(GAD170) - Mid/Post Reflections

Mid-project reflection:

Person -

Collaboration skills that I needed for this project was mostly between me & my lecturer in class but more so online on a 1 on 1 slack call.

This call allowed me to gain deeper knowledge of what I should really be looking to do in my project & ways to do it as well as ways to tackle my at the time roadblocks I was running into.

Due to study week & also me having influenza I missed out on a lot of classes over the weeks so I was unable to talk with other students in class & give feedback to them, however I was able to receive feedback from my lecturer over a slack call & slack message.

I would always make sure to ask for either feedback or questions about my project as soon as I needed it in order to be as efficient as possible.

Process -

I improved my workflow by looking at new ways I could optimize my code by making it more compact using new coding tools like dictionaries & tuple lists.

I started to realize throughout my project that there were some parts that had way too much code for what was being done, especially when it was repetitive code.

An example of this was when I developed my markov chain name generator, I would use a massive chain of if else statements which executed code based on what the current last letter was in the generated name string variable.

I then decided that having a massive chain of if else statements was ridiculous in this sense & common knowledge reminded me that there has to be a better way.

I tried to use switches but it was just as long, I then came across dictionaries which gave me exactly what I needed, a variable value assigned to another variable key.

I then found out about tuples which gave me an even greater advantage in coding my name generator.

This is how I got to my dictionary list which has a char key with a tuple list of char letter & float probability values (Wankat, 2015).

Proficiency -

I developed my technical skills by using Unity learn online, YouTube, articles, bing AI copilot for better understanding of coding tools & how to use them & communication with my lecturer.

All these resources I believe exponentially improved my coding capabilities compared to my capabilities in project 1 & I have used coding tools that I never even thought of using this early on.

An example of self-directed research was using bing copilot which uses GPT-4, this AI which keep in mind still does give errors however I was able to get a much better & deeper understanding of how to use dictionaries, tuples & most importantly, dictionaries in collaboration with tuple lists.

References:
  ○ Wankat, P. C., & Oreovicz, F. S. (2015). PROBLEM SOLVING AND CREATIVITY. In *Teaching Engineering, Second Edition* (pp. 93–116). Purdue University Press.

Post-project reflection:

Appraisal -

Overall I think my project was very successful, this is because I didn't just complete all the minimum requirements but also added extra functionality which I did not think I would be able to do or do well.

These added extra functionalities was the markov chain name generator which took me a while to problem solve & create, this was for the first & last name which used data based on 20 first & last names each.

Lastly I was quite happy with how the UI integration turned out which was a lot higher than expectations.

This UI allowed for showing the player the portfolio of the available crew member to recruit or reject, the team board which showed who the player has recruited & removal of team members on the UI team board when recruiting an alien.

All the mechanics of my project worked very well, some even better than expected, however I would say what didn't work was a function which I was trying to create for the name generator.

This function which is called the LoopFirstNameDictionary() function was already created for the first name generator however, I also wanted the same process to happen for the last name

generator so instead of duplicating the function I wanted to add input parameters into the function to allow for one function to create both first & last names.

For some unknown reason the input parameters were causing major problems for the name generator so I just ended up duplicating the function & changing some of the code to appropriately cater for generating the last name.

Challenges -

The two biggest challenges I ran into with this project would be the development of the markov chain name generator & the intermediate UI setup at least to my perspective.

I overcame these challenges by doing a lot of self taught research on YouTube & other online resources, but I would have to say that I mostly have to thank bing copilot which uses GPT-4.

No, I didn't use bing to write my code for me, as I have already shown in other documents & also explained to my teacher with deep understanding what all my code does.

Instead I used this AI to help me understand what dictionaries were which also led me to being shown tuples by accident, this then allowed me to ask questions in order to understand how I could incorporate these two coding tools together to create my name generator.

I also went through the same process for the UI to help me understand certain aspects easier & possible ways to tackle those challenges.

I also learned that if your code is getting very complicated & repetitive like my scenario which was using a massive chain of if else statements & your gut feeling is telling you that there is a better way to write the code then there is a better way to write it.

This is what led me to using dictionaries & tuple lists for my name generators & crew member container.

Future goals -

I will improve my skills for my future projects by using a lot of the strategies which I have used for this project.

This includes the use of AI in teaching me how to use certain coding tools together to create something unique & optimized.

I don't think this project would be as good without my deeper understanding of code from AI, even though there are times it gets things wrong it's safe to say that I was able to learn how to use certain code in better ways especially in my specific scenarios.
I also believe that I will use the same setup in my project for my future projects which was having a single master script that managed all the generic code, however.

This master script uniquely had all references to the other scripts but all other scripts had no references to each other or the master script, this was a form of funneling to allow for the master script to have a more stable control over the game scene.

I will probably start using arrays for my next project for optimization reasons as there were times in my code where I used lists which could've been done with arrays instead.