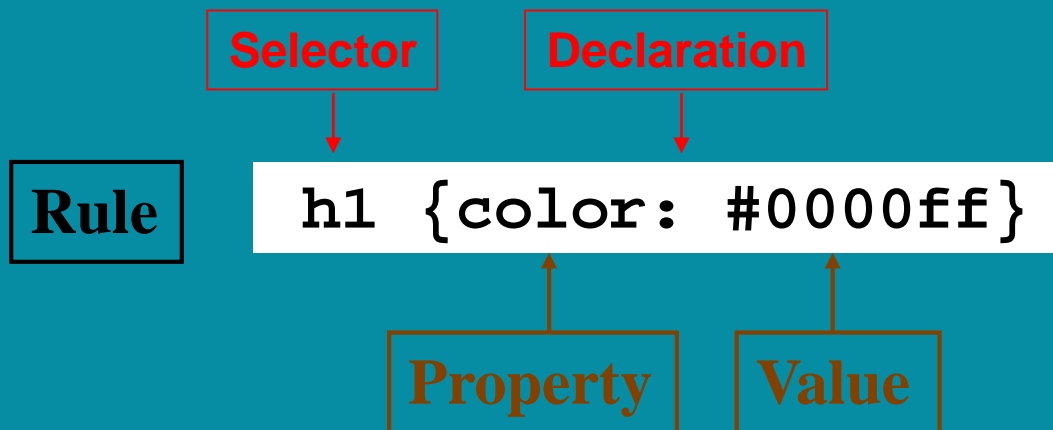
- A way of controlling appearance of pages
- Can be:
 - can include styles inside the tags themselves
 - included at the top of the page they belong to
 - a separate file that many pages link to

RULES

- Each rule has a selector eg h1 a property and a value.
- All properties are enclosed in curly brackets
- Multiple properties must be separated by a semi-colon ;

RULES

- selector*: the element being defined
- declaration*: set the *value* of the *property*



PAGE-LEVEL STYLES

- The `<style>` tag should be included with the `<head>` tag.
- Styles that relate to an entire web page

```
<head>
```

```
<style type="text/css">
```

```
h1 { font-size: x-large; font-weight: bold }
```

```
h2 { font-size: large; font-weight: bold }
```

```
</style>
```

```
</head>
```

```
<body>
```

...and the rest of the page.

SITE-WIDE STYLE SHEETS

- Nothing more than a text document with a special extension `.css`
- `<link>` tag associates the external style sheet with the current HTML document
- Use the attribute `rel` to specify the stylesheet

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

CREATING EXTERNAL STYLE

```
body { background-color: salmon;  
font-family: Arial, Helvetica, sans-serif;  
color: green}  
h1 {color: red}
```

THE LINKED WEB PAGE

```
<html>
<head>
<title>Stylesheet Example</title>
<link rel="stylesheet" href="mystyle.css"
type="text/css" />
</head>
<body>
<h1>This is a heading</h1>
This is just some normal text
</body>
</html>
```


ADVANTAGES OF SITE-WIDE CSS

- Rules are created once and can be applied to every page in the site.
 - reduces development time
 - reduces chance of error
 - makes for a consistent website
 - changes to websites can be made quickly and applied consistently

STYLES INSIDE TAGS

- Allows you to set the fonts for a **span** of text

```
<span style="font-style: italic"> Some text in  
italics</span>
```

- Examples:

- font-style: italic, oblique
- font-weight: bold, bolder, lighter
- font-variant: small-caps
- text-decoration: underline, overline
- font-family: Verdana, Arial

CLASSES

- Allows you to assign rules that can be applied in some cases

```
<style type="text/css">
```

```
p.important {font-family: Times New  
Roman; color: red}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<p class="important">Different style</p>
```

