

# **CMPU 1031 - Web Development 1**

## **Lecturer: Dr Fatmaelzahraa Eltaher**

Week 3: CSS examples



# About Brightspace and lab

- Your module is now available in Brightspace. Please make sure to enroll yourself.
- You must submit your code in Brightspace before the next lab session.
- Team and lab group changes are no longer allowed.



Web Development 1  
CMPU1031: Sept-Dec  
Academic Term  
2025/26

# Colours and CSS



- There are different ways colours can be used with CSS to style elements on a page.
- CSS and use the following options:
  - A colour name (eg. green)
  - A RGB value eg. rgb(255, 120, 120)
  - A Hex value (eg. #777777 )

Be aware: the commands used in HTML and CSS make use of American English, so the property is **color** and not **colour**

# Colours name

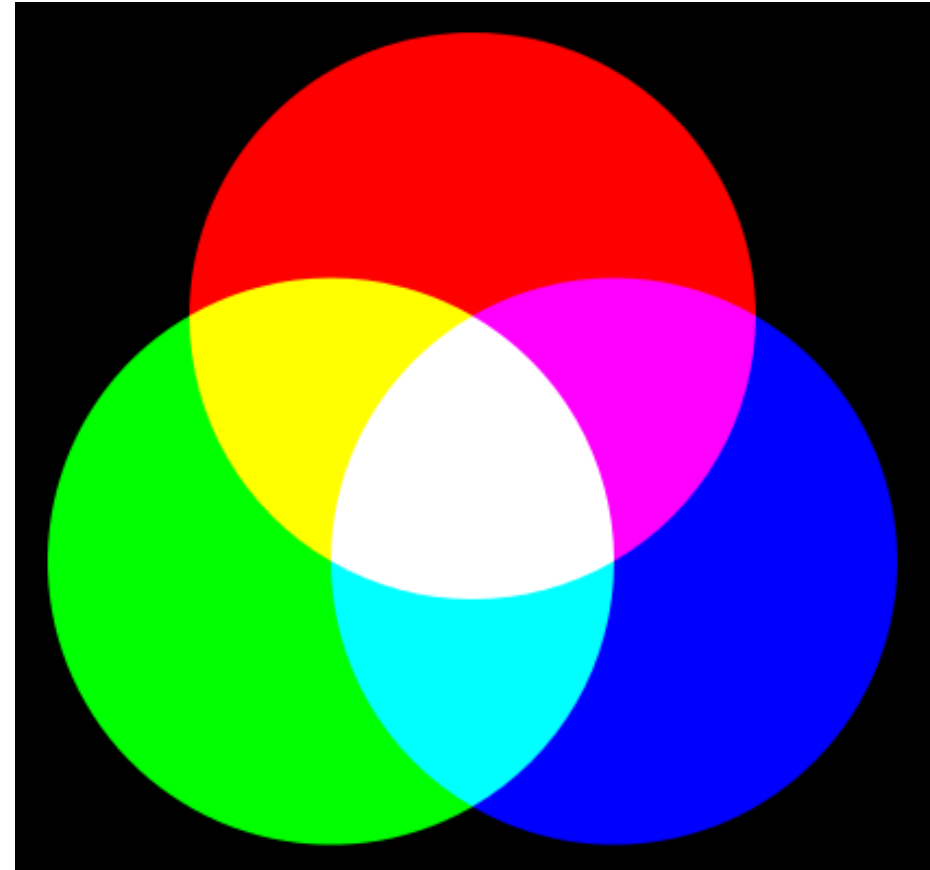
- To style an elements colour, the colour can be set using a name. The possibilities are, although, a bit limited (around 140 colours).
- Check the following CodePen link to see an example:

[https://codepen.io/fatma\\_eltaheer/pen/yyYzbVa](https://codepen.io/fatma_eltaheer/pen/yyYzbVa)

Description	Live
red	
orange	
yellow	
lime green	
green	
blue-green	
cyan	
sky blue	
blue	
purple	
magenta	
pink	
red	

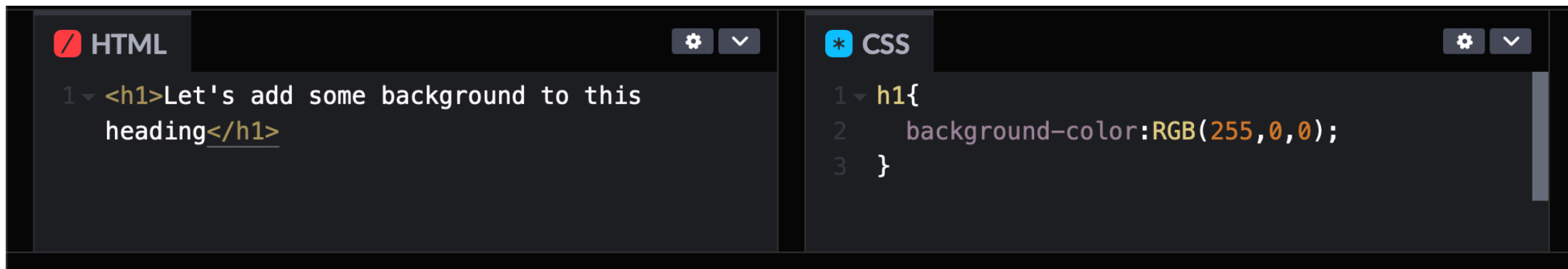
# Red, green and blue (RGB)

