

http://benhidewebsite.azurewebsites.net/

School of Computer Science

CMP1130M WEB AUTHORING - ASSESSMENT ITEM 2

Benjamin Hide | ID:16605093 Web Authoring | 12th January 2017

Website URL;

http://benhidewebsite.azurewebsites.net/

Video URL;

https://www.youtube.com/watch?v=MwAd_DbWK5I

Table of Contents

1	Intro	oduction	2
		eb Specifications and Standards	
		thods	
4	File	e Organisation and HTML Validation	9
4	1.1	File organisation/structure	9
4	1.2	W3C Validation of the main website pages	10
Та	Table of Figures		
Bib	Bibliography		
We	Website Image References		

1 Introduction

The assessment for the CMP1130M Web Authoring module was to design an interactive website and examine the strengths and weaknesses of current web specifications and standards. The website required the current web standards to be considered whilst using these standards and latest web technologies to achieve a functional website with appropriate technical features where appropriate. Therefore, the website has been designed using the most recent markup language for the content, in this case HTML5, whilst the presentation of the content has been achieved by using CSS3 styling.

As to ensure quality of the website experience and to improve the design features, user feedback which was collected from the milestone discussions during the design process was considered and subsequent improvements made to the website where appropriate. Additional design features and functionality have been applied to the website by using scripting by way of JavaScript and JQuery. The website itself contains features such as hyperlinks, text effects, shadows, multimedia, local storage, CSS3 specific properties and JavaScript/JQuery functions throughout.

2 Web Specifications and Standards

There are many advantages to using web standards when compared to versions of previous iterations. Using the latest web standards will allow for easy maintenance of web pages that can be accesses across various devices. This in turn can bring down running and maintenance costs of web sites as they will have interoperability across different platforms. This is achievable by separating content, presentation, and functionality by using HTML5 documents with external CSS3 styling and JavaScript functionality. Utilising current web standards means that websites will be displayed as the developer desired not only in the present but also in the future as web technologies advance. Furthermore, web standards can help to locate and position websites more efficiently when searched for by various search engines. Finally, web standards give greater accessibility to every type of used no matter what device the web resource is viewed on, this can include viewing websites on older browsers, hand-held devices, and accessibility for users with disabilities. (W3C, 2016)

However, there are some limitations to using the current web standards which can have an impact on their usefulness in certain situations and both for the end user and developer. Web standards require much stricter coding during their development, which also means greater knowledge of the standards is required from the developers. This will include knowledge and

understanding of developing interoperable web sites which are supported by various browsers and device. Furthermore, web standards could be considered to limiting for developers, in terms of creativity and design. To follow them strictly as to achieve complete validation from the W3C may have an impact on the final content and design of a web site. (The Web Standards Project, 2016)

3 Methods

To meet with the current HTML5 web standards the HTML markup of the web page has been implemented using the latest HTML elements as to allow the website to continue to function as expected and provide accessibility now and in the future. In do so It is anticipated that the website will continue to operate in the desired fashion even with the introduction of new web technologies and internet capable devices. The website has also been designed to follow the document object model (DOM) so that it will allow for straightforward access and manipulation to the websites HTML and CSS content when using scripting languages such as JavaScript. The implementation of the document object model in the website will also mean that the website will be compatible with any scripting language used to interact with the documents in the websites themselves. The website has been tested, to ensure interoperability, in several the most popular web browsers used today such as; Chrome, Firefox, Opera, Safari, and Edge. This interoperability can be seen in the supporting video. The HTML5 elements and adherence to the current web standards can been seen in figure 1 and 2 below.

Figure 1 - HTML Markup of the 'head' element linking the webpage to external CSS and JavaScript files, also API for google fonts and JQuery.

Figure 2 - HTML Markup of a webpage designed using the newest semantic/structural elements in HTML5, such as: 'main', 'article', 'section', 'aside' and 'footer'.

