Coursework 2

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1 Introduction

Blogs are a form of online journals made by a single or a group of people to express anything from their thoughts and opinions all the way to cooking recipes and even some [old-fashioned] news. Blogs have probably been around since the inception of the Internet, but they were usually made by individuals for their own needs. Beginning with 2010, the rise of multi-author blogs(known as MABs) such as Twitter increased their popularity, bringing in people and and companies from all around the world to unified platforms where people can read not only one topic, but all the topics they are interested in. Some of the most popular 'blog engines', websites that offer a common interface,hosting and domains(for a price) for anyone who wants to start a blog, websites such as Wordpress, Tumblr and Blogger, have millions of users because of their popularity and easy to use methods.

I have decided to make a blog engine aimed towards tech enthusiasts, as it seemed only fitting, considering the module and my personal knowledge of modern tech. The blog has a timeline similar to Twitter, where all the posts are listed chronologically(newest to oldest) in a continuous fashion.

The main source of documentation has been MaterializeCSS [1], which is a template library that provides most of the front-end, in the form of the CSS and JavaScript who make the website design. The templates are based on Google's Material Design, found in their Android OS design, and is one of my personal favourite design languages on the mobile and on the web. I have used Realm [2] for the database part of the website. Realm is a very complex cloud-based database for mobile apps, but they also provide a simple local database version that can be used with Node JS that has been perfect for my website's needs. I have also used EJS to make templates for my website and express for routing the traffic of Node.

2 Software Design

I started the project by making a plan of what features and elements I wanted in the website.

- Material Design
- Twitter-like feed
- Add Posts
- Edit/Delete Posts
- Mobile-friendly

I started with **a lot of** background reading on everything about Node JS and its modules, as I didn't know anything past the simple lab exercises. I read about EJS, and that it is mostly HTML with added features to make websites easier to write, by helping you reuse your html, resulting in less duplicated code, making the project cleaner and easier to understand. Therefore, I made templates for the head, header(navigation bar) and the footer as well as adding functionality to write the posts stored into the realm database for the main page where the posts are displayed.

I did not make any sketches on paper for this website, as I already had an idea of how I wanted the website to look, and by using a CSS template I only had to read about how to implement the templates in relation to my ideas.

The way I approached the building of the website was by having a basic blog website in place, meaning that I started with the back-end side of things, making the write function and displaying the posts, then moving to the front end and the design, and at the end, adding the extra functionality(cover images, edit/delete posts).

The diagram below showcases the page layout. There are only two pages you can view at any time, the 'Home' and 'Index' pages, with the addition of 'Write' and 'Edit' pages that can only be accessed from their respective buttons when needed.