- The RGB system is used to generate colours based on a mix of red, green and blue
- To style an HTML element colour, the colour can be set using a RGB value. RGB color values can be specified using:
  - `rgb(red, green, blue)`



# Red, green and blue (RGB)

- To style an elements colour, the colour can be set using a RGB value. RGB color values can be specified using:
  - `rgb(red, green, blue)`
- Each parameter (red, green, blue) defines the **intensity** of the color between 0 and 255.
- What will be the background colour of the tag `<h1>` in the following code?



The image shows a code editor with two panels. The left panel is titled 'HTML' and contains the following code:

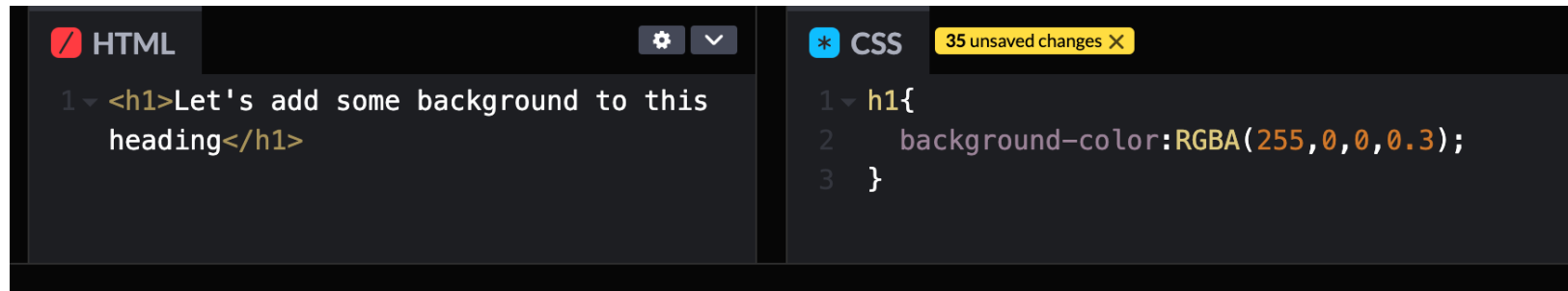
```
1 <h1>Let's add some background to this  
  heading</h1>
```

The right panel is titled 'CSS' and contains the following code:

```
1 h1{  
2   background-color:RGB(255,0,0);  
3 }
```

# Red, green and blue (RGBA)

- The RGBA system is an extension of the RGB system
- The A stands for Alpha and sets up the transparency of a colour
- The A value goes from 0 (full transparency) to 1 (no transparency)



The screenshot shows a code editor with two panels. The left panel is labeled 'HTML' and contains the following code: 

```
1 <h1>Let's add some background to this heading</h1>
```

. The right panel is labeled 'CSS' and contains the following code: 

```
1 h1{  
2   background-color:RGBA(255,0,0,0.3);  
3 }
```

. A yellow banner at the top of the CSS panel indicates '35 unsaved changes X'.

**Let's add some background to this heading**

Click on the code to see the example in CodePen



# Hex values

- The hex colour system is also based on red, green and blue colours, ranging from 0 to 255. However, we specify those values using hexadecimal numbers.
- In the hexadecimal numbers, we have a base **16** instead of base 10 (decimal numbers). Therefore, hexadecimal numbers are a combination of numbers from 0-9 and letters from A-F:

