SESSION 2020/2021 SEMESTER 1

SECV2113
HUMAN-COMPUTER INTERACTION

ALTERNATIVE ASSESSMENT

HEURISTIC EVALUATION REPORT

CASE STUDY
https://www.goldendeluxe.com.my/

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HEURISTIC EVALUATION REPORT OF

https://www.goldendeluxe.com.my/

REVIEWED BY:

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INTRODUCTION

This report will summarise on specific usability heuristic evaluation that I choose to elaborate. It consists a lot of findings from my research on the topic. Also, I state other types of usability heuristic than the one I have learned in class. By years, there are a few collections of heuristics principles from different person with different method but the same understanding.

This case study consists of a trial practice on a travel agency website to perform heuristics evaluation. Due to the current pandemic, my team that is specializing in research of the user interface (UI) and user experience (UX) faces a difficulty to interact with users. This interaction is required as we need to provide insights to our clients. By recruiting users, we can identify and improve our works. Thus, we perform heuristic evaluation on a travel agency website, https://www.goldenluxe.com.my/.

METHOD

There is a number of usability heuristics available besides the renowned 10 usability heuristics evaluations by Jakob Nielsen (1994). Here are stated three other types of usability heuristics that I can find from any valid reference points. Also, I will provide explanation for each three types of usabily heuristics.

(a) Weinschenk and Barker 2000

Firstly, Susan Weinschenk and Dean Barker as known as 'Weinschenk and Barker 2000' has researched on usabilty heuristics from many sources including Nielsen's (Wikipedia). This duo has listed a list of 20 types of usability heuristics and guidelines.

Priniciples	Description
User control	The interface will allow the user to perceive that they are in control and will allow appropriate control.
Human limitations	The interface will not overload the user's cognitive, visual, auditory, tactile, or motor limits.

Modal integrity	The interface will fit individual tasks within whatever modality is being used: auditory, visual, or motor/kinesthetic.
Accommodation	The interface will fit the way each user group works and thinks.
Linguistic clarity	The interface will communicate as efficiently as possible.
Aesthetic integrity	The interface will have an attractive and appropriate design.
Simplicity	The interface will present elements simply.
Predictability	The interface will behave in a manner such that users can accurately predict what will happen next.
Interpretation	The interface will make reasonable guesses about what the user is trying to do.
Accuracy	The interface will be free from errors.
Technical clarity	The interface will have the highest possible fidelity.
Flexibility	The interface will allow the user to adjust the design for custom use.
Fulfillment	The interface will provide a satisfying user experience.
Cultural propriety	The interface will match the user's social customs and expectations.
Suitable tempo	The interface will operate at a tempo suitable to the user.
Consistency	The interface will be consistent.
User supoort	The interface will provide additional assistance as needed or requested.

Precision	The interface will allow the users to perform a task exactly.
Forgiveness	The interface will make actions recoverable.
Responsiveness	The interface will inform users about the results of their actions and the interface's status.

One of their heuristics that I think is a good catch is suitable tempo. Suitable tempo means the interface that is being used will cooperate at a tempo or speed suitable to the user. This is because of human factors that must keep up with computer's speed of performance. It is shown that if the pace of the conversation with the computer which the content spoken is too slow or too fast, users become frustated as they must try speeding up to interact. This may result in more errors while user is performing the operation. Hence, a stable pace of speed that can be beneficial and comfortable of use for the user. The best speed may be achieved by doing a prototype and tested by real users to assure the suitable tempo for most users.

(b) Eight Golden Rules of Interface Design by Ben Shneiderman

Secondly, an own collection of principles that is called 'Eight Golden Rules of Interface Design' that is created by Ben Shneiderman (Ana Santos, 2018). As the name itself, he has created eight greatest guides to a solid interaction design.

Principles	Description
Strive for consistency	Consistent sequences of actions should be required in similar situations
Seek universal usability	Recognize the needs of diverse users and design for plasticity, facilitating transformation of content.
Offer informative feedback	For every user action, there should be an interface feedback. For frequent and minor actions, the response can be modest, whereas

	for infrequent and major actions, the response should be more substantial.
Design dialogues to yield closure	Sequences of actions should be organized into groups with a beginning, middle, and end.
Prevent errors	As much as possible, design the interface so that users cannot make serious errors. Erroneous actions should leave the interface state unchanged, or the interface should give instructions about restoring the state.
Permit easy reversal of actions	Actions should be reversible. This feature relieves anxiety, since users know that errors can be undone, and encourages exploration of unfamiliar options.
Keep users in control	Experienced users strongly desire the sense that they are in charge of the interface and that the interface responds to their actions.
Reduce short-term memory load	Humans' limited capacity for information processing in short-term memory.

I will go through the last rule which is reduce short-term memory load. For me, this is quite unique as in most of others' heuristics evaluations, this issue is not being called. As human, our attention span is limited to make our work better. In simple way, human find it is easier to recognize information than to recall it. This term is quite like Nielsen's principles, but this is from Shneiderman's perspective. For the operation, the interface must be kept simple and consistent, have a compatible of patterns, standard and conventions in the interface. By obeying this, it can lead users to have a better recgonition and ease of use.

