Web Development

Click Start

Session 3

Session Overview

- 10:00-12:30 Lecture

- 12:30-13:15 Tasks and lunch

- 13:15-13:30 Session wrap up

Lesson Objectives

- To understand HTML divisions

- To understand the use of style attributes in HTML elements

- To understand the use of colours in HTML & CSS

- To understand the importance of semantic elements

- To be able to apply knowledge of HTML divisions and CSS style attributes to create a visually appealing web page

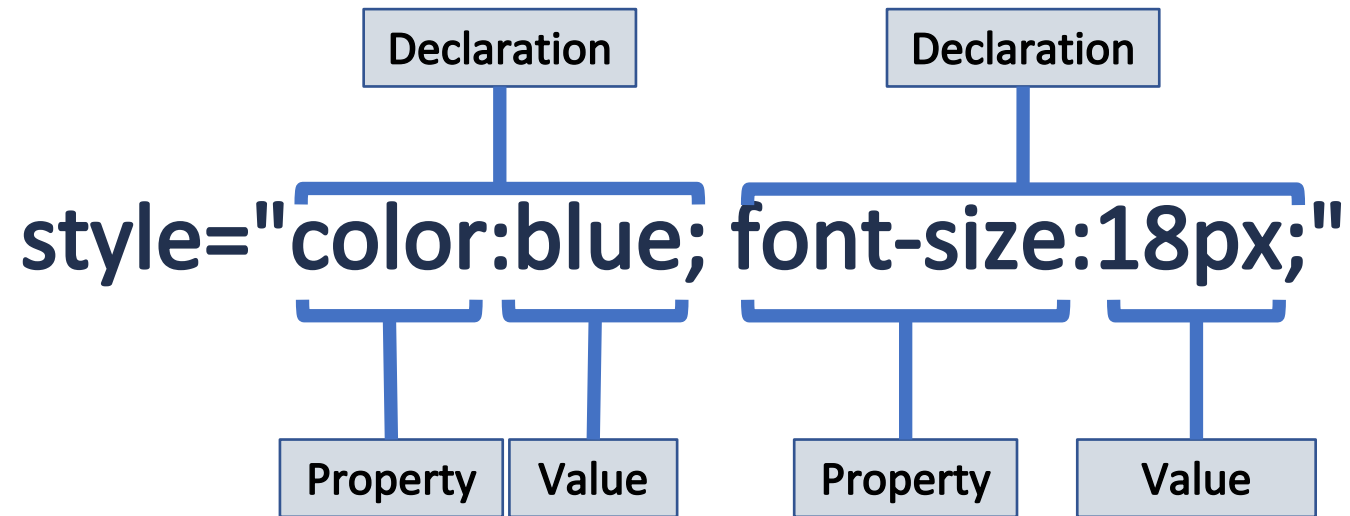- To apply knowledge of semantic tags

Keywords

Keyword	Description
Divisions	Divisions are structured containers for web page content.
CSS	**Cascading Style Sheets** are a mechanism for adding styles (e.g., fonts, colours, spacing) to web pages.
Style attributes	A means to insert **CSS** styling into HTML elements.
Semantic elements (or tags)	HTML tags that clearly define their content and help search engines and other systems to determine the importance and context of web pages.

HTML style attributes

- The **style** attribute specifies a style for an element
- It will override any style set globally, either in the <style>..</style> element within the web page, or an external style sheet
  - We will cover these in more detail in the next session
- The **style** attribute can be used on **any** HTML element, although it will not necessarily be useful

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Anatomy of a style attribute

Declaration   Declaration

style="color:blue; font-size:18px;"

