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Web Authoring CMP1130M Assignment 2

Introduction

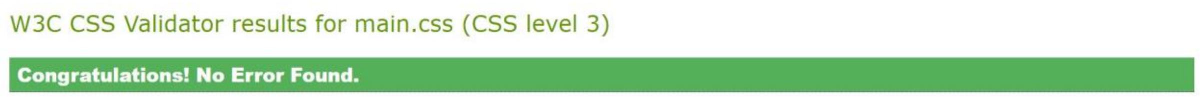
The task required a website focussed on transport which allowed users to customise different vehicles. The website must use JavaScript/JQuery to operate the customisation features as well as additional operations such as local storage and drag and drop to improve the users experience. It must also follow all regulations of the W3C standards for HTML and CSS.

Web Standards within the website

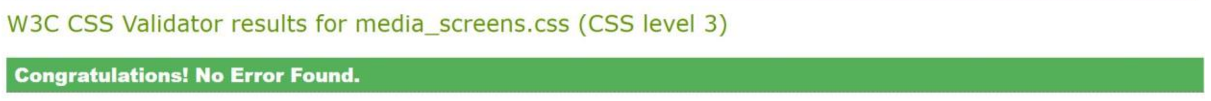
The HTML and CSS pages passed validation with no errors and thus follow all standards. All HTML and CSS documents are formatted well to be clearly presented and includes a well organised file structure separating up JavaScript, CSS and HTML documents.

Validation Process

CSS

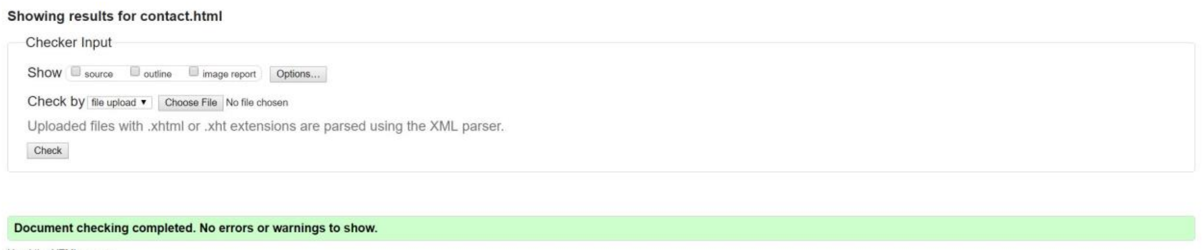

W3C CSS Validator results for main.css (CSS level 3)

Congratulations! No Error Found.


W3C CSS Validator results for media_screens.css (CSS level 3)

Congratulations! No Error Found.

HTML


Showing results for contact.html

Checker Input

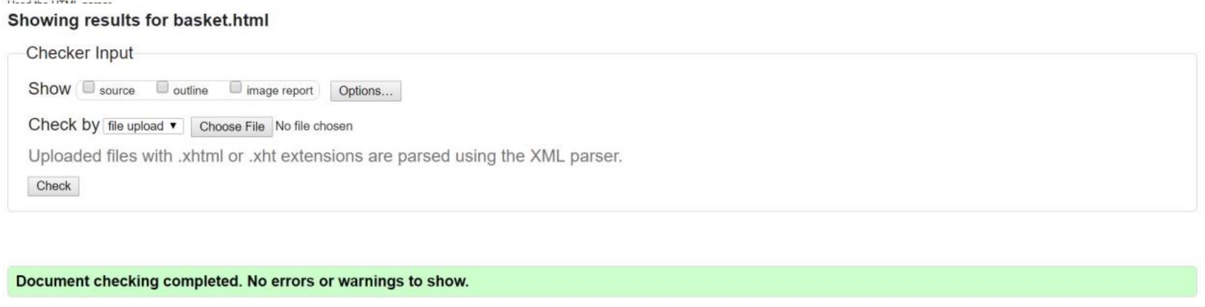
Show ☐ source ☐ outline ☐ image report Options...

Check by file upload ▾ Choose File No file chosen

Uploaded files with .xhtml or .xht extensions are parsed using the XML parser.

Check

Document checking completed. No errors or warnings to show.


