Changes

I did change the colours of the homepage logo while testing to suit people experiencing colour blindness. Other than that, I did not change my original design.

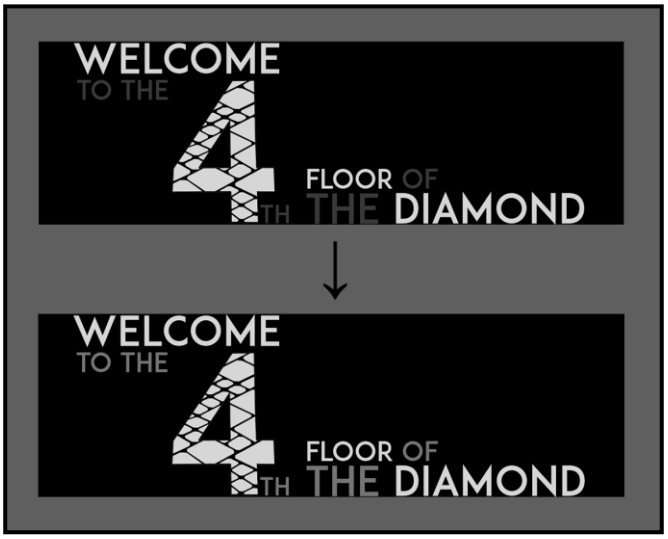

Figure 1. Homepage logo colour changes

Organisation

In terms of CSS I created two separate style sheets – one for the home page (homepage.css) and the other for all other pages (everypage.css).

For HTML I used three main templates which I made myself – homepage.html, every-page.html and blog-stories.html. The homepage is unique, thus it has its own separate HTML. Every other page uses a template every-page.html which covers the <header>, <nav> and <footer> elements. The blog stories have their own template derived from every-page.html called blog-stories.html which provides the same structure for the <main> element. I created these pre-sets because there are many repetitive elements throughout the page and using pre-made templates saves time and is more convenient organisation-wise. I did not use any templates made by other people – I created them for this assignment myself and they are specific to this website only.

Webpage name	HTML template	CSS style sheet
index.html	homepage.html	homepage.css
areas.html	every-page.html	everypage.css
blog.html	every-page.html	everypage.css
quiz.html	every-page.html	everypage.css
contact.html	every-page.html	everypage.css
accessibility.html	every-page.html	everypage.css
monday.html	blog-stories.html	everypage.css
tuesday.html	blog-stories.html	everypage.css
wednesday.html	blog-stories.html	everypage.css
thursday.html	blog-stories.html	everypage.css
friday.html	blog-stories.html	everypage.css

Figure 2. List of webpages and their associated HTML templates and CSS style sheets

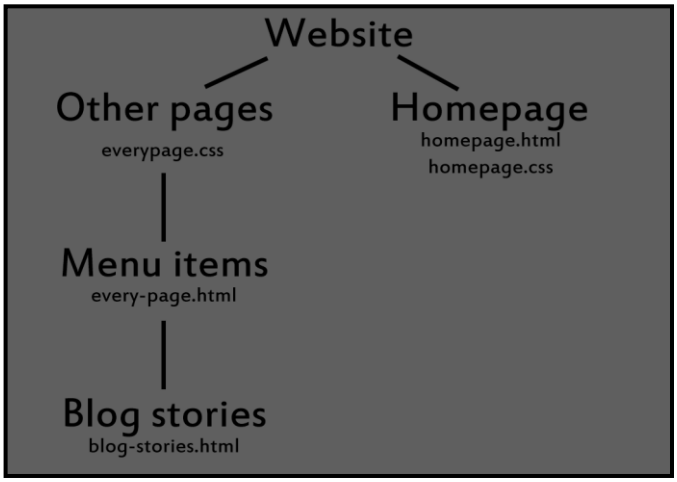

Figure 3. Template structure of the website and its HTML and CSS template inheritance

I did not use reset.css or normalize.css – I believe it is unnecessary to add an extra element to my website, especially a whole style sheet full of CSS rules, when the same can be achieved with just a few sentences in my own CSS. The differences between browsers are not that significant to have any major effect on the website's layout and design and this is proven by examples on meiert.com (2017).

