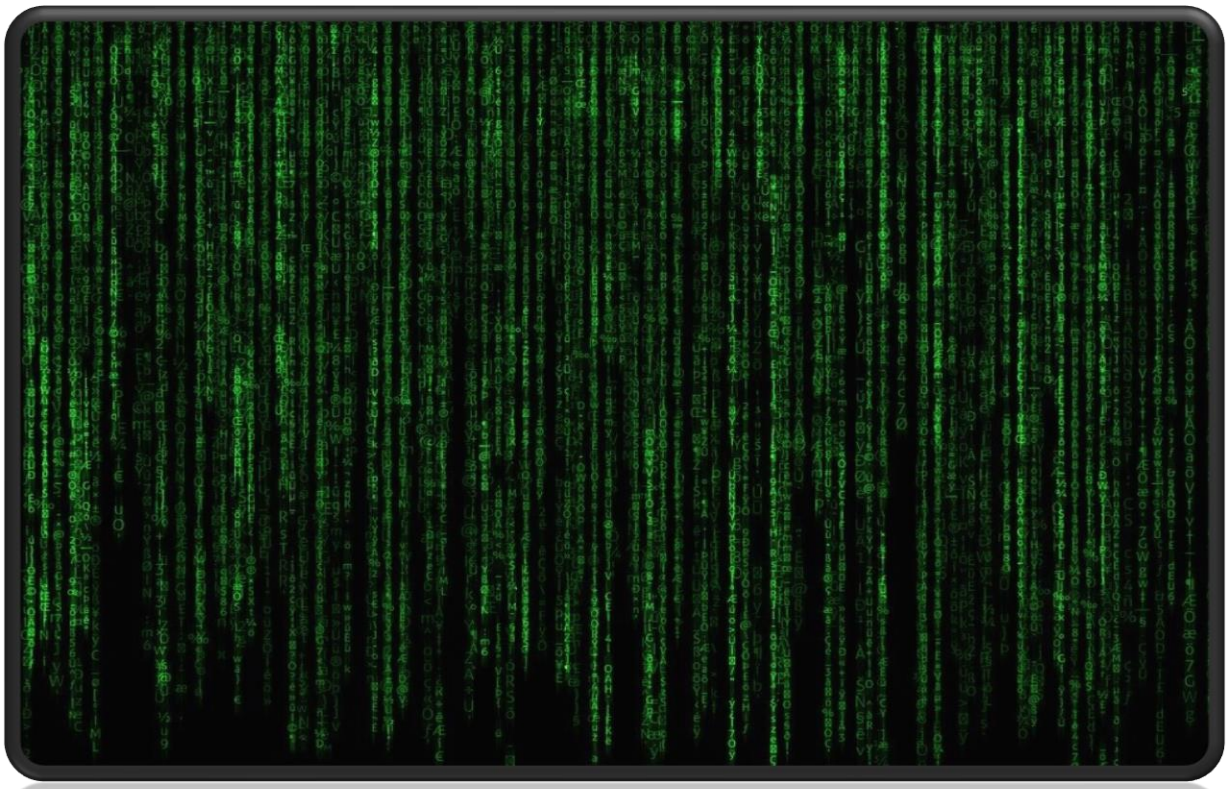


Design Report

Website Design & Implementation Assessment

Introduction to Web Design (DECO7140)

Semester 1, 2020

By Eric Cheong Kai Kit (46351979)

Part A

Introducing the Design Report

This report is intended to allow my client – a hotel owner who is thinking of digitalizing his business by observing and possibly utilizing the knowledge I have achieved during the designing and building phase of my website. My client would be able to understand the necessary steps that will need to be executed in order to ensure a website is designed as optimal as possible to suit the needs of his target group. As websites, which will be discussed later – will need to be designed efficiently and strategically to maximize user engagement and increase booking made by future guests. Additionally, target audience would appreciate and possibly be inspired by how an interesting fictional resort themed website can still be engaging and as efficient as third-party services like TripAdvisor and etc. This will be achieved and discussed through the extraction of points from research papers which will support decisions made when developing the website. This will allow target audiences who are going through this design report to appreciate the little things applied in websites to engage web users as they visit websites online.

This design report has 2 parts. The first part will showcase the steps taken to ensure the development of the website is based off decisions that were planned meticulously to ensure each designing decisions are purposeful and not repetitive to prevent a decrease in user engagement. Steps includes introducing and understanding the common characteristics between one possible web user to another by producing personas for both, a card sort user test demonstration to experiment and improve the envisioned navigational flow of the website's content, design reasoning behind the selection of the website's navigation systems and feedback on a paper prototype user test to validate website's structure for future implementation.

The steps are important as the personas allowed me to decide on whether I should allow the website to be heavily focused on content or allow users to efficient scroll through and extract the information they need. The card sort user test influenced my thought process on the categorisation of my topics under my navigation bar. Next, to provide acceptable design reasons behind my navigation system chosen, additional research had to be done to ensure sufficient confidence can be achieved for both myself, as a web developer and to ensure users' engagement would not be detrimental. Finally, feedback received after the paper prototype test allowed me to take a mental note on the future development of my website which in hand – will improve my website's structure during the implementation phase.

The second part is done similarly to the first part which consist of sessions that allows feedback to be given back by unbiased users on the prototyped website. These sessions gave me the differences in perspective on my website and it allows me to be empathetic in terms of considering good design principles. Apart from the feedback sessions, the second part has a bigger involvement in the technicalities that is involved with the development of the website. Such sections involve technical explanations in terms of aesthetics that requires the utilisation CSS and HTML. This gave me the opportunity to give attention to the little details of my website which will be discussed later on in the report. In the next section, which involves technical implementation that places me in a position to provide justifications to any interactions involved in the website. This section would include the combination of HTML, CSS and JavaScript to obtain an interaction that is deemed meaningful. In addition to that, I am also required to ensure accessibility is heavily enforced and my code is progressively enhanced.

By experiencing both feedback sessions, a proper understanding of what a meaningful interaction is and producing it with HTML, CSS and JavaScript, and incorporating good designing principles I was able to take a step back and take two steps forward in understanding what needs to be done to improve user engagement, improve my website and be more aware of the designing principles that I must incorporate into my website.

Introducing the Web Designer

I earned a bachelor's degree in Mechanical Engineering from Monash University a year ago and developed an interest in technology and its' application in solving problems for people during an internship in the data science department in Malaysia. This interest has led me to start my Masters in Information Technology which allowed me to fully immerse myself in an environment where I can be exposed to all sorts of learning opportunities and as such – I have been given the opportunity to design my very own fictional resort themed website. I am always keen in learning about technology and I enjoy powerlifting.

As I believe to be a complete beginner in terms of both coding and designing, I have decided that this would be the best approach for me. By ensuring I stay up to date to the weekly lectures and practicals, be as present as possible for practicals, and take the opportunity to search for new coding techniques for HTML, CSS and JavaScript on a daily basis and apply the research-first-ask-tutor before method. Finally, I would take the extra time to get a start on the practicals so that I could produce a list of questions for my tutor to extract as much knowledge as possible from someone who is very much more experienced in coding than me.

Responding to the Brief

Introducing the Website Topic

The website topic I have chosen revolves around a resort that is placed on the tip of a volcano mountain. I chose such a topic because it provides flexibility in terms of applying my creativity on the kinds of 'activities' that I can showcase on my website. These activities are funny and yet engaging as people would never have thought of bungee jumping down the lava filled volcano. At the same time, it is a resort that is unique because 'volcanic' resorts are usually placed further away from the mountain for obvious reasons and does not exist which makes it original – revolving this location around activities that do exist currently makes the idea somewhat 'real' in that sense. I also intend to apply a mix of colour contrast that embodies the view of the volcanic mountain.

When brainstorming for ideas, I had two other website topic which were unique as well. The first topic involved a floating resort in the sky and the other being in the desert. If either of the two topics were chosen, it would have sound something like the ones shown below:

For a resort floating in the sky (Affinity Resort would have been the name of the resort)
Take a step back from the world and come relax with us in our very own floating resort. All guests ranging from 30 – 50 are welcome to swim in our pool that encompasses a breath-taking view of earth or could even consider stargazing at night while appreciating the northern lights phenomenon. To fully complete your time with us, everyone is offered to stay in our 5-star full transparent rooms.

For a resort in the desert (Sandiest Resort would have been the name of the resort)
Sick of roads, the ocean or even trees? Come stay with us and have the adventure of your life in the desert! All adventurers from 17 to 35 would be able to sandboard down the infinite number of desert mountains or could even participate in our very own camel racing championship while enjoying the comfort of our local special encampment during your stay.

The volcano resort was chosen over the two above purely because it has somewhat a realistic 'feel' to it while still unique at the same time. The sky resort brings a lot of uniqueness and originality, but it lacked the realistic feel that I'd imagined it to have. Additionally, acquiring content and visual images to relate and enhance the user experience would be challenging as well. Next, the sky resort is very realistic but it does not embody uniqueness and that made me reject the idea.

