# CIS 3190 A4 Reflection Report

The assignment I chose to do is “Calculating e to many digits”. The task was to re-engineer the Algol-60 code to Fortran, Ada, C , and Python. I had to create multiple goals and a plan in order to finish this assignment on time. There were some complications that I went through but not too many.

My plan with this assignment was to first read and understand the code in Algol-60. If I understand the code then I would know how to re-engineer it to different languages. Therefore I spent a good time learning about Algol-60 and the syntax for it. After understanding the code, I started re-engineering it into C since I’m most comfortable with C. I began by creating the method that does all the calculations which were not hard in C. In the calculation method, I used 2 nested loops for sweeping. Then I moved on to creating the keepe method. I have been doing this for the majority of university so it did not take long to implement. After that, I created the main and called the methods to do the job.

After finishing up the C program, I moved on to re-engineering it in Ada. Since I only used Ada for one assignment before, I mostly forgot how to code in it, Therefore I went back to the notes on Courselink and brushed up on it to learn the syntax and how to use the language. Similarly to C I created the procedures for Keepe and for the calculations. From there it was the same as doing it in C just different syntax. After finishing with Ada I started working with Python. I have never worked with python before therefore I had to study the language a little and understand how to use it. Python was very different from C in terms of arrays. I had a hard time implementing it with Python since it was the first time using the language but I managed to do it by doing a lot of research.

The last and final task was to implement it in Fortran. I have worked with Fortran before therefore it wasn’t that hard to re-engineer the code but there were a few issues that I had to fix later on. Overall this assignment was fun and interesting because it taught me how to code in different languages that I have never coded with before and it taught my brain to think of different languages as a fun things to learn instead of having it be scary.

Since it is my first time using python, I have a few pros and cons to list off. I would say that the advantage of python is that it is fast to develop with, and the learning curve is not that bad. Python is also a modern language which means that there are many sources online that I used to help me when I get an error in my code. Python is also fairly simple to use which makes the language fun to work with. In terms of disadvantages, I found python to be annoying with the implementation of arrays. I also found that python is not as fast as other programming languages which might not matter in a small project like this, but on a larger scale, it would make a big difference.