



School of Computing, Maths & Digital Technology

6G4Z2101: Introduction to Web Design and Development

Introduction to Cascading Style Sheets



What this lecture will cover

- Overview of inline, internal & external style sheets
- Formatting text with CSS
- CSS box model
 - divs
 - margins/borders/padding
 - floating & clearing

Review of HTML

- HTML is page content
- Text is 'tagged', with tags mostly being paired (e.g. `<h1> </h1>`, `<p> </p>`)
- Tags interpreted by browsers as the page is rendered
- Tags give some indication of the page structure
 - e.g. heading levels
 - `<header>`, `<footer>`, `<section>`, etc

Introduction to CSS

- Used to style and position content

- You can control, e.g.
 - physical layout of the page
 - the formatting of text
 - how lists are displayed appearance of navigation menus
 - how images are displayed

3 types of Style Sheet

- **Inline**
 - Not so commonly used as the code is placed within the html body
- **Internal**
 - For styling individual pages
- **External**
 - Styling held in a separate document
 - Most commonly used
- Cascading order of importance
- One external stylesheet can style many html pages

Style Syntax

- Style declarations are in the form of a **selector** and a **property:value** pair
- **Selector** = the **element** being styled (e.g. <h1>)
- **Property** = the **attribute** being styled (e.g. text colour for <h1>)
- **Value** = how you want it styled (e.g. the text size and colour)

```
selector { propertyA:valueA;  
           propertyB:valueB }
```

e.g.

```
h1 { font-size:20pt;  
     color: #FF3399 }
```



NOTE! Use American spellings

Inline Styles and Spans

- **Inline** style placed within the html code as an attribute of the element it is styling, e.g. the <p> element

<p style="color:red; font-family: Arial;">This text will use the Arial font, and will be coloured red.</p>

Or you could use a class here

- Spans target very specific content

<p> only £349.49 </p>

- Note syntax



- Claim two free pairs of 3D glasses [with selected Panasonic TVs](#).
- Claim Avatar and Titanic on Blu-ray 3D [with selected Panasonic Blu-ray products](#).
- Get a free pair of [Epson Active Shutter 3D Glasses](#) when you buy the [Epson TW6000w 3D 1080p Projector with WiFi](#).



- Get [up to £200 cashback](#) when you buy a selected Samsung TV and another Samsung product within 28 days.
- Get £30 off [selected Panasonic soundbars](#) when you buy a TV from Amazon.co.uk.
- Save £50 on selected Whittings wi-fi body scales [with selected Samsung products](#).



- **Deal of the Week:** [BenQ W700 DLP 720p Home Cinema Projector](#): only **£349.99**
- Get a [£50 Amazon voucher](#) when you buy a selected Samsung, Sony or LG SMART TV and subscribe to LOVEFILM.
- Get [free next-day delivery](#) when you buy a selected Panasonic TV.

Internal (Embedded) Style

- Placed within the <head> tags of the html document

```
<html>
```

```
<head>
```

```
<title>Internal style sheet</title>
```

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

```
    h1 {color:red; font-family: Georgia;}
```

```
    h2 {color: blue;}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<h1>Heading using the Internal Style</h1>  etc ...
```

This style would be applied to all h1 and h2 text, on this page only

External Style Sheets

- Styling information is held in a separate file, saved as .css
- A single stylesheet can be attached to multiple html documents
- Link placed between the <head> </head> tags

<html>

<head>

<title>Linked style sheet</title>

<link rel="stylesheet" href="mystyle.css">

</head>

Example External Stylesheet

h1{
color: red;
font-family: Arial;
}

selector

property

value

```
body {  
background-color: #ffffff;  
}
```

```
p {  
font-size: 12px;  
text-align: center;  
}
```