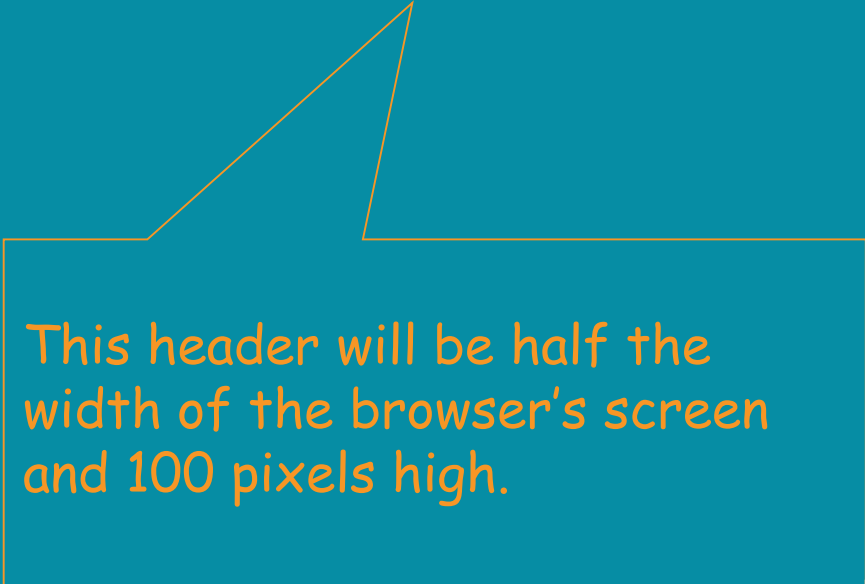
BOX PROPERTIES

- Used to position elements, control white space around them and apply effects such as borders.
- Can be used instead of tables to control layout.

CONTROLLING SIZE

- width and height control the size of a box.

```
#header{ width: 50%; height:100px }
```



This header will be half the width of the browser's screen and 100 pixels high.

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BORDERS

```
border: thickness style color;
```

- width

- thin, medium, thick or any other size (in pixels)

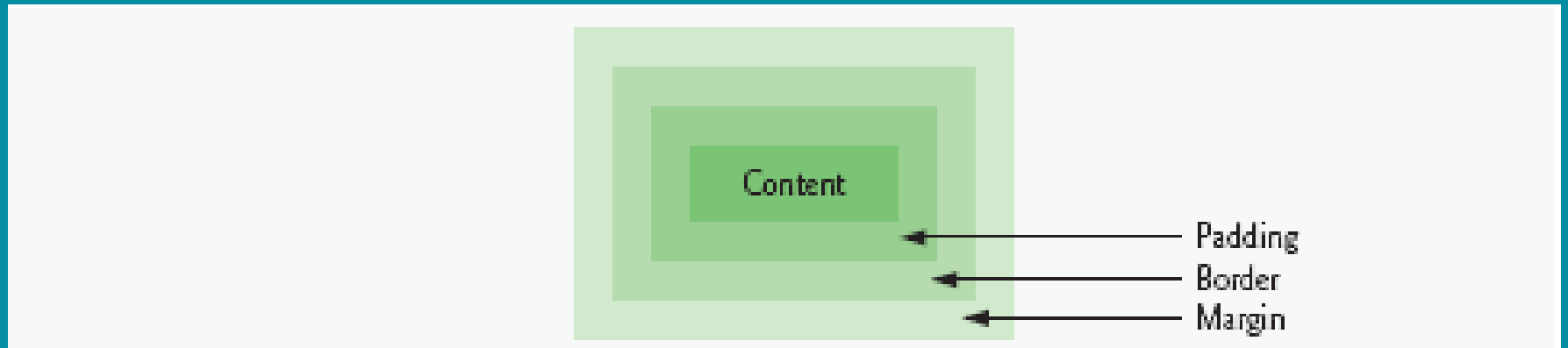
- style (default is none)

- dotted, dashed, solid, double, groove, ridge, inset, outset.

MARGINS AND PADDING

- Control white space around boxes.
- `padding` controls white space inside the border
- `margin` controls whitespace between the border and the enclosing block.

CSS LAYOUT



- padding properties

Property

Description

padding

A shorthand property for setting all the padding properties in one declaration

padding-bottom

Sets the bottom padding of an element

padding-left

Sets the left padding of an element

padding-right

Sets the right padding of an element

padding-top

Sets the top padding of an element

- shorthand property for all the padding properties “padding”

—p {

padding: 25px 50px;

