SCIS 3309 Lab Assignment 1 – Part 1

Please read Chapters 1 - 4 and understand the material before Lab 1 begins.

In the first lab we will start to use C# and learn about the Visual Studio Integrated Development Environment (IDE). We will cover the first 3 chapters. You should not be too intimidated by the quick pace in lab. You should already have an understanding of object-oriented programming from Java.

* Chapter 1 is a tour of the Visual Studio IDE.
* Chapter 2 shows forms and useful components that can be placed on them.
* Chapter 3 shows how to place code in form components to perform operations and how to test the code.

Please be sure to save your work periodically as you proceed and also back it up. You may want to store it on your flash drive. If you are going to zip an application in order to store it, BE SURE TO FIRST CLOSE Visual Studio. If you do store information on your flash drive be sure to copy it to a hard drive on your computer before working with the project.

You must read Chapters 1 - 4 before starting this assignment.

1. Open Visual Studio 2019 and create a new project/solution.
   1. This can be done from the Visual Studio Start Page “Create a new project” option.
   2. Alternatively, you can use the main menu toolbar and select **File** **→New → Project** to open the New Project dialog box.
2. Choose **C#** from the **Installed Templates** language category, and choose the **Windows Forms App (.NET Framework)** template.
3. Enter **PayrollProgram** for name for the project and solution.
4. Enter the location for the project (and solution). You should save this to your computer in a location that is easy for you to find. Use the browse button to find the location to save the project and it will write the path for you in the textbox.
5. Make sure there to uncheck the option “Place solution and project in the same directory” box. You should uncheck this box to make the folder directory structure more organized. Otherwise, it will create a folder for the solution and store all files in a single folder that will make it difficult to separate multiple projects and their associated files.
6. Click the **Create** button to create the new project.

**Design the Form**

If you need some more information about adding controls to a form and designing a form, see chapter 2.

1. Rename Form1.vb to **frmMain.cs**
2. Use the Property window to change the **Text** property to **Your Name – Employee Pay Calculator**

Notice that it changes the title bar of the form from Form 1 to Your Name - Employee Pay Calculator

1. Add 3 label controls to the form and name them **lblHourlyRate,** **lblHoursWorked**, and **lblDisplay**. Set the Text property for **lblHourlyRate** to *Enter Hourly Rate* and for **lblHoursWorked** to *Enter Hours Worked*.
2. Add 2 textbox controls and name them **txtHourlyRate** and **txtHoursWorked**.
3. Add 3 button controls to the form and name them **btnCalculatePay**, **btnClear**, and **btnClose**. Change the Text property for each button to display appropriate text for each button’s purpose (Calculate Pay, Clear, Close).

**Coding the Buttons**

1. Double-click the **btnClose** button to switch to Code View and the code for the click event of the button. Write the following code to close the form.  
     
   **this.Close();**
2. Try building the project and running the programming to test that the button works.
3. Double-click the **btnClear** button to switch to Code View and the code for the click event of the button. Write C# code to clear the controls and reset the form to its original state.
4. Try building the project and running the programming to test that the button works.
5. Double-click the **btnCalculatePay** button to switch to Code View and the code for the click event of the button. Write the C# code to calculate the employee’s pay.
   1. Calculate the gross pay (pay before deductions)
   2. Calculate the State Income Tax deduction (3.5%)
   3. Calculate the Federal Income Tax deduction (15%)
   4. Calculate the FICA deductions
      1. Social Security 6.2% and Medicare 2.9%
      2. Calculate the net pay (pay after tax deductions).
   5. Finally, display the gross pay, each tax deduction and their dollar amounts, and the net pay using a form control.
6. Try building the project and running the programming to test that the button works.
7. You need to properly name everything used in your program (controls on the form, variables, ...)
8. Provide instructions and clearly label the controls on the form to help the user.

**Due:**See the assignment posting on Canvas.  
  
**Submission:**You need to zip the root folder for your solution into a single zip file and submit the assignment in Canvas. To submit the assignment, you need to click the Assignment’s Title “Lab 1” to view the submission form and upload the zip file.

**Make sure you close Visual Studio before zipping the solution. Otherwise, necessary files that are in use will not be included in the zipped file, and we won’t be able to grade your assignment.**

Please be sure to save your work periodically as you proceed and also back it up. You may want to store a copy in a separate place. If you are going to zip an application in order to store it, BE SURE TO FIRST CLOSE Visual Studio; otherwise, the zip file will not contain all the necessary files.