COS10009 – Introduction to Programming

Learning Summary Report

JOSHUA SANJAY KING (105282612)

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: JOSHUA SANJAY KING

Portfolio Overview

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

Dear Lecturer, Siti Hawa,

I am writing to express my confidence in achieving a Credit grade for COS10009 Introduction to Programming, supported by the development of a functional music player as part of my portfolio.

Throughout this unit, I have diligently applied myself to mastering fundamental programming concepts and practical skills. The music player project exemplifies my ability to meet the unit's learning outcomes to a good level. Here's how:

Mastery of Programming Concepts:

1. **Understanding Basic Constructs**: I've effectively utilized loops, conditionals, and variables to manage and manipulate data. For instance, implementing loops in reading and printing tracks, and conditionals in searching for the music player

2. **Effective Use of Data Structures**: The music player project demonstrates proficiency in handling arrays to store and organize data. Arrays were crucial in managing albums, tracks, and student information, reflecting my grasp of data structure fundamentals.

Application of Modularization and Code Reuse:

3. **Structured and Modular Approach**: I adopted a modular design approach, encapsulating functionalities into methods like read_track, print_tracks, and read_albums. This approach promotes code reuse and enhances maintainability.

Handling Input/Output Operations:

4. **Proficiency in File Handling**: The music player efficiently reads album and track data from files (read_albums, read_tracks) and supports dynamic additions (add_album). These operations highlight my competence in managing input/output tasks.

Problem-Solving and Algorithm Design:

5. **Effective Algorithms**: I designed algorithms to address specific functionalities, such as searching albums by genre (display_genre) and playing selected tracks (play_album). These algorithms demonstrate effective problem-solving skills.

I am confident that my portfolio demonstrates a strong foundation in programming and meets the criteria for a Credit grade. I appreciate your consideration and look forward to your assessment.

Thank you for your time and attention.

Sincerely,

[JOSHUA SANJAY KING]
[105282612]

Reflection

The most important things I learnt:

1**. Basic Elements of a Program**: Understanding variables, data types, and basic syntax.

2. **Selection and Iteration**: Implementing control flow using if-else statements and loops.

3. **Introduction to Arrays**: Managing collections of data using arrays.

4. **GUI and Game Programming**: Developing simple games and interactive applications made programming more engaging and practical.

Personal Reflection: I expected to gain a foundational understanding of programming concepts and practical coding skills. The course exceeded my expectations by providing deep insights into algorithm efficiency, GUI development, and memory management.

Overall Learning: This subject provided a comprehensive understanding of programming, from basic elements to advanced concepts like recursion and GUI programming. The practical application of these concepts through projects and assignments solidified my learning experience.

The things that helped me most were:

1. **Lecturer**: clear teaching techniques and responsive in class.
2. **Additional materials on Ed lessons**: Certain chapters were complex, and the additional materials given by lecturer were useful for completion of tasks.

I found the following topics particularly challenging:

1. **Data references arrays: searching**: It was a complex chapter, and I don't have much experience prior on this topic.

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

1. **Selection and Iteration** - I mastered using if-else statements and loops, which are essential for controlling the flow of a program.
2. **GUI Drawing and Control** – I was able to design my very own image with GOSU.

I still need to work on the following areas:

1. **Recursion:** While I understand the basics, I still struggle with applying recursion to more complex problems.
2. **File Handling:** Although I have completed the music player, it took a long duration to complete it as I struggled to integrate the other text file into the music player program.

This unit will help me in the future:

Foundational Knowledge: The concepts and skills learned, like control structures, data types, and memory management, are crucial for advanced courses in computer science and software engineering.

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

I would manage my time better by creating a structured study schedule. This would ensure balanced attention to all topics and prevent last-minute cramming, leading to deeper and more comprehensive learning.