CCT College Dublin Continuous Assessment

Programme Title:	Diploma in Applied Software Development		
Cohort:	September 2024		
Module Title(s):	Programming & Mathematics Fundamentals		
Assignment Type:	Individual	**Weighting(s)**:	30%
Assignment Title:	CA1		
Lecturer(s):	Cristiani Eccher		
Issue Date:	7th October 2024		
Submission Deadline Date:	Sunday 27th October 2024		
Late Submission Penalty:	Late submissions will be accepted up to **5** calendar days after the deadline. All late submissions are subject to a penalty of **10%** of the mark awarded. Submissions received more than 5 calendar days after the deadline above **will not** be accepted and a mark of 0% will be awarded.		
Method of Submission:	**Moodle**		
Instructions for Submission:	**You must submit the ENTIRE NETBEANS PROJECT as individual .java files** Please note that if you submit the wrong file then it may be impossible to view or run your program and you could be awarded a zero mark. The link to the **GitHub** repo must be included as a comment on the top of the main method.		
Feedback Method:	**Results posted in Moodle gradebook**		
Feedback Date:	1 to 2 weeks		

Learning Outcomes:
Please note this is not the assessment task. The task to be completed is detailed on the next page.
This CA will assess student attainment of the following minimum intended learning outcomes:

MLO 1 & 2- Understand and employ fundamental concepts and principles of programming such as variables, data type, Boolean expressions, conditions, logic, etc.

MLO 3 - Understand and apply loops, functions/modularisation, coding structure, comments incorporating quality in your artifact.

Attainment of the learning outcomes is the minimum requirement to achieve a Pass mark (40%). Higher marks are awarded where there is evidence of achievement beyond this, in accordance with QQI *Assessment and Standards, Revised 2023*, and summarised in the following table:

<table>
<tr><th rowspan="2">Percentage Range</th><th rowspan="2">CCT Performance Description</th><th colspan="2">QQI Description of Attainment</th></tr>
<tr><th>Level 6, 7 & 8 awards</th><th>Level 9 awards</th></tr>
<tr><td>90% +</td><td>Exceptional</td><td rowspan="3">Achievement includes that required for a Pass and in most respects is significantly and consistently beyond this</td><td rowspan="3">Achievement includes that required for a Pass and in most respects is significantly and consistently beyond this</td></tr>
<tr><td>80 – 89%</td><td>Outstanding</td></tr>
<tr><td>70 – 79%</td><td>Excellent</td></tr>
<tr><td>60 – 69%</td><td>Very Good</td><td>Achievement includes that required for a Pass and in many respects is significantly beyond this</td><td>Achievement includes that required for a Pass and in many respects is significantly beyond this</td></tr>
<tr><td>50 – 59%</td><td>Good</td><td>Achievement includes that required for a Pass and in some respects is significantly beyond this</td><td rowspan="2">Attains all the minimum intended programme learning outcomes</td></tr>
<tr><td>40 – 49%</td><td>Acceptable</td><td>Attains all the minimum intended programme learning outcomes</td></tr>
<tr><td>35 – 39%</td><td>Fail</td><td>Nearly (but not quite) attains the relevant minimum intended learning outcomes</td><td>Nearly (but not quite) attains the relevant minimum intended learning outcomes</td></tr>
<tr><td>0 – 34%</td><td>Fail</td><td>Does not attain some or all of the minimum intended learning outcomes</td><td>Does not attain some or all of the minimum intended learning outcomes</td></tr>
</table>

Please review the CCT Grade Descriptor available on the module Moodle page for a detailed description of the standard of work required for each grade band.

The grading system in CCT is the QQI percentage grading system and is in common use in higher education institutions in Ireland. The pass mark and thresholds for different grade bands may be different from what you have experience of in the higher education system in other countries. CCT grades must be considered in the context of the grading system in Irish higher education and not assumed to represent the same standard the percentage grade reflects when awarded in an international context.

Assessment Task
Students are advised to review and adhere to the submission requirements documented after the assessment task.

IMPORTANT – You MUST comment your code to explain what you have done. **Code that has not been commented properly will score a lower mark and could be awarded zero!**

IMPORTANT – You MUST make a GitHub repository for this project and make regular commits. **Code that has not been part of a regular commit will score a lower mark!**

When in operation, the program will be given a file named "customers.txt" – this contains the details of (fictitious) customers in the following format:

Line 1 – <First Name> <Second Name>
Line 2 – <Total Purchase>
Line 3 – <Class>
Line 4 - <Last Purchase>

Your task is to:

1) Read the data from the file and check that it is valid. The file may contain more than one customer, so an appropriate loop should be used. The data must obey the following rules:
    a) The field first name must be letters only;
    b) The second name can be letters and/or numbers and must be separated from the first name by a single space;
    c) The field value of total purchase must be double and
    d) The field Class must be a integer between 1 to 3.
    e) Last purchase must be a valid year.