NOTE

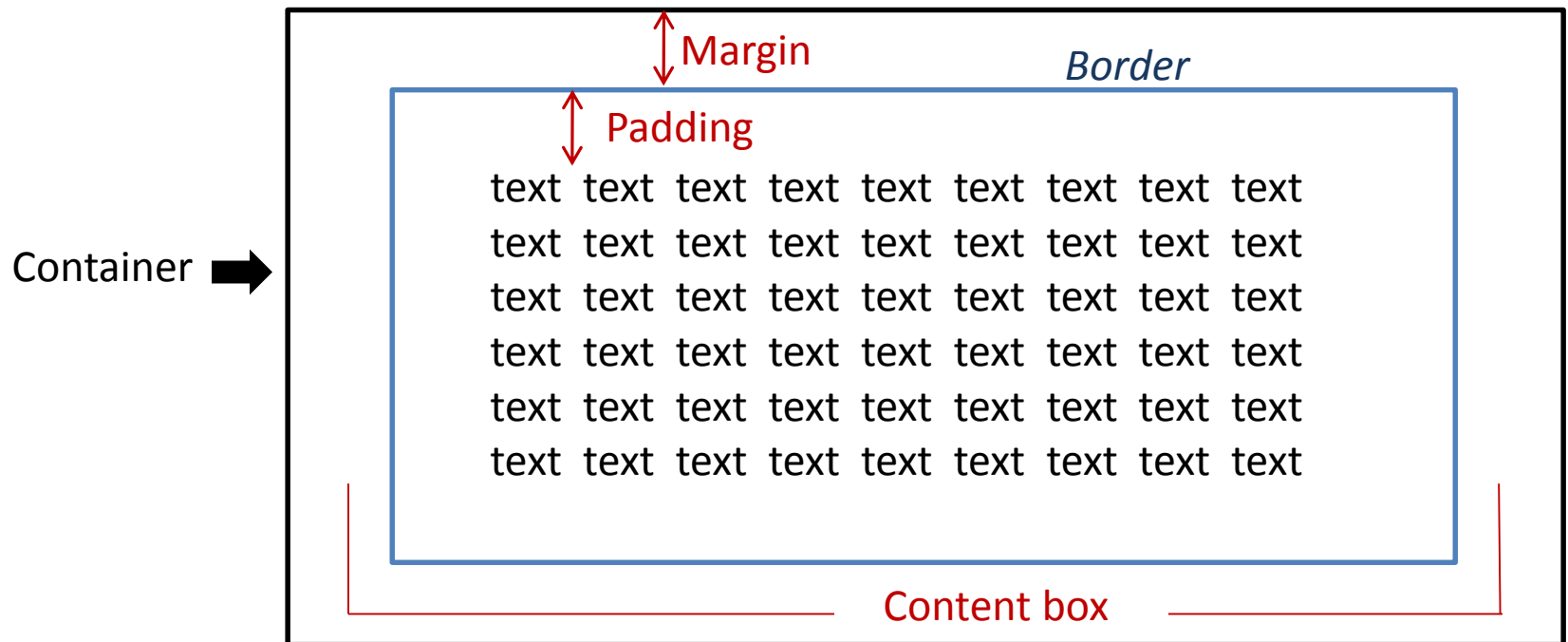
Colors can be defined using names, hexadecimal values, or rgb values

CSS Properties

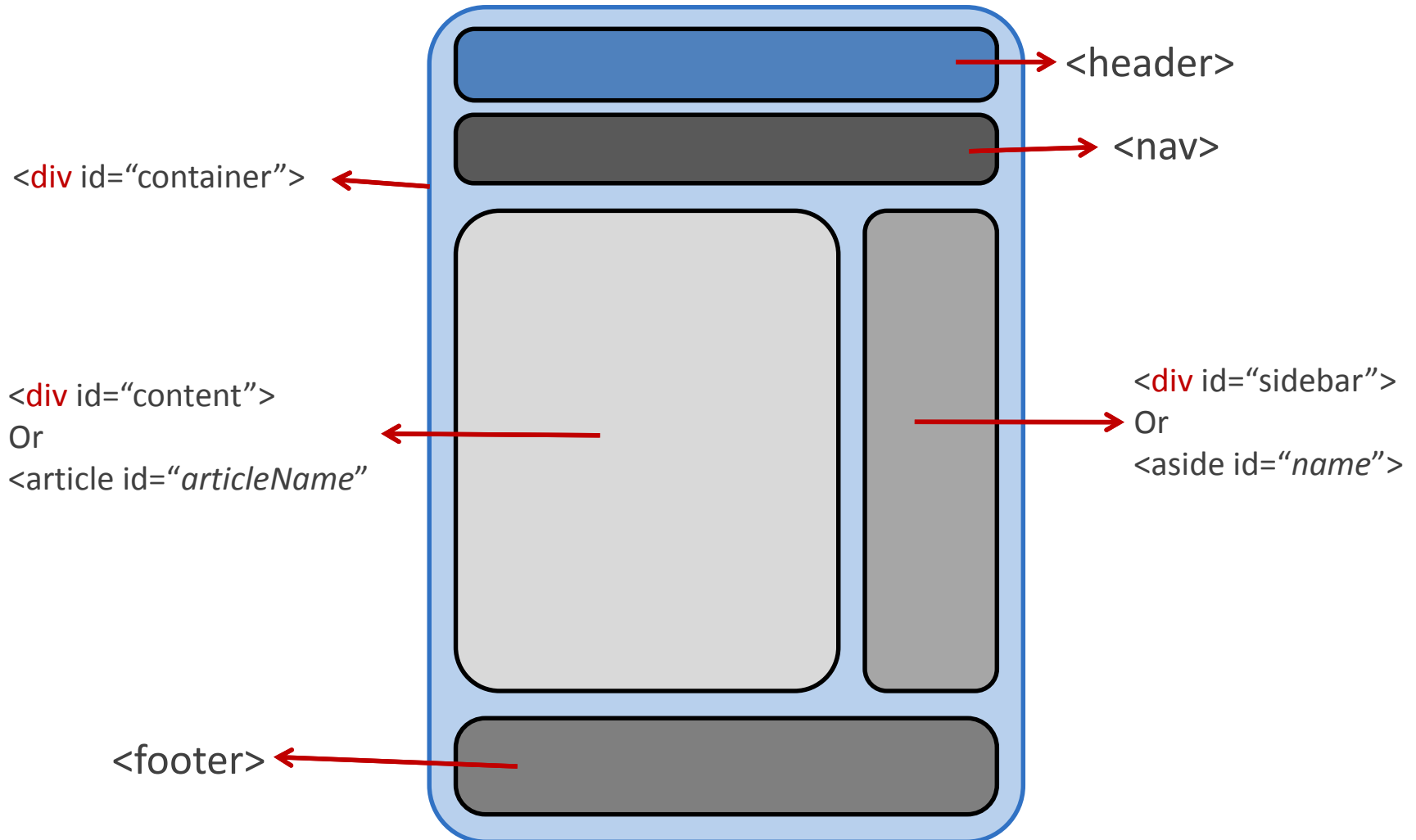
- There are many CSS properties
- Mainly visual, but also includes aural
- Constantly evolving
- Check the W3C (World Wide Web Consortium) for the full list, and to find information on current revisions
- [Full property table](#)

