

Activity 1

Ian M. McConihay

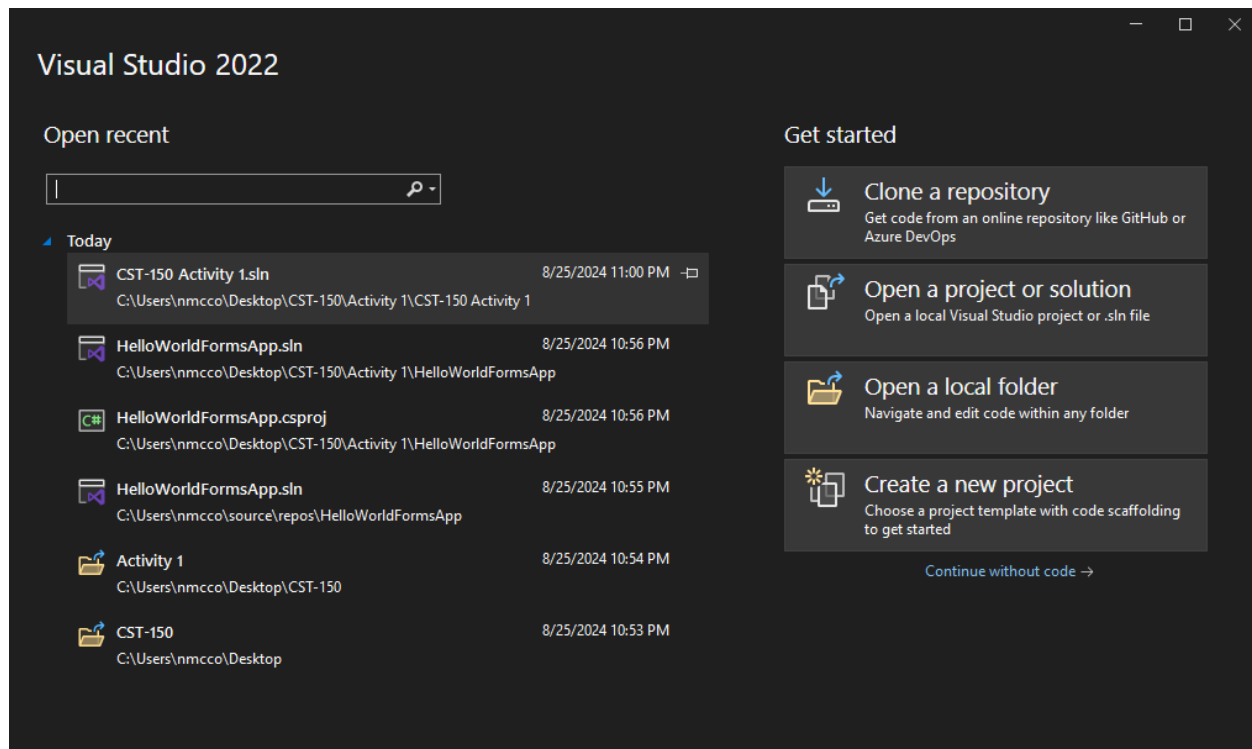
College of Science, Engineering and Technology, Grand Canyon University