(c) **Gerhardt-Powals' cognitive engineering principles**

Thirdly, Jill Gerhardt-Powals has evolved a set of cognitive engineering principles of enhancing human-computer performance. Basically, his principles are quite similar to Nielsen's

heuristics but with a more integrated approach to evaluation. Gerhardt-Powals' principles are listed with 10 principles (Wikipedia).

Principles	Description
Automate unwanted workload	Eliminate mental calculations, estimations, comparisons, and any unnecessary thinking, to free cognitive resources for high-level tasks.
Reduce uncertainty	Display data in a manner that is clear and obvious to reduce decision time and error.
Fuse data	Bring together lower level data into a higher level summation to reduce cognitive load.
Present new information with meaningful aids to interpretation	New information should be presented within familiar frameworks (e.g., schemas, metaphors, everyday terms) so that information is easier to absorb.
Use names that are conceptually related to function	Display names and labels should be context-dependent, which will improve recall and recognition.
Group data in consistently meaningful ways	Within a screen, data should be logically grouped; across screens, it should be consistently grouped. This will decrease information search time.
Limit data-driven tasks	Use color and graphics, for example, to reduce the time spent assimilating raw data.
Include in the display only information needed by the user at a given time	Exclude extraneous information that is not relevant to current tasks so that the user can focus attention on critical data.
Provide multiple coding of data when appropriate	The system should provide data in varying formats and/or levels of detail in order to promote cognitive flexibility and satisfy user preferences.

Practice judicious redundancy	In order to be consistent, it is sometimes necessary to include more information than may be needed at a given time.

One of the principles that I want to elaborate is group data in consistently meaningful ways. It is explained that within a screen, data should be logically grouped such as across screens, left on the screen, top of the screen or more. This data that is consistently being grouped will decrease the search time to find an information. A navigation is created that grouped a category in one place on a website can save the users' time when searching on a specific subject. For example, user wants to search places in Malaysia to visit so they may click on 'Domestic' and there will be a list of places inside of Malaysia only. They will not encounter with places outside of Malaysia that they are not looking into.

One type of usability heuristics that I plan to use for my evaluation is the 10 principles from Jakob Nielsen's Heuristics (Nielsen, 1994). As the client is in travel industry, it is important to keep good relationship and provide best service for the user. The user's experience while using the service starting from exploring the website is important to be evaluated. Hence, I choose Neilsen's as his priniciples are most common and relatable with the user. Let us look at one of the principles which is offer help and documentation. This principle allows users with understandable and accessible help. Also, when in unavoidable situation, a documentation is reachable by users to look into any product or specific contentitself in a findable and usable way. In my evaluation, I think this is the most suitable principle because on their website, I could not find any shortcut to any features on their website. The shortcut I am explaining is the shortest way to access to the required task by the users. I am thinking of a search box that users can enter their keyword on their finding and will be directed to the page easily. In result, it will give a good experience to the user as they will not spend a lot of time on the website searching for their needs.

Severity rating is used to allocate the most resources to fix the most serious problems besides provide a rough estimate of the need for additional usability efforts. In simple way, severity rating is used to detect issues that exist and is looking for the solution to it any way possible in a short time. Jakob Nielsen has come up with two scales of severity rating (Nielsen, 1994). The first scale is the one we learned in our HCI class which is a single rating scale from 0 to 4. A problem

with 0 is not classified as a usability problem, a rating of 1 signify a cosmetic issue that will only be fixed when the time allows, a rating of 2 denotes a minor issue which hinders the user's ability and should be fixed anytime possible, a rating of 3 signals a major issue which is important and requires a repair as soon as possible and a rating of 4 prohibits users from performing their task and demands an immediate modification. The second scale that Nielsen comes up is the combination of three factors which is the frequency the problem occurs, the aftermath of the problem if it occurs and the perserverance of the problem.

Alongside my chosen heuristics that involves with users' satisfaction, so it could be ranked by severity rating with a scale of 0 to 4. In my case study, a major issue occurs, this may frustates or confuses the users and the demands a repair as soon as possible. How this major issue circulates is without the search box feature on the website, users may feel frustated and feels delayed in time to perform a task. .

In my case study, it is difficult to fully interact with users due to the current pandemic. Hence, a heuristic evaluation on client's existing website is being performed to ensure the the team can continue to provide insights to client. A trial practice of heuristic evalution is being assesed on a travel agency website, https://www.goldendeluxe.com.my. For a website in categories of travel agency, it is compulsory to have a friendly-user, concise information and a neat website interface. This is because, the user's first impression when they first visit the website. As they are going to find a travel agency, it is da etermining factor to trust the recommendation and information found through the website. Thus, the website itself must be beneficial and vibrant for user to experiences a good time and distribute the good review.

