

Name: _____

Basic Project Structure Checklist (NO MARKS)

- yes ☐ Submitted BlueJ project folder organized as requested
 • including "test data" subfolder
 yes ☐ All code compiles without errors or warning
 yes ☐ Main class includes comments for any incomplete features or known bugs in the project

Assignment Solution

80 / 80
20 / 20

Performance Requirements

☐ General Flow

- Reads in all proper information at the start of the program then writes the report
- Prompts for name of input file and waits for user input on the same line
- Indicates in the prompt whether or not to include the .txt suffix
- Reads the entire file into an appropriate data structure
 (one or more ArrayList in the appropriately named class or classes)
- Calculates averages by scanning the data structures
- Writes the report to the console

☐ Proper use of main

10 / 10

proper use of instantiated objects

- Program is launched with a static main method in an appropriately named class
- All significant processing is performed in instantiated objects

☐ Loading and holding data

10 / 10

- All the data is loaded into ArrayLists using a loader method
- The inputted data is used to determine how to store the information
 (i.e. when the day number changes it is now a new day)
- Class that loaded the data also has methods to report the data as needed

☐ Statistics Calculation

10 / 10

- Statistics are kept in appropriately named classes
- Calculations are performed by asking the data class for the raw data

☐ Report Generation

30 / 30

- The report header displays the zone name and average as per requirements
- The number of days in the month is reported based on
 the number of days in the input file
- The report is structured into columns which have the same width
- The hour information is correctly formatted and shows the right hours for the zone
- The daily information is properly centered in each column
- The daily temperature is properly formatted with a minus sign if needed
- Asterisks properly appear on each side of temperatures within 1 degree of the average
- All significant processing is performed in instantiated objects
- All the data is loaded into ArrayLists using a loader method
- The inputted data is used to determine how to store the information
- Class that loaded the data also has methods to report the data as needed

Code Design☐ Readability**20 / 20****5 / 5****Quality and Readability Requirements**

- overall, code is clear and concise
- all identifier names are self-documenting and follow course naming conventions
- hard-coded magic number literals are avoided in favour of named constants
best declared at the top of a class in all capitals
- all code is correctly and consistently indented
- all code is formatted to enhance readability; white space is inserted around
logically-related code blocks
- tricky or less obvious sections of code are accompanied by short clarifying
comments, as appropriate (this will be weighted heavier for marks)

☐ Method Design**15 / 15****and other concerns**

- (7 marks) clearly-identifiable subtasks are delegated to clearly-named helper methods
 - Avoidance of large over complicated methods
 - Avoidance of too simple of methods where they are not really needed
(one line methods that are only called once)
 - code duplication is avoided; algorithms needed more than once are
placed in helper methods that are called as needed
- (5 marks) Javadoc has been applied to all important methods
 - Header for every file
 - Main methods include proper javadoc above the method
 - Accessory and modifier methods do not need java doc
- (3 marks) Choice of instance variables versus local variables is appropriate.

Does it make sense for the lifetime of the class it is declared in. Could it have been a local variable in each method it is used in. Could it have been a parameter or return from method instead. (3 = good, 2=small errors, 1=needs work, 0 = needs a lot of work)

**Subtotal
Deductions****100 / 100****Use of static key word other than for the main method (up to -20 marks)****-1 for every instance variable not marked private (Max of 5 marks taken off)****-1 for very helper method that is not marked private (Max of 5 marks off)****-5 the program does not start up from the main****-3 program does not format all decimal values outputted to 1 decimal places****Other:****TOTAL****100 / 100**Mark **3.0 / 3**

Comments: