

# **Software Design Pattern Lab**

## **Task One**

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Key points to consider:

- one owner can register only one vehicle
- there are multiple instances of the same vehicle model
- city / country can be changed when renewing a registration

Interpreted Schemes for the Classes in the problem statement:

#### **VehicleModel:**

- Properties / Attributes
  - modelID: string
  - modelName: string
  - modelYear: integer
  - type: string
  - manufacturerName: string
- Functionalities / Methods
  - getVehicleModelInfo(modelID) :

#### **Vehicle:**

- Properties / Attributes
  - modelID : string
  - vehicleID: string
  - ownerID: string
  - registrationID: string
  - manufactureDate: date
- Functionalities / Methods
  - getVehicleInfoByID() : string
  - setVehicleInfo(modelName, modelYear, type, manufacturerName) : bool
  - createNewVehicle(modelName, modelYear, type, manufacturerName) : bool

#### **Owner:**

- Properties / Attributes
  - name
  - ownerID
  - vehicleID

#### **Registration:**

- Properties / Attributes
  - registrationID: string
  - registrationDate: date

- registrationExpiry: date
- ownerID: string
- vehicleID: string
- city: string
- country: string

- Functionalities / Methods

- registerNewVehicle(ownerID, vehicleID, registrationDate, registrationExpiry, city, country) : bool
- renewRegistration(registrationID, expiryDate, city) : bool
- checkVerification(registrationID) : bool
- checkIfVerified(vehicleID) : bool