SIT120 Alex Brown 216012077

1.2P Pass Task

Submission parts

1. Responsive Web Design

A) When creating a new website from the initial steps having responsive web design is a key element in making the website functional for users across multiple device types whether they have a small sized screen like a phone, a medium sized screen like a tablet, or larger sized screen like on a computer. If the website is coded to respond dynamically to the device, it can better display on screen the elements to the user in a functional and clear manner.

   By using responsive web design the browser will dynamically display the content adapted to the size of the display this can be done by designating a viewport and scale each piece of content within the viewport such as changing text sizes to match a percentage of the given screen, resize images to shrink and fit within the viewing area, Grid Views can also be assigned to divide the display into different sections and have content fill a part of the screen representing each section of the grid adding or removing elements from a line to show an appropriate amount of content in the screen at a time.

   This dynamic way of presenting content is crucial as it allows the creator to highlight certain parts of the website promoting images or key text that they want a visitor to view and prioritize what is seen, it will increase a user's engagement and enjoyment of the website as they will be able to easily navigate and view content organically not having to scroll or pan in multiple directions or zoom in or out, and finally optimised websites will receive better search optimisation results as search engines will give priority to websites that are mobile friendly and easily viewed on multiple platforms.

B) To implement responsive web design HTML and CSS must be used in unison to set parameters around how the content is displayed. An essential step is to create a viewport tag in the head section of a html file and then CSS can be used to further define how the viewport is used by the browser.

   Media queries can be defined in the style section to create rules based on different factors like height or width of a screen (both min and max sizes can be defined), its resolution (high or low resolution), its orientation (portrait or landscape), or activate with accessibility settings like screen speech readers or high contrast modes or any combination of rules to create specific viewing scenarios like displaying the content in a specific way if the screen is small and in landscape mode or if the screen width is between a medium and a small size. Each media query can have its own styling rules setting font sizes, image rules, and positioning dynamically as the browser responds with its screen details.

   Further optimisation can be done by creating grids to display the content in columns, creating a website designed for a mobile screen that can scale up in size, and to test the website in multiple stages with different devices and screen sizes seeing if any further rules need to be defined in media queries to show the website correctly on all sizes available.

Sample webpage using responsive web design.

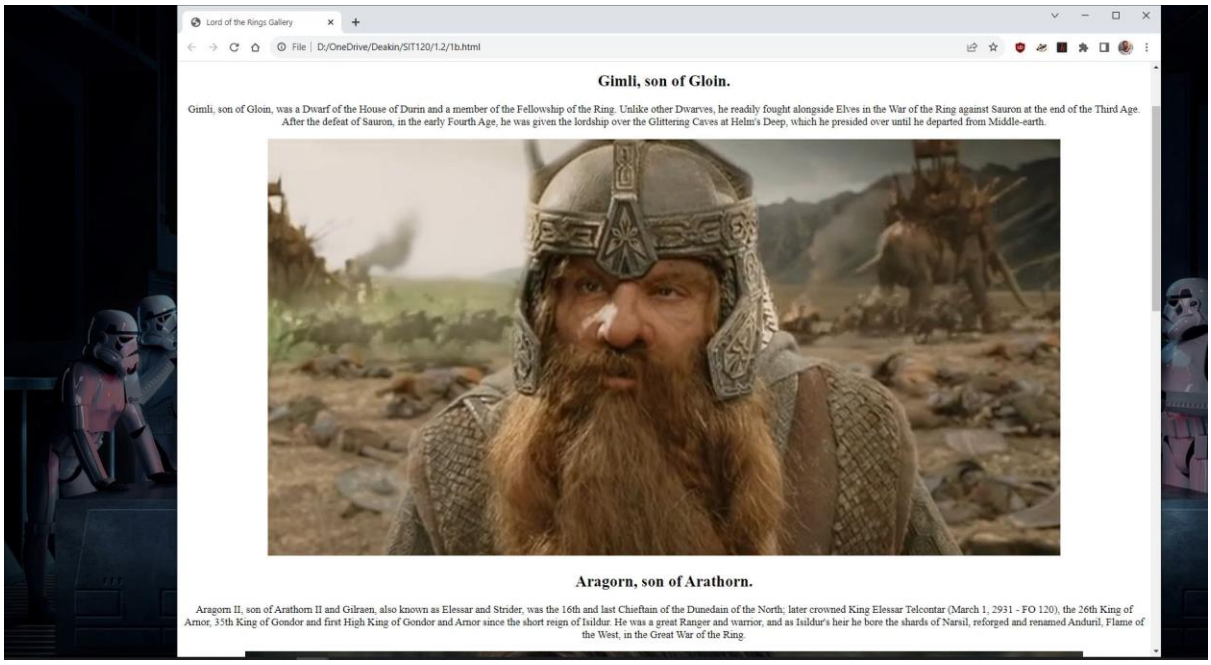


Figure 1 - When website is in a large window, image goes to 100% and text goes from edge to edge.

