ASSESSMENT 1 ANALYSIS OF AN EXISING WEBSITE

Web Programming
COSC2430

Dong Manh Duc - s3978290

I. Introduction

In the current business landscape, it is apparent that websites have become an effective tool to attract customers and clients. As Bill Gates has stated: “If your business is not on the internet, then your business will be out of business”. This holds true not only for big corporations such as Vin group but even small enterprises such as a bookstore. For entrepreneurs, developing a plain static website is one of the first challenges they will face.

However, merely having programming knowledge is not sufficient to successfully attract and keep customers interested in a business' product. In this report, I will guide you through how my bookstore website is developed, the features that the website offers, and the valuable lessons I have learnt from this project.

II. Project Description

The website outlines the fundamental components that users need for an immersive and user-friendly experience: A home page, contact page, 2 categories of books, and book detail pages.With these elements, users will be able to explore and discover books just as in a real life bookstore. Specifically, the following is a brief description of each page. However, the demonstrations and explanations of these features will be explained further in the Implementation details section.

a) Navigation bar

Located at the top of all pages is a navigation bar which users can use to navigate different sections of the website effectively. The navigation bar contains the website’s name: Null, Manga, Manhwa and Contact. On the left of each labels is it’s icon, or logo in the case of the website’s name

b) Footer

The footer contains essential information such as description of the website, as well as other details such as About us, Contact, Resources as seen in Fig 1. Only the Page inside the Contact section is operational, leading the users to the website contact page.

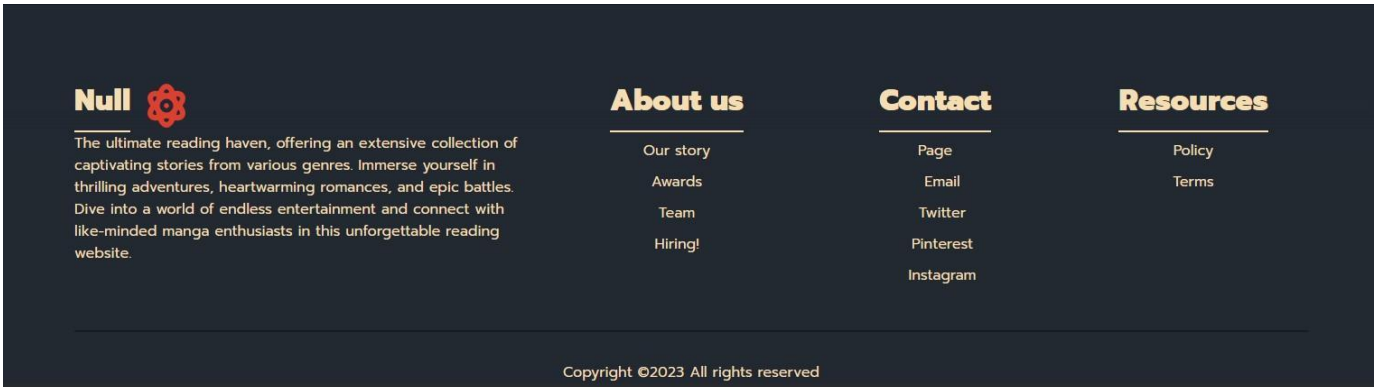


Fig 1: Footer

c) Home page

When customers open the website, they will be greeted with two main categories: Manga (Japanese comics) and Manhwa (Korean comics) (Fig 2). Users can click on the name of the category or "check out more" section to go to the category page. Near the bottom of the home page is the "Review area" (Fig 3), which features Youtube's reaction and book recommendations.