CST-150: C# Programming I

Mark Smithers

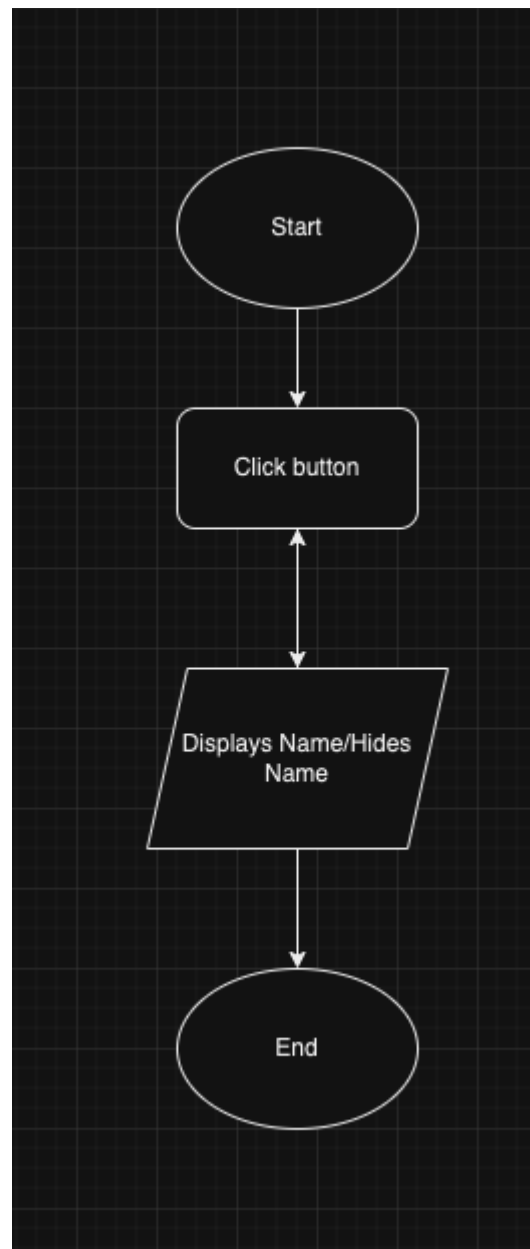
August 11, 2024

Github: <https://github.com/Ian-McConihay/CST-150>



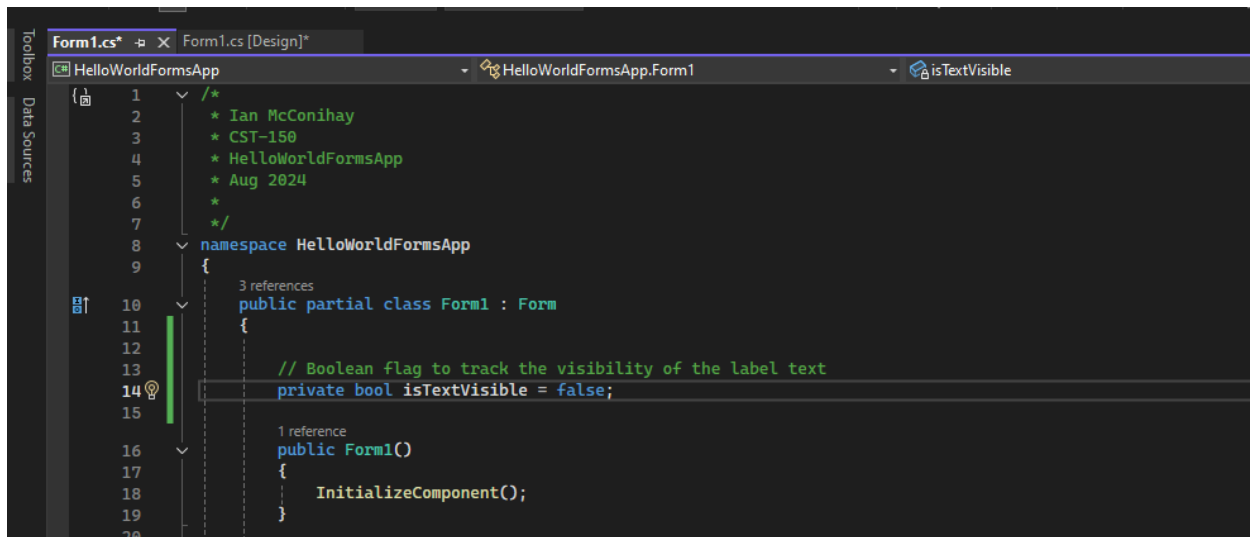
Here is the first screenshot to show I have successfully installed Visual Studio IDE. I took the screenshot post development of the applications to demonstrate that I also installed the desktop development extensions. The installation process was smooth due to my familiarity with the IDE.

Flowchart



The flow chart for the Activity 1 Part 2 application. This application is a simple click event. The users only option is to click the button to display and hide the displayed text.