In addition to this website (Alpert, 2017), that provided a list of resorts that were placed close to a stable volcano mountain – the 3 websites that sparked and inspired my idea to actually place a resort on the tip of the mountain were these 3 that can be seen in figure 1. It inspired me because in terms of practicality, these resorts could only be placed sufficiently close enough so that customers could have a view of the stable volcanic mountain. Then I thought, what if the resort is to be placed right up the top of the volcanic mountain instead? These websites had a unique theme of having a volcanic mountain as its view, but it lacked the activities that all resorts should have. These resorts may have done so intentionally because they were advertising as resorts to relax in. However, I believe that this idea has been overused as a lot of the websites I have visited so far would encompass relaxing with a volcanic mountain. With this, I decided that a volcanic mountain should not be used as a mean to relax but it should be used for thrilling activities instead. Thus, I had an idea that incorporates both elements – conducting extreme activities while still having a volcanic themed resort.

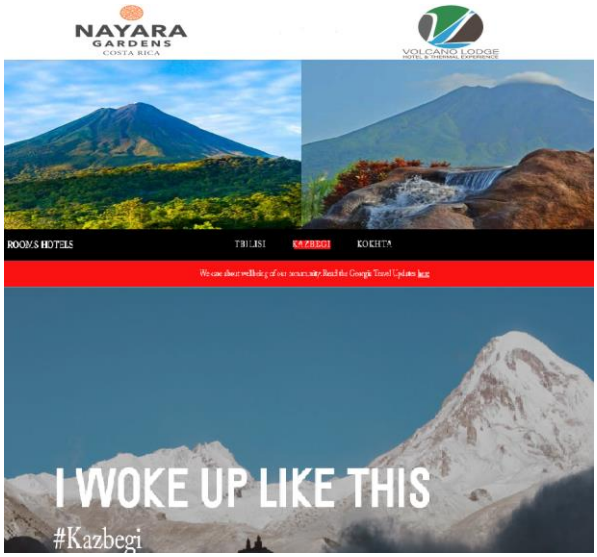


Figure 1 : Resorts that inspired me

Introducing the Target Audience

The target audience or users who are expected to / will visit the website are expected to be within the range of 18 to 40 years of age. This targeted age range would mean that the website is expected to look more professional (not childish-like) to accommodate for the expecting users who will be visiting the website. This fits with the brief as it is stated that the range should be between 5 and 50 years old. The range was chosen to be 18 to 40 rather because of the extreme activities that the website plans to mainly advertise with and the professional design that I intend to incorporate into the website. As examples, some of the expected users would likely be like the personas shown below.

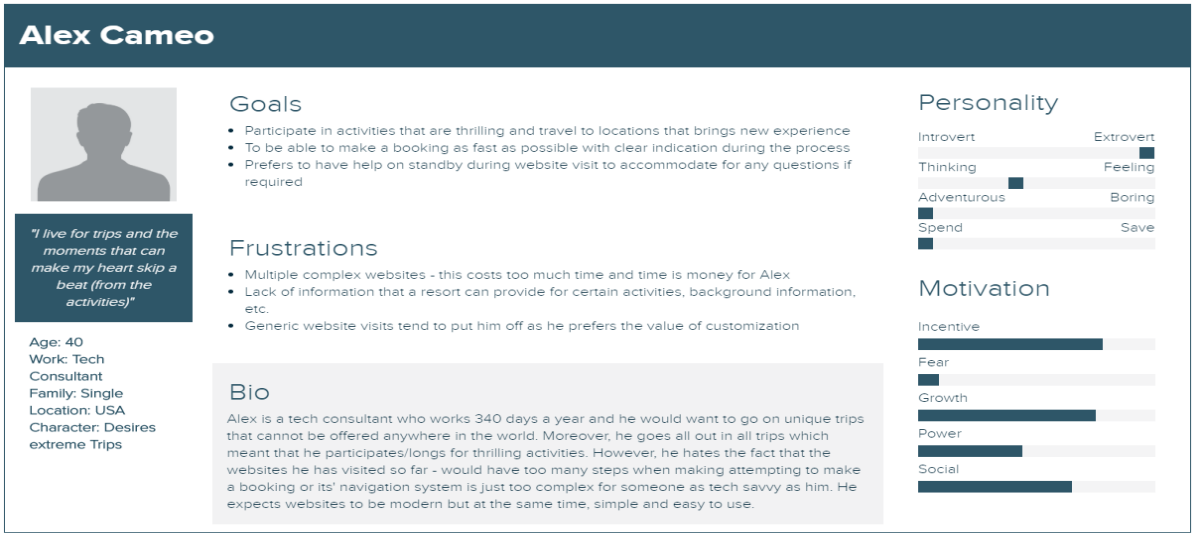


Figure 2 : Persona for a user that may visit the website

Figure 3 : Persona for another possible user that could visit the website

The personas answers the brief as they are both looking for a place to have vacation but have this problem where they are not able to acquire the information they need when visiting websites so far. Thus, the website that I will develop in the later stage will have to cater to the personas as shown above as my group of consumers may very well be identical to the characteristics shown in the personas above.

Based on the figure above, both Marissa and Alex have traits which are common and different at the same time. Some of the common traits are the prioritization of time as this can be seen when both mentioned that they prefer reservations to be done easily. Additionally, they dislike websites that are too complex and prefer a simple and straightforward organisation of contents. Lastly, in addition to the organisation of contents, both personas agree that a search function must be incorporated into the website as it would allow for information to be obtained more easily and efficiently.

Personas implies that 3 things must be considered during the design of the website. First, the entirety of the website must be structured as simple as possible while still ensuring enough content or information is included. As both users have highlighted that they dislike websites that are too complex or when there is an overabundant of information displayed leading to confusion. Next, as reservation is the key to ensuring revenue is brought to the company, the flow must be concise to ensure visiting users are guaranteed to be customers visiting. This is further supported with 2 users stating that they prefer reservations to be easily done – meaning that the reservation process must be streamlined. Lastly, functionalities such as a search function and a chatbot should be considered since this can satisfy the need for users requiring additional or specific information when visiting.

Navigation & Organisation

Card Sort User Testing

In summary, I listed contents that could or will be present on my website. A straightforward example is having 'THINGS TO DO' as a 'topic' and listing activities such as cycling, quad biking etc. as 'content' that the user will see after clicking on the things to do button on the website. I have prepared multiple topics that will categorize multiple groups of content which will be involved in the card sort user testing design activity.

I have also hypothesized that 3 topics will be the most clicked button on the website. The 3 buttons being things to do, gallery and about us. Reason is because users are ought to be interested in the activities that are advertised and since the resort is located on the tip of a volcanic mountain, users will be more inclined into finding the how and why the resort is on a volcanic mountain. Aside from the buttons, I also theorized that the most important page would be the homepage as that page would be the frontline where users would first visit when accessing the website. I have also decided on performing a closed card sort as I can receive feedback on my decisions to categorize different groups of contents under specific topics and reflect on it.

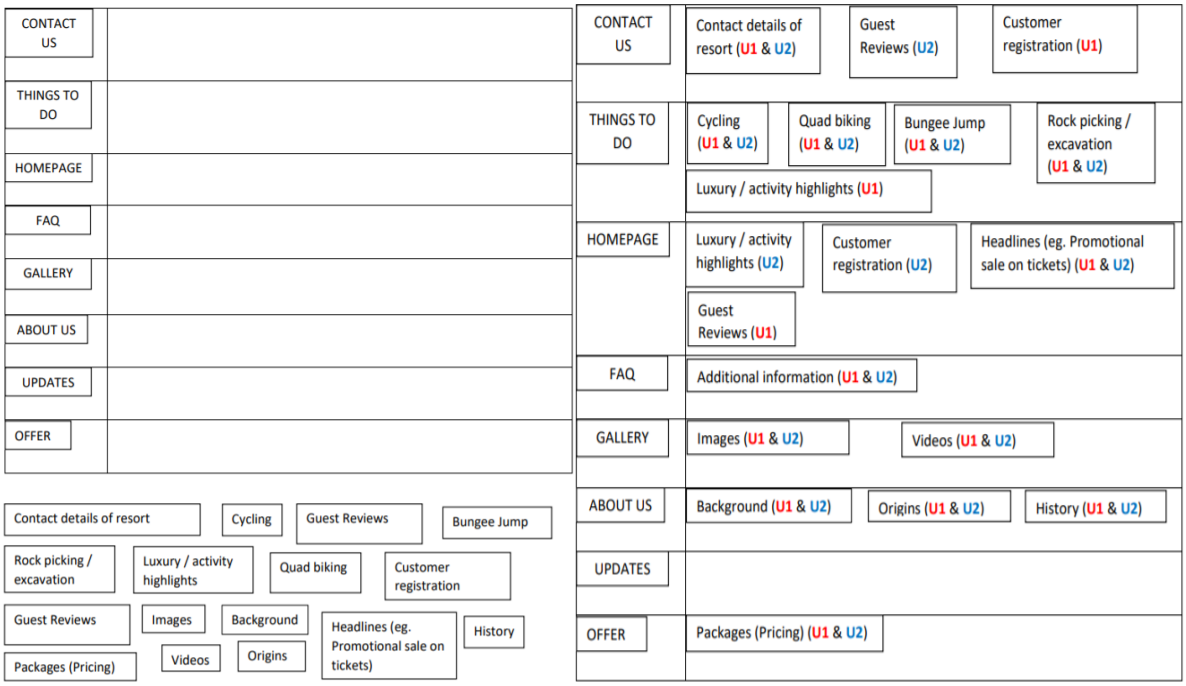


Figure 4 : Before and after users have categorize contents under topics defined

U1 and U2 represents 2 different users that were arranging the 'cards' under pre defined topics. During the activity, I would encourage both users to discuss while categorizing the contents. This prodivded me with different perspectivies of how I should categorize the contents under a topic. Once users were done with placing the contents and are satisfied, I then show them the 'correct' categorization of contents which can be seen below.