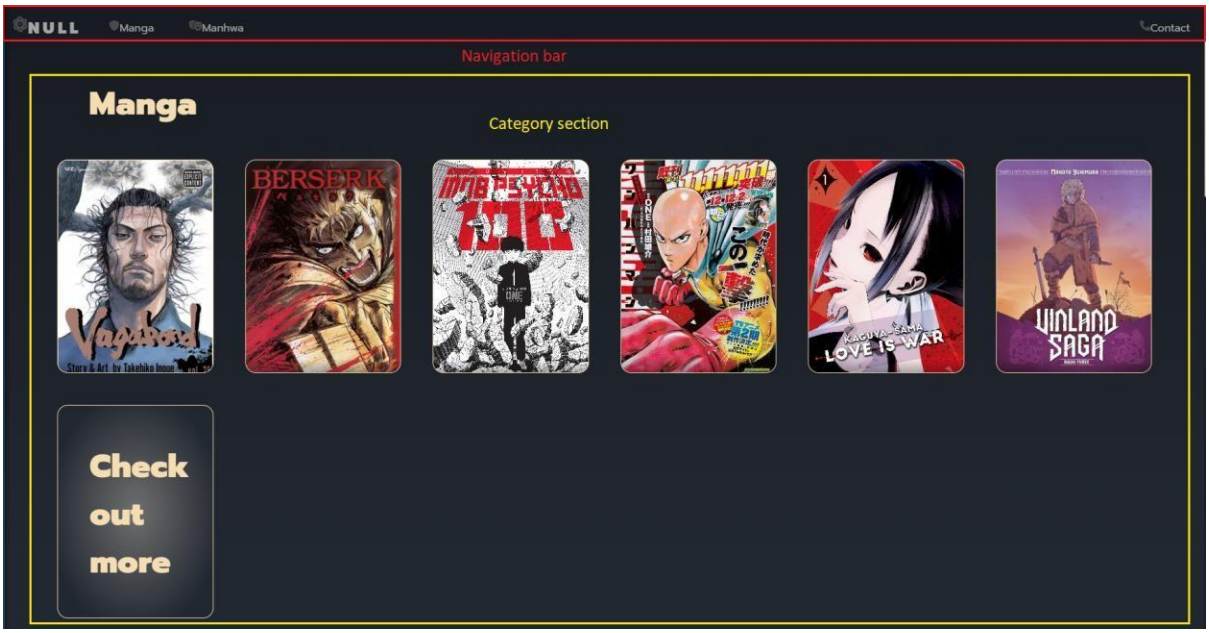


Fig 2: Home page

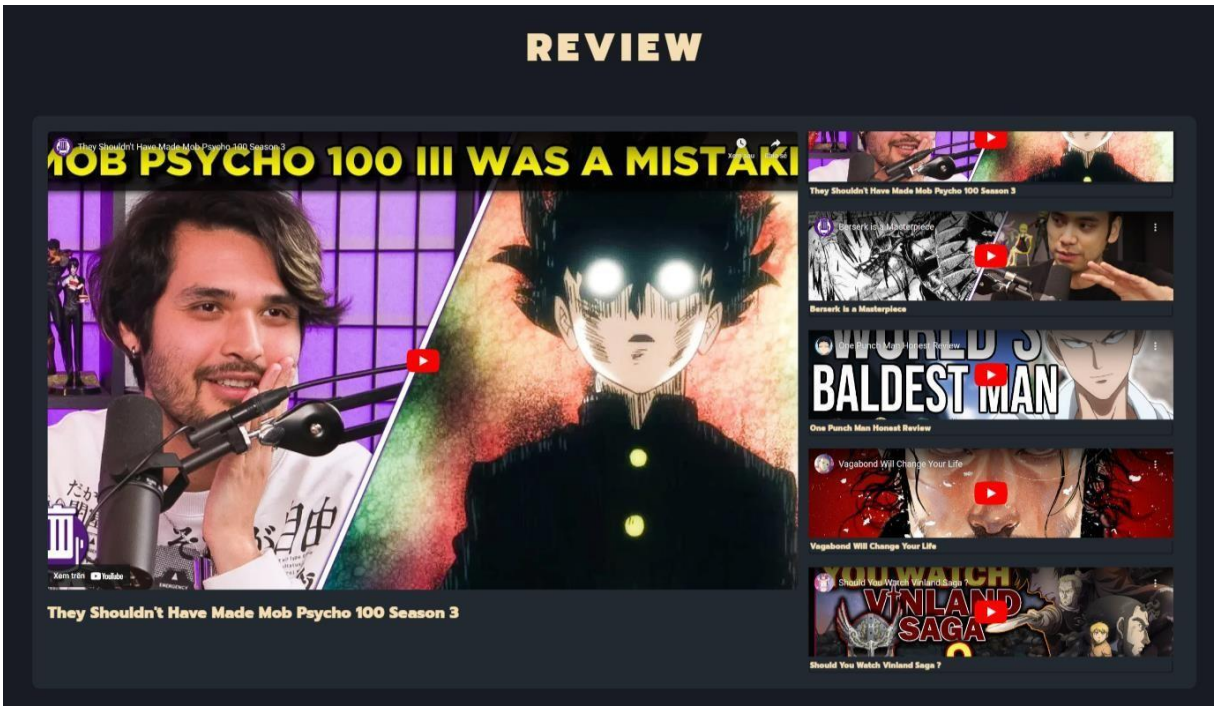


Fig 3: Review section

d) Category page

In each category page, I present 2 sub-categories each featuring 3 books. For every sub-category, there is the name of the sub-category, a brief overview of the category, and finally a grid of books.

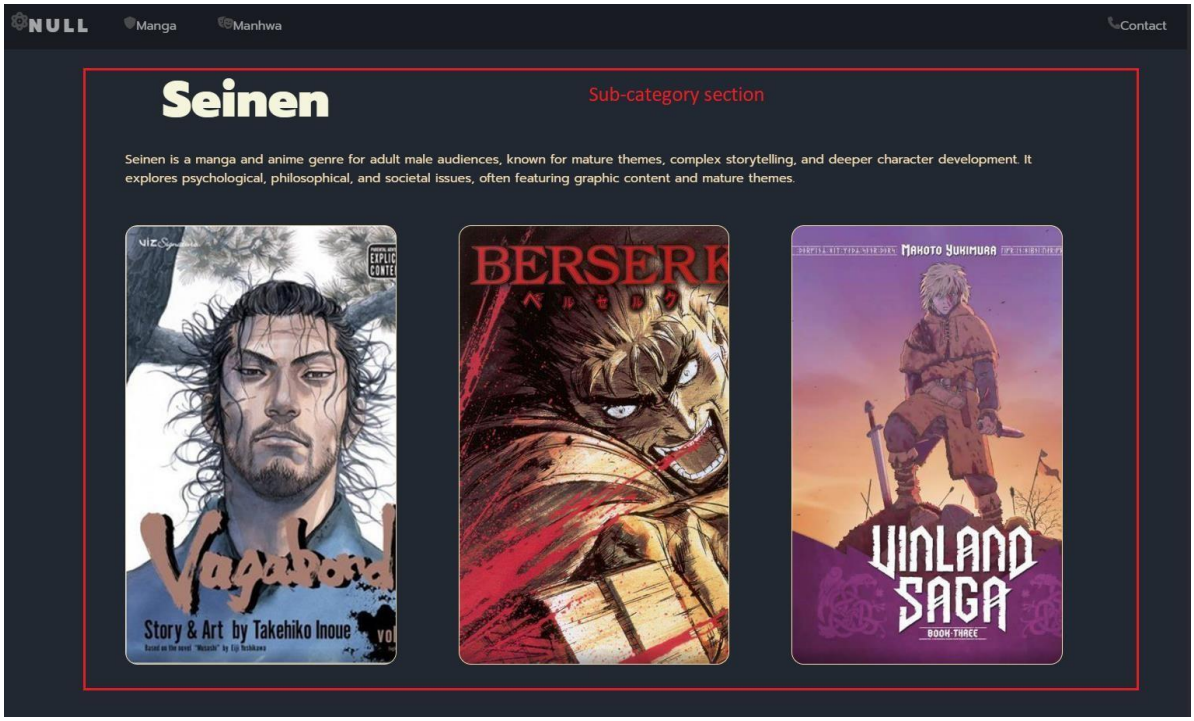


Fig 4: Category page

e) Book detail page

When the user first opens the book detail page, there are 1 main image, 3 sub-images, and 1 buying section that consists of the price tag and shopping button. In addition, there is also a breadcrumb which users can use to navigate around the website. Below the images is the descriptions section, where users can see essential details such as the name and description of the book