}

padding: 25px 50px 75px 100px;

top padding is 25px

right padding is 50px

bottom padding is 75px

left padding is 100px

padding: 25px 50px 75px;

top padding is 25px

right and left paddings are 50px

bottom padding is 75px

padding: 25px 50px;

top and bottom paddings are 25px

right and left paddings are 50px

padding: 25px;

all four paddings are 25px

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- margin properties

Property

margin

margin-bottom

margin-left

margin-right

margin-top

Description

A shorthand property for setting the margin properties in one declaration

Sets the bottom margin of an element

Sets the left margin of an element

Sets the right margin of an element

Sets the top margin of an element

- shorthand property for all the margin properties “**margin**”

–p {

margin: 100px 50px;

}

margin: 25px 50px 75px 100px;

top margin is 25px

right margin is 50px

bottom margin is 75px

left margin is 100px

margin: 25px 50px 75px;

top margin is 25px

right and left margins are 50px

bottom margin is 75px

margin: 25px 50px;

top and bottom margins are 25px

right and left margins are 50px

margin: 25px;

all four margins are 25px

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- border properties
 - Border width
 - Pixels, thin, medium, or thick
 - Border style (required):
 - dotted, dashed, solid, double, groove, ridge, inset, outset
 - Border color
 - Name, rgb, hex

```
p {  
    border: 5px solid red;  
}
```

```
<html>
<head>
<title>Styles</title>
<style type="text/css">
.usepad { border: 2px solid black; padding:
15px }
.usemargin { border: 2px solid black;
margin: 15px }
</style>
</head>
```

There are many reality TV shows today. Survivor, Big Brother, The Block, Paradise Hotel, Average Joe, The Bachelor, The Bachelorette, My Restaurant Rules, Hot House, The Resort, Popstars, Australian Idol, The Apprentice, The Amazing Race. Some shows are more popular than others. Some have had tremendous success.

Displays Margin Effect

There are many reality TV shows today. Survivor, Big Brother, The Block, Paradise Hotel, Average Joe, The Bachelor, The Bachelorette, My Restaurant Rules, Hot House, The Resort, Popstars, Australian Idol, The Apprentice, The Amazing Race. Some shows are more popular than others. Some have had tremendous success.

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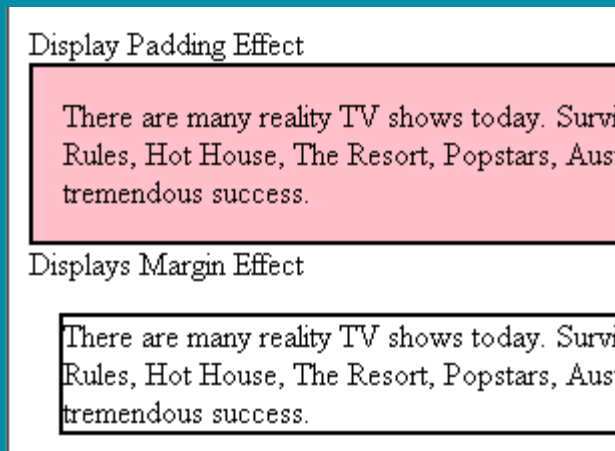


