# Chapter 3 Temperature Converter

Time required: 60 minutes

- Comment each line of code as shown in the tutorials and other code examples.
- Follow all directions carefully and accurately.
- Think of the directions as minimum requirements.

## Pseudocode

1. Write pseudocode for the exercise
2. Submit with the assignment

# Program Requirements

Create a Visual C# Windows Form program that converts Fahrenheit to Celsius or Celsius to Fahrenheit.

## Convert to Fahrenheit

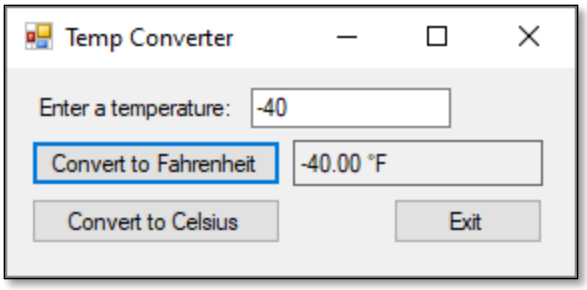
1. Create a Visual C# Windows Forms App (.NET Framework) project based on the sample application design.
2. Add a textbox named **txtEntry**
3. Add a button named **btnConvertToFahrenheit** that reads **Convert to Fahrenheit**. If the user clicks this button, the application should treat the temperature that is entered as a Celsius temperature and convert it to Fahrenheit.
4. Add a label called named **lblDisplayTemperature**
5. Double Click the **Convert to Fahrenheit** button to create the event handler
6. Assuming that **Celsius** is a Celsius temperature, the following formula converts the temperature to Fahrenheit:
   **Fahrenheit = (9.0 * Celsius) / 5 + 32.0**
7. The display label should concatenate a **°F** as shown in the example.
8. Get the Degree Symbol: www.degreesymbol.net
   At the top of this web page, you can **Copy** the degree symbol and paste it into your code.

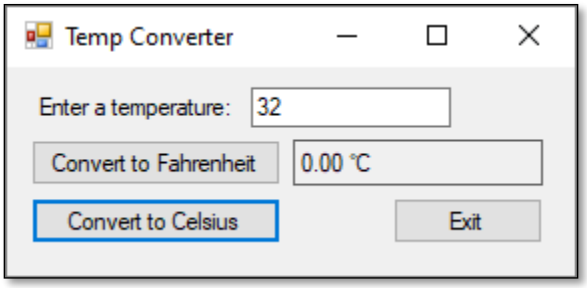
```
1 reference
14      private void BtnConvertToFahrenheit_Click(object sender, EventArgs e)
15      {
16          double celsius;
17          double fahrenheit;
18
19          try
20          {
21              // Parse the user Celsius text entry to double
22              celsius = double.Parse(txtEntry.Text);
23
24              // Convert Celsius to Fahrenheit
25              fahrenheit = (9 * celsius) / 5 + 32;
26
27              // Display the converted Fahrenheit temperature
28              lblDisplayTemperature.Text = fahrenheit.ToString("n2") + "°F";
29          }
30          catch (Exception)
31          {
32              MessageBox.Show("Please enter a number.");
33          }
34      }
```

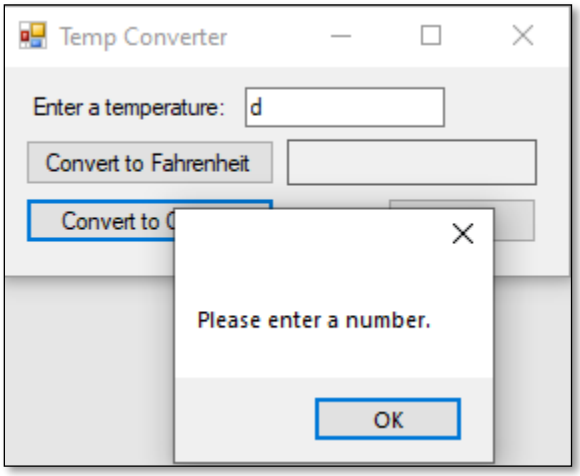
## Convert to Celsius

1. Add a button that reads **Convert to Celsius**. If the user clicks this button, the application should treat the temperature that is entered as a Fahrenheit temperature and convert it to Celsius.
2. Assuming that **Fahrenheit** is a Fahrenheit temperature, the following formula converts the temperature to Celsius:
   **Celsius = (Fahrenheit - 32.0) * 5.0 / 9.0**
3. Use **Try Catch** to catch any errors.
4. The display label should concatenate a **°C** as shown in the example.
5. Get the Degree Symbol: www.degreesymbol.net
   At the top of this web page, you can **Copy** the degree symbol and paste it into your code.
6. Add an Exit button. Add **this.Close();** to the event handler.
7. Test your finished project. Make corrections as necessary.

Example run:




## Assignment Submission

1. Take a screenshot of your functioning program.
2. Submit in Blackboard.