Mohd Adrian is 35 years old, working as a businessman and has a family of four which is his wife, Alia and their two children. Adrian has been planning a short trip for his family around March 2020 along his children's school midyear break. However, by the middle of the month, a pandemic has revolved around the world. Hence, his plan had to be postponed to another time. He is thinking for a better and proper planning on his trip since it is postponed. Adrian has found out about a website that can ease his planning for travelling. Firstly, he needs to schedule his trip well by choosing the places to visit, the tickets he must buy including flight tickets, the services the travel agency provide and more. When he accesses the website, he directly wants to search the place that has been in his mind since weeks ago. He finds for the search box on the website as it

will ease him to directly acces him to the information of the country he wants to visit. Adrian feels a bit frustated as the website does not provide a search box hence, he needs to go through the navigation on the top of the main page and finds his preferable place. When he could save time on researching as he already has his plan, but still needs to go through the whole page.

Other than that, Adrian needs to contact the person in charge from the travel agency team as he requires more information on the enquiries. In addition, he is interersted using this agency's services and needs to read reviews on their services by previous. The contact information icon is stated on the website such as their Facebook, Instagram and WhatsApp. However, when Adrian clicks on the WhatsApp icon to reach them out, he is directed to an invalid link. Next, he proceeds to check out their social media page for customer reviews', he is directed to their Facebook page when he clicks both Facebook and Instagram icon. In result, he feels confused with their information contact feature.

Typically, as a user on their website, Adrian wants to find the FAQ page on the website. FAQ stands for frequently asked questions and known as a page on a website that display quick answers to commonly asked questions or services by customer. Adrian though of maybe his curiosity can be answered when he accesess to the page. Unfortunately, the website does not have a FAQ page. With the creation of FAQ page, it offers a lot benefits to the users. For example, it will provide quick information to help user make a purchasing decision and improve the users' experience. Not only it beneficial to the user, it will reduce the staff's time to answer simple and common answers.

RESULTS

Image
1.

Identified Issue	Heuristic category	Severity Rating (Scale 1-4)
List of ticket price should be more detailed: provide the availability of the ticket.	H1: Visibility of system status	S3: Major issue

2.

Our Story. We've been providing travel services with the same unwavering passion since 1986.

Golden Deluxe Travel Service Agency Sdn Bhd was incorporated as Golden Deluxe Service Agency and expend from just a small & humble service agency to its existing name. Our Company simple and effective philosophy, lies a relationship with the customer so immense that it can only be compared to something that we treasured you most with the best possible way of services. For us, it means heart and soul effort in planning your itinerary. And for us it's not just a tour, it's really our

Our Accolades

Singapore Airlines
Top Agents Award 2001 / 2002
Top Agents Award 2002 / 2003
Kuala Lumpur Top Agents Award 2003 / 2004
Top Agents Award 2004 / 2005 Kuala Lumpur
Top Agents Award 2005 / 2006 Kuala Lumpur
Top Agents Award Financial Year 2006 / 2007
Top Agents Award 2007 / 2008 Kuala Lumpur
Top Agents Award 2008 / 2009 Kuala Lumpur
Top Agent Sales 2009 / 2010
Top Agency Sales FY 2010 / 2011
Top Agency Sales FY 2011 / 2012
Kuala Lumpur Top Agency Sales FY 2012 / 2013
Singapore Airlines FY 2013 / 2014 Appreciation Award
Singapore Airlines FY 2014 / 2015 Kuala Lumpur Top Agency Sales
Singapore Airlines FY 2015 / 2016 Top Agency Sales
Singapore Airlines FY 2017 / 2018 Top Agency Sales

Emirates Airline
Outstanding Sales Support 2012 / 2013
Sales Performance Award 2015 / 2016
Sales Performance Award 2016 / 2017

Malaysia Airlines
Silver Award 1999 / 2000
Silver 2012 Outstanding Sales Achievement

Eva Air
Best Performance 2010 – 2011
Excellent Performance Award 2014
Excellent Performance Award 2015
Top Achievement Award 2016

The About Us page should be delivering simple definitions and example to their clarifications on their services. Also, users would prefer to view a FAQ page.	H2: Match between system and real world	S2: Minor issue

3.		
Users may accidentally click on submit button. An undo action will be okay for the users.	H3: User control and freedom	S3: Major issue

4.

Two icon buttons placed at the same place that requires the user to wander clicking on which option they want to perform: social media links or send message.	H4: Consistency and standards	S1: Cosmetic issue

5.

