

## Programming Project / C++ – Vehicle Selling System

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### I. Task Description

Student 1 is responsible for managing the vehicle stock:

- Adding, deleting, and modifying vehicles (price, quantity)
- Viewing the orders history

Student 2 is responsible for user interaction with the system:

- Adding, modifying, and deleting vehicles in/from stock
- Finalizing a purchase and generating the purchase file

### II. Data Structures Used by the Team

The following classes will be used:

- Vehicle: string chassis, string brand, string model, int quantity, double price
- Date: int day, int month, int year
- Order: vector<Vehicle> vehicles, Date date

Relationship:

- Class Order contains a list of Vehicle objects (composition)
- Date is also part of Order (composition)

### III. File Structure

stock.txt

A file where details about the vehicles in stock will be stored:

<number of vehicles>

<vehicle1 chassis> <brand> <model> <quantity> <price>

<vehicle2 chassis> <brand> <model> <quantity> <price>

...

orders.txt

A file where orders will be stored:

<order date: day month year>

<vehicle\_brand> <vehicle\_model> <vehicle\_chassis> <quantity>

...

cart.txt

A file where Student 2 will store the cart data:

<vehicle\_brand> <vehicle\_model> <vehicle\_chassis> <quantity>

...

#### IV. Interacting with Executables

Application 1 (Administrator) offers the following options:

`./app_1.exe view_stock`

To view all available vehicles

`./app_1.exe add_vehicle <chassis> <brand> <model> <quantity> <price>`

To add a vehicle to the stock

`./app_1.exe delete_vehicle <chassis>`

To delete a vehicle from the stock

`./app_1.exe modify_vehicle <price | quantity> <chassis> <new_value>`

To modify the vehicle's price or quantity

`./app_1.exe view_orders`

To view all orders

Application 2 (User) offers the following options:

`./app_2.exe view_cart`

To view the shopping cart

`./app_2.exe add_vehicle <chassis> <quantity>`

To add a vehicle to the shopping cart

`./app_2.exe modify_vehicle <chassis> <new_quantity>`

To change the quantity of a vehicle in the cart

`./app_2.exe delete_vehicle <chassis>`

To remove a vehicle from the cart

`./app_2.exe purchase`

To finalize the order and store it in the orders file