

Venue \_\_\_\_\_

Student Number



Curtin University

Family Name \_\_\_\_\_

First Name \_\_\_\_\_

**School of Management DA/FA**  
**EXTENDED LEARNING PORTFOLIO**

Semester 1 2022

**ISYS2001 Introduction to Business Programming**

**This is an OPEN BOOK examination**

**For Examiner Use Only**

**Total Marks** 100

**Instructions to Students:**

This take-home exam is an open book assessment. You can also use other textbooks or resources on the web in completing the exam. But remember, **this is an exam, so all work must be your own**. You may not communicate with anyone other than the instructor in regards to this exam. Please contact the instructor if you have any questions regarding any of the problems on the exam.

This take-home exam contains **FOUR** questions. Answer **ALL** questions. Do not discuss your answers to these questions with other students.

For the coding related questions, you will need to create a new **PRIVATE GitHub repository** for this assessment to store your notebook(s). All non-coding questions can be answered in an MS Word document. You will be required to submit a zip file of your GitHub repository and the non-coding answers are to be submitted as either a PDF or MS Word document. Make your submission on Blackboard through Turnitin by the due date.

Examination Cover Sheet

<b>Q</b>	<b>Mark</b>
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Total \_\_\_\_\_

1. There is much more to creating a program than writing code. In ISYS5002, we followed a five-step problem solving methodology cycle. Demonstrate the first four steps of the development cycle by **designing** an application that calculates the net amount payable for items purchased at a store. The store offers a 5% discount if the total purchase value is less than or equal to \$200 and additional 10% on purchase amounts exceeding \$1000. The app should input price of each item purchased, calculate total purchase values, the amount of discount applicable and the net amount payable by the customer and display the results.

You can write your design in a Word document, PDF or a notebook.

Create a notebook called `discount_calculator.ipynb` to **implement** your design. Your implementation should follow best practices and demonstrate the last two steps of the methodology. This includes input validation and testing.

**[40 Marks]**

2. Write a program that reads the `netflix.csv` file and counts the number of TV show in each rating. Then plot the number of tv title in each category.

**[30 Marks]**

3. In computer programming there are three kinds of errors: syntax errors, runtime errors, and logic errors. The Fuel economy notebook is meant to calculate a car's fuel economy after reading in the distance travelled and amount of petrol used. The fuel economy is calculated by the following formula:  $kmPerLitre = kilometers / litres$ . The notebook is not working and contains both syntax and logic errors. Identify and correct the notebook.

**[20 Mark]**

4. Write a report reflecting on the lectures, workshops, and assessments for this unit, and discuss whether we achieved the unit's learning outcomes. As an appendix to the report, please include a copy of the body of all your weekly journals in a Word document. Submit the word document via the Turnitin link on Blackboard.

**[10 Marks]**

## **END OF EXTENDED LEARNING PORTFOLIO**