The CSS Box Model

- All HTML elements can be thought of as a rectangular box, which can have width, height, padding, border and margin properties

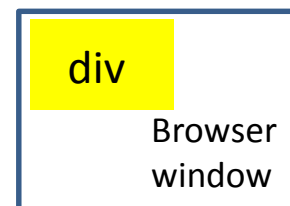
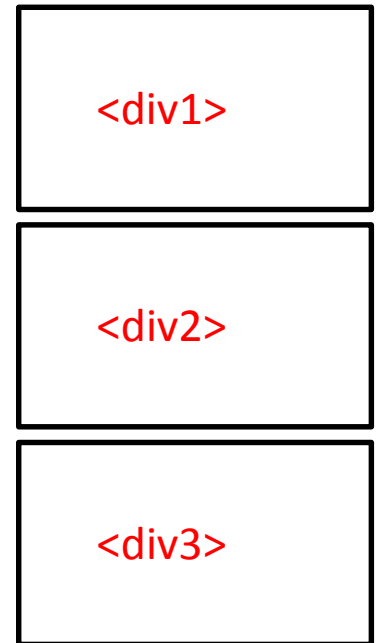


CSS Box Model - example



The <div> element

- A block-level element
- Defines areas within the html document
- The default is for content blocks to **stack vertically**
- Blocks can be realigned and nested to allow different layouts
- The first element will be placed in the top left corner by default



BBC Accessibility – example layout



The screenshot displays the BBC 'My web my way' website, which is dedicated to providing accessibility guidance. The top navigation bar includes the BBC logo, links to 'Your account', 'News', 'Sport', 'Weather', 'iPlayer', 'TV', 'Radio', and 'More...', along with a search bar. Below this, a blue header section features the title 'My web my way - Making the web easier to use' and a text size/color adjustment tool. A secondary navigation bar contains buttons for 'My web home', 'How to guides', 'Disability on BBC Online', 'Best practice', and 'FAQ / Contact'. The main content area is divided into several sections: 'How to guides' with icons for various disabilities (e.g., 'I can't see very well', 'I am blind', 'I can't hear very well', 'I find words difficult', 'I find a keyboard or mouse hard to use', and 'Browse all guides'); 'What is My web my way?' explaining the site's purpose and providing links to 'Read more about My web my way' and 'Comment on My web my way's new look'; 'BBC accessibility news' with links to 'News Connected Studio' and 'Read more news updates'; 'Disability on BBC Online' with links to 'Ouch! The online disability magazine', 'You and Yours', 'Games for switch devices', and 'BBC Online access services'; and 'Best practice' with links to 'What is accessibility?', 'Case studies', 'About My web my way', 'BBC accessibility policy', 'Useful web links', 'Standards and guidelines', and 'Contact us'. The footer contains the BBC logo, a mobile site link, and links to 'Terms of Use', 'Privacy', 'Cookies', 'About the BBC', 'Accessibility Help', 'Contact the BBC', and 'Parental Guidance'. A copyright notice for 2014 is also present.