As to meet the current web standards regarding the presentation of the website CSS3 has been used throughout applied to the HTML documents via an external stylesheet which is linked to the HTML document in the header elements on each page. This has been achieved whilst maintaining little to no inline styling within the HTML documents themselves. The employment of an externally linked CSS file is designed to separate of structure of the site from presentation of the site. Additionally, the website has been designed to use WebFonts which will provide the website with interoperability across different browsers, with regards to the text font of the website, without the relevant fonts pre-installed on the user's computer prior to viewing the website. Furthermore, cross browsers support has been employed with the latest CSS3 styling attributes such as the CSS3 transitions and box-shadows of specific HTML elements.

The CSS has been used further to maintain the browser interoperability by using CSS attributes which allow the website to be responsive. To achieve a responsive website, with cross browser support, specific styling attributes have been used when presenting HTML elements so that the dimensions of the elements are defined in percentages rather than pixels. Furthermore, media queries have been implemented throughout the website to define different styling rules for different media devices with varying screen sizes. In doing so the HTML content and CSS presentation of the website is manipulated and/or modified

depending on the screen size on which the website is viewed. The application of these styling techniques allows the website is fully responsive and has elements which are 'liquid' and very flexible when viewed across various browsers and screen sizes. An example of the CSS and latest CSS3 properties can be seen in figures 3 and 4 below. An example of the media queries used can be seen in figure 5 below.

Figure 3 - Cross browsers support for element box-shadow CSS properties

Figure 4 - HTML Elements CSS3 Transition properties which include cross browsers support

Figure 5 - Media queries used to define different style rules for different screen widths and devices

As to implement additional functionality to the website JavaScript and JQuery functions were created which can manipulate the HTML and CSS of the website, making the website more dynamic. Scripting functions have been used for the image slider, configurator, loading HTML content, saving data to local storage and the drop and drag shopping cart. Examples of the scripting can be seen in figures 6-9 below.

Figure 6 - JQuery functions called from the \$(document).ready function, makes sure that the DOM is loaded before the contained functions can be called

```
javascript.js

1 * $(document).ready(function () {
2
3
4     console.log("ready!");
5
6 * $('.backgroundImage').on('change', function (e) {
7         var backgroundImage = $(this).find("option:selected").data('boardimage');
8         $(".holder").css('background-image', 'url(' + backgroundImage + ')');
9     });
```

Figure 7 - JQuery function to load HTML markup to webpages dynamically

```
$(".newsItem1").click(function () {
    var newsItem1 = "Sed ut perspiciatis unde omnis iste natus error sit volu
    quae ab illo inventore veritatis et quasi architecto beatae vitae dicta s
    odit aut fugit, sed quia consequuntur magni dolores eos qui ratione volup
    dolor sit amet, consectetur, adipisci velit, sed quia non numquam eius mo
    Ut enim ad minima veniam, quis nostrum exercitationem ullam corporis susc
    eum iure reprehenderit qui in ea voluptate velit esse quam nihil molestia
    pariatur?";

$4
    $(".newsDiv").html("This is the lst news item" + newsItem1);

});
```

Figure 8 - JavaScript function on a HTML form which uses local storage to store data locally within the user's browser

```
function init() {
    if (localStorage["firstName"]) {
        $('#firstName').val(localStorage["firstName"]);
    }
    if (localStorage["lastName"]) {
        $('#lastName').val(localStorage["lastName"]);
    }
    if (localStorage["email"]) {
        $('#email').val(localStorage["email"]);
    if (localStorage["comment"]) {
        $('#comment').val(localStorage["comment"]);
init();
$('.form').keyup(function () {
   localStorage[$(this).attr('name')] = $(this).val();
});
$('#localStorageForm').submit(function () {
   alert("stored in local storage");
});
```