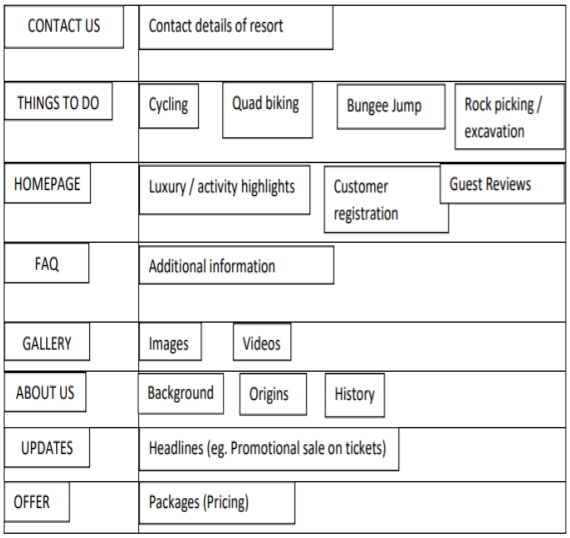


Figure 5 : Categorisation of contents

Once the figure on the left was shown, I then asked for feedback once I have highlighted the differences between the 2 tables. After a thorough discussion on the differences, 3 major feedbacks were collected. The first includes a coherent agreement of both users stating that the topic – updates should be discarded since headlines that can be displayed on the homepage and the homepage will mostly like contain the most recent update of the current affairs. Next, a user suggested that guest reviews should be

allocated under contact us rather than homepage as the positioning of guest review could disrupt the flow of the content on homepage. However, the other user disagrees as the flow of content would mostly still be intact and this placement is important as it would produce a good impression when users access the website with good guest reviews are seen. Lastly, both users suggested that additional functionality should be considered – such as a vacansy search function.

With the feedbacks I have received, I have decided to exclude a topic called updates and possibly incorporate headlines as a section in the homepage. Additionally, I would still include guest reviews under homepage but the feedback gave me an understanding that I should be well aware of the flow of the content when positioning the guest reviews section. Lastly, if time allows, incorporating a search function would also be a good idea as it provides users the ability to look up specific information and will improve user engagement as well.

Navigation & Organisation Systems

I've decided to implement a hamburger menu icon and a horizontal navigation system for my website. I've chosen such a system as I believe that it works well with the color contrast of my website along with the image background that I intended to incorporate. Other than the color contrast, since I intend to only develop a few webpages – the horizontal navigation system is well suited for it as having too many pages would cause the horizontal navigation to overpopulate and be detrimental towards user engagement since there would be too many links to look through. In addition to the horizontal navigation system, when the screen size is as small as 375px in width, the utilisation of the hamburger menu icon would come into play as it would collaspe the horizontal navigation system – making it hidden as it would cover too much of the website when it is still shown with a screen size as small as 375px.

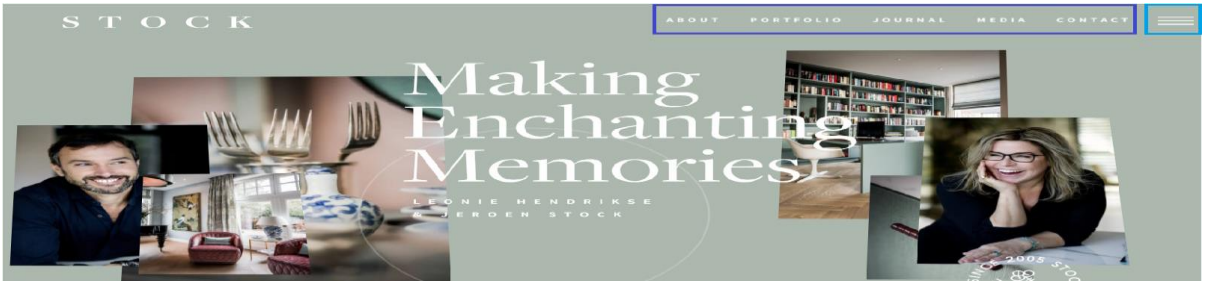


Figure 6 : A website that implements a horizontal navigation system that is not hidden – this is likely their primary navigation bar and they have additional links to other pages in the hamburger menu icon on the top right corner of the website.

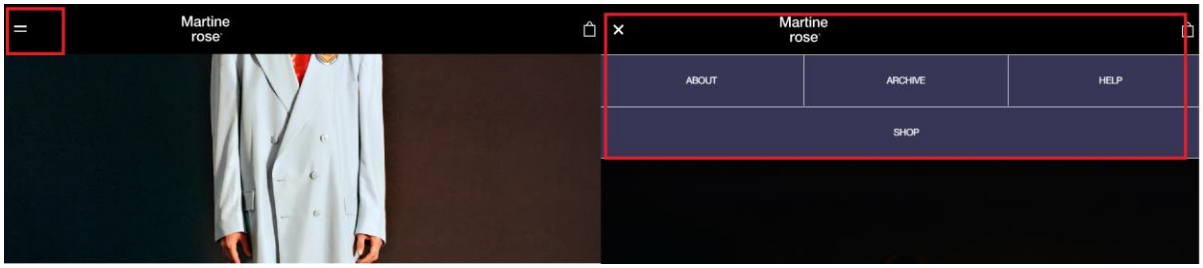


Figure 7 : A website chosen to have implemented a navigation system that I intend to incorporate into my website along with a similar horizontal navigational view when the website is as large as the window's screen

Site Map & Content Architecture

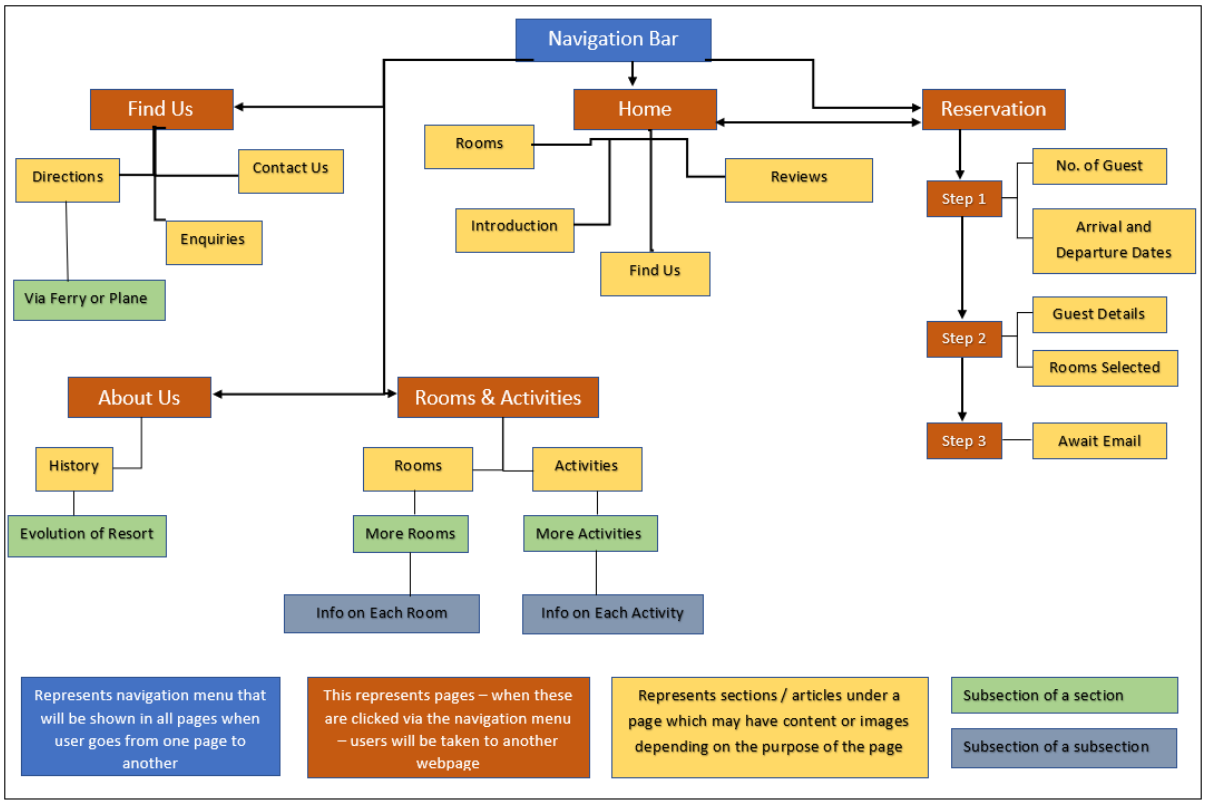


Figure 8 : Intended content architecture of website – arrows represents the linkage between one page to another and non-arrow lines are to be interpreted as sections that are included in the following pages

For clarification, navigation bar / menu will be on all pages as it is imperative to allow users to easily visit one page from another with ease. This applies to the reservation link as well – although it is not shown to avoid confusion. This is equally as important as users may want to make a reservation at anytime while looking at a section in any page of the website. Step 1 represents the dates that the guest would chose to arrive and leave, step 2 contains sections for further details on the guest and rooms that are preferred and finally, step 3 would contain content that informs user that the reservation process is completed and an email have been sent for confirmation.