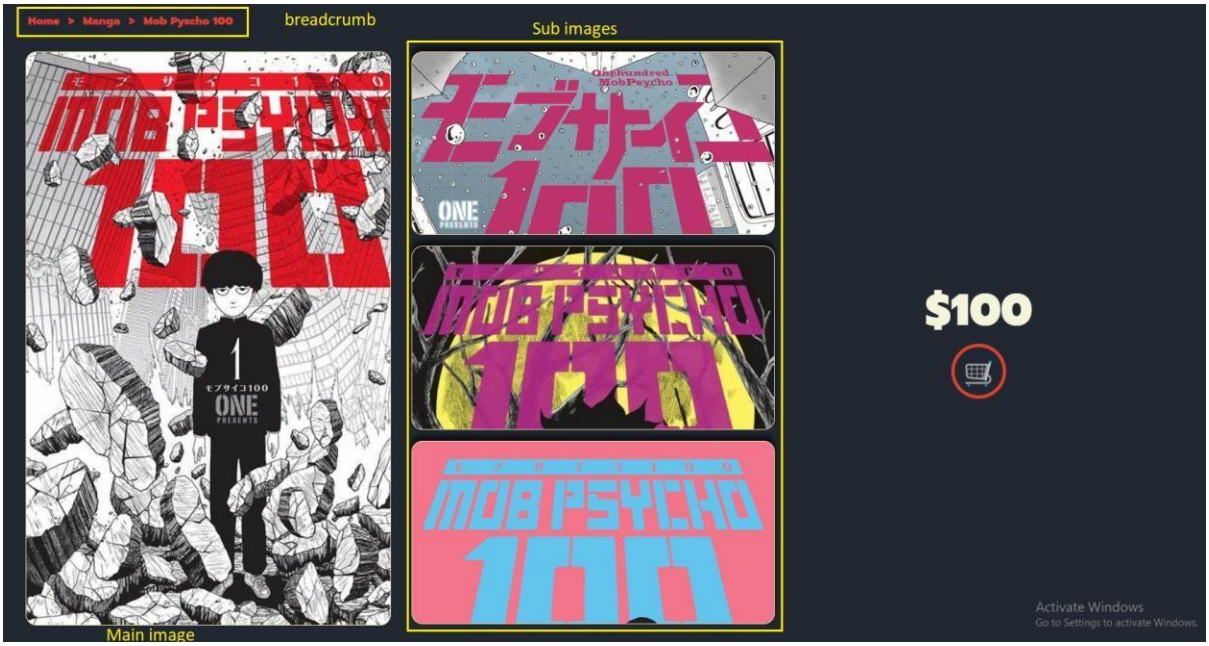


Fig 4: Buy page

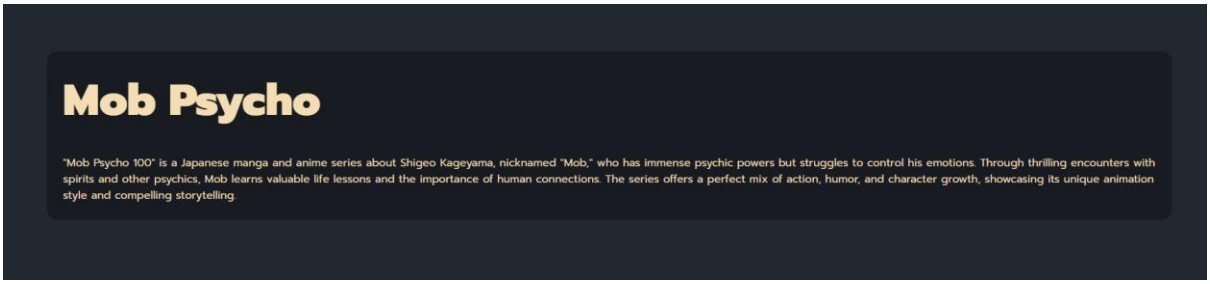
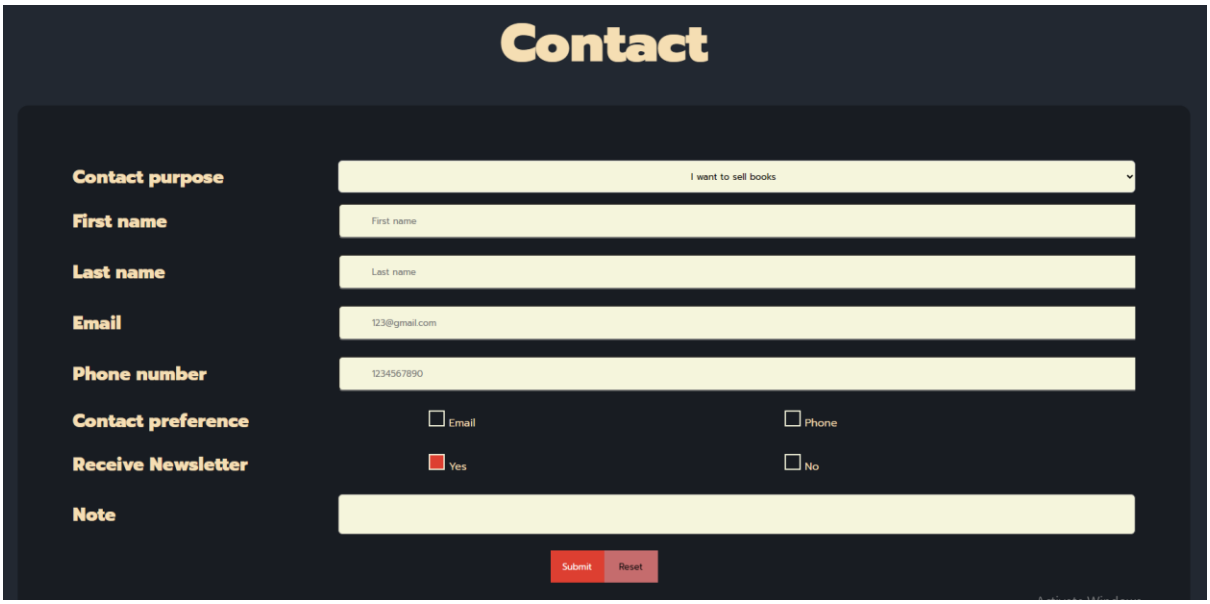


Fig 5:Description section

f) Contact page

The contact page consists of 6 inputs with various types: Contact purpose (drop-down), first name + last name (text), email (email) and phone number (tel). Additionally, there is also 1 checkbox: Contact preferences, 1 radio button: Receive newsletter and 1 text area: Note. Below these inputs, there are 2 buttons: Submit and Reset which clears users input back to default if clicked.



Contact page

III. Implementation details

Live website: [link]

a) Navigation bar

In order to enhance user interaction, I added a hover effect that alters the background color, font color and icon color whenever the user hovers over the element in the navigation bar

https://i.imgur.com/BCjkL4m.gif

Navbar hover effect

The navigation bar is designed to be responsive, being able to work perfectly for mobile devices. Specifically, for smaller screens, the navigation bar will change into a vertical bar.