User may put the wrong code for country and may enter extra digits than the verified digit for any telephone number.	H5: Error prevention	S3: Major issue
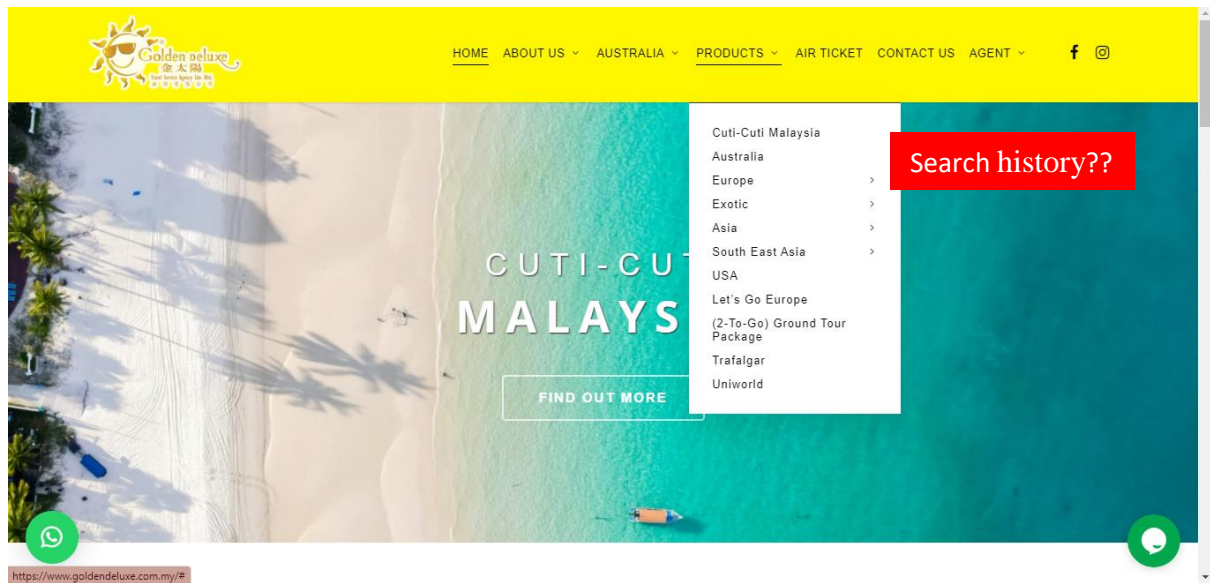
6.		
User always survey on a website for a few times, it is difficult for them to start searching on their search from the first click again.	H6: Recognition rather than recall	S2: Minor issue

7.
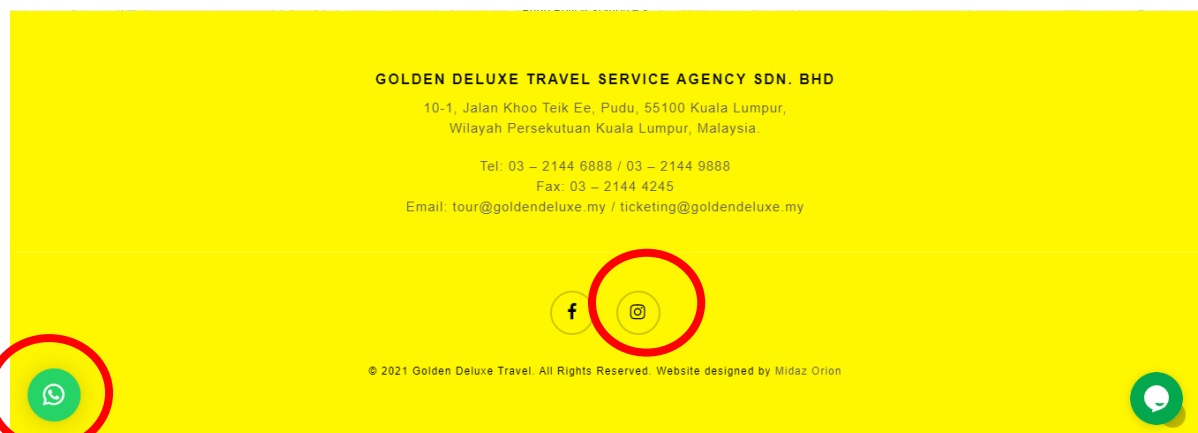
Some of the contact information provided was invalid and was a wrong access link. • Whatsapp link – invalid link • Instagram icon – access to Facebook	H7: Flexibility an efficiency of use	S3: Major issue

8.

|		
Itinerary part on each country or states's page is not necessarily to be put so big, and in another type of file (PDF).	H8: Aesthetic and minimalist design	S1: Cosmetic issue

