CSS Implementation

For the following examples make a new folder in your `html-tasks` folder and name it **CSS**. You **must** save any files with a CSS file extension (`.css`) into this folder.

There a three ways to add CSS to a web page:

- External CSS
- Internal CSS
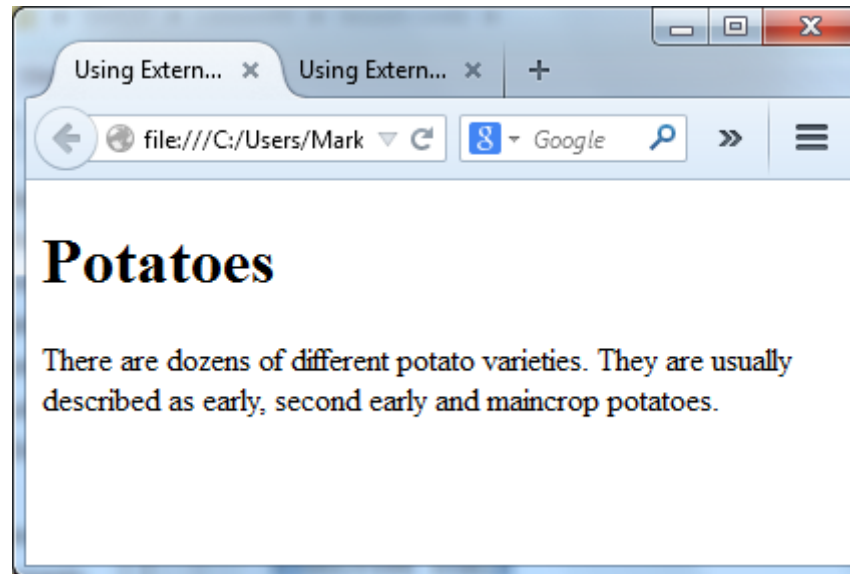- Inline CSS

External Style Sheets
This method of implementing CSS is the preferred option of modern web designers as, if your site is made up of ten pages you only need to make one style sheet and then link each page to the style sheet.

Example
Open Notepad++, create a new HTML file and save it as `external-css.html` then copy out the following code:

```
1    <!DOCTYPE html>
2    <html>
3        <head>
4            <title>Using External CSS</title>
5            <link href="css/styles.css" type="text/css" rel="stylesheet" />
6        </head>
7        <body>
8            <h1>Potatoes</h1>
9            <p>There are dozens of different potato varieties. They are usually
10               described as early, second early and maincrop potatoes.</p>
11       </body>
12   </html>
```
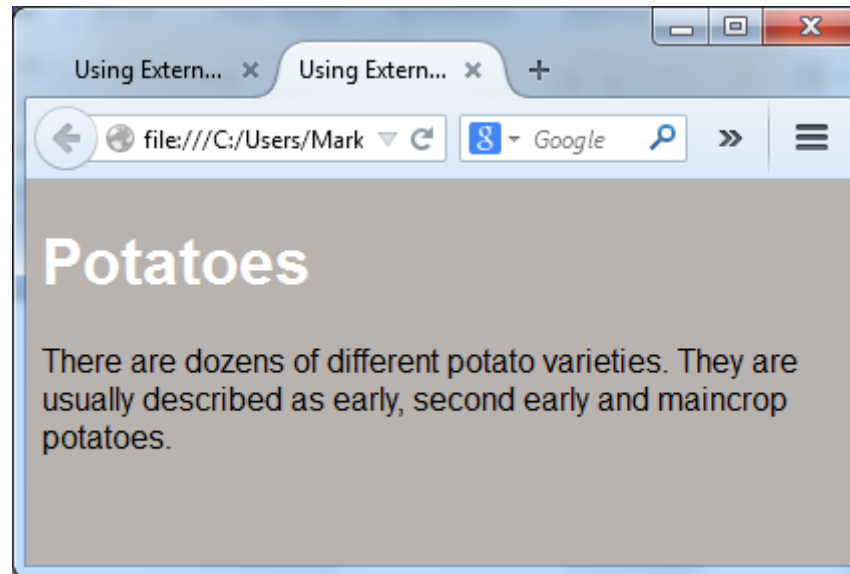
Save and preview the page and it should look like:

