Forumforum: Front end report

1 HTML

1.1 Structure

Aside from the home page which sits at the very top of the site directory, all the other pages are kept in a folder called ‘structure’. Since a forum is a highly generative website a lot of the content is just a placeholder for when the back-end is implemented which will read from a data base and inject HTML appropriately. Currently there are 4 main pages: Categories (home), Boards, Topics and Posts. Categories contain boards, boards contain topics and topics contain user posts; these are all marked with significant class names for tight structure and CSS targeting. When the back end is implemented the 3 main pages will be used as templates for injection and creation. Each category, board, topic and post has a unique ID through which it can be organized.

We have used significant HTML tags such as <header> and <footer> to mark points where a universal header and footer are injected into each page through JavaScript.

When making the Categories and Boards page there was a challenge to present the user with information of each board in a neat and easy to read way. Initially s were used to organize the information but it quickly got out of hand with the number of containers required to line the information up. We did not want to use a <table> tag as it would make a responsive layout harder to implement. Avoiding the <table> tag we comprised by styling s as a table. This allows the style to be changed in the future for better solutions, without changing the structure, and does not misuse the significant meaning of the table tag. This design took up a majority of our time, mostly from trying to style the s nicely without using table style display. This also makes adding boards to a category very easy during an injection stage.

1.2 Links

All links (not just for HTML) follow folder-local standard. The links were initially site-local, however we felt this was not very robust if the homepage and server did not exist at the same directory level. Theoretically the entire site can be placed anywhere in a server and run acceptably.

1.3 Validity

Total validator has been used on all the pages thoroughly to ensure the page meets the HTML 5.1 Polyglot standard. All pages pass the test. We have also strived to meet accessibility standards through use of the <h#> tags.

2 CSS

2.1 Stying

An early problem with the CSS was some repeated definitions. As a pair this was our first time using git, so occasionally a styling definition would be repeated. This lead to frustrating moments when early CSS definitions would have no effect on the layout due to a later definition in the style sheet. To put an end to this the CSS was heavily split up into separate files and any definitions were grouped together in meaningful ways. Namely, in every group the CSS declarations are in alphabetical order. Groups themselves were: ‘Multiple styling’, tags, ID and Class. This made styling all the easier, especially when coupled with browser development tools. We also used a CSSLinter to help us conform to standards and make more ‘bulletproof’ CSS.

2.2 Responsive Layout

We could have used a framework such as *bootstrap* which is a popular among web developers for creating a responsive layout. We have taken a simpler approach and used some simple CSS commands that hide certain elements depending on screen size. We do intend to use bootstrap in the future as a means of responsive layout.

3 JavaScript and Animation

3.1 JS

We have used JavaScript to generate place holding material and insert it into the webpages. The JavaScript operates in strict mode and always waits for the page to completely load before attempting to grab content. Elements which are randomly generated with every hard-refresh are:

- Icons || Number of Topics || Number of Posts || Last poster name || last poster date.

As mentioned earlier we also use JavaScript to insert a single HTML markup for a header and footer for the entire website into each page. By doing this we keep our code DRY and make editing easier for ourselves. The JavaScript simply targets the <header> and <footer> tag and inserts HTML from a header.html file and a footer.html file. Note that these pages do not pass a validity check because they are not intended to be displayed on their own.

3.2 Animation

There is a simple 'glowing' animation on the navigation buttons when the cursor hovers over them in the header (all but one of these buttons actually do anything at the moment). This is done through the CSS transition property.

4 SVG

4.1 Inkscape and Illustrator

One member of our team has extensive experience with Adobe Illustrator, which aided in learning the tools and usage of Inkscape. The least experienced with such tools made some icons which could represent a board or a topic. They have not been used in the website but can be viewed in the project folder inside 'made_icons'. They have not been used due to their low variety and instead a pack of free SVG icons has been used as a placeholder.[1]

The icons are all very simple and feature transparent background and layer shapes effectively on top of each other to create meaningful icons.

5 PNG

5.1 Gimp, Paint.net and Photoshop

Thinking about our responsive layout we wanted to use as few PNG files as possible, as any scaling would be subject to aliasing and require anti-aliasing. The double F icon for our website could easily be a SVG however it is subject to no scaling change in the responsive layout so it may prove to be a better choice. The icons was made in Paint.net as it is a freely available open source software that has a more contained layout than Gimp and is nothing more than a personal preference.

The background of the website is of PNG format but was not created by us. We attempted to create a repeating pattern background however we did not like any of our designs. Instead we used free to use design.[2]

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[1] http://www.flaticon.com/ [2] http://subtlepatterns.com/

6 Compatibility

6.1 Structure

Since the website is a forum and forums are a very old web relic it is important to have good compatibility for browsers old and new. HTML5 tags have been avoided, but not completely ignored, for older tags. Custom simple Polyfills have been used for the HTML 5 tags <header> and <footer>, which are not recognized by IE8 and earlier.

6.2 Styling

CSS techniques that are not widely compatible have 'back up techniques' for older browsers. For example using RGBA for colour is not supported by IE8 and lower so we simply use an RGB declaration right before the RGBA. There are some methods uses such as *transition and border-radius* but if these do not work the page is still usable for IE8 and lower users.

7 Notes & Known issues

7.1 Frameworks

We chose not to use frameworks as we thought we would learn more. Even though using a polyfill framework such as Modernizr, responsive framework like Angular.js or convenience framework like jQuery would have been advantageous. Our website benefits from having low framework reliance as the page loads quicker. We did initially use jQuery to make a 'parallax' scrolling effect so the background would scroll slower than the content, however we thought this was a slight waste of an entire library. So we decided to follow a KISS standard from then on out.

7.2 IE6

We ignored compatibility for IE6. IE6 results in too many exceptions having to be made during development and greatly restricts the design. Thankfully IE6's worldwide usage has dropped below 1%.[2]

7.3 Bitmaps versus Vectors

We are unsure whether to use mainly vectors or mainly bitmaps in our website. Bitmaps require more space to store but processing to render whereas vector images are vise-versa. This is very debatable from our point of view as to which is better: Make the user download more or process more. We request feedback on this particular issue, as we still have not come up with a definitive answer.

7.4 Icons appear to pop

We notice that when the site is loading the icons appear to 'pop'. That is they render at their largest permissible size before being properly scaled down by the CSS. We find this ugly and request feedback on this issue if you have any solutions.

7.5 Website appears slow

We have been using some free webspace to test our website. We notice that the loading of the page can be quite slow at times as elements of the page pop into the browser. We notice this issue also with the localhost server, we request in your feedback if you could let us know what particular part of our site you think is causing the most slowdown (if there is a particular element).

[2] https://dev.windows.com/en-us/microsoft-edge/ie6countdown/