9.
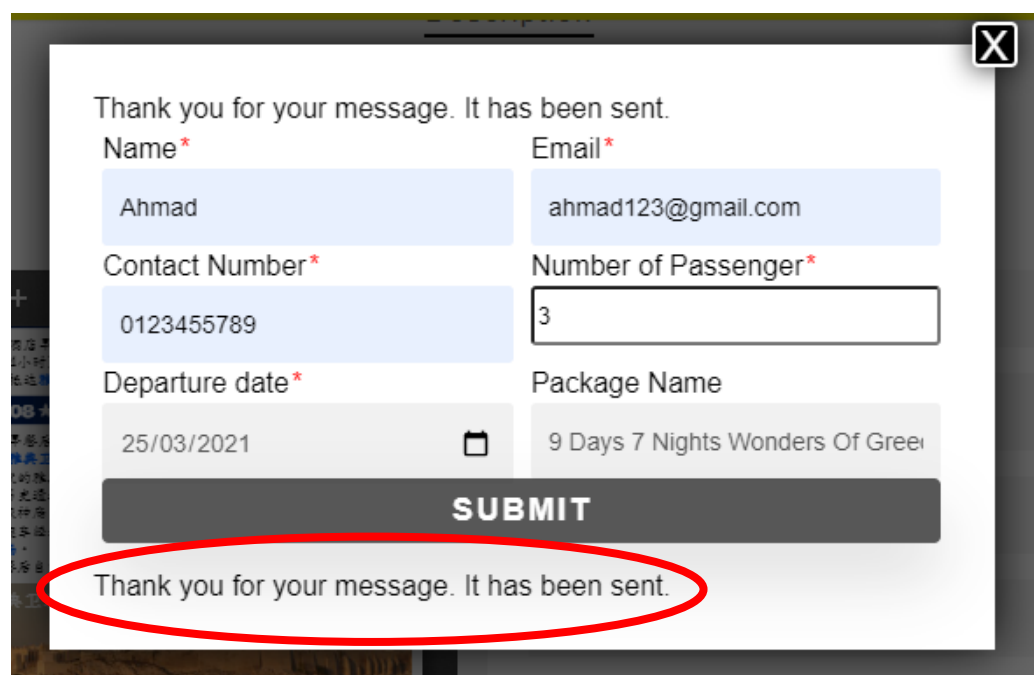
After customer enquiry any country or place, the submission is directly sent to the system. Users may constructively click on Submit button.	H9: Help users recognize, diagnose, recover from errors	S2: Minor issue

10.
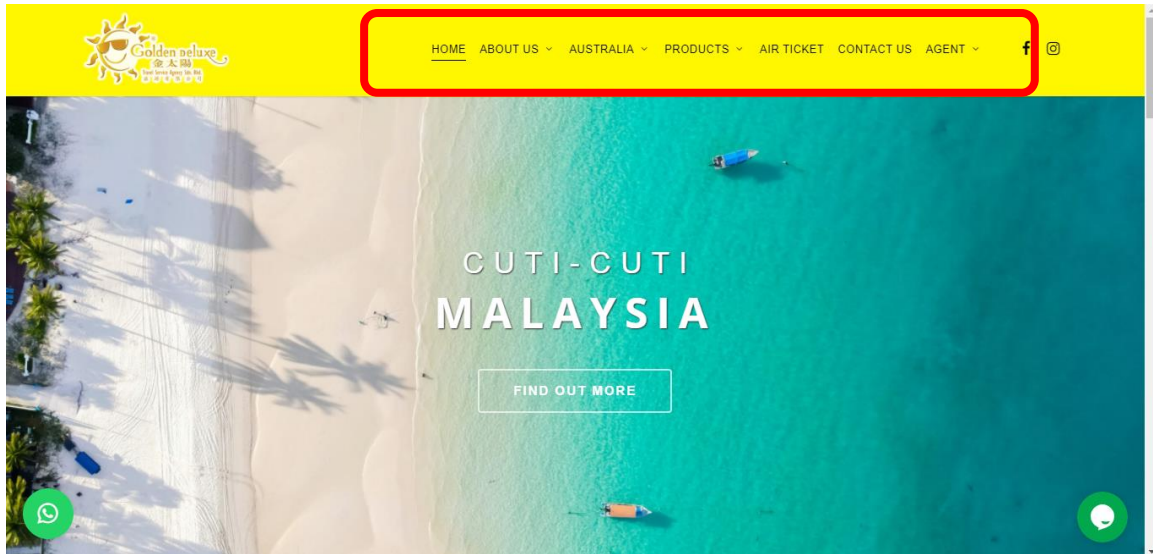
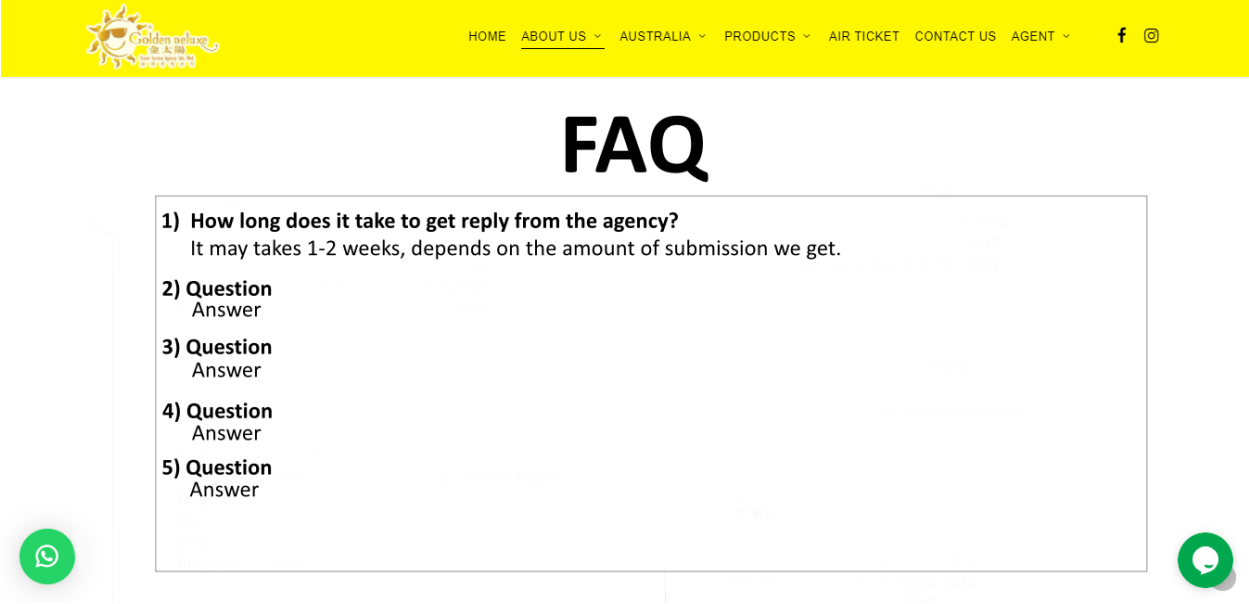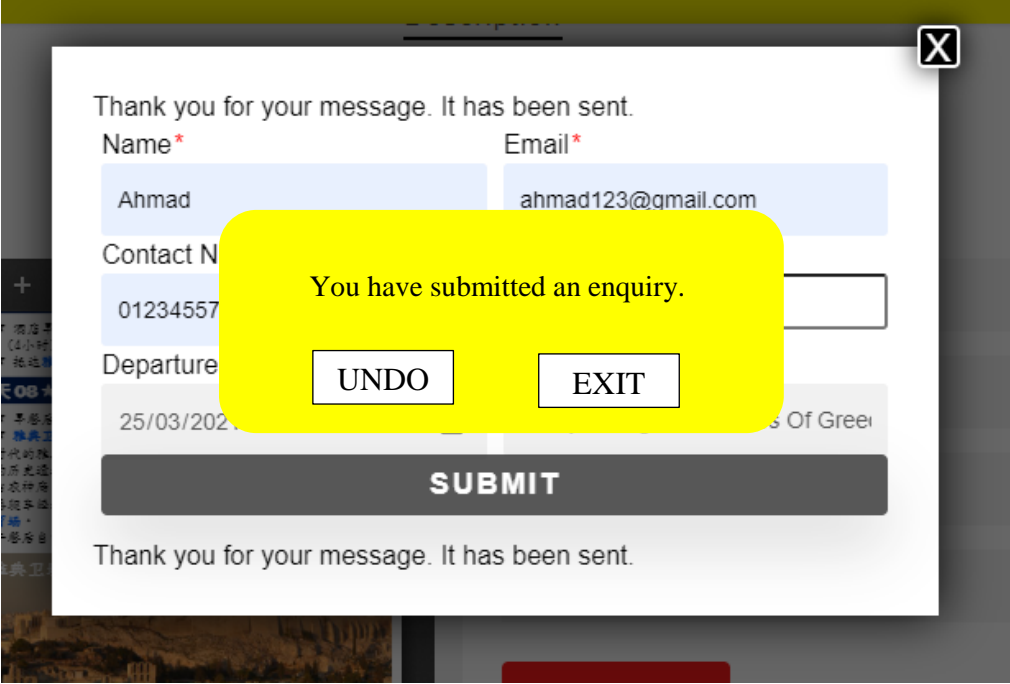| Users may think it is easier to search and focus on their desired task, other than finding it on the navigated feature. It is necessary to provide help or shortcut for the user.	H10: Help and documentation	S2: Minor issue