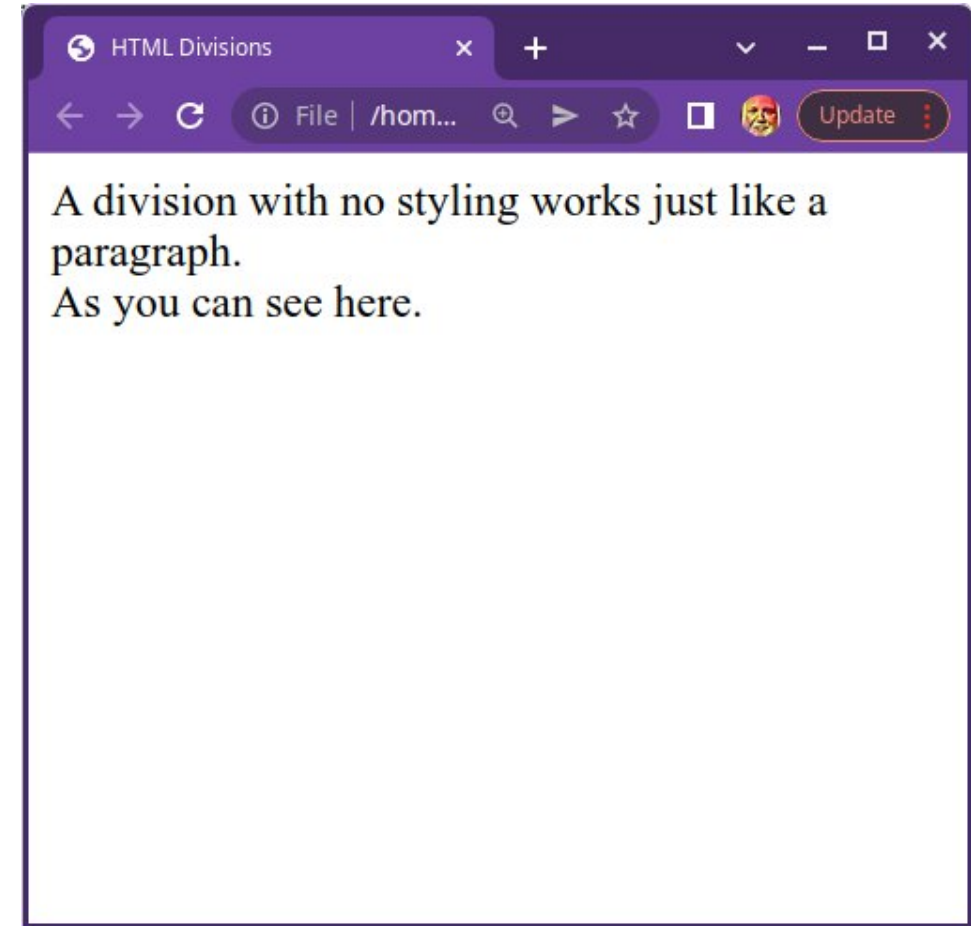Property   Value   Property   Value

Note: Remember to include the semicolon at the end of each declaration

HTML divisions

<div>A division with no styling works just like a paragraph.</div>

<div>As you can see here.</div>

Flexboxes

```html
<div style="display:flex; flex-direction:row; border:solid;">
    <div style="background:lightblue;">
    <h2>Box 1</h2>
    </div>
    <div style="background:lightgreen;">
    <h2>Box 2</h2>
    </div>
</div>
```

Flexboxes

```html
<div style="display:flex; flex-direction:column; border:solid;">
    <div style="display:flex; flex-direction:row; border:dashed;">
        <div style="background:lightblue;"><h2>Box 1</h2></div>
        <div style="background:lightgreen;"><h2>Box 2</h2></div>
    </div>
    <div style="display:flex; flex-direction:row; border:dashed;">
        <div style="background:lightgreen;"><h2>Box 3</h2></div>
        <div style="background:lightblue;"><h2>Box 4</h2></div>
    </div>
</div>
```

Position property

```
<div style="position:fixed; background:lightblue; z-index:2;">
    <h2>This division is fixed in position</h2>
</div>
<div style="position:relative; background:lightgreen; z-index:1; top:100px;">
    <h2>This division is positioned relative to its normal position</h2>
</div>
```

Note: The **z-index** property defines the stack order of divisions. Divisions with a higher z-index will be on top of those with a lower z-index

https://www.w3schools.com/css/css_positioning.asp

Float property

```
<div style="float:right;">
    <h2>This division will appear on the right</h2>
</div>
<div style="float:left;">
    <h2>This division will appear on the left</h2>
</div>
```

Note: See what happens when making the browser smaller

Float property

```
<div style="float:right; width:20%;">
    <h2>This division will appear on the right</h2>
</div>
<div style="float:right; width:20%;">
    <h2>This division is beside the previous one on the right</h2>
</div>
```

Note: See the order in which the divisions are put on the screen

Clear property

```
<div style="float:right; width:20%;">
	<h2>This division will appear on the right</h2>
</div>
<div style="clear:right; float:right; width:20%;">
	<h2>This division is below the previous one on the right</h2>
</div>
```

Note: The value of the **clear** property can be **right**, **left** or **both**

Useful web pages

Positioning divisions can be quite tricky, so here are some useful web pages:

- Flexboxes: https://www.w3schools.com/css/css3_flexbox.asp

- Position: https://www.w3schools.com/css/css_positioning.asp

- Float: https://www.w3schools.com/css/css_float.asp

- Clear: https://www.w3schools.com/css/css_float_clear.asp

- If you have a particular problem: https://stackoverflow.com/

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Colours

CSS allows colours to be defined in many ways:

