Codel { Reflection }

In today's world, computers are all around us, advancing quicker than anyone could imagine. There is an exponential need for programmers to further expand the world's demand for better and faster products and applications. However, where does one find an entry point to computer programming? Over the past several weeks, I have been working towards conceptualising Codel, a programming tutorial publication. Many of Codel's design decisions stem from the target audience, which is from ages 14 to 18. In this report I am going to discuss design decisions and reflect on what I have learned so far.

One of the most notable design decisions is the introduction of Dark Mode. Dark Mode has surged in popularity in the past few years. Dark mode reduces eye strain in dim environments and long periods of use. Commonly used apps such as Facebook, Instagram, Spotify and Twitter feature dark modes. Given that the target audience use these applications daily, it would make sense to implement Dark Mode in this publication. I conducted research on how different websites implement their Dark Mode layouts. I found Google's implementation most interesting and have adapted this aspect from their Material Design language. Instead of elements being hard coded with a hexadecimal colour code at full opacity, they are created using pure white at varying opacity levels on top of a near pure black base colour. In HTML, this is created using RGBA. As many of these elements are stacked upon each other, they increase in contrast as the alpha channel is additive.

The colour scheme is based through 'Call to Action' where certain colours are used to emphases a decision. My primary colour is blue, and this colour stands out against the dark background. When decision needs to be made, as found in the modal, one option will be coloured blue, inviting the user to click this option. Hovering over a button or highlighting text, blue will be used as a confirmation colour. The secondary button/action will be outlined but deemphasised until hovered on. My secondary colour is pink, this is used as an accent throughout my website, this is used to emphasis certain content such as lists, where bullet points can be more informative than blocks of text. There were a few restrictions in what colours could be used on dark backgrounds. After researching, I found that desaturated colours worked best to reduce visual vibration. Contrast played a key factor in what coloured text could be displayed, a contrast ratio of at least 7 was required for most text to be displayed correctly on near black.

I have been keeping tabs on UX design ideas for quite some time and an emerging ideal is creating "mobile first" UI design. This means familiar and scalable interfaces between device screen sizes, by starting the design process with the smallest possible screen size. This was considered when designing my modules, these modules have changed between my concept and my coding however the reasoning is still the same. The modules in theory, can be scaled, split in columns, aligned to grids. I was not able to show this in code due to time and skill constraints. These modules contain informational content relating to the heading.

A set of new colours can be used as syntax highlighting. I hope to use this where users are learning to write code, the code can be viewed in an easy to understand matter. An important feature is the ability to select blocks of code and copy with correct indentation into an editor. I made this possible but importing 'prettyprint' as a script, this is run in browser and has the for mentioned features. The colours have been updated to include my syntax colour palette.

It has been a gamble designing for Dark Mode without having previous knowledge of what goes into creating it. I am confident in saying that I have succeeded in creating a suitable website for the target audience. I hope to use this design style in future projects of mine.