

Unit 6: Assignment 2

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Describe the state of your project, what works and what doesn't.

The program correctly reads the weather data, stores it in the new object type, and computes the statistic using both a List and a TreeMap. Both methods return consistent results, which confirms the logic is working. The main issue encountered was ensuring the file data was parsed accurately.

Describe how you tested your program, since the data file is large.

I first verified the logic using a small set of test data before running the program with the full weather.txt file. I compared the outputs from computeByList() and computeByTree() to confirm that both produced identical results.

Show your timing data and write a paragraph on the benefits/drawbacks of using a List vs. a TreeMap.

The List approach was simpler to implement but required more manual searching and updating. The TreeMap allowed faster updates and automatically organized the data by key, but it required a better understanding of map-based structures. Overall, the TreeMap was more efficient for grouping statistics.

What did you learn?

I learned how different data structures affect program performance and organization when processing large datasets.

What did you like about this project?

I liked comparing two different implementations and observing how structure choice influenced efficiency.

What was confusing or could be improved?

Choosing between a List and a TreeMap was initially unclear, and additional examples would have been helpful.

What would you add or change with more time?

I would expand the program to calculate additional statistics and improve how the results are displayed.