Visual Organisation & Interactivity

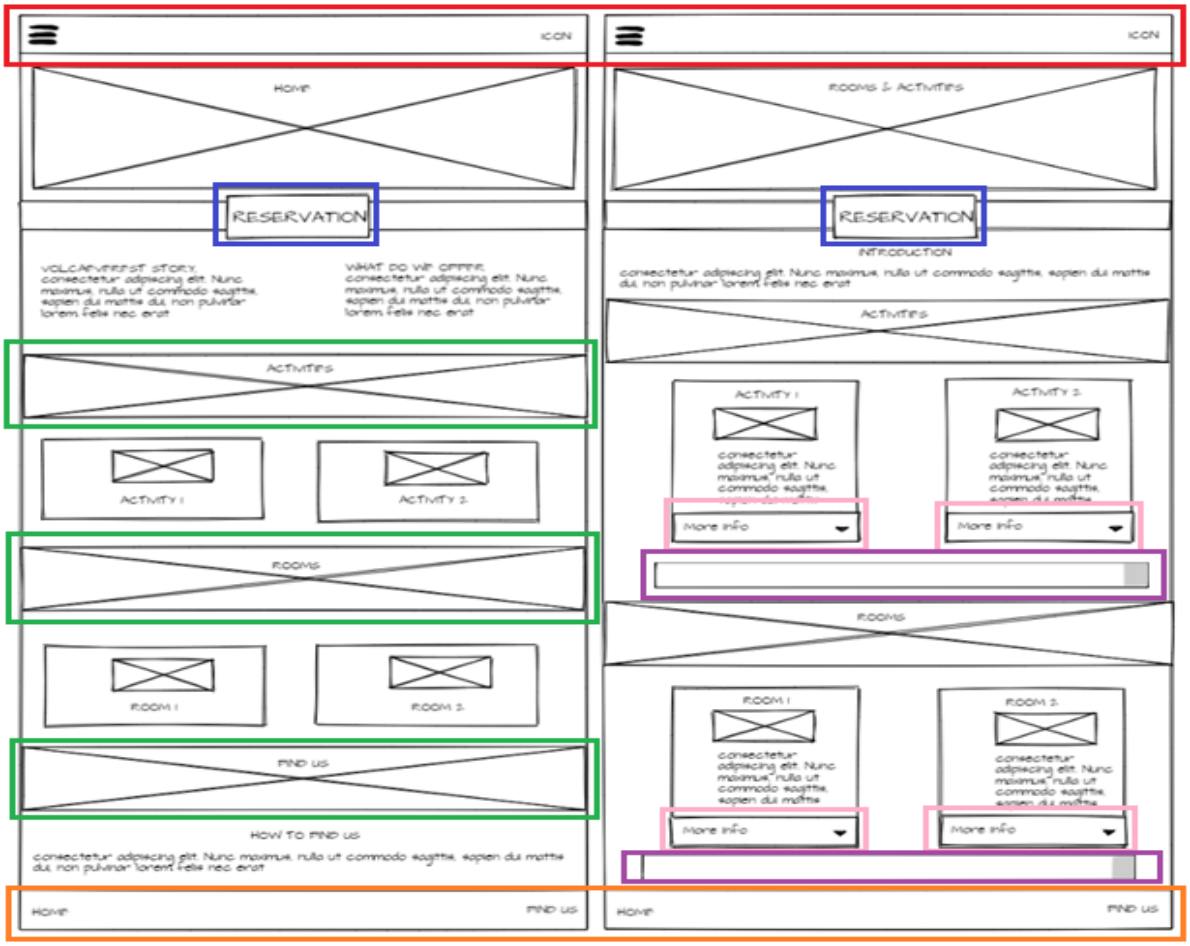


Figure 9 : Wireframe of the homepage and activity page of the website

The intention of the homepage is to allow web users to have a glimpse of what is in stored if they do decide to make a reservation. For this to occur, as much necessary content along with impactful visualization must be done. The page would allow users to navigate through efficiently while also being visually organized in a consistent matter which applies to the rest of the webpages. The red annotated square signifies the navigation bar which will be fixed as the user scrolls down the pages for easy access. The hamburger icon interacts with the user by giving him or she access to all other webpages – when it is clicked, a dropdown menu will appear, and the user can then decide to choose to visit another webpage. The interaction will be the same across all webpages.

Similarly, the blue annotated rectangular box causes a reservation box to appear when clicked which then asks the user to fill all required information. Just like the navigation bar, this interaction is the same across all webpages. To prevent an overabundance of content on a page, selected contents will only be used to magnify the images of rooms and activities on the homepage and links to the pages are annotated with the green squares. With addition to the rooms and activities, as the location of the resort is unique – a quick summary of how to find it is also allocated as a section on the homepage of the website and if further information is required – the user has the option to visit the page by clicking on the green annotated rectangular box as shown in figure 9 (on the left).

Lastly, the orange annotated box signifies the footer and will be fixed to the bottom for completeness and would give users quick access to the homepage or find us if required. The footer, navigation bar and the reservation button will be consistently shown on all webpages. This would allow all pages to be connected via the navigation bar, allow users to make a reservation on any of the webpages and allow quick and easy access to the homepage or find us page which are located in both the menu dropdown and the footer.

The figure on the right of figure 9 is also known as the ‘product’ page since activities are supposed to be the focus of the resort which is meant to pull potential customers into making the reservation. Apart from the footer, reservation button and the navigation bar - the only interactive function that will be used is the more information collapsible button. This is shown in the pink annotated square box which gives users the opportunity to find out more about the activities that they are interested in. This prevents the page from being filled with too much content and allows users to look through all the activities and rooms efficiently. Lastly, to prevent users from vertically scrolling the page for too long, a horizontal scrolling function is implemented instead for each room and activity section as shown in the purple annotated box. The point of this ‘product’ page is to allow users to have more information about the details of the activities and rooms while still ensuring the contents are organized neatly.

Figure 10 which is shown on the next page is the first page that web users will be taken to when the reservation button is clicked. This also acts as a fallback when JavaScript is not working but will be discussed in the technical implementation section. In addition to the consistent presented navigation bar and footer functionalities at the bottom, web users will be able to observe the modification of the horizontal bar in the orange annotated box that

represents the completion percentage of the reservation being made by the user – this is static as it only changes whenever a user goes to a different page (from step 1 to step 2 page of the reservation flow). During step 1 of the reservation flow, web users will then need to pick the dates of their arrival and departure. This functionality will be done by clicking the empty fields in the pink annotated box and once that has been done, users will be required to declare the number of guests that will be staying at the resort which can be seen in the blue annotated rectangle box. Once both of fields have been completed, users will then be able to see a short summary of the number of days they intend to stay and the number of guests that the resort is expecting which can be seen in the green annotated box. Once users are sure of their indicated intended of stay and the number of guests joining, they can either navigate to the next step or return to home if desired as indicated in the purple annotated box.

During the table discussion, I gained the practical understanding of how the 4 principles come into play. Proper proximity placement allowed me to reinvent the pages to provide better sectioning of contents on a page so that better emphasis can be given to contents which are higher in terms of priority and importance. In addition to that, it allowed me to consistently utilize the same structure so that users would be more used to the website's navigation structure as they go through each web page.

