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Reflection Report

The greatest problems I faced while re-engineering the algorithm in Fortron was first getting the syntax, second making it more readable, and thirdly keeping patience when re-engineering. When I first started this assignment it took me a while to get the syntax correct and understand when typing integer:: will let you declare more than one integer. Also what I learned was doing integer, dimension():: which can declare the dimension and integer at the same time which was efficient and easy to read. Making the code more readable was a challenge at first but then I read through the websites that the professor posted which help me know which problems to tackle. I choose to change all the loops to do end do which made them look almost like nested for loops in C. I also changed the way the messages were printed instead of assigning them to a number (ie. 1000 ‘key’) I decided to just write and read in the desired place so I know exactly where I’m printing and where I’m reading. Lastly, I needed patience doing the re-engineering of this program, there were a couple of times I kept getting the syntax wrong or not changing the right amount of variables. The errors got too much because I would try to re-engineer the whole code without running, sometimes I would just delete the new code and start from scratch (this happened multiple times).

The particular feature that makes Fortran a good language, in my opinion, is that it makes numerical computation easy and well-defined. It is better and more optimized code, more efficient with mathematics. It is also easy to manipulate arrays and numbers with Fortron. Lastly, it gives better diagnostics to errors in my opinion.

I feel like this program wouldn’t have been easier in C because of the ease of manipulation of strings and mathematics with Fortron would make it superior for this specific program. I do feel in a way that some functions like word2hex would be easier in C but also its because I wasn’t used to the syntax of Fortron.

Given my knowledge of programming, Fortran was not easy but wasn't difficult to learn either. It kind of reminded me of the assembly to begin. But as I read through the assignment code and restarted the re-engineering a couple of times I started to get the hang of it. Referring to the text also really helped me getting used to the if and loop statements. The biggest problem I had was doing the word2hex function done. But the task that was the most time consuming was re-engineering the code. I wish that I did it more modulized compared to doing it all at once.