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

Homework Project 1

DUE Wednesday, November 9, 2016 by 11:59.00.00pm (sharp)
Submit ZIPPED file "A1.zip" of entire Project Folder to the "Homework Project 1" Assignment in the Canvas "Homework Projects" Group

Preliminary Information:

Your goal is to show you can successfully build a version of the A290 Buffet Application used thus far as an example in class. The basic instructions for doing so are contained in the various guide files available via the Meeting Outlines page of the website. We went through this entire basic process together as well, so reproducing a version with the original features should not be a real challenge. The real focus of this programming assignment is to modify the basic Buffet Application to reflect your personal design vision and to show you can further alter the various properties of the various objects being used. Finally, you will have to ZIP the entire project folder into a single file and submit that file to your Canvas "Homework Project 1" assignment in the "Homework Programs" group by the deadline indicated above. **Please BE SURE to use WinZip or compatible tools to ZIP your Project.**

Part 1:

Create your version of the A290 Buffet Application demonstrated in class. You **must create** your own version to reflect your own design ideas. Your design choices and consistency of design represents 20% of your assignment score. Your A290 Buffet Application **must** include the following features:

1. Base Windows Form.
2. PictureBox Window.
3. **Select File** (or similar) Button with a filter for **at least 3** recognized graphics images file formats.
4. **Quit** (or similar) Button.
5. **Draw Border** (or similar) button that creates a border around the PictureBox using the color of your choice.
6. **Enlarge** and **Shrink** buttons that use iconic cues rather than text labels.
7. **X:** and **Y:** labels that are only revealed when the mouse is over the PictureBox and that clearly display the X,Y location of the mouse when it is over the PictureBox.
8. Include the modifications required to insure that all visible controls and the picture box are properly anchored so their positions change appropriately if the window is resized, either with the Shrink/Enlarge buttons, or by the user "grabbing" the window border and altering the size. This includes making sure the Picture Box changes size when the Form changes size. **This also includes making sure, if the Border has been drawn, it also changes size as the Form changes size. [Yes, this is a challenge.]**
9. Make whatever changes are required so the image selected for the PictureBox is displayed in its entirety, regardless of its native resolution.
10. Change a total of at least 10 Properties associated with your various visible objects (other than size, location, text, and name). See below for details.

BE SURE you thoroughly comment your actual code, including any information relevant to the visible part of this project. These comments will represent 20 of your 100 points.

Changing Properties: Go back to your main A290 Buffet Form and select **at least** 10 different properties related to your visible objects. Change the value for each of those 10 **or more** properties to give your A290 Buffet Application a distinct appearance. You are **not** obligated to change one or more properties for **each** of the 9 (potentially) visible objects used in the Buffet Project, just 10 properties. Note you are welcome to change more than 10 properties in order to serve your design goals.

NOTE: This **should not** be just a haphazard selection done as quickly as possible. **DESIGN** is one of our core concerns, so your selection of properties to change and how should reflect your careful consideration of design issues in this simple application.

ADDITIONAL NOTES: 1) Choosing a different **naming scheme** for your various object instances **does not count** toward this part of the assignment. Therefore, setting the **(Name)** of an instance of an object to something different from the published example will not meet this requirement. 2) Making the property of one object change each time you do something else counts as changing just one property. 3) NONE of the properties **already set in the guide** can be used for these ten. Therefore, if your buttons are the size described in the guide, which is not the default size, that **does not** count toward the 10. 4) **BE SURE you thoroughly comment your actual code** to include every property you changed and the value you changed it to. In other words, tell us what you changed. These specific comments will represent 5 of the 20 points dedicated to the comments you must include in your file.

You are welcome to add a simple text (TXT) file, i.e., README.TXT, to the root of your Project folder that further enumerates and clarifies when and how you have met the requirements of this assignment, especially as it relates the properties. This is **not required** and **will not be accepted as a substitute for your comments**, merely an opportunity to expand on your documenting of the project, if you wish.

Scoring:

Comments: 20 points [5 points for clearly indicating 10 properties changed and where.]
Consistency in Design: 20 points
All Objects created and "behave" properly: 15
10 Properties Changed from Defaults: 10
All Events Handled: 15
All Methods Properly Coded: 20

Part II: Handing in your Assignment

It should be clear that failure to successfully submit your ZIPPED [Please use WinZip 7zip or compatible tools] file to your Canvas "Homework Project 1" 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.