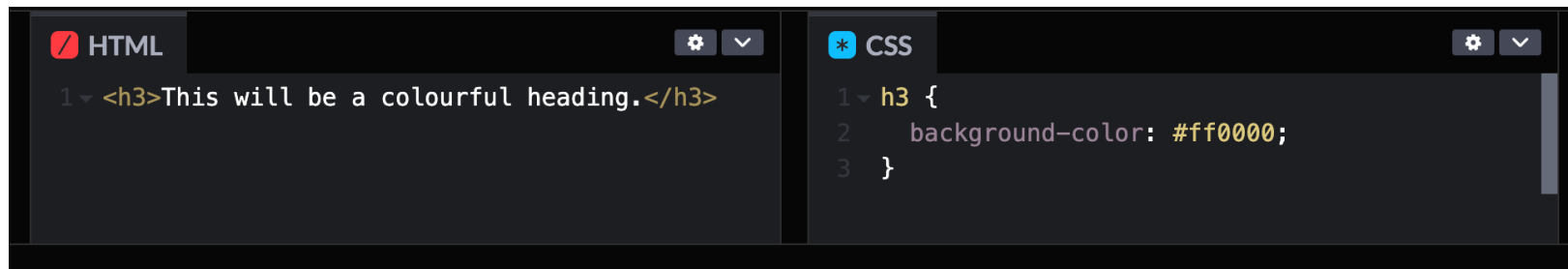
**0 1 2 3 4 5 6 7 8 9 A B C D F**

- Because we are using the hexadecimal system, we have more shades of colours options in a compact system.
- We specify the quantity of red, green and blue by the six pairs of hex numbers (**#RRGGBB**). Knowing that, what colour **#FFFFFF** would be?



# Hex values

- A hexadecimal colour is specified with: **#RRGGBB**, where the RR (red), GG (green) and BB (blue) hexadecimal integers specify the components of the colour
- Each parameter RRGGBB defines the intensity of the color between 0 and F (Hexadecimal values)



```
HTML
1 <h3>This will be a colourful heading.</h3>

CSS
1 h3 {
2   background-color: #ff0000;
3 }
```

This will be a colourful heading.

Click on the code to see the example in CodePen

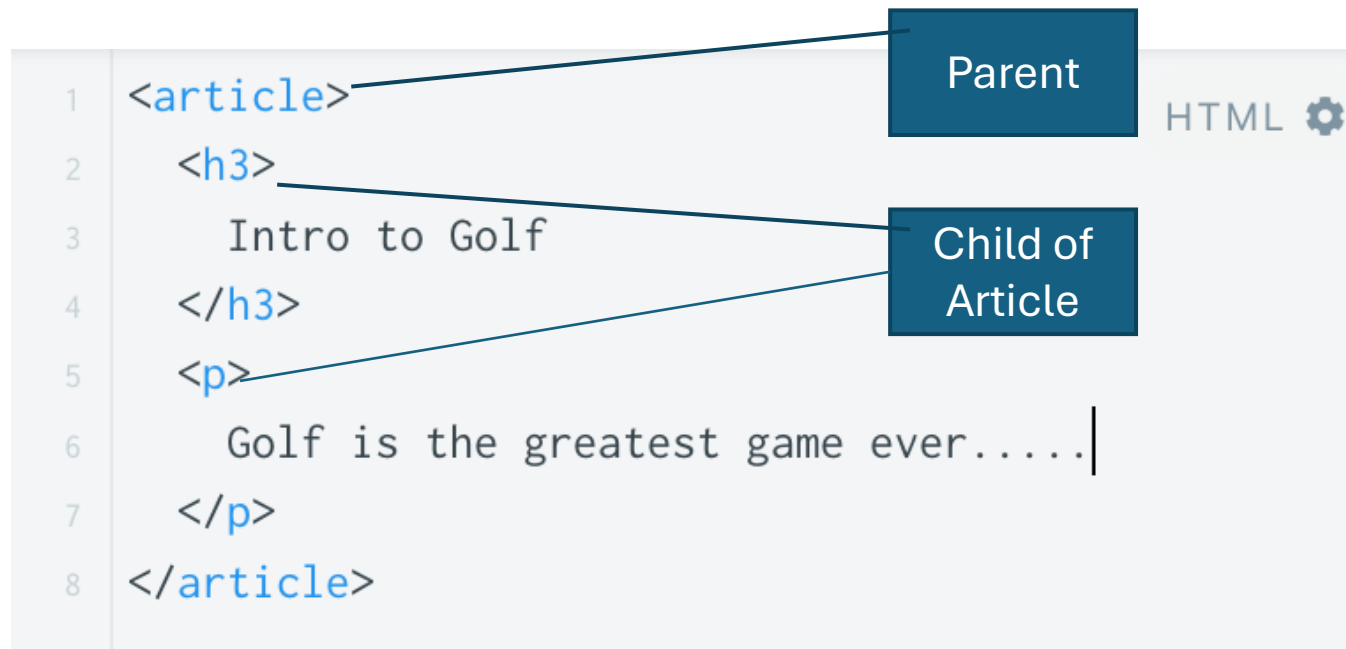


# Retrieving colours

- It might be tricky to guess what HEX and RGB values you need to result in a certain colour
- Some useful tools can help you with that, such as the Hex Color Tool website: <https://www.hexcolortool.com/>
- Another good tool for web developers is the EyeDropper Chrome extension: <https://eyedropper.org/>