- By name, such as **Blue**, **DarkOliveGreen**, **Maroon**

- By hexadecimal value: **#0000FF**, **#556B2F**, **#800000**

- By RGB value: **rgb(0, 0, 255)**, **rgb(85, 107, 47)**, **rgb(128, 0, 0)**

- Useful link: https://www.w3schools.com/colors/default.asp

Valentine poem for nerds

Roses are **#FF0000**;

Violets are **#0000FF**;

All my base are belong to you.

https://en.wikipedia.org/wiki/All_your_base_are_belong_to_us

Colours

```
<body style="background-color:azure;">
<h1 style="color:#00008B;">
This is a DarkBlue heading</h1>
<p style="color:rgb(25, 25, 112);">
This paragraph is coloured MidnightBlue.
</p>
</body>
```
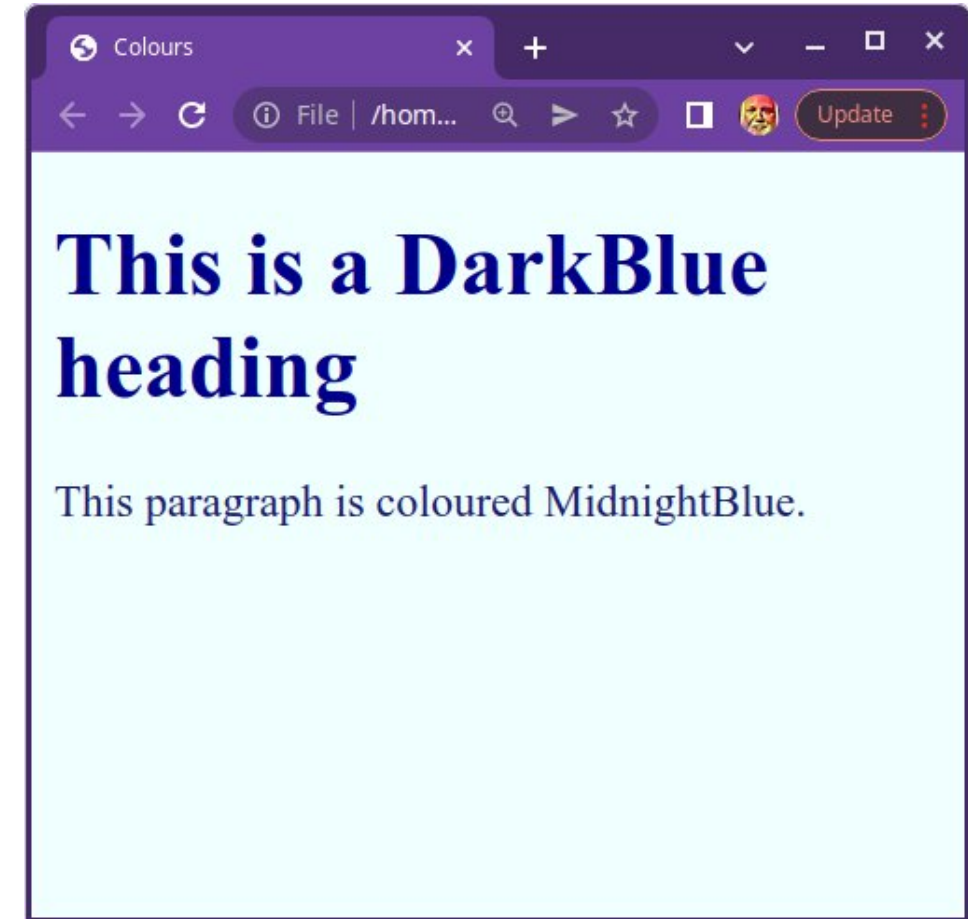
Why use semantic tags?

- **Readability**
  - The purpose of each section is clearly defined

- **Maintenance**
  - It is easier for other programmers to amend your code

- **Search Engine Optimisation (SEO)**
  - Search engine's algorithms will recognise the important content on your web page

