Website Development Report

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1   INTRODUCTION

The aim of this report is to explain the process of designing and building a website. The website is called Military Memories and the URL (Uniform Resource Locator) is: **https://outranet.scm.tees.ac.uk/users/f6120326/MilitaryMemories**

The author of the website is Stephen Hamill and it is based on his time spent in the British Army; it contains stories and images to document this. The website was built by hand coding XHTML (Extensible Hypertext Markup Language) and CSS (Cascading Style Sheets). There were certain guidelines to adhere to such as, accessibility, coding style, and browser compatibility.

Chapter 2 discusses the construction of the website i.e. XHTML and CSS. Chapter 3 discusses the author's coding style. Chapter 4 explains the website's compatibility. Chapter 5 discusses the design issues of the website. Chapter 6 highlights the image design issues. Chapter 7 discusses search engine optimisation and chapter 8 covers external linking.

In addition, this report is available in PDF format via the website's homepage.

2   CONSTRUCTION

The author was tasked with constructing the website using XHTML 1.1 and CSS 2. The former was used for structure and the latter for the styling of the website. This method not only reduces the overall page size, it also easier to edit and maintain.

2.1   XHTML 1.1

XHTML is how HTML (Hyper Text Markup Language) should be written i.e. all tags in lower case, correct nesting of tags and all tags to be closed properly. By using XHTML in conjunction with a linked style sheet, the author has adhered to the W3C recommendation that websites should now be built this way.

2.1.1 Layout

The author has used the div tag, as opposed to tables, to structure his layout; this results in a drastic reduction in the amount of code used. For optimal visual effect, the author has nested the div tags to achieve his desired layout. For instance, the container div (as its name suggests) contains all other divs. Each separate part of the layout is enclosed within its own div.

2.1.2 Navigation

The author has used the <ul> (unordered list) and <li> (list item) tags to structure his navigation. Contained within the li tag is the <a href> tag; this is used for jumping to different pages within the website and on the internet as a whole. A simple navigation would look similar to the following piece of code:

```
<ul>
        <li><a href ="index.html">Home</a></li>
        <li><a href ="contact.html">Contact Us</a></li>
</ul>
```

As well as having his global navigation horizontally at the top of the page, the author has put navigational links on the left hand side of the page (where necessary); these links are relevant to whichever page the user is on.

2.2 CSS 2

The author has used a linked stylesheet to style his code; this completely separates style from structure. This method enables the whole site to be styled by a single stylesheet. Thus, any changes made to the stylesheet are replicated throughout the site, therefore making it easier to update and edit. Also, the author has used a small amount of CSS inline (within the actual element on the XHTML page) to indicate which page the user is on.

2.2.1 Navigation

For the global navigation to appear horizontally, it was necessary for the author to use the value *inline* for the property *display* within the ul / li selector. The rest of the navigation makes use of a simple text colour rollover.

The vertical navigation on the left of the page also makes use of colour rollovers. However, a rollover image has also been used. This image is a small chevron placed vertically to the left of the text. When a mouse pointer hovers over the text, the text changes colour and the image is swapped for that of a flashing chevron. This is achieved by setting the image as a background image within the li for the link and positioning it to the left.

3   CODING

The whole website has been hand coded in XHTML 1.1 and CSS 2, and whilst there is not a set way a person should have his/her code laid out, it is beneficial, not only to the person who wrote the code, but also to anybody who looks at the code, to have a layout to some degree.

3.1 Layout

For the XHTML, the author has left aligned all elements except for the navigation areas. In addition, he has left white space after the start and at the end of a div; resulting in a uniform appearance of the code.

In the case of the CSS, the author has grouped elements together i.e. layout, navigation and form area; he has clearly marked these sections. This makes the code easy to look at and quick to locate the many different sections that make up the stylesheet.

3.2 Comments

In the XHTML document the author has inserted a comment next to each closing div tag to highlight which div it belongs to. This is useful (especially when nesting divs) as the bottom of the page can end up having several closing div tags.

In the CSS document the author has highlighted each section with an appropriate comment i.e. side navigation for the vertical navigation. Furthermore, in the case of workarounds, the author has stated what that certain piece of code is for.