Showing results for basket.html

Checker Input

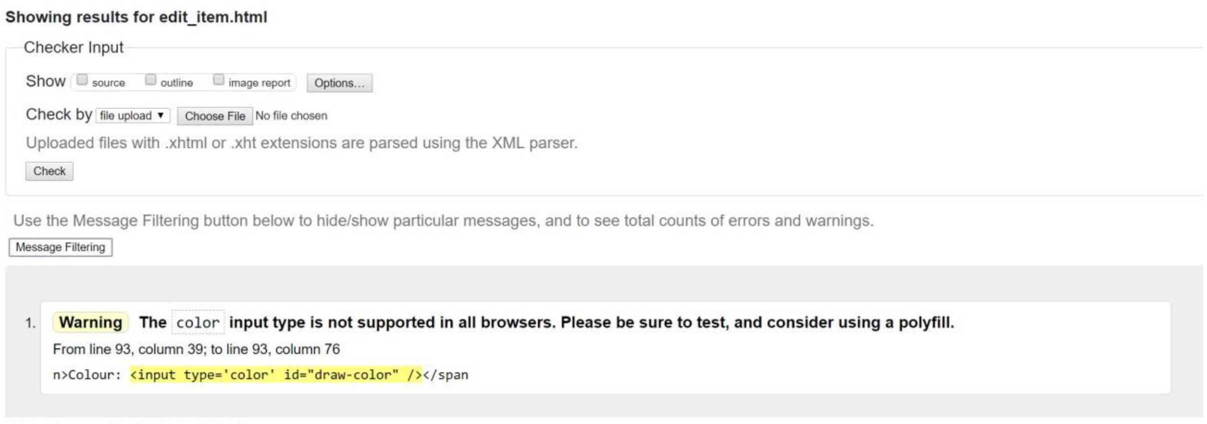
Show ☐ source ☐ outline ☐ image report Options...

Check by file upload ▾ Choose File No file chosen

Uploaded files with .xhtml or .xht extensions are parsed using the XML parser.

Check

Document checking completed. No errors or warnings to show.



Showing results for edit_item.html

Checker Input

Show source outline image report Options...

Check by file upload Choose File No file chosen

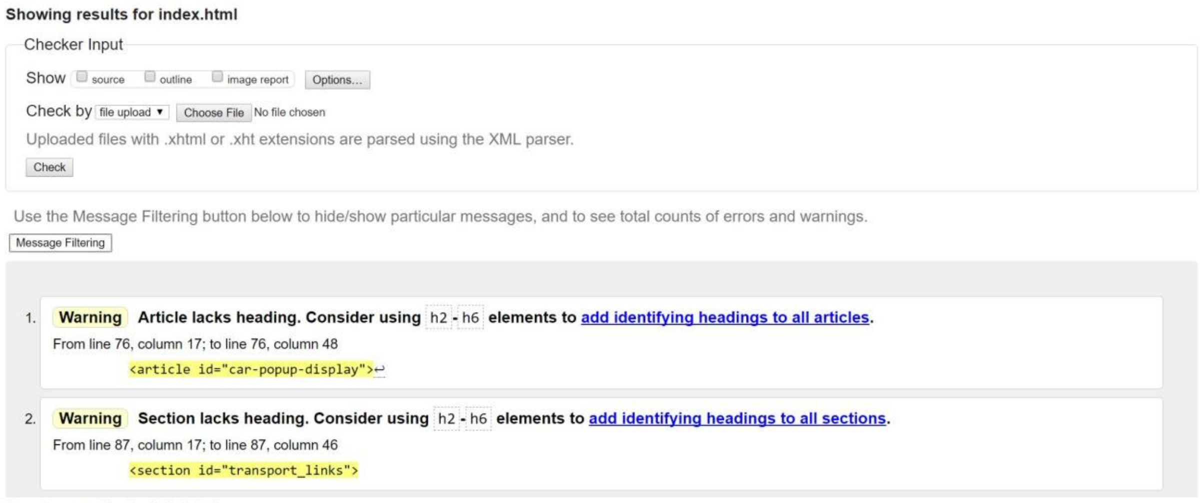
Uploaded files with .xhtml or .xht extensions are parsed using the XML parser.

Check

Use the Message Filtering button below to hide/show particular messages, and to see total counts of errors and warnings.

Message Filtering

1. **Warning** **The `color` input type is not supported in all browsers. Please be sure to test, and consider using a polyfill.**
   From line 93, column 39; to line 93, column 76
   `n>Colour: <input type='color' id="draw-color" /></span`



Showing results for index.html

Checker Input

Show source outline image report Options...

