COMP212   Programming 3
2020F - Lab2

Goals:

In this assignment, you will learn how to use the WPF controls DataGrid, ComboBox, Button, TextBlock.

Rubric: (Total marks = 10, Weight = 10%)

Cases
One DataGrid, two ComboBoxes, two Buttons, and two TextBlocks are present in the GUI layout.
You can select an item in Flower ComboBox.   The selected item shows up in a row in DataGrid.
You can select an item in Fruit ComboBox.   The selected item shows up in a row in DataGrid.
An element in DataGrid (i.e. a grid location) should not be editable.
When an item gets added to the DataGrid, the Total value gets adjusted correctly.
Button "Clear Bill" clears the DataGrid, clears the selections in every ComboBox, resets the Total value to 0.00.
Button "Delete selected row" deletes the selected row.   On deleting the selected row, the Total value gets adjusted correctly.
When DataGrid is empty (i.e. it has no rows of items), ComboBoxes should be in reset condition (i.e. they have no item selected), and the Total value is 0.00.
When DataGrid is empty, clicking the button "Delete selected row" should have no effect on the GUI.

Evaluation Focus:

- Correct implementation of requirements
- Explanation of solution when asked
- Answer questions on the relevant/related topic when asked

Instructions:

1. You are supposed to use Visual Studio 2019. You can use the free Community edition.

2. Go to **eCentennial** > Assessments > Assignment > Click lab2

3. In the lab2 page, you have the item:
    a.   the document `comp212.2020F.lab2.pdf` (the one that you are reading now)

Use of WPF controls DataGrid, ComboBox, Button, TextBlock.
(10 marks)

1. A corner store sells two kinds of things: flowers and fruits. The flowers are **Lily** and **Rose**. The fruits are **Plum** and **Kiwi**. The prices are written beside each of them (see Figure 2 and 3). **You are to develop a simple WPF App.** A **sample** layout of the GUI of the App is given in all the figures starting from Figure 1. Figure captions tell how the GUI should work.
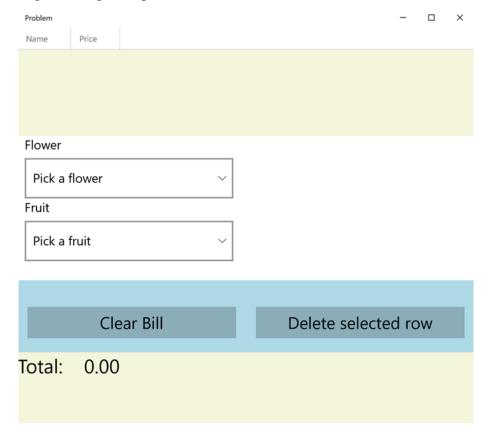

Figure 1. The GUI

2. There are four rows in the GUI. We will refer to them starting from the top. The 1st row (i.e. the top row, beige) has a DataGrid. The 2nd row (white) has two ComboBoxes: one for flowers and the other for fruits. The 3rd row (light-blue) has two buttons. The 4th row (beige) has two TextBlocks. Figure 2 and 3 shows the selectable items present in the ComboBoxes.
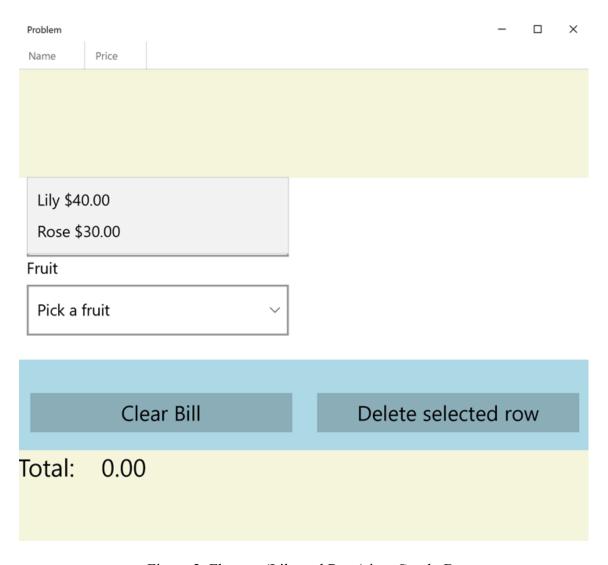
Name	Price

