# Monash University Malaysia BSc Computer Science Final Report

## Heuristic Design & Evaluation

FIT3063: Human Computer Interaction - Assignment 2 Stage D

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#### **Description of Process of Evaluation**

The evaluation of the interface was first done individually by each team member, followed by meeting up to combine their evaluation results. The number of evaluators for the evaluation of the interface is five (5). There were no observers used in the evaluations because the evaluators are domain experts. The usability principles used during the evaluation is Nielsen's Ten Usability Heuristics for User Interface Design.

Each evaluator went through all the screens and produced a list of interface problems. For every interface problem, the evaluator had to explain why he/she has listed it as a problem in reference to Nielsen's Ten Usability Heuristics for User Interface Design and state which of the principles were violated. Along with that, evaluators gave a severity rating for each interface problem and justified the rating based on the frequency, impact and persistence of the problem, and a suggested way to fix the problem. Furthermore, evaluators were required to list instances of compliance with the usability principles and explain how it complies with the principle.

After all evaluators completed the individual assessment of the interface, they met up to combine the list of instances of violations and compliances with the usability principles. The end result is a combined list of those items, the mean severity rating, and suggested fixes.

#### **Description of Process of Merging Individual Heuristic**

The merging of the total violations and compliances was done in a group, where each team member merged their items into one common table for violations and one common table for compliances. The desired number of the sum total of violations and compliances required was fifty. Therefore, we decided on acquiring thirty violations and twenty compliances for our final list.

Since the total number of violations and compliances were greater than fifty, we had to filter out the items and bring them down to a sum total of fifty items. This was done by firstly, merging every common violation or compliance found into one violation or compliance respectively. This brought down the total number of items by a significant amount as the violations and compliances collected by each member were common and overlapping.

However, we were still required to filter the items even further. The approach we took was to go through the whole table once for violation and compliances and highlight the ones which we seemed less important. If anyone had a disagreement, we would explain our point of view about it, even still if the member was not convinced, we had a team

vote on which compliance or violation to remove. Then amongst the ones we had highlighted, we removed the one which were not needed and reached our desired number of thirty violations and twenty compliances. This added up to a sum total of fifty items as required. This process ran smoothly without any notable disagreements.

#### **Evaluation Results**

The numbering we have used is described as follows: Nielsen's 10 Usability Heuristics for User Interface Design

| No. | Name of Principle                                       |
|-----|---|
| 1   | Visibility of system status                             |
| 2   | Match between system and the real world                 |
| 3   | User control and freedom                                |
| 4   | Consistency and standards                               |
| 5   | Error prevention  |
| 6   | Recognition rather than recall                          |
| 7   | Flexibility and efficiency of use                       |
| 8   | Aesthetic and minimalist design                         |
| 9   | Help users recognize, diagnose, and recover from errors |
| 10  | Help and documentation                                  |

#### **Severity Rating Table**

| Rating | Description                                   |
|--------|---|
| 0      | Do not agree that this is a usability problem |
| 1      | Cosmetic problem                              |
| 2      | Minor usability problem                       |
| 3      | Major usability problem; important to fix     |
| 4      | Usability catastrophe; imperative to fix      |

#### **Interface Problems**

| No. | Description   | Page<br>No. | Rule(s)<br>Violate<br>d | Severit<br>y<br>Rating | Mean<br>Rating | Suggested<br>Fixes  |
|-----|---|-------------|-------------------------|------------------------|----------------|---|
| 1   | There is no back button, hence if a user wants to go back to previous page to register, he would not be able to.  | 2           | 3,5 & 9                 | 4                      | 2.8            | Add a back<br>button to go<br>back to<br>previous<br>page.  |
| 2   | The page does not consist of "forget password" for users who actually forgotten their password. Users will be unable to retrieve their account in this case | 2           | 3,4,5 &<br>9            | 4                      | 3.6            | Add a forget password button and page.  |
| 3   | No help button for security code and BSB. The new user will have a hard time figuring out what they have to fill in.  | 3           | 10                      | 3                      | 3.2            | Add a help button beside those fields to help user understand what they should include in the fields. |
| 4   | There is no field to re-enter the password, this could be a problem if a user mistypes his password as the system would register his account.               | 3           | 5                       | 2                      | 3              | Add a new<br>field to re<br>enter<br>password   |
| 5   | Every text field has greyed out text to indicate to the user what should be filled. However, the Gender and Birthday fields are                             | 3           | 4                       | 3                      | 2.0            | Make every<br>text field to<br>have greyed<br>out text  |

|    | not greyed out. Users might think that only the Gender and Birthday fields are meant to be filled.  |              |       |   |     |   |
|----|---|--------------|-------|---|-----|---|
| 6  | No way indicated on how to clear the notifications  | 5, 56,<br>57 | 7     | 3 | 3.0 | Shade the background and have a button with a label saying 'Clear notification s' at the bottom of the notification bar |
| 7  | User might not know instantly where the user is currently at until the user take note of the content of the page. This is because there is no headings for the page                                 | 5, 20        | 1     | 4 | 2   | Add a heading to the pages.   |
| 8  | The down arrow<br>buttons purpose is not<br>clear and what it would<br>do upon being pressed  | 6, 27        | 2 & 7 | 3 | 3.6 | Remove the down arrow and add a scrollbar instead   |
| 9  | The page does not have a header, User will not know where the user is currently at and have to figured it out themselves. There is no back button or cancel button. There are no field description. | 8,9,10       | 4,1,3 | 4 | 3.0 | Add<br>breadcrum<br>b or a<br>header.   |
| 10 | 'Reservations available<br>for today' message<br>would only confuse the   | 8            | 7     | 2 | 2.4 | Remove the message  |

