CSE 687 Object Oriented Design Project

MapReduce

Phase #1: Write-Up

Team: Ciante Mclemore, Clayton Colson

Participation

**Program Structure:**

The workload was divided between each group member. Ciante was responsible for the map class to include the tokenizer. He also provided the formal structure and set the format to begin the project. Ciante designed the file management class that was used in both the map and reduce methods as well as establishing the workflow and executive files. I was responsible for completing the reduce class and sorting method. It was necessary that some of the reduce functionality be handled by the workflow class, so I expanded upon the workflow class as well. We met weekly to ensure a good line of communication so that each part could merge smoothly.

**Unit Tests:**

The unit test requirement was also divided for each team member. Ciante handled the map, file management, and utility unit tests. I was responsible for the reducer unit test. For this I chose to use an expected condition that checked if a file was sent to the output directory, I manually built a map with random samples that the reducer class could pull from. We both agreed to omit the unit tests for the executive class and workflow since they behaved like wrappers and there was no straightforward way to test these classes. Github pull requests may not accurately reflect the sharing of labor, since both team members met virtually to share screens and work on the project together where only one member pushed to github.

Final Thoughts

I think the project was difficult to get started but then went smoothly after. I have never used C++ for any formal programming, and it had a steep learning curve. Also, I am not familiar with using Unit Tests, so had to learn about that prior to getting started. Ciante was a great partner for this project. He was patient and helpful with getting me up to speed on how to format everything and additionally answered any questions I had.