List of Classes and attributes:

Customer: firstName, lastName, cellPhoneNumber, gender, dateOfBirth

Service: serviceName, servicePrice, mechanicName, date, numberOfServices

Vehicle: type, color, id, yearOfVehicle, make

Car: doors, type, color, id, yearOfVehicle, make

Price : taxes, total, discount, finalAmount, servicePrice

The class customer has 5 attributes with their type and their setter and getter function are included.

Customer
-firstName: String
-lastName: String
-cellPhoneNumber: String
-gender: ENUM
-dateOfBirth: Date
+setFirstName(firstName:String)
+getFirstName():String
+setLastName(lastName:String)
+getLastName():String
+setCellPhoneNumber(cellPhoneNumber:String)
+getCellPhoneNumber():String
+setGender(gender:Gender)
+getGender():ENUM
+setDateOfBirth(dateOfBirth:Date)
+getDateOfBirth():Date

The class Service has 5 attributes with their type and their setter and getter function are included.

Service

-serviceName: String
-servicePrice: Float
-mechanicName: String
-dateOfService: Date
-numberOfService: Integer
+setServiceName(serviceName:String)
+getServiceName():String
+setServicePrice(servicePrice:Float)
+getServicePrice():Float
+setMechanicName(mechanicName:String)
+getMechanicName():String
+setDateOfService(dateOfService:Date)
+getDateOfService():Data
+setNumberOfService(numberOfService:Integer)
+getNumberOfService():Integer

The class Vehicle has 5 attributes with their type and their setter and getter function are included. It is the parent class of the class car. There is a "is a" relationship between them where A car is a Vehicle and it is a Single inheritance..

Vehicle
-model: ENUM
-color: ENUM
-id: String
-yearOfVehicle: Integer
-make: ENUM
+setModel(model:ENUM)
+getModel():ENUM
+setColor(color:ENUM)
+getColor():ENUM

+setID(id:String)
+getID():String
+setYearOfVehicle(yearOfVehicle:Integer)
+getYearOfVehicle():Integer
+setMake(make:ENUM)
+getMake():ENUM

The class Car has 6 attributes with their type and their setter and getter function are included. It is the child class of the class Vehicle and it inheretes its attributes. One attribute "numberOfDoors" is related to Cars specifically since since the vehicle can be motorcycles, boats, or airplanes, where the concept of doors may not apply. There is a "is a" relationship between them where A car is a Vehicle and it is a Single inheritance.

Car
-model: ENUM
-color: ENUM
-id: String
-yearOfVehicle: Integer
-make: ENUM
-numberOfDoors: Integer
+setModel(model:ENUM)
+getModel():ENUM
+setColor(color:ENUM)
+getColor():ENUM
+setID(id:String)
+getID():String
+setYearOfVehicle(yearOfVehicle:Integer)
+getYearOfVehicle():Integer
+setMake(make:ENUM)

```
+getMake():ENUM

+setNumberOfDoors(numberOfDoors:Integer)

+getNumberOfDoors():Integer
```

The class Price has 5 attributes with their type and their setter and getter function are included.

```
Price

-taxes: Float

-total: Float
-discount: Float

-finalAmount: Float

-servicePrice: Float

+setTaxes(taxes:Float)

+getTaxes():Float

+setTotal(total:Float)

+getTotal():Float

+setDiscount(discount:Float)

+getDiscount():Float

+setFinalAmount(finalAmount:Float)

+getFinalAmount():Float

+setServicePrice(servicePrice:Float)

+getServicePrice():Float
```

The other relationships might be an associations, but not inheritance, the only one is the vehicle and the car.

Object 1

```
James: Customer

-firstName="James"
```

-lastName="W.Jones"

-cellPhoneNumber="816-897-9862"

-gender=Gender.Male

-dateOfBirth=[1990-10-05]

Object 1

Service1: Service
-serviceName="Diagnostics"
-servicePrice="15"
-mechanicName="Hans K"
-dateOfService="March 13, 2022"
-numberOfService="1"

Object 2

Service2: Service
-serviceName="Oil Replacement"
-servicePrice="120"
-mechanicName="Hans K"
-dateOfService="March 13, 2022"
-numberOfService="2"

Object 3

Service3: Service
-serviceName="Oil Filter Parts"
-servicePrice="35"
-mechanicName="Hans K"
-dateOfService="March 13, 2022"
-numberOfService="3"

Object 4

Service4: Service
-serviceName="Tire Replacement (2)"
-servicePrice="100"
-mechanicName="Hans K"
-dateOfService="March 13, 2022"
-numberOfService="4"

Object 5

Service5: Service
-serviceName="Tire (2)"
-servicePrice="160"
-mechanicName="Hans K"
-dateOfService="March 13, 2022"
-numberOfService="5"

Object 1

Price1: Price
-taxes="21.5"
-total="451.5"
-discount="11.5"
-finalAmount="440"
-servicePrice=15"

Object 2

Price2: Price
-taxes="21.5"
-total="451.5"
-discount="11.5"

-finalAmount="440"

-servicePrice="120"

Object 3

Price3: Price
-taxes="21.5"
-total="451.5"
-discount="11.5"
-finalAmount="440"
-servicePrice="35"

Object 4

Price4: Price
-taxes="21.5"
-total="451.5"
-discount="11.5"
-finalAmount="440"
-servicePrice="100"

Object 5

Price5: Price
-taxes="21.5"
-total="451.5"
-discount="11.5"
-finalAmount="440"
-servicePrice="160"

Object 1

Car1: Car
-model=Model.Altima
-color=Color.Silver
-id="AD-89034
-yearOfVehicle="2014"
-make=Make.Nissan -numberOfDoors="4"

Object 1

Vehicle1: Vehicle
-model=Model.Altima
-color=Color.Silver
-id="AD-89034
-yearOfVehicle="2014"
-make=Make.Nissan