

[Pattern Library](#)

[Github](#)

Creating a Pattern Library.

Pastel Pattern Library is a pattern library that has been created from scratch using HTML, CSS and JavaScript. It uses a constant pastel colour palette for the elements to create a subtle but vibrant theme for developers to utilize when creating their own projects.

Introduction

Pattern libraries are a catalogue of different elements that are intended for reuse, the elements are often tested with the benefit of efficiency. Allowing designers and developers to create projects quicker as the solution to what they need has already been created. Pattern libraries can contain a range of different elements that be dragged and dropped into a project as the library usually comes with a CSS file to style the elements.

Usual Components:

- Index Template.
- Button styles.
- Jumbotrons.
- Navigation system.
- Footers/Headers.
- Grid layout.
- Icons
- Utility classes.

All elements should be clearly described to give the user the right information of use. A pattern library standard is displaying elements along with the supporting code allowing developers to quickly grab the elements to use.

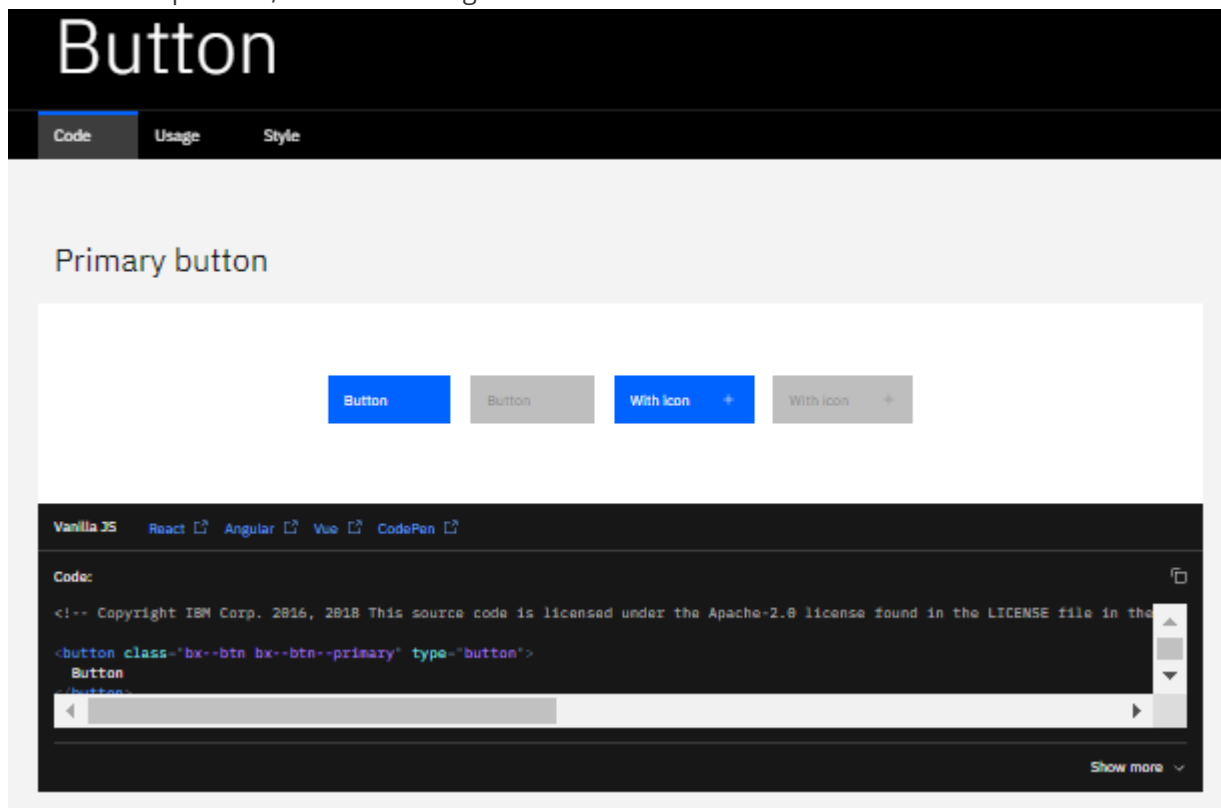
Pattern libraries are often used by businesses to create a company standard across all platforms online, the libraries will be specific for each platform but will they will all have a consistent theme throughout keeping the standards of the business to a maximum to maintain a professional look.