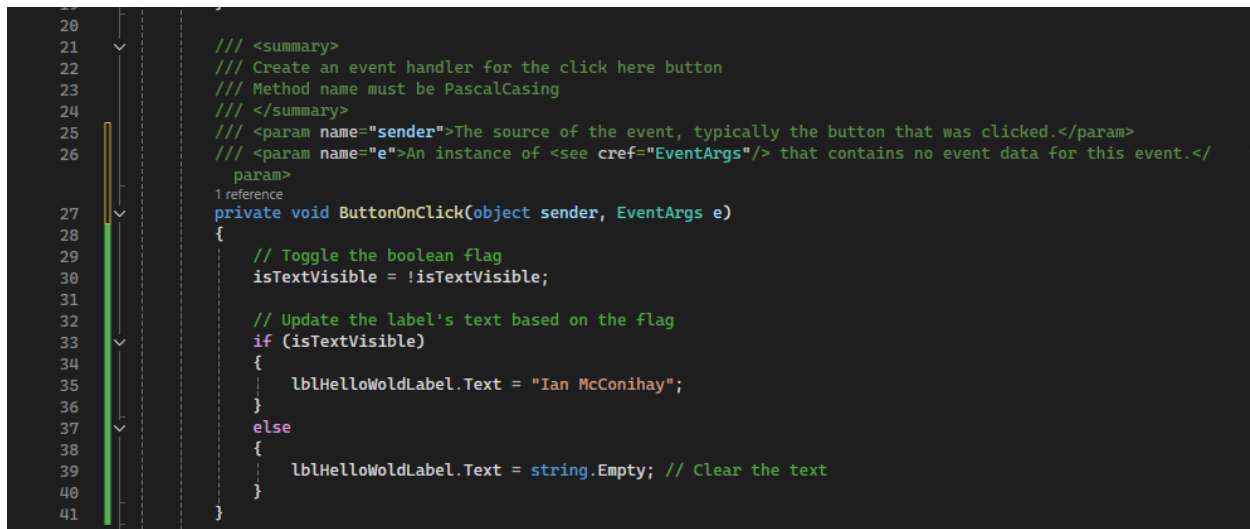
Application Screenshots



```

1  /*
2  * Ian McConihay
3  * CST-150
4  * HelloWorldFormsApp
5  * Aug 2024
6  */
7
8  namespace HelloWorldFormsApp
9  {
10     3 references
11     public partial class Form1 : Form
12     {
13         // Boolean flag to track the visibility of the label text
14         private bool isTextVisible = false;
15
16         1 reference
17         public Form1()
18         {
19             InitializeComponent();
20     }

```



```

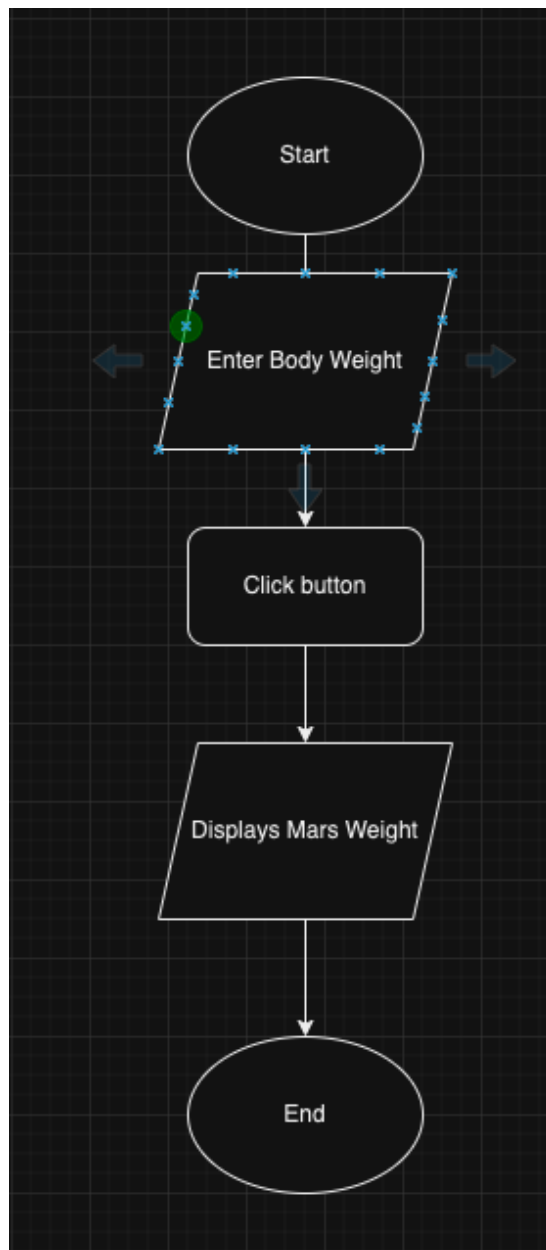
20
21     /// <summary>
22     /// Create an event handler for the click here button
23     /// Method name must be PascalCasing
24     /// </summary>
25     /// <param name="sender">The source of the event, typically the button that was clicked.</param>
26     /// <param name="e">An instance of <see cref="EventArgs"/> that contains no event data for this event.</
27     param>
28     1 reference
29     private void ButtonOnClick(object sender, EventArgs e)
30     {
31         // Toggle the boolean flag
32         isTextVisible = !isTextVisible;
33
34         // Update the label's text based on the flag
35         if (isTextVisible)
36         {
37             lblHelloWoldLabel.Text = "Ian McConihay";
38         }
39         else
40         {
41             lblHelloWoldLabel.Text = string.Empty; // Clear the text
42         }
43     }

```

This is my ButtonOnClick method for displaying my name on a label. I went ahead and added an if else block to display the lblHelloWorldLabel whenever I clicked the button again. I inserted a bool variable to be set to false unless the click event for the button was pressed and then set back with another click.