|    | user as a calendar option is given to choose the date for reservation. Hence, the message is unclear if reservation is available for current date or date chosen in calendar. |        |   |   |     |  |
|----|---|--------|---|---|-----|--|
| 11 | Usage of red and green color to indicate the available and unavailable tables and red and green are not colour-blind friendly.  | 10     | 2 | 1 | 3   | Change the color of to indicate the available and unavailable tables.  |
| 12 | The view button does not clearly indicate what is being viewed after clicking on it.  | 12     | 2 | 2 | 2.8 | Change the button description into a more specific description. For example view reservation if the button is for viewing reservation. |
| 13 | When a popup box appears the background on screen is not greyed out. Users might be able to click on the background.  | 12, 18 | 4 | 2 | 1.8 | Make sure that the background is greyed out when the pop up box appears.   |
| 14 | The red color cross icon does not tells the user that the current reservation is cancelled and the tick also does not clearly and directly tells the user that the            | 15, 20 | 2 | 4 | 3.0 | The cross icon should be removed, and the entire reservation   |

|    | reservation is confirmed. The icons does not make sense if it is being used here.  |    |   |   |     | should be remove once is being canceled.   |
|----|--|----|---|---|-----|--|
| 15 | The alignment is not consistent. The food list is align to the left but the total is aligned to the middle.  | 19 | 4 | 1 | 1.0 | It would be better to have a long line instead of a long hanging in the middle.  |
| 16 | Grouping between rating of service and food is difficult to distinguish.   | 22 | 3 | 3 | 2.8 | Increase the white space between service rating and food rating. Or Change the fonts size to be more distinguisha ble than the others. |
| 17 | The search bar is on the left of the screen which is not following the standard where search bars are on the top right of the screen.  | 25 | 4 | 1 | 1.8 | Change the search bar to be on the top right.  |
| 18 | All the checkboxes are already ticked once the page opens, which may confuse the user as to if he has to untick the respective box to choose his item which goes against the standard across forms in which you have to tick the box to select the item. | 25 | 4 | 3 | 3.0 | Uncheck all<br>the<br>checkboxes<br>on the page  |
| 19 | Font size for the header 'Customer Information'  | 34 | 4 | 1 | 1.2 | Increase the font size for   |

|    | is smaller than the main<br>text which is not<br>consistent to the other<br>screens   |                 |       |   |     | the header<br>so that it is<br>distinguisha<br>ble from the<br>other text.   |
|----|---|-----------------|-------|---|-----|--|
| 20 | Button sizes are different for 'Clear' and 'Send' compared to 'Back' and 'Home'.  | 41              | 4     | 1 | 1.0 | Make the button size similar   |
| 21 | The entire screen seems overwhelming with two screens. Users will have to pay attention to what they are doing at all times. Also, the division between orders and menu section is not clearly evident. | 44 - 51         | 8     | 3 | 2   | Split the screen to make sure that the main screen is larger than the secondary screen                                     |
| 22 | There is no adequate use of colour for the system which makes the screens unattractive and dull for the user. The screens are not aesthetically pleasing  | 1-88            | 8     | 1 | 1.2 | Set a theme color to MoVE and make it consistent over the pages. Add more colour to pages instead of using black and white |
| 23 | The logout button has a power icon next to it, which does not represent the logout hence, inconsistent and inaccurate use. Users may think it would shut down the whole system                          | 59              | 4     | 2 | 2.8 | Remove the power icon and just make the logout a button instead of plain text  |
| 24 | The small arrow indicating a drop down is not needed on 'total' as it is a derived quantity which is calculated by a formula  | 44-51,5<br>3,54 | 4 & 5 | 3 | 3.6 | Remove the option for drop down on the total   |

|    | which cannot be changed. Hence, an option for drop down on total should not be given  |                   |   |   |     |   |
|----|---|-------------------|---|---|-----|---|
| 25 | The icon for tables does not represent tables at all. User might get confused as the icon indicates gender instead of table.          | 59                | 2 | 1 | 3.0 | Replace the icon with an icon that represents a table   |
| 26 | The choice of field for reservation date and time encourages error to occur. The freedom of letting the user to type in prompt error. | 61                | 5 | 3 | 1.8 | They should<br>make it a<br>calendar for<br>date, and<br>drop down<br>box for<br>time.                |
| 27 | The buttons have different font size. It is not consistent over the screen. Also, the font size of price tag is too small             | 62, 67,<br>71, 27 | 4 | 1 | 1.2 | Make the font size of the buttons to be consistent. Increase font size of price tag                   |
| 28 | User is not able to go back to the dashboard once they have selected the menu.  | 60-63             | 5 | 3 | 3.0 | Add a back<br>button  |
| 29 | Pop up box is not centred like the other screens which is inconsistent.   | 68-69             | 4 | 1 | 2.4 | Centre the pop up box   |
| 30 | The plus and minus buttons do not seem to make any sense and the user might be confused as to what it actually does.                  | 73                | 2 | 2 | 3   | Just choose<br>the<br>discount<br>amount<br>from the<br>drop-down<br>option<br>given. The<br>plus and |

| I I I I I I I I I I I I I I I I I I I |  |  |  |  |  |  | minus<br>buttons are<br>redundant. |
|---------------------------------------|--|--|--|--|--|--|------------------------------------|
|---------------------------------------|--|--|--|--|--|--|------------------------------------|