Project Aim

The project aim is to create a pastel pattern library that can be used to quickly create a website for developers or users. The library will be displayed with clarity and elegance with the attention being brought mainly to the elements on the page. I will also research and look into other pattern library to understand the industry standard that is currently being used by other developers.

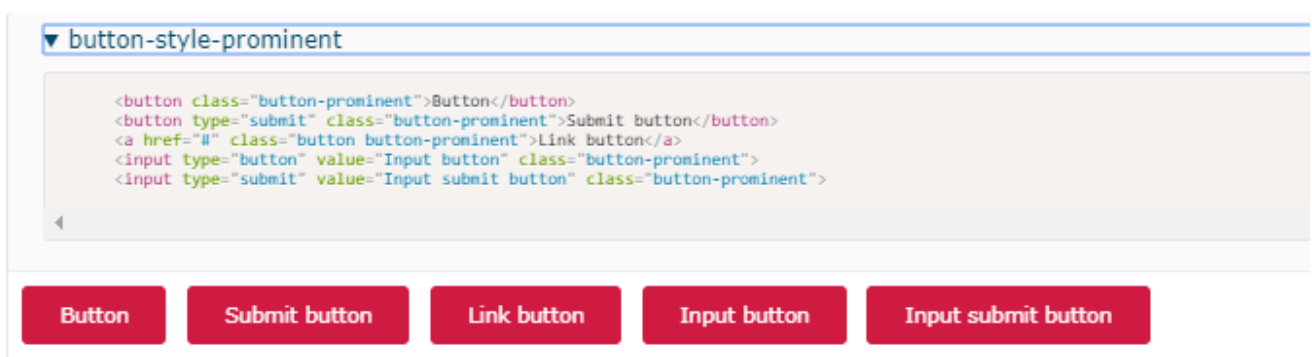
Research

Styleguides.io is a website that holds many different pattern library that are free for users to use and experiment with. The design libraries on the site range in the amount of content that is on them, one of the biggest library that is available to users, is a pattern library by IBM. [Carbon](#) is IBM's free and open-source design and pattern library for digital products, the library is very consistent throughout and a range of different components, resources and guidelines that IBM follow themselves to create their brand.



Carbon also lists all the different variations of the element in different code along the top of the code box which gives the library a lot more utilization. it also lists different scenarios you can use the elements to help developers maintain consistency, the library also provides the JavaScript and extra modifiers to be able to customise the use of the elements. Other libraries such as Starbucks and Code for America have very different layouts compared to IBM.

This is [Code For America](#) pattern library, its a long list of elements all on one page, with drop down code example for each of the elements.



This is an example of [Starbucks](#) code example and element, they have a long list of bullet points that are hyperlinked to the code and the element but the library has not been updated since 2014.

Centered Buttons

Centering the buttons in a button group is achieved with the "btn_group--centered" modifier. Note that because the default for button groups is to create stacked buttons, if your intention is side-by-side centered buttons, you'll need to add "btn_group--inline" as well.

```
Html/Razor <div class="btn_group btn_group--inline btn_group--centered">
    @ButtonHelpers.Button("Button 1", @class: "btn_group__button")
    @ButtonHelpers.Button("Button 2", @class: "btn_group__button")
</div>
```

BUTTON 1

BUTTON 2

In an article by [Dave Redfern](#) explains why pattern libraries are used in the industry and the benefits they provide.

- Improved performance.
- Better Maintained code.
- Consistent interface.
- Better browser support.
- Longer life span of the website due to being able to make upgrades continuous.

Pattern libraries can also be created as developers design and develop websites for clients, this allows developers to easily revisit a clients website to create new features or reuse features with great ease having an already established library that the client is happy with. One downfall of pattern libraries are if developers become lazy and reuse the same library for each project then therefor becoming stagnant in design and lazy.

Pattern library tools

There are many pattern library that make it easier to create a library, but these usually come with certain constraints like using the tools that are provided can cause developers themes or styles for the elements to be similar but it will help maintain consistency but lack originality.

Pattern Library tools:

- Astrum.
- Bootstrap.
- Barebones.
- Pattern Lab.
- Snack.

Creating my own Library.

