

## 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.