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BACKGROUND-COLOR

- Adds color to a box

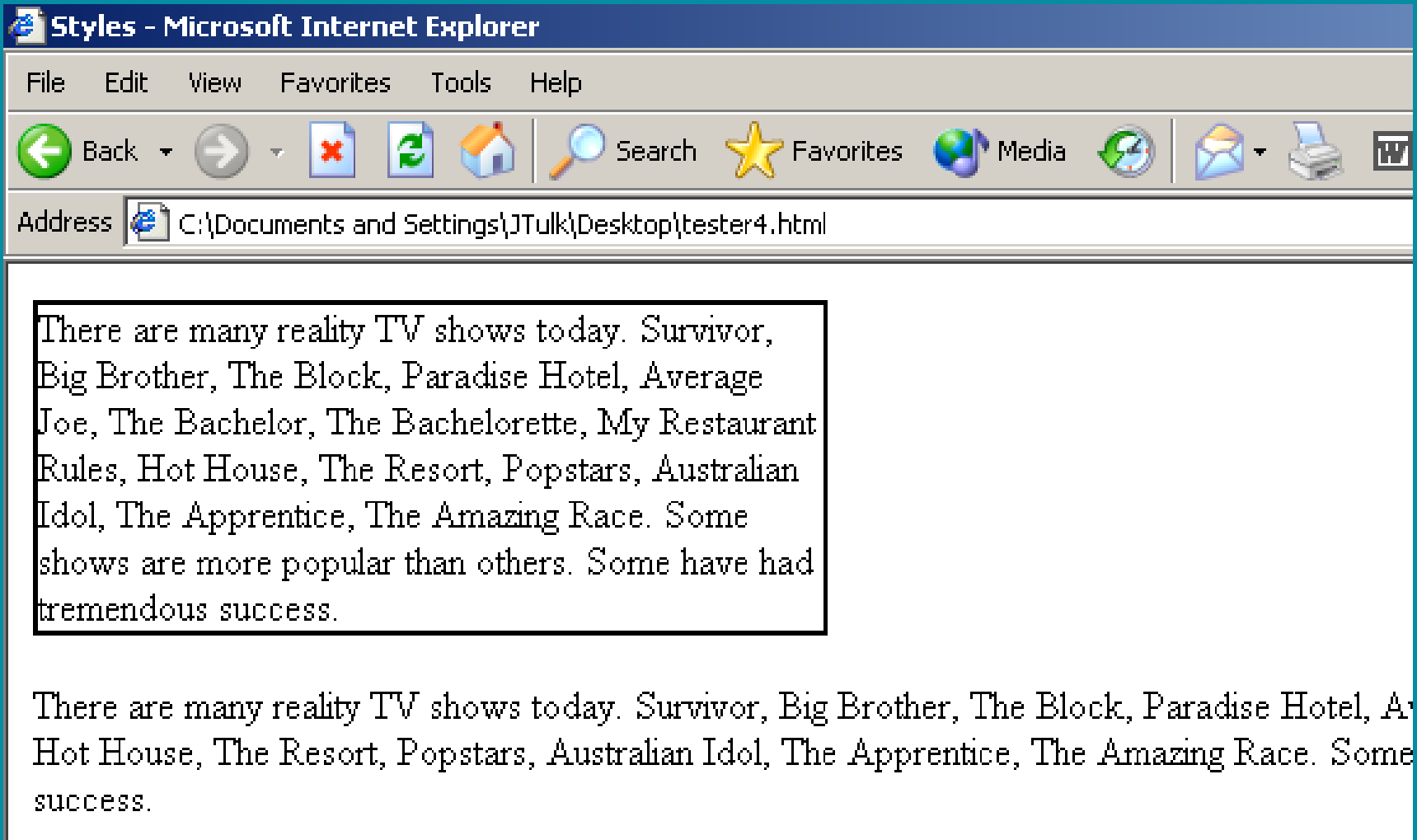
```
.usespad {  
    border: 2px solid black;  
    padding: 15px; background-color: pink  
}
```



FLOAT

- Two paragraphs with no float.

```
<style type="text/css">
.right {
    width: 33%; border: 2px solid black
}
</style>
```