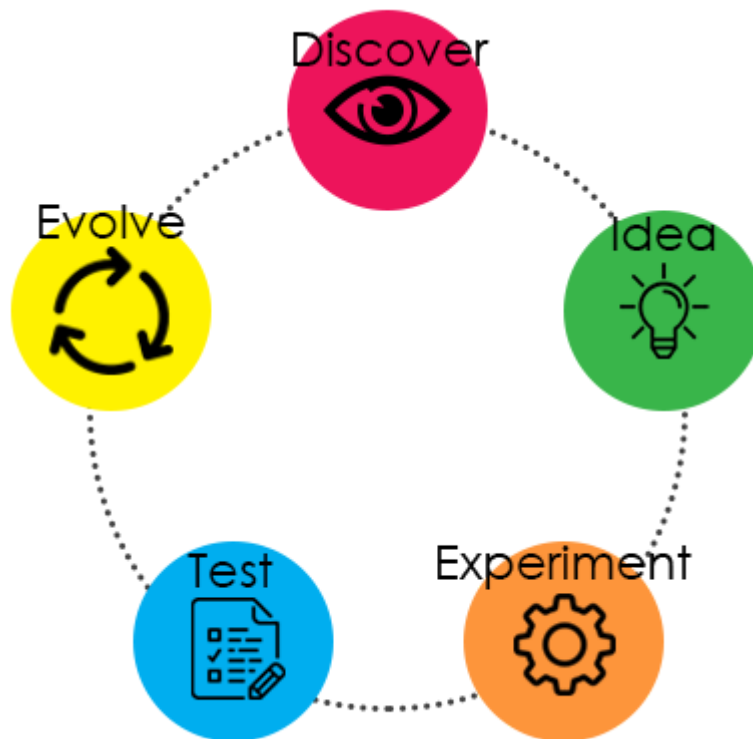
I decided to create my own library instead of using another framework or tool, depending on the tool or program used to assist it could possibly constrain how users interact with my library and having complete control over the elements will give me more freedom when designing the components. I will mainly use HTML, CSS and JavaScript, to create the elements, style and animate them to suit the library consistently throughout.

I will take design inspirations from [Google's Material Design](#) mixed with pastel colours to keep a subtle feel and try to create an organic environment for the elements to create a set of building blocks to build sleek websites.

Design Process Method.

The 5 stage model of design helps designers understand the problem, generate ideas, prototype and experiment with the ideas and then to test and evolve those ideas into something more. This can be used towards my design pattern as the stages will help my library grow over time.

The design process will be identify what needs to be done come up with a solution, experiment with the solution until it fits the correct aesthetic and feel of the pattern library. Test the solution (elements) and then build upon the elements to create a larger library with more functionality and usability.



Test Plan

Testing and why The elements have to be tested to make sure they are faultless and can be reused effortlessly as the building blocks for other developers projects. The functionality of the elements need to be correct as the last thing users are going to want to do is to debug a pattern library that is advertised as working correctly.

The CSS will be checked alongside the HTML code samples to provide reassurance to all parties that the services provided are working correctly. There will be a test plan produced to test all of the elements to in case of syntax error or spelling mistakes in the class names, the snippets will be copy and pasted into [codepen](#) to debug them.

Specification

The pattern libraries specification has to include a certain elements of a website to be able to create a consistent theme and style throughout.

Minimum Elements:

- Navigation Bar.

- Header Element.
- Range of buttons.
- Jumbotron.
- Footer.
- Responsive Grid system.

Extra Element

- Pop-up Chat box.

The library will have a page for each element to display the chosen element, with live working components and coloured code examples that can be easily highlighted and copy and pasted. The library is created to make developers lives easier and increase work efficiency. Each page and element will include details on how the element should be used.

The homepage will have two buttons that will allow users to download the files to then later implement them into their own projects.