BBC Your account News Sport Weather iPlayer TV Radio More... Search

My web my way - Making the web easier to use

Text size **A A A** Colour **C C C C**

My web home **How to guides** **Disability on BBC Online** **Best practice** **FAQ / Contact**

You are on: My web my way home [View sitemap](#)

How to guides

Choose a topic you would like help with

-  **I can't see very well**
-  **I am blind**
-  **I can't hear very well**
-  **I find words difficult**
-  **I find a keyboard or mouse hard to use**
-  **Browse all guides**

What is My web my way?

This site provides accessibility help, enabling computer users to make the most of the internet whatever their ability or disability.

- [Read more about My web my way](#)
- [Comment on My web my way's new look](#)

BBC accessibility news

[News Connected Studio](#)

- [Read more news updates](#)

Disability on BBC Online

The best of BBC Online for users with disabilities

- [Ouch! The online disability magazine](#)
- [You and Yours](#)
- [Games for switch devices](#)
- [BBC Online access services](#)

Best practice

Resources for making the web a more accessible place

- [What is accessibility?](#)
- [Case studies](#)
- [About My web my way](#)
- [BBC accessibility policy](#)
- [Useful web links](#)
- [Standards and guidelines](#)
- [Contact us](#)

BBC Mobile site Terms of Use Privacy Cookies About the BBC Accessibility Help Contact the BBC Parental Guidance

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Creating divs within the html

- Each div is given an **id** or **class** name
- Names should be meaningful (e.g. “container”, “sidebarRight”)
- Defined in the html using one of the following

```
<div id="id_name">
```

CONTENT GOES HERE

```
</div>
```

```
<div class="class_name">
```

CONTENT GOES HERE

```
</div>
```




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University

```
<body>
<div id="container">
  <div id="header">
</div> <!-- end header div -->
  <div id="navbar">
<ul>
  <li id="current"><a href="default.html">Home</a> </li>
  <li><a href="yearTutor.html">Year tutor</a></li>
  <li><a href="timetables.html">Timetables</a></li>
  <li><a href="teaching.html">Taught units</a></li>
  <li><a href="links.html">Links</a></li>
  <li><a href="contact.html">Contact me</a></li>
  <li><a href="http://www.det.mmu.ac.uk/formulastudent/">Racing car</a></li>
</ul>
</div> <!-- end navbar div -->
  <div id="mainContent">
<h1>Marie's home page</h1>
<p>I'm Year Tutor for:</p>
  <ul>
    <li>BSc (Hons) Media Technology</li>
    <li>Year 1</li>
    <li>Year 2</li>
  </ul>
  ... etc
</div> <!-- end container div -->
```



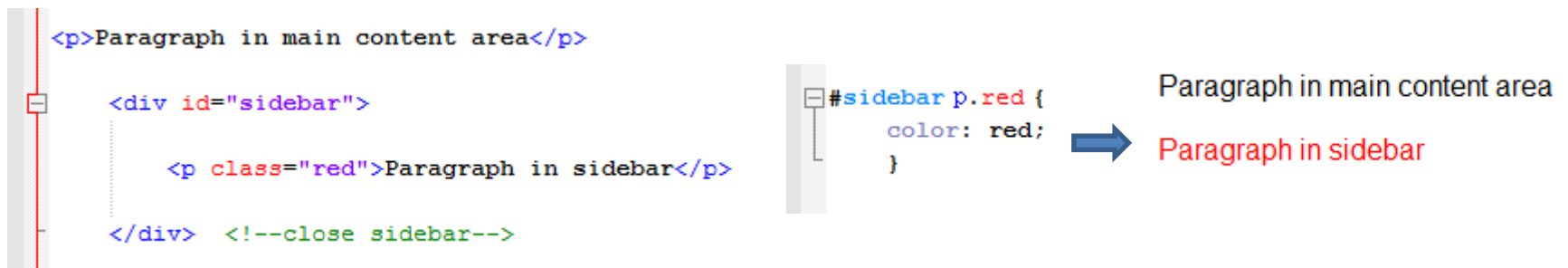
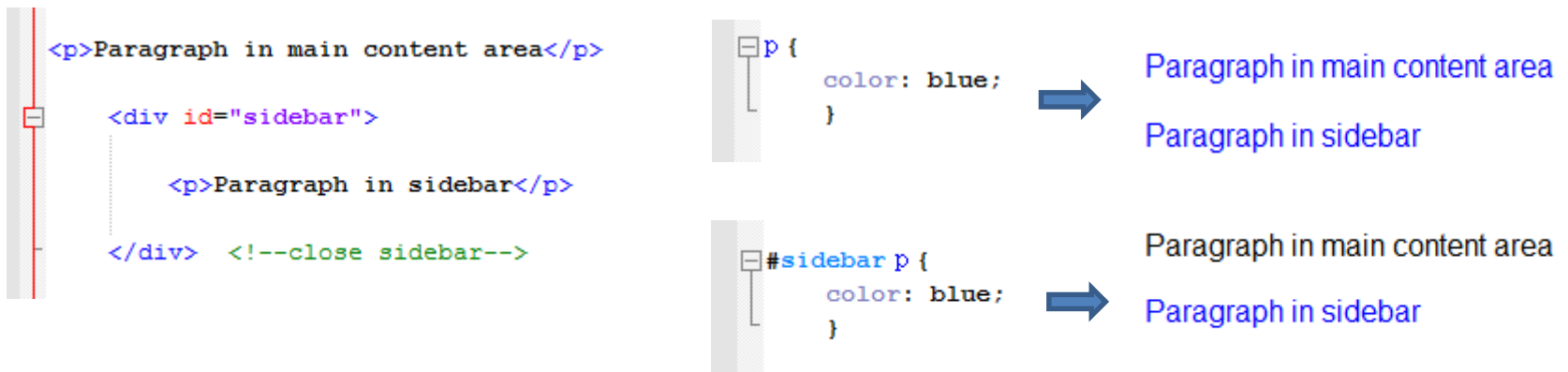
Divs within the CSS