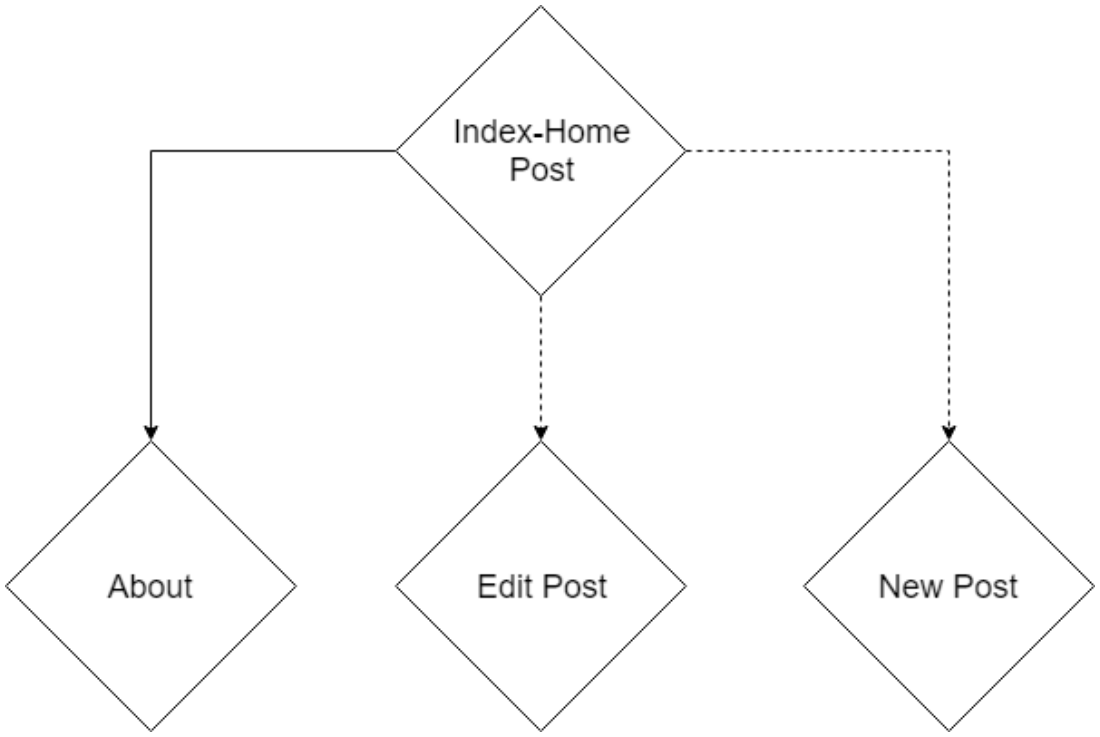

Figure 1: **Diagram of the page layout** - The dotted line signifies that the New and Edit pages are not normal pages that can be accessed

3 Implementation

As mentioned before I drew a lot of inspiration from Android and Twitter because I like the minimalist and colourful approach of Material Design, mixed in with the simple feed interface of Twitter. The MaterializeCSS library has been the perfect fit for that, and I have used it extensively to make the website look pleasing and usable. This is also where I added the mobile friendly elements to the website such

as the NavBar elements, which are displayed on the bar if viewed on a Desktop, but reside in a hidden sidebar when viewed on mobile. Smaller things that are different between Desktop and Mobile are the footer contents and button positions, otherwise unnoticeable.

All the pages in the website are based on one or more EJS templates. Apart from the already mentioned templates, every page you can navigate to has it's own template(home,about,edit and write). The home page includes parallax effects on the top banner, as well as the cover image of posts.