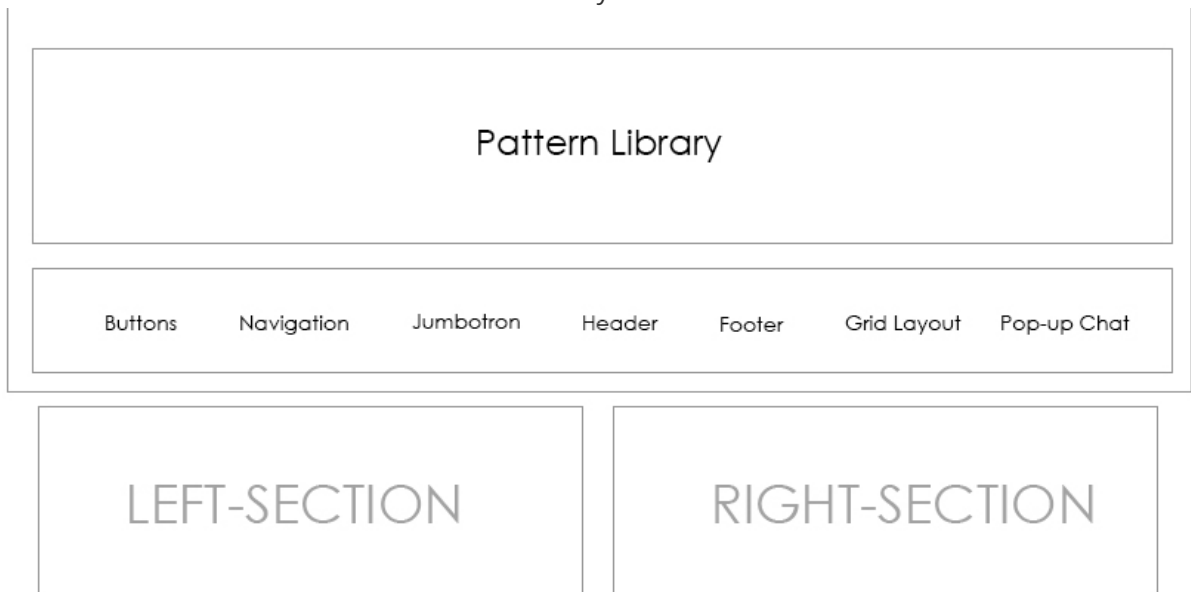
Design & Planning

Planning the pattern library was key due to the fact the idea of this pattern library to be be able to add the it continuously throughout the development and further with great ease, for this the library needed to be implemented with a grid system that could be easily added too.

The library would have 5 main sections, title box, navigation box, mid-section box, left-section box, right-section box. These building blocks could then be used to keep the content centred within a container (wrapper) to keep the content together on the page. The design is similar to prompt cards, little snippets of information that is easy to ready and understand at a quick glance.

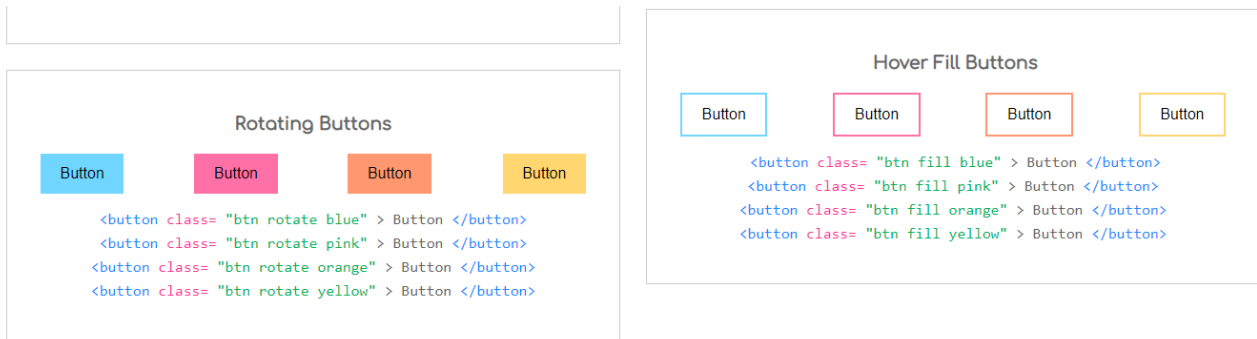


This is the two sections that can be used alternatively from the mid section.



The design of the pages is intended not take anything away from the elements with the components being the main focus, this leads more time to be used developing the elements for the library. The main element will be the first piece of content on the page with the sample code and other iterations underneath of the main focal point.

The development process started at the buttons page, to figure out how the different sections would fit together like a puzzle. the sections do not match up evenly but this decreases the amount of white space between sections and surrounding the content within the boxes.

