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**Class Vehicle:** The base class for all types of vehicles.

**Class Car:** Derived from Class Vehicle. The base class for all types of cars.

**Class Motorcycle:** Derived from Class Vehicle. The base class for all types of motorcycles.

**Class Truck:** Derived from Class Vehicle. Stand alone as an instantiated object.

**Class Tire:** Contained in Class Vehicle. Used to hold the Tires information for every vehicle in the garage.

**enum eFuel:** Contained in Class Vehicle. Represents the type of energy source used by the vehicles.

**enum eLicenseType:** Contained in Class Motorcycle. Represents the different types of licenses for motorcycles.

**enum eColor:** Contained in Class Car. Represents the different colors available for cars.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Class Vehicle\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

-m\_ModelName

-m\_LicenseNumber

-m\_EnergyPercentage

-m\_MaxAmountOfEnergy

-m\_CurrentAmountOfEnergy

-Tire[] m\_Tires

-enum eFuel

-class Tire

+Vehicle() **(constructor)**

+M\_ModelName **(get, set)**

+M\_LicenseNumber **(get, set)**

+M\_EnergyPercentage **(get, set)**

+M\_CurrentAmountOfEnergy **(get, set)**

+M\_MaxAmountOfEnergy **(get, set)**

+M\_Tires **(get, set)**

+InflateAllTires()

+RefillEnergySource()

+abstract ReturnAdditionalInformationNeeded()

+abstract ParseFirstInputToInformationNeeded()

+abstract ParseSecondInputToInformationNeeded()

+static ToInt()

+static ToFloat()

+IsParameterIsWithinRange()

+UpdateEnergySource()

+abstract ReturnFuelType()

+ToEFuel()

+abstract string ReturnVehicleInformation()

**\_\_\_enum eFuel\_\_\_**

-Octane95

-Octane96

-Octane98

-Soler

-Electricity

**\_\_\_\_\_\_\_\_Class Tire\_\_\_\_\_\_\_\_**

-m\_ManufacturerName

-m\_CurrentTirePressure -m\_MaxTirePressure

+Tire() **(constructor)**

+M\_ManufacturerName **(get, set)**

+M\_CurrentTirePressure **(get, set)**

+M\_MaxtTirePressure **(get, set)**

+InflateTire()

+IsTirePressureWithinRange()

**\_\_\_\_\_\_\_\_\_\_\_\_Class Car\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

-m\_CarColor

-m\_NumOfDoors

-k\_NumOfTires = 4

-k\_CarTirePressure = 31

-enum eColor

+Car() **(Constructor)**

+M\_CarColor **(get, set)**

+M\_NumOfDoors **(get, set)**

+ReturnAdditionalInformationNeeded()

+override ParseFirstInputToInformationNeeded()

+override +ParseSecondInputToInformationNeeded()

+ToECarColor()

**\_\_\_\_\_\_\_\_\_Class Motorcycle\_\_\_\_\_\_\_\_\_\_**

-m\_LicenseType

-m\_EngineVolume

-k\_NumOfTires = 2

-k\_MotorcycleTirePressure = 31

-enum eLicenseType

+Motorcycle() **(Constructor)**

+M\_LicenseType **(get, set)**

+M\_EngineVolume **(get, set)**

+ReturnAdditionalInformationNeeded()

+override ParseFirstInputToInformationNeeded()

+override ParseSecondInputToInformationNeeded()

+ReturnLicenseTypeIfValid()

**\_\_\_\_\_\_\_\_\_\_\_\_Class Truck\_\_\_\_\_\_\_\_\_\_\_\_**

-m\_IsHaulingDangerousMaterials

-m\_LoadVolume

-k\_NumOfTires = 12

-k\_CarTirePressure = 26

-k\_MaxAmountOfFuel = 110

+Truck() **(Constructor)**

+M\_LoadVolume **(get, set)**

+M\_IsHaulingDangerousMaterials **(get, set)**

+ReturnAdditionalInformationNeeded()

+override ParseFirstInputToInformationNeeded()

+override +ParseSecondInputToInformationNeeded()

+IsHaulingDangerousMaterials()

+ReturnFuelType()

**\_\_\_\_\_\_Class ElectricCar\_\_\_\_\_**

-k\_MaxHoursBatteryLife = 1.8f

+ElectricCar() **(Constructor)**

+override ReturnFuelType()

+override ReturnVehicleInformation()

**\_\_\_\_\_\_\_\_\_\_Class FuelCar\_\_\_\_\_\_\_\_**

-k\_MaxAmountOfFuel = 55

-k\_TypeOfFuel = eFuel.Octane96

+FuelCar() **(Constructor)**

+override ReturnFuelType()

+override ReturnVehicleInformation()

**\_\_\_\_\_Class ElectricMotorcycle\_\_\_\_**

-k\_MaxHoursBatteryLife = 1.4f

+ElectricMotorcycle() **(Constructor)**

+override ReturnFuelType()

+override ReturnVehicleInformation()

**\_\_\_\_\_\_Class FuelMotorcycle\_\_\_\_\_\_**

-k\_MaxAmountOfFuel = 8

-k\_TypeOfFuel = eFuel.Octane95

+FuelMotorcycle() **(Constructor)**

+override ReturnFuelType()

+override ReturnVehicleInformation()

**\_\_enum eLicenseType\_**

-A

-A1

-A2

-B

**\_\_\_\_enum eColor\_\_\_\_**

-Red

-Blue

-Black

-Gray