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| RMIT University – South Saigon Campus |
| Assignment 1: Static Website |
| I declare that in submitting all work for this assessment I have read, understood and agree to the content and expectations of the Assessment declaration. |

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# Introduction

The objective of this project is to create a playground for the students with hands-on experience of using HTML and CSS through a hackathon style. The project will run continuously for 3 weeks, allowing the student to undergo the feeling of what hackathon looks like to improve and sharpen their skill for the future. This is a good opportunity for students to practice what they have learnt during the Web Programming course and use those skills to produce an outcome that meets the requirements. At the end of the project, an online bookstore will be deployed onto a website using GitHub Pages based on the technical requirements and sketch images that the student got from the course instructor. Any further information related to improvements, drawbacks or future update as well as the progress of the project will be logged into this document.

# Project Description

The system consists of 4 different pages that each page will have some similarity and also some differences depend on the prerequisite. In terms of the design technical requirements, each of the pages needs to have 3 main components which are header, main and footer. The header will be responsible for containing the logo as an image and a navigation bar which will be horizontal when the device is larger than 960px and vertically when the size of device is lower or equal 960px. The navigation bar would consist of 4 different links including: Homepage, Category 1, Category 2, Category 3. The category would be dependent based on student option, and it will link to the corresponding Category page. The footer will also need to have a navigation bar and the same as header layout – horizontal when device larger at a specific pixel value and vertical when device size smaller or equal a specific pixel value. Due to the constraint of time and requirements, not all of the links in the footer’s navigation bar will have an “a” tag except for Contact Us which going to direct user to the Contact Form to communicate with the administrator of the page. Within all of the pages, the header and the footer will always stay consistently the same. Only the main section will be different from page to page. For the landing page, the main section would need to have at least 2 different categories, and each would consist of 3 different displayed books. The title of the category will need to be linked to the equivalent Category page through the “a” tag. The books displayed will also need to be linked to those Book Detail pages. Due to the constraint of time and technical knowledge, students will only need to do at least 1 Book Details page. Moving forward to the Category Page, the main will be the same as the landing page except it will need to display at least 3 sub-categories and at least 3 displayed books for each. Sub-category can be defined as a small child of the category. For example, within the Machine Learning category, there will be sub-categories such as Computer Vision, Natural Language Processing and Document AI as those are the children of Machine Learning category. Next would be the Book Detail page where all of the information related to that book will appear here. The information includes book images, book description, book title and the price. The book will need to display at least 4 images with 1 main large image and 3 side small images. During the display size is larger than 960px, the arrangement of this image could be horizontally – the large image on the left and the list small image will be on the right. But when the display size changes to smaller or equal than 960px, the large image will be on the top and the list smaller images will be at the bottom. Beyond that, a breadcrumb will also be allocated in this page as well to help the user easily move back and forward between the book details page and the category page. Furthermore, there will also be an “Add to Cart” button which will lead to the Contact Form. Finally, the Contact page contains the fill-in form and a submit or reset button to send the request to the website administrator. The contact forms will have some field for users to fill in. This includes contact purpose as a dropdown bar – either “I want to sell books” or “I want to buy books”, basic information like name, email, phone and contact preferences and finally is asking if user wants to receive weekly newsletter about the changed. Other than that, an extra note will be left at the bottom of the form to let user add on any information that they want to share or ask. The user can submit or reset the form by using two buttons at the end of the form.

Beside the design components, there are also some expectations and requirements for the usage of HTML. Firstly, choosing the appropriate tag for specific locations would be important as this could affect the layout and the design of the website. Element such as like “header” should appear straight after the “body” tag or ”nav” element should contain links to other page of the website. Not only that, while using element correctly, I need to consider using “id” and “class” attributes appropriately and consistently as well. This would make my code look cleaner as well as easier to maintain as well. Furthermore, elements related to heading such as “h1”, “h2”, etc. should also need to be considered carefully before using it as this could create a big difference compared to the tag “p” or “span”. Moreover, images in the website need to have “alt” attribute goes with that. This is important as it could affect the user experience in the scenario where the image cannot be loaded by the website due to different factors, user can still understand what the picture is trying to show them. Another important requirement that could affect the code structure is the label for form inputs. If I do not use proper label for each of the form input, it could create a mess when user send the form, the payload will not contain the correct information that I need, or in the worst scenario it will be blank.

As with HTML, CSS also contains some important requirements that I need to consider when designing the website. For me, one of the most important prerequisites is that the website must be responsive. This is a major requirement as the user could use their phone or desktop to access the website. So having a responsive website would improve their experience on the platform a lot. Not only that, by considering the layout of the website when it’s responsive, I could have more room for creativity as well. To make the website more responsive, the course instructor recommended using CSS Flexbox as the component in main element. This would help me create a more dynamic layout for the website. Any other requirements related to creativity such as CSS transitions, animations, different color schema and palette are highly recommended to make the website become more attractive and user friendly.

# Implementation Details

During the implementation of the website, there had been multiple design decisions that I have made to make the website looks more attractive and appealing to users. At the first start, I decided to stick with the sketch images that the course instructor put in the assignment page as a starting point. I did not change anything in terms of the layout or structure of the web rather than try to play around with the color and make it more colorful. I decided to use a warm color palette as the main color for the header and the footer, blank white background for the main part and some cold and neutral color for anything that add-on in the main part such as category title, button to allocate to the sub-category, etc.

