ISTM 250– Programming Logic & Design
Project One

Problem Statement: Kirby's Deli, owned by Edward Kirby, has been taking sandwich orders and maintaining records related to the business on paper. Mr. Kirby feels that it is time for him and his deli to enter the modern era and to use computer technology to manage his deli. As a first installment, he wants to have an application developed for his recording of sandwich orders. Additional features will be added with later application installments.

GUI Design Features:
1. **Form**. The form should be a permanent size and should open in the center of the user's screen. It should have appropriate text in its title bar.

2. **Object Details**:
a. Mr. Kirby wants to have details about the customer, including name, street address, city, state, zip code, phone number, and subdivision location. In addition, details about the delivery location (name, street, city, state, zip, phone number and subdivision) needs to be present. The details should be grouped into one of two group boxes depending upon their context.

b. Customer address and delivery address do NOT have to be the same. The deli clerk needs to be able to indicate whether order delivery is desired. If order delivery is desired, then the customer's data will be copied to the delivery textboxes. If the customer wants carryout, no delivery address is necessary.

c. The deli clerk needs to be able to select the type of sandwich or pizza that is being ordered, the type of crust, and the quantity of the item. Based on whether a sandwich or pizza is being ordered, a picture of the respective item needs to be displayed in the area of the order information. The customer needs to be able to order multiple different items in their order. Consequently, the clerk needs to be able to specify that additional items are being ordered. A subtotal needs to exist for the calculation of the costs of each portion of the order and a total for the combined cost.

d. All ordered items are to be displayed in a large list box. The listing should include the item(s) ordered and the quantity of each item being ordered.

e. **Button objects**. The form should have four button objects:
   - one to add an additional order item
   - one to process the completed order
   - one to clear the data fields
   - one to close the form

g. **Form navigation (tab order).** The user should be able to tab between each object in a reasonable order.

Code Specifications

1. **Validation Checks**. Prior to calculating the subtotal, the program needs to run several validation checks. It needs to make sure that the customer's name, item and crust type and quantity have been entered. If any one of these items has not been entered, a message needs to appear that states that information in the respective data field needs to be entered.

2. **Range testing**. The delivery city needs to be either Bryan, TX or College Station, TX. If any other city is entered as the delivery city, then a message needs to warning that delivery isn't possible. If carryout is chosen, you do NOT need to validate the delivery address.

3. **Numeric testing**. The entry in the Quantity textbox must be numeric.

4. **Item combo box options** are: Ham & Swiss sandwich, Turkey & Provolone sandwich, BLT sandwich, Med. cheese pizza, Med. pepperoni pizza, Med. supreme pizza

5. **Bread/crust combo box options.** You must use a **single** combo box for either bread options or crust options. The choices listed in the combo box will change depending upon the food type chosen in the previous combo box. The combo box options for sandwiches are: White, Pumpernickel, Rye, Sourdough, Multigrain. The combo box options for pizzas are: Original, Pan, Thin, Wheat.

7. **Item Costs**. The costs of the items are: All sandwiches - $5.00; All pizzas - $9.50. The tax rate is 8.25%.

8. After the item combo box option is selected, a picture box needs to be populated with an image of the option. If a sandwich is selected, utilize the deli.jpg file. If a pizza is selected, utilize the pizza.jpg file.

9. After a food type is selected, the user must then be able to choose a bread/crust type, and a quantity ordered.

10. After each item is ordered, it is added to the list box listing. The listing should include: quantity, bread/crust type, and subtotal price (e.g. "Pan Med. Cheese Pizza, 3@$9.50, total: $28.50")

11. After an item is ordered, you must update the order total, which includes taxes for the entire order. Display the results in a textbox or label. Limit the displayed amount to two (2) digits to the right of the decimal.

General Specifications
1. **All** controls are to be named in accordance with the generally accepted naming convention.
   a. The folder is to be named 'ISTM250Project1'
   b. **All group members' names MUST be listed in the initial comment section of your project to earn credit for the assignment.**
   c. The order form is to be named 'frmOrder' and saved as 'frmOrder.cs'
2. **ALL** variables are to be named in accordance with the generally accepted naming convention.
3. **Documentation needs to be present in the code**.
4. Allow user to enter customer's name, address and phone number
5. User may or may not check the Delivery checkbox. If delivery is requested, user will check it and the delivery address group box will be activated. If Delivery checkbox is not checked, the group box will not be activated.
6. With activation of the delivery address group box, the customer's address will automatically populate the respective data fields. If user needs to enter different address information, the text boxes will be "highlighted" for data entry.
7. User will select the type of sandwich or pizza desired
8. Based on whether a sandwich or pizza is ordered, the respective image will be displayed in the picture box.
9. Based on whether a sandwich or pizza is ordered, the user will be able to select the proper bread/crust type.
10. User will specify the number of the specific item that is being ordered.
11. The application will calculate the subtotal for this portion of the order and display the subtotal.
12. As each item is ordered, the item and quantity will be listed in the Item List box.
13. If user has additional items to order, the user will select the additional order button.
14. When the additional order button is clicked, the item and crust combo boxes, quantity, image and subtotal reset in the respective interface controls.
15. When the user selects the process order button, the total cost is displayed.
16. When the user selects the clear form button, all text fields are cleared.
17. When the user selects the close form button, the form closes.

Your team lead will upload your project to eCampus by the stated deadline. Your zipped file should be named Group#Project1.zip (e.g. Group3Project1.zip)