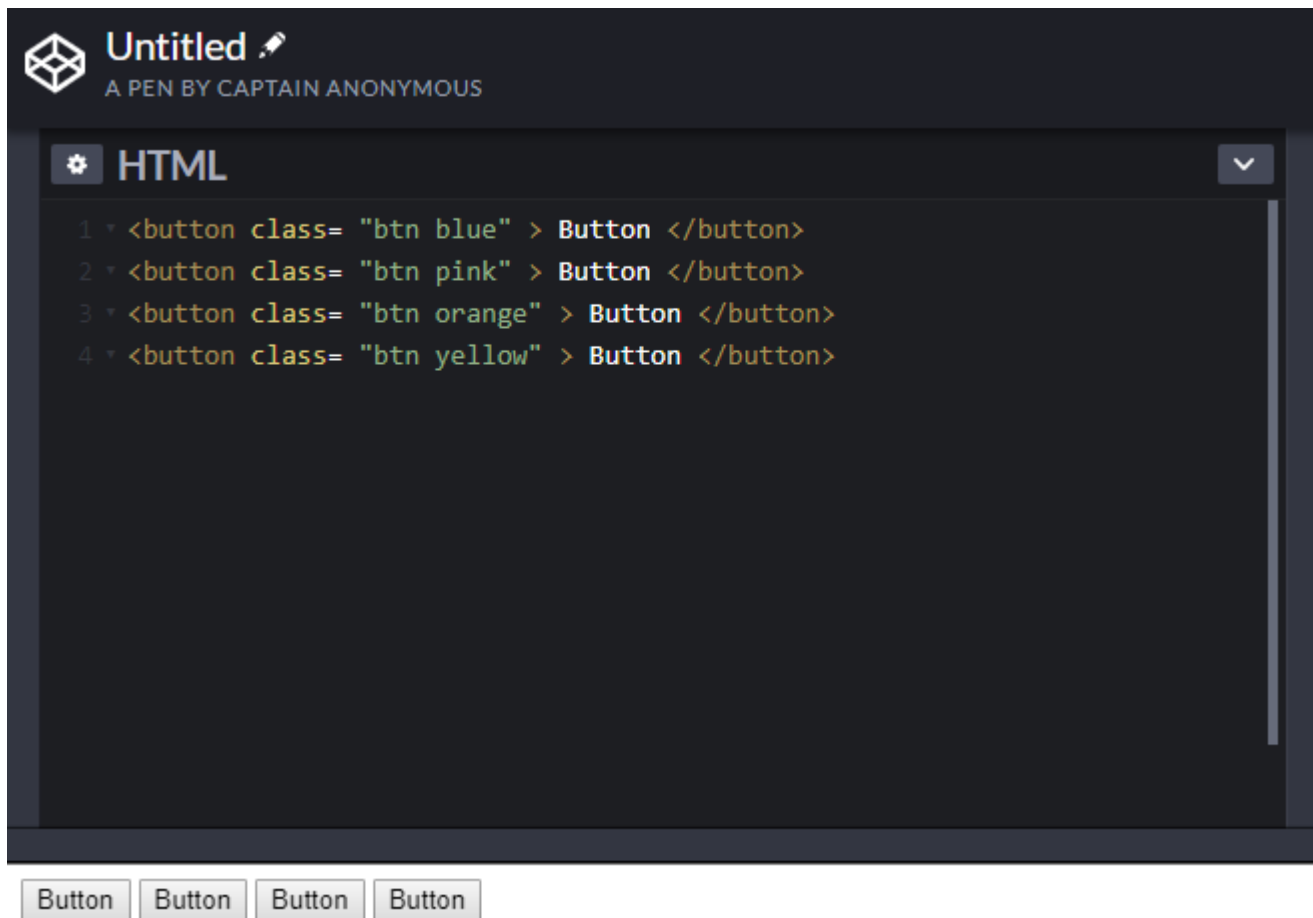


The sections not fitting perfectly together also allows more customisation when it comes to sizes of elements and not having to change the padding or margins of the element. The sections are also responsive to the content that is within them allowing the sections to grow inside as the elements do.

