

## (1) Personal Reflection

### - Challenges faced:

There are 2 main problems I would like to highlight here, as I feel these taught me more about programming than the other smaller problems I faced. The first challenge I faced while writing my code is retrieving data from the files available and writing back and appending new information into it. Although my code did always keep being executed to completion, there was no changes being seen on the dataset files. I tried searching online for reasons as to why, but even after about 6 hours of searching, I was unable to find out why. The second challenge I faced, was motivating myself to update and write codes every week, especially in the middle of many competitions and weighted assessments.

### - How you overcame it:

For the first problem, I simply just erased all my code, practiced using the Python\_File\_IO document published on Coursemology, and re-wrote my code again. Although this did take me long, I was not as deep into the project yet, and it was not too difficult to re-write it. For the second problem, I gradually learnt how to enjoy myself in the process of writing my codes.

### - What you have learnt in the process:

Firstly, I learnt File Input and Output operations, that is, how to retrieve data from my datasets, and how to edit and append to data found in my data files. I also learnt about the use of Classes in programming, and their use in Object-Oriented Programming (OOP), which I learnt can be used to solve many problems in the real world, such as the project that I have written myself. I learnt various OOP concepts, including proper class designs, inheritance, etc. I also learnt how to run try and except commands.

On a side note, I also learnt that at many points in time, programming requires one to make smart decision, firstly, to save on time, and secondly to improve the program themselves, the program readability and user friendliness. Secondly, I learnt that for a good project to be put together, everything can't be done at the last minute, and gradual progress every week is required to obtain a completed project.

- Aspects of the project you are proud of implementing:

I am proud of the user-friendliness of my project, as well as the simplicity it offers. This can be seen in the large number of codes in my program that have been dedicated to making the output of the program neater and optimising the user-end experience of the program. I am also proud of its ability to read from datasets and write to them, which I had not done before.

## (2) Design Decisions

I am not very sure of what is meant by design decisions, but I did focus a lot of my program on the user-end experience. Whenever the program asks a user for an input, or when running the main code, the prompt for the user is made very clear. This guides a user through the function very neatly, making their experience better. Although not as significant, to further improve user readability, there is always a line between input prompts, making the user end experience better.

The overall structure of the project defines my CCA as a class, which has various different functions that can be called on to edit information about the CCA stored in datasets in the folder. Some of these functions call on other classes to help them carry out certain tasks of editing information in the datasets.