



ITEC318
Visual Programming
(Visual Basic .NET)

Assignment 2

Design:

The image shows the design view of a Windows Form titled "Form1". The form has a menu bar with "File" and "Edit" menus. The "File" menu is open, showing "1" next to it. The form contains several controls: a "2" label above a group box "Order" containing a "Quantity:" label and a text box with "4" (labeled "4"), a "5" label above a "Take Away?" checkbox, a "Discount (If any):" label and a text box with "6" (labeled "6"), and an "Item Amount:" label and a text box with "7" (labeled "7"). To the right is a "3" label above a group box "Selection" containing three radio buttons: "Coffee", "Tea" (labeled "8"), and "Milkshake". At the bottom is a "Calculate" button (labeled "9") and a "Total:" label with a text box containing "10".

Sample Run:

The image shows the form in its run state. The "File" menu is open, showing "New Order" and "Exit" options. The "Quantity" text box contains "1". The "Take Away?" checkbox is checked. The "Discount (If any)" text box contains "2,00 ₺". The "Item Amount" text box contains "14,00 ₺". The "Milkshake" radio button is selected. The "Calculate" button is highlighted with a blue border. The "Total" text box contains "34,00 ₺".

The image shows the form in its run state with the "Edit" menu open, showing a "Clear" option.

You should create a project for Windows Forms Application with one form. Design of the form is also given above. The form elements and their properties are as listed:

1. **MenuStrip1**: Contains two categories and three subcategories.
 - a. **FileToolStripMenuitem**: Contains **NewOrderToolStripMenuitem** and **ExitToolStripMenuitem**.
 - i. **NewOrderToolStripMenuitem**: Clears **QuantityTextBox**, **ItemAmountTextBox**, **DiscountedAmountTextBox**, **GrandTotalTextBox**, changes the Checked property of **CoffeeRadioButton** to True, Checked property of **TakeAwayCheckBox** to False and initialize the value displayed in **GrandTotalTextBox** to "0".
 - ii. **ExitToolStripMenuitem**: Closes the application.
 - b. **EditToolStripMenuitem**: Contains **ClearToolStripMenuitem**.
 - i. **ClearToolStripMenuitem**: Clears **QuantityTextbox**, **ItemAmountTextBox**, **DiscountedAmountTextBox**, **GrandTotalTextBox**, changes the Checked property of **CoffeeRadioButton** to True and Checked property of **TakeAwayCheckBox** to False.
2. **OrderGroupBox**: Contains **QuantityTextBox**, **TakeAwayCheckBox**, **DiscountedAmountTextBox** and **ItemAmountTextBox**.
3. **SelectionGroupBox**: Contains **CoffeeRadioButton**, **TeaRadioButton** and **MilkshakeRadioButton**.
4. **QuantityTextBox**: Reads integer value.
5. **TakeAwayCheckBox**: "2.00" will be subtracted from Item price, if the check box is checked. The variable must be declared as constant. Also, a private variable for the grand total must be declared in the same block.
6. **DiscountedAmountTextBox**: If **TakeAwayCheckBox** is checked, the value of the constant variable will be displayed, otherwise; "0" will be displayed. The component is read only.
7. **ItemAmountTextBox**: The actual price of the selected item will be displayed. Price for each item can be assigned locally (coffee is "10.00", tea is "7.00" and milkshake is "14.00"). The component is read only.
8. Radio buttons;
 - a. **CoffeeRadioButton**: If the radio button is checked, price for the selected item must be initialized to "10.00".
 - b. **TeaRadioButton**: If the radio button is checked, price for the selected item must be initialized to "7.00".
 - c. **MilkshakeRadioButton**: If the radio button is checked, price for the selected item must be initialized to "14.00".
9. **CalculateButton****: When the button is clicked, it accepts the integer value from **QuantityTextBox**. Then, it checks if **TakeAwayCheckBox** is checked.
 - a. If **TakeAwayCheckBox** is checked, the program also checks which radio button is checked.
 - i. If **CoffeeRadioButton** is checked, the formula given below must be used.

Item Price = 10.00 ItemAmountTextBox = Item Price DiscountedAmountTextBox = Take Away Constant Value Total = (Item Price – Take Away Constant Value) * Quantity Grand Total = Grand Total + Total GrandTotalTextBox = Grand Total
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- ii. If **TeaRadioButton** is checked, the formula given below must be used.

```
Item Price = 7.00
ItemAmountTextBox = Item Price
DiscountedAmountTextBox = Take Away Constant Value
Total = (Item Price – Take Away Constant Value) * Quantity
Grand Total = Grand Total + Total
GrandTotalTextBox = Grand Total
```

- iii. If **MilkshakeRadioButton** is checked, the formula given below must be used.

```
Item Price = 14.00
ItemAmountTextBox = Item Price
DiscountedAmountTextBox = Take Away Constant Value
Total = (Item Price – Take Away Constant Value) * Quantity
Grand Total = Grand Total + Total
GrandTotalTextBox = Grand Total
```

- b. If **TakeAwayCheckBox** is NOT checked, the program again checks which radio button is checked.

- i. If **CoffeeRadioButton** is checked, the formula given below must be used.

```
Item Price = 10.00
ItemAmountTextBox = Item Price
DiscountedAmountTextBox = 0.00
Total = Item Price * Quantity
Grand Total = Grand Total + Total
GrandTotalTextBox = Grand Total
```

- ii. If **TeaRadioButton** is checked, the formula given below must be used.

```
Item Price = 7.00
ItemAmountTextBox = Item Price
DiscountedAmountTextBox = 0.00
Total = Item Price * Quantity
Grand Total = Grand Total + Total
GrandTotalTextBox = Grand Total
```

- iii. If **MilkshakeRadioButton** is checked, the formula given below must be used.

```
Item Price = 14.00
ItemAmountTextBox = Item Price
DiscountedAmountTextBox = 0.00
Total = Item Price * Quantity
Grand Total = Grand Total + Total
GrandTotalTextBox = Grand Total
```

** For any exception, the program must generate an error message with a standard message box (**Try-Catch** method must be used).

10. **GrandTotalTextBox**: Displays the result of the calculation for grand total private variable.