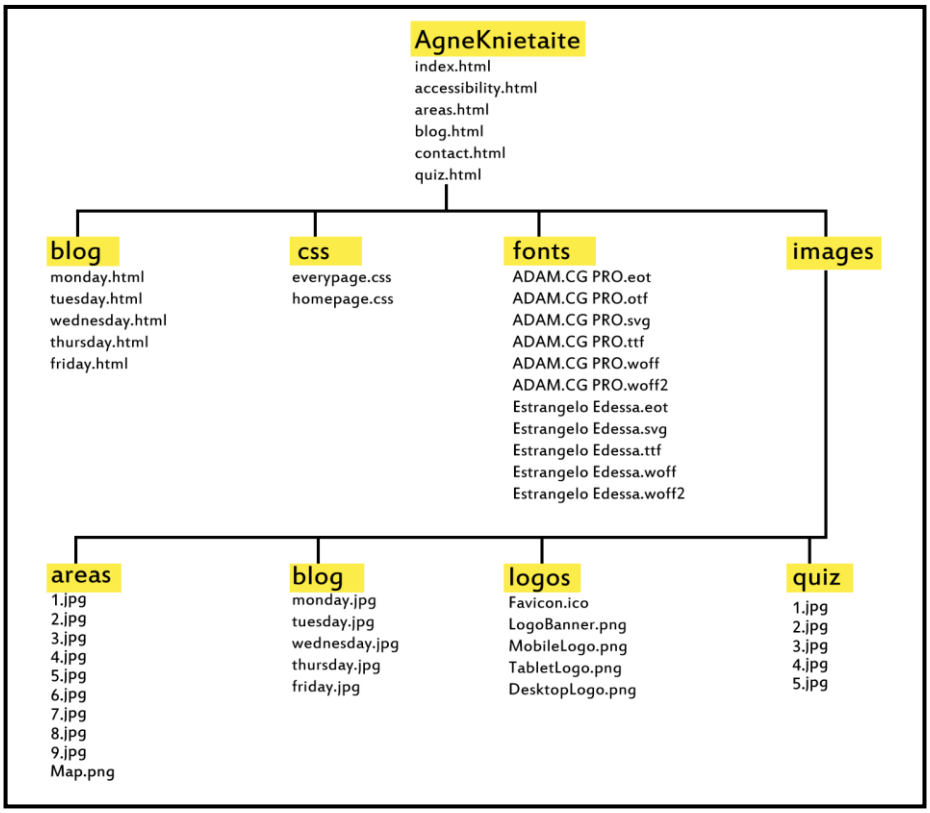

Figure 2. Website folders/subfolders and file structure

For the file and folder structure I tried to use a logical approach which uses consistent, plain language, understandable by everyone (Lynch & Horton 2015). The structure I used is available above. Marked in yellow are the folders and bellow them are the contents of each.

Whilst developing my website I used Chrome DevTools (Google Developers 2019) and Firefox Developer Tools (MDN Web Docs 2019). I mainly used them to find bugs in my design and layout, test responsiveness and ensure great usability on various devices and screen sizes.

In regards of the menu, I followed the Magical Number 7±2 rule (Wikipedia, 2019) as well as the three-click rule (Webopedia 2019. My menu consists of 6 elements in total, hence overburdening it with an unnecessarily complicated structure would defeat the purpose of the website being intuitive and simple to use.

Figure 3. Menu changes based on device size

I did not use JavaScript in development of my website. The menu system I chose did not require JavaScript and subtle animations I use in my website, such as changing text or button colours whilst clicking or hovering over them, do not require JavaScript – the desired effects were achieved using only CSS.

