SIT102

Introduction To Programming

Learning Summary Report

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Self-Assessment Details

The following checklists provide an overview of my self-assessment for this unit.

	Pass (D)	Credit (C)	Distinction (B)	High Distinction (A)
Self-Assessment		✓		

Self-Assessment Statement

Declaration

I declare that this portfolio is my individual work. I have not copied from any other student's work or from any other source except where due acknowledgment is made explicitly in the text, nor has any part of this submission been written for me by another person.

Signature: yizheng he

Portfolio Overview

Start with a statement as
"This portfolio includes work that demonstrates that I have achieve all Unit Learning Outcomes for <SIT102> <Unit Title> to a **<Credit>** level."

Describe your learning journey – where did you start, what did you learn, where will this take you? Note the significant milestones or hurdles you overcame **that help you demonstrate your achievements.**

From the first week to the end of the eleventh week, the biggest problem I encountered was the creation of Lost in Space, which took me a lot of time to practice, troubleshoot bugs, communicate with teachers, etc. It was not only a test of my knowledge, but also a test of our understanding of large files and the use of overhead logic.

Provide **justifications** for why you should receive the above indicated grade… Write this for the assessment panel – tell them why you should be awarded this grade.

Although I have learned some programming languages before. Especially for c++, but I found it completely different from what I learned ten years ago. So I spend a lot of time to relearn them. I think the experience of learning c++ would have been better for establishing basic programming concepts and writing any programming language and provided a fresh start.

One major hurdle I overcame was that I lacked the ability to properly modularize and make function calls, so I had a lot of redundancy across code blocks. For my level of CR in the unit, I not only had to understand concepts and topics but also needed to apply them flexibly.

I don't have experience writing games like Lost in Space. Through this project and other tasks, I have proven that I can perform data management using custom data types, static and dynamic arrays. And execute appropriate control flow under the right conditions. In addition, I have gone beyond the tasks and studied Splashkit's documentation and tutorial articles so that I can use the functions provided in the task list.

I think these can justify the success of my ULO1 and ULO2 by reading the code and coding. In addition to the coding portion of the tasks, there are questions and answers that go along with the coding in which I demonstrate my ability to handle programming artifacts in the proper terminology. In ULO3, I reflected on my learning progress and I think that the quality of my tasks is improving compared to the beginning of the semester, and I also discuss the questions provided by my tutor to expand on what I learned from the tasks. This would demonstrate that I have achieved ULO4:Relevant to Outcomes

Reflections

The most important things I learnt:

Think about what you have learnt in this unit and reflect on what you think were key learning points, tasks, activities, etc. Did you learn what you wanted/expected to learn?

I learned during the semester, programs and procedures, software development practices, data and functions. Data and functions, control flow, custom data types, large amounts of data, decomposition in software design, other languages (python), dynamic memory management and secure coding concepts.
Among them, I think that control flow and custom data types are particularly important, as the former enables us to program without having to write a lot of tedious and useless code, but to keep them under control. The latter allows us to use custom data and assign data types, which is a great benefit to the use of data.

I feel I learnt these topics, concepts, and/or tools really well:

What things are you really confident about now?

Control Flow
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 end loop, 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.

I found the following topics particularly challenging:

What was the most challenging part of the unit? Have you mastered those ideas, concepts, or skills now? What did you learn about yourself in how you dealt with these challenges?

I think Week 9-Dynamic Memory Management is very challenging, in the initial learning process I did not understand their definition and usage, I once thought this topic is impossible to complete, then after I kept practicing and watching videos, searching for explanations and examples in professional websites, I understood A pointer is a variable that stores the memory address of an object. Pointers are widely used in C and C++ for three main purposes: allocating new objects on the heap, passing functions to other functions, and iterating over elements in arrays or other data.

I found the following topics particularly interesting:

What was the most interesting or valuable thing you learnt from this unit? This could be related to the unit concepts, or general things you learnt about yourself.

Week 7 - Decomposition in Software Design
I find the topic of decomposition in software design very interesting, as it usually implies a specific way of organizing the text of a program. Usually, the purpose of using a decomposition paradigm is to optimize some metric related to the complexity of a program, such as its modularity or its maintainability.

