



## **GROUP ASSIGNMENT**

### **TECHNOLOGY PARK MALAYSIA**

**AAPP008-4-2-VBDN**

**VISUAL BASIC .NET**

**UCDF1905ICT(SE)/UCDF1905ICT/UCDF1905ICT(ITR)/UCDF1905BIT/**

**UCDF1905ICT(DI)**

**HAND OUT DATE: 6 APRIL 2020**

**HAND IN DATE: 1 JUNE 2020**

**WEIGHTAGE: 50%**

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#### **INSTRUCTIONS TO CANDIDATES:**

- 1 Students are advised to underpin their answers with the use of references (cited using the Harvard Name System of Referencing).**
- 2 Late submission will be awarded zero (0) unless Extenuating Circumstances (EC) are upheld.**
- 3 Cases of plagiarism will be penalised.**
- 4 The assignment should be bound in an appropriate style (comb bound or stapled).**
- 5 Where the assignment should be submitted in both hardcopy and softcopy, the softcopy of the written assignment and source code (where appropriate) should be on a CD in an envelope / CD cover and attached to the hardcopy.**

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Version 3.2 AssCv 2007-09-24

## Table of Content

### Contents

|                                     |    |
|-------------------------------------|----|
| 1.0 Introduction.....               | 3  |
| 2.0 Storyboard.....                 | 4  |
| 2.1 Staff User Login.....           | 4  |
| 2.2 Customer Login Page.....        | 5  |
| 2.3 Customer Registration Form..... | 6  |
| 2.4 Menu List.....                  | 7  |
| 2.5 Payment System.....             | 10 |
| 2.6 Hidden Menu .....               | 11 |
| 3.0 User Manual.....                | 12 |
| 4.0 Testing.....                    | 23 |
| 5.0 Critical Assessment.....        | 24 |
| 6.0 Reference .....                 | 25 |

## 1.0 Introduction

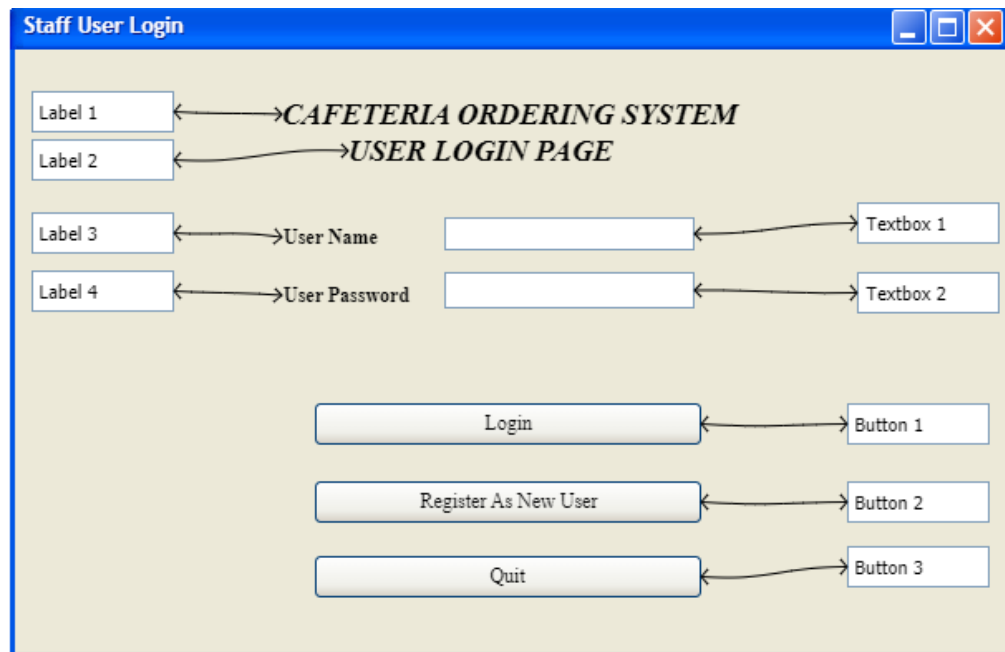
The project name Cafeteria Ordering System is created to assist the staffs in ordering process as this system can automatically carry out its function. With this system, staffs are able to save time as the ordering process is more efficiency due to the system can automatically calculates the amount of price and record data about items that customer order and total amount of payment made by just selecting buttons. Not only that, this system also provides opportunity for the staffs to choose whether to continue serving customer like usual or consider it as self serving kiosks. Thus, staffs are able to reduce cost and to improve business performance with the records made. This system structure contains six pages which is staff user login, customer login page, customer registration form, menu list, payment system and hidden menu. In staff user login page, staffs are required to input their user name, user password and for staffs who wish to become new user are required to obtain proper permission as the registration required registration password in order to prevent unauthorised user to access. Besides that, customers are required to fill in their data in customer login page as their ID number will be used in record. For those customers who do not register as the member can register in customer registration form with few restrictions in order to ensure proper data is obtain. Next, customers can order through menu list and the menu list contains list boxes to display the orders that customers made alongside with few restrictions in order to prevent manipulating data occurs. Once customers confirm their orders, customers will proceed with payment system to select amount of cash or coins through combo boxes and calculate the changes amount. Customers are required to confirm one last time to ensure no changes will be made soon followed by preceding the orders. Then, the items that have been order and total amount will be record alongside with customers' ID number. Last but not least, if customer manages to fulfil hidden criteria, the customer will be introducing to hidden menu to choose one item within the time limit as a small reward. Staffs also can refer to the records to see the hidden item that chose the most as their new recipe and renew for the hidden menu for the upcoming time.

In short words, this system can reduce staffs workload and staffs can refer to the records in order to further improve sales rate alongside with the hidden menu introduce to attract the customers' attention.

## 2.0 Storyboard

A modified Storyboard with 6 pages

### 2.1 Staff User Login



| Control   | Control Name        | Description  |
|-----------|---------------------|--|
| Label 1   | lblSystem           | System Name  |
| Label 2   | lblTitle            | Label for Form Title   |
| Label 3   | lblUser_Name        | Label for User Name  |
| Label 4   | lblUser_Password    | Label for User Password  |
| Textbox 1 | txtboxUser_Name     | Textbox input field for User Name                                |
| Textbox 2 | txtboxUser_Password | Textbox input field for User Password or Registration Password   |
| Button 1  | btnLogin            | Button for user to login the system                              |
| Button 2  | btnRegister         | Button for user to register as new user and obtain user password |
| Button 3  | btnQuit             | Button for user to quit the system                               |

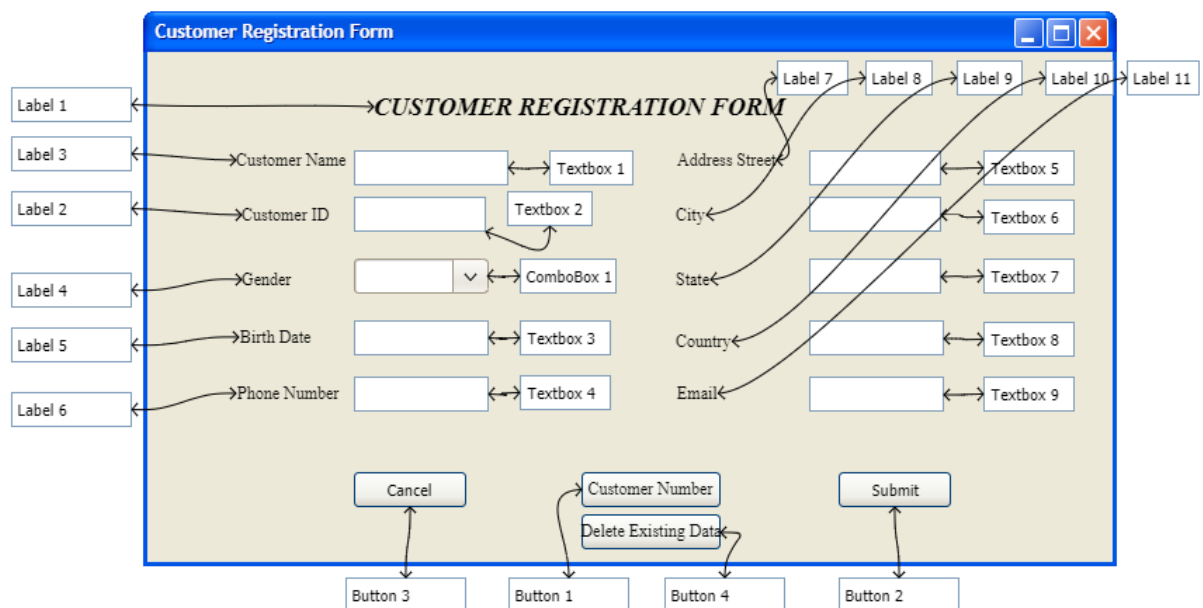
## 2.2 Customer Login Page

The screenshot shows a Windows-style window titled "Customer Login Page". Inside, the interface includes:

- Label 1** pointing to the text **CAFETERIA ORDERING SYSTEM**.
- Label 2** pointing to the text **CUSTOMER LOGIN PAGE**.
- Label 3** pointing to the text **ID**, followed by **Textbox 1** (input field).
- Label 4** pointing to the text **Name**, followed by **Textbox 2** (input field).
- Label 5** pointing to the text **Customer Number**, followed by **Textbox 3** (input field).
- Label 5** (top) pointing to the text **Staff Incharge:**, followed by **Textbox 4** (output field).
- Button 1** (labeled **Login**)
- Button 2** (labeled **Register**)
- Button 3** (labeled **Log Out**)

