# PROJECT REPORT FOR WEB DESIGN & DEVELOPMENT

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## INTRODUCTION

In this project, I designed and developed a website titled "Greg's One Stop HiFi Shop," which as it sounds is a website that would sell Amplifiers and vinyl players. The website serves as an ecommerce platform and I did take inspiration from websites like “[HifiHut.ie - Ireland's leading experts in Hifi and Home Cinema Systems](https://www.hifihut.ie/)” .

## LINK TO GITHUB PAGES

The project is hosted and can be viewed at [Greg's One Stop Hi-Fi Shop on GitHub Pages](https://eunanmur.github.io/Semester1Website/index.html).

## INSTALLATION/USAGE

The website is designed for ease of use and does not require any special installation. It is accessible via standard web browsers. For the login I did not leave any information as it is simple to register an account and then logout to test the login.

## DESIGN DECISIONS MADE

### COLOURS, TEXT, AND FONTS

When I started to design my website I opted for a neutral colour palette, predominantly featuring shades of grey. I made these design choices as I found it was good for a HiFi website as there was no need for striking colours that may strain the users eyes. The grey tones provide a minimalist look, allowing product images and content to stand out.

I also maintained a consistent use of the "Arial" font across the website. This was due to the fact that Arial, is a recognizable font which is also terrific for readability and has a clean appearance. I felt this aligned with the site's aesthetic of clarity and minimalism.

### BREAKPOINTS

Responsive design was one of my main aims to try get perfect and I believe my end result was quite good. We had done the burger menu in class before so I did have a good idea of how to properly establish breakpoints into my navbar which was a huge help. I then made sure that my sites body content was responsive to the bootstrap breakpoints as well. This approach ensures that the website's layout and content dynamically adjust to fit various screen sizes, such as desktop monitors and mobile phones. The breakpoints are set at good intervals, which allows for relatively seamless transition and an optimal viewing experience across devices.

### NAVIGATION

The navigation bar's design is a blend of functionality and style. The choice of a grey background with white text is not only visually appealing but also lets the text pop allowing the elements of the navbar to be easily distinguishable. The burger menu implementation, allows the navigation bar to adapt to smaller screens. This ensures that the user experience remains consistent and intuitive, regardless of the device used.

### PERFORMANCE

The use of Bootstrap and minimized external scripts contributes to fast loading times. Future performance optimization could include image optimization.

### SEO

Meta tags in the HTML head section improve SEO, making the site more discoverable in search engines. I have also included a favicon to make the website more welcoming when seen on a search engine.

### ACCESSIBILITY

High-contrast colours aid readability. Future improvements could include ensuring sufficient contrast ratios throughout the site and providing focus styles for interactive elements for keyboard navigation. Sadly I managed to forget about Aria tags and thus I acknowledge that there is room to enhance accessibility further.

### WIREFRAMES

When comparing my website to the wireframes I did earlier in the year I feel that I did a good job keeping my navbar and footer then same. However, there are a few big differences that are noticeable and the first of which is in index.html.

The largest difference between my wireframe and my final website in my index.html is that I had planned to incorporate a carousel to showcase a few products on the homepage. Once I began to attempt this though using bootstrap carousels I found online I discovered that it was not working as simply as I hoped and eventually had to scrap the idea as it was becoming far too time consuming for a feature that isn’t actually needed. My main issue was that when my javascript tried to append the products into the carousel it would break entirely and no matter how much I did to try resize and fix the carousel it wouldn’t work properly.

The other change that is noticeable is how my products are displayed in my products.html. I had planned to do an amazon style product display where the products are listed sideways. I changed this though as I wanted to make use of Bootstraps grid system and I feel display the 9 products in a 3 x 3 grid in the middle of the page actually resulted in a better looking page.

## REFLECTION ON YOUR WORK

### POSITIVE ASPECTS

I am particularly proud of the website's responsive design and its adaptability to various screen sizes. The integration of e-commerce functionalities like a shopping cart is also a highlight.

### CHALLENGES

When we first began bootstrap in our labs I did find it relatively easy to grasp but I must admit that building a heavily bootstrap reliant website was more of a challenge compared to the more basic html, css and js I would be used to.

Although I did have experience in creating user authentication and forms for websites before it sadly only helped me slightly. This was due to the fact that my experience had been in Firebase which is a lot more secure but its application is also far easier than the local storage forms and user authentication.

### FUTURE IMPROVEMENTS

If I was to move forward, I would plan to develop a more robust backend system to improve the security and handling of user data and transactions. This would entail most likely swapping to firebase as it is a more secure system.

I also anticipate further enhancements to the site's interactivity and especially accessibility as this would allow me to make a website that is both more accessible to everyone as well as user friendly.