BSc in Software Development

Year 3

COMP07030 Software Design Project

*TechHub*

*G00318025*

*Declan Duffy*

Contents

[Introduction 3](#_Toc447884727)

[Architecture of the solution 3](#_Toc447884728)

[Class diagram and Data Model 3](#_Toc447884729)

[Technologies used 3](#_Toc447884730)

[Problems Encountered/Solved 4](#_Toc447884731)

[Conclusions 4](#_Toc447884732)

[Recommendations 4](#_Toc447884733)

Student Number: G00318025

Student Name: Declan Duffy

Supervisor: Kevin O’Brien

GitHub Link: https://github.com/theultraduffmaster/Main-Proj

# Introduction

For our third year project a couple of classmates of mine, Claire Finn and Thomas McNamara, decided we would undertake a group project because of our past success working in a group. Once we had decided to work together we had our first brain storming session and there we talked about what kind of project would interest all 3 of us enough to do and what language would we write in in that suits all three of us? We came up with two conclusions – first and our most though out solution was a html website as all three of us are well versed in html but have not had any project/module in html since first year so we thought refreshing an old skill like that would be beneficial to all of us. Our second less thought out idea was a game built in java but that idea never got any further than the choice of language. We all said java would be one of our stronger languages to write in but we never settled on a theme for our game. So with these two ideas we approached our supervisor who firstly we asked of if we could in fact work in a team. He was happy to let us work together as he soon found out how tight-nit we were. He also was very enthusiastic about our plan for a website as we brought in our draft sketch of what the front page of our website looked like and by the following week we had a working stylesheet and template for him to view. After that we started scheduling more brain storming sessions for building out our website and what kinds of features our site should hope to achieve. We tried to have at least one thing new on our website each week in order to show our supervisor we were progressing along steadily.

In our team sessions we theorized the best way to approach this project was to build the whole thing from the ground up so no fancy programs to help us only a simple text-editor which for me was notepad++. In our project talks we all agreed that our website should be based on the interesting technology that’s in our world today as well as the ideas that are currently being floated around in the tech industry that not everyone would know about but this tech could soon impact their lives. We then had to name our website and without going into the boring detail of how many names we went through I’ll just say we all agreed that TechHub was the best name. Based on that we then decided to split up the website into as many equal parts as possible in regards to both the amount of articles we wanted to write and the amount of features we wanted to add, features which we all would learn outside of school and of our own accord and try to get working without the help of other members, this was so we could then explain our features in detail to each other by understanding both the method to create and the errors encountered while doing so, this was so we all could understand and learn as much as possible in regards to building this website. The feature that I wanted to add was a way to get a rotation of a selection of images on the homepage and these images would be linked to some articles that we wrote that aren’t accessed by the navigation bar so they would be like extra features just on the main page. I’ll talk more about this later on however.

Now I’ll go into more details on this project specifically everything that was my job to do and what goals I wanted to achieve with this project. I’ll set out my intentions as well for this project moving forward and I’ll also talk about the things I’d do differently if I had the chance to start this project again and hopefully offer some recommendations to anyone who wants to undertake a similar project in the future.

# Architecture of the solution

When it came to designing this website we all wanted to design it through html and a simple text editor so that we could understand every nook and cranny of the site as well as every error that occurred and why it occurred so that we all could appreciate the effort that goes into designing websites.

*Whilst designing TechHub we had numerous talks about the look and feel of our website- did we want a website that had lots of features to it? Did we want one that was visually striking? Did we want to have it more content focused rather than look nice? We tried and hopefully succeeded to strike a balance between these without compromising too much of the other ideas. In our talks we choose a minimalist design with contrasting colours in red, black and white to allow users to not be overwhelmed by the colours on the page. We wanted this because we wanted the site to also be easily accessed by older people so we did not want a site that would scare them off with bright colours or an over complicated layout. For this we looked at sites like TechRadar and tried to mimic their more successful points while also making the site feel easier to use just in case some people who visit the site looking for a new smartphone is someone who isn’t the most technologically advanced person. This was a goal we all wanted to achieve – a uniformly easy site for anyone to visit and get the hang of within in seconds and be able to look for an article about the tech they want to see. We wanted this because we all know that on the internet everyone wants to access things as quickly as possible otherwise they’d get bored/ frustrated with the site and go looking elsewhere. This was the reason behind having all of site navigation and RSS feeds at the top of the page so that it would be one of the first things a visitor to the site would see and then be able to figure out how to work the site from there alone. But we also wanted to include some features for people who do read to the bottom of every page so we decided we would add some surveys and some random facts for those kinds of people who want to read everything. With every article page we also realised that when we added photos of the product to that page that some people may not be able to see the photo properly. Thus, Claire came up with the idea of photos expanding their sizes through html events for those who can’t see and I added on to this by clicking on this image it will be opened even bigger in a new tab.*

*We all felt that in some articles photos did not spell out exactly what we wanted to portray in those articles so we thought instead we could include videos to better portray the tech that we were talking about. While a picture may say 1000 words this ideas had even more to say than that so videos was the best way we could express that and show off the tech and its wondrous possibilities. Once they were added we believed the site now has the feel to it that hopefully anyone can come in and read an article about something they’re interested in and leave that article understanding everything that was talked about in that article or that they could learn something new about something they never heard of before and leave with some new knowledge about that particular tech. This was one of our main goals being achieved as we built our site and we were all excited by the prospect of building onto this site more and more.*

# Class diagram and Data Model

Class diagram

Main Articles

**Featured**

**ARTICLES**

RSS

RSS

RSS

RSS

RSS

RSS

Other

Gaming

Household

SmartPhones

TVs ss

PCs

Article

Article

RSS

RSS

Article

RSS

Template

(Homepage)

RSS

# Technologies used

We only used text editors for the purpose of building this website. The reason for this was because we wanted to test our knowledge of the html and css languages and see exactly how much we remembered regarding them. We also wanted to understand the website completely as we’d write every line ourselves and nothing was created for us by dragging it onto a page or something along those lines.