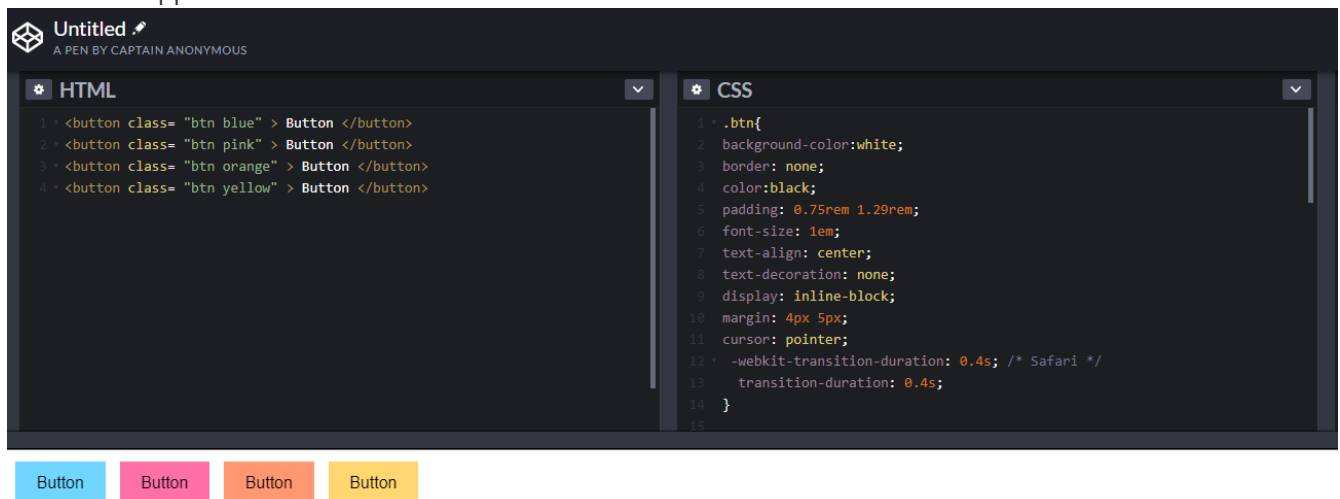
Testing.

Testing the elements in [codepen](#) copy and pasting the elements from the code blocks to see the results. this is to give evidence that the code snippets work with the intended and if they don't debugging them until they do.

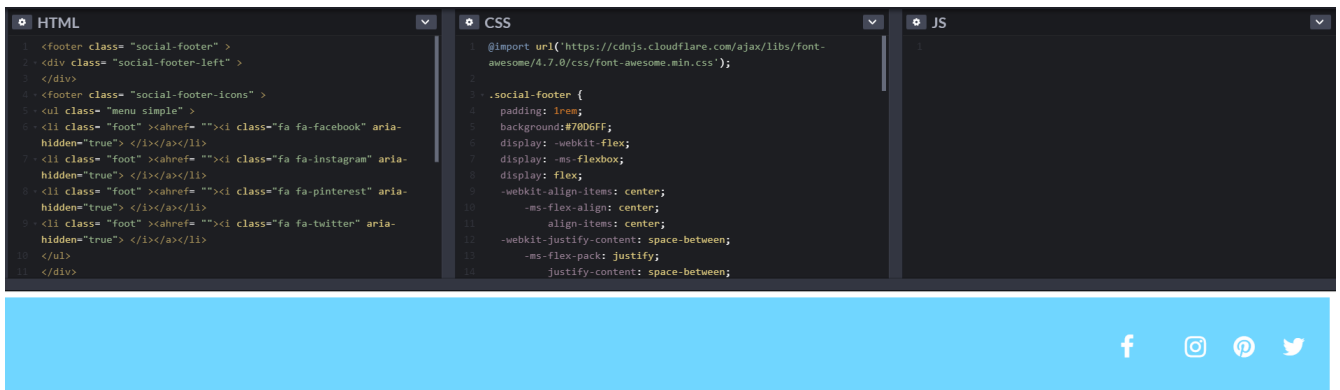
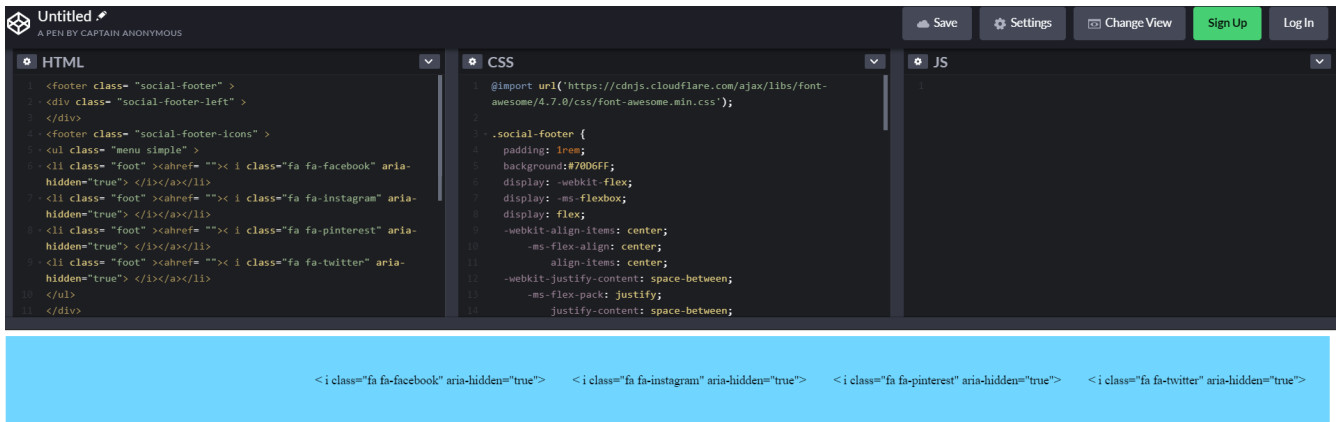
This is the button html with no styling, working as intended.