- Each div is referenced using *#id_name* or *.class_name*

```
#container {  
    width: 90%;  
    margin: 0 auto;  
    margin-top: 20px;  
    text-align: left;  
    border: 3px solid #999999;  
    padding-top: 10px;  
    background-color: #fff;  
}
```

Targeting selectors

- Selectors will depend on the structure of your document, and any nesting



Setting margins/borders/padding

- Can be defined in combination. In these examples, 'margin' could be replaced by 'border-width' or 'padding'

`margin:25px 50px 75px 100px;`

top margin is 25px
right margin is 50px
bottom margin is 75px
left margin is 100px



Think clock!

`margin:25px 50px 75px;`

top margin is 25px
right and left margins are 50px
bottom margin is 75px

`margin:25px 50px;`

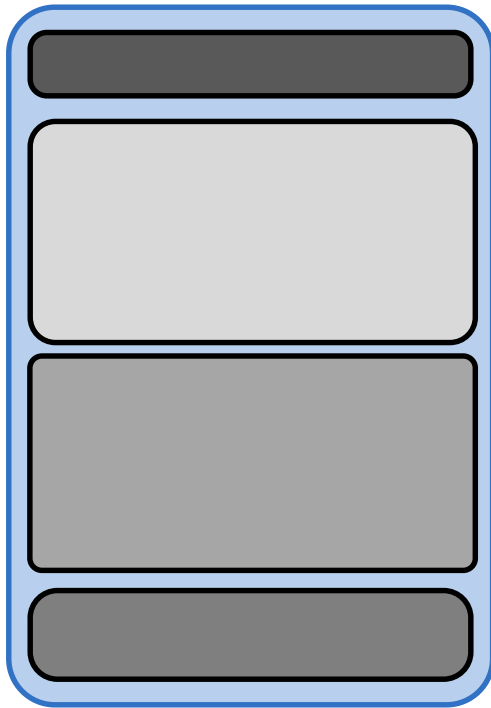
top and bottom margins are 25px
right and left margins are 50px

`margin:25px;`

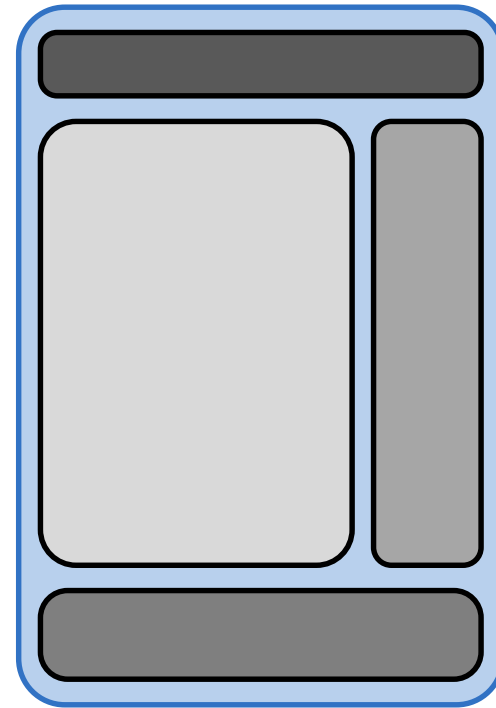
all four margins are 25px

CSS layout

- By default, content will have a linear layout (elements stacked)
- To achieve a non-linear layout, you can **float** elements, or position using values



