COS10009 – 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 (please tick) |  |  |  | ✔ |

*Self-assessment Statement*

|  |  |
| --- | --- |
|  | Included (please tick) |
| Learning Summary Report | ✔ |
| Test 1 and Test 2 are Compete in Ed | ✔ |
| All Pass level tasks completed (including tutorial tasks) | ✔ |

*Minimum Pass Checklist*

|  |  |
| --- | --- |
|  | Included (please tick) |
| All Credit Tasks are Complete in Ed | ✔ |

*Minimum Credit Checklist, in addition to Pass Checklist*

|  |  |
| --- | --- |
|  | Included (please tick) |
| Distinction tasks (other than Custom Program) are Complete | ✔ |
| Custom program meets Distinction criteria & Interview booked | ✔ |
| Design report has structure chart and screenshots of program | ✔ |

*Minimum Distinction Checklist, in addition to Credit Checklist*

|  |  |
| --- | --- |
|  | Included (please tick) |
| HD Project included | ✔ |
| Custom project meets HD requirements | ✔ |

*Minimum High Distinction Checklist, in addition to Distinction Checklist*

# 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:



# Portfolio Overview

This portfolio includes work that demonstrates that I have achieve all Unit Learning Outcomes for COS10009 Unit Title to a **High Distinction** level.

This unit has been very helpful for me, I find it interesting as it provides many interesting materials and excercises of different difficulties to do. I have a clearer understanding of coding and I will state the reason for that claim.

Here are some key knowledge:

* Mindset for programming and logical reasoning
* Basics of programming:
  + Data types include integers, strings, booleans, floats, arrays, records, enumerations, ...
  + Procedure and purpose
  + variables, arguments, and parameters
  + Coupling, cohesion, decomposition, abstraction, etc. (design principles)
  + Statements: assignment and condition Looping
* The advanced programming topic taught in this unit is:
* using Gosu for GUI design, game programming, etc. and the ability to read and other libraries (OpenGL, Tk,...)
* Recursion and complexity in algorithms
* testing and bug fixing

Here are some more soft skills

* Researching in general
* Ability to run deadlines to a certain extent
* How to keep myself motivated
* Learn how to be humble when needed, but also love yourself for what you have done and be proud of it

Harder tasks I have completed:

* 4.4HD, 5.3C, 7.2C, 8.2D, 10.2C, 11.3C, 11.4D, 12.1C
* For custom program, I chose the Music Player project (7.3D) and wish to extend it for High Distinction

# Reflection

## The most important things I learnt:

The most significant lesson I received from this unit was the necessity of adopting a programming mindset. I also learned several basic concepts and methods for general programming. I now have a better understanding of how people use computers to create programs and instruct them to perform certain tasks.

## The things that helped me most were:

## Canvas resources for this unit are extensive and easy to find. The platform we use to submit our tasks (Ed) is also useful; it is an all-in-one location that allows us to easily access both portfolio tasks and lectures.

## I found the following topics particularly challenging:

## I believe that using the Music Player is the most difficult aspect of this unit for me. This is the first time I use a graphic library, and it took me a long time to grasp it at first. However, after completing the tasks and reviewing the documentation provided by the lecturer and tutor, I am able to use it effectively. Nevertheless, with HD projects I still found myself struggling at times.

## I found the following topics particularly interesting:

## While Gosu is a very complex topic as mentioned before, the GUI components are the most fascinating to me because I can create something that looks nice and is highly interactive with the users. I can see and manipulate my results, which is a wonderful experience when learning to code.

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

I think that I and adapt and switch to other programming languages really fast, and I can do research on libraries and syntaxes on my own. My design outputs are very good looking.

## I still need to work on the following areas:

I still have trouble optimizing my code and grasp the concept of OOP. I also found myself lost at abstract concepts leant in week 8.

## This unit will help me in the future:

This unit aspire me to be successful and has rekindled my fiery passion for computers and technology that I had lost long ago.

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

I would manage my deadlines better, made various schedules ahead of time, and took care of my mental well-being.

## Other…:

I hope I can learn more interesting things in the future.