Group Assignment 2 - ICS372

DUE:
Use cases, requirements, sequence diagrams: March 12, 2025 (Sprint 1)
Full implementation and unit tests: March 26, 2025 (Sprint 2)

Introduction

After the success of the initial phase of the vehicle tracking application, the project has been expanded to include new features that the organization would like to see implemented. Unfortunately, at this point very little definition work has been performed, and this work will fall on your team instead. You will need to convert the vague feature requests and implicit requirements below into a set of **use cases, requirements, and sequence diagrams** for initial review and then implement those designs.

New feature 1: We have 3 new dealers using the software. Some of those dealers rent out the cars they have on a temporary basis. They would like to be able to track which cars are loaned out and thus not available for sale. Because of the amount of joy riding that has occurred, sports cars are not allowed to be rented. The actual loaning is handled by separate software (does not need to be implemented in your application).

New feature 2: The system currently loses its state every time the program is stopped, please retain the vehicles and dealer data that were previously entered when the program starts up.

New feature 3: The recently acquired dealers already have their own data format for storing vehicle data. That system already publishes data in XML format (also their system has a lot of bugs, so sometimes the data has issues). These should be importable into our software. The dealer name should be included in the data. Previous records should be able to have the dealer name edited/added.

New feature 4: Dealers would like to be able to transfer inventory from one dealer to another.

New feature 5: We'd like a graphical interface for the system so users can point and click to perform operations.

The management team is also concerned about demonstrating the reliability of the code, so **unit tests** should start to be part of the code provided.

Format

This assignment should be delivered as a zip file or git tag including all the necessary code to execute it as well as unit tests (excluding the Java runtime). Be sure to include the requested documentation for the project, as well.

Submission

The individual portion (same as the previous assignment) can be submitted via D2L to the professor prior to or on the due date.

The group portion can be submitted via D2L to the professor prior to or on the due date.

Evaluation

This assignment will be evaluated/graded based on:

1) Functionality - Does the program meet the requirements?
2) Design - Were good design principles used in the construction of the program?
3) Style - Do you have comments and well written code?
4) Documentation - Do the diagrams indicate how the software is structured?
5) Unit Test - Are unit tests effective and cover important parts of the code?

Example XML external reading file:

```
<Dealers>
	<Dealer id="485">
		<Name>Wacky Bob's Automall</Name>
		<Vehicle type="suv" id="848432">
			<Price unit="pounds">17000</Price>
			<Make>Land Rover</Make>
			<Model>Range Rover</Model>
		</Vehicle>
		<Vehicle type="pickup" id="52523">
			<Price unit="dollars">22600</Price>
			<Make>Toyota</Make>
			<Model>Tundra</Model>
		</Vehicle>
		<Vehicle type="sedan" id="151e5dde">
			<Price unit="dollars">36600</Price>
			<Make>Genesis</Make>
			<Model>G70</Model>
		</Vehicle>
		<Vehicle type="sports car" id="ern222">
			<Price unit="dollars">22330</Price>
			<Make>Mazda</Make>
			<Model>Miata</Model>
		</Vehicle>
	</Dealer>
</Dealers>
```