Optimisation

I did not use JavaScript or heavy animation elements, thus my largest concern for the website's loading time was the size of the images. Two formats for images that I use are *.jpg* and *.png*. The former is used for photographs because it can preserve complex colours even at high compression levels. The latter is used for the logos of the website because it is well-suited for rapid transitions between colours that need to remain sharp (Hughes, J. 2019). To compress the images I used Adobe Photoshop CS6 and its "Save for web…" option.

As mentioned in the design and planning document, I used custom fonts, which are not supplied by every browser, hence I included them in a separate subfolder – I used plenty of formats to cater to a variety of different browsers (Westfall, P. 2018).

As far as accessibility goes, I added *alt* text for images where needed – For the banner logo and the homepage the text supplied should fully convey the intended message. On the quiz page the alternative text should allow the user to participate in the game of guessing. I opted out the *alt* image property on the blog webpages – images there serve a decorative purpose, hence adding that will just produce an unwanted background noise for users using screen readers (RNIB 2014). As well as that, I added a *lang="en"* property to support users relying on text to speech devices (Watson, L. 2016).

Security

In regards of security, I added the *<meta charset="utf-8">* tag to all of my webpages as a security precaution (MDN Web Docs 2019).

I am not dealing with any extremely sensitive or high-security demanding data on my website, such as billing information or passwords, hence I decided not to overburden the website with additional features security-wise and chose to dedicate my time and resources on other aspects of website development. In addition, to improve security I would have to buy a certificate from a licensed certificate authority (Google Support 2019). I am not actually deploying a website thus I am not able to use a certificate.

Debugging

For debugging I used a CSS Validation Service (W3C 2013) and a Markup Validation Service (W3C 2009). The HTML validator was a great tool in detecting typos and pointed out flaws in my *viewport* tag which I fixed. It also uncovered some *alt* image properties I have missed to fill. CSS validator did not find any errors on both of my style sheets.

Figure 6. everypage.css validation

Figure 4. homepage.css validation

Testing

One of my main focus areas for testing accessibility was colour blindness. I used a colour picker tool ColorZilla (2016) in combination with WebAIM Contrast Checker (2019). All of the colour combinations I use on my website pass WCAG 2.1 AA requirements.

