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HUMAN COMPUTER INTERACTION

URL OF THE REVIEWED WEBSITE : <https://ezbuy.my/>

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Introduction

In this report or the case study report on Heuristic Evaluation , students are asked to identify the some different types of usability heuristics that can be used for evaluation , explain about those usability heuristics and identify the severity about the system that they have been asked to review . The student has also been asked to do the user and task analysis, conceptual and Physical design even prototyping and evaluation. This may allow the student to be more exposed to the Heuristic Evaluation and will have more experience of being a user interface designer and user experience designer. This also allows the student to have a chance to apply knowledge that has been taught in the classroom in project or in real life.

For this case study , I will study the user interface of an online shopping platform named “ezbuy”. According to the internet , ezbuy was found in 2012 and it is formerly known as 65daigou. Ezbuy is a company that specializes in overseas purchasing, logistics and marketing . Ezbuy provides users the platform to be able to buy items they want to purchase online. For this case study report, I will explore and try the user interface of the ezbuy and identify Nielsen's heuristics to evaluate the ezbuy’s user interfaces, and rate the severity of each issue that I found. After that I will have to do the user and task analysis, conceptual and Physical design even prototyping and heuristic evaluation.

Methods

Item 1

Based on my case study, the heuristic evaluations are Ben shneiderman's Eight Golden Rules of Interface Design and Christian Bastien and Dominique Scapin created 18 Ergonomic criteria for the evaluation of human-computer interface(1987) and Jakob Nielsen's Heuristics for User Interface Design (1994 version).

The reason I chose those methods is that I think those methods are more suitable to evaluate software, website and phone application. On top of that, the user interface I reviewed is an online platform which can be displayed on a website and phone application. It is not a hardware or hardware system. Ben Shneiderman's Eight Golden Rules of Interface Design and the Christian Bastien and Dominique's 18 Ergonomic criteria for the evaluation of human-computer interface(1987) has some usability heuristic that is different from Jakob Nielsen's heuristic. Besides that, it also has some usability heuristics that is more detailed.

Item 2

I suggest that I do the Heuristic evaluation based on Jakob Nielsen's Heuristics for User Interface Design (1994 version) and also Christian Bastien and Dominique Scapin's 18 Ergonomic criteria for the evaluation of human-computer interfaces. The ergonomic criteria that I will use is Guidance. Guidance is to advise, orient, inform, instruct and guide user throughout the interface. There are some usability heuristics that I would use and I have listed them below. It refers to the article by Jakob Nielsen on April 24, 1994. (10 Heuristics for User Interface Design: Article by Jakob Nielsen, 2020)

Visibility of system status

This heuristic refers to how well the state of the system or the interface is conveying the users. It means the system should always keep the user informed of the things that are happening in a reasonable time through appropriate feedback. This should allow the user to make decisions based on that information. It does not need to have much information. (10 Heuristics for User Interface Design: Article by Jakob Nielsen, 2020)

Match between system and the real world

It means that the system should use the user's language. The words, phrases and concepts should be familiar to the user and do not use system-oriented terms that the user is not familiar with and do not understand. Besides that, the system or interface should follow the real-world conventions so that it makes the information appear in a natural and logical order. (10 Heuristics for User Interface Design: Article by Jakob Nielsen, 2020)

User control and freedom

It states that the user always choose system functions by mistake, and need clearly marked "emergency exit" to leave the unwanted state. And the process should not make the users go through an extended dialogue. The system should support undo and redo option and even cancel option . (10 Heuristics for User Interface Design: Article by Jakob Nielsen, 2020)

Consistency and standards

This is very important to ensure that the user interface is predictable and learnable. Users should not have to wonder and think whether different words, situations, or actions mean the same thing or it does not mean the same. The interface should follow platform conventions so that the interface does not force the user to learn something new. (10 Heuristics for User Interface Design: Article by Jakob Nielsen, 2020)

Error prevention

The system should be able to prevent the user from making errors. This is better than good error messages which is a careful design that prevents problems from occurring in the first place. It can either eliminate error-prone conditions or check for them and display a confirmation option to them before they commit to the action so that the problem can be prevented.(10 Heuristics for User Interface Design: Article by Jakob Nielsen, 2020)

Recognition rather than recall

The interface should be able to minimize the user's memory load by making objects, actions, and options visible. The user should not need to remember or memorize the information from one part of the dialogue to another. Instructions for use of the system should be visible, with more cues or easily retrievable whenever it is appropriate.(10 Heuristics for User Interface Design: Article by Jakob Nielsen, 2020)