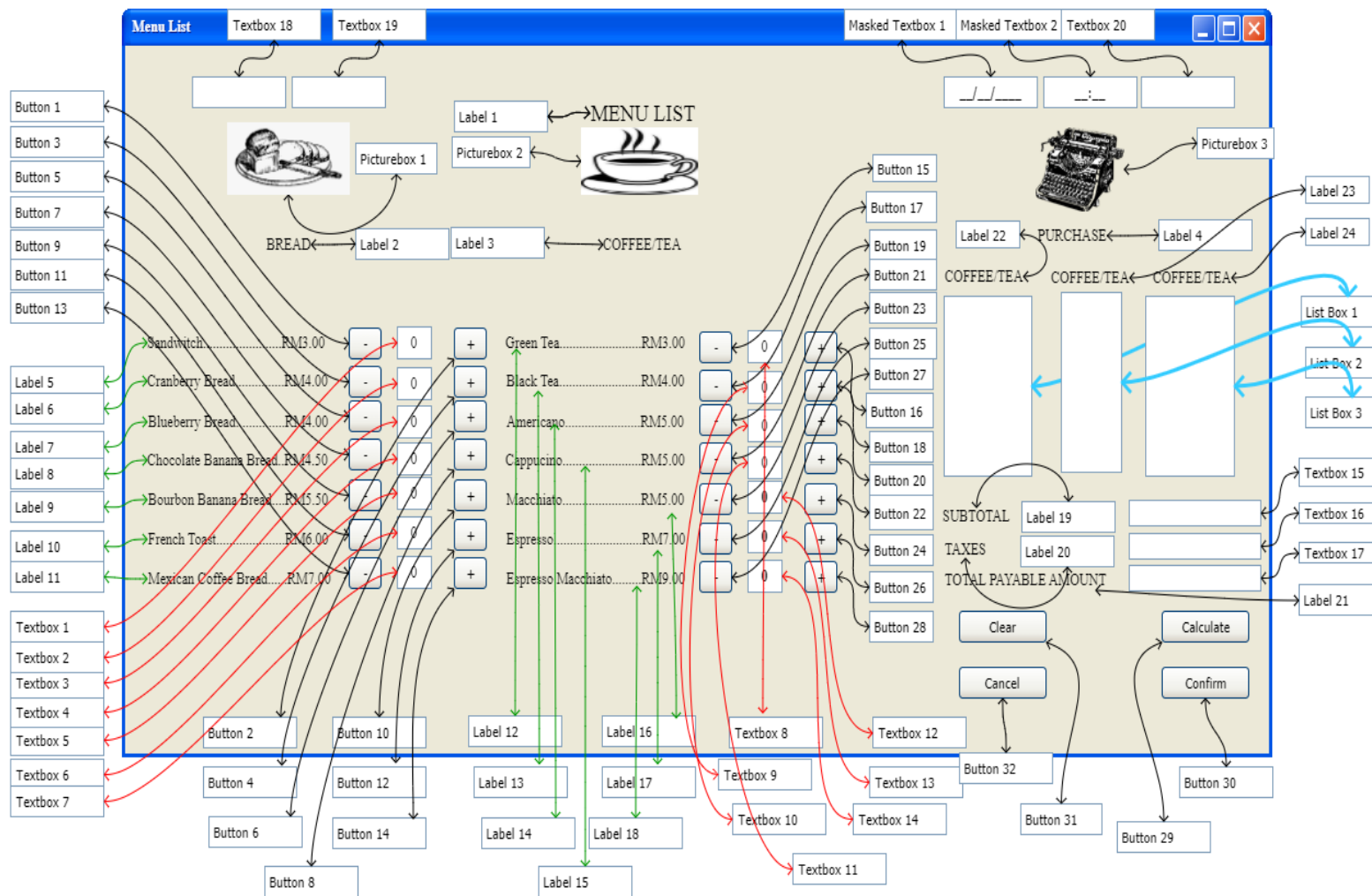
| Control   | Control Name          | Description  |
|-----------|-----------------------|--|
| Label 1   | lblSystem             | System Name  |
| Label 2   | lblTitle              | Label for Form Title   |
| Label 3   | lblID                 | Label for Customer ID  |
| Label 4   | lblName               | Label for Customer Name  |
| Label 5   | lblCustomer_Number    | Label for Customer Number  |
| Textbox 1 | txtboxID              | Textbox input field for Customer ID  |
| Textbox 2 | txtboxName            | Textbox input field for Customer Name  |
| Textbox 3 | txtboxCustomer_Number | Textbox input field for Customer Number                                      |
| Textbox 4 | txtboxUser            | Textbox output display Staff that currently login and incharge of the system |
| Button 1  | btnLogin              | Button for staff or customer to login the system                             |
| Button 2  | btnRegister           | Button for staff or customer to enter registration page                      |
| Button 3  | btnQuit               | Button for user to log out   |

## 2.3 Customer Registration Form



| Control    | Control Name        | Description  |
|------------|---------------------|--|
| Label 1    | lblTitle            | Form title   |
| Label 2    | lblCustomer_ID      | Label for Customer ID  |
| Label 3    | lblCustomer_Name    | Label for Customer Name  |
| Label 4    | lblGender           | Label for Gender   |
| Label 5    | lblBrith_Date       | Label for Birth_Date   |
| Label 6    | lblPhone_Number     | Label for Phone Number   |
| Label 7    | lblAddressStreet    | Label for Address Street   |
| Label 8    | lblCity             | Label for City   |
| Label 9    | lblState            | Label for State  |
| Label 10   | lblCountry          | Label for Country  |
| Label 11   | lblEmail            | Label for Email  |
| Textbox 1  | txtboxCustomer_ID   | Textbox input field for Customer ID  |
| Textbox 2  | txtboxCustomer_Name | Textbox input field for Customer Name  |
| Textbox 3  | txtboxBirth_Date    | Textbox input field for Birth Date   |
| Textbox 4  | txtboxPhone_Number  | Textbox input field for Phone Number   |
| Textbox 5  | txtboxAddressStreet | Textbox input field for Address Street   |
| Textbox 6  | txtboxCity          | Textbox input field for City   |
| Textbox 7  | txtboxState         | Textbox input field for State  |
| Textbox 8  | txtboxCountry       | Textbox input field for Country  |
| Textbox 9  | txtboxEmail         | Textbox input field for Email  |
| ComboBox 1 | cboGender           | Combo Box for Gender selection   |
| Button 1   | btnNumber           | Button for Customer Random Number selection  |
| Button 2   | btnSubmit           | Button for submit Customer Registration Form information                                   |
| Button 3   | btnCancel           | Button for cancel Customer Registration Form information and return to Customer Login Page |
| Button 4   | btnDelete           | Button for delete existing data  |