For this design, the texts are hidden until users' hover over the navigation bar. Upon hovering, the navigation expands and reveals the texts. The hover color changes are also applied consistently for the vertical layout, further enhancing the user experience. This design was influenced by (Fireship, 2020) with some adjustments to fit the website.

https://i.imgur.com/aEqNONf.gif

Vertical Navbar

b) Home page

I have implemented a hover effect for each book. When hovered, the book's title and description will seamlessly appear from the bottom of the card. This is achieved by using display flex, overflow hidden and the transition of text from inside to outside when not hovered, and vice versa upon hover. This effect is consistently applied throughout the website across various categories, including sub-categories. Users can also click and be navigated to the respective book detail page, where users can see more detailed information of the book. To implement this effect, I followed the tutorial with some minor improvements by (Kevin Powell, 2021)

https://i.imgur.com/V30imYv.gif

Book hover effect

As for the rich media, I added an extra feature using a small amount of Javascript. By simply clicking the video title below the rich media, users have the option of switching between sub-videos and main video . To organize the sub-videos as there are multiple videos, they have been arranged within the same column. Users can use the vertical scrollbar to easily view all videos offered. This design was implemented by following the tutorial provided by (Mr. Web Designer, 2021). However, due to the utilization of iframes instead of video tag as in the original tutorial, the design had to go through substantial redesign.

Another interesting effect I self-implemented is the hover effect on the Review label. To be more specific, when users hover on the label, each word will slowly rise up instead of all at the same time. Instead of using Javascript, this is achieved by simply using CSS and HTML. To create this effect, each letter is divided into divs and positioned using flexbox. Afterwards, I add a rising animation for the texts when hovered and add transition delay for each div.

https://i.imgur.com/1pyWSU6.gif

Review section

The page also works seamlessly for devices with smaller screens as well. For mobile devices, the category section dynamically adjusts the book organization to automatically fit the current screen size. This is achieved by using grid repeat.

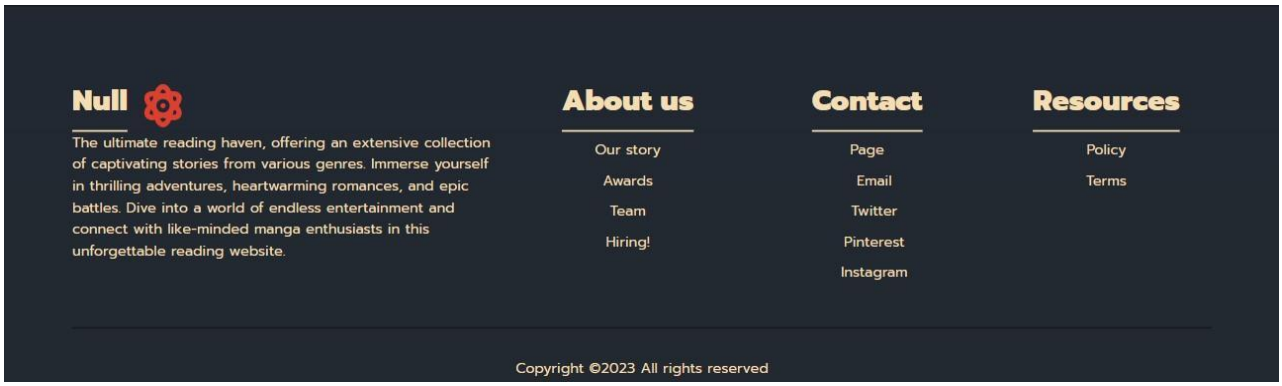
Originally, for large screens, the review section displayed 2 columns: The main video and sub-videos on the same column. However, on smaller screens, both main video and sub- videos are placed under the same column. Users can still scroll and choose which video they want to watch.