Flexibility and efficiency of use

This heuristic helps users to be more effective and make the user comfortable with the user interface. It should be a highly usable interface or system that is efficient for experts and user friendly for newbies. The accelerators which are unseen by the novice user could speed up the interaction for the expert user or the experienced user such that the system can cater to both inexperienced and experienced users. The interface should allow users to tailor frequent actions.(10 Heuristics for User Interface Design: Article by Jakob Nielsen, 2020)

Aesthetic and minimalist design

This heuristic is more about making sure to keep the contents and visual of the user interface focusing on essentials. Every extra unit of information in a user interface will compete with the relevant units of information and diminishes their relative visibility. User interface should

not contain information which is irrelevant or rarely needed or even for decoration .(10 Heuristics for User Interface Design: Article by Jakob Nielsen, 2020)

Help users recognize, diagnose, and recover from errors

The user interface should help users to recognize , diagnose and recover from errors. The interface should display Error messages should be expressed in plain language , indicate the problem precisely, and provide a solution for the user that can solve the problem immediately.(10 Heuristics for User Interface Design: Article by Jakob Nielsen, 2020)

Help and documentation

Although, it would be better for an interface to provide documentation , but it may be necessary to provide help and documentation. The interface should make sure that the user can search for help easily. The documentation provided should focus on the user's task and list out concrete steps to be carried out and it should not be too large. (10 Heuristics for User Interface Design: Article by Jakob Nielsen, 2020)

ITEM 3

The rating system that i would use along my heuristics is severity ratings in Heuristic Evaluation proposed by Jakob Nielsen . It is used to judge the severity of usability problems that I found by heuristic evaluation. The severity rating can help us to allocate the most resources to solve the most serious problems and provide a rough estimation of the need for extra usability effort to solve the problem facing . It is said that there are some factors that contribute to the severity of a problem which are its frequency of occurrence (whether common or rare), its impact on users (whether it is easy or difficult to overcome), and its persistence (whether it needs to be overcome once or repeatedly). By thinking about this ,we can decide which severity suits the issues. The scale severity rating i will use are as following

Rating 0 :

This is the rating that indicates that i do not agree that the issue or the problem is a usability problem.

Rating 1:

It is a cosmetic issue. It affects the appearance and it does not need not to be fixed unless extra time is available on the project and if the time permits.

Rating 2:

It is a minor issue. It hinders the user's ability to navigate and should be fixed when possible and the needs to fix is low priority.

Rating 3 :

It is a major issue. This issue frustrates or confuses the users and it is require to be repair as soon as possible. The priority to fix this issue is high.

Rating 4 :

It is a catastrophic issue. It prohibits users from performing their given task and requires an immediate modification. It is imperative to fix before the product can be released.

I choose this rating system because it is not so less and not so many options. It makes it easier for me to decide what the severity of the issue is. When the option is very less for example 3 , it would not be so detailed about the severity of the problem found. On top of that, the sequence of the scale is from low to high , which means it is from not serious to extremely serious. There are clear differences between each rating which will also make it easier for me to decide the severity of the issues.

ITEM 4

Persona

Cindy Lee is a production manager in a food factory located in an industrial area in Sungai Petani, Kedah. She is a wife of a civil engineer and a mother of two kids. She is a quite busy person and only free during Saturday and Sunday. During this covid-19 outbreak , malaysian are not allowed to simply go out and the store out there mostly did not open for business. Her elder son's birthday is around the corner. She would like to give him a birthday present as she promised him last year when she was not able to celebrate his birthday and did not give him a birthday present. On top of that, her elder son has a good grade in UPSR. Hence she decided to buy the gift online using the ezbuy.

Scenario for Task 1 :

It's a friday afternoon, Cindy lee is very free as people are not allowed to simply go out from house during the covid-19 outbreaks and the Malaysian movement control order . She decided to spend her time searching for items that she wanted to buy for her elder son as a gift. She decided to buy a watch for her elder son. She finds and compares the watch price and its details . After she decides on which to buy , she adds the purchase to her cart.

Scenario for Task 2 :

After she is really sure that she will buy it, she clicks the check out button. After that , there is a login or register page pop out. Hence , she starts to register and login into the ezbuy.

Scenario for Task 3 :

After login to her ezbuy account, she place the order and pays for the item.