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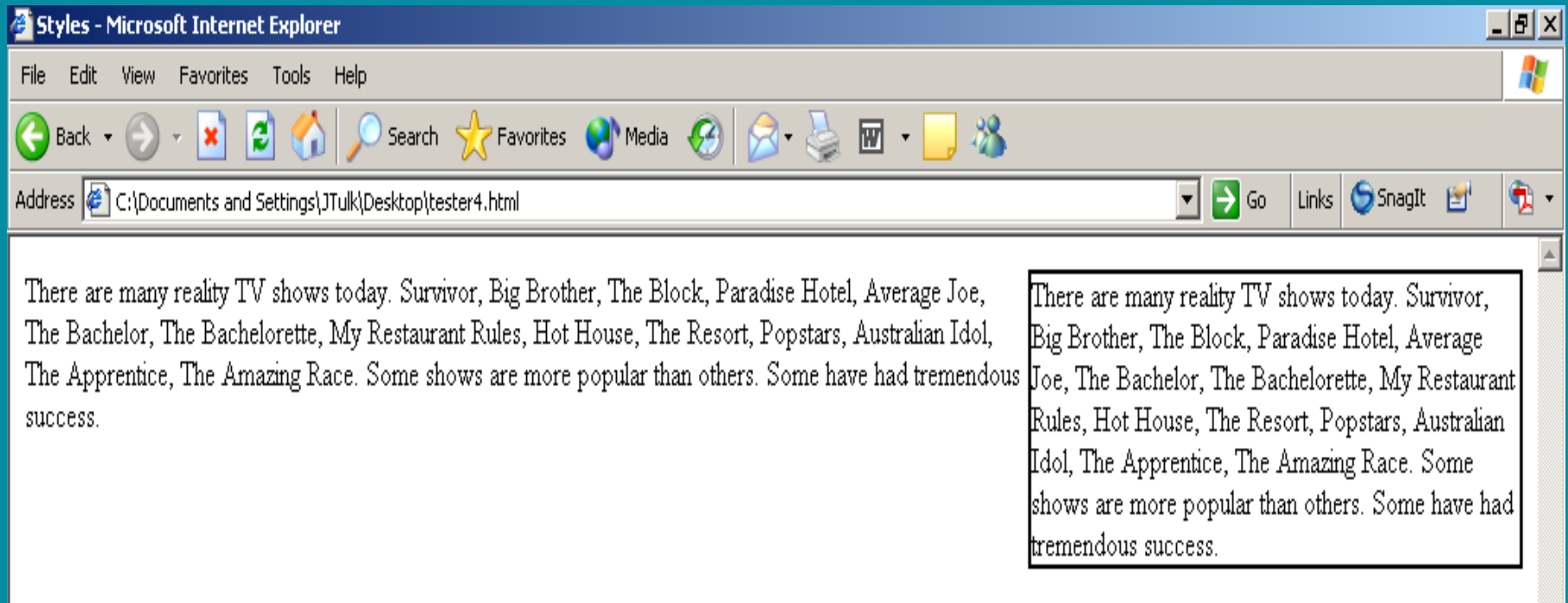
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AND USING FLOAT

```
.right { width: 33%; border: 2px solid black;  
float: right }
```



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LINKS

- `unvisited a:link { color: pink }`
- `visited a:visited { color: black }`
- `active a:active { color: yellow }`
- `currently has mouse pointer over it`
`a:hover { color: red }`
- Use the property `text-decoration:` with the value `none` to take the underline off an hyperlink.

LIST STYLE

- The `list-style-image` property can assign a graphic image to a list table, something difficult to do under plain XHTML

```
-ul {list-style-image: url(file.gif);}
```

Inheritance

- Central concept in designing style systems is *inheritance*
- Based on a structural hierarchy within documents, with most visible elements being ‘children’ of the `<body>` element – so they inherit their properties from the body
- Properties defined at one level in the hierarchy are inherited by structures ‘below’ them (but they *can* be over-ridden at that ‘lower’ level)

Inheritance

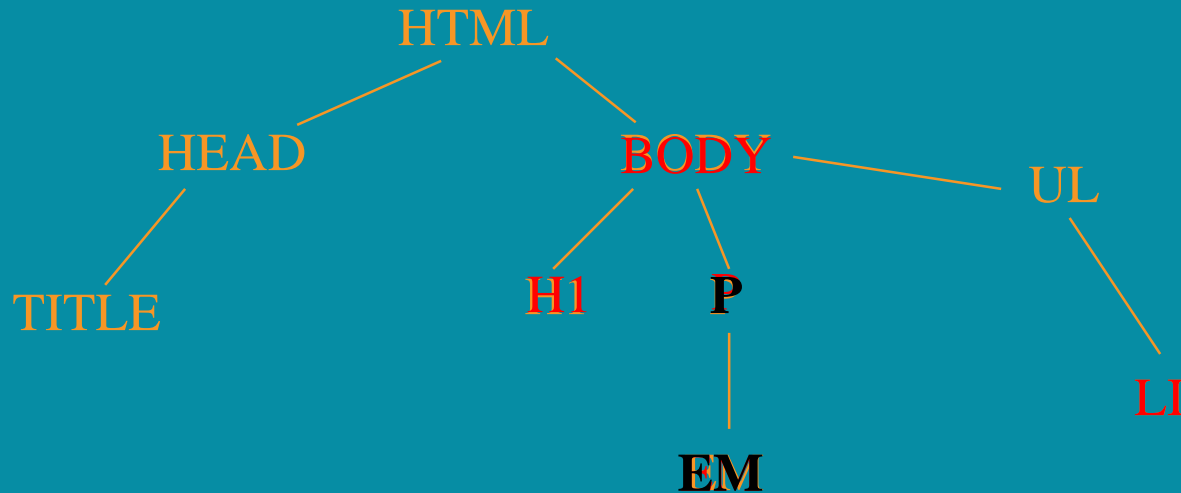
- Any property of any element not defined by a *style rule* takes the default value provided by the browser

