Lab#4 – WPF

Due Date: Friday Midnight of Week#10

Purpose: The purpose of this assignment is to help you:
- Consolidate your understanding of delegate
- Build up comprehensive understanding of data binding

Instructions: Be sure to read the following general instructions carefully:
This assignment should be completed individually by all the students. Submit your solution through the dropbox, and name your submission according to the following rule: studentID(yourlastname)_LABnumber.zip. e.g., 300123456(smith)_LAB#4.zip

Rubric

	Functionalities	Marks
Q1	Model: the class(es) to model the data	1
	View (XAML) 1. Overall UI (1 mark) 2. Use DataTemplate for ComboBox so that the comboBox not only display the item name but also the unit price with dollar sign($) (0.5 mark) 3. Make sure only the item quantity is editable in the DataGrid (0.5 mark) 4. Use button's command property to hookup button with command object (0.5 mark) 5. Data binding (0.5 mark)	3
	Functionalities 1. Selected item(s) from ComboBox is added to the DataGrid; if the selected item(s) exists in the DataGrid, change the quantity of the corresponding item rather than add new row to the DataGrid (3 mark) 2. The selected item can be removed from the DataGrid (2 marks) 3. The quantity can be updated directly in DataGrid (2 marks) 4. The invoice is generated correctly (2 marks)	9
	Status Bar	1
	Overall (code readability, usability, maintainability, etc.)	1
Q2	Class Library project for LoginUserControl 1. UI 0.5 mark 2. Dependency Properties 0.5*2 mark	1.5
	WPF app to test LoginUserControl 1. Include a LoginUserControl object in your UI 0.5 2. Access the dependency properties of LoginUserControl object 0.5*2	1.5

Question 1 [15 marks]

(Restaurant Bill Calculator) A restaurant wants a WPF app that calculates a table's bill. The app should display all following menu items (shown below) in four ComboBoxes. Each ComboBox should contain the food items and their price of a specific category offered by the restaurant (Beverage, Appetizer, Main Course and Dessert). The user can choose

from one of these ComboBoxes to add an item to a table's bill. As each item is selected in the ComboBoxes, add to the DataGrid Control, and add the price of that item to the bill. The user can click the Clear Bill Button to restore the Subtotal:, Tax: and Total: fields to $0.00. Add your student name and your company's (i.e., Centennial College) logo at the status bar, when user clicks the logo, company's website is opened in Internet explorer. (NOTE: To encourage decoupling in your application (i.e. to encourage "separation of concern"), you may use the MVVM pattern in your design. For MVVM, you may refer to the website https://en.wikipedia.org/wiki/Model%E2%80%93view%E2%80%93viewmodel. The ICommand interface may be useful to achieve MVVM. For a tutorial on ICommand interface, you may refer to the website https://www.wpf-tutorial.com/commands/introduction/ .

Name	Category	Price	Name	Category	Price
Soda	Beverage	$1.95	Chicken Alfredo	Main Course	$13.95
Tea	Beverage	$1.50	Chicken Picatta	Main Course	$13.95
Coffee	Beverage	$1.25	Turkey Club	Main Course	$11.95
Mineral Water	Beverage	$2.95	Lobster Pie	Main Course	$19.95
Juice	Beverage	$2.50	Prime Rib	Main Course	$20.95
Milk	Beverage	$1.50	Shrimp Scampi	Main Course	$18.95
Buffalo Wings	Appetizer	$5.95	Turkey Dinner	Main Course	$13.95
Buffalo Fingers	Appetizer	$6.95	Stuffed Chicken	Main Course	$14.95
Potato Skins	Appetizer	$8.95	Apple Pie	Dessert	$5.95
Nachos	Appetizer	$8.95	Sundae	Dessert	$3.95
Mushroom Caps	Appetizer	$10.95	Carrot Cake	Dessert	$5.95
Shrimp Cocktail	Appetizer	$12.95	Mud Pie	Dessert	$4.95
Chips and Salsa	Appetizer	$6.95	Apple Crisp	Dessert	$5.95
Seafood Alfredo	Main Course	$15.95			

Question2 [3 marks]

(Login User Control) Develop a UserControl (similar as below) called LoginUserControl that contains two labels, one Textbox and one PasswordBox. LoginUserControl must include two dependency property, UserName and Password to allow LoginUsercontrol's client to get the user input (i.e., login name and password). Implement an WPF application to test LoginUserControl.

User Name [   ]

Password [   ]