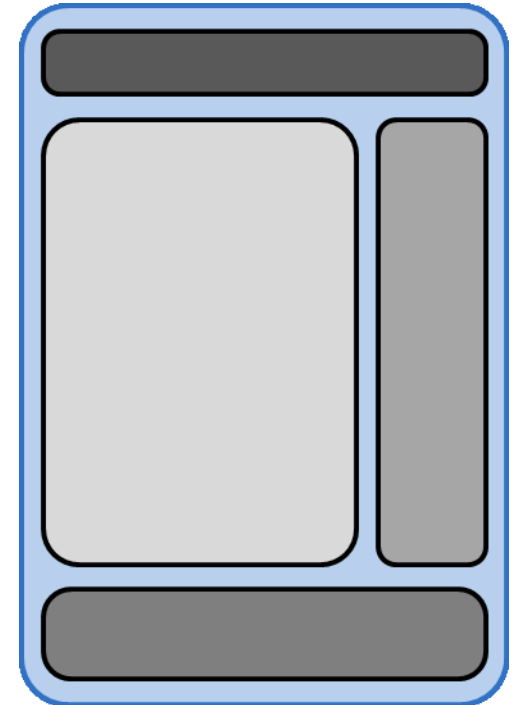
A linear layout



A non-linear layout

Floating elements

- Floating elements is one way to break the default linear document flow
- Float left or right
- Floating several elements in the same direction will align them horizontally
- Layout can break when browser window is resized



```
#div1, #div2, #div3 {  
  float: left;  
  margin-left: 10px;  
}
```

<div1>

<div2>

<div3>

Floating images

- When an image is floated it allows the text to wrap round it
- Images can be floated to the right or left