## 2.4 Menu List



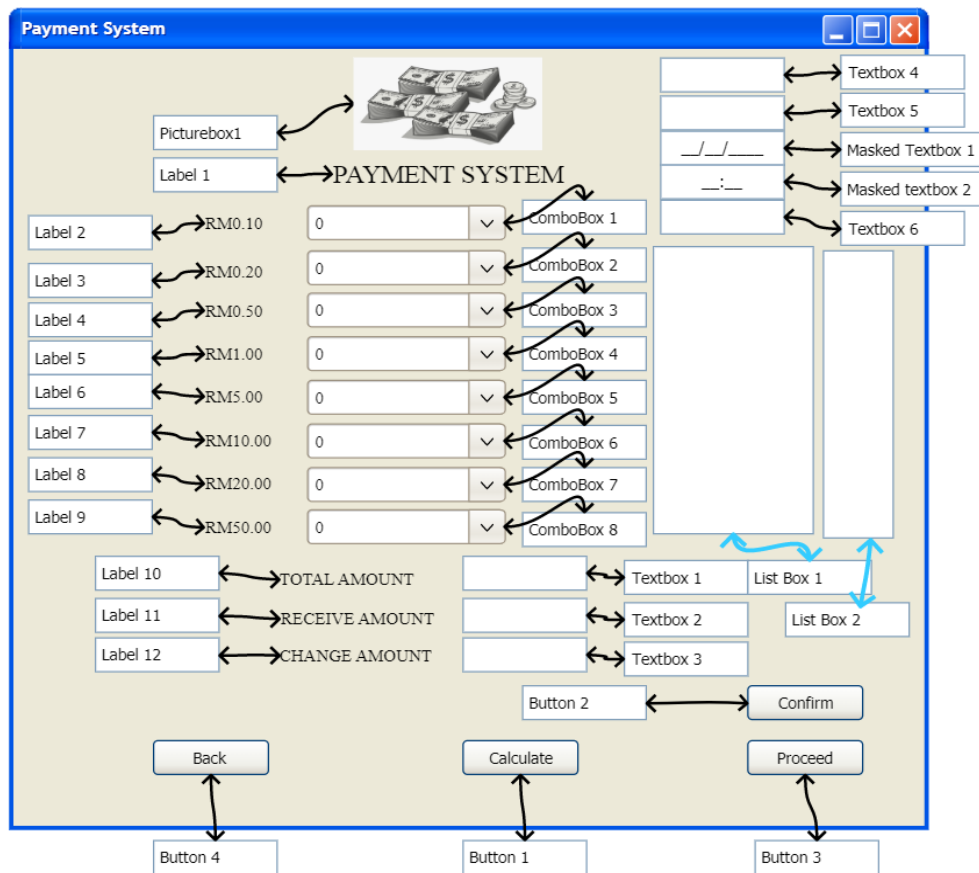
| Control          | Control Name     | Description      | Control   | Control Name | Description |
|------------------|------------------|------------------|-----------|--------------|-------------|
| Button 1         | Button 1         | Button 1         | Button 15 | Button 15    | Button 15   |
| Button 3         | Button 3         | Button 3         | Button 17 | Button 17    | Button 17   |
| Button 5         | Button 5         | Button 5         | Button 19 | Button 19    | Button 19   |
| Button 7         | Button 7         | Button 7         | Button 21 | Button 21    | Button 21   |
| Button 9         | Button 9         | Button 9         | Button 23 | Button 23    | Button 23   |
| Button 11        | Button 11        | Button 11        | Button 25 | Button 25    | Button 25   |
| Button 13        | Button 13        | Button 13        | Button 27 | Button 27    | Button 27   |
| Label 5          | Label 5          | Label 5          | Button 16 | Button 16    | Button 16   |
| Label 6          | Label 6          | Label 6          | Button 18 | Button 18    | Button 18   |
| Label 7          | Label 7          | Label 7          | Button 20 | Button 20    | Button 20   |
| Label 8          | Label 8          | Label 8          | Button 22 | Button 22    | Button 22   |
| Label 9          | Label 9          | Label 9          | Button 24 | Button 24    | Button 24   |
| Label 10         | Label 10         | Label 10         | Button 26 | Button 26    | Button 26   |
| Label 11         | Label 11         | Label 11         | Button 28 | Button 28    | Button 28   |
| Textbox 1        | Textbox 1        | Textbox 1        | Button 30 | Button 30    | Button 30   |
| Textbox 2        | Textbox 2        | Textbox 2        | Button 31 | Button 31    | Button 31   |
| Textbox 3        | Textbox 3        | Textbox 3        | Button 32 | Button 32    | Button 32   |
| Textbox 4        | Textbox 4        | Textbox 4        | Button 29 | Button 29    | Button 29   |
| Textbox 5        | Textbox 5        | Textbox 5        | Button 27 | Button 27    | Button 27   |
| Textbox 6        | Textbox 6        | Textbox 6        | Button 25 | Button 25    | Button 25   |
| Textbox 7        | Textbox 7        | Textbox 7        | Button 23 | Button 23    | Button 23   |
| Label 12         | Label 12         | Label 12         | Button 21 | Button 21    | Button 21   |
| Label 13         | Label 13         | Label 13         | Button 19 | Button 19    | Button 19   |
| Label 14         | Label 14         | Label 14         | Button 17 | Button 17    | Button 17   |
| Label 15         | Label 15         | Label 15         | Button 15 | Button 15    | Button 15   |
| Label 16         | Label 16         | Label 16         | Button 13 | Button 13    | Button 13   |
| Label 17         | Label 17         | Label 17         | Button 11 | Button 11    | Button 11   |
| Label 18         | Label 18         | Label 18         | Button 9  | Button 9     | Button 9    |
| Label 19         | Label 19         | Label 19         | Button 7  | Button 7     | Button 7    |
| Label 20         | Label 20         | Label 20         | Button 5  | Button 5     | Button 5    |
| Label 21         | Label 21         | Label 21         | Button 3  | Button 3     | Button 3    |
| Label 22         | Label 22         | Label 22         | Button 1  | Button 1     | Button 1    |
| Label 23         | Label 23         | Label 23         | Button 29 | Button 29    | Button 29   |
| Label 24         | Label 24         | Label 24         | Button 27 | Button 27    | Button 27   |
| List Box 1       | List Box 1       | List Box 1       | Button 25 | Button 25    | Button 25   |
| List Box 2       | List Box 2       | List Box 2       | Button 23 | Button 23    | Button 23   |
| List Box 3       | List Box 3       | List Box 3       | Button 21 | Button 21    | Button 21   |
| Textbox 15       | Textbox 15       | Textbox 15       | Button 19 | Button 19    | Button 19   |
| Textbox 16       | Textbox 16       | Textbox 16       | Button 17 | Button 17    | Button 17   |
| Textbox 17       | Textbox 17       | Textbox 17       | Button 15 | Button 15    | Button 15   |
| Masked Textbox 1 | Masked Textbox 1 | Masked Textbox 1 | Button 13 | Button 13    | Button 13   |
| Masked Textbox 2 | Masked Textbox 2 | Masked Textbox 2 | Button 11 | Button 11    | Button 11   |
| Textbox 18       | Textbox 18       | Textbox 18       | Button 9  | Button 9     | Button 9    |
| Textbox 19       | Textbox 19       | Textbox 19       | Button 7  | Button 7     | Button 7    |
| Textbox 20       | Textbox 20       | Textbox 20       | Button 5  | Button 5     | Button 5    |

|            |                            |   |
|------------|----------------------------|---|
| Label 1    | lblTitle                   | Form Title  |
| Label 2    | lblBread                   | Label for Bread categories                                      |
| Label 3    | lblCoffee_Tea              | Label for Cofee and Tea categories                              |
| Label 4    | lblPurchase                | Label for Purchase  |
| Label 5    | lblSandwitch               | Label for Sandwitch and RM3.00                                  |
| Label 6    | lblCranberry_B             | Label for Cranberry Bread and RM4.00                            |
| Label 7    | lblBlueberry_B             | Label for Blueberry Bread and RM4.00                            |
| Label 8    | lblChocolate_Banana_B      | Label for Chocolate Banana Bread and RM4.50                     |
| Label 9    | lblBourbon_Banana_B        | Label for Bourbon Banana Bread and RM5.50                       |
| Label 10   | lblFrench_Toast            | Label for French Toast and RM6.00                               |
| Label 11   | lbl_MexicanCoffeeBread     | Label for Mexican Coffee Bread and RM7.00                       |
| Label 12   | lblGreen_T                 | Label for Green Tea and RM3.00                                  |
| Label 13   | lblBlack_T                 | Label for Black Tea and RM4.00                                  |
| Label 14   | lblAmericano               | Label for Americano and RM5.00                                  |
| Label 15   | lblCappucino               | Label for Cappucino and RM5.00                                  |
| Label 16   | lblMacchiato               | Label for Macchiato and RM5.00                                  |
| Label 17   | lblEspresso                | Label for Espresso and RM7.00                                   |
| Label 18   | lblEspresso_Macchiato      | Label for Espresso Macchiato and RM9.00                         |
| Label 19   | lblSubtotal                | Label for Subtotal price  |
| Label 20   | lblTaxes                   | Label for Taxes   |
| Label 21   | lblTotal_Payable_Amount    | Label for Total Payable Amount price                            |
| Label 22   | lblOrders                  | Label for items Order   |
| Label 23   | lblQuantity                | Label for items Quantity  |
| Label 24   | lblPrice                   | Label for items Price   |
| Textbox 1  | txtboxSandwitch            | Textbox output display quantity of Sandwitch order              |
| Textbox 2  | txtboxCranberry_B          | Textbox output display quantity of Cranberry Bread order        |
| Textbox 3  | txtboxBlueberry_B          | Textbox output display quantity of Blueberry Bread order        |
| Textbox 4  | txtboxChocolate_Banana_B   | Textbox output display quantity of Chocolate Banana Bread order |
| Textbox 5  | txtboxBourbon_Banana_B     | Textbox output display quantity of Boubon Banana Bread order    |
| Textbox 6  | txtboxFrench_Toast         | Textbox output display quantity of French Toast order           |
| Textbox 7  | txtboxMexicanCoffeeBread   | Textbox output display quantity of Mexican Coffee Bread order   |
| Textbox 8  | txtboxGreen_T              | Textbox output display quantity of Green Tea order              |
| Textbox 9  | txtboxBlack_T              | Textbox output display quantity of Black Tea order              |
| Textbox 10 | txtboxAmericano            | Textbox output display quantity of Americano order              |
| Textbox 11 | txtboxCappucino            | Textbox output display quantity of Cappucino order              |
| Textbox 12 | txtboxMacchiato            | Textbox output display quantity of Macchiato order              |
| Textbox 13 | txtboxEspresso             | Textbox output display quantity of Espresso order               |
| Textbox 14 | txtbox Espresso_Macchiato  | Textbox output display quantity of Espresso Macchiato order     |
| Textbox 15 | txtboxSubtotal             | Textbox output display Subtotal price                           |
| Textbox 16 | txtboxTaxes                | Textbox output display Taxes                                    |
| Textbox 17 | txtboxTotal_Payable_Amount | Textbox output display Total Payable Amount price               |
| Textbox 18 | txtboxID                   | Textbox output display Customer ID                              |



