KIT101 Programming Fundamentals

PP Task 8.1 Programming Principles

Overview

Purpose: Express your understanding of how the programming artefacts, tools, and concepts relate to each other.

Task: Write a short explanation of programming to outline your understanding of structured programming principles and tools, and how they are used to create programs.

Learning Outcomes: 2 ⤲

Time: Aim to complete this task before the start of Week 9.

Resources:
- Introductory Programming Notes
- Online Mini-lectures

Submission Details

Upload the following to the MyLO submission folder for this task:
- A **Word or PDF document** with your description

Assessment Criteria

A ▒ Completed   submission will:
- Clearly demonstrate a good understanding of the structured programming principles and how they relate to the development of software
- Include references to programs you have written in this unit to illustrate concepts
- Be your work and express your understanding in your own words (where ideas and descriptions are related to other people they are appropriately cited and referenced)

Instructions

Over the past two months you have been using structured programming (and a little object-orientation) to implement a variety of programs. In this task you need to explain how the structured programming principles of sequence, selection and repetition apply to the process of program creation, and relate these principles to the programs that you have created.

> **Note:** An *explanation* is more than just a description; you need to convey a deeper understanding than can be achieved with a simple description. Try to relate the principles together and express the depth of your understanding.

> **Tip:** A deep explanation does not need to be a long one. Aim to convey your understanding in a concise fashion.

Create an article, blog post, letter to a friend, comic or something else that explains the principles of structured programming as you understand them.

1. Keep it to about 1 or 2 pages of text

2. Creativity will be valued

> **Tip:** Including references to textbooks (not Wikipedia) or research papers can help you strengthen your explanation. Remember to reference other people's work.

Make sure your explanation covers the following:

Concepts and Principles	Programming Artefacts
Sequence	Variable
Selection	Constant
Repetition	Method
Modularisation (functional decomposition)	main() method
	if and switch
	while, do-while and for

Concepts and Principles	Programming Artefacts
	class (custom data types)

Relate these to programs **you** have written in this unit.