Lab Exercise 2 Part A
Focus: Simple arithmetic, input, output, selection, repetition statements; modifying existing code
Point value: 10 points
% of course grade: 3%
Cross disciplinary connections: Meteorology, English, Math

In this assignment, you will modify a program you have written in lab 1.

Assignment Specifications

For this assignment, you will do the following:

1. Re-read lab 1 carefully
2. Look at your previous solution and incorporate any changes that have been suggested
3. Now add the following to your existing code. DO NOT re-write the whole program from scratch!
   a) The INTERACTIVE part of the program should repeat 5 times (see sample output)
   b) Add a message based on the windchill. You decide the message. As an example, if the windchill is between 0 and 20 degrees or below you might say "brrrrrr…….that's cold"; if it is between -1 and -20 you might say "Are we human flavored popsicles yet?"
   c) Use the following ranges:
      i) Between 20 and 40 degrees
      ii) Between -20 and 19 degrees
      iii) Less than -20 degrees

Notes About This Assignment

There are three main control structures in a program. These are:

1. Sequence: All statements in the program/code block are executed sequentially
2. Selection: The program/code block needs to make a choice based on certain conditions. As an example, you go to an ATM, enter your PIN and accidentally enter the wrong PIN. You get an error message. That is a selection control structure. The PIN you entered is compared against the PIN stored in your card stripe for equivalency. The result of the comparison can be either true or false. If it is false you are shown an error.
3. Repetition: When a program/code block repeats either a set number of times or until a certain condition becomes true or false. In the ATM example, the machine prompts you to re-enter your PIN. That is a repetition.

Before you start this lab, plan out your solution. It pays to think in English (pseudocode) and then translate to code. Watch all the videos in module 2. Also watch the videos listed in the Notes section of Lab 2 part B.

Sample Output

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 RESTART: /Users/amardeepk/Desktop/Spring 2018 Class Prep/Labs Spring 2018 New Set/Labs Module 2/windChill_sel_rep.py
This is the magical wind chill calculator! Enter a temperature in degrees Fahrenheit and a wind speed in MPH and see a wind chill value
See a sample below!


Temperature          Wind Speed                    Wind Chill
20.00                19.00                         4.60
0.00                 5.00                          -10.51
-15.00               25.00                         -44.15

================================================================



What is the temperature for which you want to calculate a wind chill index: 40
What is the wind speed: 3
For a temperature of 40.00 and a wind speed of 3.00, the wind chill index is 38.37
Nothing much - just a cold breeze!


What is the temperature for which you want to calculate a wind chill index: 34
What is the wind speed: 23
For a temperature of 34.00 and a wind speed of 23.00, the wind chill index is 21.83
Nothing much - just a cold breeze!


What is the temperature for which you want to calculate a wind chill index: -1
What is the wind speed: 12
For a temperature of -1.00 and a wind speed of 12.00, the wind chill index is -18.72
Now that is a bit chilly!


What is the temperature for which you want to calculate a wind chill index: -11
What is the wind speed: 20
For a temperature of -11.00 and a wind speed of 20.00, the wind chill index is -36.43
Now we are freezing!!!


What is the temperature for which you want to calculate a wind chill index: 25
What is the wind speed: 5
For a temperature of 25.00 and a wind speed of 5.00, the wind chill index is 18.85
Now that is a bit chilly!
>>>
                                                                                                                    Ln: 47  Col: 4
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