**Montgomery College**

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**CMSC 203**

**Prof. Farnaz Eivazi**

**Assignment 1 Design**

**Pseudocode**

1. The problem: Gather the data that you have, or at least that you will need. Investigate them.

* **You will need constants for the data that do not change.**
* **What will be the type of the wind chill ?**
* **String for the name of the programmer.**

1. Establish the limits of data types and act accordingly.

* **The temperature is between -45 and 40 inclusively. If it is not display error message!**
* **The wind speed should be between 5 and 60. If not, display an error message**

1. Think of the values that you will use as tests. (see Data tables)
2. Examine the requirements. The range allowed but also what functions, what key words you will use.

* **You will need a control structure for the error messages, some input and output.**

1. Once you have identified all of those what you will use now you can pass to the technical part (coding)
2. Create your file and start writing your code, making sure to not make predictable mistakes (like the missing semicolon)
3. When you are done and that your program has no compiling errors, execute to just see if it is working properly.
4. Use the cases of your data table, check if there is no logical errors (do they match the table?).
5. Now enter invalid values to make sure that your program responds to errors accordingly.
6. Once you are sure about that, check the general format of your code. Do you need a header, walkthrough the rubric, to make sure you did not forget anything.
7. Now copy/paste your program and run it through command line. If it executes successfully, do all the screenshots needed and upload your files following the teacher instructions.

2)

Use the given tests table and data as an example. Record your data for input and output in the following table. **Make sure your tests cover all the possible scenarios.**

**Test tables**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test Case #** | **Input** | **Actual Input** | **Expected Output** | **Actual Output** | **Did the test pass?** |
| 1 | Temp:  -45  Wind chill:  5 | -45  5 | -63 | -63.365094522952546 | Yes |
| 2 | Temp: 40  Wind Chill: 60 | 40  60 | 25 | 24.692676351298978 | Yes |
| 3 | Temp: -45  Wind Chill: 61 | -45  61 | Error Message | Error message | Yes |
| 4 | Temp: 41  Wind Chill: 5 | 41  5 | Error Message | Error message | Yes |