

Progress Report #2 (4/5/2023) -

The goal of this progress report was to have two Rubik's Cube algorithms implemented within my java program and a visualization to show off this algorithm. I ended up spending a lot more time on this than I would have liked and not getting as far as I want but there are a few positives I can take out of this.

I changed both of my algorithms from the first report. After researching more on these Rubik's Cube algorithms, I decided to go with 2x2 cubes instead of a standard 3x3 cube. This was to simplify and shorten the amount of code I had to deal with in these algorithms. However, these programs are still somewhat lengthy. The first algorithm can be found here <https://github.com/ljz112/rubiks-cube>. The second algorithm can be found here <https://github.com/Nabil-1999/rubik-s-cube>. My implementation of these can be found under rubiksSolver1 and rubiksSolver2 folders in my repository. Both of these have a main/tester method to run the program. I modified these programs in a few ways to do some things that I will need for my analysis of these algorithms. The first one I added in print statements and prints for cubes during the solving process, to give more detail in my output. I also changed the loop in main to only solve one cube. The second program I created a method to count the number of moves made to solve the cube. I added this in because the first algorithm had it and wanted this for my analysis later.

Next, I went on to try to create better visualizations for these programs rather than the ones being output in the terminal with print statements. I tried for a few hours on making a java swing program to show a cube being solved. I ended up scraping this entirely because it was extremely complicated and beyond the scope of this project. I tried several java swing methods and nothing was working the way I wanted. I decided I may come back to create visualizations for these algorithms, as they are not as important as the analysis. I would set this to be a milestone when the final presentation is due. I put it off to focus on more important aspects of this project.

All goals are in sight for this project. All dates remain the same. I hope to have the entire analysis completed of these two algorithms by next Friday (4/12). Although I changed several aspects of the project, I now have a better understanding and plan of what needs to be done, so these mistakes have helped me in the long run.