11.
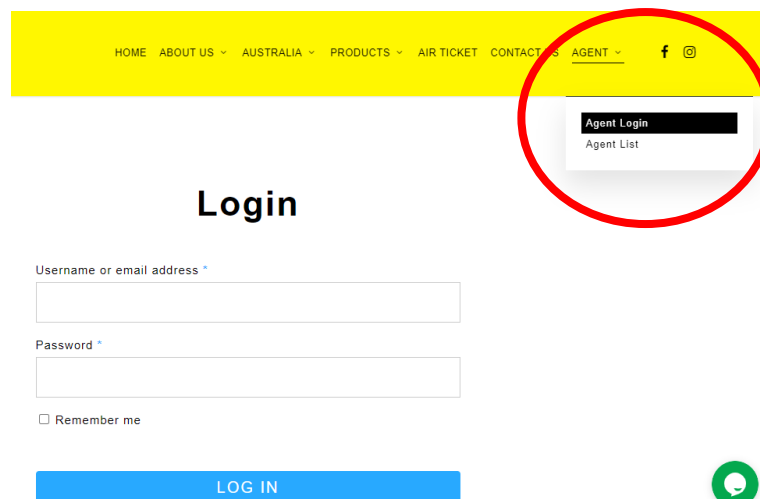
Besides agent's account, they should enable for cutomers to sign up create for an account.	H10: Offer help and documentation	S2: Minor issue

