The objective of this lab is to introduce you to writing selection statements C# code.  You'll use both if and switch statements.  You'll also review reading and writing programming logic using pseudocode.

Part 1

Complete tutorials 4-1 through 4-6 in the textbook.  The UIs have been provided for you. You just need to create the event handlers and write the code that goes in them.   
  
Note: The textbook author has provided videos of him doing each tutorial at www.pearsonhigehered.com/gaddis.  Feel free to view the video to help you do the tutorials.

Part 2

Complete the following Programming Problems from the end of Chapter 4 in the textbook.

**2. Mass and Weight**  
Scientists measure an object’s mass in kilograms and its weight in Newtons. If you know the amount of mass of an object, you can calculate its weight, in Newtons, with the following formula:

Weight = Mass × 9.8

Create an application that lets the user enter an object’s mass and then calculates its weight. If the object weighs more than 1000 Newtons, display a message indicating that it is too heavy. If the object weighs less than 10 Newtons, display a message indicating that it is too light.

(Gaddis 262)

**4. Color Mixer**  
The colors red, blue, and yellow are known as the primary colors because they can- not be made by mixing other colors. When you mix two primary colors, you get a secondary color, as shown here:

* When you mix red and blue, you get purple.
* When you mix red and yellow, you get orange.
* When you mix blue and yellow, you get green.

Create an application that lets the user select two primary colors from two different sets of Radio buttons. The form should also have a Mix button. When the user clicks the Mix button, the form’s background should change to the color that you get when you mix the two selected primary colors. Figure 4-34 in the book shows an example of how the form should appear.

Note: If the user picks the same color from both sets of Radio buttons, set the form’s background to that color. (Gaddis 262)

**12. Workshop Selector**

The following table shows a training company’s workshops, the number of days of each, and their registration fees.

|  |  |  |
| --- | --- | --- |
| ***Workshop*** | ***Number of Days*** | ***Registration Fee*** |
| Handling Stress | 3 | $1,000 |
| Time Management | 3 | $800 |
| Supervision Skills | 3 | $1,500 |
| Negotiation | 5 | $1,300 |
| How to Interview | 1 | $500 |

The training company conducts its workshops in the six locations shown in the following table. The table also shows the lodging fees per day at each location.

|  |  |
| --- | --- |
| ***Location*** | ***Lodging Fees per Day*** |
| Austin | $150 |
| Chicago | $225 |
| Dallas | $175 |
| Orlando | $300 |
| Phoenix | $175 |
| Raleigh | $150 |

When a customer registers for a workshop, he or she must pay the registration fee plus the lodging fees for the selected location. For example, here are the charges to attend the Supervision Skills workshop in Orlando:

Registration: $1,500   
Lodging: $300 × 3 days = $900   
Total: $2,400

Create an application that lets the user select a workshop from one ListBox and a location from another ListBox. When the user clicks a button, the application should calculate and display the registration cost, the lodging cost, and the total cost. (Gaddis 265)

Gaddis, Tony. *Starting out with Visual C# 2012 (with CD-Rom), 3/e, 3rd Edition*. Pearson, 06/2013. VitalBook file.