Inheritance

```
<html>
<head>
  <title><Sample document></title>
</head>
<body>
  <h1>This is a sample page</h1>
  <p>This is <em>some text</em></p>
  <ul>
    <li>A list item</li>
  </ul>
</body>
```


Inheritance

`body {color: red}`



`p {color: blue}`

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- Build full CSS layouts
 - Build one step at a time and test each step across a range of browsers
 - Build for modern browsers then work backwards
 - Validate your HTML code and CSS
 - [WC3 HTML validator](#)
 - [WC3 CSS validator](#)

- Step 1 Decide on a level of browser support

Browser support options

Modern Browsers	Modern Browsers	Recent Browsers	Older Browsers
Option 1.	Full CSS support	Full CSS support	Full CSS support
Option 2.	Full CSS support	Full CSS support	Partial CSS support
Option 3.	Full CSS support	Full CSS support	Unstyled content
Option 4.	Full CSS support	Partial CSS support	Unstyled content

- Step 2 Look for containers



- Step 3 Name the containers

- container

- header

- mainnav

- menu

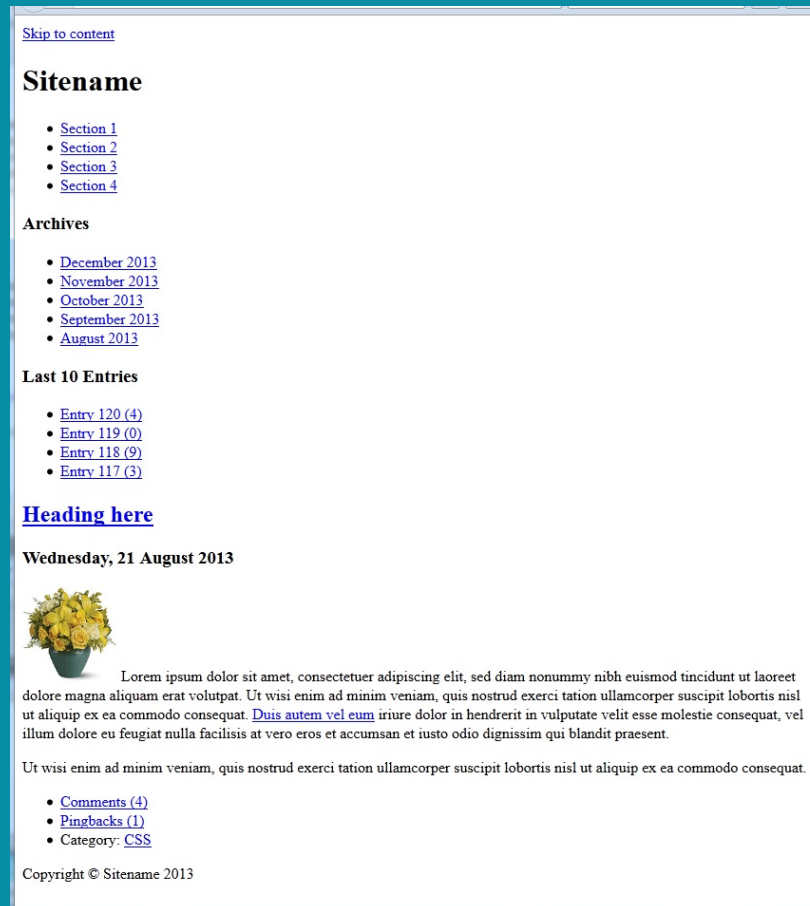
- contents

- footer



- Give <div> names that have semantic meaning rather than names that describe their appearance

- Step 4 Create the mark-up



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- Step 5 Position containers

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Wednesday, 21 August 2013



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- Step 6 Any problems?
 - test page across a range of browsers

- Step 7 Detailed styling

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[Entry 119 \(0\)](#)

[Entry 118 \(9\)](#)

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- Step 8 Print CSS

- Hide any containers you don't need using `display: none;`
- Change all colors to black or grayscale colors.
- Change links using a `{ text-decoration: none;}`
- Remove font sizing and allow the default font-sizing to be used.