|                  |              |   |
|------------------|--------------|---|
| Textbox 19       | txtboxName   | Textbox output display Customer Name  |
| Textbox 20       | txtboxUser   | Textbox output display Staff Name that currently incharge                     |
| Masked Textbox 1 | mtxtboxDate  | Masked Textbox output display current Date                                    |
| Masked Textbox 2 | mtxtboxTime  | Masked Textbox output display current Time                                    |
| Button 1         | btnSub_1     | Button for Subtract one quantity of Sandwich order                            |
| Button 2         | btnAdd_1     | Button for Add one quantity of Sandwich order                                 |
| Button 3         | btnSub_2     | Button for Subtract one quantity of Cranberry Bread order                     |
| Button 4         | btnAdd_2     | Button for Add one quantity of Cranberry Bread order                          |
| Button 5         | btnSub_3     | Button for Subtract one quantity of Blueberry Bread order                     |
| Button 6         | btnAdd_3     | Button for Add one quantity of Blueberry Bread order                          |
| Button 7         | btnSub_4     | Button for Subtract one quantity of Chocolate Banana Bread order              |
| Button 8         | btnAdd_4     | Button for Add one quantity of Chocolate Banana Bread order                   |
| Button 9         | btnSub_5     | Button for Subtract one quantity of Bourbon Banana Bread order                |
| Button 10        | btnAdd_5     | Button for Add one quantity of Bourbon Banana Bread order                     |
| Button 11        | btnSub_6     | Button for Subtract one quantity of French Toast order                        |
| Button 12        | btnAdd_6     | Button for Add one quantity of French Toast order                             |
| Button 13        | btnSub_7     | Button for Subtract one quantity of Mexican Coffee Bread order                |
| Button 14        | btnAdd_7     | Button for Add one quantity of Mexican Coffee Bread order                     |
| Button 15        | btnSub_8     | Button for Subtract one quantity of Green Tea order                           |
| Button 16        | btnAdd_8     | Button for Add one quantity of Green Tea order                                |
| Button 17        | btnSub_9     | Button for Subtract one quantity of Black Tea order                           |
| Button 18        | btnAdd_9     | Button for Add one quantity of Black Tea order                                |
| Button 19        | btnSub_10    | Button for Subtract one quantity of Americano order                           |
| Button 20        | btnAdd_10    | Button for Add one quantity of Americano order                                |
| Button 21        | btnSub_11    | Button for Subtract one quantity of Cappucino order                           |
| Button 22        | btnAdd_11    | Button for Add one quantity of Cappucino order                                |
| Button 23        | btnSub_12    | Button for Subtract one quantity of Macchiato order                           |
| Button 24        | btnAdd_12    | Button for Add one quantity of Macchiato order                                |
| Button 25        | btnSub_13    | Button for Subtract one quantity of Espresso order                            |
| Button 26        | btnAdd_13    | Button for Add one quantity of Espresso order                                 |
| Button 27        | btnSub_14    | Button for Subtract one quantity of Espresso Macchiato order                  |
| Button 28        | btnAdd_14    | Button for Add one quantity of Espresso Macchiato order                       |
| Button 29        | btnCalculate | Button for Calculate the Subtotal Price, Taxes and Total Payable Amount price |
| Button 30        | btnConfirm   | Button for Confirm the order and proceed to Payment System                    |
| Button 31        | btnClear     | Button for Clear the order and reset all order quantity to zero               |
| Button 32        | btnCancel    | Button for Cancel the order and return to Customer Login Page                 |
| Picturebox 1     | picbox1      | Picturebox output display the image of Bread                                  |
| Picturebox 2     | picbox2      | Picturebox output display the image of Coffee/Tea                             |
| Picturebox 3     | picbox3      | Picturebox output display the image of a Mechanism                            |
| List Box 1       | listbox1     | List Box output display items name order by customer                          |
| List Box 2       | listbox2     | List Box output display items order quantity by customer                      |
| List Box 3       | listbox3     | List Box output display items price order by customer                         |

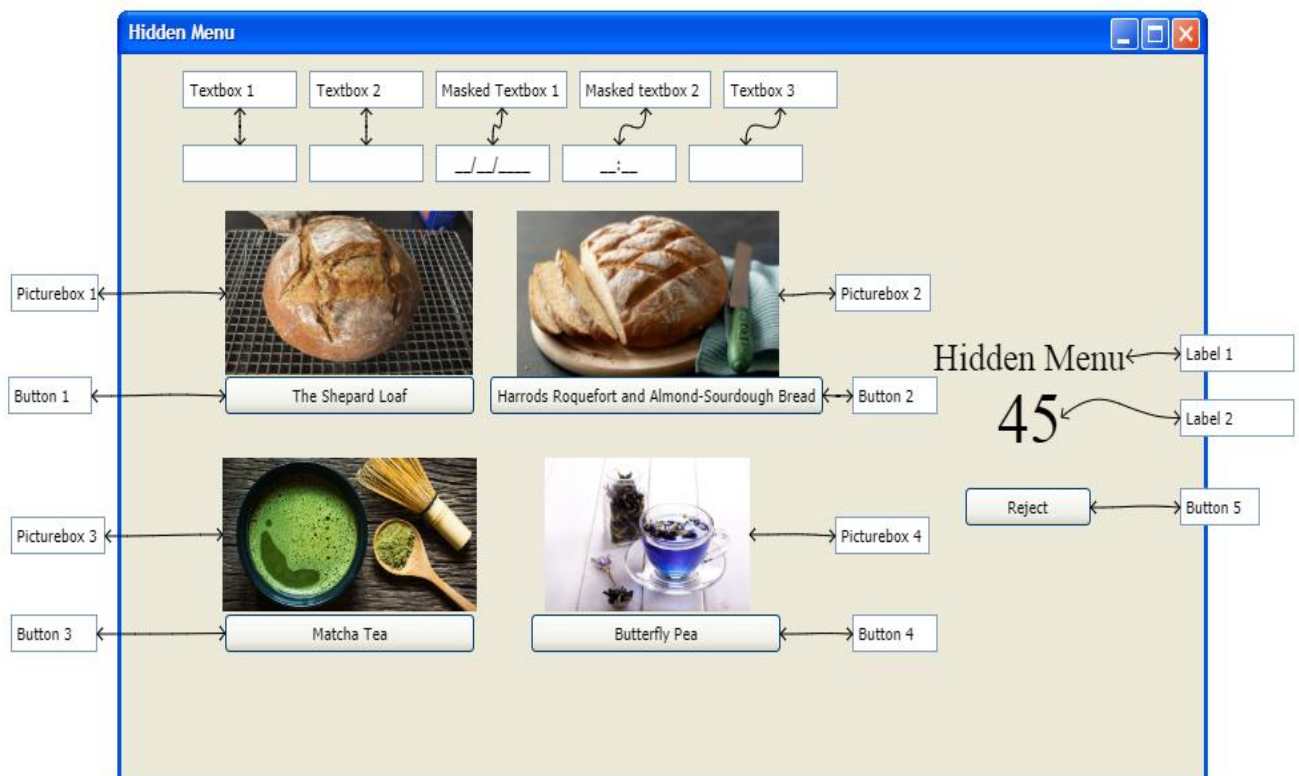
## 2.5 Payment System



| Control          | Control Name         | Description   |
|------------------|----------------------|---|
| Label 1          | lblTitle             | Label for Form Title  |
| Label 2          | lblTen_sen           | Label for RM0.10  |
| Label 3          | lblTwenty_sen        | Label for RM0.20  |
| Label 4          | lblFifty_sen         | Label for RM0.50  |
| Label 5          | lblOne_ringgit       | Label for RM1.00  |
| Label 6          | lblFive_ringgit      | Label for RM5.00  |
| Label 7          | lblTen_ringgit       | Label for RM10.00   |
| Label 8          | lblTwenty_ringgit    | Label for RM20.00   |
| Label 9          | lblFifty_ringgit     | Label for RM50.00   |
| Label 10         | lblTotal_Amount      | Label for TOTAL AMOUNT                                      |
| Label 11         | lblReceive_Amount    | Label for RECEIVE AMOUNT                                    |
| Label 12         | lblChange_Amount     | Label for CHANGE AMOUNT                                     |
| Textbox 1        | txtboxTotal_Amount   | Textbox output display Total amount of price                |
| Textbox 2        | txtboxReceive_Amount | Textbox output display Receive Amount of cash               |
| Textbox 3        | txtboxChange_Amount  | Textbox output display total Change Amount of cash required |
| Textbox 4        | txtboxID             | Textbox output display Customer ID                          |
| Textbox 5        | txtboxName           | Textbox output display Customer Name                        |
| Textbox 6        | txtboxUser           | Textbox output display Staff Name that currently incharge   |
| Masked Textbox 1 | mtxtboxDate          | Masked Textbox output display current Date                  |
| Masked Textbox 2 | mtxtboxTime          | Masked Textbox output display current Time                  |

| Control     | Control Name       | Description   |
|-------------|--------------------|---|
| ComboBox 1  | cbo1               | Combox Box for number of RM0.10 selection                               |
| ComboBox 2  | cbo2               | Combox Box for number of RM0.20 selection                               |
| ComboBox 3  | cbo3               | Combox Box for number of RM0.50 selection                               |
| ComboBox 4  | cbo4               | Combox Box for number of RM1.00 selection                               |
| ComboBox 5  | cbo5               | Combox Box for number of RM5.00 selection                               |
| ComboBox 6  | cbo6               | Combox Box for number of RM10.00 selection                              |
| ComboBox 7  | cbo7               | Combox Box for number of RM20.00 selection                              |
| ComboBox 8  | cbo8               | Combox Box for number of RM50.00 selection                              |
| Button 1    | btnFinal_Calculate | Button for Calculate Total Amount, Receive Amount and Change Amount     |
| Button 2    | btnFinal_Confirm   | Button for Confirm the order  |
| Button 3    | btnProceed         | Button for Proceed the order  |
| Button 4    | btnBack            | Button for return to Menu List Page                                     |
| Picturebox1 | picbox1            | Picturebox output display the image of Payment System                   |
| List Box 1  | listbox1           | List Box output display items name order by customer from Menu List     |
| List Box 2  | listbox2           | List Box output display items quantity order by customer from Menu List |