https://i.imgur.com/M90Qqbm.gif

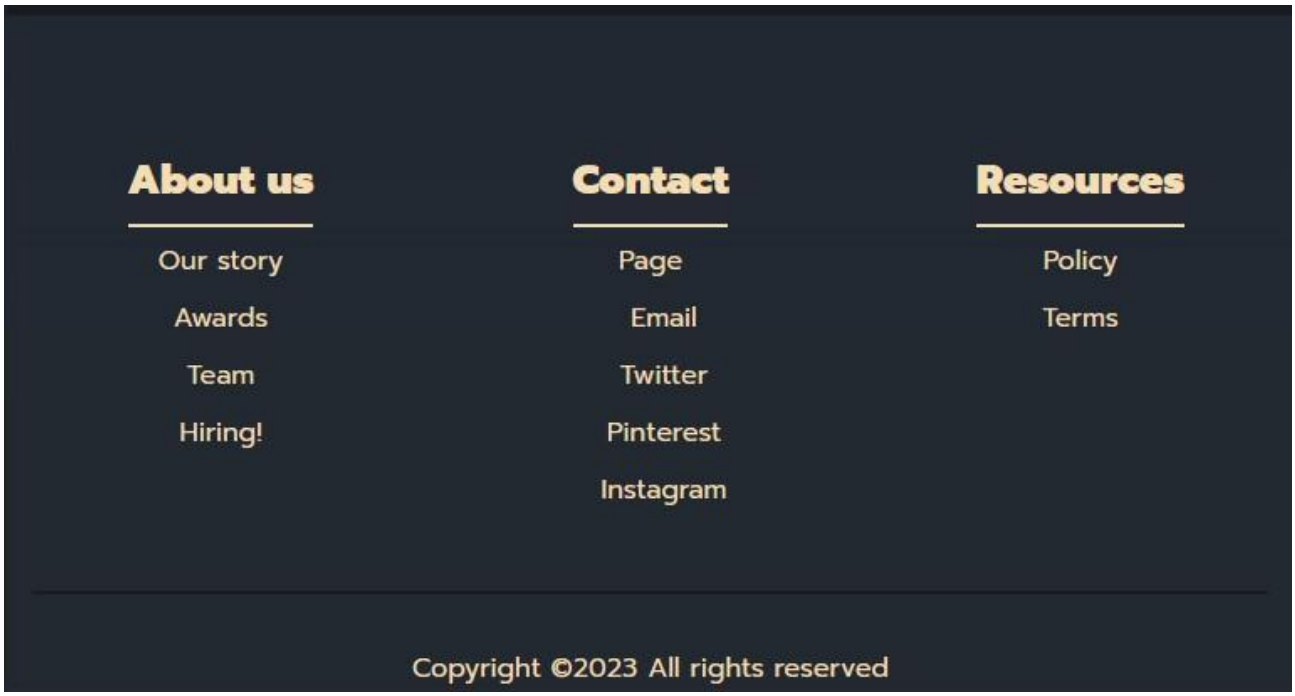
Review section in smaller screen

c) Footer

As mentioned in the previous section, the footer contains several details such as the website description or the Page which users can click to redirect to the contact page. In order to organize the footer, I use display flex and change the flex direction for each main section to create columns.



To ensure user experience for smaller screens, I have made some adjustments for the footer. To prioritize space for critical sections, I decided to hide the website description. Moreover, the font-size of other elements is reduced to appropriate size to accommodate smaller screens.



d) Category page

The hover effect applied for books in the home page is also applied in this section. By clicking on a book, users will be redirected to the respective book detail page.

https://i.imgur.com/aWuBUvG.gif

Hover effect

Similarly, for smaller screens, the sub-categories will also adjust the section to fit the screen, ensuring a smooth experience regardless of screen size.

https://i.imgur.com/fq7rDwp.gif

e) Book detail

To enhance users' experience and website responsiveness, I implemented a hover effect on the images (main-image and sub-images) which will scale the images up whenever the user hovers on the images. However, for sub-images, instead of simply scaling up, the image the user is hovering on will expand to have the same height as the main-image, enhancing the visibility for the small sub-images.

https://i.imgur.com/S2cYqIu.gif

Book detail page

For mobile devices, all images and the buying section will come under the same column, with the sub-images to be reorganized side by side. The hover animation explained above is also applied. The breadcrumb font-size is adjusted appropriately but its position in the screen remains the same. As for the description section, it is placed below the buying section

