BSc in Software Development

Year 3

COMP07030 Software Design Project

*<Techhub Website>*

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

# Introduction

The aim of this project was to create a web site that would provide information on the many modern technologies being used and created in the world. I wanted this information to be displayed in such a way that any user that decided to come to the website would have an easy time navigating through all the pages. I also wanted to incorporate my experience and what I had learned in classes with what I had learned outside of them from colleagues and online tutorials. I wanted the website to be about technology as I have a keen interest in it and it is also one of the reasons I decided to do Software Development.

The objectives of the website was to create multiple links that would segment all the information into their own separate page, instead of creating one big page that contained large amounts of scrolling which would be somewhat inconvenient for some users. Each of the links were broken up as follow; Home, TVs, Gaming Consoles & Accessories, Personal Computers and Laptops, Smartphones, Household and Other. I felt that these categories covered all the grounds for covering all the modern technologies.

This was also agreed upon with my two other classmates, Claire Finn and Declan Duffy, as sufficient Category titles. We decided to work on this project as a team as we all had an interest in technology and felt we could add certain aspects to the website that the others on the team weren’t as confident about such as Picture Archives for changing photos, enlarging of photos and text and also displaying certain text containing info when the mouse was hovered over certain parts of the page.

# Architecture of the solution

The structure of the website was designed in such a way so that all the links and information were easily visible to all users and navigation through all the pages didn’t require any understanding of code or programming. This allows any user, no matter how young or old, or technically impaired, to access and understand the website.

The certain topics that were written up are broken up into seven categories that are displayed at the top of the page, which acts as a navigation bar. This is the first thing that users see on the page, and as such should be used to allow them to move around the site.

The minimalist style of the website was also chosen for quick access to all pages on the website. It also reduced loading times between pages, which in this day and age, many people do not expect long waiting periods between pages, like back in the era of dial-up.

Each of the main pages contains at least one video which gives a real life example of the technology being used in that section. For example, on one of the pages I wrote up, Personal Computers and Laptops, I have implemented two videos onto the page. The first one is about what the standards for computers were back in the 70’s and 80’s. The one on the right talks about how touch screen interfaces and advancements in touch-based technology has allowed it to be easily incorporated into businesses and to normal consumers. These advancements are happening the whole time, and as time goes on it allows for more and more people to get involved in technology, either making them or being able to afford and make use of it. At the end of the day, they make most difficult tasks that little bit easier allowing everyone to benefit.

After the main pages were completed, were moved on to creating a featured article each on something we all found interesting. The three chosen were the Oculus Rift, the Samsung Galaxy S7 and the Samsung UHD 4K Television. These were chosen as the very up-to-date and current examples of high-end technologies that are accessible to most consumers. With eye-catching imagery and placed in their own section, we thought these articles would be make the reader interesting in seeing what these articles had to offer.

After writing up the entire website without the assistance of outside editing tools and writing it from scratch, we feel the website fits all the pieces together really well; Easy navigation, images to explain what certain topics will mention and unobstructed links allow for what we assume a nice time reading the information we have researched and added to the website.

# Class diagram and Data Model

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

The technologies used for this project consisted mostly of HTML, CSS and JavaScript, which were used in all files of the website. The website was run locally from the computer itself. These languages were used as I felt the most confident and adept at using them. I have preferred the language of HTML over the many other languages ever since my first year in college when I learned how to code in HTML. Being able to create websites in this way made it way more efficient as nearly every bit of code that was entered into the file made it visible(positively or negatively)on the page. If something wasn’t working then it could be easily rectified as opposed to other languages where when the code would be built then nothing would be displayed or an error would appear vaguely explaining what the problem occurred was.

With the use of CSS I was able to create rectangular buttons that would be displayed on each of the pages excluding the Home page. These buttons created the effect of fading in and out text when the button was hovered over. Doing this allowed me to display several facts about each topic that wouldn’t have enough information to talk about each on a whole page. Having this information not displayed until the user hovered over it reduced the amount of clutter on the page and increased the focus placed on the main articles. It also acts as a small reward for users who decided to read the whole article down to the bottom of the page.

We also added in YouTube videos into our website that had information that corresponded to the current page you were on. These were incorporated into our pages by taking the link from YouTube, which was done by pressing share on the video and taking the link that was created and placing it into the specific code file.

Pop-up windows were also used in the website. These were used on the Home page to display the name of the current user on the website. They were also used on the Tvs, Personal Computers and Laptops and Smartphones pages. These were used to easily show the user that an action had been completed instead of the user being redirected or their information disappearing for no designated reason.

# Problems Encountered/Solved

Several problems occurred over the course of completing the project, but then again what project doesn’t have at least one problem occur? One problem that I had in particular was to do with the buttons that displayed the facts at the bottom of the pages. When I had justbegun working on them, a problem that kept happening was that the text appearing would remain on the screen and then overlap with the text from the other buttons. Another problem that also kept happening was that when the text would appear, it appeared on top of the button. These may not seem like major problems, but they’re obtrusive and it would be very unprofessional if they were to be left in.

To remedy these problems, I had to go into the Stylesheet CSS file and edit the ‘bottom’ value of the container span. After working with several values, I decided to change it to 0. Any other value would cause formatting issues or overlapping of text. Keeping it at 0 allows the text to be displayed at the very bottom of the page, preventing any overlapping of formatting errors occurring.

Many of the problems encountered were small and were easily remedied by going through the code and switching around values on the variables until we got what we needed.

# 

# Conclusions

Throughout the entire project I have learned so much. In terms of programming and working with people. I have greatly improved my understanding of programming in HTML, CSS and JavaScript and general coding practises and planning things out before going head first and then being stuck when a problem occurs. This has allowed me to code more efficiently and use the time that I had saved to spend on other visible functionality.

Working within a team with classmates has also improved my communication skills, especially when trying to remedy an error that has occurred or to even say what functionality is needed for the website. Not communicating together would have led to more problems occurring without being able to figure how to fix them, and features and content having to be removed or commented out, when they could have been easily fixed if we had communicated to each other.

By finding errors and talking them out, we were all able to learn from the mistakes made and avoid them the next time they came around. Looking up how to fix broken aspects also lead on to find out how to do something else or even find a work around to many problems such as instead of trying and fail to submit the survey results and nothing happening, we decided that a pop-up would appear letting the user know that they have submitted the data.

Overall I feel that I have become a better programmer over the course of the past year and that I will be better off for the projects that we will have in 4th Year. By learning from my mistakes and understanding more and more now, I will get a better grasp at the language and will be open to learning the more difficult areas of this in the future.

# Recommendations

To further develop the project I would prefer to rewrite it into ASP.NET which would allow the user of databases and many tools for customizing the website in many easily updateable ways. It would also allow authorized users to add in data and pages of information without having to hard code it into the codes base. The reason we did not do this, is that when we were given the project to start, we had not yet learned about the functionality and how ASP.NET worked in detail, and by the time we had, the project we were working on had been almost completed. This was annoying as we could have made the website much better than we currently have, and this is what we would do to improve the website greatly.

I would also have it that when the user enters in their information into the surveys, that the information is gathered into the groups and displayed in bar or pie chart format e.g. who has one computer or what is the most common amount of televisions in the home etc. As of right now, it only displays a pop-up thanking the user for taking part in the survey. I would also like to have validation which could be easily done in ASP.NET.