CS 3364 Project 2 report

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Sorting is one of the most broadly used fundamental operations in data processing. There are

numerous sorting algorithms available. In this problem we were given 29 classes and were asked to sort them using a topological sorting algorithm. Below is the 3-step process followed throughout the implementation and interpretation of the project.

Step1: Make the Adjacency list.

Step2: Implement DFS algorithm.

Step3: Adjust DFS for pre and post visits.

Below is the description of the methodology of the solution

Our group choose to use the DFS as our algorithm and started to first make an adjacency list in python for our graph. We then made our explore procedure and dfs procedure by reviewing over the pseudo code in the slides and implementing post visit, pre visit, and visited for the stack. The algorithm works by traversing down the list pushing the visited nodes into the stack and popping them out when that part of the graph ends.

Conclusion: In completing this project, we were able to collaborate with one another and further developed our ability to: simplify and solve real-world problems, apply the existing algorithms into real world applications, modify and implement algorithmic approaches. In conclusion – as stated earlier in the experimental results section – We were able to implement the DFS algorithm on a real world problem.