Week of November 16, 2020 - November 20, 2020

This week our team mainly focused on figuring out the planning and logistics of the final project, to make sure we all have a smooth experience working on this project in the coming weeks. We met on Monday, November 16th, to get to know each other and figure out what each team member's strengths, weaknesses, and interests are. We then set up team communication on Discord, scheduled team meetings for the rest of the time we have to work on this project, and divided tasks. Later in the week, we met on Wednesday, November 18th, to finish the Team Contract and Project Goals. We took some time to look into various data sets and learned more about which algorithms would be appropriate for our data set and how we could potentially implement them. Next week, we plan to start spending more time outside of team meetings to complete each of our individual contributions to the code-base, and make significant progress towards completing the code-base by the end of the week.

Week of November 20, 2020 – November 27, 2020

During break we continued to learn more about the algorithms we had chosen and how we could possibly implement them. We also talked more about how to divide the work and what were some possible graph implementations to use and which would be better. We also got started on creating the graph class and created an outline of what we were going to do.

Week of November 27, 2020 – December 4, 2020

This week we really started putting in more work. We divided into subgroups where one group focused on the data portion, manipulating a dataset of over 1 million nodes and then reading from the input file and loading into a queue. The other subgroup focused on creating the graph class and making sure it was functional and also started implementing Dijkstra's algorithm. By the end of the week we have a fully functional graph implementation that can read from txt file and load the data. We also have theDijkstra's algorithm basically done; we just need to incorporate it and test. Next week we plan on finishing up; one sub group will work on the BFS traversal and saving the visited nodes to a txt file and the other will work on Dijkstra's and landmark algorithm. We will continue to meet up more frequently in order to make sure all our individual code is working properly with each others'. Towards mid week next week we plan on meeting up to finish up with the recording and any other thing else remaining.

Week of December 7th, 2020 - December 11th, 2020

This week we completed implementing the BFS traversal, and the Djikstra's and Landmark Algorithms. We identified some of the limitations our algorithms had and attempted to address though to the best of our abilities. To wrap things up, we cleaned up our code, finished out test cases, and double checked out input and output files. We also completed our remaining written reports and recorded our final presentation. This project allowed us to use our knowledge and skills from CS225 towards creating something substantial, based on the real world. Apart from implementing the actual algorithms, we were also given the opportunity to demonstrate more practical skills for the workplace, such as retrieving and cleaning data, creating our own makefiles and test cases, and having tangible outputs outside of test cases. We hope to continue working on this project in the future, and using the skills and knowledge from future

coursework and projects, we aim to overcome our current limitations and present our program to many other respective data sets.