CS 135
Exercise #5
Point value: 30
Date due: email source file (using mail utility) to your lab instructor by 11:59pm Mon, Sep 18

New Skills Practiced (Learning Goals)

- Problem solving and debugging.
- Interactive input.
- C++ arithmetic operators.
- C++ data types.
- Generating output to meet specifications.

A Fahrenheit temperature can be converted to Celsius using the following formula

$$C = \frac{5}{9}(F - 32)$$

and a Celsius temperature can be converted to Fahrenheit using the following formula

$$F = \frac{9}{5}C + 32$$

Design and implement a complete C++ program that will

- display your name, lecture and lab section #s, and exercise #
- interactively prompt for and read an integer that represents a temperature
- assume the input value is a Fahrenheit reading, convert it to Celsius
- assume the input value is a Celsius reading, convert it to Fahrenheit
- display (to the screen) two statements worded as follows
  - input_temp Fahrenheit = computed_Celsius_temp Celsius
  - input_temp Celsius = computed _Fahrenheit_temp Fahrenheit
- do NOT attempt to control the precision of the output values
- when displaying the output, make sure you include adequte labels (see the sample terminal session below) and do not run words and numbers together (separate with blanks)

When the program compiles and runs correctly on bobby.cs.unlv.edu, use the mail utility to email a copy of the program file to your lab instructor. Make sure the subject line of your email includes your name, lecture and lab section #s, and the exercise # if you wish to receive full credit.

NOTES:

- Assume that the input value will be an integer (positive, negative, or zero).
- Converted temperatures should be exact (include decimals)
- It is a good idea to send a carbon copy to yourself (-c option) of all emails sent to your

lab or course instructor when using the mail utility.

- A comment with your name, lecture section#, lab section#, and exercise# should be at the start of your program file.

Sample terminal session:

```
[lee@bobby keys]$ g++ ex05.cpp
[lee@bobby keys]$ ./a.out
Lee Misch Lec#10__ Lab#10__ Exercise#5
Please enter a temperature to convert
32
32 Fahrenheit = 0 Celsius
32 Celsius = 89.6 Fahrenheit
[lee@bobby keys]$ ./a.out
Lee Misch Lec#10__ Lab#10__ Exercise#5
Please enter a temperature to convert
76
76 Fahrenheit = 24.4444 Celsius
76 Celsius = 168.8 Fahrenheit
```

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