Check by file upload Choose File No file chosen

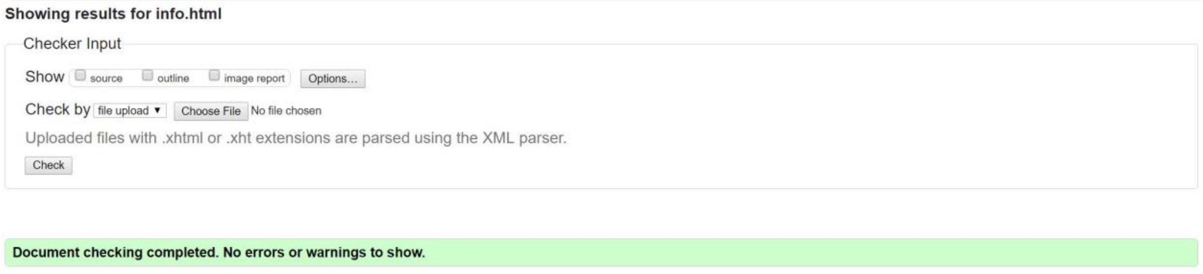
Uploaded files with .xhtml or .xht extensions are parsed using the XML parser.

Check

Use the Message Filtering button below to hide/show particular messages, and to see total counts of errors and warnings.

Message Filtering

1. **Warning** **Article lacks heading. Consider using `h2`-`h6` elements to add identifying headings to all articles.**
   From line 76, column 17; to line 76, column 48
   `<article id="car-popup-display">↩`
2. **Warning** **Section lacks heading. Consider using `h2`-`h6` elements to add identifying headings to all sections.**
   From line 87, column 17; to line 87, column 46
   `<section id="transport_links">`



Showing results for info.html

Checker Input

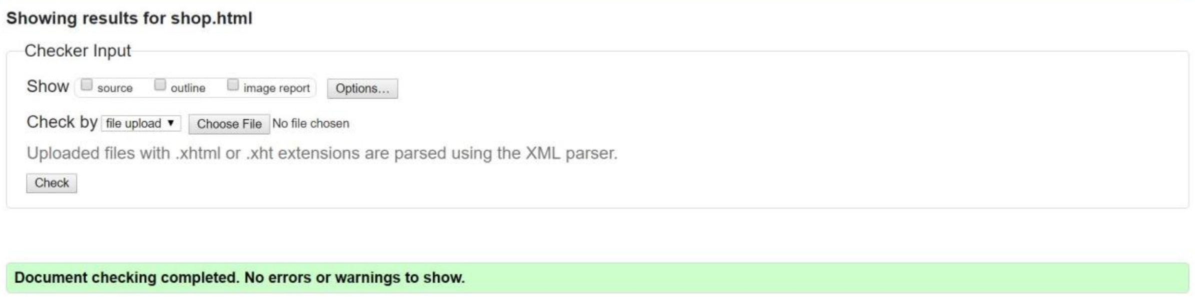
Show source outline image report Options...

Check by file upload Choose File No file chosen

Uploaded files with .xhtml or .xht extensions are parsed using the XML parser.

Check

Document checking completed. No errors or warnings to show.



Showing results for shop.html

Checker Input

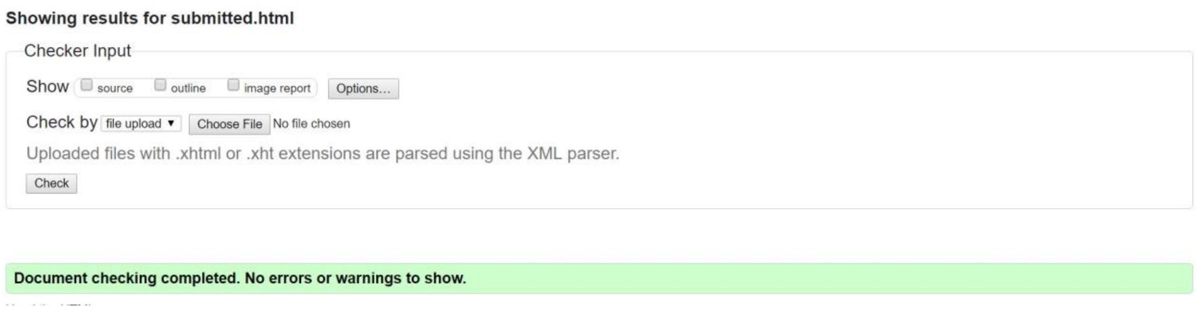
Show source outline image report Options...