Where it is most valuable involves breaking down a complex problem or system into smaller parts that are more manageable and easier to understand. These smaller parts can then be studied and solved, or designed separately, because they are easier to manipulate.

I still need to work on the following areas:

University is about developing lifelong learning skills. Given what you have achieved already, what is the next step for you? How will you build upon what you learnt in this unit? This could be related to the unit concepts and skills, or to personal traits you identified as needing further development.

My next step would be to consolidate what I have learned this semester and try to self-study the next semester during the holidays. Students from the same program in my senior year suggested that I first self-study the definition and language of c#. For example, in week 8 we taught ourselves python to build the program test name and guess number, and although they are syntactically different, they have the same logic

The things that helped me most were:

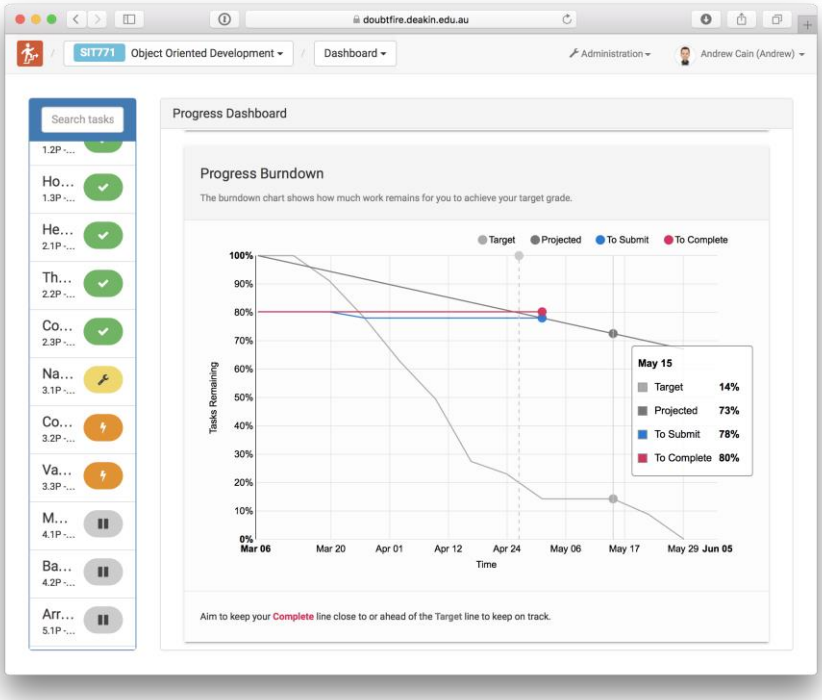
What were the most helpful/useful resources? How did they assist you with your learning?

I think the most useful resource is Help Hub, the biggest difference between learning programming and other subjects is that it is not just something you can understand by watching videos and tutorials, on the contrary, to a large extent, you need the help of a teacher to understand these difficult things, so the tutor in help hub can help me understand this better and point out my suggestions and suggest better solutions.

My progress in this unit was …:

Include a screenshot of your **progress graph** from **OnTrack**, and comment on what happened from your perspective… what does the graph say about how you approached the unit?

Week 3 of 3.1P needs to be revised and resubmitted, 3.2 and 3.3 tasks are being made with 14% of the target tasks left to be completed, 73% are projected, 78% of the tasks have been submitted, and 80% of the tasks are marked as completed. [...]



If I did this unit again, I would do the following things differently:

Looking back, what is it that you think you could have done differently to help you achieve the most you could in this unit (both in terms of the unit concepts and skills, and in terms of personal growth). How will you approach learning in the future?

Writing code of high quality and being able to understand them more quickly in relation to the questions asked by the tutor, and studying the resources needed for the semester in advance, will avoid the problems encountered when writing assignments at the beginning of the school year.

Other…:

Adjust this heading to add any other reflections you think help you demonstrate what you got out of this unit, and how it has or will help shape you as an IT Professional.