When it came to building the project we found out that it would take more than html and css to achieve exactly what we were hoping to achieve with our website. We learnt as we built it that in order to make some of the more complicated functions we would have to dabble into some javascript and some XML in order to do what we intended to do. This was not a huge roadblock for us however as we have a more recent experience in javascript than html and css so it was fresher in our minds to write some javascript events and understand them. XML, on the other hand was completely different but that was down to Claire to learn how to use that.

We decide the best course of action was to turn to the internet to learn more about the languages we were now trying to include as we had either not studied these at college or we did not have as extensive a knowledge in them that we’d feel confident enough to write in them efficiently. We wanted to see also if there were definitive ways to do what we were hoping to do with these languages or if we’d have to figure them out on our own.

It was suggested to us by our supervisor that if we needed we could also use a program like Dreamweaver to set any alignments or layouts correct if we could not do it right in a text-editor. We discussed this as an option but we agreed that at this stage we had done so much already in text editors that we’d just continue on that path.

We wanted the challenge of writing the whole project with little to no help from the program we were using so a text editor we felt was the best way to do this as it gives no error lines when something isn’t working so it challenged all of us to be more creative with the things that weren’t working the way we wanted them to.

# Problems Encountered/Solved

The creation of this website was not without its fair share of problems and was at times challenging and strenuous. The first problem encountered for me was with the stylesheet as it took me some time to remember not only how to write the stylesheet correctly but how to have a gradient colour background to add more appeal to the look of the site. It also took some time for me to remember correctly have to inherit an external stylesheet. I choose an external stylesheet because it would clean up the code of the website better than having an internal stylesheet. Eventually I remembered how to implement the stylesheet based off an older project I had where I had the line for inheriting in it and I got the format of the stylesheet correct in time for all of us to have a colour debate for the website that we all eventually agreed red, white and black would be the most appealing colours to use.

My next problem came in the form of my feature I wanted to add in rotating a selection of images. I learned that this could only be done through javascript, a language I was not well versed in but after some research into the language I eventually got the hang of it and was searching for a way to do the rotation but everything I found on the internet was not working for me. Why? I had no idea until eventually I stumbled onto a picture archive which allowed me to place a number of images into the archive and then I set a time for them to rotate between them. I thought this would be a good place to include our logo for the website again even though our logo is present on the same page I thought it added nicely to the archive.

After that I wanted to include some videos such as the video of the BMW Vision 100 being showed off because I thought even after reading the features of the car I needed a visual representation in order to actually believe what was being said in the article. Luckily enough for me Claire had already included some videos so she showed me that all I needed to do was use her piece of code for it but then find the video on youtube and share it to get the embedded link to the video and then include that link in Claire’s piece of code in order to get that video playing on the page.

# Conclusions

I believe that making a website is something most people take for granted – the time and effort that goes into designing a website is extensive and tough. After doing it from the ground up, all 3 of us now know exactly the trials and tribulations that programmers have to go through just to get a simple website up. So the more complicated sites like social medias must be an absolute hell to develop and not that many people realise what it takes to make a site like that or they just don’t care. Not us however, we just marvel at it now wondering how they had the patience.

I do think now however, I should not have spent as much time on the css when I could have easily picked it back up if I just looked at my older projects. This would have allowed me to look further into more things I wanted to add into the project or even add some more articles.

So in conclusion, I can say now that I have gained a finer appreciation for the making and developing of a website though the details it takes to make a site look and feel the way you want it to and the struggles of getting every little function working the way you need it to without the assistance of a program to tell you why every little thing isn’t working. Thus, the extra challenge of using a text editor only helped me realised and appreciate how difficult websites can be. So I can now say despite the struggles and hardship encountered in this project I do enjoy making websites and given the chance I would make one again.

# Recommendations

For this project if I get the chance to further develop it I would like to add features such as 3D modelling for certain products. So that when people visit the site whatever product they want to see on the site they could get a visual 3D model of it and be able to spin the model so they could see what the product looks like exactly. I would also include a size chart to compare the products size to more everyday objects to give the visitor an idea of what size the product would actually be.

If I were to start this project again I would recommend that css is not worth wasting so much time instead I would have spent more time on the features being added to the website to make it more interactive for the visitor. If I had just remembered about the older project sooner then I would have been able to take on more features to develop for the site.

Also I would have had more research done before starting the project into what tech to include rather than diving into making the website first. But in the future I might be able to develop onto this site still by adding more articles about more tech that has come out since or some of the tech we missed out on in this project.-