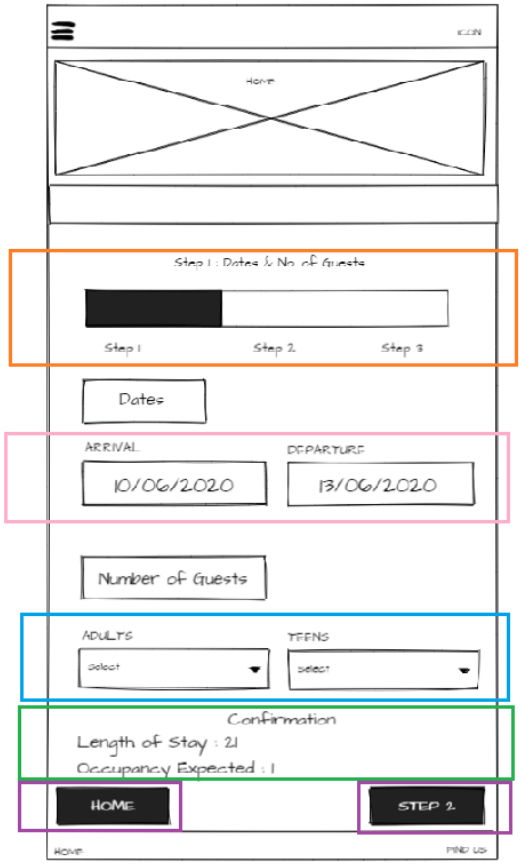


Figure 10 : First step of making reservation

Additionally, with each block properly aligned and sectioned, I could then apply interactivity to better emphasize the actions taken by web users to enhance their experience as they go through the website. In conclusion, by understanding and directly executing the 4 principles, I was able utilize the positive outcome of adhering to these principles with the application of JavaScript. Without adhering to them however, I would not be able to maximize the interaction of each

functions / buttons to capitalize the user's engagement as users will not even be attracted to these functionalities without positioning them in areas that would magnify its' importance.

In short, I was able to better position my contents, focus on buttons / contents which are of importance that will ensure web users will be enticed to click and produce a web structure consistently throughout the website (for all webpages).

Paper Prototype User Testing

My plan on receiving the user's feedback involved multiple parts which includes centralizing my feedback by asking the 3 W's – What if? What did they like? What do they wish? This requires the user to generally explore all the pages prior to answering the questions above. After that, with the questions being as general as it can be, I focus on specific parts of the user's feedback for specificity to allow me to better quantify the feedback received and act on it. The combination of the generality and specificity of questions allowed me to understand different sections of the websites while also focusing in on specific parts that matters most for both the user and me as a web designer. A sample of a part of the prototype can be seen below.

With the plan I have in mind for receiving the feedbacks, I have also planned 5 distinct tasks to work coherently with these questions. The 5 tasks are as follows – have a go through of all the website's content (not just homepage), look for a tab about pricing and find prices of different packages, look for directions that are not shown on the website (needs to be clicked somewhere), make a reservation with the resort and make a review (assumption that you have been to the resort). The 5 tasks embody the combination of generality and specificity which will allow me to better understand what needs improvement and what should be excluded during the planning phase of the website design.

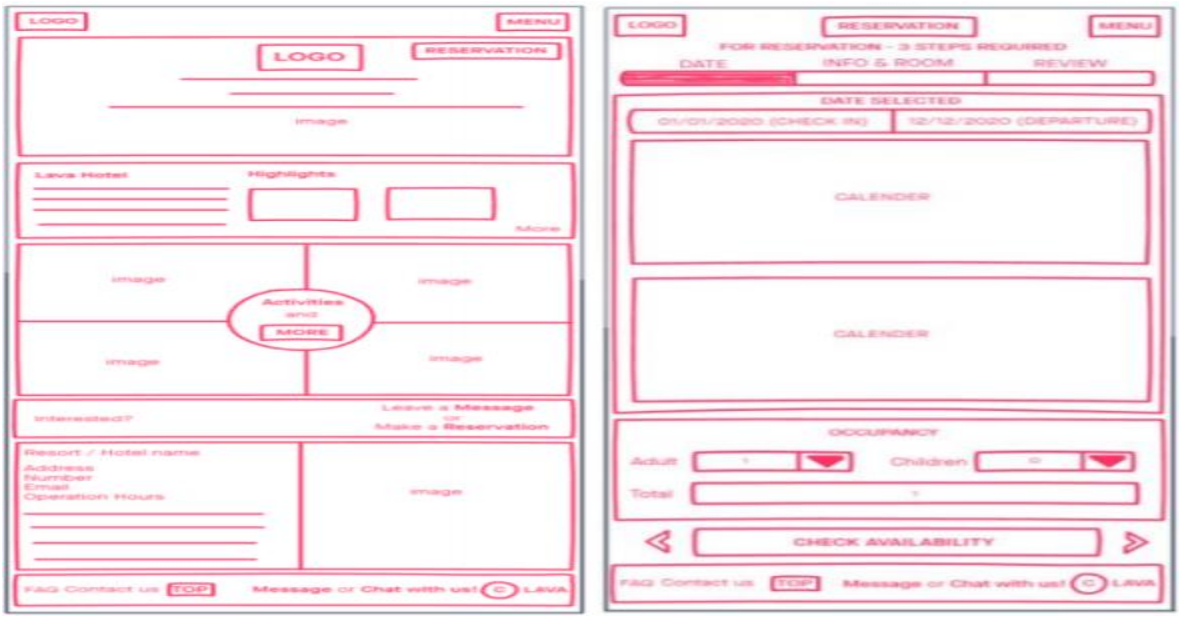


Figure 11 : Website's homepage on the left and the start of the reservation flow on the right

With the number of users numbering approximately 5 that have used the prototype I have set up on InVision. I was able to receive a few feedbacks. The first user stated that information on how to get to the resort should be placed under about us rather than contact us as he supports this as he would only click the contact us button when a complain needs to be launched. Next, message and chat us buttons are not as obvious which meant that bolding them was not enough. These buttons are important as they can provide users additional information when required – as stated in the persona and recommended during the card sorting activity. Another user also commented that I should include more content rather than focusing on visualisation, this is a fair point as users may want to read about the images that are displayed on the website. Lastly, some arrows are missing and including these would ensure completeness.

These feedbacks made me realize that important functionalities will require additional highlighting effects to ensure that users would notice and use them. Next, content should not be ignored and is as important as including visual images. Finally, there are contents that will need to be reorganized for better flow of content.

Part B

Aesthetics

Before focusing on the mockups produced, the following shall be addressed beforehand:

Table 1 : Summary of mark-up styles that are consistently applied through website

Styling category	Style used for each category
Colour scheme	#1c250c – was used as the base colour and is frequently used and seen in all webpages of the website. This was picked as the base colour because of the resort's theme of embracing nature. #FFFFFF – white was used as it highlights and provides good contrast ratio with the base colour used. The combination of #FFFFFF and #1c250c allowed buttons and links to be more noticeable and highlights important interaction that needs user's attention. #475429 – was utilized for any interaction that involved links or buttons with a background colour which involved the usage of #1c250c as the subtle change between the 2 colours would fit with the theme of this resort that concentrates on embracing nature. #aadaff – was only applied in the Find Us webpage which can be seen in figure 12. This was used as it matches well with the background image of the header and the embedded google map.
Typography	'Montserrat' – font-family was used for all content located in all page headers of all webpages, labels and legends and links that may require additional styling for aesthetic purposes while sans-serif is used as an alternative if such a font-family is not available for any reason. 'Roboto' – font-family is only used for contents and the fallback is sans-serif

The combination of 'Montserrat' and 'Roboto' for which one is allocated for titles, legends and labels and the other for content allows the website to have a more professional look / personality as the targed age group is 18 to 40 – users are most likely expecting the website to look professional.

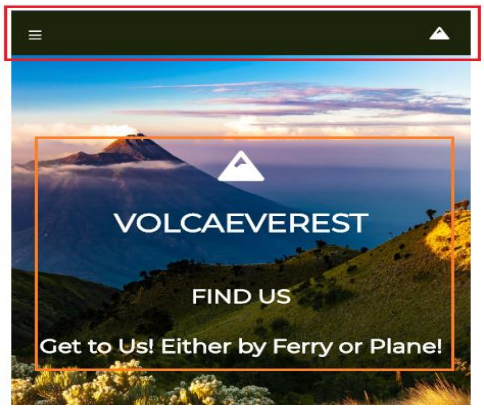


Figure 12 : Find Us page's header

Additionally, the font size of each different headers in the page headers are sized differently so that the prioritization of attention can be given to the most magnified one first. In this case, as shown in figure 12, the font size of Volcaeverest is given to be 2em while the rest of headers (located right after it in the annotated orange box) are set to have the font size of 1.5em. This is to enhance the user's attention that they have reached the resort's website and realize which part of the website that they are currently at.

The rest of the headers that are located in the main body of the webpage is also styled similarly with font-sizes being no larger than 1.2em to ensure a typography hiearchy is maintained throughout the page. The font weights are bold to ensure that it can be clearly seen as a mix of color contrast will be allocated as the background. The red annotation is the fixed navigation bar that will be located in all webpages as mentioned before. The HTML entity - &#9776 was also used to represent the hamburger menu which can be seen on the most left of the navigation bar as well as the mountainous icon which is obtained from google api on the opposite end. The icon on the opposite end takes the user to the homepage which also acts as a reminder to the users of how they ought to remember the resort by since this is a unique icon. This statement is further supported by Garret, et al. (2016). As mentioned before this navigation bar is consistenly applied throughout all webpages and it applies to the style formatting as well.

