COMP 2614 – .NET Windows Application Development in C#

Assignment Five

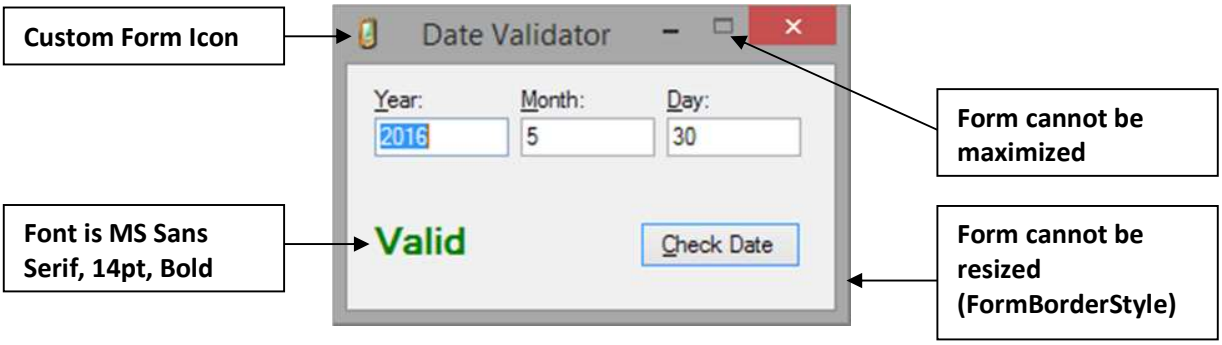
Assignment Date: Week 7
Due Date: Week 8

Assignment Objective

The purpose of this assignment is to design a Windows form that conforms to GUI design best practices.

Your Task

Write a simple Windows Forms program that validates a date from three separate values: year, month, and day. You might notice that there is a `DatePicker` control that circumvents the need to write a program such as this, so keep in mind that you are doing it for the practice. For this assignment, the program must look and feel exactly like the sample program included with the assignment files named `COMP2614Assign05.exe`.



Details

Run the sample program `COMP2614Assign05.exe` and get an idea how the program works. In short, the user enters three values and the program reports whether or not it is a valid date.

Your form must look and feel exactly like the sample, so pay close attention to details like:

- size and spacing
- alignment
- spelling and capitalization
- default button (see `AcceptButton` property of the form)
- accessor keys (mnemonics)
- form title
- custom form icon
- tool tips on label
- color of the result label (use the `Color` structure, which has lots of built-in colors)
- input validation not occurring until the button is clicked

To validate the date, write a separate class called `DateValidator` that has one *static* method called `Validate`. This *static* method *receives three strings as parameters: the year, month and day*. Do not worry about leap years. As examples:

```
"2010" "1" "31"   valid
"-1" "1" "1" invalid
"2010" "4" "31" invalid (April has just 30 days)
"2010" "10" "dog" invalid
```

The `Validate` method does not do anything except *return true or false*, based on whether or not the input is a valid date. The method does not do anything else. Do not attempt to access or modify the form from this method. Think of the entire `DateValidator` class as one that would be just as useful in a console project.

You may write this method in any way you wish, as long as it meets the requirements above. It is entirely up to you as to how to perform the validation. Reject any date with a year less than 1900 as well. (return false) As with so many other things in software development, there are easy ways and hard ways.

Notice that previous input is highlighted when you reenter a textbox. This enhances the user experience as the user has the option to replace the existing value (current input is cleared as the use starts entering the new value) or editing the existing value by clicking in the textbox to remove the highlighting. This can be done by calling the SelectAll() method of the textbox as it receives focus.

For all your code, be sure to:

- Use appropriate spacing in your code
- Comment your code intelligently
- Use XML comments for each class summary and for each of its public *members*

Please Hand In:

1. Zip your entire project and upload the zipped file to the Assign05 Dropbox on D2L.