

Computer Science
Introduction to Multimedia
Multimedia Web Page Development
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10th December 2015

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1. Introduction

For Introduction to Multimedia the project at hand was to create a personal website. In this report the rational behind design implementations will be explored and methods behind creation will be explained. The aim from the outset was to make a simple, yet sleek and professional personal website. This is clearly reflected in the design where photos are used on each page to give a clear sense of positioning and context on each page, whilst continuity is maintained in formatting and styling.

2. Website Design

When designing the website, it became quickly apparent that imagery would play a key part each page. Hence the first image in each page follows directly after the navigation bar. During development Adobe Photoshop was use extensively to edit the photos so that they followed the theme of the page and created a feeling of similarity as the resolutions and saturations differed greatly. It was found that monochromatically increasing the noise helped to reduce the distinctive differences between photos.

The navigation bar was anchored at the top of the page so that a user never feels a loss of place when exploring the website. The highlighted active tab helps supports this sense positioning. To compliment this the navigation bar was coloured in a dark grey, to prevent an intrusive feel guiding the users eyes away from page content. In

In the development of the site the choosing a font was crucial in the preservation of the site sleek appearance. So an external font was imported, 'Raleway'^[1].

The majority of the website was coded in WebStorm and refined with the help of Google Chrome's "Inspect Element" feature. Which was key in resolving many issues such as removing unexpected margins and padding from elements such as the navigation bar links. One of the greatest issues that arose was an unexplained separation between <section> tags – caused by neither the padding nor the margins. After further research it was found that it was a product of using the CSS "display: inline;" styling format and so the default background colour of the body would peer through the breaks. So to resolve the issue the background colour some of the <section>s had to be made the same colour as the body background colour. This can be seen working most effectively on the 'Hobbies' and 'CV' pages. However, this unexplained spacing persisted and a spacing above the navigation bar had appeared, and remained immovable. Later it was found that by adding a top-border to the first <section> after the navigation bar that this spacing was removed but the navigation bar covered the top 40 pixels of it. This ended up becoming key in the formation of the websites finishing look as a photo was used to fill the space in these <section>s.

The website was created with a large display in mind, and hence gives the best user experience. This is not to say that the website must only be used on a large display as the minimum width of the site has been defined as 798px so that images don't become distorted. To take advantage of a large display the CSS "width: 100%" style was used on all incorporated images. Furthermore, as more content can be seen when in full screen a small additive has been made such that the video on the welcome page fades in (using jQuery^[2]).

Finally, as the site was built it was done so to be optimized for Google Chrome, and post development confirmed to be compatible with Safari and partially compatible with Firefox (hover tabs and active tab in navigation bar are offset by 1px).

3. Animation

The storyboard for the animation was created after completing a few online tutorials online to make SVG animations. The first of which was on how to make an interactive windmill^[3] using Raphael.js. The second was a tutorial how to move elements around the SVG paper and more, this tutorial^[4] included a tetromino piece that inspired the the final storyboard for the Animation.

To begin with, the animation needed something to initiate it. To do this instead of using buttons outside, an interactive button was made within the SVG animation. Done by creating a a rectangle and text, then grouping them so they act together. For the extra layer of interactivity, a glow^[5] was added to the button for as long as the mouse is hovering above the grouped element.

One of the major stumbling blocks when creating the animation was controlling a group of elements to move together as one. As seen in the animation all of the Tetris shapes fly apart using the 'element.animate()' function and out of view apart from the centre one. This was a compromise from the initial idea where they would rotate as a one around the centre of the entire animation. To prevent any of the element returning and unwantedly interfering with the rest of the animation, Raphael's remove element function was used to remove all of them at once. And then the animation was recalled with one difference. After the first run through an external variable is changed from positive to negative and a conditional statement is used to ensure the animation ends.

As a final touch 3 bitmap images are used in the animation. They way they are called is the same as how all the elements in the animation are delayed so that they move in sync with the music, using the Raphael 'setTimeout(function(), time)' function. The first image and most obvious being the 'The End' image^[6]. The others being the thumbs up GIF and the replay PNG.

4. Conclusion

When creating this website the main objectives where to create something simple, elegant, and interactive. Unfortunately an identical site could not be replicated in Firefox but it could be in Google Chrome and Safari.

Going forward things that would be added to the website for improvements would be things like parallax scrolling^[7] to give the website a sense of depth. The CSS was added to the style sheet but regrettably when an attempt was made to incorporate this into the the site it interfered with the 'display: inline' styling and meant redoing the entire CSS styling.

5. References:

- [1] Raleway font imported from <http://www.fontsquirrel.com/fonts/raleway>
- [2] jQuery <https://jquery.com/>
- [3] SpeckyBoy <http://speckyboy.com/2014/08/27/creating-responsive-interactive-animations-raphael-js-2/>
- [4] Raphael Tutorial <http://code.tutsplus.com/tutorials/an-introduction-to-the-raphael-js-library--net-7186>
- [5] Glow in Raphael <http://stackoverflow.com/questions/8275738/how-to-add-and-remove-glow-for-raphael-element>
- [6] The End image <https://annejosephson.files.wordpress.com/2014/09/the-end.jpg>
- [7] Parallax Scrolling <http://keithclark.co.uk/articles/pure-css-parallax-websites/>