Unit 8 Reflection

Description

This was the eighth unit of the Software Engineering Project Management module. This unit focused on the different data structures available in Python. The goals of this unit were to learn how and when to use each data structure in Python focusing on each data structures optimal use case. The goals of this unit were achieved through a seminar on data structures and the required reading for this unit of the module.

Feelings

As I had already done several online courses on data structures and algorithms this unit mainly served as a recap of what I already knew. The main difference between this module and the online courses I have already done was this unit focused on how data structures and algorithms are implemented in Python where as the courses I had previously done focused on data structures and algorithms in Java meaning that whilst there was a lot of overlap not everything was the same. For example, Python uses dictionaries whereas Java uses maps for storing key value pairs.

This was the first lecture in this module to date where I received the lecture slides in advance which was a refreshing change of pace. I believe this was beneficial as it allowed me to be more prepared for the lecture.

I feel as if this unit was a tad short as it focused only on the different data structures in Python. I believe it should have also focused on how to implement the different sorting algorithms such as bubble sort and merge sort as data structures and algorithms are so closely intertwined in programming.

Evaluation

I didn’t gain much from this unit as I was already familiar with all the theory and the unit didn’t cover as much as I would have expected.

Analysis

This unit of the module served as a refresher on the different data structures available in Python. As I have previously worked with Python during my undergraduate degree there wasn’t anything that I didn't already know.

Conclusion

This unit focused on the different data structures that can be used in Python to store data.

Action plan

When writing code, I will consider the purpose of the code and the space and time complexity before deciding what is the optimal data structure instead of just using the ones I am most familiar with as performance is key especially when handling real time data.

References

Gibbs, G. (1998) Learning by Doing: A guide to teaching and learning methods. Further Education Unit. Oxford Polytechnic: Oxford.