

### Reflection 3

This project wasn't too bad overall. I ended up refactoring my original code from project 2, mainly in that I switched to working with vectors instead of getlines to read and write from my files. I'm more comfortable with vectors now after this, so that's pretty good knowledge gained, I'd say.

The biggest problem I ran into was when I was trying to change every third number to 0. The vectors I'd created to read from the ppm file were string type, not int, so I couldn't use the modulo idea I'd originally had planned when I was first mapping out my code for the assignment. I got stuck for a while converting my strings to ints, and in the end had to make a couple of functions to help get the job done. Which isn't bad or anything, probably the opposite, but I'm still wondering if there was an easier way to go about it that I missed somehow. I'll do some refactoring come project 4 if it turns out there is a more efficient way to go about it, so I guess it's fine either way.

The most fun part of the project was probably making the functions I used to convert string to int. (For the most part anyways. I got stuck a couple of times and it was a little frustrating, but also very satisfying when I persisted and finally got it all working.) I like figuring out all the different tools I can use to go about solving the problem and then putting them all together. I also really enjoyed working with vectors. Once I had them all figured out they really were so much nicer to use, compared to what I was doing before. So that was fun.

If I was going to do anything differently in the future, I'd probably make my pseudocode a little more detailed before really getting started. It helps to have an idea, even a vague one, of the different kinds of tools I'll need to be using for the project. Besides that, though, I think everything went well. It definitely feels like I'm improving with each project I tackle.