## **Compliances**

| No | Description   | Page  | Rule  |
|----|---|-------|-------|
| 1  | Log in or register. User must choose one of the options. It avoids the user filling in the details and only realised it is a login section instead of register.   | 1     | 5     |
| 2  | The page has a very simple design which direct user's focus to only doing one task which is the logging in.   | 2     | 8     |
| 3  | The calendar icon on the Birthday drop down box follows real world conventions. A calendar shows dates which is what the Birthday dropdown would show.  | 3     | 2     |
| 4  | The groupings between the Delivery and Dine In section can be clearly seen.   | 4     | 7     |
| 5  | Users can edit their account information which allows them to traceback from any errors made while the creation of the account  | 6     | 5,7,9 |
| 6  | It provides the flexibility to the user to choose the currency and language. User will experience more freedom as they can change the language based on where they are from. A filter can be changed easily using a drop down. This provides flexibility to user to view the list or order however they like. | 6, 27 | 3, 7  |

| 7  | Users are given options from a drop down box instead of having to type.   | 9      | 5        |
|----|---|--------|----------|
| 8  | It shows the user which restaurant they have chosen, and the date they have picked is stated clearly on top of the page.  | 9, 10  | 6        |
| 9  | It shows a dialog box indicating the status of the reservation is successful.   | 12     | 1        |
| 10 | A popup dialog box is used to confirm the user's decision before the actual action is taken. User can also click on the cancel button if the user accidently initiates the action.  | 14     | 3,5      |
| 11 | Popup is shown to the user to tell the users that the request has been made.  | 18     | 1        |
| 12 | A payment status is stated under<br>the screen, this reduces short term<br>memory load of the user.   | 21     | 6        |
| 13 | Price status is being updated every time an item is being added.  | 29     | 1        |
| 14 | Address suggestions are given to the user while they are typing resulting in the user to type less and just choose the required option thereby, reducing chances of error. Also, the system prompts the users that their address is not in range of the delivery. | 35, 36 | 5, 10, 9 |
| 15 | The buttons on the top navigation bar are shaded indicating which functionality page you are currently on   | 45, 70 | 1, 6     |
| 16 | It provides information feedback to the user that the item has been successfully added to the order.  | 48     | 1        |
| 17 | Users can have multiple options to  | 55     | 3        |

|    | obtain the receipt.  |    |   |
|----|--|----|---|
| 18 | Users are able to edit or delete the order.  | 52 | 3 |
| 19 | This prevents error by asking user if they really want to cancel the order.                                  | 69 | 5 |
| 20 | Highlighting the current job route will help the user differentiate which job they are currently working on. | 78 | 6 |

## Appendix

## 1. Tee Kai Yoong

| No. | Screen /<br>Page<br>Number   | Description   | Rule<br>Violated | Severit<br>y | Justificatio<br>n of rating<br>/ Impact of<br>problem                    |
|-----|------------------------------|---|------------------|--------------|--|
| 1   | 3                            | No grouping of fields   | 7                | 2            | More difficult for users to use, but does not render the system useless. |
| 2   | 3                            | No password re-entry  | 5                | 3            | Could cause a lot of trouble if the user typed in the wrong password.    |
| 3   | 2, 5, 8                      | No clear way to go back   | 3                | 2            | User can still use the back button on the browser.                       |
| 4   | 6                            | Fields not labelled   | 6                | 2            | Inconvenie<br>nt   |
| 5   | 6                            | What is the button with the down arrow for?   | 2                | 2            | Confuses<br>the user   |
| 6   | 9, 28, 31,<br>46, 47,<br>53, | Increase and decrease buttons are not standard on mobile devices, and they may cause problems for users with stubby fingers | 4                | 3            | Use<br>drop-down<br>box  |

| 7  | 14, 18,<br>24, 25,<br>26, 32,<br>33, 34,<br>35, 36,<br>37, 38,<br>85, 86 | Primary and secondary buttons are reversed   | 4 | 2 | Not<br>following<br>standards,<br>but system<br>still usable |
|----|--|--|---|---|--|
| 8  | 19   | Two back buttons   | 4 | 2 | Redundanc<br>y   |
| 9  | 31   | Not clear whether the text "Remove" is a button  | 2 | 2 | Confusing  |
| 10 | 31, 37,<br>38  | "Free" should be replaced with "\$0.00" for consistency  | 4 | 1 | Just<br>personal<br>preference                               |
| 11 | 12, 18   | When dialog box appears, the background is not dimmed  | 4 | 2 | User attention not directed to the dialog box                |
| 12 | 5  | It is not clear whether "Add/Edit" is click-able   | 4 | 2 | Confusing  |
| 13 | 8  | It is not clear that the slideshow is a selection  | 4 | 3 | User may<br>forget to<br>make the<br>selection               |
| 14 | 8, 9, 10   | No title to show what page it is   | 6 | 2 | User may<br>lose sense<br>of direction                       |
| 15 | 5  | The notification window is disconnected from the notification button, giving the impression that they are not related. | 6 | 2 | User may<br>forget how<br>he/she got<br>there                |
| 16 | 56, 57   | Not clear what "OK" does. It should be replaced with "Clear".  | 2 | 2 | Confusing  |
| 17 | 72   | Not clear what the "Pending" button does.  | 2 | 2 | Confuses<br>the user   |

