A290/A590
Tools for Computing
Windows Interface Design and Programming with C# and .NET.

Homework Project 2

DUE Wednesday, November 16, 2016 by 11:59:00.00PM (SHARP)
Submit ZIPPED file "A2.zip" of entire Project Folder to the "Homework Project 2" Assignment in the Canvas "Homework Projects" Group

Preliminary Information:

Your goal is to show you have successfully up-graded the A290 Buffet Project used as an example in class to reflect the features listed below, including an Options form. You will also be adding a version of the Collections Example by adding a **second child form** accessible from your main Buffet form and creating a control to access it. The basic instructions for doing most of this work is contained in various Example Guide files available via the Meeting Outline page of the website. We went through most of both processes together, so adding the modifications is the only real "challenge" to this assignment. Finally, you will have to again ZIP [using WinZip compatible tools] your project folder into its own single ZIP file, **A2.zip**, and submit it to your Oncourse "Homework Programs" Dropbox Folder by the deadline indicated above. **REMEMBER:** a simple text file in the root folder further clarifying what you have done to meet the assignment requirements is always welcome, but not required and **not** a substitute for clearly commented code.

Part I. Revised A290 Buffet Project with More Events and Two Child Forms. [100 points]

Go back to your Buffet Project from Homework Project 1, or recreate the original. MAKE SURE all the original Buffet Project functions work correctly.

Overall Scoring: Comments in all files: 15 points,
                        Design consistency between all files: 15 points,
                        Changes to Main Form including visible features and working code: 20 points
                        Options Form including visible features and working code: 25 points
                        Collections Form including visible features and working code: 25 points.

Your revised A290 Buffet Project should include the following:

[NOTE: These requirements are listed in an order somewhat consistent with how they were presented in class. You may wish to read through the list and do them in a different order to be more efficient.]

For the Main Buffet Form, you must:

- Include an "Options" button that creates a new **modeless** child-form that has the properties described below and shown in class.
- Include a "Collection" (or similar) button that creates another new **modeless** child-form that has the properties described below and shown in class.
- **IF THE BORDER HAS BEEN DRAWN,** it should also change size with the main form when that form is resized. **[If you got this for Project 1, then you have it done already.]**
- Make sure the PictureBox object displays the entire image selected and maintain the proper "aspect ratio" [shape] of the image. **[If you got this for Project 1, then you have it done already.]**
- Add a "Confirm on Exit" control in the main Form that has the same functionality as the example in class.

For the Options Child Form, you must:

- Include a background color different from the default.
- Include a background image (choose carefully). The results of this may not be obvious, but I will check for it.
- Include appropriate changes to the Form properties so the window appears the way we expect a secondary window to appear. This would include:
    o Simplified border
    o No Maximize Window control
    o No Minimize Windows control

- o An appropriate text label
- o An appropriate StartPosition
- Include both an "OK" button and a "Cancel" button. Both should trigger a Close event at this point, but each should also be properly "attached" to either `AcceptButton` or `CancelButton` so that <Enter> and <Esc> work as expected.
- Include a Label object entitled "UserName:" that is properly sized and located.
- Include a TextBox that is sized to display more than one line of text and this is instantiated with some sample text visible. NOTE: The TextBox and the Label should be properly located so it is clear they "go together."
- Include any changes to the visual properties of the objects added to this form to insure they "match" the overall appearance of the form and **your design strategy for the entire Project**. This could include Color, Font, and other properties. NOTE: Since you have been asked to do this, you are not required to make a set number of property changes to each object. You are free to make what changes you think are needed to meet this requirement.
- Include a GroupBox with an informative label/caption.
  - o Place 4 controls in this GroupBox that allow you to change the background color of the entire Form. Radio buttons were used in the class example, but other choices are available and acceptable.
  - o Make sure each control provides both a textual and a visual clue as to their particular function. Make sure that all controls remain visible, regardless of the background color chosen.
  - o Make sure the "border" [see next bullet] remains visible, if enabled, even when background color is altered.
  - o Make sure one of the 4 buttons returns the background to the default color.
- Include a ComboBox with either an informative label or some other textual clue as to its function.
  - o Make sure there are at least 5 options available in the ComboBox, one of which **must be** "default."
  - o Make each option create a border of a different color right **inside** the current form and make sure it appears the same distance from all 4 edges.
  - o Make sure a Message Box appears, confirming the color choice made for the border.
  - o Make sure the current background color of the form overall [previous bullet] retains the currently selected color whenever the color of the border is changed.
  - o Make sure the "default" option here returns the Options Form to its original appearance.

For the Collection Child Form, you must:

- Include a background color different from the default.
- Include a background image (choose carefully). The results of this may not be obvious, but I will check for it.
- Include appropriate changes to the Form properties so the window appears the way we expect a secondary window to appear. This would include:
  - o Simplified border
  - o No Maximize Window control
  - o No Minimize Windows control
  - o An appropriate label
  - o An appropriate StartPosition
- Include a "Quit" (or similar) button that triggers a Close event at this point.
- Make sure this button is properly "attached" to both `AcceptButton` and `CancelButton` so that <Enter> and <Esc> **both** close this form.
- A button control entitled "Show Control Names" or something equally informative
- A combination of button and text box controls totaling at least five (5) (with at least one of each). None of these have to provide a function. However, each button should be properly titled, have a "proper" instance name and the text box should contain some text.
- **ALL** controls created should be consistent in appearance with the rest of your **Buffet Project** and be labeled with features or functions that would seem relevant to your Buffet application.
- The code required to make the "Show Control Names" button creates a MessageBox and displays the Name of each control and its "number" within the Collection of controls (identical to the function shown in class).
- For all six (6) or more controls you instantiate, alter at least one of the properties OTHER THAN the usual ones of (Name), Location, Size, and Text. These will need to be altered, of course, but choose at least one more property and alter it as well. **AGAIN,** you will probably have to do this to meet the previous design requirement. Just keep track of what you change and include it in your comments.

The location of your controls is up to you. You example does not have to [and should not] reflect the layout of the example given in class.

Part II. Handing it in

It should be clear that failure to successfully submit your ZIPPED [Please use WinZip 7zip or compatible tools] file to your Canvas "Homework Project 2" Assignment in the "Homework Programs" group or failing to meet the deadline will result in a score of zero (0). **BE SURE** your ZIPPED file is a *.zip file (no *.7z files please) and **TEST** your zipped version before you hand it in to be sure it **extracts correctly**. Partial credit will only be possible **IF** you are unable to make the project work, but are successful in submitting your project **AND** we can **build it AND** most or all of what you submit is correct. If you have questions about this, ask them ASAP.