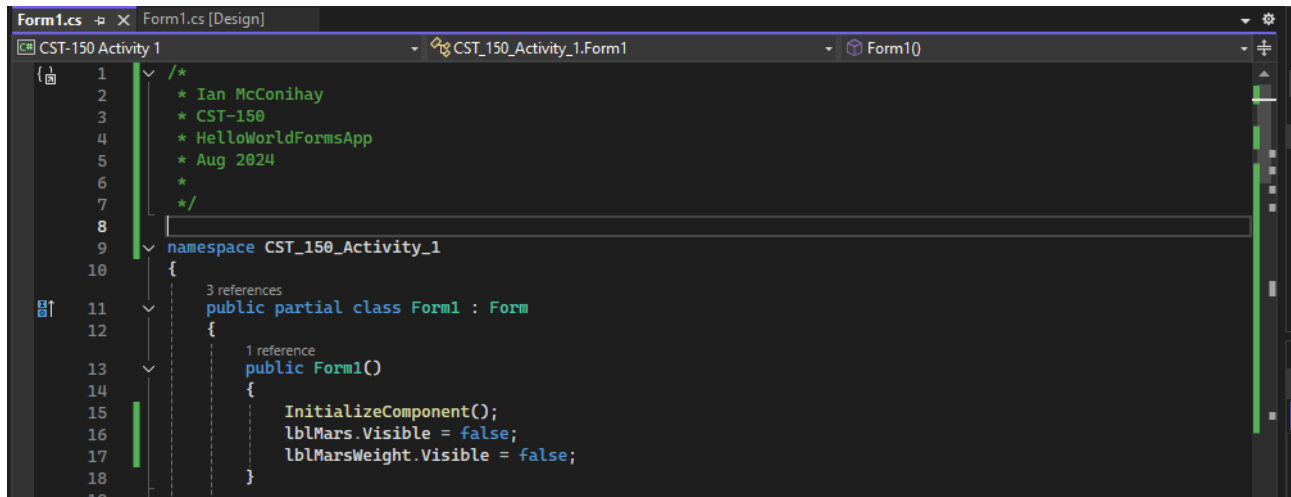


Here I have the application running after U had clicked the button. I configured the display design to highlight an assorted color scheme. I prefer dark mode on about everything so I most likely will stick to a similar theme throughout the course.

Part 3 of Activity 1**Flowchart**

Activity 1 part 3 application required an input field of the user to enter their bodyweight. Once the bodyweight is entered, they can click on the convert button to see their weight being converted into what they would weigh on Mars. A new weight can be converted, or the application can end.