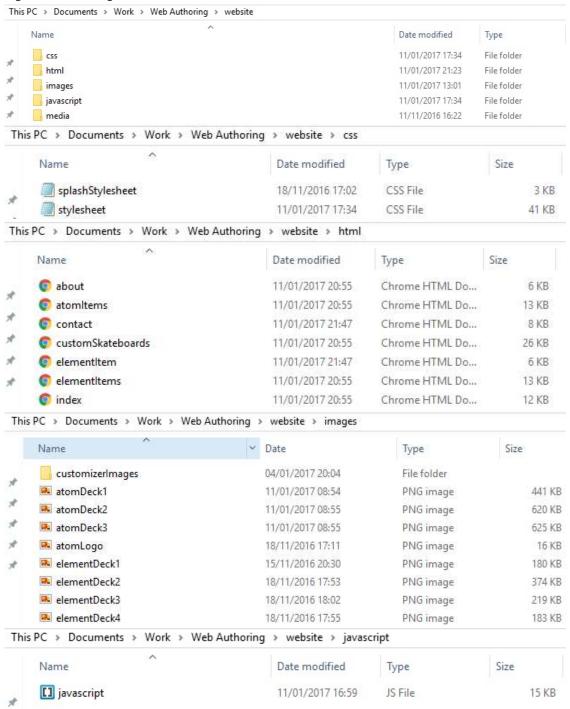
Figure 9 - JQuery function to hide/show HTML elements dynamically

```
$ (".viewElementProduct1").click(function () {
    $ (".elementProduct1").show("slow");
    $ (".products").animate({
        height: '100%',
    }, "slow");
    $ (".products li").animate({
        width: '100%',
    }, "slow");
    $ (".elementProdList1").animate({
        height: '100%',
    }, "slow");
    $ (".elementProduct1").hide();
    $ (".viewElementProduct1").hide();
    $ (".item1").hide();
    $ (".elementProdList2").hide();
    $ (".elementProdList3").hide();
    $ (".eleme
```