Semantic tags

<header> Logo, heading information

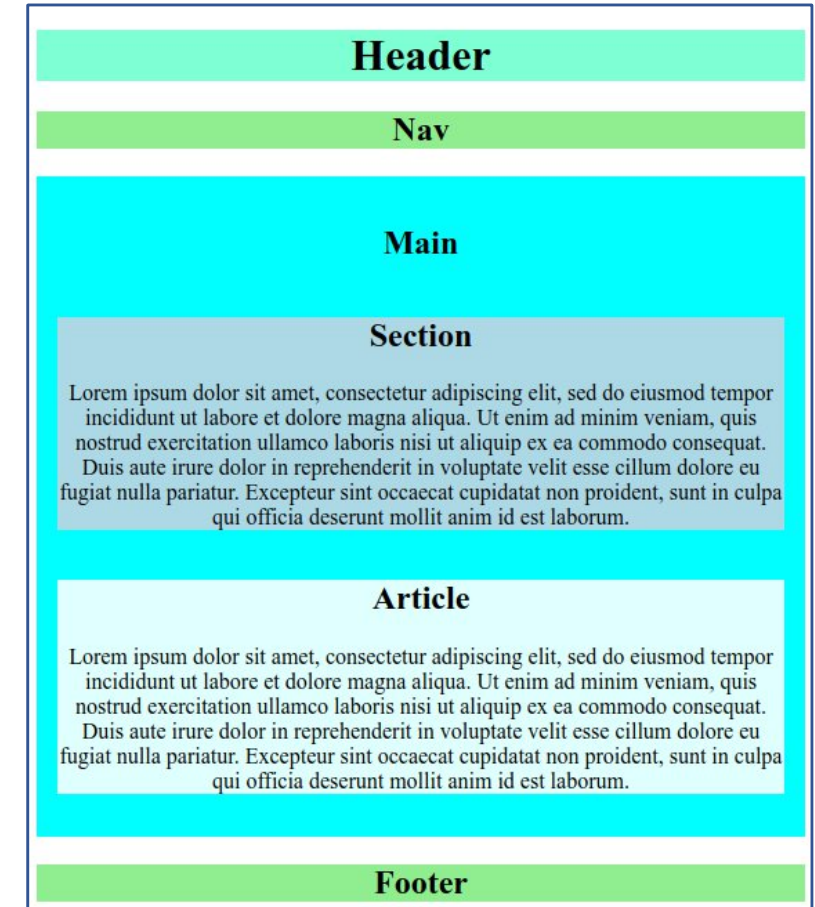**<nav>** Navigation bar content such as links to other pages on the site, search or social network pages

<main> The main content of the web page

<section> Introduction, contact information

<article> News, blog posts

<footer> Authorship, copyright information

https://www.w3schools.com/html/html5_semantic_elements.asp

Header

Nav

Main

Section

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.

Article

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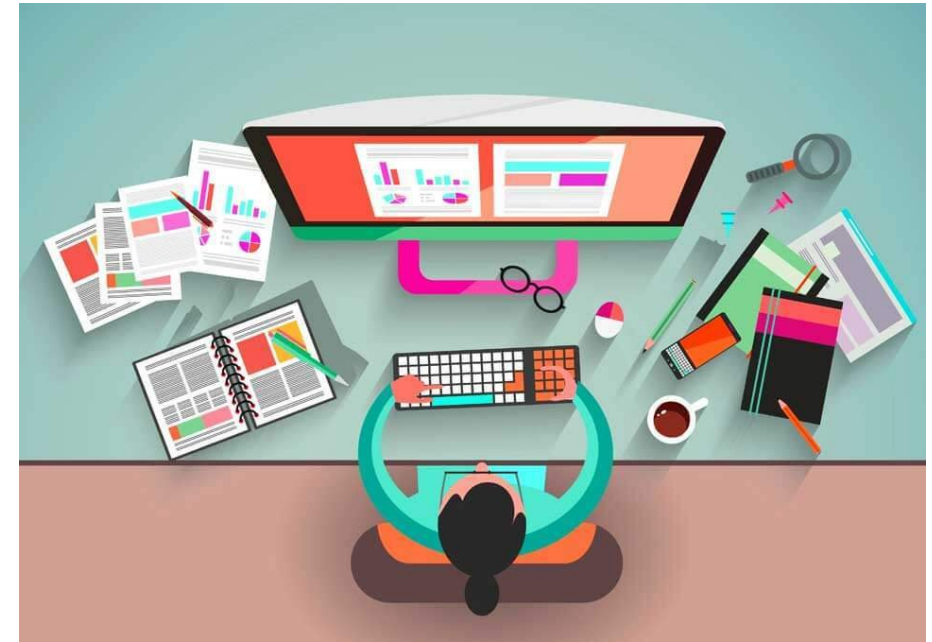
Footer

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Task

- Use divisions to improve the structure of your web pages
  - You may want to split the information you included into horizontal sections
- Give your web pages more visual appeal using colours
  - Use a palette in which the colours compliment and contrast each other
- Add semantic tags to your pages, where appropriate
- You could also add a header and navbar
- Upload your html files to GitHub

Project

- Design and build a web site for either...
  - A business
  - An organisation
  - An event
  - Something else (subject to my approval)
- There should be at least three web pages with a unified design
- Publish the web site on GitHub Pages

Session Wrap up