| 18 | 72 | What is the difference between "OK" and the "X" button?  | 2 | 2 | Redundanc<br>y  |
|----|----|--|---|---|---|
| 19 | 73 | Not sure how to update the discount table.               | 2 | 3 | User may<br>not know<br>how to use<br>the system                        |
| 20 | 85 | "Delivered" should be replaced with "Mark as Delivered". | 2 | 2 | Label of the button does not tell the user exactly what the button does |
| 21 | 85 | No option to call customer directly                      | 3 | 2 | Inconvenie<br>nt  |

| No. | Screen /<br>Page<br>Number | Description   | Rule<br>Compliance |
|-----|----------------------------|---|--------------------|
| 1   | 10                         | Booking details   | 6                  |
| 2   | 30                         | A message box will appear, saying that an item has been added into the cart                       | 1                  |
| 3   | 32                         | Address and credit card details are shown   | 7                  |
| 4   | 36                         | "Next" button is coloured in grey to show that it's disabled                                      | 5                  |
| 5   | 37, 38                     | Order information details are shown for confirmation  | 6                  |
| 6   |                            | Primary buttons are on the right, secondary buttons are on the left and this layout is consistent | 4                  |
| 7   | 22                         | Food order history is shown.  | 6                  |

#### 2. Bazil Muzaffar Kotriwala

| No | Page | Description   | Rule  | Severity | Justification  |
|----|------|---|-------|----------|--|
| 1  | 3    | Informs user to fill out all fields rather than using a red asterisk next to the fields to indicate it is compulsory.   | 4 & 6 | 1        | This violates a standard universally used across systems. The users may be unfamiliar with the new convention used |
| 2  | 3    | There is no field to re-enter the password.   | 5     | 2        | This could be a problem if a user mistypes his password as the system would register his account.                  |
| 3  | 5    | No way indicated on how to hide the notification bar once accessed  | 7     | 2        | The user may not know what to do if he wants to hide the notification bar.   |
| 4  | 6    | Add/Edit should be buttons rather than text or if text then should be blue coloured to indicate that they are clickable   | 4 & 6 | 2        | The user may not know if the text is clickable or not.   |
| 5  | 6    | The down arrow buttons purpose is not clear and what it would do upon being pressed   | 7     | 2        | The user would have no idea what the arrows do and can only find out upon pressing them                            |
| 6  | 8    | 'Reservations available for<br>today' message would only<br>confuse the user as a calendar<br>option is given to choose the<br>date for reservation. Hence, the | 7     | 2        | This message<br>may confuse the<br>users as it is<br>unclear with the<br>required                                  |

|    |        | message is unclear if reservation is available for current date or date chosen in calendar.   |       |   | functionality given.   |
|----|--------|---|-------|---|--|
| 7  | 19, 21 | There are two back buttons, may confuse the user on which to press.   | 5 & 7 | 2 | The two back buttons are redundant, may confuse the user, this same problem is on two screens  |
| 8  | 19     | There is an alignment issue with<br>the text displayed as the food<br>items are aligned to the left<br>whereas the total amount is<br>aligned to the center | 4     | 1 | The text not being aligned may not be desirable to look out or may bother some users   |
| 9  | 20     | The upcoming reservations may or may not be clickable according to the screen shown as they are not shown as clickable buttons rather just plain text.      | 3 & 7 | 2 | This problem makes it unclear for the user on how to access further details of his reservation   |
| 10 | 22     | The groupings made between<br>the rating of service and food<br>items is not clearly evident  | 7 & 8 | 1 | The user may not know where the new section starts.  |
| 11 | 25     | All the checkboxes are already ticked once the page opens.  | 4     | 3 | This problem may confuse the user as to if he has to untick the respective box to choose his item which goes against the standard across forms in which you have to tick the box to select the item. |
| 12 | 26     | The price range bar has '\$25'  | 4     | 1 | The user would   |

|    |            | missing compared to the previous screen, this is a consistency issue.  |       |   | not be able to<br>access the \$25<br>price range<br>which was<br>possible in the<br>previous screen  |
|----|------------|--|-------|---|--|
| 13 | 1-88       | Unclear what the bell next to the logo in the header does when clicked upon.   | 6     | 1 | The bell may baffle the user as to why it is there, can only be found out what it does upon clicking |
| 14 | 33         | The fonts are not consistent on this page.   | 4     | 1 | Troubles the user into reading due to inconsistent font size   |
| 15 | 41         | The clear button is of no use as<br>the user can use the keyboard<br>backspace to delete anything he<br>has typed  | 5 & 7 | 1 | The button is redundant and the user may not understand why its there.                               |
| 16 | 43         | Employee ID and Password already mentioned on top of the boxes, therefore, there is no need to mention them again inside the boxes. This is redundancy and an overload of information. | 8     | 1 | This is redundancy a problem and an overload of information for the user.                            |
| 17 | 43         | There are two of the same logo's one in the header and one in the footer.  | 8     | 1 | This is redundancy a problem and an overload of information for the user.                            |
| 18 | 44 -<br>51 | The screens seem too overloaded with information and the division between orders and menu is not clearly evident.  | 7 & 8 | 2 | Hard for the user to distinguish between sections and browse through the page.                       |
| 19 | 44         | No field or column dedicated on how to calculate or represent the discount, just shown on the final  | 3 & 7 | 2 | This is unclear as the discount should be shown  |

