Application Development with .NET (32998, 31927)

Tutorial -7 Questions

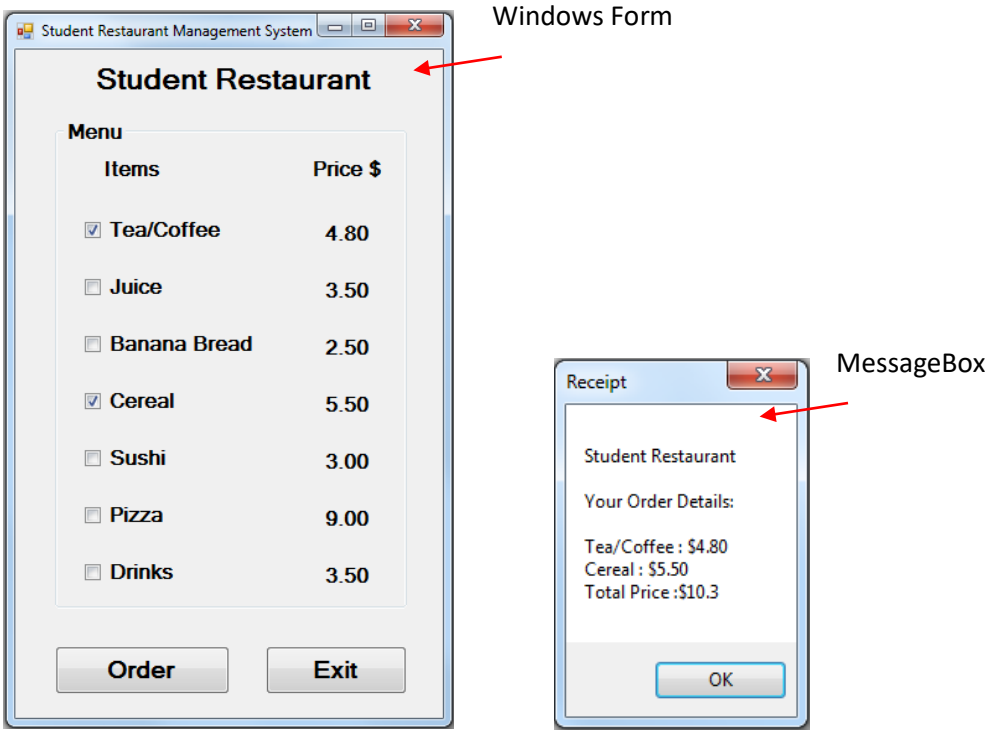
Please download the sample code from Canvas and follow the instructions

Program 1:

Write a program to create a simple Student Restaurant Management System using windows forms with the following specifications:

1. Design an interface/form which displays the food items available in the restaurant and their price. **Controls to use:** CheckBox, Label, Button, and GroupBox.
2. Use a checkbox for each food item. All the menu/food items should be in a GroupBox named "Menu".
3. Use Label to display the corresponding price of each food item.
4. The interface/form should have a button named "Order". Once food items are selected and "Order" button is clicked, a receipt with the total price is shown in a MessageBox (sample receipt format is shown below).
5. The second button named "Exit" is used to close the program.

   A sample user interface is given below for reference:



6. Write a method named `public string GetReceipt()` to process the selected food/menu items and calculate the total price. The method is inside the
   `public partial class Form1 : Form`

   Example: In the interface shown above, tea/coffee and Cereal were selected, and the order details are shown in the MessageBox, along with the total price.

The GetReceipt() method returns a String which is created by concatenating the food item names, price, and the total price. The receipt also has a header such as “Student Restaurant” and “Your Order Details:” which are also concatenated.

Hint:

a. The food item names can be accessed by: `CheckBox1.Text,` which returns a String
b. Prices are displayed as Labels and can be accessed by: `Label1.Text,` which returns a String.
c. The price values are String and should be converted to double, to calculate the total value.
d. Create a CheckBox and Label arrays and add each of the food items and prices to them, respectively.