4   COMPATIBILITY

For a website to be acceptable it was necessary to check that it works in multiple browsers. The browsers tested were:

- Internet Explorer 6

- Mozilla Firefox 1.07

- Netscape 7.1

- Opera 8

- Avant 10.1

The website works fine in all of the above browsers.

5 DESIGN ISSUES

The following chapter discusses the issues surrounding the design of the website, issues such as, accessibility and different display settings. This stage of the development process is fundamental to the success of the finished website.

5.1 The design

The author wanted the website to convey a sense of the military, which is why he opted to use green and brown as his main colours throughout the site. The navigation is easy to use and because the website has a standard design across all pages, the whole site is easy to navigate around. The author has also included a contact page which will generate him some feedback as to how well his site has been designed.

5.2 Accessibility

Making the website accessible as well as aesthetically pleasing is quite hard to do. The author has, he feels, managed to strike a balance between the two. For instance, the navigation and links within pages have a 'tab index' assigned to them and the contact form specifies which language it is written in.

5.3 Display settings

The website has been tested in various display settings ranging from 800 x 600 through to 1400 x 1050 and works well in all of them

6 IMAGE DESIGN

It was decided by the author to keep the design of the images simple as it was the content of the images that he desired people to see, and he didn't want any fancy decorative features distracting them.

6.1 Image size

Apart from the header all images have the same width as each other; this is to promote uniformity across the website. The images in the photo gallery have their own dimensions and are discussed in a later paragraph.

6.2 Compression

Not including the animated GIF, all the images used in the website are photographs, therefore the best format for them is JPG. The author has kept them at a high resolution as he didn't want the images to lose any of their clarity; however, he still managed to achieve a small file size by optimizing them in Macromedia Fireworks.

6.3 Photo gallery

McGrath (2005, p170) demonstrates the ability to make images appear when a user positions a mouse over a smaller image. The photo gallery is possible thanks to the visibility property in the attached style sheet. The photo gallery enables a user to hover over a thumbnail to reveal a larger version of the picture. All small thumbnail images are of the same size, and the larger images are of a similar size to each other.

6.4 Copyright

All images used in the website are the authors own.

7   SEARCH ENGINE OPTIMISATION

An important element of any website that is built today is that it is visible by the different search engines available for users to search on. The author has built his pages in a search engine friendly manner; CSS enabled him to do this effectively.

7.1   Meta tags

The author has included meta tags in every page of his website enabling any search engines to index the site better. Meta tags such as:

- Keywords
- Description
- Robots

7.2   Keywords

In addition to having keywords in the meta tag, the author has placed keywords throughout his website. All keywords, whether they be in the main text or meta tag, are relevant to the page that they are on.

7.3   XHTML order

For a website to be more search engine friendly it is paramount that the search engine spiders are able to index all of the keyword rich content. CSS has enabled the author to do this by positioning his content as high up the page as possible by absolutely positioning the navigation.

7.4   Alt tags

All images have alt tags, this enables text to be displayed if a user has their images turned off and is more search engine friendly.

8   EXTERNAL LINKS

The website has one external link to the MOD's Duke of Lancaster's Regiment website. The MOD is happy for anybody to link to their site; therefore, permission did not have to be sought.

9   VALIDATION

The website is valid XHTML 1.1 and was validated via the W3C website. The CSS did not validate as according to the W3C website it could not be parsed correctly.

10   CONCLUSION

The author of the website feels that he has achieved his aim of building a website using only XHTML 1.1 and CSS 2 to a high standard. The fact that the author has discussed a multitude of issues surrounding the development of the site, demonstrates that he has took into account all of the various standards set out in 'the task' of this assignment.

The site has been tested in a number of internet browsers, which is of paramount importance, and the XHTML used has passed validation via the W3C website.

Finally the author has included a contact page to generate feedback. This is important as you cannot please everybody, and it is an invaluable source of information with which he may put to use on his next website development.

Total word count: 1,781

REFERENCES

McGrath, M. (2005) Hiding and revealing components *in CSS in easy steps*. Warwickshire: Computer Step, 170 – 171.