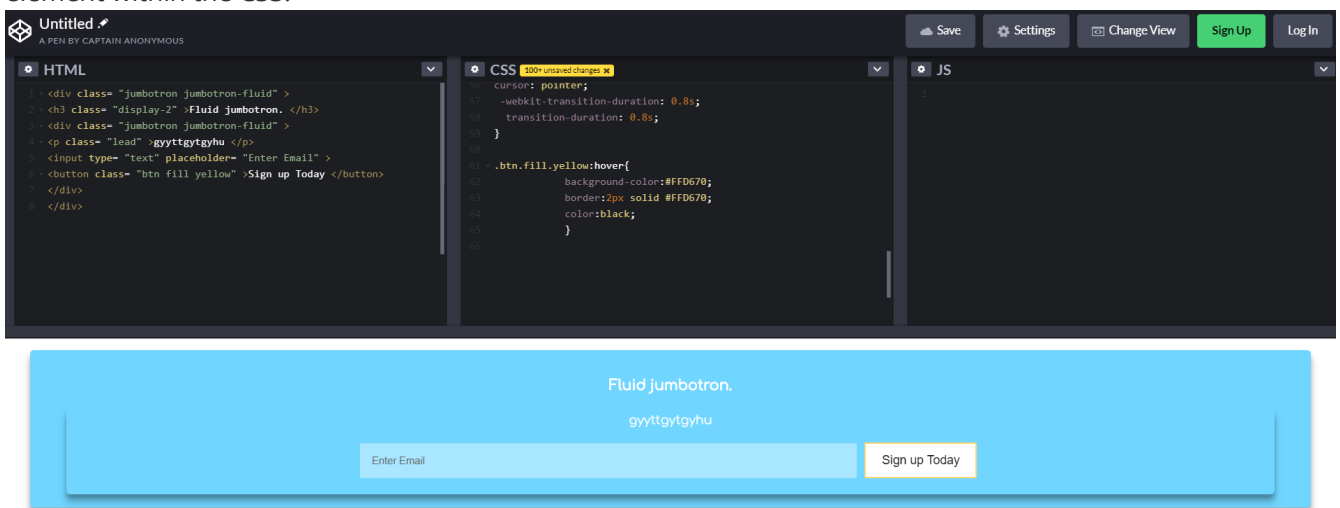
This next snippet is the HTML and CSS combined to create the desired effect on the buttons.



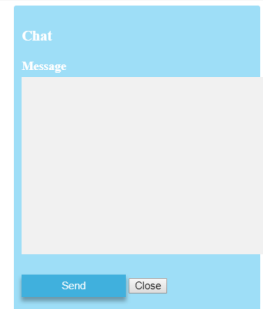
This next code example is of the footer, some debugging had to take place due to the code snippet being implemented wrong and it had a extra space between an end tag and an i, thus not displaying the social media icons and instead producing a hyperlink.



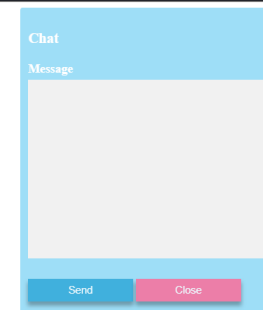
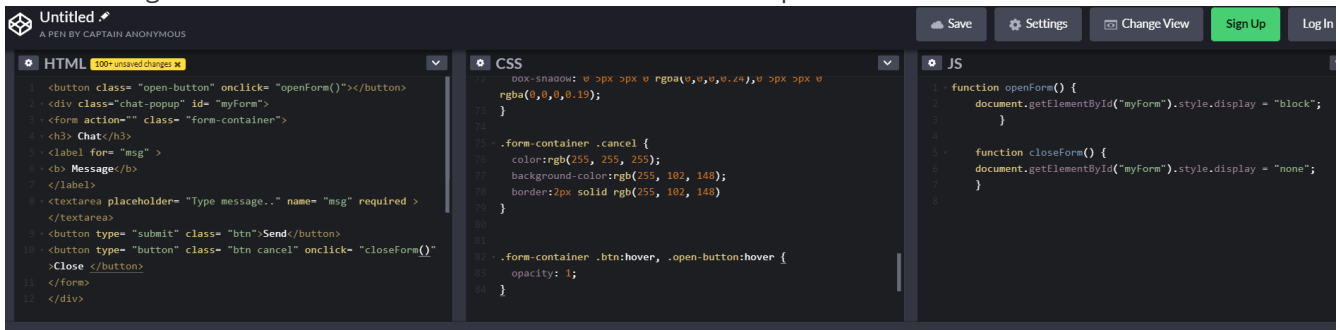
The jumbotron was tested next with some interesting results as the shadow of the element applies to the lead element within the CSS.



