Project 1

Program 1

Pseudo Code

-Measure the wind chill temperature by asking for a temperature between -58 and 41 degrees Fahrenheit and a wind speed greater than or equal to 2.

1. OUTPUT: “Enter the temperature in Fahrenheit between -45°F and 40°F: “
2. INPUT: Integer between -45 and 40.
3. IF Integer is between -45 and 40 THEN

STORE input in variable “temperature”

ELSE

OUTPUT: “Invalid Input“

END PROGRAM

1. OUTPUT: “Enter the wind speed (>=5 and <= 60) in miles per hour: “
2. IF Integer is greater than or equal to 5 and less than or equal to 60 THEN

STORE input in variable “wind speed”

ELSE

OUTPUT: “Invalid Input“

END PROGRAM

1. CALCULATE: 35.74 + (0.6215 \* (double) temperature) – (35.75 (double) wind speed) + (0.4275 \* temperature \* (wind speed ^ 0.16))
2. STORE the result in the double variable “wind chill index”
3. OUTPUT: “The wind chill index is (temperature).”

Test Plan

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Cases | Input | Expected Output | Actual Output | Did Test Pass? |
| Case 1 | Temp:  30  Wind chill:  20 | 17.361783756466327 | 17.361783756466327 | Yes |
| Case 2 | Temp:  -13  Wind chill:  59 | -51.65630893463364 | -51.65630893463364 | Yes |
| Case 3 | Temp:  0  Wind chill:  2 | -4.203015186081863 | -4.203015186081863 | Yes |

Lessons Learned:

-Learned how if/else statements work

-Learned how to convert variables to different data types