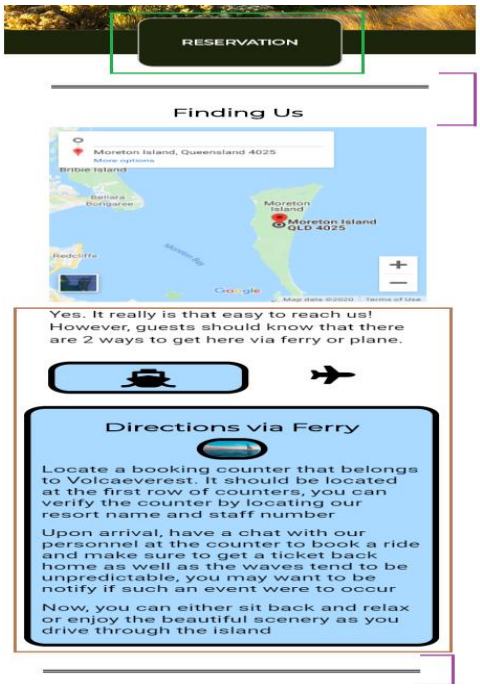


Figure 13 : Body of Find Us page

Note that figure 13 is a continuation of figure 12, this mainly consist of the main body of the page. The green annotation is styled to highlight the fact that a reservation can be made by clicking it. This is done by utilizing additional paddings to outgrow its' container to make it look more visible and noticeable as a button. Apart from the paddings, white colored borders are also given to add depth in terms of color and border radius 0.25em is applied to give it its' round corners for aesthetic purposes. In addition to ensuring the cursor would turn into a pointer when the user hovers over the reservation button, the color would also transit to a different color (#475429) as well.

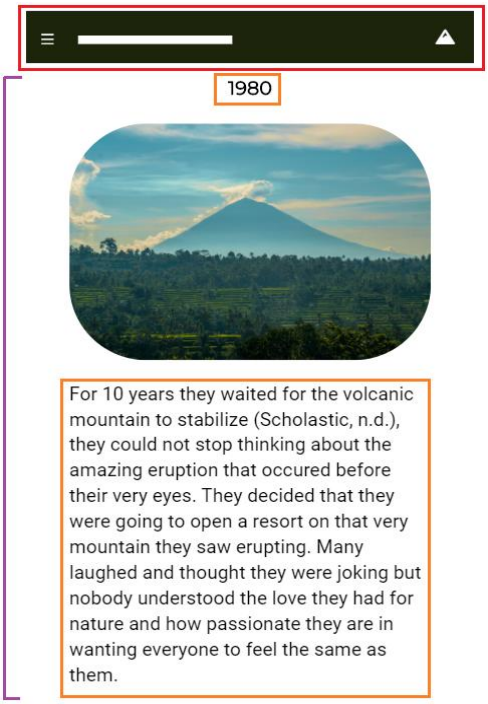


Figure 14 : A section of the About Us page

The purple annotations are the result of the feedback I have received during the aesthetics prototype user testing design activity. The feedback received includes the discussion on how I should better utilize white space and ensure that each section can be visibly seen to be disconnected from one to another which can allow user to understand that they are currently at a different section of the webpage. With the feedback, I ensure 5px double black borders on the top and bottom for each articles are applied and additional margins & spacings for better segmentation of sections. Apart from what has been explained so far in the red annotation in figure 14, the horizontal scroll indicator is an interaction that highlights the length remaining of the webpage (this only exist for the about us page). This will be further discussed in the technical implementation, but this prevents users who lack time to lose engagement as this webpage is lengthy in terms of content.

With regards to the annotation, the orange and brown annotations which can be seen in figure 14 and 13 are contents that have line-heights of 4vh. This is to ensure that the contents do not get too close to one another as these are contents which are significantly more lengthy compared to the contents from the homepage and by doing so, it would not be detrimental to the user's engagement.

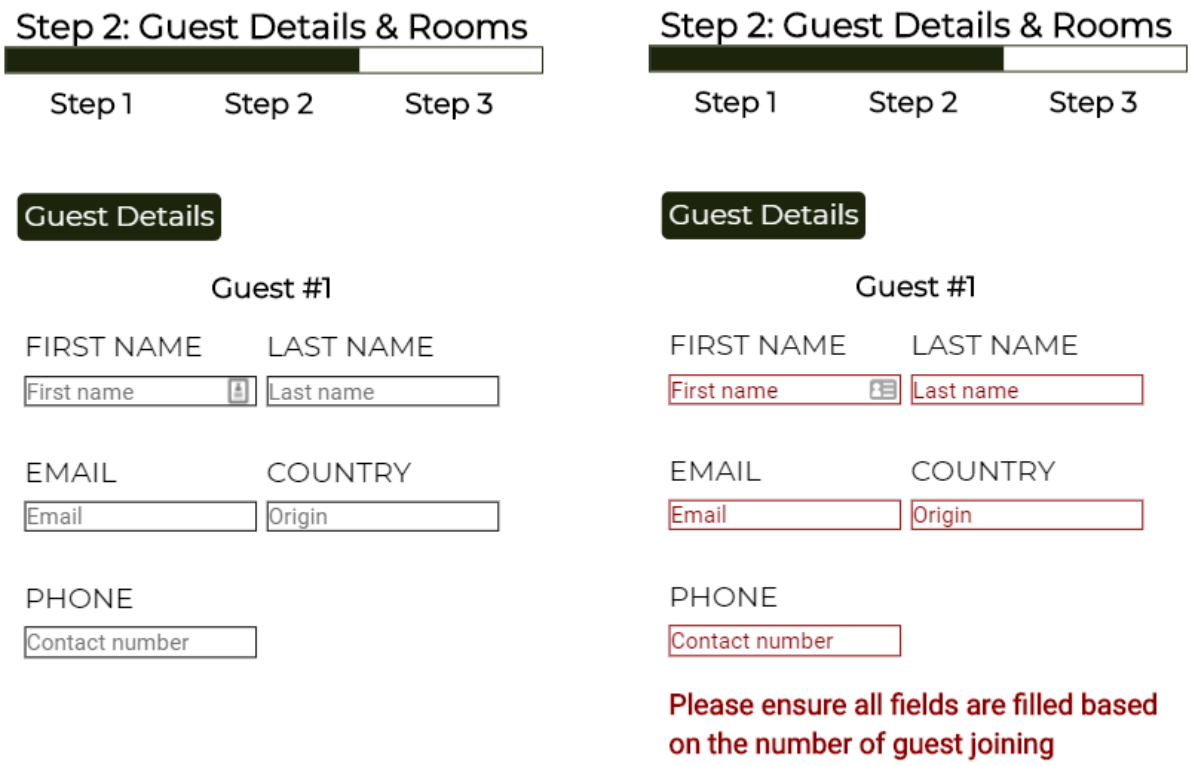


Figure 15 : Second step of reservation page - before and after the submit button is clicked

Figure above showcases the attention that needs to be given by user when a field is not filled. This is not only computer accessible (which I learned from the table discussion), but it is self-explanatory that highlighted red borders and fonts are a sign of error which users can immediately take note of and take appropriate action to fill the fields accordingly. It is computer accessible as the paragraph that informs the user that 'all fields need to be filled' at the bottom of the Guest #1 will appear when some fields are not filled when the submit button is clicked which meant that the notification is not only relying on the change in color when an error is to occur.

In addition to how each of the mockup page were achieved aesthetically and how they visually function to users. Each webpage has its' own intention as well, for example – the find us page would include detailed instructions on how the user could get to the resort and

these instructions are highlighted to pull the attention of the users as the intention of the page is to provide for such information. The users can then link the instructions with the embedded google map above. Next, the about us webpage is a page that has the whole history of the resort and this is a necessity because users tend to be more engaged when there is an inspirational story behind any success as mentioned by Lehmann et al. (2017). Lastly, the second step of the reservation (in fact all reservation steps) is designed in a simple yet minimalistic way to ensure that only necessary information is required to be given to the resort and it is easily inputted by the users so that a swift and fast reservation can be made. To achieve such result, a simple and straightforward notification must also be incorporated so that users can easily retrace their mistakes and move forward with making a reservation as quickly as possible which is the intention of the whole reservation process.