Results

Item 6

Task : Search , compare , decide and add items that would like to purchase to cart.

Task : Sign up or register

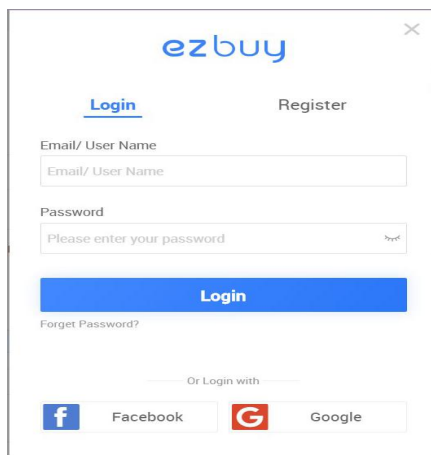
Violation 1 : The word “login” in the register pop over for the user is not so suitable

Heuristic violated : Match between system and real world.

Severity : 3 .It is because it may confuse users whether it is for login or register.

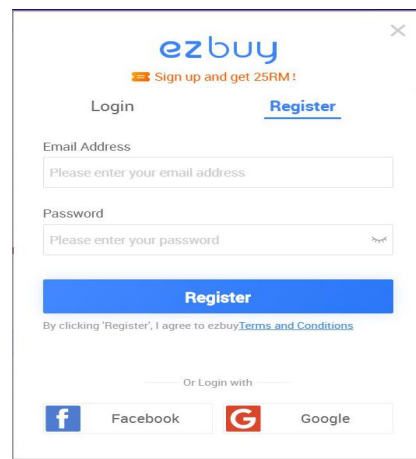
Description : In the second picture , the word “Login” should be replaced with register.

Normally, in other user interfaces , for providing user with other easier option , it may use the word “register”.



The screenshot shows a login pop-over for ezbuy. At the top, the ezbuy logo is on the left and a close button (X) is on the right. Below the logo, there are two tabs: 'Login' (which is underlined) and 'Register'. The form contains two input fields: 'Email/ User Name' and 'Password'. The password field has a placeholder text 'Please enter your password' and a small 'type' indicator on the right. Below the fields is a large blue button labeled 'Login'. Underneath the button is a link for 'Forgot Password?'. At the bottom, there is a section for social login with the text 'Or Login with' and two buttons for 'Facebook' and 'Google'.

Login pop over



The screenshot shows a register pop-over for ezbuy. At the top, the ezbuy logo is on the left and a close button (X) is on the right. Below the logo, there is a promotional banner that says 'Sign up and get 25RM!'. Below the banner, there are two tabs: 'Login' and 'Register' (which is underlined). The form contains two input fields: 'Email Address' and 'Password'. The email address field has a placeholder text 'Please enter your email address'. The password field has a placeholder text 'Please enter your password' and a small 'type' indicator on the right. Below the fields is a large blue button labeled 'Register'. Underneath the button is a line of text: 'By clicking 'Register', I agree to ezbuy Terms and Conditions'. At the bottom, there is a section for social login with the text 'Or Login with' and two buttons for 'Facebook' and 'Google'.

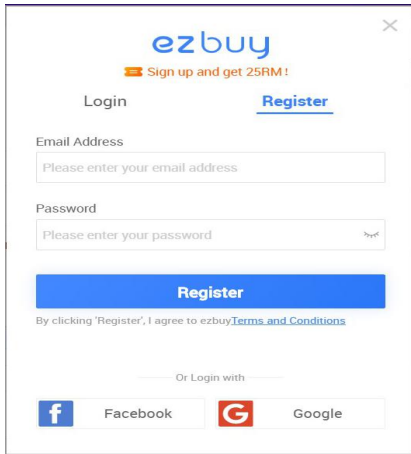
Register pop over

Violation 2: There did not have any instruction on how what the user should be entering and not to be entering for the password section on the register pop over.