# Parent and children elements

- If one element contains another element, the outer element is the parent and the inner element is the child.
- Container HTML elements usually work as a parent element to one or multiple children elements
- By styling the container element, you can style the elements inside





# Practice



# Positioning a container – margin property

- The **margin** property can be used for a number of HTML elements, including containers
- You can specify which of the margins you want to set up:
  - margin-top
  - margin-right
  - margin-bottom
  - margin-left
- Or you can declare everything using the margin property. For example, the following code will set up a top margin = 20px, right margin = 60px, bottom margin = 80 px, and left margin = 100px:

```
#todo {  
  margin: 20px 60px 80px 100px;  
  background-color: grey;  
}
```

# Positioning a container – margin property

```
HTML
1 <div id="todo">
2   <ul>
3     <li>Task 1</li>
4     <li>Task 2</li>
5     <li>Task 3</li>
6   </ul>
7 </div>

CSS
1 #todo {
2   margin: 20px 60px 80px 100px;
3   background-color: grey;
4 }
```

- Task 1
- Task 2
- Task 3

Click on the code to see the example in CodePen



# Positioning text – text-align property

- For a container that holds text, it is possible to align only the text.
- The CSS property used is **text-align** and the most commonly used values are **center**, **left**, or **right**



The screenshot shows a code editor with two panels. The left panel, labeled 'HTML', contains the following code:

```
1 <div id="todo">
2   <ul>
3     <li>Task 1</li>
4     <li>Task 2</li>
5     <li>Task 3</li>
6   </ul>
7 </div>
```

The right panel, labeled 'CSS', contains the following code:

```
1 #todo {
2   text-align: center;
3   background-color: grey;
4 }
5
6 li {
7   list-style: inside;
8 }
```

Below the code editor, a preview of the rendered HTML is shown. It displays a grey rectangular container with a centered bulleted list:

- Task 1
- Task 2
- Task 3

Click on the code to see the example in CodePen

# Background

- The CSS background properties can be used on a variety of elements.
- It is possible to set up the:
  - background-color
  - background-image
  - background-repeat
  - background-position



# Background

```
HTML
3
4 <p id="bgimage">This is how the background
  image CSS property works</p>
5
6 <p id="bgrepeat">This is how the
  background repeat CSS property works</p>
7
8 <p id="bgposition">This is how the
  background position CSS property works</p>
9
10

CSS
1 /*this is a comment*/
2 /*background-color*/
3 #bgcolor{
4   background-color: green;
5 }
6
7 /*background image*/
8 #bgimage{
9   color: white;
10  background-image: url("https://cdn.pixabay.com/photo/2021/09/12/07/58/banner-
    6617553__480.jpg");
11 }
12
13 /*background repeat - used to repeat the same image multiple times in the background; it can
```

This is how the background colour CSS property works.

