Instruction:

This is one of the eight assessment tasks which will contribute to the overall mark. You will need to complete the tasks as outlined below and then document them in a Word document file. As a minimum, you should provide screenshots of the following:

- Your code

- The output that your code generates

In instances where your code could generate different outputs depending on what values are given, you should provide multiple screenshots of the console screen, showing the different outputs in order to demonstrate that the code works correctly.

This assessment will focus on variables and operators.

You must attempt all tasks on this sheet to achieve a higher grade. For example, if you want to gain marks between 70 - 100, you must complete all other grades first and add them to your portfolio with screenshots.

A zip folder with all Grade codes must be attached inside of the portfolio (MS Word file).

Assessment Task 1: Personal Budget Tracker

The goal of this task is to create a program that tracks weekly expenses for different categories (e.g., Groceries, Rent, Utilities) and provides insights into spending trends over one or more weeks. The program will focus on variables, arithmetic operators, output formatting, user input, validations, logical operators, and conditional statements.

To achieve Marks (Between 40-49) (Basic Expense Tracking)

- Create variables for **three expense categories**: Groceries, Rent, Utilities.

- Assign values to these variables directly in the code.

- Calculate and print the **total weekly expense**.

- You need to provide screen shots of your code and the different outcomes it can give.

- Your Word document should have appropriate headings to ensure that this task can easily be identified alongside the rest of your work.

To achieve Marks (Between 50-59) (User Input and Budget Check)

Complete all previous steps, then:

- Retrieve expenses for Groceries, Rent, and Utilities from the user.

- Add a **weekly budget limit** and compare it with the total expenses.

- Print whether the user is **within budget** or has **exceeded the budget**.

To achieve Marks (Between 60-69) (Multi-Week Tracking)

Complete all previous steps, then:

- Allow the user to input expenses for **two consecutive weeks**.

- Calculate and print the **total expense for each week**.

- Compare expenses between the two weeks and print whether spending **increased, decreased, or remained the same**.

To achieve Marks (Between 70-100) (Dynamic Input and Enhanced Comparison)

Complete all previous steps, then:

- Allow the user to **specify the number of expense categories dynamically**.

- Retrieve expenses for the chosen categories for **two weeks**.

- Print a **detailed breakdown** of expenses for each week.

- Compare total expenses between weeks and identify **increases, decreases, or no changes** in each category.

Assignment Preparation Guidelines

- All components of the assignment report must be Word-processed **(handwritten text or hand drawn diagrams are not acceptable)**, font size must be within the range of 11 point to 14 point including the headings, body text and any texts within diagrams.
- Standard and commonly used fonts such as Times New Roman, Arial or Calibri should be used.
- All figures, graphs and tables must be numbered and labelled with short explanations.
- Material from external sources must be properly acknowledged and cited within the text using the Harvard referencing system.
- All components of the assignment (text, diagrams, code etc.) must be submitted in one Word file.
- The report should be logically structured, the core of the report may start by defining the problem / requirements, followed by the proposed solution including a detailed discussion, analysis and evaluation, leading to the implementation and testing stage, finally a conclusion and a personal reflection on learning.
- Screenshots without description / discussion are not suitable as they do not express your understanding or support your work adequately.

Submission instructions

- This is a portfolio assignment with eight tasks in total. Each task will be completed and saved in the portfolio. Once the portfolio is completed, it should be submitted on Turnitin. The submission link to Turnitin can be found under the "Assessment Tab" in your module section in the SOL VLE.

- Please note file size limitation might apply. Your report must be under 250MB.

- The source code for each task should be **zipped** and **attached** to your Word document report submission in the appendix.

- The Assignment Brief can be found under the "Assessment Tab" in your module section in the SOL VLE.

- **Refer to the Assignment Brief** to find the links to Late Submissions, Extenuating Circumstances, Academic Misconduct, Ethics Policy, Grade marking and Guidance for online submission through Solent Online Learning (SOL).