## 2.6 Hidden Menu

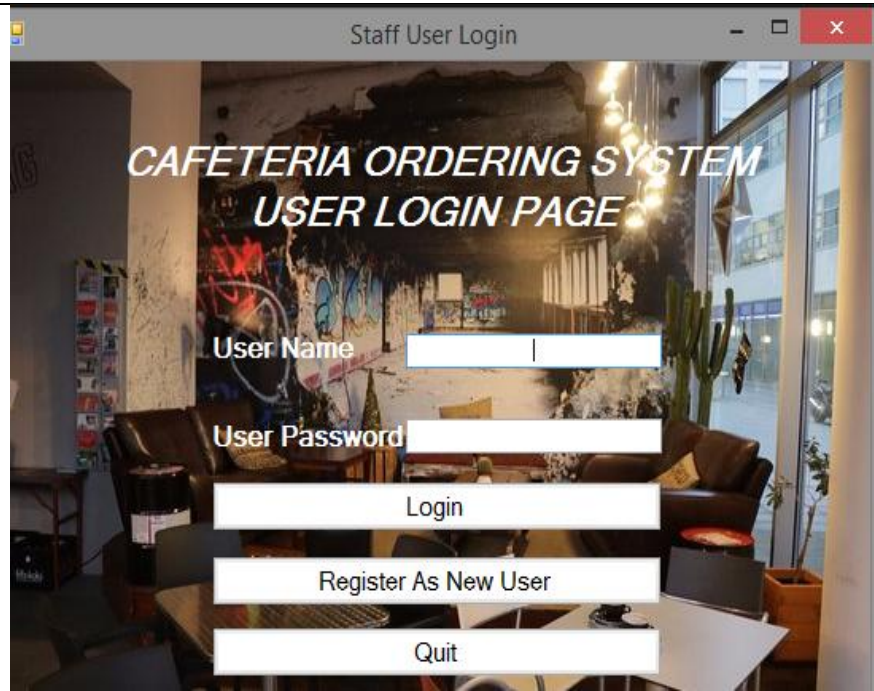


| Control          | Control Name | Description   |
|------------------|--------------|---|
| Label 1          | lblTitle     | Label for Form Title                                      |
| Label 2          | lblTimer     | Label for Time Limit                                      |
| Textbox 1        | txtboxID     | Textbox output display Customer ID                        |
| Textbox 2        | txtboxName   | Textbox output display Customer Name                      |
| Textbox 3        | txtboxUser   | Textbox output display Staff Name that currently incharge |
| Masked Textbox 1 | mtxtboxDate  | Masked Textbox output display current Date                |
| Masked Textbox 2 | mtxtboxTime  | Masked Textbox output display current Time                |

| Control      | Control Name | Description  |
|--------------|--------------|--|
| Button 1     | btnTSL       | Button for user to select The Shepard Loaf   |
| Button 2     | btnHR_AS     | Button for staff or customer to select Harrods Roquefort and Almond-Sourdough Bread  |
| Button 3     | btnMT        | Button for staff or customer to select Matcha Tea                                    |
| Button 4     | btnBP        | Button for staff or customer to select Butterfly Pea                                 |
| Button 5     | btnReject    | Button for staff or customer to reject any choices and return to Customer Login Page |
| Picturebox 1 | pbox1        | Picturebox output display the image of The Shepard Loaf                              |
| Picturebox 2 | pbox2        | Picturebox output display the image of Harrods Roquefort and Almond-Sourdough Bread  |
| Picturebox 3 | pbox3        | Picturebox output display the image of a Matcha Tea                                  |
| Picturebox 4 | pbox4        | Picturebox output display the image of a Butterfly Pea                               |

### 3.0 User Manual

#### Form1: Staff User Login



##### Login

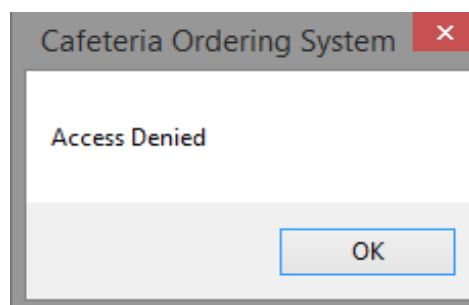
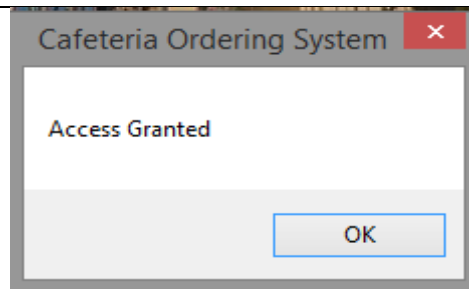
Once the system is active, staff user is required to input the correct user name and user password individually.

##### Register As New User

For user who has not register as the system user and wish to become a new user.

##### Quit

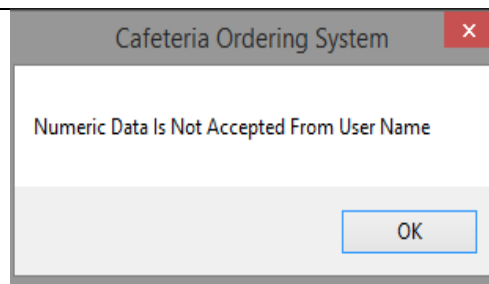
User who wishes to quit the system shall select Quit button and the system will auto close.



##### Login

Once user input the correct user name and user password, a message box will show ("Access Granted") and second page will display. The following pages do not contain control box like Staff User Login Page.

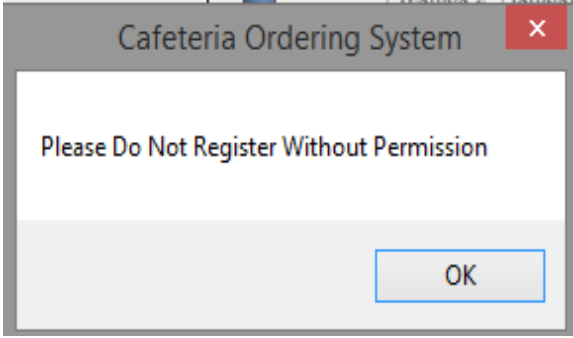
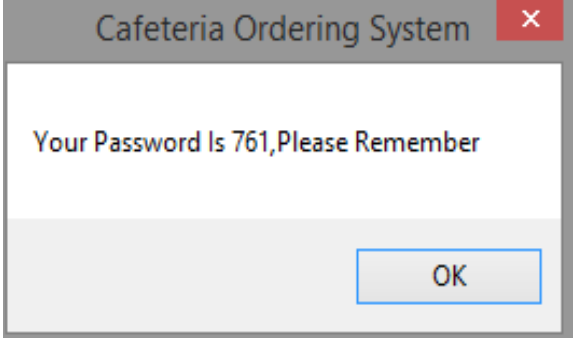
However, if either user name or user password or both is input incorrectly, a message box will show ("Access Denied") and second page will not display.

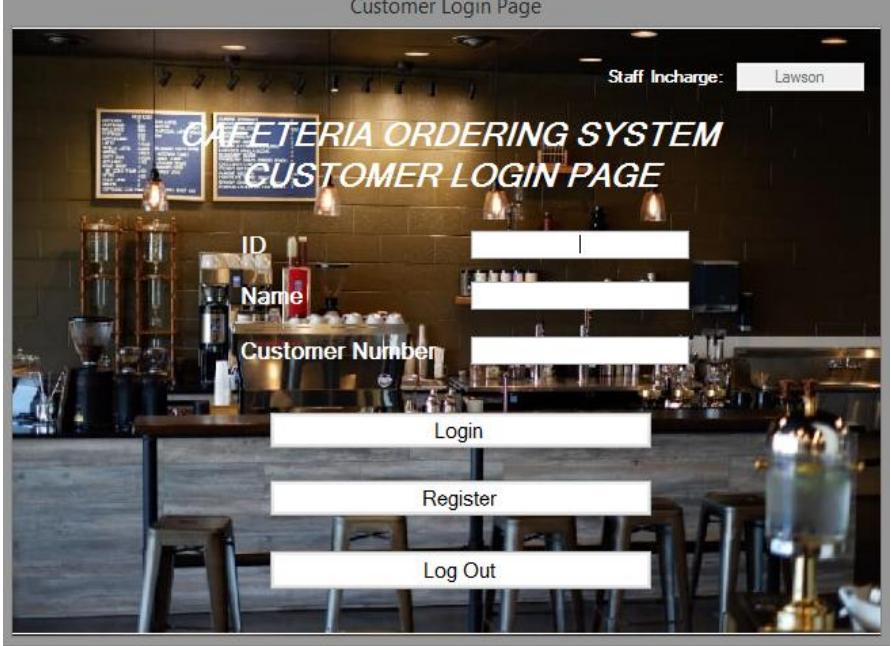


##### Register As New User

##### User Name

Staff User must remember to fill in proper user name in as numeric data will not be accepted.