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Metropolitan
University

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum



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```
<body>
```

```

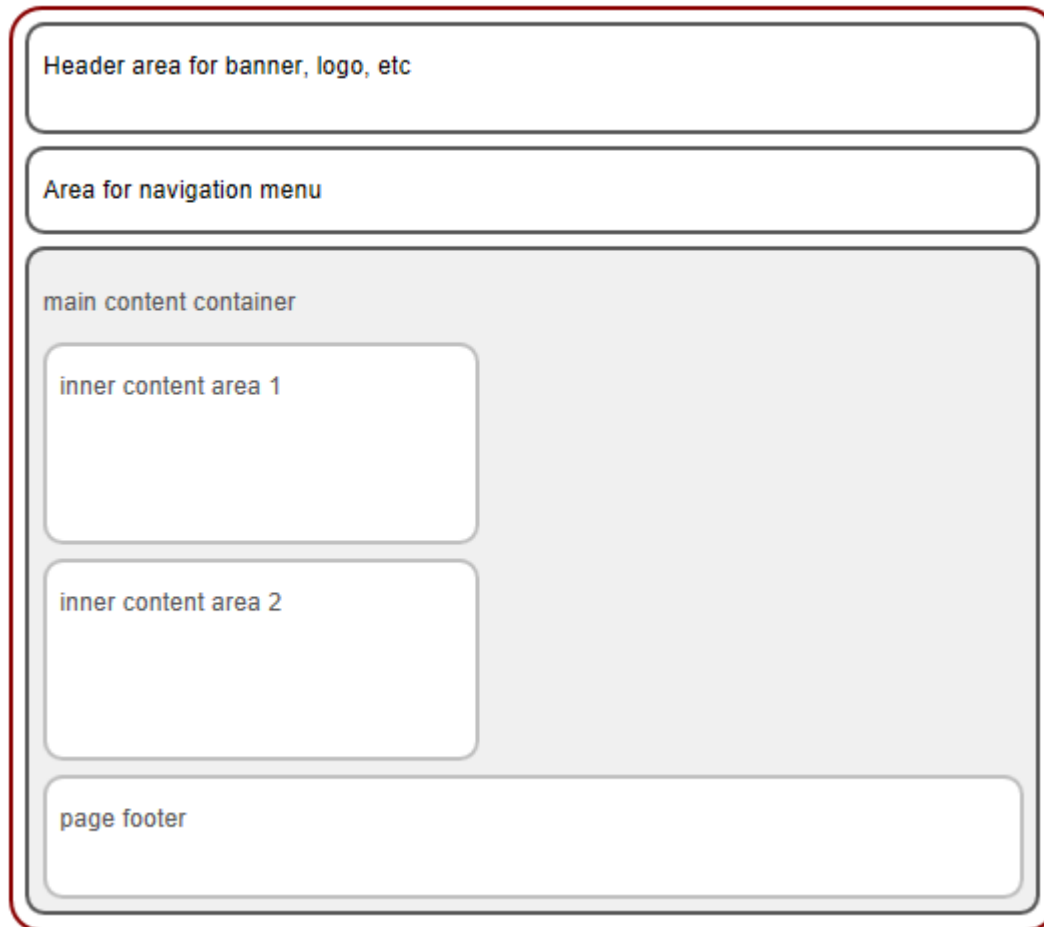
```

```
<p>Lorem ipsum dolor sit amet...</p>
```

```
</body>
```

```
img {  
  float: left;  
  margin: 4px;  
}
```

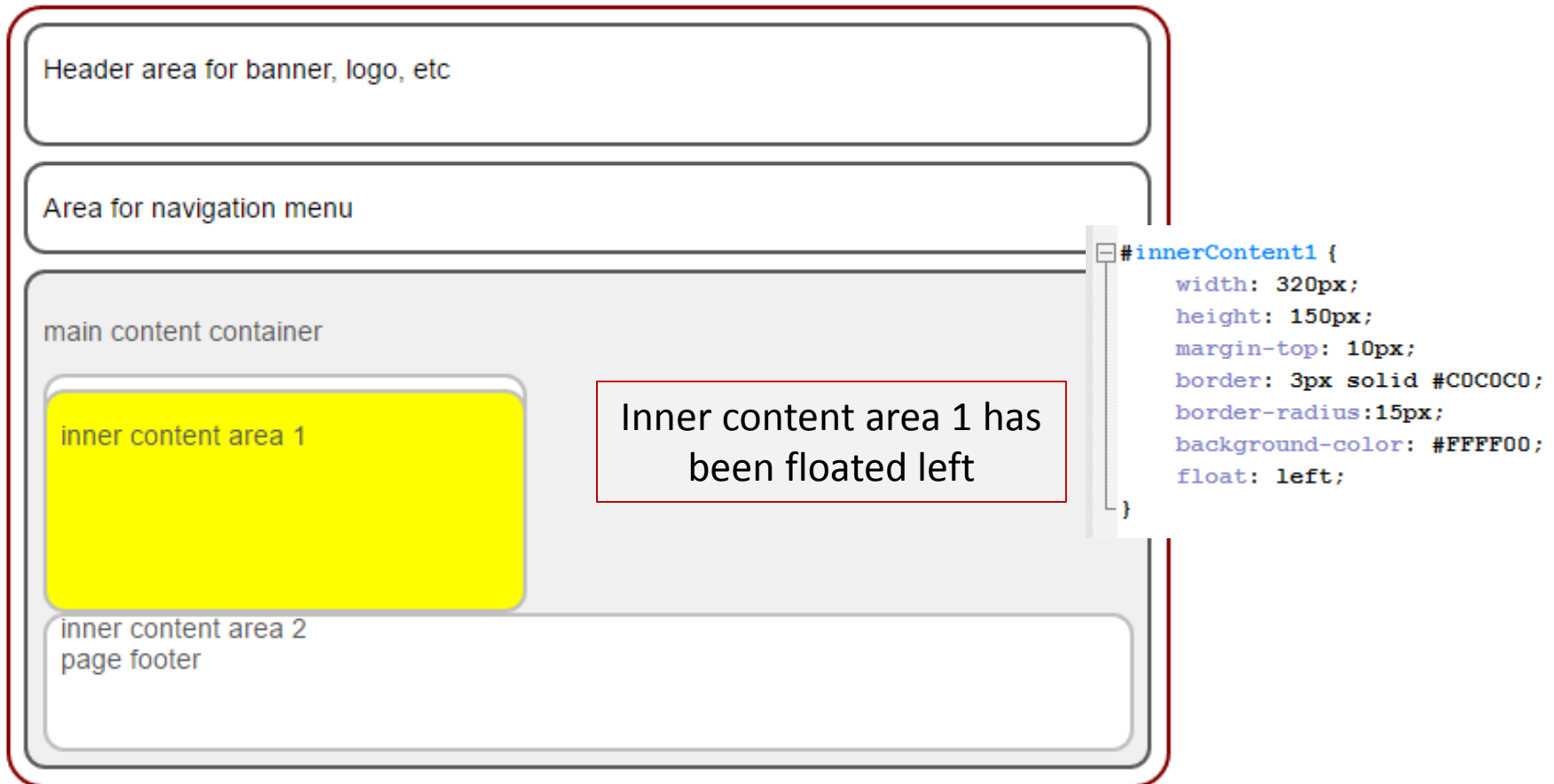
Default document flow



The default flow of content areas is for them to stack one below the other

There are no floats or position statements

Float example #1



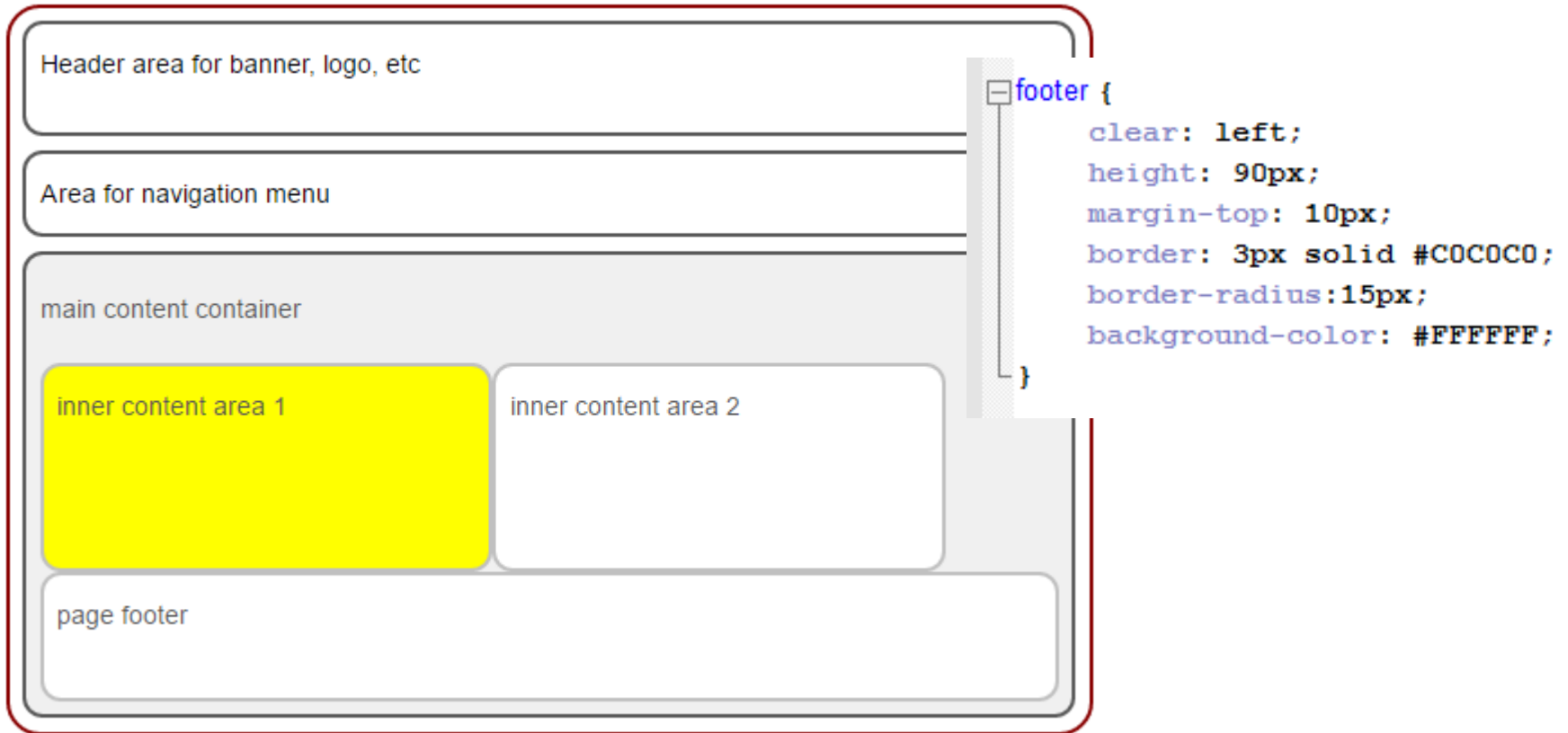
Floating content can break the flow of other content blocks

Float example #2



Inner content area 2 has also been floated to the left

Float cleared



Applying 'clear' to the footer forces it to move below content which is floated in the direction specified

Conclusion

- Styles use 'selector', 'property' and 'value' to define styles
- CSS formats and positions content
- HTML document is divided into content blocks
 - Use HTML tags where possible
 - HTML tags can have ids or classes to identify them
 - Divs can be applied to create further structure
- Standard html tags are referenced in the CSS by their name e.g. **body**
- ids are referenced in the CSS with *#idName*, classes use *.className*
- Floats can be a simple way of repositioning content, but can break the flow of other elements on the page