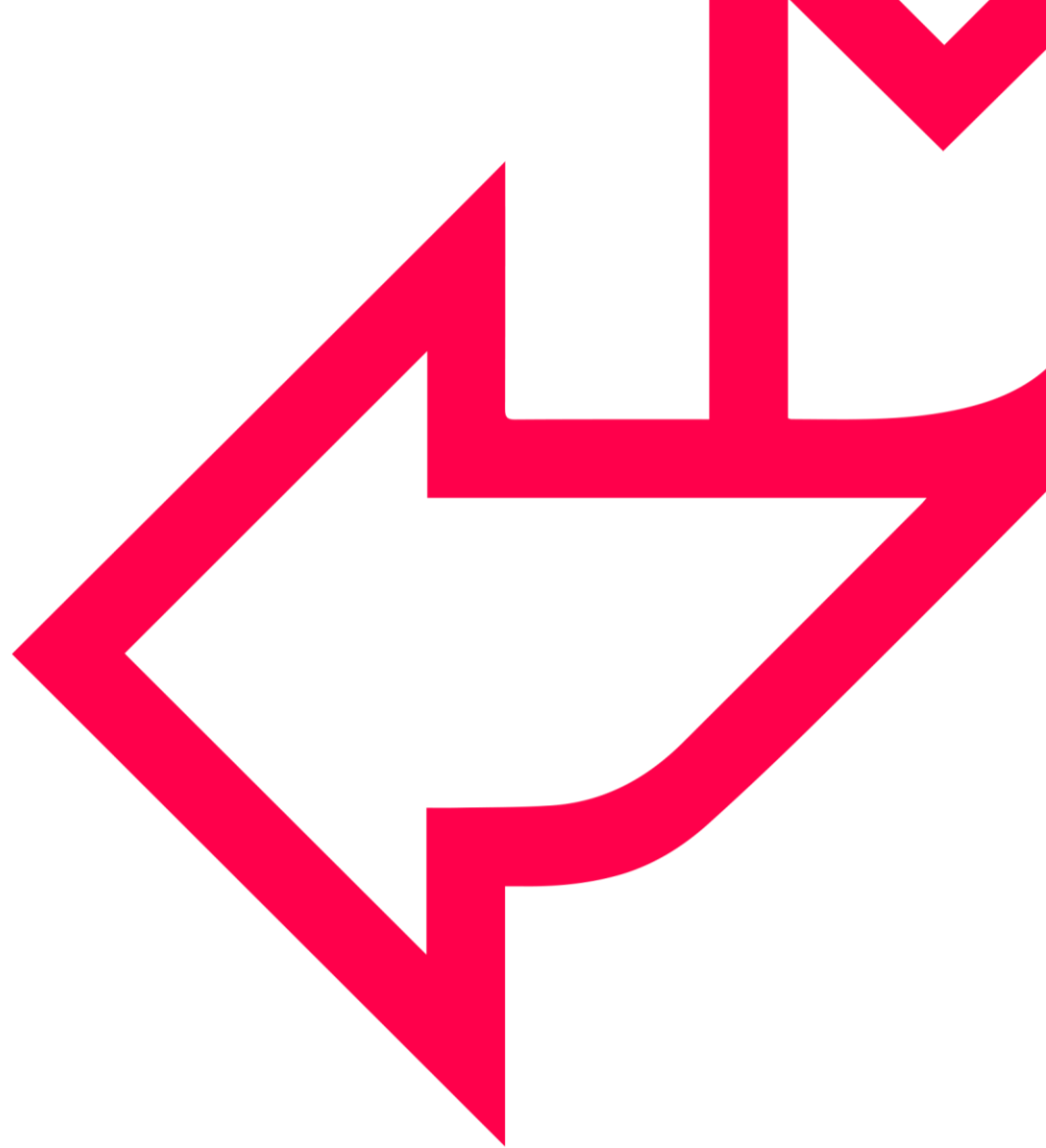




Text and Colours



QA Working with fonts – setting the character type

As previously noted, it is important to set the encoding type of a document.

- In HTML5

```
<meta charset="utf-8">
```

- In XHTML/HTML4

```
<meta http-equiv="Content-Type" content="text/html; charset="utf-8" />
```

A character set is a list of character codes your browser will accept

- If it does not understand, a character a glyph will appear in its place
- You are also leaving yourself exposed to dangerous JavaScript attacks



QA Font Families

CSS defines five font families to which most fonts are categorised

- Serif - Times New Roman
- Sans-serif - Arial
- Monospace - Courier New
- Cursive - Brush Script
- Fantasy - Papyrus

```
font-family: Helvetica, Verdana, Arial, sans-serif
```

There are also dingbats and other symbol library fonts

Plus HTML character entities

- `£` for a GBP symbol as an example

Fonts are set in a comma delimited list

- Browser checks if font is available, used if present, moves on if not

QA Other Font Settings

→ Additional typography properties can be set:

Property	Usage
font-size	Font size can use any of the units previously discussed or a value between xx-small and xx-large
font-weight	font-weight controls the normal weight of the font normal bold or a weight scale between 100 and 900
font-style	Normal, italic, or oblique – if no oblique is present, italic will be used
line-height	The height of each line of text known as leading
vertical-align	Sets the alignment of the text in relation to the line box

QA Setting fonts as a compound rule

Fonts need to be set in a very specific way using CSS.

