**B18 Ex 03 May Miller 205661598 Noam Mani 203439450**

**Ex03- Garage Management**

**Project Name: Ex03.GarageLogic**

**Classes List:**

* **Garage-** A class that contains a dictionary with all the vehicles and their details in the garage, it also contains the logic behind the methods that handles a vehicle in the garage.
* **OwnerDetails-** A class that contains the attributes that concerns to a vehicle

in the garage.

* **SpecificDetailsForm-** A class that contains only data members- the special attributes of a certain vehicle - similar to a registration form.
* **VehicleFactory-** A class that creates a new vehicle from a given details form.
* **Vehicle-** An **abstract** class that contains all the common attributes and methods for vehicles.
* **Car-** **Inherits from Vehicle**, a class that contains the special attributes for a car.
* **MotorCycle-** **Inherits from Vehicle**, a class that contains the special attributes for a motorcycle.
* **Truck**- **Inherits from Vehicle**, a class that contains the special attributes for a truck.
* **EnergySource**- An **abstract** class that represent a vehicle’s engine.
* **Fuel**- **Inherits from EnergySource,** a class that that contains the special attributes and methods for a fueled vehicle.
* **Electric**- **Inherits from EnergySource,** a class that contains the special attributes and methods for an electric vehicle.
* **Wheel**- A class that contains the attributes and methods for a wheel.
* **ValueOutOfRangeException**- **Inherits from Exception,** the class creates an exception when there is a value out of range, contains the range (max, min).

**Nested Enums:**

* **eVehicleType-** nested in the class- **VehicleFactory**, represent the optional vehicle types.
* **eColor-** nested in the class- **Car**, represent the optional car colors.
* **eNumberOfDoors-** nested in the class- **Car**, represent the optional number of doors for a car.
* **eEnergyType-** nested in the class **EnergySource**, represent the engine type.
* **eFuelType-** nested in the class **Fuel**, represent the optional fuel types.
* **eLicenseType-** nested in the class **MotorCycle**, represent the optional license types.

**Project Name: Ex03.ConsoleUI**

**Classes List:**

* **Program**- Contains the main method that runs the garage management.
* **UI**- The user interface, contains the methods that get input from the user and prints messages. The class also validates all the user inputs.
* **GarageMenagment**- A class that connects the user interface with the logic, contains the running method that runs the management according to the user input.

**Nested Enums:**

* **eUserOptions-** nested in **GarageManagement**, represent the options for garage management.