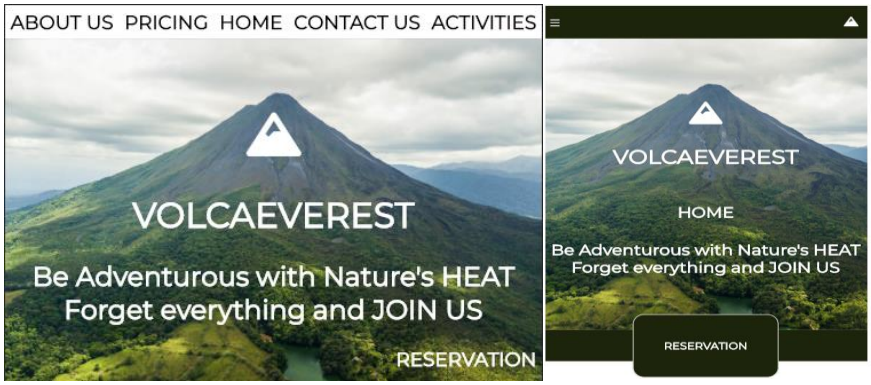


Figure 16 : Before (left) and after (right) the aesthetic prototype user testing activity

One of the most important feedback I received during the design activity is the restructuring / restyling of the navigation bar and reservation button. The feedback was related to having a hamburger icon to group all of the links as shown on the left figure as one dropdown menu (as shown on the right figure) as users tend to have large fingers and that could cause them to click on the wrong button. This would not happen on a desktop but it could possibly happen on an iPhone and as I begin the development of my website by taking the mobile first approach – I need to tend to that scenario as well. Also, it was commented that the page had too much content and a tutor pointed out that I should increase the spaces on the sides and in between each block of content so that even with the same amount of content, the spacings would cause the contents to spread out and prevent the webpage from looking too lengthy. Due to the feedbacks I have received, I am more aware of the spacings

between contents and how I should develop my website to cater for both desktop and mobile versions.

The aesthetics table discussion allowed me to understand that there needs to be a balance between aesthetically displaying my products while still effectively attracting the customers to it on the website. Next, it allowed me to be more subjective when designing my website and lastly, to be more attentive to the little details of my website as well. This balance that I understood better was applied in the rooms and activities page – initially the idea was to display each activity and room as a row on its' own which can be aesthetically pleasing but is not effective as it can cause the webpage's length to be very long. So, to mitigate that effect, all activities and rooms is styled so that they can effectively be accessed in one row. The aesthetics of the webpage is still maintained and the intention of the webpage to allow users to acquire information for any rooms or activities quickly is maintained. Next, initially, the website had many different colours involved and after implementing them – from my perspective, it was aesthetically sufficient. However, during the table discussion, I realize that more is not always better and minimalizing the number of colours involved in my website would ensure that there are no conflicts in terms of colour contrast – which let me to better understand the use of colour base and secondary colours. Lastly, I was more attentive in ensuring the little things are aesthetically pleasing such as choosing the right icons for my website. The hamburger icon was initially a Menu button, but it looked out of place with the mountain icon on the most right, which caused me to rethink and replace it with a hamburger menu icon.

Technical Implementation

Interaction 1 – Reservation popup box

Interaction 2 – Instructions displayed based on user's choice

Interaction 3 – Step 2 of reservation involving number of guest details required to be filled

Interaction 4 – Collapsible button to provide more information for an activity or a room

Interaction 5 – Horizontal scroll indicator

Interaction 6 – Dropdown menu

Table 2 : How interactions are implemented with HTML, CSS and JavaScript

No.	HTML implementation	CSS implementation	JavaScript implementation
1	This reservation popup box is a form tag that encapsulates labels, inputs and selects with each label that indicates the information required from the user such as arrival and departure dates, and number of guests along with appropriate answers provided for each labels. At the end of the form, the user will then need to 'submit' the form which is essentially an anchor tag that navigates the user to reservation step 2 webpage. A similar format is applied across all webpages except for reservation pages.	The position of the reservation popup box is fixed and will 'popup' in the middle of the webpage when clicked. However, the visibility will initially be set to be hidden. There will be an additional class (that does not exist initially) that will turn the visibility of the reservation box from hidden to visible and ensure that the user will not be able to scroll the webpage anymore.	With the versatility of toggle class, an additional class will be added to the body of the webpage and because of this, CSS can then convert the visibility of the reservation box to visible. With the same function, the exit button of the reservation box will then cause the removal of that very same class, causing the reservation box to 'disappear'.
2	There will be 2 sections dedicated for the 2 types of transportation with each section having an indicative header and figure that lets the user	A section will be chosen first and displayed with an existing class while the other section will be displayed as none making it essentially not	With the styled button-like sections, JavaScript will respond based on the user's actions. If the user clicks on the button-like plane icon, the clicked

	know the type of transportation and an ordered list tag that consists of the steps that users will need to take for that particular transportation type that they have chosen. The users will then be able to choose either of the transportation type by clicking on the button like section that includes the transport's icon.	visible on the webpage initially due to the non-existing class which have already been dedicated with CSS. The 2 button-like section mentioned from before is also styled to magnify its' function as a button.	section along with its' content will be verified to see if a certain class exist and if it does, nothing will happen since it is already being displayed but if the class does not exist, it will remove the existing class on the button-like section ship icon and its' content and adds the class on the plane icon and its' content. This will work vice versa.
3	This interaction has a similar structure to the first interaction but in the form encapsulation, there will be 4 sections for 4 guests (for this case – the resort only accepts a maximum of for guests). With each section, dedicated for information required to be inputted about each guest. Within each section, there would be headers that dedicated for each guest, labels and inputs that require information to be typed in.	CSS will then be used to ensure 3 out of the 4 sections within the form would always be displayed as none first (since there will always be 1 guest attending anyway) and if a specific class were to exist for any of the section (for which each section is for each guest), the section would then be displayed as a block and shown on the webpage.	With the use of localStorage, data on the number of guest attending will be set in the local storage and as soon as the submit button is clicked (on the popup box), JavaScript will check if there are more than 1 guest attending and if that is the case, the number of sections will be displayed accordingly with the use of adding a specific class name for the dedicated section
4	For each room and activity section in the 'product' page, there would be an additional section that will encapsulate a section that has a header that says 'More Info' and a section that has additional content for that particular room or activity.	For every additional section, the section with the 'More Info' header is styled to indicate to users that it is a button that can be clicked to allow for more information to be displayed. With that being said, the additional content will all be displayed as none	As there are multiple collapsible buttons, the id for each 'More Info' header section will be used to distinguish between each section. With each id, the section's additional content is targeted and will be displayed as a block by directly manipulating the display attribute on CSS with JavaScript. If

		initially while the more info headers can still be seen.	additional content is already displayed and the header is clicked again, the content will then be displayed as none once again with JavaScript. The icon for the header will also be changed for indicative purposes. This can be repeated and is done the same way for all the rooms and activities.
5	This is an empty section located right after the header tags in html that has the id called horizontal indicator.	The section will initially be displayed as none and has a sticky position which entails that the indicator will located in between the menu dropdown icon and the resort's icon on the top of the page. The section has a white background color with no width initially. It also has a z-index of 2 which ensures that it can be seen by the user. A max width of 75% is also allocated to it as the width of the highlighted bar tends to grow out of the webpage. By executing such style, the section will be styled to look more like a moving bar which will be explained in the next column with JavaScript.	With the use of the scroll function, the scroll position of the user can be detected and recorded. Since the intended purpose of the indicator is to let the user know of the length of the content. The scroll indicator will only be visible after the user scrolls pass the reservation button that is in the about us web page. With the measurements recorded, the width of the section will be manipulated directly in CSS with JavaScript. The horizontal scroll bar can decrease and increase depending on the user's scroll position and the indicator can be displayed and disappear whenever the user scrolls pass the reservation button.
6	This contains an unordered list of lines with anchor tags in each line that will allow users to navigate from one webpage to another. This	The unordered list of lines will have an absolute position while the hamburger menu icon is given a relative position. This ensures	When the menu icon is clicked, JavaScript will convert the unordered list to be displayed as a block and immediately starts searching for anchor tags

	structure is consistently done on all webpages of the website.	that when the menu icon is clicked, the unordered list of lines will be located right below the menu icon. However, the unordered list is set to be displayed as none initially.	within each line and upon finding the tags, JavaScript will then add a class to display each anchor tag as a block so that each line will have its' own row which produces a dropdown menu when clicked. The added classes will then be removed when the same menu icon is clicked once again.

All interactions discussed have been typed by myself through either self-learning or from the practical throughout the semester.