|    |                       | receipt.  |       |   | per item or<br>rather shown on<br>which items it is<br>available for the<br>user to know<br>how its<br>calculated                            |
|----|-----------------------|---|-------|---|--|
| 20 | 46                    | Lorem Ipsum should not be part of high fidelity prototype   | 4     | 2 | Information of<br>the item should<br>be there rather<br>than lorem ipsum   |
| 21 | 47-48                 | The dialog boxes for feedback are being shown on different sides on the screens, first on the left and then on the right.   | 8     | 2 | This is inconsistent and may bother the user   |
| 22 | 44 -<br>51,<br>53, 54 | The small arrow indicating a drop down is not needed on 'total' as it is a derived quantity which is calculated by a formula which cannot be changed. Hence, an option for drop down on total should not be given | 4 & 5 | 2 | An option for drop down on total should not be given as the user should not be allowed to change the total as it is calculated by the system |
| 23 | 56-57                 | Instead of having 'Ok' button next to the notifications, it should be 'clear', as according to standards across devices we have an option of 'clear notifications'  | 4     | 1 | 'Ok' button may<br>confuse the users<br>as to what it<br>exactly does  |
| 24 | 59                    | The logout button has a power icon next to it, which does not represent the logout hence, inconsistent and inaccurate use.  | 4     | 2 | The users may think the power icon shuts off the system rather than logout.  |
| 25 | 62                    | The search bar must be at the rightmost side rather than in the middle of two options.  | 4     | 1 | Integration problem as most systems have the search bar on the right, thereby confusing users.   |

| 26 | 62-63 | Header not consistent, centered in first screen and left aligned in second screen   | 4     | 1 | Users may get bothered by this   |
|----|-------|---|-------|---|--|
| 27 | 63    | The view option of an order is written in text, making it unclear whether it is clickable or not. A button can be used instead to make it clear   | 3 & 4 | 2 | The users may not know if the button is clickable. They would get confused and only find out by trying to click it                     |
| 28 | 68-69 | The dialog box is not centered on the page  | 4     | 1 | Some users may find it troublesome to look at it   |
| 29 | 70    | For the buttons instead of having the 'three bars' icon which indicate drop down menu / hamburger menu, a right arrow only can be used to show that the information will be displayed in the right direction.   | 3 & 4 | 2 | The users would expect the menu to dropdown rather than display on the right   |
| 30 | 71    | The buttons can be arranged in one line horizontally  | 4     | 1 | Some users may find it troublesome to look at it and navigate  |
| 31 | 73    | The logout button should be placed after the print option, the '+' and '-' buttons next to the discounts are unclear on what they increase or decrease.   | 4     | 1 | The manager can just use the drop down to change the discount rates, hence no need for the plus and minus buttons, these are redundant |
| 32 | 79    | The call button between the customer and manager button is quite misleading as it does not indicate whether it would call the manager or customer upon clicking. Also, the colour of the button should be green | 3 & 4 | 2 | The delivery staff may end up calling the wrong person by mixing up between customer and manager as only                               |

|    |    | indicating it can be pressed to call    |   |   | one common<br>button is given                  |
|----|----|---|---|---|--|
| 33 | 88 | No way indicated to clear notifications | 4 | 2 | User would not know how to clear notifications |

| No | Page  | Description   | Complied   |
|----|-------|---|------------|
| 1  | 1     | The login and register button is displayed with accurate information regarding the details of creation of account to place order. This is consistent with login / registration systems across the web | 4, 6, 8 10 |
| 2  | 2     | A standard minimalistic design of a login page offering functionality of logging in   | 6, 8 & 10  |
| 3  | 12    | Feedback is given once the reservation has been confirmed.  | 1          |
| 4  | 42    | Accurate feedback given to the user   | 1          |
| 5  | 50    | Ask for confirmation once the button is pressed and give accurate feedback  | 5 & 10     |
| 6  | 47-48 | Accurate feedback given to user upon placing the order  | 1          |
| 7  | 43-57 | The buttons on the top navigation bar are shaded indicating which functionality page you are currently on   | 1 & 6      |
| 8  | 35    | Address suggestions are given to the user while they are typing resulting in the user to type less and just choose the required option thereby, reducing chances of error                             | 5 & 10     |
| 9  | 69    | Ask the users once more before they delete their order  | 5 & 10     |
| 10 | 6     | Users can edit their account information which allows them to traceback from any errors made while the creation of the account  | 5, 7 & 9   |

| 11 | 30 | The system gives feedback to the user that the item has been added to cart once he clicks on the add to cart button   | 1        |
|----|----|---|----------|
| 12 | 36 | The system notifies the user if it is not able to deliver at the given address which may be outside the 20km range of their delivery conditions. This allows the user to either change the address he has given | 1,5 & 9  |
| 13 | 78 | The current delivery the delivery staff is delivering is highlighting indicating to the staff which delivery is he currently on. This is accurate feedback for him to differentiate which ones are left         | 1, 4 & 6 |
| 14 | 12 | A dialog box giving feedback by confirming that the reservation has been successful   | 1        |
| 15 | 21 | The payment status is shown on the bottom of the screen thereby reducing short term memory load.  | 1 & 3    |