|   |  |
|---|--|
|   | <p><u>Register As New User</u></p> <p><u>User Password</u></p> <p>User shall input registration password in User Password Textbox which is:<br/>(AntidisestablishmentarianismPathfinderPeebee)</p> <p>User is not allowed to input any password that based on their favourites as a message box will show (“Please Do Not Register Without Permission”).</p> <p>User is advised not to simply share registration password to others.</p> |
|  | <p><u>Register As New User</u></p> <p>Once user successful register, user will be given random password number. User is advised remember their password as there is no second chance to view their password again.</p> <p>Then the textbox input will auto clear and user shall input their user name and new password to login the system.</p>  |

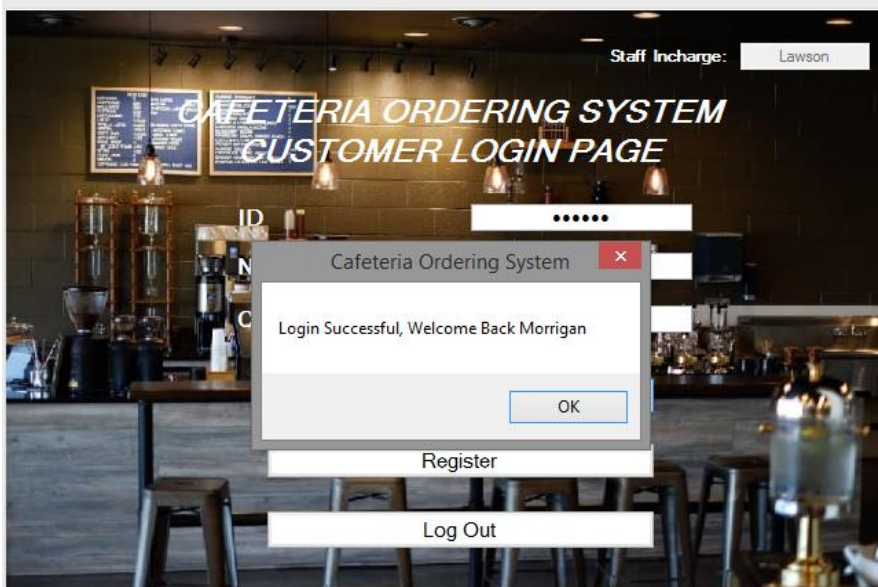
|  |   |
|--|---|
| <p><b>Form2 : Customer Login Page</b></p>  |   |
|  | <p><u>Login</u></p> <p>Once Customer Login Page is display, user should enter Customer ID, Name and Customer Name to login to Menu Page. Any information that type on the textbox will be auto clear.</p> <p><u>Register</u></p> <p>For customer who has not registered as a member, they should select register button. Any information that type on the textbox will be auto clear.</p> |



### Log Out

To log out and return to Staff User Login Page, staff user should enter their user name into Name textbox and user password to ID textbox then select Log Out button. Any information that type on the textbox will be auto clear.

Customer Login Page

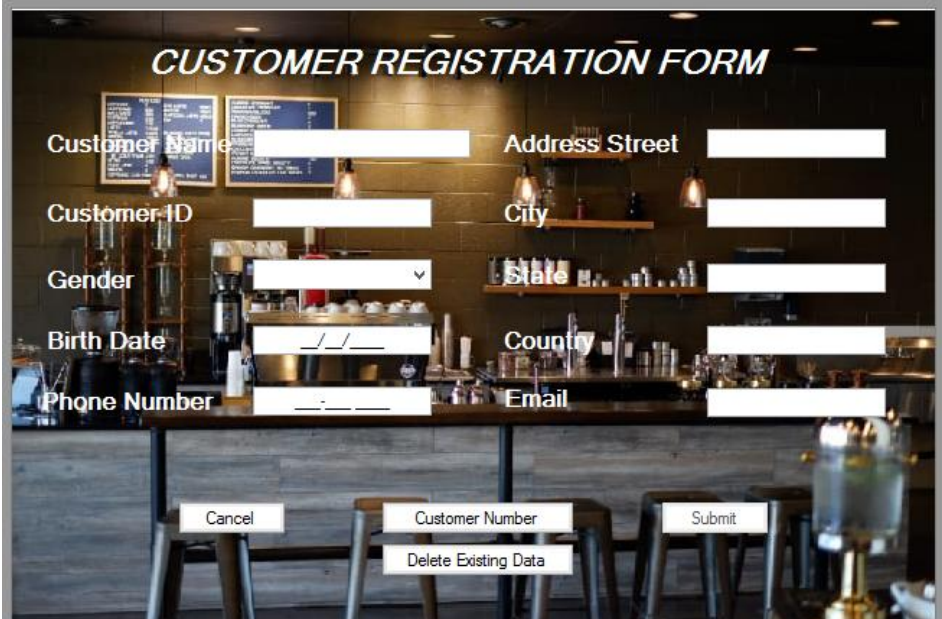
The screenshot shows the 'Customer Login Page' of a 'CAFETERIA ORDERING SYSTEM'. At the top right, it says 'Staff Incharge: Lawson'. The main title is 'CUSTOMER LOGIN PAGE'. There are input fields for 'ID' and 'Password' (masked with dots). Below these is a 'Login' button. A modal dialog box is open in the center with the title 'Cafeteria Ordering System' and a close button. The message inside says 'Login Successful, Welcome Back Morrigan'. Below the message is an 'OK' button. At the bottom of the page, there are buttons for 'Register' and 'Log Out'.

### Login

If login successful, a message box will display and welcome the customer with their name to ensure is the correct customer.

## Form3: Customer Registration Form

Customer Registration Form

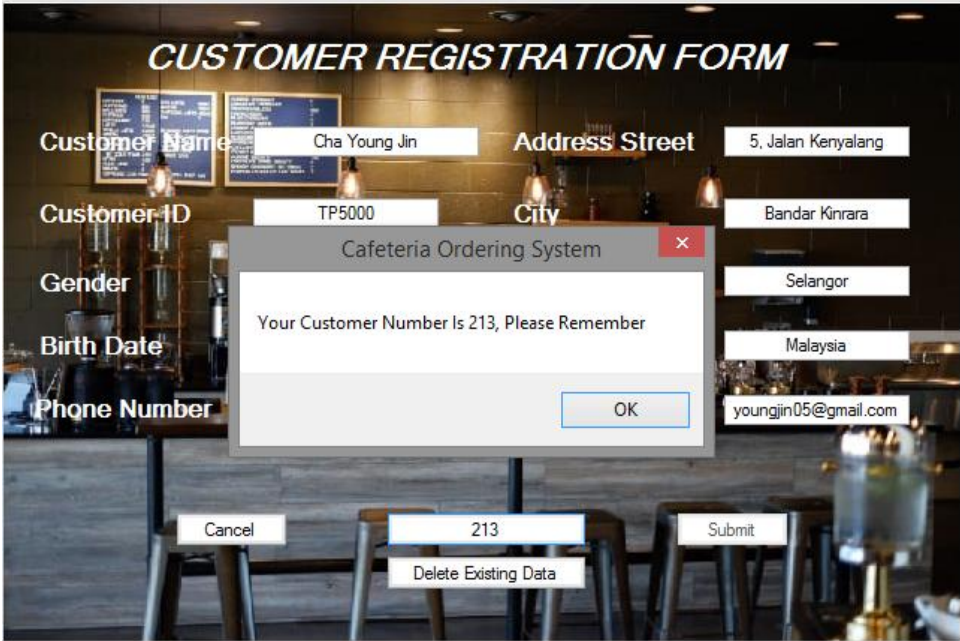
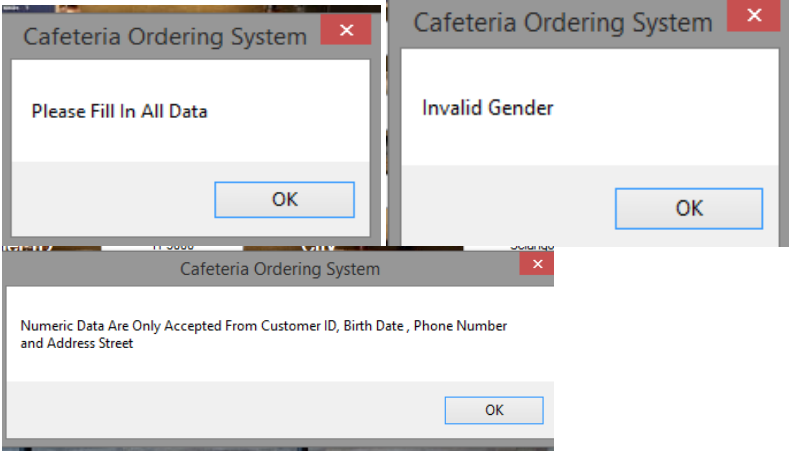
The screenshot shows the 'CUSTOMER REGISTRATION FORM'. It has a title bar 'Customer Registration Form'. The form fields are: 'Customer Name', 'Address Street', 'Customer ID', 'City', 'Gender' (a dropdown menu), 'State', 'Birth Date' (with a date picker), 'Country', 'Phone Number', and 'Email'. At the bottom, there are four buttons: 'Cancel', 'Customer Number', 'Delete Existing Data', and 'Submit'.

### Disable Submit Button

Once Customer Registration Form is display, the Submit button will initially disable. Thus staff user is unable to select the button. Staff User should enter all data into the textbox.

