

LAB Assignment #1 – Using .NET Delegates and .NET Controls

Student: _____

Due Date: Monday, May 22, 2017.

Purpose: The purpose of this Lab assignment is to:

- Practice the use of delegates in event-handling
- Practice the use of Advanced .NET Controls
- Develop complex GUI apps using properties, events, and methods of UI controls

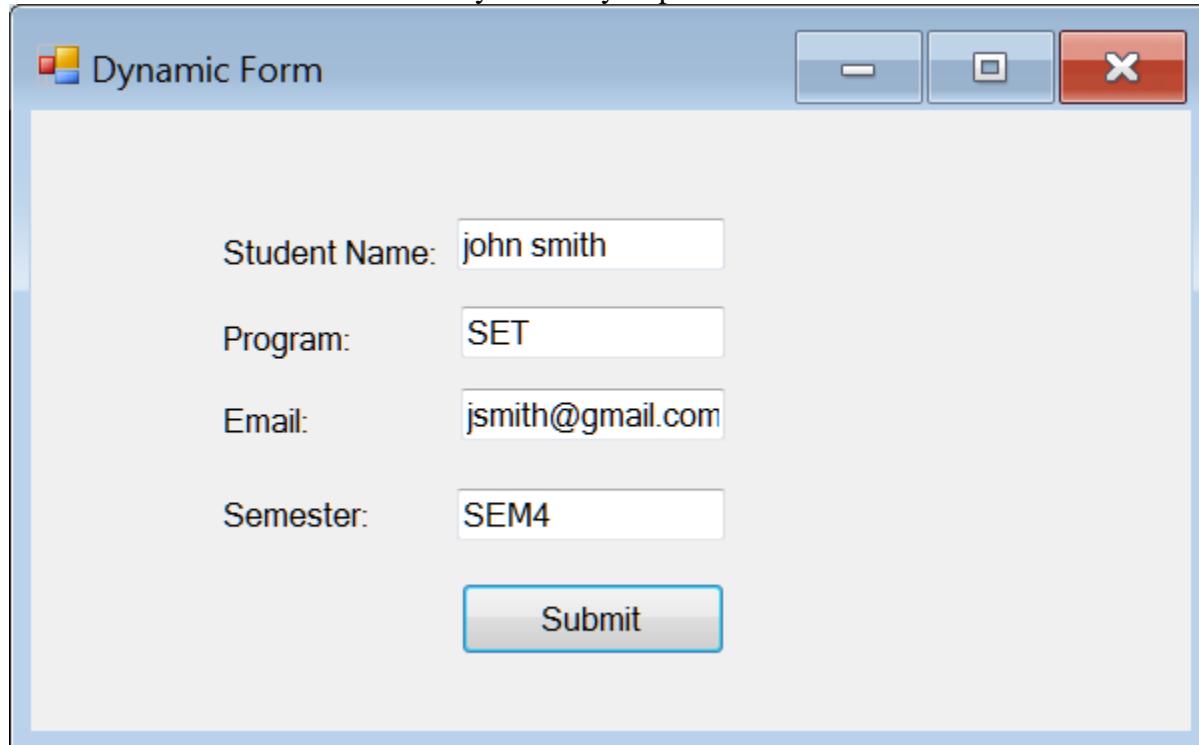
References: Read the course's text and notes. This material provides the necessary information you need to complete the exercises.

Instructions: Be sure to read the following general instructions carefully:

- This lab should be completed **individually** by all the students.
- The project **must be named** using the first name and last name. For John Smith the project name should be **JohnSmithM15_Lab1_Ex1** for the first exercise, **JohnSmithM15_Lab1_Ex2** for the second exercise, and so on.
- You will have to demonstrate your solution in a scheduled lab session. Submit the zipped projects through the **dropbox** link on **eCentennial**.

Exercise #1:

Write a C# Windows application that **dynamically** creates the GUI below. The event handling for the Submit button should be also dynamically implemented.