This is how the background image CSS property works

This is how the background repeat CSS property works

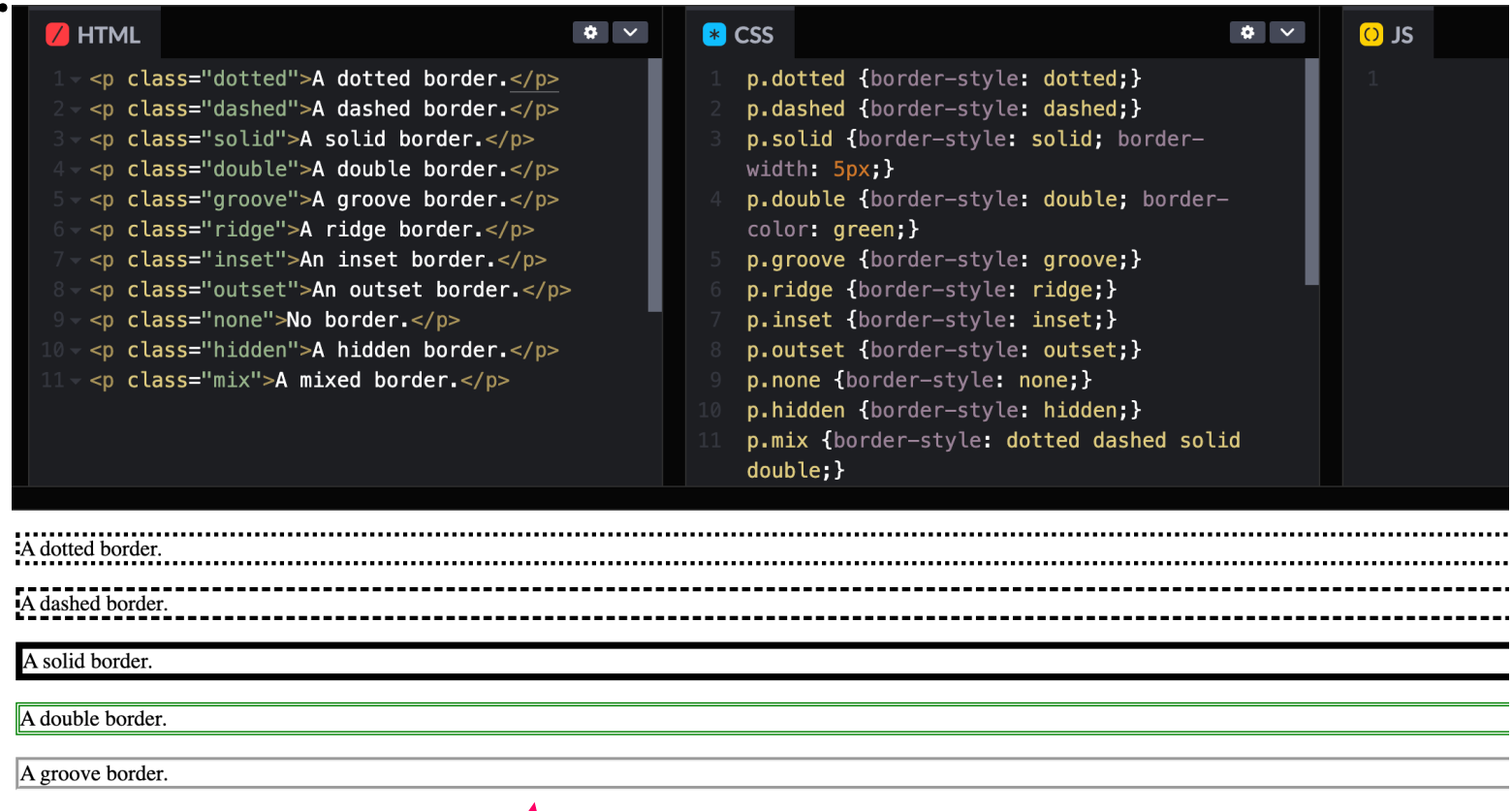
This is how the background position CSS property works

Click on the code to see the example in CodePen

[https://www.w3schools.com/cssref/tryit.php?filename=trycss\\_background-repeat](https://www.w3schools.com/cssref/tryit.php?filename=trycss_background-repeat)

# Border

- The CSS border properties allow you to specify the style, width, and color of an element's border.



```
HTML
1 <p class="dotted">A dotted border.</p>
2 <p class="dashed">A dashed border.</p>
3 <p class="solid">A solid border.</p>
4 <p class="double">A double border.</p>
5 <p class="groove">A groove border.</p>
6 <p class="ridge">A ridge border.</p>
7 <p class="inset">An inset border.</p>
8 <p class="outset">An outset border.</p>
9 <p class="none">No border.</p>
10 <p class="hidden">A hidden border.</p>
11 <p class="mix">A mixed border.</p>

CSS
1 p.dotted {border-style: dotted;}
2 p.dashed {border-style: dashed;}
3 p.solid {border-style: solid; border-width: 5px;}
4 p.double {border-style: double; border-color: green;}
5 p.groove {border-style: groove;}
6 p.ridge {border-style: ridge;}
7 p.inset {border-style: inset;}
8 p.outset {border-style: outset;}
9 p.none {border-style: none;}
10 p.hidden {border-style: hidden;}
11 p.mix {border-style: dotted dashed solid double;}

JS
1
```

A dotted border.

A dashed border.

A solid border.

A double border.

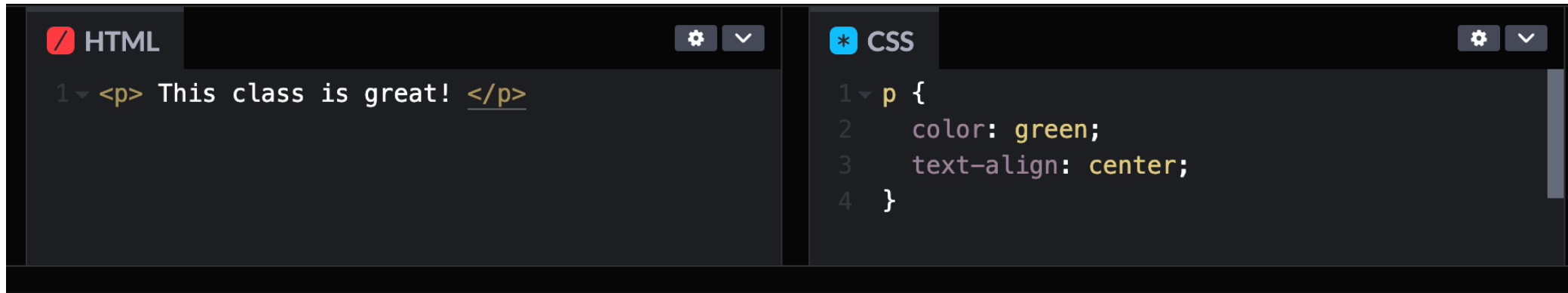
A groove border.