### Cancel

If customer decided not to make registration, user should select Cancel button to cancel registration. Any changes in the textbox will auto clear.

|  |   |
|--|---|
|  | <p><u>Delete Existing Data</u></p> <p>If customer decided to delete their customer data, customer should input their name into Customer Name and Customer Number into Customer ID textbox then select delete existing data button.</p>  |
|  | <p><u>Customer Number</u></p> <p>User should not forget to select Customer Number button to provide customer number. The message box will then display random customer number. Customer is advised to remember their number as there is no second chance to view their customer number again.</p> <p><u>Submit Button Enabled</u></p> <p>After close the message box, the Customer Number button will be disabled and Submit Button will be enabled</p> |
|  | <p><u>Submit Button (Submit Failed)</u></p> <p>User is advised to input all data and no numeric data is accepted besides from Customer ID, Birth Date, Phone Number and Address Street.</p> <p>User is also advised input the correct gender Male or Female. Any gender besides the proper gender will consider as Invalid Gender.</p>  |

### Customer Registration Form

### Submit Button (Submit Success)

Once the registration is successful, user is required to input again the Customer Name, Customer ID and Customer Number in Customer Login Page. At the same time, all input data in Customer Registration Form will be auto clear.

### Form4: Menu List

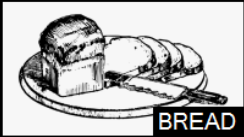
Once user reaches to Menu List Page, all textbox, masked textbox, list box and Confirm button are auto disable in order to prevent user from simply manipulating the data. To choose item that customer requested, user just need to select the (+) button to add order quantity or (-) button to subtract the order quantity




MENU LIST

TP1000

Morgan



**BREAD**

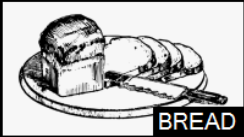


**COFFEE / TEA**


31/05/2020

05:30


Lawson



|                             |  |        |   |   |   |
|-----------------------------|--|--------|---|---|---|
| Sandwich.....               |  | RM3.00 | - | 2 | + |
| Cranberry Bread.....        |  | RM4.00 | - | 1 | + |
| Blueberry Bread.....        |  | RM4.00 | - | 2 | + |
| Chocolate Banana Bread..... |  | RM4.50 | - | 0 | + |
| Bourbon Banana Bread.....   |  | RM5.50 | - | 0 | + |
| French Toast.....           |  | RM6.00 | - | 0 | + |
| Mexican Coffee Bread.....   |  | RM7.00 | - | 2 | + |



|                         |  |        |   |   |   |
|-------------------------|--|--------|---|---|---|
| Green Tea.....          |  | RM3.00 | - | 1 | + |
| Black Tea.....          |  | RM4.00 | - | 1 | + |
| Americano.....          |  | RM5.00 | - | 1 | + |
| Cappuccino.....         |  | RM5.00 | - | 0 | + |
| Macchiato.....          |  | RM5.00 | - | 0 | + |
| Espresso.....           |  | RM7.00 | - | 0 | + |
| Espresso Macchiato..... |  | RM9.00 | - | 0 | + |



**PURCHASE**

| Orders                      | Quantity | Price   |
|-----------------------------|----------|---------|
| Sandwich                    | 2        | RM6     |
| Cranberry Bread             | 1        | RM4     |
| Blueberry Bread             | 2        | RM8     |
| Mexican Coffee Bread        | 2        | RM14    |
| Green Tea                   | 1        | RM3     |
| Black Tea                   | 1        | RM4     |
| Americano                   | 1        | RM5     |
| <b>SUBTOTAL</b>             |          | RM44.00 |
| <b>TAXES</b>                |          | RM1.06  |
| <b>TOTAL PAYABLE AMOUNT</b> |          | RM45.64 |

Clear

Calculate

Cancel

Confirm

### Calculate Button

Once customer decided the items order, user should select Calculate button to calculate the Subtotal, Taxes and Total Payable Amount. If Subtotal is less than or equals to RM30.00, the taxes will remain RM1.08, if Subtotal more than or equals to RM31.00, the taxes will reduce to RM1.06. The Calculate button also refresh the listbox to display Orders name, Quantity of order and Price. Once Calculate button is select, Confirm button will enabled but Cancel button will disabled.

### Confirm Button

Once Confirm button is select, Payment System will display.

### Clear Button


If customer changes their decision, user can select Clear button to reset all orders to zero and clear Subtotal, Taxes and Total Payable Amount. However the listboxes will not be clear in order for customer to refer what they have order previously to make new decision. Once Clear button is select ,Cancel button will enabled but Confirm button will disabled.

### Cancel Button

Once customer decided cancel their order, user can select Cancel button to return to Customer Login Page and all data will be reset automatically.

## Form5: Payment System

PAYMENT SYSTEM



# PAYMENT SYSTEM

TP1000

Morrigan

31/05/2020

05:52

Lawson

RM0.10

0

▼

RM0.20

0

▼

RM0.50

0

▼

RM1.00

0

▼

RM5.00

0

▼

RM10.00

0

▼

RM20.00

0

▼

RM50.00

0

▼

|                      |   |
|----------------------|---|
| Sandwich             | 2 |
| Cranberry Bread      | 1 |
| Blueberry Bread      | 2 |
| Mexican Coffee Bread | 2 |
| Green Tea            | 1 |
| Black Tea            | 1 |
| Americano            | 1 |

TOTAL AMOUNT

RECEIVE AMOUNT

TOTAL CHANGE

Confirm

Back


Calculate

Proceed

Once user reaches Payment System Page, the orders name and quantity of order from Menu List Page list box will transfer to Payment System list box. All textbox, masked textbox, list box, Confirm button and Proceed button are auto disable in order to prevent user from simply manipulating the data.

User should use combo box to select based on the amount of customer purchase.

PAYMENT SYSTEM



TP1000  
Morrigan  
31/05/2020  
06:28  
Lawson

PAYMENT SYSTEM


RM0.10 0  
RM0.20 0  
RM0.50 0  
RM1.00 0  
RM5.00 0  
RM10.00 0  
RM20.00 0  
RM50.00 1

Sandwich 3  
Cranberry Bread 1  
Blueberry Bread 2  
Mexican Coffee Bread 1  
Green Tea 1  
Black Tea 1  
Americano 1

TOTAL AMOUNT RM42.40  
RECEIVE AMOUNT RM50.00  
TOTAL CHANGE RM7.60

Back Calculate Proceed

PAYMENT SYSTEM



TP1000  
Morrigan  
31/05/2020  
06:28  
Lawson

PAYMENT SYSTEM

RM0.10 0  
RM0.20 0  
RM0.50 0  
RM1.00 0  
RM5.00 0  
RM10.00 0  
RM20.00 0  
RM50.00 0

Sandwich 3  
Cranberry Bread 1  
Blueberry Bread 2  
Mexican Coffee Bread 1  
Green Tea 1  
Black Tea 1  
Americano 1

TOTAL AMOUNT RM42.40  
RECEIVE AMOUNT RM0.00  
TOTAL CHANGE RM-42.40

Back Calculate Proceed

Cafeteria Ordering System

Not Enough Cash, Stranger

OK

### Calculate Button

Once user selected the amount of cash or coins from the combo box, user should select Button calculate to calculate the Receive Amount. The Total Amount will be transferred from Menu List Total Payable Amount. If user select amount wrongly, user can always select amount in combo box again and reselect Calculate Button.

If the Receive Amount is more than Total Amount then Total Change will display change amount and Confirm button will enabled. If customer cheats after selecting Calculate Button by changing the amount in combo box then select Confirm Button, the data in textbox will not be change and customer are still forced to pay proper amount. However, if Receive Amount is less than Total Amount then Total Change will display negative value which is owed by customer and message box will display.

### Back Button

If customer wants to make changes to their orders, they can select back button to return to Menu List. All data will be reset automatically.

PAYMENT SYSTEM



## PAYMENT SYSTEM

TP1000

Morigan

31/05/2020

06:28

Lawson

RM0.10

RM0.20

Sandwich  
 Cranberry Bread  
 ...

RM50.00

**TOTAL AMOUNT** RM42.40

**RECEIVE AMOUNT** RM50.00

**TOTAL CHANGE** RM7.60

Cafeteria Ordering System  
 (All Action Will Be Irreversible Once You Select This Button)  
 Are You Sure You Want To Proceed With Your Orders?  

Yes
No

Confirm

Back

Calculate

Proceed

### Confirm Button

Once the calculation is complete and no negative value in Total Change amount, the confirm button will be enabled. Customer has to carefully consider since no changes will be allowed if select yes button from the message box. If customer select no, then nothing will happen. However if yes button is select, all combo box and buttons are disabled, thus all action will be irreversible. Then, Proceed Button is enabled.


### Proceed Button (Outcome 1)

When Proceed Order is select to end the order, Outcome 1 will display with message box ("Thank You, Please Come Again").

### Proceed Button (Outcome 2)

If customer fulfil Hidden Criteria which is spend RM41.00 or above with order at least 5 breads and 2 drinks (both repetition is allowed), then Outcome 2 is display to allowed user to choose 1 hidden item within 45 Seconds.