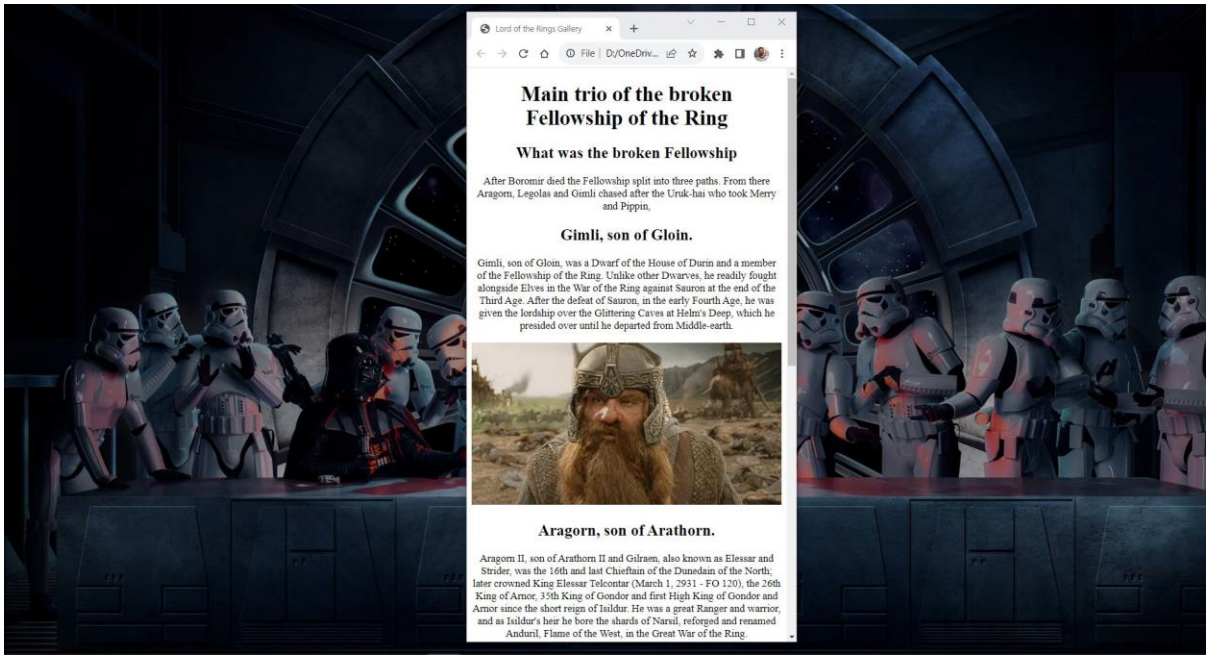
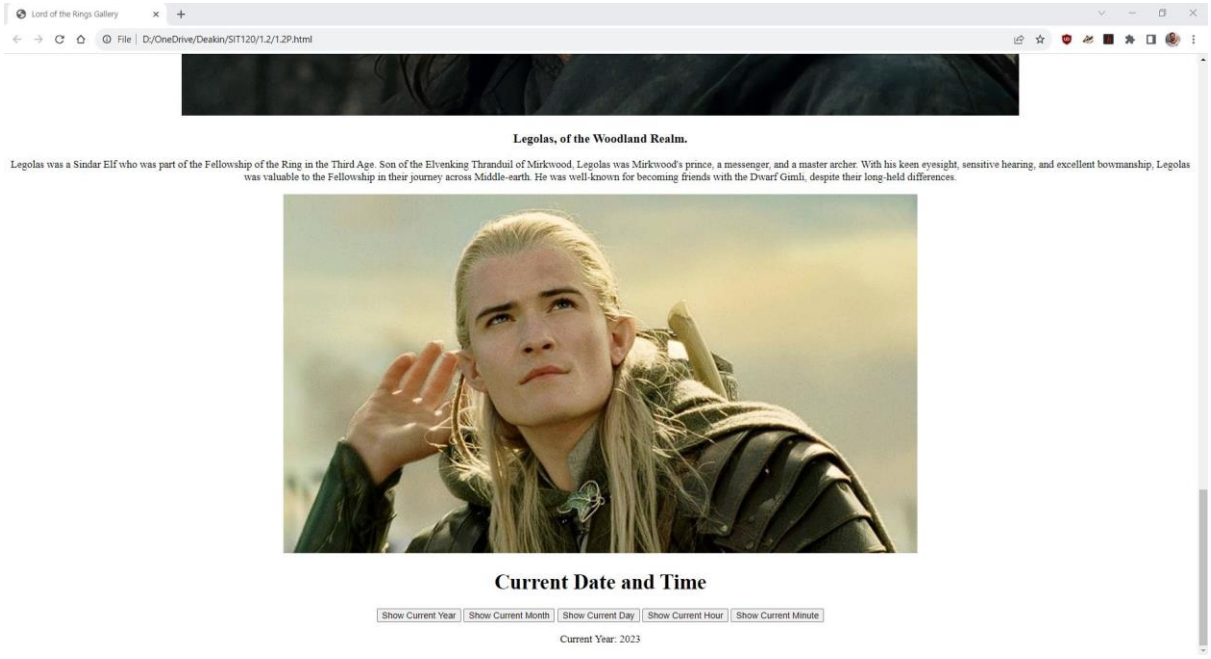
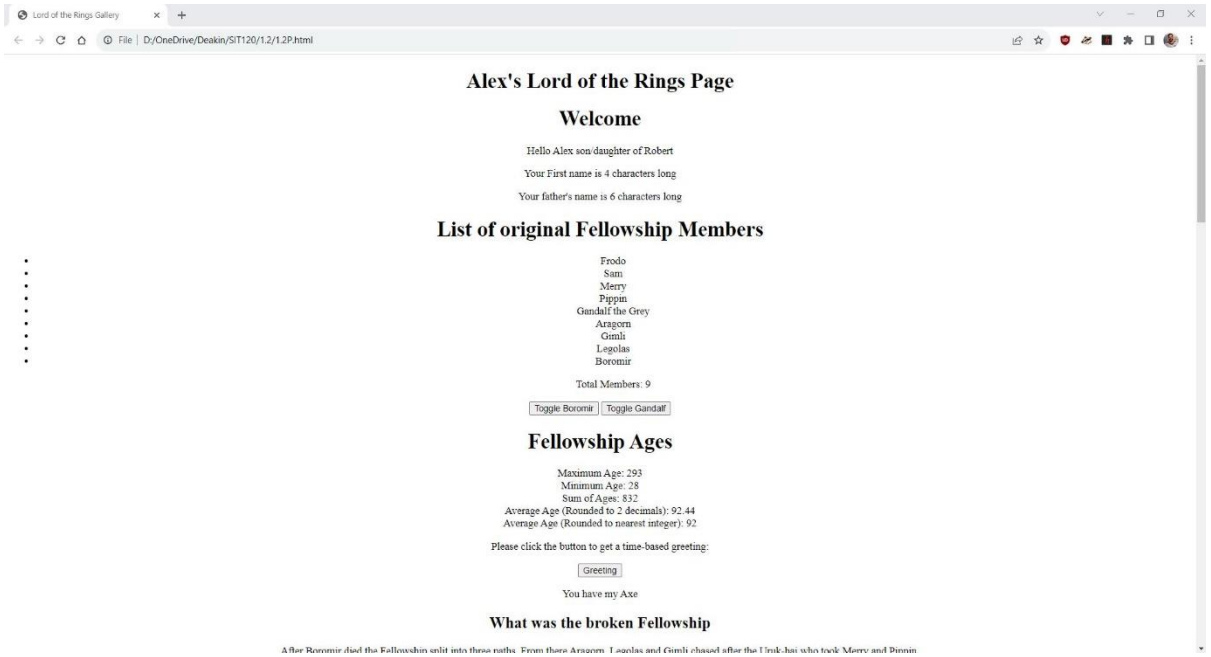


Figure 2 - When website is on a smaller screen image files shrink to width of the window and text wraps into shorter lines.

2. JavaScript

Some screenshots below and code is in github repository.





Reflection

This was a task really challenged me learning a lot of JavaScript and crating each function took a lot of trial and error and was not easy to put together but enough trial and error and I was able to create the tools and functions to make the website work. I still want to be able to continue to learn more of the JavaScript language as I think it is incredibly powerful in creating a websites and applications and I want to be able to do further web development and application development.