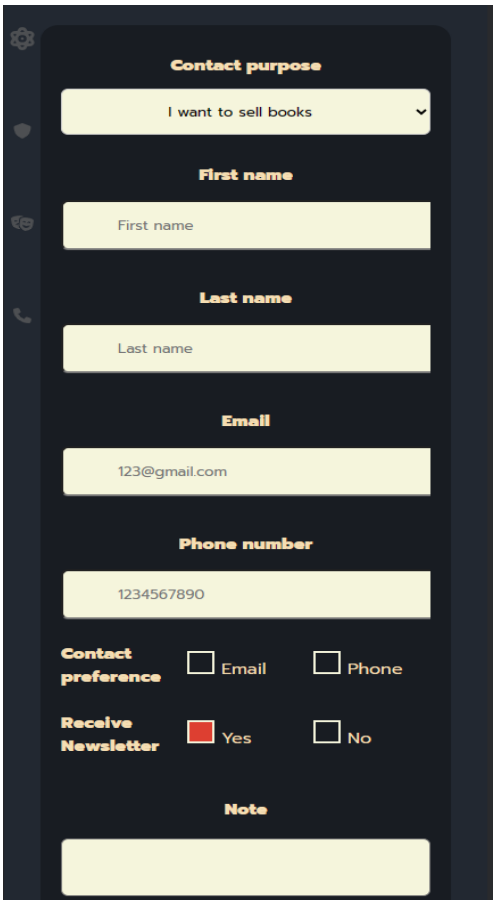
https://i.imgur.com/V30imYv.gif

https://i.imgur.com/BsWI21N.gif

Book detail page for smaller screens

f) Contact page

On large screens such as laptops, the inputs' names are placed side by side with the corresponding inputs. However, for smaller screens, these names are positioned above the inputs with the exception of the checkbox and radio button



Contact page for small screen

g) Other

Another effect I implemented was elements gradually appearing when users scroll to them. This is achieved by using Javascript to detect when an element has come into view. Once detected, the javascript will change element class, thus triggering the CSS code for the corresponding class. This implementation results in several interesting effects such as elements sliding from the left or the right, or simply appearing in their designated position. This was implemented by following the instructions provided by (Beyond Fireship, 2022).

https://i.imgur.com/2RVkdAS.gifv

Scrolling effect

IV. Conclusion and Lessons

1. Lessons

Through this project, I had the opportunity to apply knowledge from lectures into a real project and explore the capabilities of simple tools such as HTML and CSS. It was interesting to experiment with features such as flexbox and grid to create dynamic and engaging layouts. By leveraging CSS transforms, I was even able to create a visual effect similar to a movie from a static image. The possibility seems endless and only confined by the creator's creativity. However, despite being at awe with the potential, I realized that it is not my path. Nonetheless, it is a guarantee that I will implement these technologies in future projects to better display my projects.

2. Drawbacks

During the project, I faced several challenges. As a beginner in web programming, I initially relied on tutorial videos. However, I quickly found out that copying code without understanding the underlying logic is not sufficient. This led to numerous bugs and design inconsistency, forcing me to scrape everything and start from scratch. Fortunately, the experience from the first attempt helped me create a more consistent and better website.

Another drawback was ensuring the website for all devices regardless of screen size. While the first design worked perfectly on large screens, it is not suitable for mobile devices. Overall, although this problems were challenging, I was able to overcome them and learnt alot from this experience

V. Reference

Fireship (2020). *Animated Responsive Navbar with CSS - Plus Other Useful Tricks*. Available at link (Accessed 2/8/2023)

Kevin Powell (2021). *CSS Card with hover animation and mobile fallback*. Available at link (Accessed 2/8/2023)

Mr. Web Designer (2021). *Create A Responsive Video Playlist Gallery Using HTML - CSS -*

Javascript. Available at link (Accessed 2/8/2023)
Beyond Fireship (2022). *Subtle, yet Beautiful Scroll Animations*. Available at link (Accessed 2/8/2023)