Click on the code to see the example in CodePen

# CSS and text

- The appearance of text on the web page can be styled with CSS.
  - Text Color
  - Text Alignment
  - Text Decoration
  - Text Transformation
  - Line Height
  - Word Spacing

# Text-colour



The screenshot shows a code editor with two panels. The left panel is titled 'HTML' and contains the code: `1 <p> This class is great! </p>`. The right panel is titled 'CSS' and contains the code: `1 p {  
2 color: green;  
3 text-align: center;  
4 }`. Both panels have a settings icon and a dropdown arrow in the top right corner.

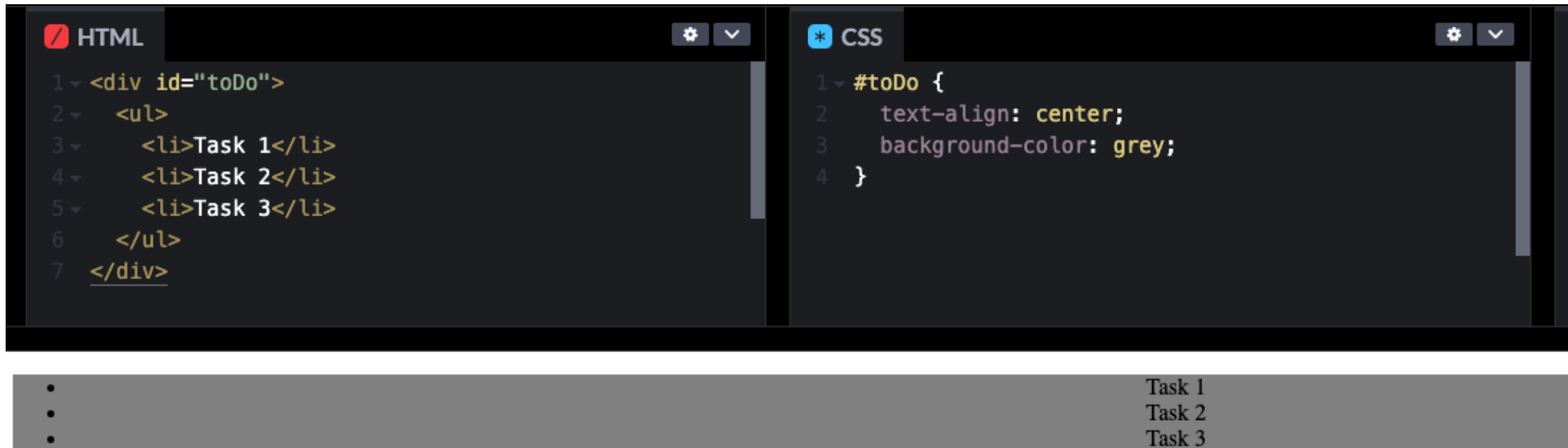
This class is great!

Click on the code to see the example in CodePen



# Text-alignment

- Properties:
  - text-align: left;
  - text-align: right;
  - text-align: center;
  - text-align: justify;



# Text-decoration

- text-decoration: underline;
- text-decoration: overline;
- text-decoration: line-through

```
HTML
1 <p id="underline">This is an underline
  text</p>
2
3 <p id="overline">This is an overline
  text</p>
4
5 <p id="linethrough">This is a linethrough
  text</p>
6
7 <p id="allTogether">This is all
  together</p>

CSS
1 #underline{
2   text-decoration: underline;
3 }
4
5 #overline{
6   text-decoration: overline;
7 }
8
9 #linethrough{
10  text-decoration: line-through;
11 }
12
13 #allTogether{
14  text-decoration: overline underline
```

This is an underline text

        
This is an overline text

~~This is a linethrough text~~

~~This is all together~~

Click on the code to see the example in CodePen

# Text-transform

- text-transform: capitalize;
- text-transform: uppercase;
- text-transform: lowercase;

```
HTML
1 <p id="capitalize">Capitalize</p>
2
3 <p id="uppercase">Uppercase</p>
4
5 <p id="lowercase">Lowercase</p>
6

CSS
1
2 #capitalize{
3   text-transform: capitalize;
4 }
5
6 #uppercase{
7   text-transform: uppercase;
8 }
9
10 #lowercase{
11   text-transform: lowercase;
12 }
```