- Requiring a minimum set of keywords and a specific order
- The most basic rule requires:

```
font: <font-size> <font-family>;
```

When using a complex rule, optional values precede the mandatory

```
font: italic small-caps 1.2em Georgia, serif;
```

With the exception of a sneakily inserted line-height

- Note the lack of measurement unit
- You can add them but it can cause issues

```
font: 100%/2.5 Helvetica,
```

QA Text Alignment and Other Properties

Property	Description	Common Values
<code>color</code>	Sets the text colour for this and child elements	Any valid colour
<code>text-align</code>	Sets the horizontal alignment of text	<code>left</code> , <code>right</code> , <code>center</code> , <code>justify</code>
<code>text-decoration</code>	Sets or removes decorations from text	<code>none</code>
<code>text-transform</code>	Specifies case for text	<code>uppercase</code> , <code>lowercase</code> , <code>capitalize</code>
<code>text-indent</code>	Specifies indentation of first line of text	Any valid measurement
<code>letter-spacing</code>	Specifies space between characters in text	Any valid measurement
<code>line-height</code>	Sets space between lines	Any valid measurement
<code>text-direction</code>	Changes the direction of text	<code>rtl</code> , <code>ltr</code>
<code>word-spacing</code>	Sets space between words	Any valid measurement
<code>text-shadow</code>	Adds shadow to text – gives horizontal, vertical, and colour of shadow	<code>3px 3px green</code>

QA Adding a drop shadow

Drop shadow is back as if the 1990s never happened!

```
.shadow {  
    text-shadow: 10px 8px 20px rgb(56, 52, 153) ;  
}
```

text-shadow requires the following properties:

- X, Y offset
- Amount of blur
- Colour
- Corresponding box shadow rule

```
.shadow {  
    box-shadow: 3px 3px 3px 3px rgb(0, 0, 119) ;  
}
```

QA Colour values and format

































W3C specifies 4 numerical colour value methods:

- RGB, RGBA, HSL and HSLA

There are also 16 basic named colour values that can be used in CSS

- Additional 128 colours are named in the extended set
<https://www.w3.org/TR/2018/REC-css-color-3-20180619/#svg-color>

Color names and sRGB values

Named	Numeric	Color name	Hex rgb	Decimal
		black	#000000	0,0,0
		silver	#C0C0C0	192,192,192
		gray	#808080	128,128,128
		white	#FFFFFF	255,255,255
		maroon	#800000	128,0,0
		red	#FF0000	255,0,0
		purple	#800080	128,0,128
		fuchsia	#FF00FF	255,0,255
		green	#008000	0,128,0
		lime	#00FF00	0,255,0
		olive	#808000	128,128,0
		yellow	#FFFF00	255,255,0
		navy	#000080	0,0,128
		blue	#0000FF	0,0,255
		teal	#008080	0,128,128
		aqua	#00FFFF	0,255,255

QA Colour values and format RGB/RGBA

Used to specify RED, GREEN, and BLUE values

- Can be done with hexadecimal or as a set of 3 numeric values (either integer or percentage)

```
em { color: blue; }           /* #rgb */
em { color: #ff0000; }        /* #rrggbb */
em { color: rgb(255,0,0); }
em { color: rgb(100%, 0%, 0%); }
```

The A value can be used to represent ALPHA for opacity of the colour

- Cannot be used with HEX values

```
em { color: rgb(255,0,0); }    /* integer range 0 - 255 */
em { color: rgba(255,0,0,1); } /* the same, with explicit opacity of 1 */
em { color: rgb(100%,0%,0%); } /* float range 0.0% - 100.0% */
em { color: rgba(100%,0%,0%,1); } /* the same, with explicit opacity of 1 */
```

QA Colour values and format – HSL/HSLA

- RGB is hardware oriented and harps back to the days when CRT were used in monitors
- HSL are encoded as Hue, Saturation, and Lightness
 - Hue is represented as an angle of the colour circle – measured in degrees and value is used in CSS
 - Saturation and lightness are represented as percentages
 - 100% is full saturation and 0% is a shade of grey
 - 0% lightness is black, 100% is white and 50% is 'normal'

```
* { color: hsl(0, 100%, 50%); }           /* red */
* { color: hsl(120, 100%, 50%); }         /* lime */
* { color: hsl(120, 100%, 25%); }         /* dark green */
* { color: hsl(120, 100%, 75%); }         /* light green */
* { color: hsl(120, 75%, 75%); }          /* pastel green, and so on */
```

QA Adding external fonts to HTML/CSS

- There are many libraries of fonts which can be incorporated into your designs
- They can be used in addition to the families supported by browsers
 - Google fonts is the most popular currently and the number of available families is growing rapidly
 - Find the font you want, copy the import to CSS, refer to the family as normal

CSS

```
@import url('https://fonts.googleapis.com/css2?family=Roboto&display=swap');
```

```
* { font-family: 'Roboto', sans-serif; }
```



Measurement Units

CSS Fundamentals



QA Element Sizing

Sizing elements can be achieved in a number of different ways:

Pixels (px) - a fixed measurement based on the size of a pixel

```
img { width: 150px; }
```

Ems (em) - a relative unit that equates to the font size of the element.

- An em unit is relative to the parent element's font size.

```
article{ width: 3em; }
```

Points (pts) - Points are an absolute unit equal to 1/72 of an inch

- Points can be useful when setting type sizes for print

```
body{ font-size: 12pt; }
```

% - Size is relative to the containing element

```
p{ width: 50%; }
```



Quick Lab Chapter 8 – Text, Colours, and Sizing

Experiment with adding colours and sizing to text and elements