Heuristic violated : Error prevention

Severity: 3

Description: When there do not have any instruction for the user to enter password section on the register pop over. It may cause error to occur as the password that user plan to create will not fit the requirement



Register pop over

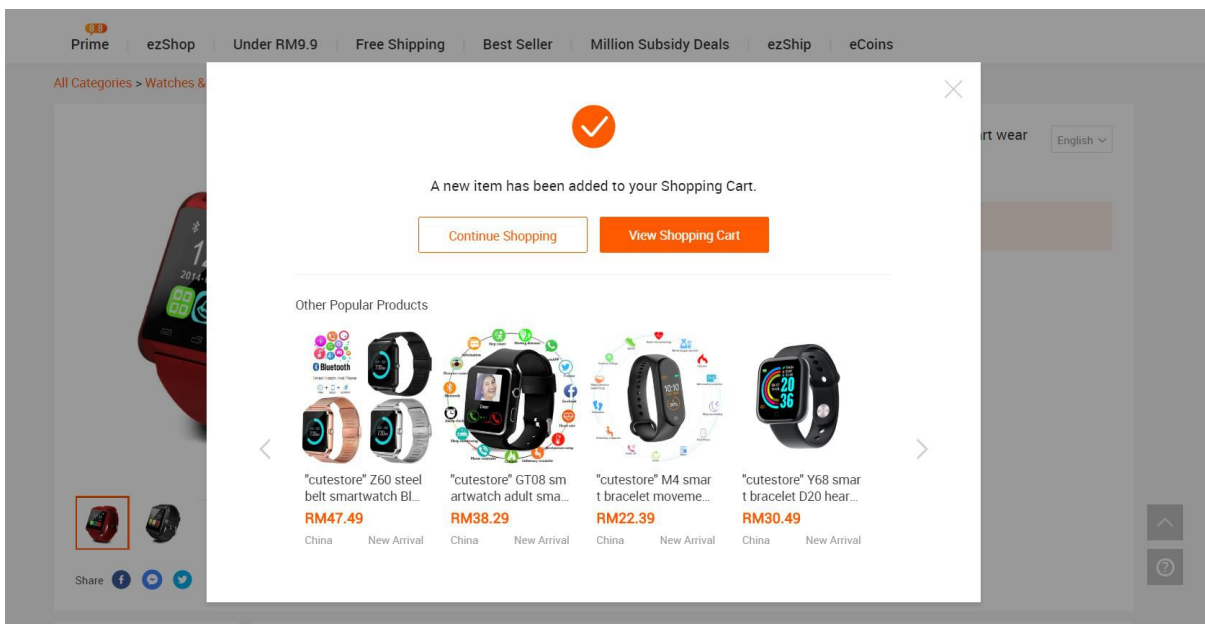
Violation 3 : The pop up page after the user clicks the button to add an item into cart did not have an option for the user to undo the action of add purchase or item into the cart.

Severity : 2. It is because it does not affect the user to add an item to cart as the user still can continue cart and delete it before the user wants to do payment.

Heuristic violated : Help Users Recognize, Diagnose, and Recover from Errors

Description : The user might not want to add that item into cart although they already click the button provided to add into the cart . The rate recovering from error will be slow.

Although it is not an interface error or the error that the user enters invalid input , the user who thinks that this is an important matter , the user will have to click into the view cart page to delete it.



The picture of after pressing the add cart button.

