Comp1021  
Coursework 2 – Written Report  
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Note: This coursework uses the “Materialize” framework as an alternative to the Bootstrap framework. This decision was authorized by Sam Wilson.

Design Plans  
Due to the limitations of the first coursework, I was very limited in terms of what I could technically achieve. The lack of Javascript made it difficult to do things when an event was triggered, which caused limited functionality with some of my elements.

I was relatively content with the overall design of my first website, so I will be trying to keep true to my layout as much as possible. As my design was inspired by Google’s “Material Design” I thought it would be more appropriate to use this as my framework to help preserve my vision.

With the availability of javascript, the first thing I will make functional is my form on my contact page. I will first put in form validation, to prevent the user from submitting a form without the required contact information, which in a professional setting, would make responding to the query a lot easier. The submit button will also work when submitting a form as well, but as PHP is not allowed/I don’t know how to use it yet I will create a notification that will pop up with an onclick method. In a real world scenario, a PHP script would be used to send the form to a specific e-mail address.

I will also include a function that acquires the user’s geolocation and provides navigation directions to a specific location using Google Maps. I will have it launch the google maps website instead of providing an iframe in the site, as I believe it is more functionally useful to have access to all of Google Maps’ options. I will include a video to a random YouTube video in an iframe on my homepage, like my previous coursework.

Another thing I will modify will be the portfolio pages, specifically the showcase. I would rather have the screenshots take centre stage, with the descriptions being available either via a hover or a click. Using Materialize, elements like this should already exist and be easy to implement. Changing the layout to a format like this benefits the overall aesthetic, and lets the content take centre stage, promoting user interaction if they wish to know more about the content in question.

Finally, I will make improvements to the navigation bar. Having access to the Materialize framework will make it easier to implement a dropdown menu without as many formatting issues as the previous iteration as Jquery will now be used to initialise it instead of li:hover. In addition to this, it will allow me to implement a secondary navigation bar that will be used instead of the normal one on smaller-screened devices, which increases the usability of the website and allows a larger demographic of consumers to visit the website, as a good majority of users browser the internet on mobile devices.

Evaluation/Justification  
Upon completion of my website, I made some changes to the design and functionality to some of it.

The first noticeable aesthetic change would be to the navigation bar. Instead of having the logo change colour on each page, the entire navbar changes colour. This allows for a greater amount of contrast between the content and the navigation, and generally looks more appealing. The drop box is now activated by a click rather than a hover, which makes it easier to use on something such as a touchscreen. Hover elements don’t always typically revert back to their original state on a touch interface, causing problems with layout and interaction.

Most pages have also received a ‘splash-screen’ type of appearance upon launch. A full screen image with the main header will first greet the user upon arrival. This is mainly a design decision, rather than a functionality one. As not every user will have the initiative to scroll down past the image, I have included a button that scrolls down to the appropriate content. This could have been easily done using ids in HTML and linking a button to that ID, but the motion was jerky and sudden. Using Javascript, I have implemented a function that smoothly scrolls down to the content, creating a more pleasurable experience to the user.

On the contact page, I did implement what I initially set out to do. The submit/send button allows a message to appear when a form has been successfully been filled out. However, I resorted to using form validation using HTML5, as it was simpler to implement and made it easier to impose character limits in text boxes. However I have also implemented a character counter in the textarea box of the contact form. This imposes a limit on the user on how much they can type, but it would be beneficial to the mail server as it helps regulates the overall size of the message, allowing more to be stored (if it was used for actual business use). Given the opportunity, I would like to make a PHP script that would send the contents of the form to a test e-mail address.

The use of the Materialize framework allows an easier modification of the layout of the site. Materialize adopts a 12 column layout, with the ability to push elements a certain amount of columns across. This framework allows the programmer to choose how many columns a specific element takes up on each screen size. For example, an information element may only take up 6 columns on a large display, but it may take up 12 on a smaller device. This allows complete control of the layout, allowing for easier implementation of a responsive design whilst maintaining aesthetic appeal.

As proposed, I modified the design of the portfolio pages. The content is now presented as cards that reveal more information when interacted with. This decision has allowed more content to be displayed in the same area, whilst not compromising on content delivery.

Other Additions I have included is an iframe on the homepage that allows content from an external site to be displayed in my website. I have also implemented a rollover event on my image on my about page. These features don’t really enhance my website. They are more there for entertainment purposes and proof of concept.

*Test Cases*

Client/Server Operation

HTTP Protocol

HTML & CSS