Capitalize

UPPERCASE

lowercase

Click on the code to see the example in CodePen

# Line-height

```
HTML
1 <p id="uppercase">Uppercase</p>
2
3 <p id="lowercase">Lowercase</p>
4

CSS
1 #uppercase{
2   text-transform: uppercase;
3   line-height: 400%;
4   background-color: green;
5
6 }
7
8 #lowercase{
9   text-transform: lowercase;
10  line-height: 50%;
11  background-color: red;
12 }
```

UPPERCASE

lowercase

Click on the code to see the example in CodePen





# Word-spacing

```
HTML
1 <p id="wordSpacing">"Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt explicabo. Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem sequi nesciunt. Neque porro quisquam est, qui dolorem ipsum quia dolor sit amet, consectetur, adipisci velit, sed quia non numquam eius modi tempora incidunt ut labore et dolore magnam
```

```
CSS
1 #wordSpacing{
2   word-spacing: 30px;
3 }
```

```
JS
1
```

"Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam  
ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt explicabo. Nemo enim ipsam  
aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem sequi  
est, qui dolorem ipsum quia dolor sit amet, consectetur, adipisci velit, sed quia non numquam eius  
labore et dolore magnam aliquam quaerat voluptatem. Ut enim ad minima veniam, quis nostrum exerc  
laboriosam, nisi ut aliquid ex ea commodi consequatur? Quis autem vel eum iure reprehenderit qui  
quam nihil molestiae consequatur, vel illum qui dolorem eum fugiat quo voluptas nulla pariatur?"

Click on the code to see the example in CodePen

# CSS Fonts

```
HTML
1 <p id="fontFamily">"Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt explicabo. Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem sequi nesciunt. Neque porro quisquam est, qui dolorem ipsum quia dolor sit amet, consectetur, adipisci velit, sed quia non numquam eius modi tempora incidunt ut labore et dolore magnam
```

```
CSS
1 /*set up an extra font-family in case the chosen one is not available*/
2 #fontFamily{
3   font-family: Lucida Console, Courier New;
4 }
```

"Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, t inventore veritatis et quasi architecto beatae vitae dicta sunt explicabo. Nemo enim ipsam voluptate fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem sequi nesciunt. Neque porro qu amet, consectetur, adipisci velit, sed quia non numquam eius modi tempora incidunt ut labore et dolc minima veniam, quis nostrum exercitationem ullam corporis suscipit laboriosam, nisi ut aliquid ex ea reprehenderit qui in ea voluptate velit esse quam nihil molestiae consequatur, vel illum qui dolorem

Click on the code to see the example in CodePen

# Font stack

- Browsers and computer systems can be limited in relation to how many fonts options they have available
- You can check this website to see what fonts are available for each system <https://www.cssfontstack.com/>
- Because of that, you need to have a font stack – extra options in case the font you've chosen is not available
- You can separate your fonts in the stack using a comma

# Google Fonts API

It is possible to use the pre-built CSS fonts or link your stylesheet to external fonts, such as Google Fonts API: <https://fonts.google.com/>  
This API is open-source and free to use, even commercially.

To add a Google Font to your website:

1. Add the following to the **<head></head>** tag (replace the **Font+Name** with the name of the font you want to use

```
<link rel="stylesheet" href="https://fonts.googleapis.com/css?family=Font+Name">
```

2. Work on your CSS code and add the chosen font as a value of the **font-family** attribute. Do not Forget to add an alternative font in case the Google one is not available

# Google Fonts API

```
HTML
1 <head>
2   <link rel="stylesheet"
   href="https://fonts.googleapis.com/css?
   family=Silkscreen">
3 </head>
4
5 <body>
6   <h1>Sed ut perspiciatis unde omnis iste
   natus error sit voluptatem accusantium
```