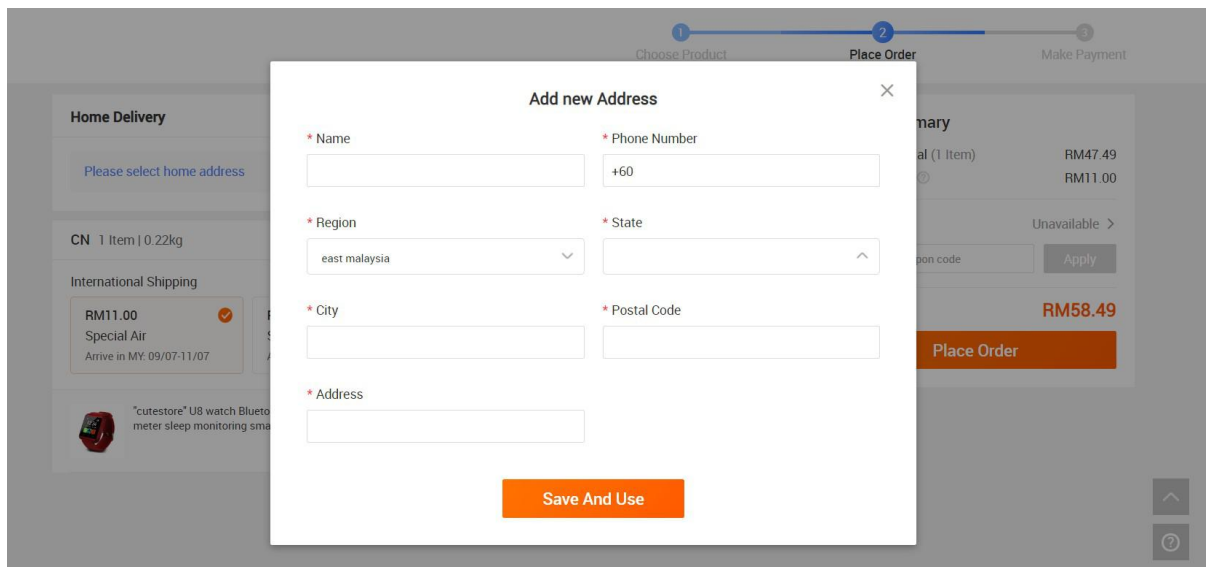
Task : placing order and payment

Violation4 : There should be some instruction or example on how the number for the phone should be for the phone number section in Add new Address popover.

Heuristic violated : Error Prevention

Severity: 3. This is because it will confuse the user.

Description: There are some situations where the user does not know whether to add 0 or not. For example , my phone number is 011 1234568. It might have asked me to put 11 123456. It is also possible to input 011 1234568.

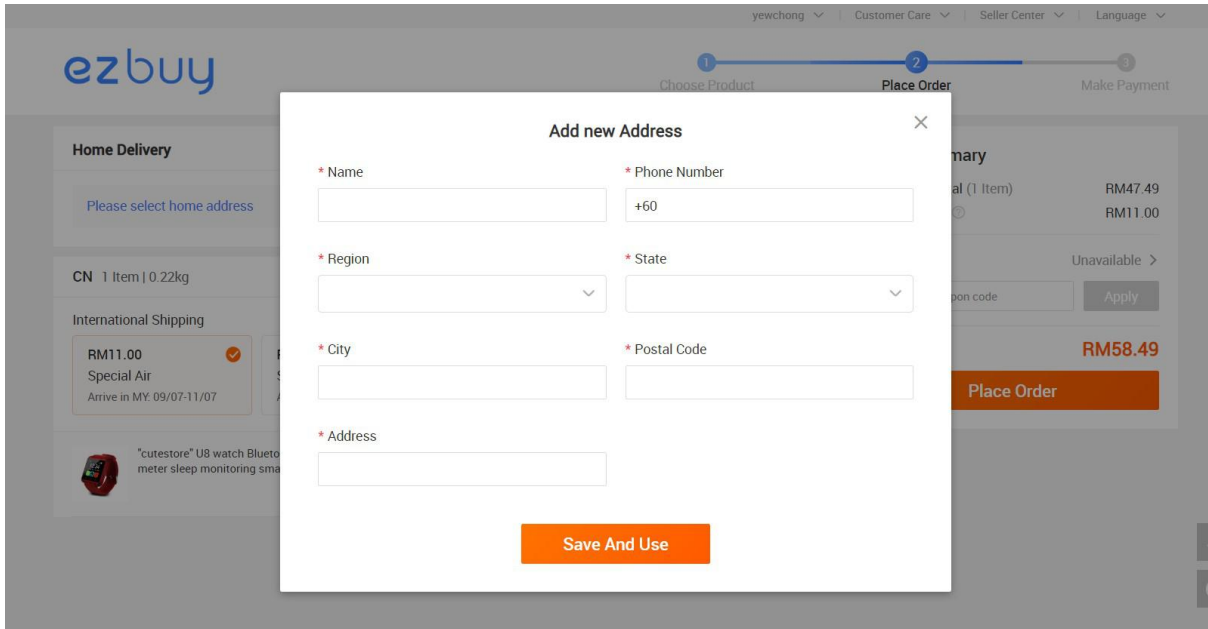


Violation5: There should have some guideline or instruction for the region section for the region section in the Add new Address popover.

Ergonomic violated : Guidance

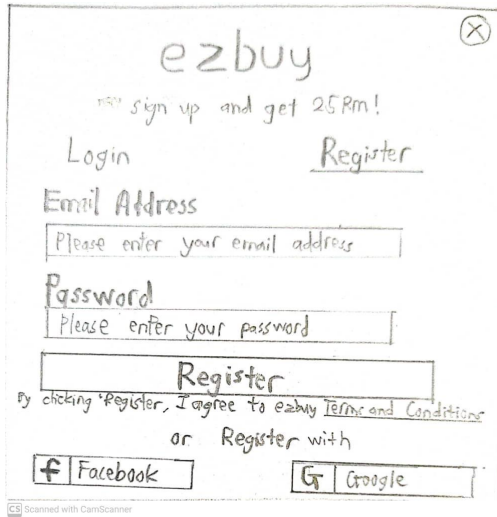
Severity: 3

Description: There are two choices in the Region section which is west Malaysia and east malaysia. The user might not know which part of Malaysia he or she is in. When they simply choice , they might encounter problems when they choose the state option. There might not have the state of which the user is in.