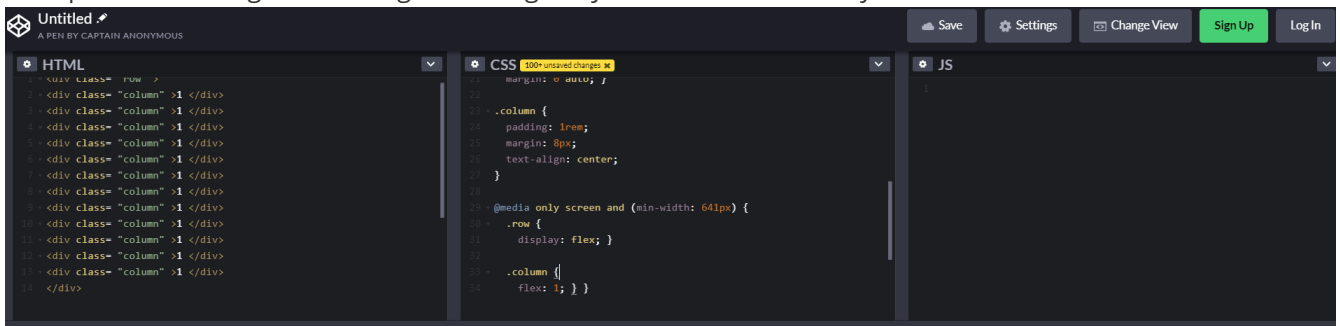
Next was an element that used JavaScript for some of its functionality. The chat pop-up had some issues with the code snippet with the onclick function being in the class on the close button.



With the bug fixed and the button sorted it looked as intended apart from the font face.



Next phase of testing was making sure the grid system worked correctly.



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Why the Pop-up chat box

The chat box was chosen due to the fact that more and more sites are deciding to use instant messaging to communicate with their clients over the websites, giving good customer service to get users to return to use their services again as they are reassured with the ability to a quick response time.

Chat boxes are a less daunting way of communicating with a service provider, it feels a lot more personal and formal compared to an email in which users may worry about the layout and their grammar compared to a casual instant message.

User Feedback.

Asking users simple questions about the feel, style and usability of the pattern library.

Question	User 1	User 2	User 3	User 4	User 5
Do you like the style of the pattern library?	Yes	Yes	Yes	No	Its ok
Is the pattern library easy to navigate?	Yes	Yea	Yea	Yep	Yes
Did you find the documentation easy and clear to understand?	Yes	Kind of	easy to just copy and paste the code into mine	Needed more instructions	Yes
Would you find this helpful if you wanted to create your own website?	Would help to learn the basics.	Yes	Its a good set of initial building blocks of a website.	Yes but needs more components	No, I already know how to program these features
What would you change about the pattern library?	I would change the navigation tab to inform the user of what page they are on.	I would of preferred the downloadable files to be zipped together.	More navigation options.	needs a different layout, felt boring.	Needs more components

Conclusion

The testing and user feedback returned some good results with improvements overtime to be made adding more components and more of a variety to them. The amount of instructions in the code snippets would be increased in further development to guide newer users more through the pattern library to assist new developers in creating their future projects. The pattern library seems like a good start point which can only be improved over time with time and the resources, it will help personal development and support my creative growth in the web development industry if I maintain and update it.

The library is very easy to maintain and update with the way its been implemented with the 5 different sections and the interchangeable left, right and mid section. I would also make the website less static and add more animations and display the elements differently but the initial stages of the pattern library are in place but could be improved for usability.