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***List of the types we defined:***

***Garage Logic:***

***Classes:***

\*Power source: The base class for ElectricalSource and FuelSource which are the energy sources of the vehicles . The class is abstract

\* ElectricalSource : The energy source of the electric vehicles ,derived from Power source.

\* FuelSource : The energy source of the regular vehicles , derived from Power source.

\*GarageManager : The class which contains and manage all the vehicles in the program.

\*ComposedVehicle : Contain Vehicle, and OwnerName and Owner Phone. Acting as internal Garage object.

\*Vehicle : The base class for all the types of vehicles in the garage. The class is abstract.

\* Automobile : The class which represents car , both electric and regular that are different by the type of Power source. The class derived from vehicle.

\*Motorcycle: The class which represents motor cycle ,both electric and regular that are different by the type of Power source. The class derived from vehicle.

\*Truck: The class which represents truck. The class derived from vehicle.

\*Wheel: The class which represents wheel of vehicle.

\*VehicleFactory: The Class Which making the new vehicles.

***Enums:***

\*eVehicleStatus: Represents the current status of each vehicle in the garage.

\*eValidVehicle: Represents the types of vehicles that defined in the exercise.

\*eLicencseType: Represents all the license types that define for motor cycle.

\*eColor: Represents the defined colors for car object.

\*eNumOfDoors: Represents the possible options of doors in car.

***ConsoleUI:***

***Classes:***

Program : The enter point for the program.\*

UserInterface: The class which interacts with the user.

DataExtractor: The class act as an data extractor helper to UserInterface.\*

***Enums:***

\*eEntryMenuOptions: Represents the number of options in the main menu.

\*ePerLicenseMenuOption: Represents the number of options in the single option menu.

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| --- |
| ***Power Source*** |
| # m\_currentAmountOfEnergy |
| # ValidateAmountToBeAdded() |

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| --- |
| ElectricalSource |
|  |
| + Charge() |

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| --- |
| FuelSource |
| r\_FuelType - |
| + eTypeOfFuel  + Refuel() |

|  |
| --- |
| ***ValueOutOfRangeExeption*** |
| -r\_MaxValue -r\_MinValue |
| +MaxValue +MinValue  +Message |

|  |
| --- |
| ***Wheel*** |
| r\_ManufacturerName -  - r\_MaxPressure  - m\_CurrPressure |
| + InflateToMax() + InflatingWheel() |

|  |
| --- |
| ***GarageManager*** |
| -m\_VehiclesInGarage |
| +VehiclesInGarage +CreateAutomobile() +CreateMotorcycle() +CreateTruck() +InsertVehicle() +GetAllVehiclesLicensesNumbers() +GetVehiclesLicenseFilterdByStatus() +ChangeVehicleStatus() +InflateWheelsToMax()  +RefuelVehicle() +RechargeVehicle() +GetVehicle() +IsVehicleInGarage() +GetVehicleDetails() |

|  |
| --- |
| ***vehicle*** |
| # r\_ModelName  #r\_licenseNumber  #m\_Status #m\_WheelsVehicle #m\_PowerSource #m\_Wheels |
| #InflateWheelsToMax() |

|  |
| --- |
| ***automobile*** |
| -m\_NumOfDoors  -m\_Color |
| + enum eColor +enum eNumOfDoors +Color +NumberOfDoors |

|  |
| --- |
| ***Truck*** |
| -\_r\_TrunkCapticity - m\_CooledTrunk |
| +TrunkOpen +CapacityTrunk |

|  |
| --- |
| ***Motorcycle*** |
| -r\_EngineCapacity  -m\_LicenseType |
| +enum eLicenseType |