DISCUSSION

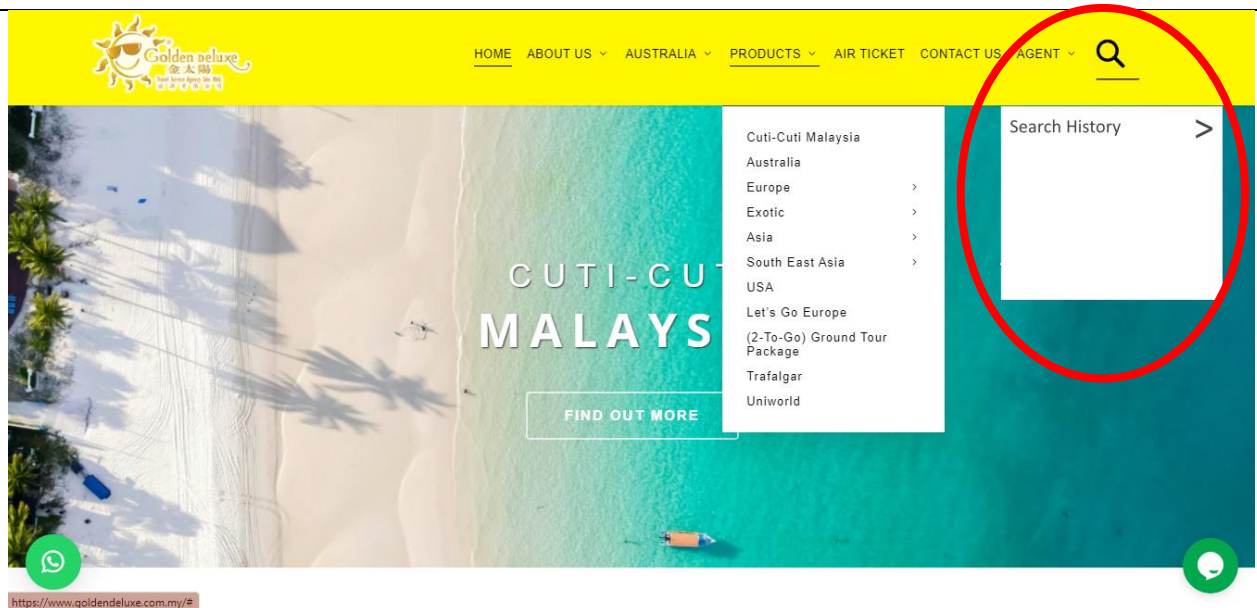| No.	Improved Image and Explanation
1.	 Display availabilty of ticket: sold out, still available, only a few left or more. This appropriate message gives the status of the ticket to the user.
2.	

They can create a frequently asked questions (FAQ) page that users can click and read on it. Instantly, the website provides understandable answers to questions that are commonly asked by users. Thus, this could save time of the staff in charge of their hotline to be answering FAQ questions from customers.

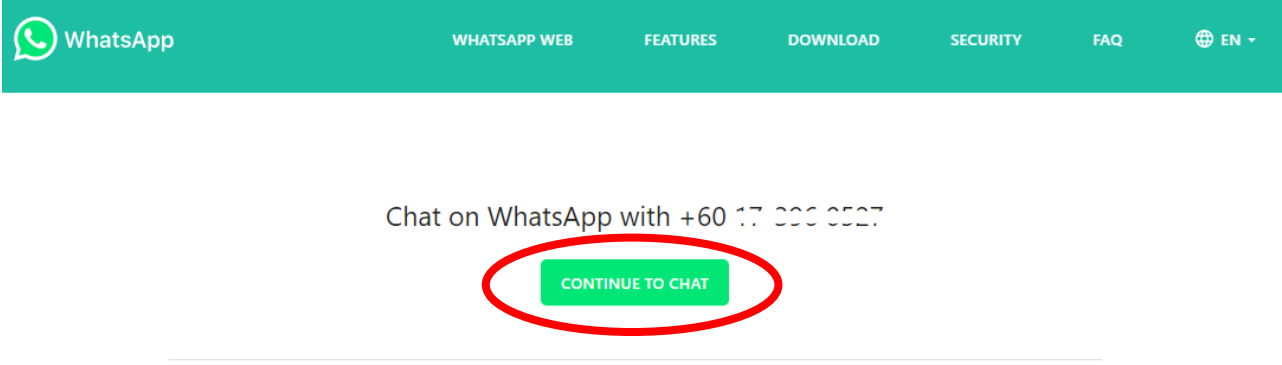|	
	With an offer of a confirmation dialog to undo action, it allows user to cancel submitting the enquiry they have submitted by accident.
4.	 (Icons have been rearranged.) (This when users click on the main icon – sub icon appears.) Rearrange the icons so they can look neat and understandable, also follow the standards conventions on the website.

5.	
	Use forgiving formatting. A desired format should be displayed at the field so the user can choose their country calling code (e.g: +60) and confirm that they entered their phone number with the typical format (e.g: 11 digits).
6.	
	Users may need a search history feature. They will be able to track their previous search on the website.

7.

