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Project Exam 1

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Word count: 1482



Introduction

The goal of this project is to apply skills learned in the first year of studies by creating a blog site. The site should include a home page with a carousel of latest posts, an about page, a list of blog posts with a "load more" feature, blog post-specific pages with dynamic content, and a contact page with JavaScript validation for textboxes. But we had the freedom to select the design and topic of the blog ourselves.

I decided to create a blog centered around houseplants, named Leaf at Home, a playful twist on "life at home". Given my keen interest in houseplants, it was an easy choice.

Design

While designing the Figma prototype for the Leaf at Home blog, I strategically went for the colour green to create a vibrant and visually appealing interface. My goal was to make an engaging user experience though incorporating inspiring images featuring green houseplants and an interesting layout.

To add a layer of depth between the navigation menu and the main section, I removed from the background from certain PNG plant images and positioned them both behind and on top of the first main section of the page, which had a white background.

To make the design more alive and playful, I decided to switch these images across various pages, with the exception of the blog-specific and about pages. . The only exception was the blog specific page and the about page. On the blog specific page I prioritized focus on the post content. While on the about page, the image beneath the heading was quite captivating and made additional designing of the layout unnecessary. On desktop version I placed the Leaf at Home logo between the navigation menu and main content, to enhance the layer of depth. For mobile I opted for displaying a scaled-down logo within the navigation at the page's top, reducing the distance between the menu and the content, ensuring better user navigation without excessive scrolling.

The home page's latest post carousel, dynamically features the last 16 posts from the rest API. This number aligns with the carousel's presentation of four posts at a time on a



standard desktop screen, this choice aimed for optimal content visibility.

For pages containing lengthy paragraphs, such as those dedicated to specific posts, I chose left-aligned text to improve readability, as “a consistent left margin makes reading easier”(Design for Readability, n.d.). Additionally, I set the line-height to be no narrower than 1.3.

After creating the prototype, I identified a challenge with insufficient contrast between certain background and text colours. To address this issue, I adjusted the text colour to be a darker shade of green. More insights about this can be found in a section dedicated to discussing WCAG, CMS and SEO.

In upcoming project, I want to try and make the navigation menu more engaging compared to its current design. Despite opting for a dropdown menu under the blog section of the menu I found the menu somewhat dull and straightforward. Additionally, I want to integrate a comment section on the blog posts, to make the interface more interactive.

Technical

While developing the code for this project, I focused on making the blog as responsive and user engaging as possible. Employing the flexbox CSS property because flexbox gives a container the ability to alter its items width and height and making able to accommodate diverse screen sizes and devices (*A Complete Guide to Flexbox*, 2013). Additionally, I implemented media queries to set several breakpoints, ensuring optimal responsiveness across various devices.

Regarding the JavaScript programming I felt I had quite a bit of practice fetching APIs and displaying data, in this instance, displaying posts on the user interface. This part went rather smoothly. However, I did encounter some challenges when attempting to develop the latest posts carousel. Fortunately, it was solved with some effort, and I found a solution.

In a later project I plan to integrate a sorting function for the blog page. I would also try



to display posts based on categories or tags, Although I've found a solution for displaying posts by categories or tag that didn't include if-statements based on tags/categories. But I didn't have enough time to implement the function in this project.

I used a lot of time on trying to render the alt-feature from the API call. In the end I found a plugin that displays the "featured Images"-properties within the posts rest API, this made it much easier to access and the correct alt-text was attached to the images.

"Don't repeat yourself" (DRY) is a principle of software development aimed at reducing repetition of software, replacing it with abstractions or using data normalization to avoid redundancy ('Don't Repeat Yourself', 2023). In CSS I tried to implement DRY by using group selectors to style objects with shared characteristics and media queries to apply styles based on devices attributes. In JavaScript I prioritized code reusability by employing reusable functions. Additionally, I used exports and imports to reuse modules, reducing the need for redundant code. I regularly tried to review the code and refactor it.

WCAG guidelines, content management and SEO

Web Content Accessibility Guidelines (WCAG) covers a wide range of recommendations for making Web content more accessible to a wider range of people with disabilities. Following these guidelines will also often make your Web content more usable to users in general (*Web Content Accessibility Guidelines (WCAG) 2.0*, n.d.).

This includes principles that make the page more:

- Perceivable, like presenting text alternatives on non-text content.
- Adaptable: create content that can be presented in different ways without losing information or structure (Web Content Accessibility Guidelines .
- Distinguishable: Make it easier for users to see and hear content including separating foreground from background. This includes text-sizing and contrast ratio.



- Navigatable: Provide ways to help users navigate, find content, and determine where they are. Like page title describing topic or purpose, and heading and labels describing .

(*Web Content Accessibility Guidelines (WCAG) 2.0*, n.d.)

I employed the WAVE Accessibility Extension to evaluate whether the blog was following WCAG principles, I tried Wave multiple times during this project to ensure user accessibility, the tool flagged contrast errors, but I resolved this issue by changing text color to a darker shade of green.

While reviewing the navigation menu, I received alerts about redundant links. Although I successfully removed most of them, one alert persisted in the index.html, on the home button. Additionally, I encountered an alert stating that nearby image had the same alt text, this appeared in the footer section of post.html and about.html. The issue was resolved by adjusting the alt text on the footer logo.

SEO (Search Engine Optimization) is the process of making a website more visible in search results. Search engines “crawl” the web and follow links from page, and index the content found. These crawlers follow rules, if you follow these rules this will give your site a chance of showing up among the first results in search engines (*SEO - MDN Web Docs Glossary*, 2023). I implemented unique title tags and an accurately summarized meta descriptions to each HTML document. Furthermore, I ensured that the site was mobile-friendly and I added alternative text for images.

I utilized the Lighthouse tool in Chrome Devtools. The tool recommended using “next-gen formats” for images, like WebP or AVIF. Despite all images being below 200kb, alerts about appropriate sizing. To address this, I resized the images using the WordPress Media Library. This improved the performance score from 81 to 91.

After making adjustments based on the Lighthouse report, the final scores were as follows: Performance: 91, Accessibility: 100, Best Practices: 91 and SEO: 100.



I thoroughly enjoyed using WordPress to create a rest API, appreciating the flexibility it gave me in modifying the content to suite my preferences. Although I encountered a bit of frustration when attempting to retrieve the alt-text properties for images, as is common with WordPress challenges, a plugin came to the rescue and resolved this issue for me.

Next time I want to create a REST API to receive comments on blog posts and handle the details submitted through the contact form.

Feedback

I integrated Hotjar into my blog and sent it to friends and family for user testing. Initially, I received feedback indicating that the blog's purpose wasn't sufficiently clear. In response, I added the tagline "The Houseplant Blog for Cultivating Your Indoor Green Paradise" beneath the logo. Additionally, I addressed feedback regarding how the text appeared on various screen sizes by making corresponding adjustments.

I spent some time watching user recordings via Hotjar, this help me gain insights into user's navigation patterns on my blog. By observing my blog across different screen sizes, I could make further adjustments beyond those initially suggested by user feedback.



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