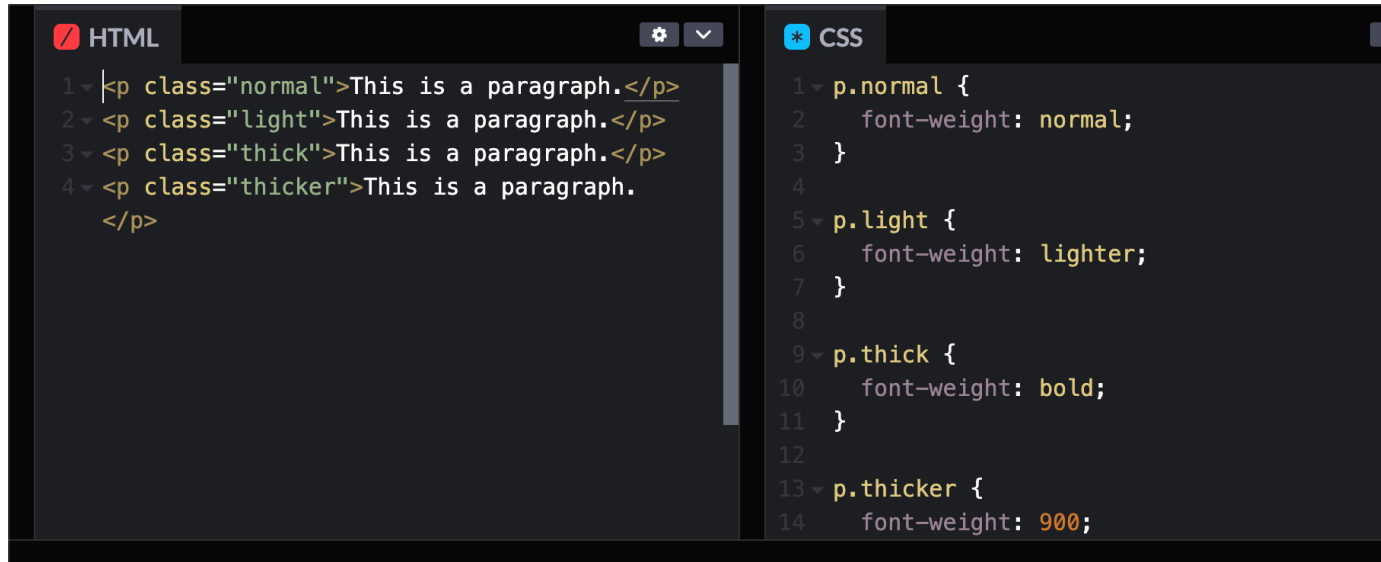
```
CSS
1 body {
2   font-family: "Silkscreen", sans-serif;
3 }
```

SED UT PERSPICIATIS UNDE OMNIS ISTE NATUS ERROR  
ACCUSANTIUM DOLOREMQUE LAUDANTIUM, TOTAM REM  
QUAE AB ILLO INVENTORE VERITATIS ET QUASI ARCHITE  
DICTA SUNT EXPLICABO. NEMO ENIM IPSAM VOLUPTATE  
SIT ASPERNATUR AUT ODIT AUT FUGIT, SED QUIA CONS  
DOLORES EOS QUI RATIONE VOLUPTATEM SEQUI NESCIU  
QUISQUAM EST, QUI DOLOREM IPSUM QUIA DOLOR SIT A  
ADIPISCI VELIT. SED QUIA NON NUMOUAM EIUS MODI TI

Click on the code to see the example in CodePen

# Font-weight

A simple way to change the font weight.



```
HTML
1 <p class="normal">This is a paragraph.</p>
2 <p class="light">This is a paragraph.</p>
3 <p class="thick">This is a paragraph.</p>
4 <p class="thicker">This is a paragraph.
  </p>

CSS
1 p.normal {
2   font-weight: normal;
3 }
4
5 p.light {
6   font-weight: lighter;
7 }
8
9 p.thick {
10  font-weight: bold;
11 }
12
13 p.thicker {
14  font-weight: 900;
```

This is a paragraph.

This is a paragraph.

**This is a paragraph.**

**This is a paragraph.**

Click on the code to see the example in CodePen



# Font-size

- Different units can be used to set up the font-size. We will cover a number of units in future classes and see how they will be applied in the font-size property.
- We will start with pixels. Although it is not the most recommended one to be used, it is the easiest one to start with.
- Pixels are fixed units and one pixel is usually equal to one dot on the screen. That means the font-size in pixels will be rendered smaller on screens with higher resolution than on a lower resolution screen.
- Pixels are not recommended on responsive websites (websites that can be seen in most devices by adapting to them)

# Font-size

```
HTML
1 <p id="first">This is a paragraph</p>
2
3 <p id="second">This is paragraph, but with
  bigger font size</p>
4
5

CSS
1 #first {
2   font-size: 20px;
3 }
4
5 #second {
6   font-size: 40px;
7 }
```

This is a paragraph

This is paragraph, but with bigger font size

Click on the code to see the example in CodePen





# Styling Links

- The four types of link states:
  - `a:link` - normal, not clicked yet
  - `a:visited` - link has been clicked
  - `a:hover` - when the user hovers the link
  - `a:active` - when the link is just clicked

# Styling Links

```
HTML
1 <a href="https://codepen.io/pen">Code Pen
  Website</a>

CSS
1 a:link{
2   color: red;
3 }
4
5 a:visited{
6   color: purple;
7 }
8
9 a:hover{
10  color: green;
```

[Code Pen Website](https://codepen.io/pen)

Click on the code to see the example in CodePen





# Practice