Check by file upload Choose File No file chosen

Uploaded files with .xhtml or .xht extensions are parsed using the XML parser.

Check

Document checking completed. No errors or warnings to show.



Showing results for submitted.html

Checker Input

Show source outline image report Options...

Check by file upload Choose File No file chosen

Uploaded files with .xhtml or .xht extensions are parsed using the XML parser.

Check

Document checking completed. No errors or warnings to show.

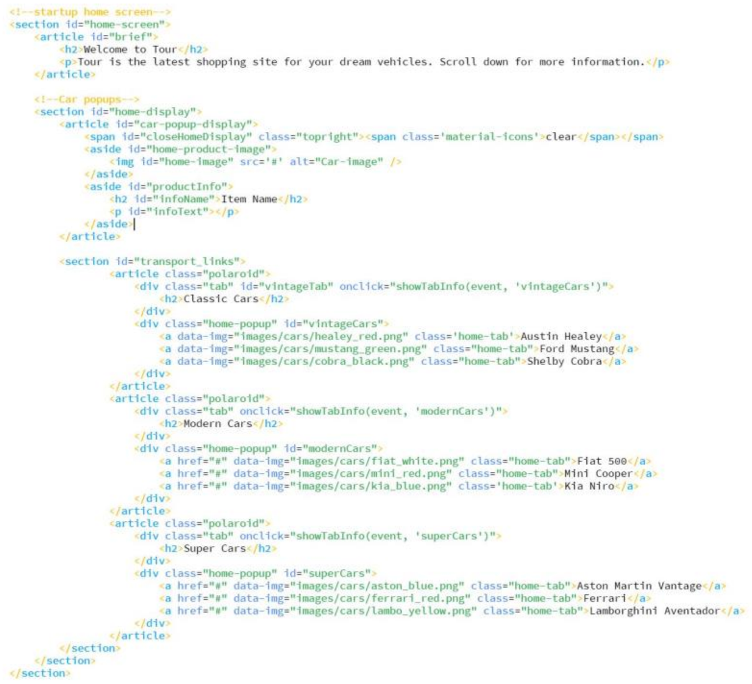
Strengths and Weaknesses of Web Standards

Strengths

Following web standards meant that all pages were consistent on all types of browsers even with different compatibilities. The company are requiring a website that would expand business, valid under W3C specification and will be accessible by a larger audience on a range of devices as it is formatted to expectations. This ensures that the website will work to its best capabilities even if the browser is not fully compatible. For example, if images were not appearing, including an alt tag to the image, it will have a description of what it should be.

Weaknesses

W3C validator will output a warning if there is not a heading tag within each article or section, as seen with the screenshots above, which was common throughout the site. Sections and articles were used consistently to format content to make it clearer however didn't always require a heading. This could be fixed by using <span> or <div> however <div> is not part of HTML5 and when there was a lot of content like the index page it meant certain elements weren't allowed to be a child of <span>. W3C restricted having specific tags parent others such as a <aside> can't be the parent of an <article> etc. This meant some tags had to be repeated when there was a lot of content which meant styling became difficult keeping track of multiple tags.