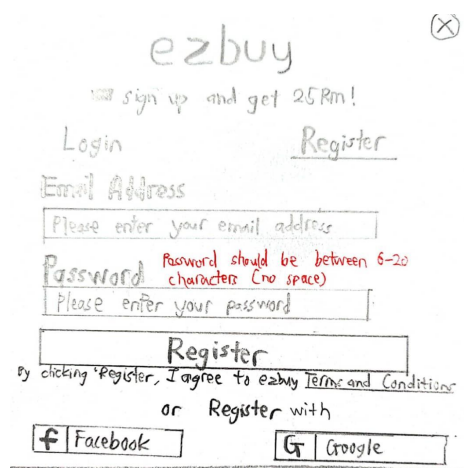
Discussion

Suggested improvement for violation 1 :



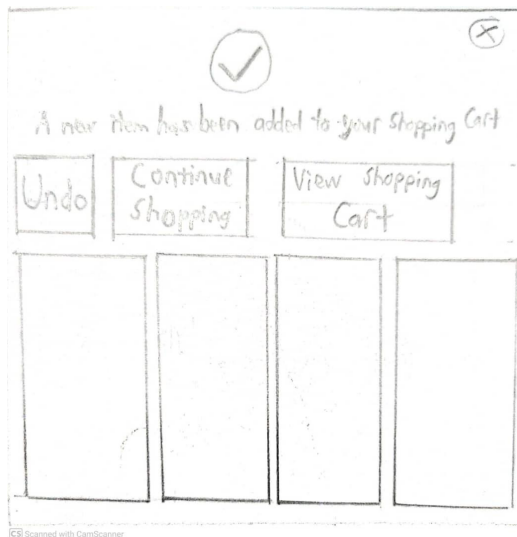
The word "Register" is more suitable for this register page.

Suggested improvement for violation 2 :



This is the suggested register popover. There will be a requirement and the condition that the password that the user needs to follow in order the password can be created and succeed to register a ezbuy account.

Suggested improvement for violation 3 :



The undo option is for the user to click to undo straight way without have to view the shopping cart when the user think he does not want to add to cart.

Suggested improvement for violation 4 :

A hand-drawn form titled "Add new Address" with a close button (X) in the top right corner. The form contains the following fields and labels:

- *Name: A rectangular input field.
- *Phone Number: A rectangular input field containing the text "eg: +6011 123456".
- *Region: A rectangular input field.
- *State: A rectangular input field.
- *City: A rectangular input field.
- *Postal Code: A rectangular input field.
- *Address: A larger rectangular input field.
- At the bottom center, there is a button labeled "Save And Use".

Scanned with CamScanner

The example of the phone number format that the user has to enter is inside the blank space. This can prevent the user to have errors for the phone number information.

Suggested improvement for violation 5 :

A hand-drawn form titled "Add new Address" with a close button (X) in the top right corner. The form contains the following fields and labels:

- *Name: A rectangular input field.
- *Phone Number: A rectangular input field containing the text "eg: +6011 123456".
- *Region: A rectangular input field.
- *City: A rectangular input field.
- *Address: A larger rectangular input field.
- Instead of a "State" input field, there is a dropdown menu with a list of horizontal lines, indicating a list of states to choose from.
- At the bottom center, there is a button labeled "Save And Use".

Scanned with CamScanner

There will be a list of states that are categorized in which part of Malaysia. Hence the user will be more clear and can select it confidently. They will not face problems in the state option after picking the region.

Conclusion

In conclusion , there are some interface issues that ezbuy need to fix to make its online platform more perfect and more user friendly. Actually , the online platform is already very nice and it is easy to use .

From this project, it challenged me to find out what is the problem that this website has although the platform is already well designed. It tells me that designing a good user interface is hard and needs some general knowledge. When we design an user interface we should think of what is the user and we have to think in many characters so that we can make an user interface that is efficient , user friendly and that is suitable for all walks of life.

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