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) |  |  |  | x |

*Self-assessment Statement*

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

*Minimum Pass Checklist*

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

*Minimum Credit Checklist, in addition to Pass Checklist*

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

*Minimum Distinction Checklist, in addition to Credit Checklist*

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

*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: Kien

# Portfolio Overview

This portfolio includes work that demonstrates that I have achieve all Unit Learning Outcomes for COS10009 Introduction to Programming to a **Pass** level.

[Provide a justification for why you should receive this grade… Write this for the assessment panel – tell them why you should get this grade.

For Pass: you need to indicate how you have demonstrated all Unit Learning Outcomes to a minimal level. Mention what level of the Music player you completed.  
For Credit: you need to indicate how you have demonstrated all Unit Learning Outcomes to a good level. Mention what level of the Music player you completed.  
For Distinction: you need to indicate how you have been able to apply all of the Unit Learning Outcomes in achieving the distinction tasks. Mention what level of the Music player you completed.  
For High Distinction: you need to indicate how you have been able to extend beyond the material presented in the unit. Mention what level of the Music player you completed.

# Think of this like a cover letter to a job application – here it is a cover letter to your grade application. Things that I have obtained from the unit:

* Programming mindset and logical thinking.
* Fundamental of programming:
  + Data types: Integer, String, Boolean, Float, Array, Enumeration, Record, …
  + Function and procedure.
  + Parameters, arguments, variables.
  + Design principles: coupling, cohesion, decomposition, abstraction, …
  + Statements: selection, repetition, assignment
* Advance topic of programming covered by in this unit:
  + Using Gosu to do game programming, GUI degisn, …
  + Skills to research and read documentation to use a new library (Gosu, Chipmunk, Sinatra, …)
  + Algorithms: complexity, recursion
* Test and debugging.
* Clean & consistent coding style.
* Ability to read and understand code.

1. To develop myself:

* I watched lectures from the Edstem to gain knowledge, then searched on the internet for additional resources to make myself understand the topics better.
* Solved the portfolio tasks, then got stuck, searched for solutions online, try again and repeat these until I could solve it.
* Some tasks were very difficult to complete but I did not give up, I thought about it more carefully, search for the solution online, asked my friend, and tried anything I can to complete it. And this is the most important thing and experience that helped me to push myself beyond the boundary.

1. Completed tasks:

* 1.1T, 1.2T: an introduction to Ruby programming language.
* 1.3P: It helped me to understand how to use variable, type conversion.
* 2.1T: It introduced to me the concept of debugging and code fixing.
* 2.2T, 2.3P, 3.1.1T, 3.1.2T, 3.2T: It taught me to use functions and procedures, condition statements and looping.
* 3.3C, 4.2T, 4.3C, 5.3C: It helped me to understand Gosu library and how to apply it to make simple 2D application.
* 4.1T, 5.1T: It showed me the ideas of how to read and write to external files.
* 5.2T, 4.4.D, 6.1T, 6.2P, 7.1P: They are fundamental programming concepts, complex data types and file reading/writing.
* 7.2C, 7.3D, 8.2D: The advance uses of Gosu library to make programs.
* 8.1T: It is a revision of the general picture of all the concepts, which help me to prepare well for the tests, especially Test 1.
* 9.1T, 12.1C: testing and debugging the code.
* 10.1.1P, 10.1.2P, 11.4D, 11.2P, 11.3C: An introduction other programming languages (C and Python).
* 10.2C, 10.3HD: recursion algorithm and application of it.
* 6.3D, 9.2D, 9.3HD, 10.4HD, 11.5HD: About making my own custom program and custom project.

1. How did I go beyond the requirements:

* I have done all of the tasks within the expected deadlines.
* I have tried my best to make sure all of the tests (1 and 2) are completed perfectly in the first try.
* I have made the custom program and custom project.

# Reflection

## The most important things I learnt:

The most important things I have learnt in this unit is Ruby programming language’s basic structure, then I was not only stopping at Gosu, but I have get used to some of its other libraries likes Gosu, Ruby2d, Sinatra, …

## The things that helped me most were:

I think the programming helpdesk was very helpful, especially the chat channel in Discord. Also, the tutor is very frendly and professional in helping me to understand the concepts.

## I found the following topics particularly challenging:

Initially, I found getting used to Ruby, and then is Python, very challenging since I had not had any prior experence about it.

## I found the following topics particularly interesting:

In my opinion, the most favourite one I have learnt from this unit is how to make simple 2d game with the Ruby’s libraries of Gosu and Ruby2D.

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

It is Gosu that I have learnt so well, now I can design any simple 2d games I want.

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

I need to improve my knowledge, skills and ability to understand about the algorithms, which is very helpful in programming for me in my future studying and working.

## This unit will help me in the future:

I firmly believe that this unit provides the students a lot of basic knowledge, skills and experience about basic programming, which is very helpful for us for the future units ralating to programming, as well as in future jobs.

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

I believe that I have performed well in this unit, but if I had a chance to do it again, I would practice more in diferent Ruby libraries other than Gosu only, not just in beginning level, such as Ruby2d and Sinatra…