An official website should provide a valid link for customer to access. This will prevent confusion to users. |
| 8. |

The big PDF file can be reduced into minimalist design by just displaying the submenu title under Itinerary and when the users want to know about certain aspect, they can click and it will shows more details of it. |
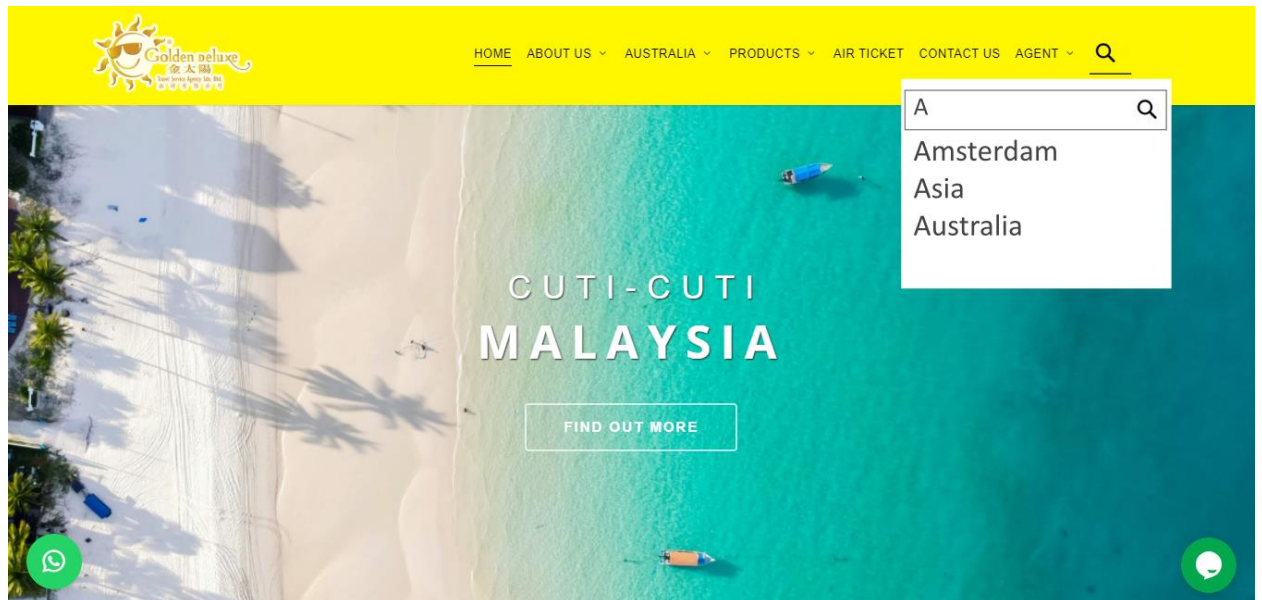| 9. | |

Confirmation or error messages should be display in plain language (e.g: Yes, No, OK). This should be precisely indicating problem, confirming any choice and constructively suggest a solution.

| 10. | |

The website can offers in-app help and documentation by creating a prominent search box with title (e.g: How can we help?). Despite the different countries and places represented on the website, users

	can instanly search keywords on the search box. This will be a living help that will be updated regularly on the website.
11.	 By enabling customers to create an account for the website too, they can secure and store the data and their searches on the website.

CONCLUSION

This was the second time I have done the heuristic evaluation. Previously, my group members and I completed it for our Assignment 3 in Human Computer Interaction (HCI) class. In this case study, what I learned after evaluating the usability heuristic is that an expert heuristic evaluator can perform an evaluation on a website and they can solve it using major usability testing. Generally, the heuristic evaluation is a good way to identify the usability problem on a website or in an application. Before we are recruiting usability experts, we may do a user testing on the testing acting ourselves as the user. By that, we can identify and recognize where are the mistake and can be done an improvement.

REFERENCES

1. Ana Santos, (2018), *8 Golden Rules for Better Interface Design.* [Online] Available at: https://webdesign.tutsplus.com/articles/8-golden-rules-for-better-interface-design--cms-30886
[Accessed: 27th January 2021]

2. Courtney Jordan, (2017), *Every Expert Has A Severity Scale: Which is Most Effective?.* [Online] Available at:
https://medium.com/@courtneyjordan/every-expert-has-a-severity-scale-which-is-most-effective-2eeb3e2f21ad
[Accessed: 27th January 2021]

3. Nick Babich, (2020), *10 Usability Heuristics and How to Apply Them to Product Design,* UX Planet. [Online] Available at: https://uxplanet.org/10-usability-heuristics-and-how-to-apply-them-to-product-design-dd4a4a06d78c
[Accessed: 28th January 2021]

4. Nielson, (1994), *10 Usability Heuristics for User Interface Design*, Nielson Norman Group. [Online] Available at:
https://www.nngroup.com/articles/ten-usability-heuristics/
[Accessed: 28th January 2021]

5. Norbi Gaal, (2017), *Heuristic Analysis in the Design Process*. [Online] Available at: https://uxdesign.cc/heuristic-analysis-in-the-design-process-usability-inspection-methods-d200768eb38d
[Accessed: 27th January 2021]

6. Wikipedia, *Heuristic Evaluation,* Wikepedia, the free encyclopedia. [Online] Available at: https://en.wikipedia.org/wiki/Heuristic_evaluation
[Accessed: 27th January 2021]