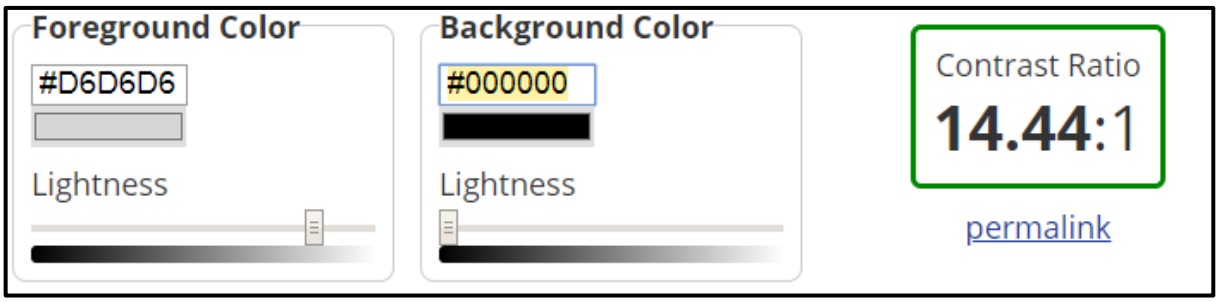

Figure 5. Navigation elements against the background

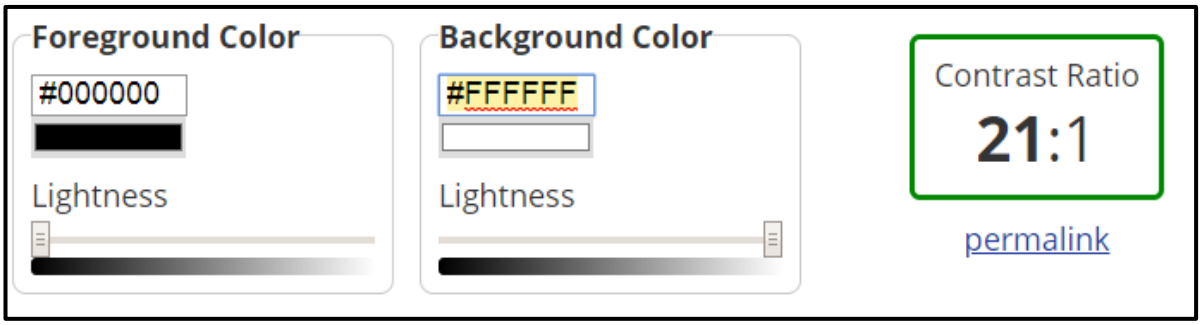

Figure 6. Regular text against the background

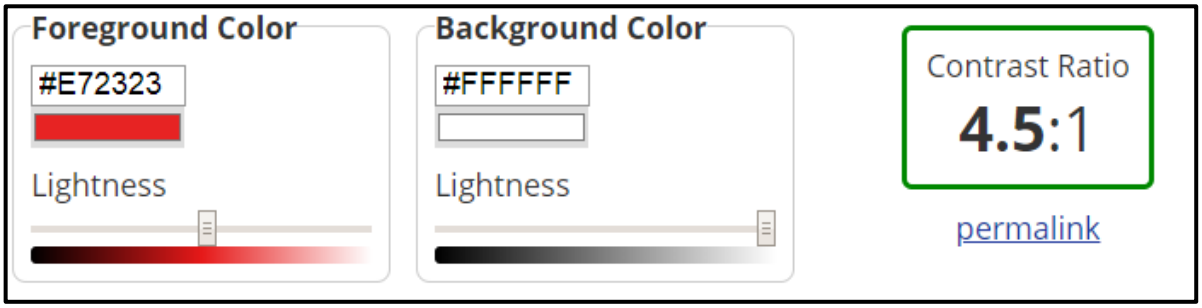

Figure 7. Navigation items in area.html against the background

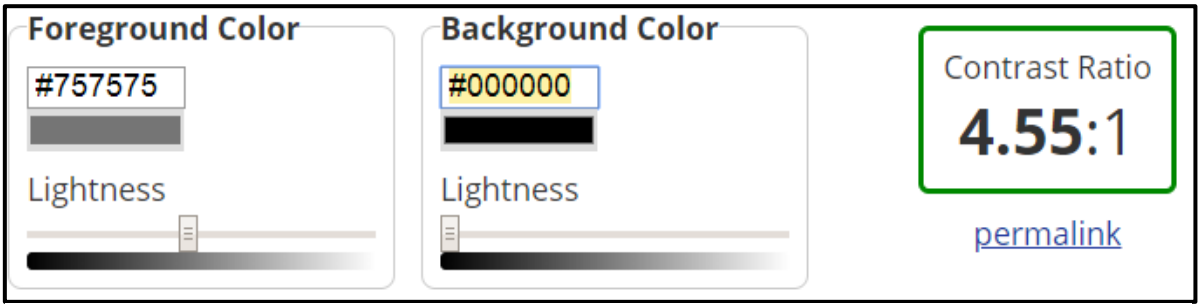

Figure 8. Homepage logo against the background

I also tested my website with WAVE (2019) – the test results were not perfect but my website did not encounter any major, unexplainable errors.