## 3. Ng Kah Hoe

| No | Page                      | Description  | Rule      | Severity | Justification  |
|----|---------------------------|--|-----------|----------|--|
| 1  | 1, 2,<br>43,<br>58,<br>74 | .The page does not consist of "forget password" for users who actually forgotten their password. | 3,4,<br>9 | 4        | This issue occurs many times as long as the page include login. Users will be unable to retrieve their account is the user forgotten the password          |
| 2  | 2                         | The page does not have a cancel or back button to go back to the previous page.                  | 3         | 4        | Users might accidentally come to this page but actually wanted to register an account, user will not be able to go back to the previous page in this case. |
| 3  | 2,3                       | There are no solid field description for the "email" field                                       | 4         | 2        | Once the user keys in the details, the field   |

|   |       | and the "password" field.   |     |   | description in this case will disappear as the field description is incorporated with the field column  |
|---|-------|---|-----|---|---|
| 4 | 3     | The "all field must be filled up" is not in red and the sentence is in small fonts.   | 5   | 2 | normally users will not notice that the sentence is even there. This is because users are always goal driven and always wanted to complete their task as fast as possible. Thus, users will go fill up the fields directly without noticing that sentence is there until error occur. |
| 5 | 4     | The bell beside the company name is not easily understandable.  | 2,5 | 1 | At first glance, the function of the icon is not easily understandable until the user clicks on it.  Normally notification icon is not placed beside the company name.  |
| 6 | 4     | The menu button, which also points to the menu bar are usually on the left side on the screen.                                      | 4,5 | 1 | Following what majority does, usually the menu bar is on the left side.   |
| 7 | 5, 20 | User might not know instantly where the user is currently at until the user take note of the content of the page.                   | 1   | 3 | This is because there is no headings for the page to tell the user where he or she is currently at  |
| 8 | 6     | The preferences should be in<br>the setting page, it should not<br>be in the user's account page<br>following the usual convention. | 4   | 2 | The user's account page should only contains information about the user and not other unrelated informations  |

| 9  | 6, 27            | User can hardly understand what the button at the bottom at the page means. The arrow is pointing down without any meaning.   | 2    | 3 | User will not know what the button means without proper description on the button.   |
|----|------------------|---|------|---|--|
| 9  | 8,9,1<br>0       | The page does not have a header, User will not know where the user is currently at and have to figured it out themselves. There is no back button or cancel button. There are no field description. | 4,1, | 4 | There is no freedom for the user to navigate across the pages without such buttons, this will hinders the user from completing the task efficiently.         |
| 10 | 12               | The view button does not clearly indicate what is being viewed after clicking on it.  | 2    | 3 | User will not know where the user is being directed to after clicking the button. Specific button description should be included on the button.              |
| 11 | 15,<br>20        | The red color cross icon does not tells the user that the current reservation is canceled and the tick also does not clearly and directly tells the user that the reservation is confirmed.         | 2    | 3 | Without proper icon indication, user can easily misunderstand the meaning being conveyed. Icon used should convey a clear and direct indication to the user. |
| 12 | 25               | It will confuse the user to put a search bar in a search page.  | 5    | 3 | User might be confused whether to use the search bar or the search page for the searching.   |
| 13 | 25,<br>40,<br>41 | The price status should not be here.  | 8    | 0 | The price status should be here so that the user will know what is the total price the user has ordered  |
| 14 | 34,<br>35,       | Field description is incorporated in the field which will disappear after the user filled in the detail.  | 4    | 1 | User might not see the description anymore after filling in the column. User might   |

|    |           |   |   |   | need to figured out what the column is about after filling in and rechecks the columns.   |
|----|-----------|---|---|---|---|
| 15 | 56,<br>57 | Users cannot clear all the notifications at once          | 7 | 3 | User will need to clear<br>the notification one by<br>one which hinders the<br>user from completing<br>the task efficiently.            |
| 16 | 59        | The table icon does not match what the button description | 2 | 2 | This does not gives a direct clear message to the user what the button is about. Might confuse user on the functionality of the button. |

| No | Page      | Description   | Complied |
|----|-----------|---|----------|
| 1  | 2         | The page has a very simple design which direct user's focus to only doing one task which is the logging in.   | 8        |
| 2  | 14        | A popup is being used to confirm the user's decision before the actual action is taken. User can also click on the cancel button if the user accidently initiates the action. | 3,5      |
| 3  | 18        | Popup is shown to the user to tell the users that the request has been made.  | 1        |
| 4  | 29        | Price status is being updated every time an item is being added.  | 1        |
| 5  | 45,<br>46 | Users can actually view the food they order.  | 6        |
| 6  | 55        | Users can have multiple options to obtain the receipt.  | 3        |

## 4. Wong Xun Guo

| N<br>o | Page         | Description   | Rule | Severity | Justification   |
|--------|--------------|---|------|----------|---|
| 1      | 2            | Users have no option to return to the home page if they choose to.  | 3, 5 | 2        | This problem might not occur often but if it does, user will not be able to return.                       |
| 2      | 3            | Every text field has greyed out text to indicate to the user what should be filled. However, the Gender and Birthday fields are not greyed out.   | 4    | 3        | Users might think that only the Gender and Birthday fields are meant to be filled out.                    |
| 3      | 6            | User does not know what the arrow button at the bottom of the screen does.  | 2    | 3        | The user might think that the button will scroll the screen down.   |
| 4      | 8            | User would not know which page they are currently at as no header can be found.   | 1    | 1        | If the user leaves the device after a while, they might not remember what page they currently are at.     |
| 5      | 12,14,<br>18 | When a popup box appears the background on screen 14 is greyed out but not on screen 12 and 18, making it not consistent. Are users still able to click on any buttons on screen 12 and 18? | 4    | 2        | Users might accidentally click on the buttons on the background and it would disrupt the current process. |