Lily $40.00

Rose $30.00

Fruit

Pick a fruit ⌄

Clear Bill

Delete selected row

Total: 0.00

Figure 2. Flowers (Lily and Rose) in a ComboBox

Problem　　　　　　　　　　　　　　　　　　　　　　—　□　✕

Name	Price

Flower

Pick a flower	⌄

Plum $15.00

Kiwi $30.00

Clear Bill	Delete selected row

Total:　　0.00

Figure 3. Fruits (Plum and kiwi) in a ComboBox

Name	Price
Lily	$40.00
Plum	$15.00

Flower

| Lily $40.00 | ⌄ |

Fruit

| Plum $15.00 | ⌄ |

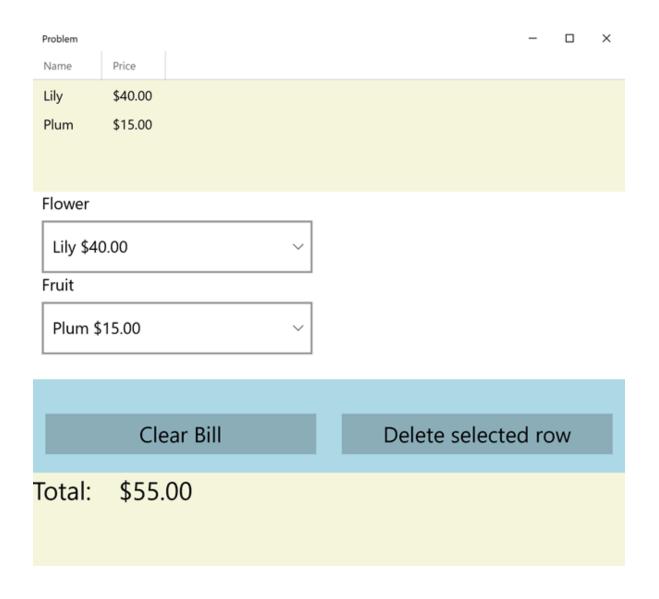| Clear Bill | Delete selected row |

Total: $55.00

Figure 4. The flower Lily, and the fruit Plum are selected in ComboBoxes. As a result, they show up in the DataGrid. Also, as a result, the prices of the items present in the DataGrid are added up and the Total value is displayed in the 4th row.
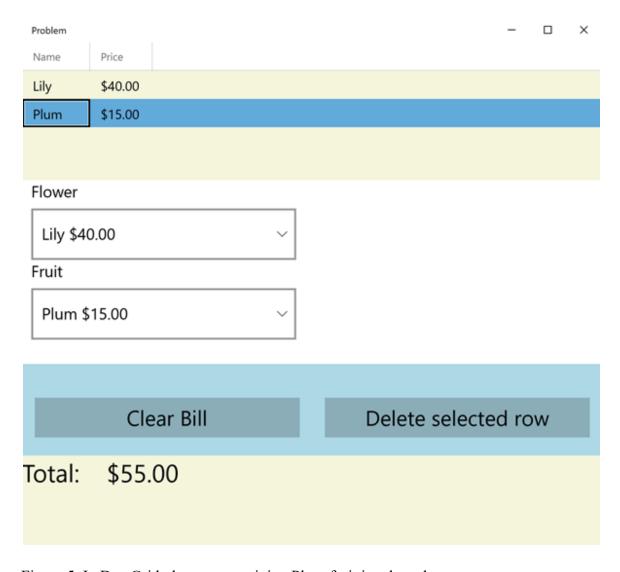
Figure 5. In DataGrid, the row containing Plum fruit is selected.

Figure 6. In DataGrid, the selected row containing Plum fruit (Figure 5) is deleted by clicking the button "Delete selected row". As a result, the updated Total value gets displayed.
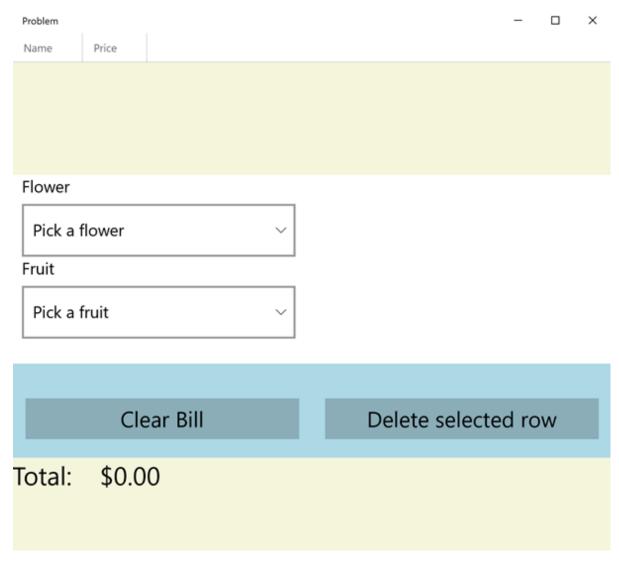
Figure 7. A click on button "Clear Bill" clears the DataGrid, clears the selections in every ComboBox, resets the Total value to 0.00

Submission of Assignment:

1. **Submit the solution to lab2 drop-box by drop-box deadline.**
2. Make sure there is one project folder **Proj1** under the Visual Studio solution folder **lab2**.
3. In Visual Studio, in Solution Explorer, right-click on the solution **lab2** and select **Clean Solution**.
4. Compress the Visual Studio solution folder **lab2** and all its contents into a single zip file. This will be your submission file. You MUST name your submission file according to the following rule:

   YourFirstname_YourLastname_COMP212_labNumber.zip
   Example: John_Smith_COMP212_lab2.zip

5. **Next, submit above zip file on eCentennial** through the **Assignment** link.