Intro to Programming
Assessment 2

This assessment is an individual programming assessment and is worth 50 marks.

The assessment should be all your own work, using only code taught in the course.

- Your submission should take the following form:
  - A local folder called
    - **SURNAME_Firstname_BannerNo_ItP_A2**
    - e.g.
    - **JONES_Terry_B00654321_ItP_A2**
  - (include CAPITALISATION and please use your name and Banner No)

- Inside that folder should be a Python Project called
  - **BannerNo_ItP_A2**
  - e.g.
  - **B00654321_ItP_A2**

- Inside the project there should be a program called **BannerNo_Assess_2** based on the given specification

The assessment should be submitted by midnight on Sunday 14th April 2024

The local folder **SURNAME_Firstname_BannerNo_ItP_A2** should contain all your work for the assessment, including the pickle file (make sure that it works in this folder) as well as your planning and testing documentation.

Upload this folder to OneDrive and share it with your lecturer.

Your lecturer may make alternative upload arrangements so make sure you know what to do when the time comes.

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Our client, UWS Vehicle Sales, has commissioned you to create a program to assist their front-line staff when they are dealing with customers.

Below is a summary of the information we have available after meetings with the client, and with colleagues, and on examining previous similar commissions.

From our initial meetings with the client, we have collected the following information:

UWS Vehicle Sales has four branches in Scotland, and sells Cars, Vans, and Minibuses.

- For each vehicle the system should store
    - Registration number
    - Make
    - Model
    - Colour
    - Selling price
    - Cost (how much the vehicle cost UWSVS to buy and repair)
    - Branch where the vehicle is located
    - For CARS
        - Number of doors
    - For VANS
        - Capacity in kgs
    - For Minibuses
        - Number of seats
- The system should allow the operator to
    - Add a new vehicle
    - See all vehicles in stock
    - Search for a vehicle
        - Registration number
        - Type – car, van or minibus
        - Make
        - Model
        - Colour
        - Price range
        - Branch
    - Make an offer for a vehicle
        - To be accepted offer must be at least 1.5 times the cost of the vehicle
        - Cost of the vehicle should not be revealed

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At the initial programming team meeting the following was decided.

The program should:

- Be created in Python using an OOP approach
    - Classes
    - Use at least Polymorphism and Inheritance
- Be as user-friendly and easy to use as possible
- Be fully commented, and use meaningful identifiers
- Be able to maintain data between runs using a pickle file
- Use a Python dictionary for internal data storage and manipulation

Analysis of previous similar projects suggest the following

Users appreciate

- The use of menus when a choice needs to be made
- Clear headings
- Clear prompts for information, avoiding jargon