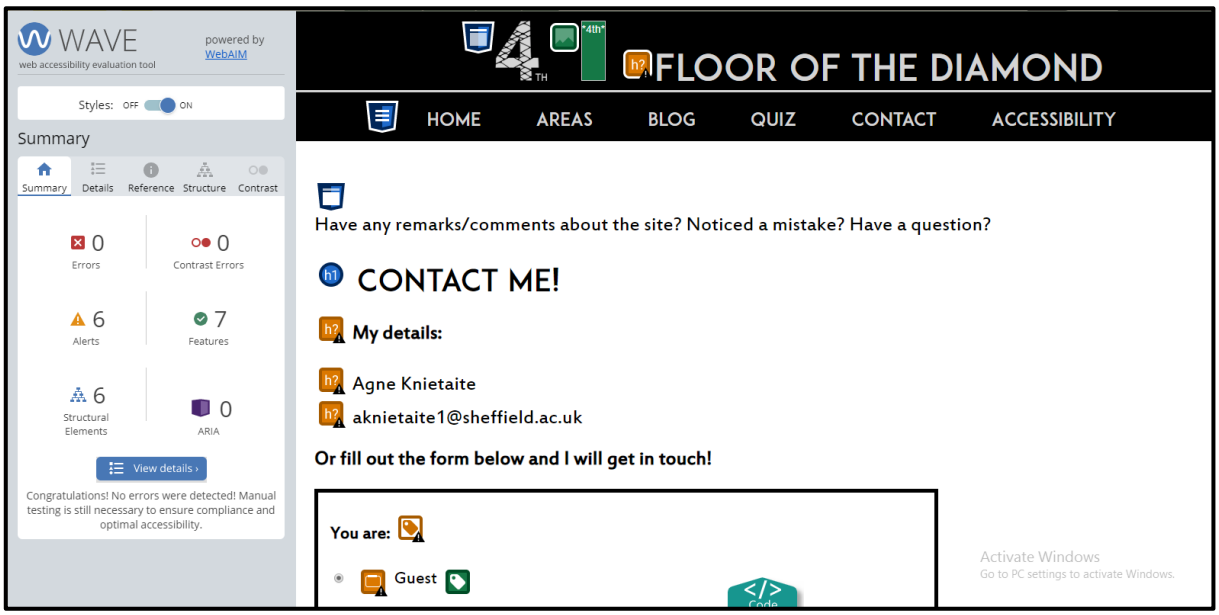

Figure 9. contact.html tested with WAVE, experiencing no errors

For multiple device testing I used emulation tools from Google and Mozilla, specifically responsive design mode, to which I referred earlier. For touchscreen responsiveness I used my own device as well. In terms of different browser testing I used some of the most popular browsers which were available on my machine.

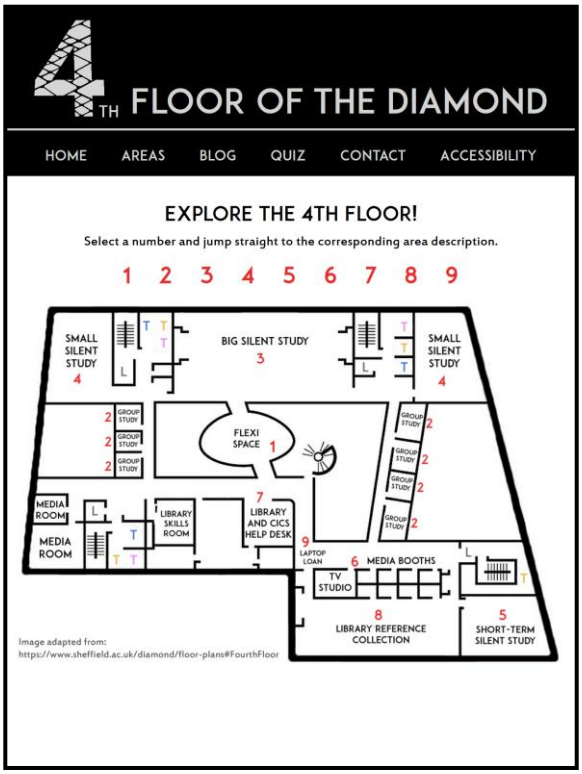

Figure 11. Website on an emulated Ipad (Tablet)

Figure 10. Website on an emulated Samsung S9/S9+ (Mobile)

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