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**CMSC 203**

**Assignment 1 -Wind Chill**

**02/03/2020**

**Design Document**

**1) pseudoCode.**

Declare a double variable called fahTemp.

Declare a double variable windSpeed.

Declare a double variable windChill.

Take user input for the temperature in degrees F and store the value in the variable fahTemp. Temperature values should be greater than or equal to -45, but less than or equal to 40.

Take user input for the Wind Speed in MPH and store the value in the variable windSpeed. The wind speeds should be greater than or equal to 5, but less than or equal to 60.

Calculate the wind Chill

Wind Chill (oF) = 35.74 + 0.6215(fahTemp )- 35.75((windspeed)0.16) + 0.4275(fahTemp )(( windspeed) 0.16), where

windSpeed is the Wind Speed in MPH, and

fahTemp is the temperature in degrees F.

Display the wind chill temperature that results.

Display programmer’s Name at the end.

2) **T**est table :

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test Case #** | **Input** | **Actual Input** | **Expected Output** | **Actual Output** | **Did the test pass?** |
| 1 | Temp:  30  Wind Speed:  20 | Temp:  30  Wind Speed:  20 | 17.361783756466327 | 17.361783756466327 | pass |
| 2 | Temp:  -45  Wind Speed:  5 | Temp:  -45  Wind Speed:  5 | -63.4 | -63.36509452295255 | pass |
| 3 | Temp:  45  Wind Speed:  60 | Temp:  45  Wind Speed:  60 | 31.9 | 31.91555995982972 | pass |
| 4 | Temp:  0  Wind Speed:  30 | Temp:  0  Wind Speed:  30 | -25.9 | -25.864926944480686 | pass |
|  |  |  |  |  |  |