| 6  | 15,16 | Icons does not really indicate what they are trying to tell the users. No message indicating that reservation has been cancelled or successful. | 2 | 3 | Users can get confused as to what the icons are trying to say.  |
|----|-------|---|---|---|---|
| 7  | 19    | The alignment is not consistent. The food list is align to the left but the total is aligned to the middle.                                     | 4 | 1 | This is just a cosmetic error where the alignment is not consistent to everything else.                       |
| 8  | 22    | Grouping between rating of service and food is difficult to distinguish.  | 4 | 2 | The users might get confused the first time they read it as there is hardly any grouping to distinguish them. |
| 9  | 25    | The search bar is on the left of the screen which is not following the standard where search bars are on the top right of the screen.           | 4 | 1 | Most search bars are on the top right. Users will instinctively look at the top right for the search bar.     |
| 10 | 27    | Fonts for the prices are not consistent with any other fonts on the screen  | 4 | 1 | Users might have a hard time reading the price as the font is smaller than other texts.                       |
| 11 | 34    | Font size for the header 'Customer Information' is smaller than the main text which is not consistent to the other screens                      | 4 | 1 | Users might be confused as to what page this is. Since the main header is smaller than the main text.         |

| 12 | 41           | Button sizes are different for 'Clear' and 'Send' compared to 'Back' and 'Home'. The ordering for the 'Clear' and 'Send' buttons are also not following the standards where buttons which does cancelling actions are usually on the right. | 4 | 2 | Consistency of the button size is different and users might accidentally click on the wrong button because of the arrangement.         |
|----|--------------|---|---|---|--|
| 13 | 44 -<br>51   | The entire screen seems overwhelming with two screens.  | 8 | 3 | Users will have to pay attention to what they are doing at all times. If not they can get lost easily.                                 |
| 14 | 54           | Under the payment section, is the user able to change the amount since it is using a text box to display the price.   | 2 | 2 | The user might think that they are able to change the amount of the price.   |
| 15 | 59           | The icon for tables does not represent tables at all. User might get confused as the icon indicates gender instead of table.  | 2 | 1 | If the user uses icons to choose which options they would like to select, the user might think that the icon for the table is genders. |
| 16 | 62,<br>67,71 | Button size is not consistent.  | 4 | 1 | Does not affect usability but violates consistency.  |
| 17 | 60-63        | User is not able to go back to the dashboard once they have selected the menu.  | 5 | 3 | If the user misclicked, then there won't be any way for the user to return to  |

|    |       |  |   |   | the previous screen.  |
|----|-------|--|---|---|---|
| 18 | 68-69 | Pop up box is not centred like the other screens which is inconsistent.  | 4 | 1 | The user would have to move their mouse further down the screen to reach the pop up box.  |
| 19 | 72    | The 'OK' and 'Pending' status looks like they are buttons since they are highlighted. The user might think that the buttons are clickable. | 2 | 1 | User might think that they are allowed to click on the buttons when the buttons are not clickable.                                      |
| 20 | 73    | The plus and minus buttons does not seem to make any sense.  | 2 | 4 | The user might be confused as to what it actually does and not think that it will increase or decrease the discount.                    |
| 21 | 86    | 'Yes' and 'No' buttons are at the wrong order.   | 4 | 2 | Most primary buttons are places on the right while the secondary buttons are placed on the left. Users might click on the wrong button. |

| No | Page | Description | Complied |  |
|----|------|-------------|----------|--|
|----|------|-------------|----------|--|

|    |    |  | <del> </del> |
|----|----|--|--------------|
| 1  | 2  | Each text box shows users what should be keyed in.   | 5            |
| 2  | 3  | The calendar icon on the Birthday drop down box follows real world conventions. A calendar shows dates which is what the Birthday dropdown would show. | 2            |
| 3  | 4  | The groupings between the Delivery and Dine In section can be clearly seen.  | 7            |
| 6  | 4  | System asks users if they would like to make a delivery or a table reservation on the top.   | 1            |
| 7  | 6  | Users are able to edit their account information if any mistakes were made.  | 3            |
| 8  | 9  | Users are given options from a drop down box instead of having to type.  | 5            |
| 9  | 14 | Pop up box to confirm with the user that they would like to cancel their reservation   | 5            |
| 10 | 30 | The system informs the users that the item has been added to the cart.   | 1            |
| 11 | 35 | The address text box provides suggestions to users, so that users does not need to type their entire address out.                                      | 7            |
| 12 | 36 | The system prompts the users that their address is not in range of the delivery.   | 9            |
| 13 | 52 | Users are able to edit or delete the order.  | 3            |
| 14 | 70 | Highlighting of tabs so that the user knows where he currently is at.  | 6            |
| 15 | 75 | The icons displayed for each sections makes sense for what they are displaying.  | 2            |
| 16 | 78 | Highlighting the current job route will help the user differentiate which job they are currently working on.   | 6            |

