SIT102 – Introduction to Programming

Answers for 5.MP: Milestone 2 Checkpoint with Self-reflection

Milestone 2 – Weeks 4-5 Control Flow with Structures, and Custom Data Types

Part A – A quick self-check on your Pass tasks completeness

Have you addressed the given feedback from your OnTrack tutor to your on-time submissions of your weeks 4 to 5 **Pass** tasks?

Yes, I dealt with the feedback I got from my mentor at Ontrack. Sometimes I don't even understand the feedback from my mentor, but my mentor is very patient and responsible, and even though she is demanding of me, I am happy to accept it. And I submitted my 4-5week pass task on time!

Part B – Self-reflective Assessment

It is about time for your learning reflection. Based on your experience in SIT102 Milestone 2, please reflect on your learning using the following self-assessment table. For each row, place ✔ in the column which is most relevant to you.

Topics/Concepts	Have Some Doubts	Can implement using given guidelines	Confident to implement, apply, and justify
Control flow and dynamic behaviour			✔
Selection statements		✔	
Repetition statements		✔	
Conditions, expression, and operators			✔
Custom data type - Struct			✔
Custom data type - Enum			
Pass by value		✔	
Pass by reference		✔	
Others, please specify	✔		

Part C – Reflection Overview

Provide your reflection overview in 150 – 180 words for the above self-reflective assessment in regard to **various programming concepts and topics** in your **learning journey**. Try to reflect the following but not limited to:

- What was your understanding on the terminology “Control Flow” before week 4? How different is it now?
- Recall what you have implemented so far, how did you pick the proper conditions, expression, and operators in your control flow design?
- What is your understanding on the terminology “Custom Data Types”? How is it different from the built-in data types that you have learnt in weeks 2 and 3.
- Imagine what would happen if we are not allowed to use control flow and custom data types in a program?
- In general, what were the concepts/topics you were most confident in?

- What were your most interesting discoveries?
- Elaborate any significant programming milestones or hurdles you have overcome, and how could it be better.

Note: Your reflection in each milestone task are the building blocks for your learning summary report for your portfolio submission.

1 Prior to week four, I considered control flow to be a fundamental aspect of computer programming, critical to creating any script that performs logic-based computations for you, and an important part of becoming proficient in c++. **In SIT102 control flow (or flow of control) is** the order in which individual statements, instructions or function calls of an imperative program are executed or evaluated**. The emphasis on explicit control flow distinguishes an imperative programming language from a declarative programming language**
2 Conditional Branches, which we use for choosing between two or more paths. ... **Loops that are used to iterate through multiple values/objects and repeatedly run specific code blocks. ...** **Branching Statements, which are used to alter the flow of control in loops.**
3 A custom data type is a designer-defined data structure that represents a logical grouping of related data, such as Employee and Contract. It can be used to read from and write to a database table, to store information within a process. **Built-in Data types are those data types that can be directly used by the programmer to declare and store different variables in a program. They are also called Primary or Primitive Data Types. These Data types are believed to be one of the fastest modes to execute operations on Data.** **Custom math is a data structure that needs to be defined by the designer, while built-in data types are those that can be used directly to declare and store different variables in the program**
4 Then the process of writing the program becomes very difficult and error-prone, and reduces the readability of the code.
5 Control flow and dynamic behaviour, because it is relatively better to understand and apply **6 Using control flow prevents us from having to write too many programs to achieve a single purpose. To break out of a while loop, if you use endloop, continue, or other statements inside the control flow, then no other statements will be executed in the loop and the whole loop will be closed.** **7 For example, in my 6.1 task assignment, I wrote the program as described in the Week 6 video tutorial** **tutorial. I tried to make it possible to change each name, but in fact, I could only change the last name, and when I tried to choose to change the first or second name entered, the terminal showed a conflict. During the helphub meeting, with the help of my teacher and our continuous discussion, I finally found out that it was index_of (....) There is an error in this function** **I should ask my classmates or teacher for help.** **help to avoid wasting time.**

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