In the `<head>` section of the HTML we included a `<link>` element, this tells the browser where to look for the CSS style sheet and we have not made it yet so the browser displays the plain web page. Open a new Notepad++ file, change the language to **CSS** and save the file as `styles.css` in the CSS folder you made earlier. Next copy out the following code:

```css
1  body {
2      font-family:      arial;
3      background-color:    #B9B3AF;
4  }
5
6  h1 {
7      color:   #FFFFFF;
8  }
```

When you view the page it should now look like:

A huge advantage of external CSS is that one you have made a style sheet you can link every page in a web site to it, that way you only need to make one style sheet instead of one for every web page. All you need to do is add the link in the <head> section of the page's HTML:

```
<head>

        <link href="css/styles.css" type="text/css" rel="stylesheet" />

</head>
```

Internal CSS

The second method of implementing CSS is to not use a separate style sheet but to incorporate it into the same page as the HTML.

Open Notepad++, create a new HTML file and save it as **internal-css.html** then copy out the following code:

```
1   <!DOCTYPE html>
2   <html>
3       <head>
4
5           <title>Using Internal CSS</title>
6           <style type="text/css">
7               body {
8                   font-family: arial;
9                   background-color: #B9B3AF;}
10              h1 {
11                  color: rgb(255,255,255);}
12          </style>
13
14      </head>
15      <body>
16
17          <h1>Potatoes</h1>
18          <p>
19              There are dozens of different potato varieties. They
20              are usually described as early, second early and
21              maincrop potatoes.
22          </p>
23
24      </body>
25  </html>
```

When you save the page and preview it, you will get a styled version of the web page. When using internal CSS you must use the <style> element inside the <head> section and then include the rules that you want.

Internal CSS rules only apply to the page they are written in and cannot be linked to other pages. That means that if you have ten pages in your site then you would have to include the internal CSS on each individual page. This method has the following issues:

- Each web page increases in file size.
- Pages are slower to load as the browser reads the CSS rules each time the page loads (instead of just once for external CSS).
- If you decide to change the style rule for **<h1>** you would have to change it on every page (instead of just once for external CSS).

Inline CSS

The third method of including CSS into a web page is using inline CSS.

Open Notepad++, create a new HTML file and save it as **inline-css.html** then copy out the following code:

```
1   <!DOCTYPE html>
2   <html>
3       <head>
4           <title>Using Inline CSS</title>
5       </head>
6
7       <body style="font-family: arial;background-color: #B9B3AF;">
8
9           <h1 style="color:#FFFFFF;">Potatoes</h1>
10          <p>
11              There are dozens of different potato varieties. They
12              are usually described as early, second early and maincrop
13              potatoes.
14          </p>
15
16      </body>
17  </html>
```

Save and test the file, you should see the page styled as before. A big problem with inline CSS is that it only applies to the element it is in, therefore if you added another <h1> element to the document it would not be styled unless you added all of the CSS instructions again. Inline CSS should be avoided completely in modern web design, if you want to style individual tags differently there is a better approach – the use of classes which the next worksheet will cover.

Points to remember

- There are three ways to apply CSS:
  - External Style Sheet
  - Internal Style Sheet
  - Embedded style
- External style sheet are the preferred method as you only have to make one style sheet regardless of how many pages are in a web site.
- Avoid using inline CSS at all costs – it is inefficient and creates bloated code. If you want to style an individual element use a class (covered in next worksheet).
- External CSS is much more efficient – web pages load faster and changing a rule in the external sheet has an impact upon every page that links to it.