## 5. Sham Ying Ying

| No | Page | Description   | Rule | Seve<br>rity | Justification   |
|----|------|---|------|--------------|---|
| 1  | 3    | In the gender field, it is more appropriate to use radio button. This violates the standard form.   | 4    | 2            | It is a minor usability problem because it doesn't affect the input from user but it will be much easier if it is a radio button because user can just click once to choose male or female without having to click the drop down then only choose a gender. |
| 2  | 3    | In the address field, it is way too short for the user to enter the address completely. It has higher possibility for the user to make a mistake, since they couldn't see the complete address that have added, they need to scroll up and down to check. | 5    | 3            | It is a major usability error because it has the chance to confuse user to having the mindset to enter something short. If they enter the address, it is likely to prone error since they have to scroll up and down to see where they were at.             |
| 3  | 3    | Most of the first time user will not know what is the security code and BSB, it should have a help button to tell user what is the security code.   | 10   | 3            | It is major usability problem because when the new user is signing up, they will have no idea what it is. It is very likely that they will enter something wrong or they will Google it, which is troublesome for the user.                                 |

| 4  | 8    | It doesn't clearly show the user what page they are currently in, they have to read the page and guess which page they have pressed on the menu. It should provide a bread crumb or at least have a page title     | 6 | 3 | It is a major usability problem because user will be constant doubt of where they are currently in.  |
|----|------|--|---|---|--|
| 5  | 10   | They uses red and green to indicate the available and unavailable tables on the application. It is not color blind friendly and hence, the usability reduces.  | 2 | 2 | It is a minor usability problem because it will not affect the output of the action but it will confuses people with color blindness.  |
| 6  | 19   | The alignment is not consistent. The food list is align to the left but the total is aligned to the middle. It would be better to have a long line instead of a long hanging in the middle.                        | 4 | 1 | It is a cosmetic problem because it will not affect any output from the application. It just affect how the application look like.   |
| 7  | 22   | The font and sections made the page quite confusing, They can make the "Please rate the service received" and "Please rate the food items ordered" to a bigger font size in order to make it clearer to the users. | 9 | 2 | It is not clear to the user what they should do. At the first glance, user will find it very confusing until they read carefully. The stars also make the screen look very cramp and not a pleasure to the eyes. |
| 8  | 25   | All the checkbox is checked automatically. Normally, checkbox will not be checked, if user never check a checkbox, it will assume that user search for everything.   | 4 | 3 | It violates with how the standard application looks like. Normally, the checkboxes are not checked, with all the checkbox checked, it will surprise the users.   |
| 9  | 1-42 | The color scheme is boring, just grey black white.   | 8 | 1 | It doesn't affect what<br>the user will do in the<br>application. It only<br>affects the application<br>in terms of beauty and<br>aesthetic.   |
| 10 | 46   | It is a high fidelity prototype, it  | 2 | 3 | Since it is a high fidelity  |

|    |                         | shouldn't show a lorem ipsum description.   |   |   | prototype, it should<br>show the real<br>description. Lorem<br>Ipsum does not provide<br>user with any<br>information. This<br>should be changed so<br>that it provides<br>information and details<br>to the user.  |
|----|-------------------------|---|---|---|---|
| 11 | 47                      | The buttons in the page is confusing because they are placed vertically, which it is normally placed horizontally. The price should be shown on top.                        | 4 | 2 | Across the screens, the buttons are placed horizontally, but in this screen, they are placed vertically which violates the consistency of the application. The price also should be on top of the button and in bigger font since it is an important component. |
| 12 | 43<br>and<br>othe<br>rs | The footer of page 43 and the rest of the tablet page are different.  | 4 | 1 | The footer does not have any functionality. Therefore, it doesn't affect the overall value of the application, other than the consistency of the size of the footer.  |
| 13 | 61                      | The choice of field for reservation date and time is bad. They should make it a calendar for date, and drop down box for time. The choice of user entry field prompt error. | 5 | 3 | This needs to be changed because it has the tendency to confuse the user. The user will not know what format to be used when entering the date and time. This prompts error.  |
| 14 | 62                      | The buttons have different font size. It is not consistent over the screen.   | 4 | 1 | It does not affect the overall functionality of the application but it is not pleasing to the eyes of the users.  |

| 15 | 68 | The dialog should be in the center but it appears to be lower than the center. | 8 | 1 | It does not affect the overall functionality of the application but it is not pleasing to the eyes of the users. |
|----|----|--|---|---|--|
|----|----|--|---|---|--|

| No | Page | Description   | Complied |
|----|------|---|----------|
| 1  | 1    | Log in or register. User must choose one of the options. It avoids the user filling in the details and only realised it is a log in section instead of register.                            | 5        |
| 2  | 2    | It provides hint to user that what information they need to fill in.  | 10       |
| 3  | 6    | It provides the flexibility to the user to choose the currency and language. User will experience more freedom as they can change the language based on where they are from.                | 7, 3     |
| 6  | 9    | It shows the user which restaurant they have chosen, and the date they have picked is stated clearly on top of the page.  | 6        |
| 7  | 10   | It shows the user which restaurant they have chosen, and the date they have picked is stated clearly on top of the page.  | 6        |
| 8  | 12   | It shows a dialog box indicating the status of the reservation is successful.   | 1        |
| 9  | 14   | A dialog pops out to ask user to confirm the cancellation. It prevent error because the user can press the cancel button by accident. And when the dialog box pops out, they can choose no. | 5        |
| 10 | 21   | A payment status is stated under the screen, this reduces short term memory load of the user.   | 6        |
| 11 | 27   | A filter and currency option can be changed easily using a drop down box. This provides flexibility to user to view the list or order however they like.                                    | 7        |

| 12 | 28 | The fact that it reduces the chances for the user to type, helps a lot in reducing the possible error. User just have to choose an option. | 5 |
|----|----|--|---|
| 13 | 45 | The menu on the top right shows the current page you are in with the shaded tab. This could tell the user where they are in.               | 6 |
| 14 | 48 | It provides information feedback to the user that the item has been successfully added to the order.                                       | 1 |
| 15 | 69 | This prevents error by asking user if they really want to cancel the order.  | 5 |