4 File Organisation and HTML Validation

4.1 FILE ORGANISATION/STRUCTURE

Figure 10 - File organisation/structure of the website



4.2 W3C VALIDATION OF THE MAIN WEBSITE PAGES

Figure 11 - W3C Validation of the website pages, starting at index.html

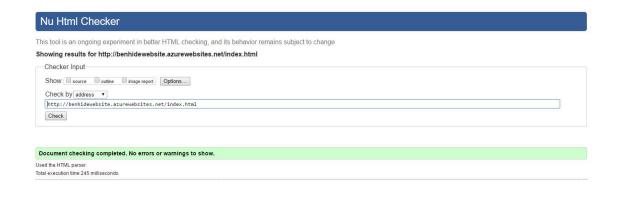


Figure 12 - W3C Validation of about.html

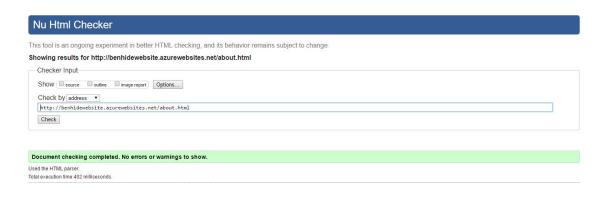


Figure 13 - W3C Validation of products.html



Figure 14 - W3C Validation of contact.html



Figure 15 - W3C Validation of news.html

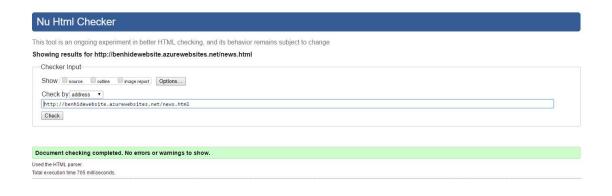


Figure 16 - W3C Validation of skateboardProducts.html

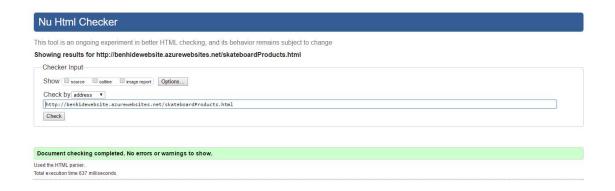


Figure 17 - W3C Validation of longboardProducts.html

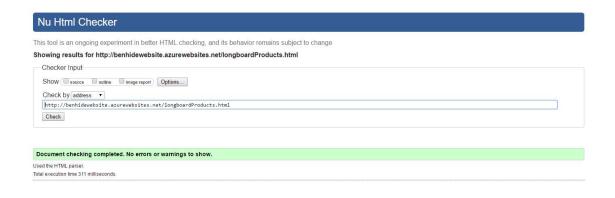
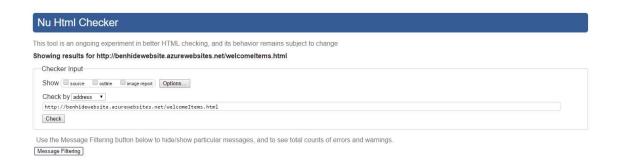
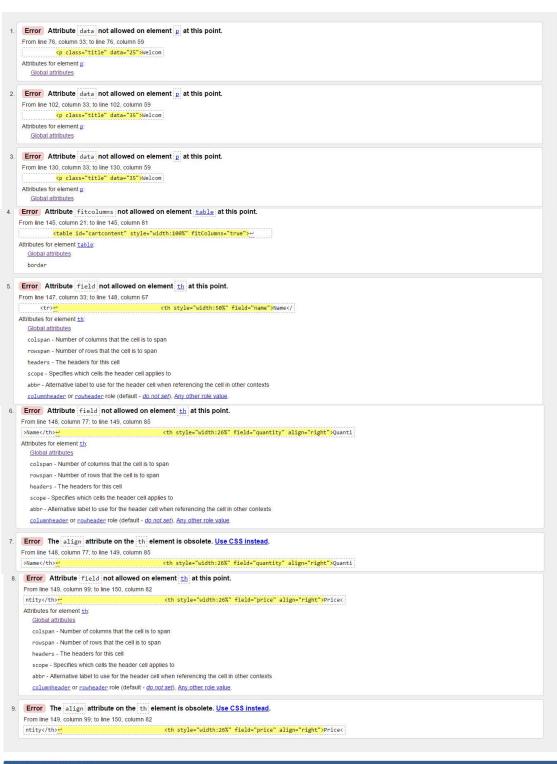


Figure 18 - W3C Validation of customSkateboards.html



Figure 19 - W3C Validation of welcomeltem.html





Document checking completed.

Total execution time 334 milliseconds.

Table of Figures

Figure 1 - HTML Markup of the 'head' element linking the webpage to external CSS and JavaScript files, also API for google fonts and JQuery	3
Figure 2 - HTML Markup of a webpage designed using the newest semantic/structural element in HTML5, such as: 'main', 'article', 'section', 'aside' and 'footer'	
Figure 3 - Cross browsers support for element box-shadow CSS properties	5
Figure 4 - HTML Elements CSS3 Transition properties which include cross browsers support	5
Figure 5 - Media queries used to define different style rules for different screen widths and devices	6
Figure 6 - JQuery functions called from the \$(document).ready function, makes sure that the DOM is loaded before the contained functions can be called	6
Figure 7 - JQuery function to load HTML markup to webpages dynamically	7
Figure 8 - JavaScript function on a HTML form which uses local storage to store data locally within the user's browser	7
Figure 9 - JQuery function to hide/show HTML elements dynamically	8
Figure 10 - File organisation/structure of the website	9
Figure 11 - W3C Validation of the website pages, starting at index.html	.10
Figure 12 - W3C Validation of about.html	.10
Figure 13 - W3C Validation of products.html	.10
Figure 14 - W3C Validation of contact.html	.11
Figure 15 - W3C Validation of news.html	.11
Figure 16 - W3C Validation of skateboardProducts.html	.11
Figure 17 - W3C Validation of longboardProducts.html	.12
Figure 18 - W3C Validation of customSkateboards.html	.12
Figure 19 - W3C Validation of welcomeItem.html	.12

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welcomeLogo.png

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sk8mafiaDeck1.png

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sk8mafiaDeck2.png

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sk8mafiaDeck3.png

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atomDeck3.png

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atomDeck1.png

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atomDeck2.png

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