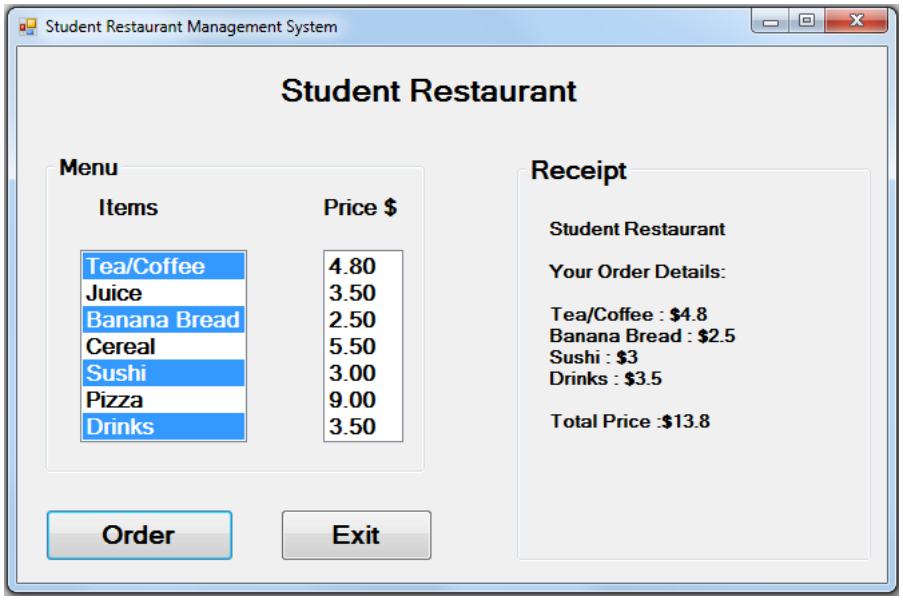
```
CheckBox[] menuItems = new CheckBox[7]; // Create an array of checkbox
menuItems[0] = teaCoffee; // teaCoffee is the name of the checkbox
menuItems[1] = Juice;  // Juice is the name of the checkbox
:
:

Label[] price = new Label[7]; // Create an array of Label
price[0] = teaCoffeePrice; // teaCoffeePrice is the name of the label
price[1] = juicePrice; // juicePrice is the name of the label
:
:
```

e. The status of the checkbox can be found by accessing the value of CheckBox1.Checked property which is bool (true/false).
f. Use ‘\n’ escape sequence while formatting the receipt string.

Program 2:

Modify Program1 to re-create a simple Student Restaurant Management System using windows forms with the following specifications:

1. Design an interface/form which displays the food items available in the restaurant and their price. **Controls to use:** ListBox, Label, Button and GroupBox.
2. Use a Listbox to display all food items. The food item list and the price list should be in a GroupBox named "Menu". The food Listbox should allow user to select multiple items.
3. Use a ListBox to display the corresponding price of each food item, but it should be disabled for selection, as it just displays the price.
4. The interface/form should have a button named "Order". Once food items are selected and "Order" button is clicked, a receipt with the total price is shown in a Label in a separate GroupBox as shown in the example below).
5. The second button named "Exit" is used to close the program.



6. Re-write a method named `public string GetReceipt()` to process the selected food/menu items in the listbox and calculate the total price. The method is inside the `public partial class Form1 : Form`

   Example: In the example form/interface shown above, the selected food items and the order details are shown in a label, along with the total price in the Receipt GroupBox.

   The GetReceipt() method returns a String which is created by concatenating the food item names, price, and the total price. The receipt also has a header such as "Student Restaurant" and "Your Order Details:" which are also concatenated.

   Hint:
   a. The indexes of the food items selected can accessed using: `Listbox1.SelectedIndices`
   b. The text/name of the corresponding selected items can be accessed using: `ListBox1.Items[index].ToString()`
   c. Use a foreach loop to process all the indexes returned by `Listbox1.SelectedIndices`
   d. The price values are String and should be converted to double, to calculate the total value.