Table 3 : Explanations of each interaction on whether it is accessible and progressively enhanced

No.	Is it meaningful?	Is it accessible and has it been progressively enhanced?
1	It allows users to start making reservation whenever they intend to on whichever webpage that they are currently at. At the same time, users may not want to be taken to another page immediately after clicking the reservation button as they might want to continue to have a look at the rest the current webpage. It also provides the option of exiting the reservation flow if users decide to change their mind as well.	It is accessible as the reservation popup box serves as an extension of the current webpage's html which will function the same way as well. In addition to that, all buttons have good color contrasts and every label and select options are semantically labelled. It has also been progressively enhanced as users will be taken to a different page if JavaScript does not work – which essentially has the same structure as the popup box. This would mean that users would still be able to make a reservation even without the use of JavaScript. This happened because .js class could not be added.
2	Due to the font size and the google map embedded, having instructions for both types of transportation will prevent users from having the opportunity to look at the instructions while comparing them to the map provided. Having this functionality allows the user to do both which will improve user's experience.	It is accessible as all instructions have been designed so that it is simple and easy to process. Additionally, contents are also highlighted sufficiently just in case. In the case where JavaScript does not work, both instructions will be displayed and user will not need to click any buttons to switch from one instruction to another. This

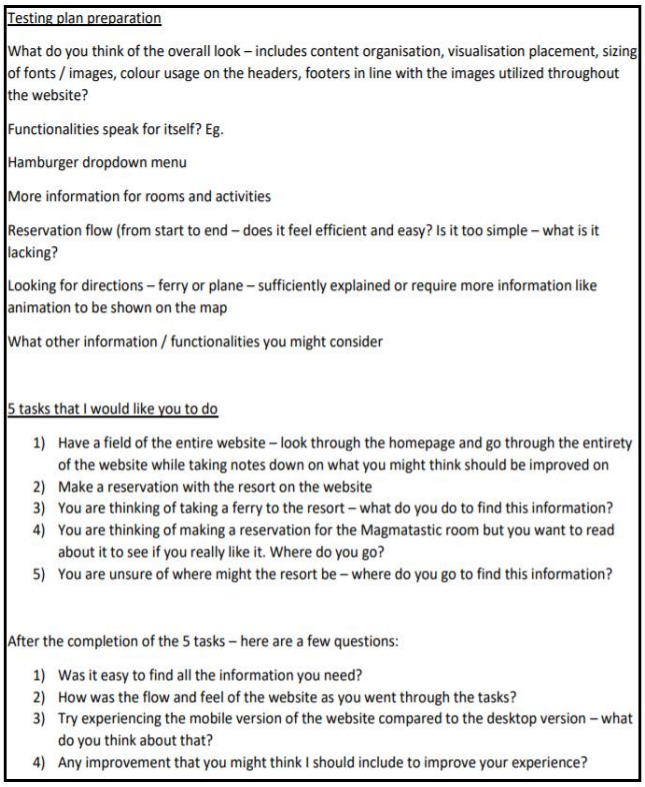
		happened because .js class could not be added.
3	The number of guests inputted by the user will manipulate the number of forms produced. This essentially prevents the webpage from getting too lengthy and reproducing sections that are not required which may cause confusion to the guests if this were to occur.	It is accessible as each form has been labelled separately and segmentations of each section was also done to avoid confusion. In addition to that, all labels and inputs are labelled meaningfully. Without JavaScript, all forms will be displayed and informative instructions will prevent users from being confused. This happened because .js class could not be added. This ensures that users will always be able to proceed with making a reservation regardless of JavaScript existing or not.
4	Users may want to scroll through the rooms and activities webpage to have a look at the types of rooms and activities available. By utilizing the collapsible button, additional content can be hidden which allows users to efficiently look through the webpage.	It is accessible as contents and headers are self-explanatory along with the flow of each room and activities which will prevent confusion. It is progressively enhance because .js class is only added when JavaScript works and if it does not, all additional content will be displayed for each room and activities.
5	Since the about us page has a high amount of content, the scroll indicator will give users who do not have time about the amount of content left so that users will not lose engagement as they scroll through the lengthy content.	The scroll indicator is highlighted with colors that can easily be seen and is easily noticeable. Without JavaScript, the scroll indicator will not be able to function. There is no way to still allow the indicator to function without the use of JavaScript but the indicator essentially disappears since .js class will not exist.
6	This is beneficial for mobile users as it will be easier for mobile users to select the webpage that they intend to visit with the dropdown menu format. Additionally, since the navigation bar is fixed to the top of all webpages, not having each links stored in the hamburger menu icon may confuse users as they scroll through the webpages.	By ensuring that the dropdown menu needs to be clicked, screen reader users will not be surprised by the sudden addition in links and each link has been organized in an understanding manner when the dropdown menu is clicked. Like the rest of the interaction, without the .js class, the links to all the webpages will be displayed across the navigation bar instead. This allows user to still visit any webpages even without JavaScript.

I learned about screen readers during the table discussion on accessibility. It gave me the impression that I have not been designing for everyone which let me to be more concern of how I design certain aspect of my website. Secondly, I learned about the need to be compliant with the WCAG 2.0 accessibility guideline and that my website can benefit from being compliant to such a guideline. Lastly, the Graceful Degradation & Progressive Enhancement table discussion made me realize that in order for my website to not lose its' functionalities even when there is no JavaScript, I must prepare for a scenario when there is no JavaScript at all. By discussing about the accessibility guideline, I ensured that if a notification is to be broadcasted to a user, that I should not only rely on colours to do but use contents as well to notify them as seen in figure 15. Progressive enhancement made me rethink my step when designing my website. A prime example is the navigation bar that has the dropdown menu. Initially, there would be no navigation bar if JavaScript were to cease to exist but due to the discussion, links to all the other webpages will be displayed instead when there is no JavaScript which meant that the website would still maintain its' level of functionality.

Final Feedback

Hi-Fi Prototype User Testing

Figure 17 : Screenshot of testing plan in Week 13



Testing plan preparation

What do you think of the overall look – includes content organisation, visualisation placement, sizing of fonts / images, colour usage on the headers, footers in line with the images utilized throughout the website?

Functionalities speak for itself? Eg.

Hamburger dropdown menu

More information for rooms and activities

Reservation flow (from start to end – does it feel efficient and easy? Is it too simple – what is it lacking?

Looking for directions – ferry or plane – sufficiently explained or require more information like animation to be shown on the map

What other information / functionalities you might consider

5 tasks that I would like you to do

1) Have a field of the entire website – look through the homepage and go through the entirety of the website while taking notes down on what you might think should be improved on
2) Make a reservation with the resort on the website
3) You are thinking of taking a ferry to the resort – what do you do to find this information?
4) You are thinking of making a reservation for the Magmatastic room but you want to read about it to see if you really like it. Where do you go?
5) You are unsure of where might the resort be – where do you go to find this information?

After the completion of the 5 tasks – here are a few questions:

1) Was it easy to find all the information you need?
2) How was the flow and feel of the website as you went through the tasks?
3) Try experiencing the mobile version of the website compared to the desktop version – what do you think about that?
4) Any improvement that you might think I should include to improve your experience?

In summary, figure 17 entails my testing plan that I have planned prior to the tutorial. The plan includes first asking the users for their opinion on the website and if there are any improvements if they have any negative comments about it. Once they have a rough idea of how to navigate through the website, I then ask them to execute a series of tasks while I observe their actions. These tasks involved interactions that I have developed with JavaScript and would allow me to quantify the value of incorporating such an interaction into the website.

Interestingly, users appreciated the minimalistic placement of content throughout each webpage and enjoyed how the contents were organised. Additionally, they also thought that the interactions were meaningful and engaging as they remembered how the old prototype used to look prior to this.

Figure 18 : Before (left) and after (right) Hi-Fi Prototype User Testing design activity

One of the most valuable feedbacks given after the design activity was mentioned by Chris – which consist of the placement of the contents. Based on the figure above, I intended to arrange the content to have a 2 column like organisation with rooms being in one column and activities being in another for the homepage (I intend to ensure all webpages would have structures that are similar in nature as well). However, by doing so, Chris mentions that users will be confused about the flow of the content as users would usually expect content to be read from left to right without a breakage in content relation and this goes against that logic (figure on the left in figure 18). This is a very valid point which made me consider the organisation of my content which resulted in the figure on the right of figure 18.

Additional feedback given my Si Cheng was the non-existing titles of each page (not for the table) but on the top of the webpage. Since I have opted for each webpage to have an image at the start of the webpage, Si Cheng's feedback discusses about how users may get confuse on which page they are currently located at and because of that, I have ensured that each page has been given a self-explanatory title so that users will not be confused. With the feedbacks I have received, I gain a better comprehension on proper organisation for my contents along with enhanced labelling for each of the section that encapsulates the contents.

Conclusion

I would say that the website is completed but not up to a very satisfactory level. I was not able to ensure that my website had a simple message chat box that could aid guests to find simple information or even reply with simple text. This can be easily done with a dictionary in JavaScript so that it could detect certain phrase and reply users instantaneously. But apart from that, I believe I've utilized the skills I have learned throughout the semester and if I could do things differently, I would have perhaps considered a different colour scheme as green isn't really the colour I was looking for initially but somehow it matches with the images I was using and I stayed with it.

Even though I have always started the exercises given on the practical before the practical itself, but I realize that throughout the development of the website. I should have also dedicated time to building it throughout the semester. Rather than starting the development in week 9 – 10, I should have started the building the structure of the HTML in week 4, determine how my website would look and the spacings for my contents in a few weeks down the road and finally take a few weeks to combine them. If I could have done this earlier on in a more consistent matter, I would have more time to add more interactions or animations to my website. But apart from that, everything still worked out and I was able to produce a website that was not fully satisfied but still satisfied enough to consider it to be a success.

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