Another Language - Python

SIT102 is all about learning to program. We have done that using C-style syntax with the C# and C/C++ languages. However, our focus has been on programming in general and the knowledge and skills you have developed are transferrable to other languages. In this task you will demonstrate how you can transfer what you have learnt by programming in Python.

Learning Goals

To complete this task, you need to demonstrate that you can do the following:

- Use the knowledge and skills you have developed in this unit to learn and build some small programs with the Python programming language.

Focus

As you work through this task, focus on the following aspects of the unit:

- **Programming concepts:** Focus on how the concepts you have learnt apply in Python and reflect on how this understanding has set you up for programming in general.
- **Programming process:** Focus on how the programming process remains the same when approaching programs in Python.
- **Coding**: Focus on how the Python uses different syntax – looking slightly different but achieving the same thing. Pay attention to the conventions and styles of the language.
- **Professional characteristics:** Show that you have developed the learning skills you will need to keep up with an ever-evolving industry.

Your Task

For this task you will need to submit the following:

- A PDF document containing:
  - Summaries and reflections.
  - Screenshots of your python program running
  - Learning Journey and Resources
- Source code for:
  - Your python program

1. Complete Learning Activities

Work through these steps to develop and demonstrate your understanding. Aim to demonstrate, to yourself and others, that you have achieved the learning goals.

1. Ensure you have a working version of Python
2. Read the Introduction to Python from Geeks for Geeks. You may have to skip over sections to get to the actual details, but it has a reasonable set of instructions for getting started with the language.

Tip

Build some small programs as you go and play around with the Python code. Trust that you know how to program, so you are only looking for how to achieve what you want in Python.

3. Once you are happy with the basics, take one of your C# programs (or create a new one for this task) and have a go at coding it up in Python. Choose a program that demonstrates the use of functions, procedures, control flow, and arrays as a minimum.
4. When you have the Python code working, create a document with a side-by-side comparison of the two languages and reflect on the similarity.

Tip

The purpose of this is not to say one language is better or worse than the other. They are just different. Focus on the similarities instead. Notice how similar they are when you look below the surface differences.

5. Prepare your summary, making sure to cover all learning goals and related concepts. Remember that this is a personal summary that demonstrates your understanding of the concepts.
6. Prepare your reflections by responding to the following:
   - How do you know you have achieved the learning goals?
   - What is the most important thing you learned from this and why?
   - How does the content or skills learned here relate to things you already know?
7. Capture your learning journey and collate your evidence of study and practice.

Tip

Maybe set a personal goal of learning at least one new language a year. This will give you the confidence that you can find the best tool for any programming task.

2. Upload Your Submission & Engage with Feedback

Mark the task as **Ready for Feedback** and upload the required files. Make sure to keep copies of these in case you need to resubmit. Then engage with the feedback you receive and get the task Complete!

Remember to be proactive and engage with the feedback process.