2) If the data is not valid, you should output a useful error message on screen to the user.

3) If the data is valid, then you have to calculate the discount to the net value and save a file named customerdiscount.txt, in the following format:

<Student number> - <Second Name>
<Final Value>

Where the <Final Value> is determined by the number of classes, as follows:

Criteria	**Final Value**
Classe = 1 and Last Purchase in 2024	Value Purchased - Discount of 30%
Classe = 1 and Last Purchase before than 2024	Value Purchased - Discount of 20%
Classe = 1 and no Purchase in the last 5 years	Value Purchased - Discount of 10%
Classe = 2 and Last Purchase in 2024	Value Purchased - Discount of 15%
Classe = 2 and Last Purchase before than 2024	Value Purchased - Discount of 13 %
Classe = 2 and no Purchase in the last 5 years	Value Purchased - Discount of 5 %
Classe = 3 and Last Purchase in 2024	Value Purchased - Discount of 3 %
Classe = 3 and Last Purchase before than 2024	Value Purchased - Discount of 0 %

Examples:

Input:
Cristiani Eccher
1000.00
1
2024

Would output as:
Cristiani Eccher
700.00

DISTINCTION WORK

To gain a distinction (70% or higher) you must complete tasks 1) – 3) properly AND ALSO:

1) The conditional statement is dynamic, simplified and clear.
2) Quality of the code & Comments
3) Addition validations that you judge is essential for the quality of the output

Marking Schedule

Description	**Weighting**
Appropriate data types are used to store data in the program. Naming conventions have been followed and sensible variable names have been used.	15%
*Input validation has been done correctly and in line with brief. Error messages are clear and helpful to the user. ALL CODE IS COMMENTED PROPERLY**	15%
Decision structure(s) are appropriate and capture all possible options. ALL CODE IS COMMENTED PROPERLY.*	20%
Program performs correctly and outputs correct data to the output file in the format required. Appropriate methods have been used to manipulate Strings.	20%
DISTINCTION WORK: Additional validation checks have been included, in line with the brief. *ALL CODE IS COMMENTED PROPERLY**	15%
DISTINCTION WORK: The condition statement is clear and well organized	15%
Total	**100%**

***Code should be commented to explain what you have done. Any code that is not commented properly will not score well and could be awarded a zero!**

Submission Requirements

All assessment submissions must meet the minimum requirements listed below. Failure to do so may have implications for the mark awarded.

All assessment submissions must:

- Be submitted as individual .java files
- The link to the GitHub repo must be included as a comment on the top of the main method.
- Be submitted by the deadline date specified or be subject to late submission penalties
- Be submitted via Moodle upload
- Be the student's own work.

Additional Information

- Lecturers are not required to review draft assessment submissions. This may be offered at the lecturer's discretion.
- In accordance with CCT policy, feedback to learners may be provided in written, audio or video format and can be provided as individual learner feedback, small group feedback or whole class feedback.
- Results and feedback will only be issued when assessments have been marked and moderated / reviewed by a second examiner.
- Additional feedback may be requested by submitting questions to a discussion forum that will be available once results are posted; questions must be posted within 1 week of results being posted or they will not be addressed. Additional feedback may be provided as individual, small group or whole class feedback. Lecturers are not obliged to respond to email requests for additional feedback where this is not the specified process or to respond to further requests for feedback following the additional feedback.
- Following receipt of feedback, where a student believes there has been an error in the marks or feedback received, they should avail of the recheck and review process and should not attempt to get a revised mark / feedback by directly approaching the lecturer. Lecturers are not authorised to amend published marks outside of the recheck and review process or the Board of Examiners process.
- Students are advised that disagreement with an academic judgement is not grounds for review.
- For additional support with academic writing and referencing students are advised to contact the CCT Library Service or access the CCT Learning Space.
- For additional support with subject matter content students are advised to contact the CCT Student Mentoring Academy
- For additional support with IT subject content, students are advised to access the CCT Support Hub.

Acceptable and Unacceptable Use of AI

This statement is useful when you are allowing the use of AI tools for certain purposes, but not for others.

- The use of generative AI tools (e.g. ChatGPT, Dall-e, etc.) is permitted in this assignment for the following activities:
  - Brainstorming and refining your ideas;
  - Fine tuning your research questions;
  - Finding information on your topic;
  - Drafting an outline to organise your thoughts; and
  - Checking grammar and style.
- The use of generative AI tools is not permitted in this course for the following activities:
  - Impersonating you in classroom context
  - Generating code for your assignment
  - Writing a draft of a writing assignment
  - Writing entire sentences, paragraphs or papers to complete class assignments.
- You are responsible for the information you submit based on an AI query. Your use of AI tools must be properly documented and cited.
- Any assignment that is found to have used generative AI tools in an unauthorised way will be subject to college disciplinary procedures as outlined in the QA Manual.
- When in doubt about permitted usage, please ask for clarification.