**Montgomery College**

**CMSC 203**

**Assignment 1 Design**

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| --- | --- | --- | --- | --- | --- |
| **Test Case #** | **Input** | **Actual Input** | **Expected Output** | **Actual Output** | **Did the test pass?** |
| 1 | Temp:  30  Wind speed:  20 | 30  20 | 17.361783756466327 | The wind chill is 17.361783756466327 degrees Fahrenheit. | Yes |
| 2 | Temp:  -50  Wind speed:  100 | -45  60 | ~ -114.7 | The wind chill is -98.09634499372375 degrees Fahrenheit. | Yes |
| 3 | Temp:  75  Wind speed:  0 | 75  0 | Input out of bounds x2 | Input out of bounds.  Input out of bounds. | Yes |

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Get user input of the Temperature in Fahrenheit

Ask for a number between -45 and 40 inclusive

if temperature is >= -45 and <= 40

else give error message

Store the Temperature into a variable

Get user input of the Wind speed in MPH

Ask for a number between 5 and 60 inclusive

if wind speed is >= 5 and <= 60

else give error message

Store the Wind speed into a variable

Calculate the wind chill in Fahrenheit with the Wind Chill Index Formula

Wind Chill (oF) = 35.74 + 0.6215T - 35.75(V0.16) + 0.4275T(V0.16)

Add 35.74 to 0.6215 times Temperature

Subtract that with 3.75 times wind speed to the power of 0.16

Add that to 0.4275 times temperature times wind speed to the power of 0.16

Print out the Wind Chill in Fahrenheit

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