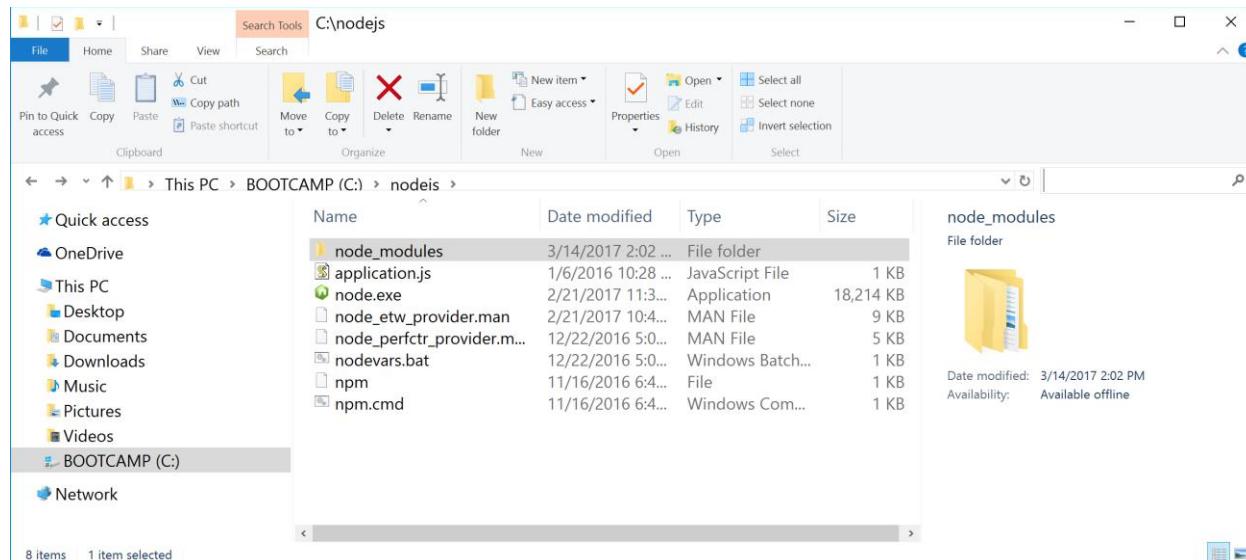
The image shows a Windows application window titled "Dynamic Form". The window has a standard title bar with a minimize, maximize, and close button. Inside the window, there are four text input fields arranged vertically. Each field has a label on the left and a text box on the right. The first field is labeled "Student Name:" with the value "john smith". The second field is labeled "Program:" with the value "SET". The third field is labeled "Email:" with the value "jsmith@gmail.com". The fourth field is labeled "Semester:" with the value "SEM4". Below these fields is a large blue "Submit" button.

Your program should display your name, program name, email, and semester in text box controls whenever user clicks on “Submit” button.

(2 marks)

Exercise # 2:

Your task is to design and develop a Windows application that can be used as a light version of Windows 10 File Explorer. You will have to design the GUI using Visual Studio 2015. No need to generate it dynamically. Include the following .NET controls: TabControl, SplitContainer, ToolStrip, StatusStrip, MenuStrip, TreeView, ListView as shown below.



Allow the user to navigate through Directories and view the subdirectories and files of a selected directory. Allow the user to **copy**, **rename**, and **delete** the selected file. Allow the user to change the view of the **ListView** control to **Details**, **List**, and **SmallIcons**. Use the properties and methods of **DirectoryInfo** and **FileInfo** objects to implement the above operations. You may use the code from SimpleExplorer example for showing the directory structure of your system using a **TreeView** and a **ListView**.

(5 marks)

Exercise #3:

In this exercise you will develop a simple word processor application named **SimpleWord**. In a **MenuStrip** control provide the necessary menu items to open RTF or a plain text documents, and exit the application. In **ToolStrip** controls, provide all the **toolStrip** items that allow the user to change the *font*, *font size*, **cut**, **copy**, and **paste**, change the *color* of the text, etc. Use the **Copy** method of **RichTextBox** control to copy the text in clipboard. Use the **Paste** property of **RichTextBox** control to paste the selected text. You may also use the **SelectedText** property which returns the selected text. Check for more properties and methods of **RichTextBox** control here: <http://msdn.microsoft.com/en-us/library/system.windows.forms.richTextBox.aspx>.



(3 marks)

Evaluation:

| Evaluation item (for each exercise) | Weight |
|---|---------------|
| Functionality (all required operations as described in exercises): | 85% |
| Friendliness (Alignment, Fonts, Colors, etc.) | 15% |
| Total | 100% |