PAYMENT SYSTEM



**PAYMENT SYSTEM**

TP2000  
Alistair  
31/05/2020  
07:01  
Peebee

RM0.10   
RM0.20   
RM0.50   
RM1.00   
RM5.00   
RM10.00   
RM20.00   
RM50.00

Bourbon Banana Bread 1  
Espresso 2


Cafeteria Ordering System  
Thank You, Please Come Again  
OK

TOTAL AMOUNT RM21.06  
RECEIVE AMOUNT RM21.20  
TOTAL CHANGE RM0.14  
Confirm

Back Calculate Proceed

(OUTCOME 1)

PAYMENT SYSTEM



**PAYMENT SYSTEM**

TP1000  
Morgan  
31/05/2020  
06:28  
Lawson

RM0.10   
RM0.20   
RM0.50   
RM1.00   
RM5.00   
RM10.00   
RM20.00   
RM50.00

Sandwich 3  
Cranberry Bread 1  
Blueberry Bread 2


Cafeteria Ordering System  
Congratulations You Have Fulfill Hidden Criteria  
OK

TOTAL AMOUNT RM42.40  
RECEIVE AMOUNT RM50.00  
TOTAL CHANGE RM7.60  
Confirm

Back Calculate Proceed

(OUTCOME 2)

PAYMENT SYSTEM



**PAYMENT SYSTEM**

TP1000  
Morgan  
31/05/2020  
06:28  
Lawson

RM0.10   
RM0.20   
RM0.50   
RM1.00   
RM5.00   
RM10.00   
RM20.00   
RM50.00

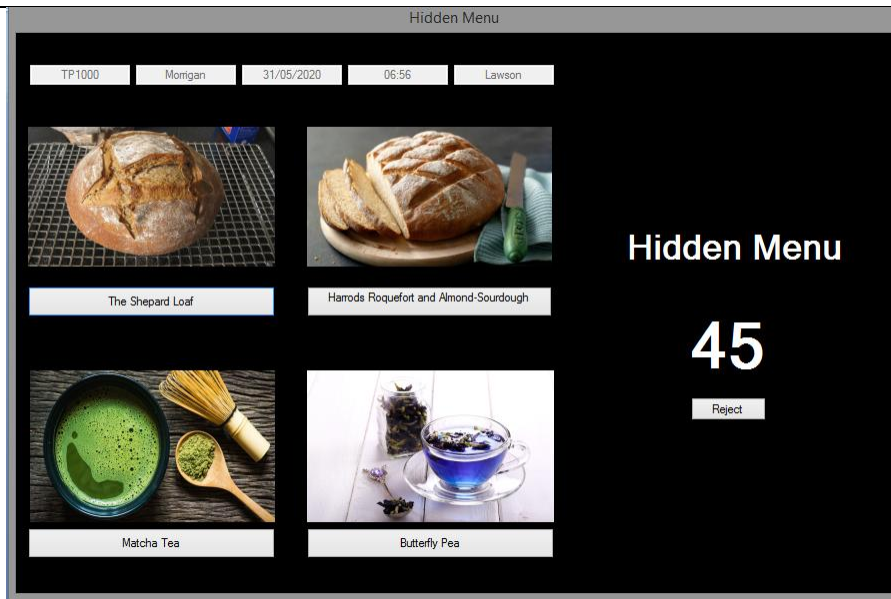
Sandwich 3  
Cranberry Bread 1  
Blueberry Bread 2

Cafeteria Ordering System  
You Have 45 Seconds To Choose 1 Item only  
(If You Select Reject Button, You Are Consider Letting Go FREE Chance)  
OK

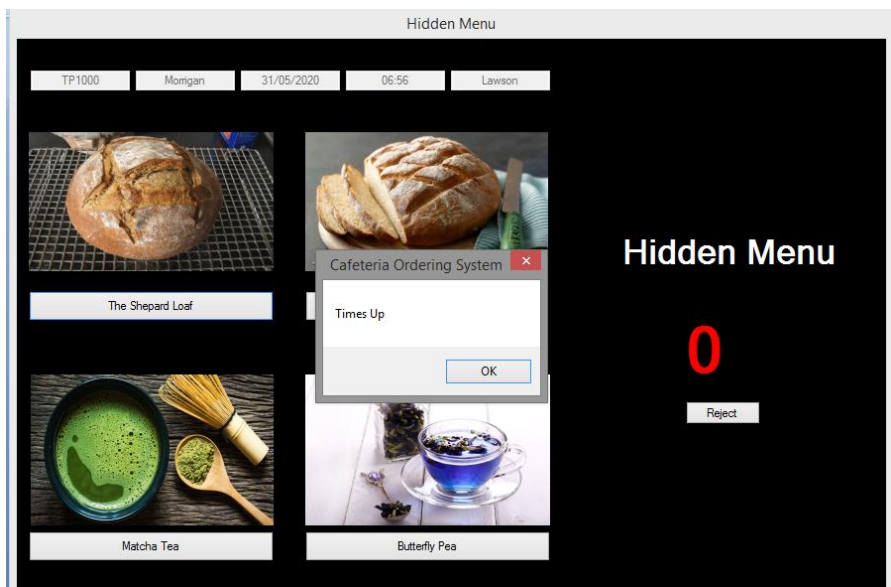
TOTAL AMOUNT RM42.40  
RECEIVE AMOUNT RM50.00  
TOTAL CHANGE RM7.60  
Confirm

Back Calculate Proceed

Form6: Hidden Menu



In this hidden menu, customer has to choose 1 item within the time limit, 45 Seconds. If time reaches to zero, customer will lose the chance to select an item. Customer can also reject to choose by selecting Reject Button and return to Customer Login Page.



## 4.0 Testing

| Test Case | Function Name                                      | Test Objective   | Expected Result   | Actual Result  | Remarks  |
|-----------|--|--|---|--|--|
| 1         | Addition (btnAdd) and Subtraction Button (btnSub)  | To add and subtract quantity   | Able to add and subtract quantity   | Addition and Subtraction Button works accordingly                                  | To ensure user does not edit negative quantity, all textbox quantity has been enabled FALSE. |
| 2         | Calculate Button                                   | To display list boxes items ,calculate Subtotal, Taxes, Total Payable Amount, Receive Amount, Total Change | Able to display list boxes items and calculate Total Change whether need to change for customer or owed by customer | Not be able to calculate the Subtotal accordingly due to mistakes in Loop Function | Due to calculate button has heavy work load, the function code should be check frequently    |
| 3         | Random Number                                      | To generate Random Number for Customer Number  | Able to generate Random Number  | Customer Number works accordingly  | -  |
| 4         | Access database connection (ddrraamm, 2013)        | To connect the Access database   | All forms except Menu List can connect to Access database   | All forms successfully connected to Access database                                | -  |
| 5         | Insert Into (Anon., 2007) and Delete (Anon., 2017) | To make changes to Access database   | Correct data has been insert and delete unwanted data   | Syntax Error in INSERT INTO statement  | Statement has to check frequently to avoid input wrong symbol.                               |
| 6         | For Next in Confirm Button (Anon., 2013)           | To transfer list boxes items to another form list boxes  | Correct data has been transfer  | Data unable to be transfer   | .ToString is required to returns a string to represent current object                        |
| 7         | Date and Time in Masked textbox (Anon., 2011)      | To returns the current date and time respectively  | Correct date and time generate  | Date and time generate accurately  | -  |
| 8         | Array  | Creates an array, containing a supplied set of values  | The price value successful set into array and assist in calculation   | Price calculation is successful  | -  |
| 9         | “RM” & Format (Cost, “0.00”) (Anon., 2007)         | To format the Subtotal, Taxes, Total Payable Amount, Receive Amount, Total Change into 2 decimal point     | Able to display “RM0.00”  | Display successful   | -  |
| 10        | Timer Tick (Anon., n.d.)                           | To make time limit countdown   | Time limit countdown occurs   | Time limit countdown too fast  | Time interval = 1000 is required to ensure countdown 1 second until times up                 |

## 5.0 Critical Assessment

The project name Cafeteria Ordering System is constructed to enhance the ordering process performance by optimizing and controlling the ordering steps. With the usage of the system, chances of random mistakes will be reduced as the staffs' workload will be greatly reduced to improve efficiency of the business performance. However, there would be various strength and weakness presents as the system has limited capabilities. Recommend solution is provided as an alternative way for system improvement.

The strength of this system is speed, accurate and storage capabilities. First and foremost, the system can accept user input swiftly and give immediate response. It can improve ordering speed by overcoming staffs problem as they will had to frequently double confirm with the customer and fatigue after continuously taking orders and the ordering speed is further delay. With this system that can analyse input data quickly, customers do not need to line up and wait for long period of time and the sales rate can increases. Secondly, the system able to accept user input and perform calculation accurately, this can overcome random mistakes occur as the staffs will made mistakes sometimes by taking the wrong orders or calculate incorrect amounts. The system can calculate accurately through array functions and also to provide correct amount of total changes so that the lost can be avoided. In additional, the system has storage capabilities to store staff user login data, customer personal details and customer order and payment in Access Database. With storage capabilities provided, the security of the system can be enhanced by allowing authorised user to access the system. Not only that, staffs can use customers' order record for their business future reference.

However, no system is perfect as the system is facing two major weaknesses which is data repetition in Access Database and dishonest in customer registration. First of all, certain customer will likely input the wrong data during customer registration or wishes to update latest data such as address, phone number or email. Thus customer will create another new registration causing two customer info are belongs to the same customer. The recommend solution is to provide delete button to allow customer to delete existing data and register new one. Next, certain customer will likely dishonest during customer registration by simply input random data. The recommend solution is to enhance validation to restrict from input incorrect data.



