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 Doubtfire | X |
| Ruby programs that demonstrate coverage of core concepts | X |
| A C program that demonstrates coverage of core concepts | X |

*Minimum Pass Checklist*

|  |  |
| --- | --- |
|  | Included (please tick) |
| All Credit Tasks are Complete on Doubtfire | 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 |  |
| 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: Bui Minh Duc

# Portfolio Overview

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

In the beginning of this semester, I aimed for a distinction grade when I found that programming is not too hard. However, after dealing with all tasks in the unit, I thought that I can only got credit grade. I have completed all pass tasks, credit tasks and all Distinction tasks except the Cutom Program. I have also completed the 10.3HD Task – Maze Search.

With all of my completed tasks, I have been able to apply all Unit Learing Outcome in achieving the credit tasks:

1. Apply code reading and debugging techniques:

- 7.2C: This is the hardest task I have completed. I have spent for about 2 days to only working on the code, with many functions that I didn’t know how to use. I made so much errors when doing this tasks because of the lack of function knowledge I have. However, I have completed the tasks after reading documents provided in the tasks.

- With all the tasks I completed, only 3-4 tasks that I successfully passed it with no error in the first try. About other tasks, I always made error in the first try and then I loacte the problem and fix it to get the task completed

2. Describe the principles of structured programming:

- 7.1P: This is the task required the knowledge of using Sequence, Iteration, Coupling. The task (text music player program) consists of the basic principles of ruby programming language so to complete it I have to revise the lectures for understanding those principles.

- 8.1T: - This is the task called “Concept Map”, it demonstrates all the principles of ruby programming language. After complete this task, I have acknowledge about all principles of structured programming.

3. Construct small programs, using the programming languages covered:

- 3.1.2T, 11.2P: These two tasks required me to create a program to print out the name in case it is silly or not. The program is written in ruby language (3.1.2T) and python language (11.2P).

- 3.3C, 11.3C: These two tasks consist of creating a program to move the shape by using ruby language (Gosu methods included) and python language.

4. Use modular and functional decomposition to break problems down functionally:

- 9.1T: In order to find where the problem is in the program provided, I have to break down it into its funtions. I have successfully solve the task (fix the errors in the code).

- 7.2C: There are 4 different options (play, pause, next, stop) in the program (GUI music player) so it will be very hard if I don’t break it down in smaller tasks. I have broken the problems down so I just need to working on each tasks (functions of the program) mainly then I have finished the tasks.

- 10.3HD: The task require the use of recursive factorial, and for me, its complexity is the hardest of all the tasks I have faced in this semester. By breaking it down, I can solve the problem of each functions then I have finished the task.

# Reflection

## The most important things I learnt:

For me, the most important skill I have learnt in this course is problem solving skill and time management skill. All the tasks required me self-learning and problem solving skill. However, even I have tried my best in this semester, I still couldn’t complete the Custom Program and all of the HD task because of the lack of time. I have to deal with other assignments too so it is quite hard for me to complete all the task in this course. In the future I will use those skills to get higher grade.

## The things that helped me most were:

- My classmates, as they have the same aim as me so we can discuss about the lessons and we can also learnt from each other

- My teacher, he always try his best to deliver the lessons to us.

## I found the following topics particularly challenging:

Pygame and Gosu methods in Ruby because I don’t have much related documents to read about it. The ruby tasks which requires Gosu method took so much time of mine to be completed.

## I found the following topics particularly interesting:

- Arrays: The way elements are put together in a list

- Gosu draw method: I am interested about how to draw object on screen using this method.

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

- Loops, Arrays because most tasks required these knowledge so I get to use those very well. I also find that filehandling is an easy topic too. I can use.

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

I will really need to work on Gosu function more because I still haven’t know how to use some of them. To develop game in ruby language, Gosu is very important so I think that I need to handle it in the future.

## My progress in this unit was …:

Chart, line chart

Description automatically generated

As it was shown in the graph, my performance this unit is just above average level. I did quite good from week 1 to week 8 with all the task completed from T to D. However, I couldn’t manage the time so I am not able to do the D and HD task in week 9 and week 11. In the other hand, I completed the HD task in week 10 so I completed all week 5 ‘s tasks.

## This unit will help me in the future:

The unit will help me in the future so much as I am studying Software Development major in Swinburne. The knowledge of using ruby to write a simple program then to create a completed game will benefit me so much in the future.

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

If I had a chance to did this unit again, I will work harder in the Distinction and High Distinction tasks because I can only complete few of them in this semester and also because I want to get higher grade than Credit only.

# Summary

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Complete | Incomplete | Late | Not Late | Total (?/100) |
| 1.1T | X |  |  | X | 100 |
| 1.2T | X |  |  | X | 100 |
| 1.3P | X |  |  | X | 100 |
| 2.1T | X |  |  | X | 100 |
| 2.2T | X |  |  | X | 100 |
| 2.3P | X |  |  | X | 100 |
| 3.1.1T | X |  |  | X | 100 |
| 3.1.2T | X |  |  | X | 100 |
| 3.2P | X |  |  | X | 100 |
| 3.3C | X |  |  | X | 100 |
| 4.1T | X |  |  | X | 100 |
| 4.2T | X |  |  | X | 100 |
| 4.3C | X |  |  | X | 100 |
| 4.4D | X |  |  | X | 100 |
| 5.1T | X |  |  | X | 100 |
| 5.2P | X |  |  | X | 100 |
| 5.3C | X |  |  | X | 100 |
| 6.1T | X |  |  | X | 100 |
| 6.2P | X |  |  | X | 100 |
| 6.3D | X |  |  | X | 100 |
| 7T - Test 1 | X |  |  | X | 100 |
| 7.1P | X |  |  | X | 100 |
| 7.2C | X |  |  | X | 100 |
| 7.3D | X |  |  |  | 80 |
| 8.1T | X |  |  | X | 100 |
| 8.2D | X |  |  | X | 80 |
| 9.1T | X |  |  | X | 100 |
| 9.2D |  | X |  |  | 0 |
| 9.3HD |  | X |  |  | 0 |
| 10T - Test 2 | X |  |  | X | 100 |
| 10.1T | X |  |  | X | 100 |
| 10.2C | X |  |  | X | 100 |
| 10.3HD | X |  |  | X | 100 |
| 11.1T | X |  |  | X | 100 |
| 11.2P | X |  |  | X | 100 |
| 11.3C | X |  |  | X | 100 |
| 11.4D |  | X |  |  | 0 |
| 11.5HD |  | X |  |  | 0 |
| 11.6HD |  | X |  |  | 0 |
| 12.1C | X |  |  | X | 100 |