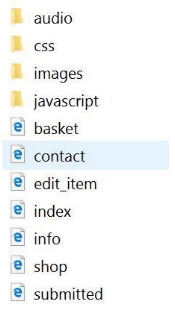


```html
<!--startup home screen-->
<section id="home-screen">
    <article id="brief">
        <h2>Welcome to Tour</h2>
        <p>Tour is the latest shopping site for your dream vehicles. Scroll down for more information.</p>
    </article>

    <!--Car popups-->
    <section id="home-display">
        <article id="car-popup-display">
            <span id="closeHomeDisplay" class="topright"><span class='material-icons'>clear</span></span>
            <aside id="home-product-image">
                <img id="home-image" src='#' alt="Car-image" />
            </aside>
            <aside id="productInfo">
                <h2 id="infoName">Item Name</h2>
                <p id="infoText"></p>
            </aside>
        </article>

        <section id="transport_links">
                <article class="polaroid">
                    <div class="tab" id="vintageTab" onclick="showTabInfo(event, 'vintageCars')">
                        <h2>Classic Cars</h2>
                    </div>
                    <div class="home-popup" id="vintageCars">
                        <a data-img="images/cars/healey_red.png" class='home-tab'>Austin Healey</a>
                        <a data-img="images/cars/mustang_green.png" class="home-tab">Ford Mustang</a>
                        <a data-img="images/cars/cobra_black.png" class="home-tab">Shelby Cobra</a>
                    </div>
                </article>
                <article class="polaroid">
                    <div class="tab" onclick="showTabInfo(event, 'modernCars')">
                        <h2>Modern Cars</h2>
                    </div>
                    <div class="home-popup" id="modernCars">
                        <a href="#" data-img="images/cars/fiat_white.png" class="home-tab">Fiat 500</a>
                        <a href="#" data-img="images/cars/mini_red.png" class="home-tab">Mini Cooper</a>
                        <a href="#" data-img="images/cars/kia_blue.png" class='home-tab'>Kia Niro</a>
                    </div>
                </article>
                <article class="polaroid">
                    <div class="tab" onclick="showTabInfo(event, 'superCars')">
                        <h2>Super Cars</h2>
                    </div>
                    <div class="home-popup" id="superCars">
                        <a href="#" data-img="images/cars/aston_blue.png" class="home-tab">Aston Martin Vantage</a>
                        <a href="#" data-img="images/cars/ferrari_red.png" class="home-tab">Ferrari</a>
                        <a href="#" data-img="images/cars/lambo_yellow.png" class="home-tab">Lamborghini Aventador</a>
                    </div>
                </article>
        </section>
    </section>
</section>
```

The home display contains a lot of content to layout the page appropriately so it must have various tags to break it up, however will contain warnings as sections don't have header tags.



audio
css
images
javascript
basket
contact
edit_item
index
info
shop
submitted

File Structure

Site Operability

Techniques

The site uses a built in JQuery function .draggable() and .droppable() feature with easyui which allows users to add items to the basket with a drag and drop action. Once the droppable function is activated it stores the product information by collecting data from the HTML and then runs a function to save it to the browse.
The localStorage method is used to save the product information to the browser so that it can be retrieved on each page throughout the site. Information such as the number of items in the basket, the data of each product in the basket and the total cost of the basket were stored. To store information on each product, the separate features had to be stored within an array. Then to be stored within local storage it is converted into a JSON array where each item is stored as an object. JSON would turn the original array into an object of strings where it can then on be accessed with the JSON.parse() method.
Each time a page is loaded it will check to see if there is any current local storage within the browser. This way, any items that were previously added to the basket will re-appear and if the basket was empty initially then the values within local storage are set to 0 and the basket is an empty array.
When the customise option is selected in the shop, JQuery would register the exact element clicked on a collected all data such as colour, name, image source and price to then be saved to the session storage. When the edit page is loaded it outputs all the data saved in session storage.
A discount option is included which means that users can input a code on the checkout page and get 20% off their total price. A function is used to check the value of the text inputted into the field provided and if it is equal to a specific value, it will retrieve the total cost from local storage and reset it to be total cost – (total cost * 0.2).

Challenges

The website includes media screens which allows it to be responsive in different screen sizes making the user interface more usable on mobile phone and tablet screens. However, attempting to implement this into the CSS of certain features proved testing when it came to positioning due to items overlapping and content not being presented clearly as it doesn't fit within the small screen.
Using one edit page as a template for each item means that product data is transferred via session storage. As JavaScript, cannot match a variable with a session storage item all image arrays are stored within session storage as well so that the appropriate one can be accessed on the page. The product is assigned a data attribute on the shop page which matches the name of the image array in session storage. Once the page is loaded, the data attribute is used to obtain the array in session storage so it can operate the correct image scroll for that vehicle.

Conclusion

In conclusion, the website follows all main requirements of the W3C standards passing all validation tests with a few warnings. JQuery and JavaScript is included throughout the pages to improve operability of the site including drag and drop functions, popups and more. Local storage is included so users can add products to their basket and save them to the browser. A JavaScript image scroll function is implemented so users can change between car colours, wheel type and engine sizes and personalise their car as required.

Links

Video - https://www.youtube.com/watch?v=jXWHiOZmBZ0
Site - http://tourcars.azurewebsites.net/index.html