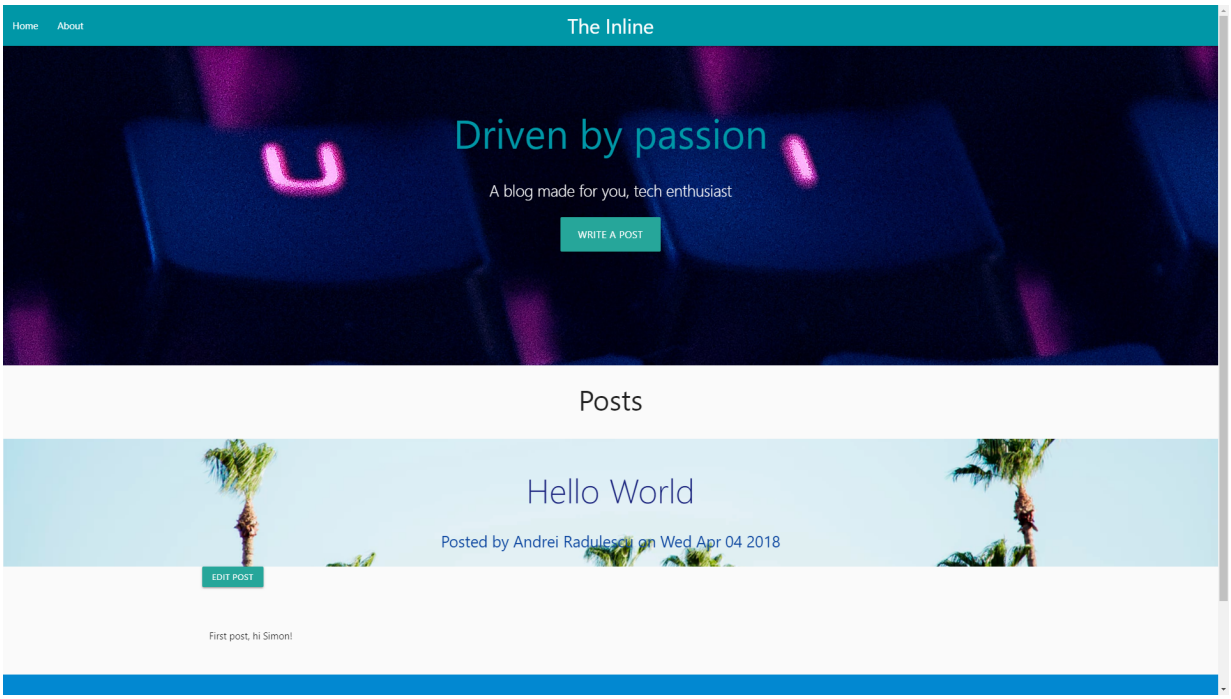

Figure 2: **Screenshot of Home Page** - Contains all the posts

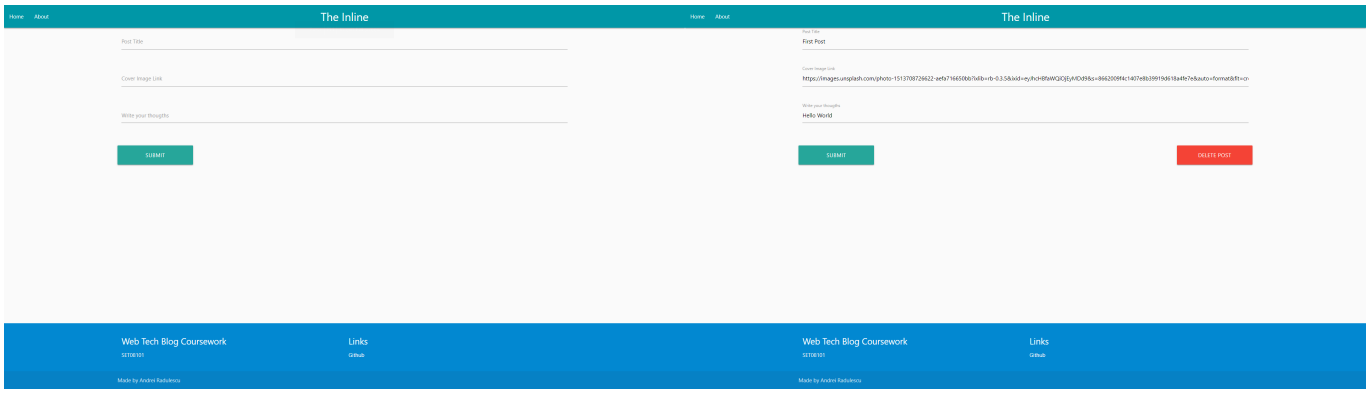

Figure 3: **Screenshots of Write and Edit** - Showcases the write page and edit page, which contain the same elements, with the added feature of being already written for the edit page

I started building the website by making the Realm database and making a simple web interface to check if and how it works. After that, I converted the simple HTML pages to EJS templates and added the CSS to make it look pleasing. I then starting working on the extra features like editing and deleting, which required extra reading on Realm's website, which is very well documented.

4 Critical Evaluation

I started this project with the goal of making an easy to use and easy to understand Blog Platform available to anyone. I am very pleased with the result, as I have achieved all of the goals I set out to do. One point worth considering is in regard with other blog platforms as the ones found one the internet are more complex, with more features for the posts such as text formatting and attachments, which my blog does not have. Even so, I am pleased with how the project turned out.

Parts that I would improve would be the lack of proper user support. As it is right now, anyone could add and edit posts, and I would like to add an authentication part to the blog in the future. The upside is that the way the website is built, it would be easy to add a sign in page to the already existing website, as a middle step before a user can edit or write a post. This would also make it easy to add a "By «Author»" filter to the blog, making it easy to search for all the posts of your favourite blogger.

There isn't much information to be seen on the website, as I felt the whole reason of a blog was to let the user express their thoughts free of any constraints or guidelines, as I think this should be the main purpose of the platform.

5 Personal Evaluation

I have learned a great deal about the server-side of making a website. As opposed to the previous coursework, where I already had experience in creating a local website out of HTML and CSS, this has been a completely new area for me to learn in this coursework, from the basics of Node JS, where at the beginning I had trouble understanding how npm modules can be installed globally or locally, all the way to the more complex side of express, where I learnt how to get parameters from an address and use it to get the data I needed from the database.

Node JS has been a very captivating application to learn and use and it has made pages and features easier to create and implement by having specialised modules that help in one area or another. Node has definitely made creating a website easier and more accessible as there are so many articles, videos and tutorials on the internet that help in realising your goals.

References

[1] MaterializeCSS, "http://materializecss.com/,"

[2] Realm, "https://realm.io/,"