Text

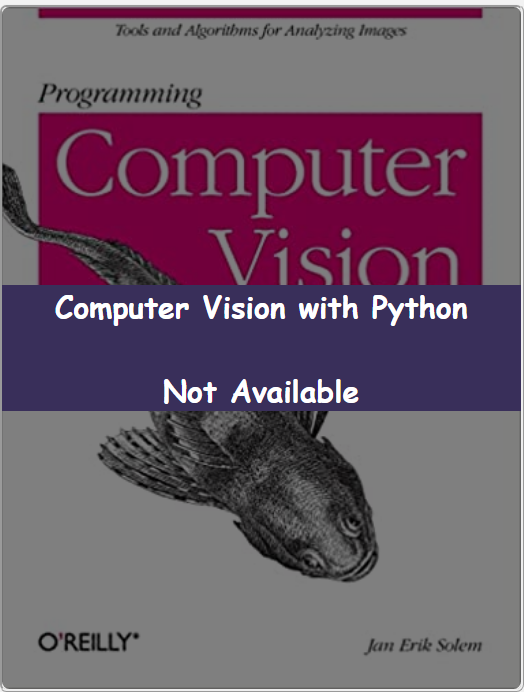
Description automatically generatedGraphical user interface, website

Description automatically generatedOne of the reasons that I decided to use the warm and hot color palette for the header and footer is because this is the first point that user can see when they access into the website. This will show the user straight away what kind of category do we have on the website without the need to scroll down to the bottom of the page. Furthermore, to support the responsiveness of the website, I decided to use a hamburger dropdown for the navigation bar when the display size is less than 960px. This would save more space for the website and only when the user presses on the hamburger button, the dropdown will show out. To help the user know where they are at right now, I decided to add-on to the class of the button of the current page which is called “active” and make the background color of it change a bit compared to the rest. With that the user can know which site they are on and where they can go next. For the main part in most of the pages, I decided to use flex as the main display variable in CSS and combine it with the flex direction which is columns or rows – depending on the object that I am adjusting. This helps me create a flexible gallery image for the books display in both the scenario when user uses on phone or on desktop. Not only that, but the section of each different sub-category is also divided equally as well, making the website look cleaner and easy to read as well. To give the user more information about the books, I decided to use overlay when user interacts and hover to the book image. It will include the information about the book’s name, price and availability. If the book shows the price, that means the book is available and the user can click on it to direct to A picture containing text, tree, outdoor, sign

Description automatically generatedthe book details page or else it will show as unavailable.

Figure 2 - Dropdown bar when responsive

Figure 1 – Main color palette of the website

  
  
This not only helps me save the space on the website, but also align with my motto that I am following which is delivered most information to the user without scrolling or pressing too much button. By hovering on the image of the books, the user will get the most out of it instead keep scrolling up and down. Currently on the website, there are only 3 books that have the page detail which is the Algorithm in the Software Engineering – Algorithm & Data Structure section, Advancing into Analytics in the Data Related – Data Analysis section and Deep Learning in the Machine Learning – Deep Learning section. When you click on these 3 books, it will direct you to the book details page and the rest should be unavailable. Furthermore, to help the user not lose track of the section that they are looking at in the Category page, I decided to add-on a section where it shows out 3 buttons corresponding to 3 sections of the sub-category. User will only need to press on it and the page will automatically scroll down to the position of that sub-category. Graphical user interface, website

Description automatically generatedThis would save time for the user to keep scrolling up and down which is quite inconvenient.

Figure - Book that is not available

Figure - Book that is available

Figure 3 - Choose your sub-category

Graphical user interface, text, application, chat or text message

Description automatically generatedMoreover, I also add on the connection between the Buy Now button in the Book Detail page and the Contact Us page which is mentioned in the requirements. Technically, when the user clicks on the Buy Now button in the Book Detail page, it will lead them to the Contact Us which they can fill in the form with the reason of “I want to buy books”. Before that, the button Buy Now is a disabled button as it does not lead or direct the user to anywhere else based on the technical requirements. Not only that, to trigger the user to buy more, I also add on some CSS method to the button Buy Now to make it more attractive. I used the color the same as most of the online shopping apps such as like Shopee or Lazada which is red to make the user want to press into that. And when the user hovers into the button, the size of it will increase and the shadow effect will also appear to make it feel looks in-depth from the user point of view. The transition between hover and click will also make the button change into a green color which makes them feel like they are doing the right thing.

Figure - Buy Now button

Text

Description automatically generatedBeside all of those features that I mentioned before, there are remains some of the errors or bugs that I did not have a chance to fix yet. For example, during the dropdown of the navigation bar, the main section did not push down while the dropdown is applied, making the interface looks squeezy and uncomfortable.

Figure - Dropdown Bug

Not only that, but the navigation bar in the footer also disappeared when the size of the displayed is less than 960px as well. Even though the arrangement of the element in footer looks neat and pretty but for some reason, the navigation display change into none.

# Conclusion

Figure - Footer bug

In summary, the project focuses on giving students a hands-on experience of how to use HTML and CSS to create an online bookstore based on the requirements and design constraints given by the course instructor. Even though the website can satisfy the basic requirements for the user workflow, there are remains some of the drawbacks that I can consider add-on in the future to make the user experience improve. There are some aspects of the website that look quite disconnected from the rest of the workflow or what I call an endpoint button. When the user presses on them, it does not react or return anything to the user, which might decrease the user experience on the platform. Furthermore, currently the website only supports buying books but does not support user uploading books for sale. We could consider this new feature on the website to trigger more users to use our platform. Not only that but also when the number of books reaches a gigantic number, we need to support the user to find the book that they like easier through search bar or suggestion model.

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