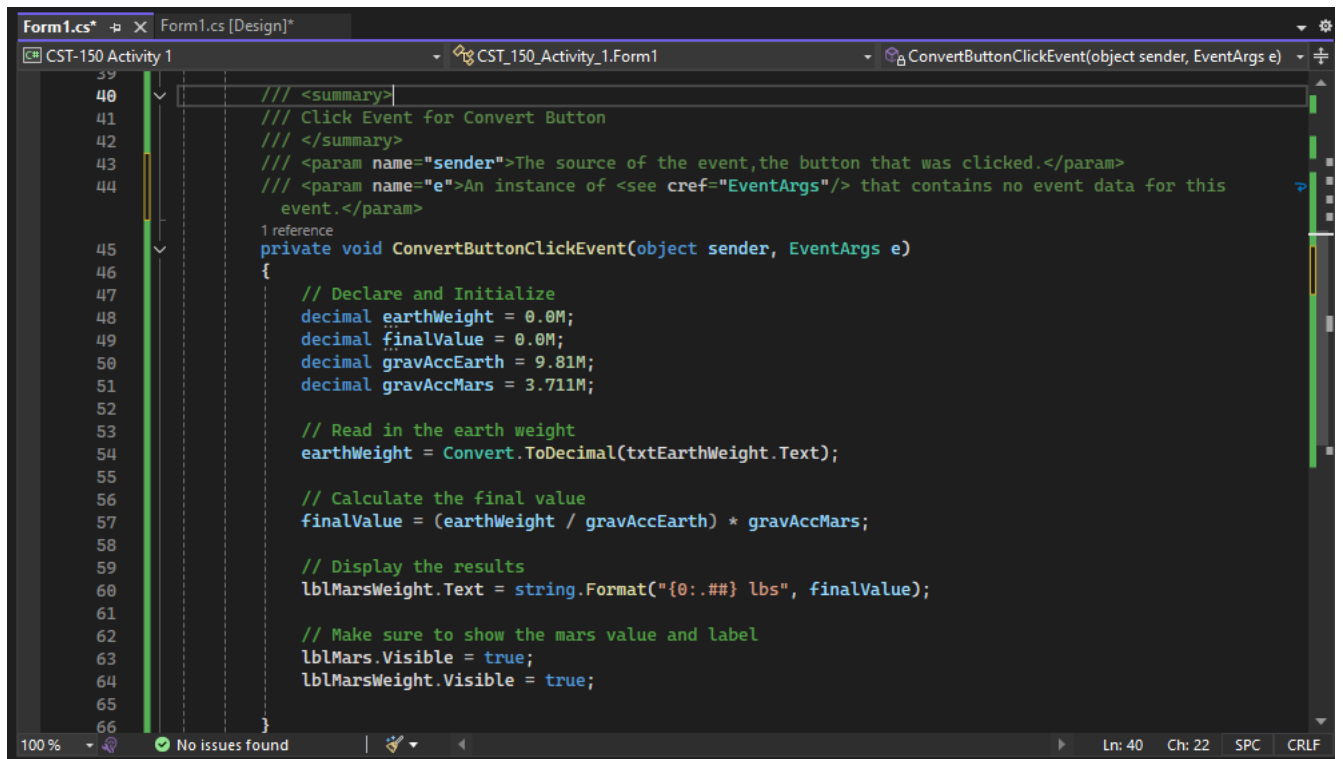
Application Screenshots



```

1  /*
2  * Ian McConihay
3  * CST-150
4  * HelloWorldFormsApp
5  * Aug 2024
6  */
7
8
9  namespace CST_150_Activity_1
10 {
11     3 references
12     public partial class Form1 : Form
13     {
14         1 reference
15         public Form1()
16         {
17             InitializeComponent();
18             lblMars.Visible = false;
19             lblMarsWeight.Visible = false;
20         }
21     }

```



```

39
40     /// <summary>
41     /// Click Event for Convert Button
42     /// </summary>
43     /// <param name="sender">The source of the event, the button that was clicked.</param>
44     /// <param name="e">An instance of <see cref="EventArgs"/> that contains no event data for this
45     /// event.</param>
46     1 reference
47     private void ConvertButtonClickEvent(object sender, EventArgs e)
48     {
49         // Declare and Initialize
50         decimal earthWeight = 0.0M;
51         decimal finalValue = 0.0M;
52         decimal gravAccEarth = 9.81M;
53         decimal gravAccMars = 3.711M;
54
55         // Read in the earth weight
56         earthWeight = Convert.ToDecimal(txtEarthWeight.Text);
57
58         // Calculate the final value
59         finalValue = (earthWeight / gravAccEarth) * gravAccMars;
60
61         // Display the results
62         lblMarsWeight.Text = string.Format("{0:##} lbs", finalValue);
63
64         // Make sure to show the mars value and label
65         lblMars.Visible = true;
66         lblMarsWeight.Visible = true;
67     }

```

Part 3 of Activity 1 Was to create a convertor for an individual's bodyweight in pounds to be converted to what your weight would be on Mars. After creating and instantiating visibility functions to the label lblMars and lblMarsWeight I was able to work on the method. The

method has variables to store starting weights and conversion variables. Then the logic moved to calculating the finalValue and displaying the results.

The image displays two sequential screenshots of a Windows application window titled "Form1".

Top Screenshot: The window has a light gray background. It contains two labels: "Enter your weight on Earth" and "Your weight on Mars". The "Enter your weight on Earth" label is positioned to the left of a text input field containing the value "175". To the right of the input field is the text "lbs". Below the input field, the label "Your weight on Mars" is positioned to the left of the text "66.2 lbs". Below these elements is a button labeled "Convert".

Bottom Screenshot: The window has a dark gray background. The "Enter your weight on Earth" label is positioned to the left of a text input field containing the value "235". To the right of the input field is the text "lbs". Below the input field, the label "Your weight on Mars" is positioned to the left of the text "88.9 lbs". Below these elements is a button labeled "Convert".

With these screenshots I wanted to display two different weights as well as two different color schemes. This is a small demonstration of testing the converter. The darker background is also softer on the eyes.

1. What was challenging?

It was pretty straightforward.

2. What did you learn?

I learned about controlling visibility within the form's application.

3. How would you improve on the project?

I would create additional converters that had to do with space. I would also limit what was allowed to be submitted into the textbox

4. How can you use what you learned on the job?

You can use converters for a multitude of reasons. Computing discounts for items, quantify weight limits for truck deliveries, and other several reasons.