Psuedo Code for WindChillTemperature class:

1. Import the following:
   * Decimal format library for formatting from java.text.DecimalFormat
   * Scanner library for input from java.util.Scanner
2. Create constant double variables below for the following formula: twc = 35.74 + 0.6215t – 35.75v^.16 + 0.4275tv^.16:
   * FIRST\_COEFFICIENT set to 35.74
   * SECOND\_COEFFICIENT set to 0.6215
   * THIRD\_COEFFICIENT set to 35.75
   * FOURTH\_COEFFICIENT set to 0.4275
   * EXPONENT set to 0.16
3. Declare non-constant variables:
   * twc to hold the wind chill index
   * temperature to hold the temperature
   * windSpeed to hold the wind speed
   * calcutedWindSpeed to hold the wind speed to the power of the exponent
   * input for the Scanner to get the user’s input
   * twoDigits to hold two-digit decimal format
4. Prompt the user for the temperature in Fahrenheit
5. Receive the user’s input and put it in the variable temperature
6. Prompt the user for the wind speed in miles per hour
7. Receive the user’s input and put it in windSpeed
8. Close the input to prevent memory leakage.
9. Calculate the windSpeed to the EXPONENT power and put it in calculatedWindSpeed.
10. Calculate twc by using the formula above. All the variables just need to be plugged in.
11. Display the wind chill index to the user, formatted with two decimal places
12. Display programmer’s name: Michael Amaya

Test plan for WindChillTemperature:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Cases | Input | Expected Output | Actual Output | Did it pass? |
| Case 1 | Please enter the temperature in Fahrenheit between -58 degrees F and 41 degrees F: 5.3  Please enter the wing speedd (>=2) in miles per hour: 6 | The wind chill index is -5.57  Programmer: Michael Amaya | The wind chill index is -5.57  Programmer: Michael Amaya | Y |
| Case 2 | Please enter the temperature in Fahrenheit between -58 degrees F and 41 degrees F: 32  Please enter the wing speedd (>=2) in miles per hour: 7 | The wind chill index is 25.50  Programmer: Michael Amaya | The wind chill index is 25.5  Programmer: Michael Amaya | N |
| Case 3 | Please enter the temperature in Fahrenheit between -58 degrees F and 41 degrees F: 22  Please enter the wing speedd (>=2) in miles per hour: 12 | The wind chill index is 10.21  Programmer: Michael Amaya | The wind chill index is 10.21  Programmer: Michael Amaya | Y |
| Case 4 | Please enter the temperature in Fahrenheit between -58 degrees F and 41 degrees F: 30  Please enter the wing speedd (>=2) in miles per hour: 13 | The wind chill index is 19.83  Programmer: Michael Amaya | The wind chill index is 19.83  Programmer: Michael Amaya | Y |

Screenshots for WindChillTemperature:

**Case 1:**

**![A screenshot of a social media post

Description automatically generated]()**

**Case 2:**

**![A screenshot of a social media post

Description automatically generated]()**

**Case 3:**

**![A screenshot of a social media post

Description automatically generated]()**

**Case 4:**

![A screenshot of a social media post

Description automatically generated]()

WindChillTemperature Class Diagram:

![A screenshot of a cell phone

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WindChillTemperature Flow Chart:

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Lessons learned:

In this program, I learned how to make constant variables, and used a lot of the information from the other program was used to create this one. ObjectAID really helped create UML diagrams for my classes. I know later on, we will be working on multiple classes so UML editor will be more descriptive than a flow chart and it will be a lot easier to look at.

I’m not sure if this is for my use or your use, please let me know if this is incorrect..

|  |  |  |  |
| --- | --- | --- | --- |
| **#** |  | **Y/N** | **Comments** |
|  | **Source java files** | **Y** |  |
|  | **Compressed files:** | **Y** |  |
|  | FirstInitialLastName\_Project1\_Moss.zip | **Y** |  |
|  | FirstInitialLastName\_Project1\_doc.zip | **Y** |  |
|  | **Program compiles** | **Y** |  |
|  | **Program runs** | **Y** |  |
|  | **Checklist is completed and included in the Documentation** | **Y** |  |
|  | **Documentation file:** | **Y** |  |
|  | **Comprehensive Test Plan** | **Y** |  |
|  | **Screenshots based on Test Plan** | **Y** |  |
|  | **UML Diagram** | **Y** |  |
|  | **Algorithms/Pseudocode** | **Y** |  |
|  | **FlowChart** | **Y** |  |
|  | **Lessons Learned** | **Y** |  |