Variables, Operators, and Decisions

Lab Summary

Design an app that will allow users to convert entered numeric values between Celsius and Fahrenheit.

Think about…
- What information needs to be entered by the user?
- What types of fields can you use?
- How can you organize the interface to make it user-friendly?
- How can the user submit the data?
- Can you make the form look appealing? (Fonts, sizes, colors, pictures…)

Once you have decided on a design, create it in a UWP application!

This time, the application must contain code to perform the temperature conversions. There should be one interface that can perform conversions in both directions – from Celsius to Fahrenheit or from Fahrenheit to Celsius. (Do not make two separate submit buttons.) Your app needs to *decide* which conversion it needs to make, and then it should calculate the converted value using one of the two formulas below:

From Celsius to Fahrenheit: $F = (C \times 1.8) + 32$
From Fahrenheit to Celsius: $C = (F - 32) \times 5/9$

When the user submits the value for conversion, your code must **decide** what type of conversion to perform and then display the result to the user.

Lab Requirements

You will submit your UWP application.

Your app should include:
- A well-designed user interface
- Input controls which allow the user to interact with the program.
  - Don't duplicate inputs – for example, there should only be one place where Celsius Temperatures are entered/displayed.
- Appropriate text blocks to label the inputs.
- At least one way for the user to submit the data.
- Correct tab order for input controls
- Logically and syntactically correct code which responds to the user's actions and displays the desired results.
- Include decision structures to determine which formula to use.
- Comments, including your name and descriptions of variables, algorithms etc.
- Code that is aligned and formatted correctly, and well organized.
- Use "camelCasing" when naming variables (ex. userInput)

Lab Submission

The due date for this lab is **11:59 pm** on the day of your **next** class.
Submit into the Blackboard Lab 2 link a ZIP (compressed file) consisting of the entire folder containing your UWP Application Project and Solution File. Name your file: YourName_Lab1.zip
Note: Failure to follow Lab submission requirements may result in up to 10% reduction in grade.

Grading Scheme

Task	Marks
User interface design	2
Field placement, tab order, labels	2
Variables and operators	2
Decision structures	2
Code comments and organization	2
Total	**10 Marks**