

[Design a system model]

- Scenario:

Motor vehicle could be a car, a bus, or a truck. Each vehicle has wheels, an engine. They are managed/driven by drivers. They can transport passengers and loads. All persons could be passengers and some of them could be a driver.

Classes of objects for our model

Engine

Wheel

<i>MotorVehicle</i>

Load

Person

Driver

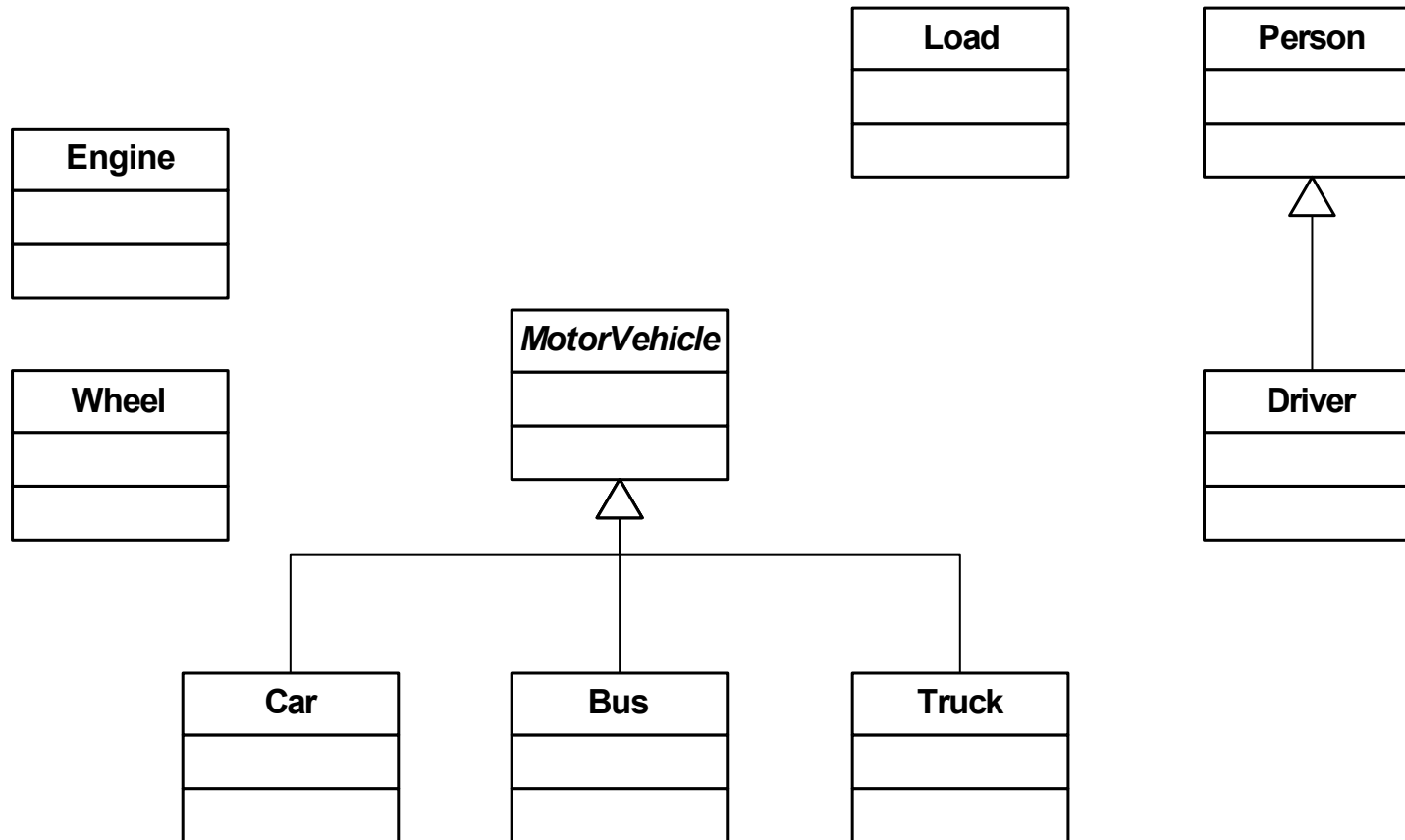
Car

Bus

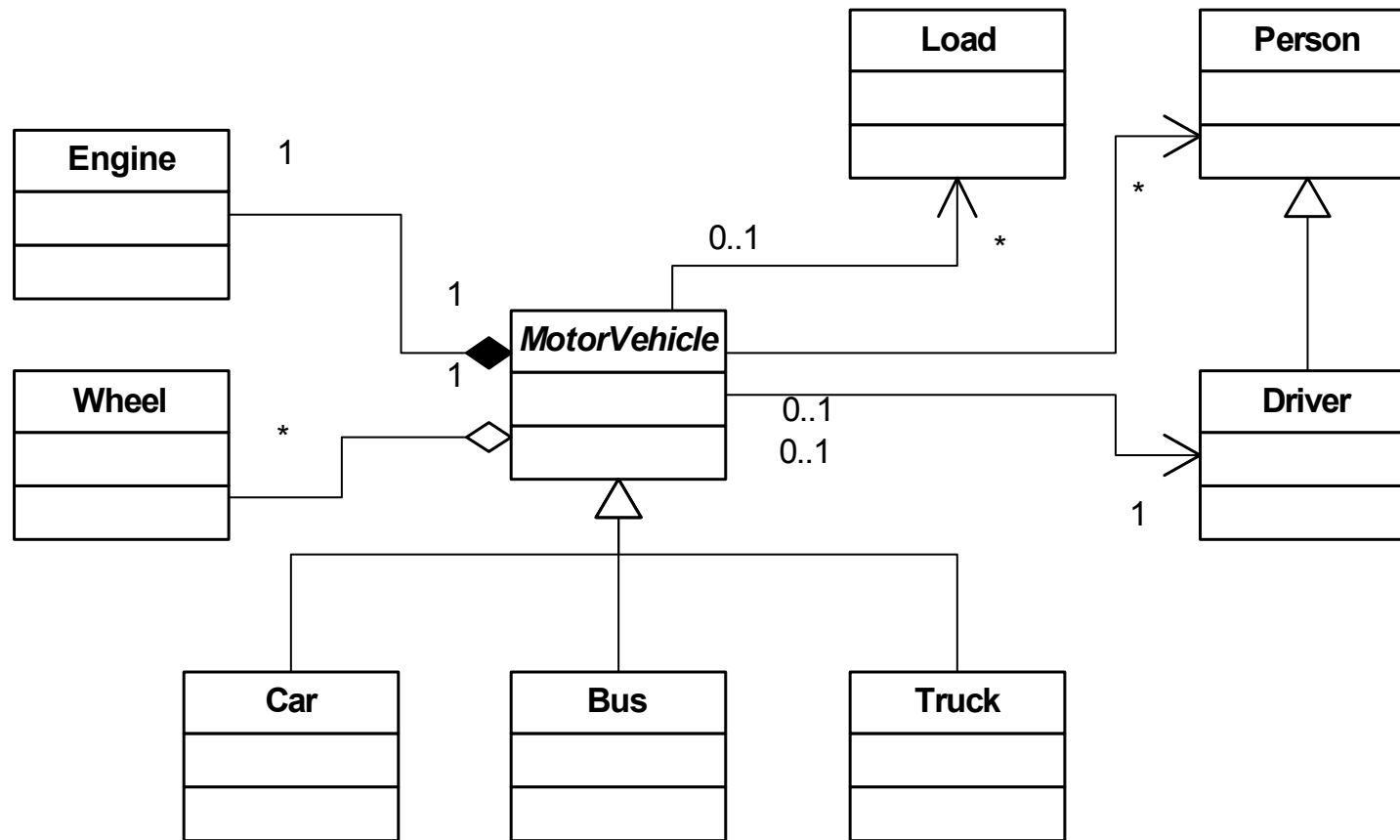
Truck

Inheritance

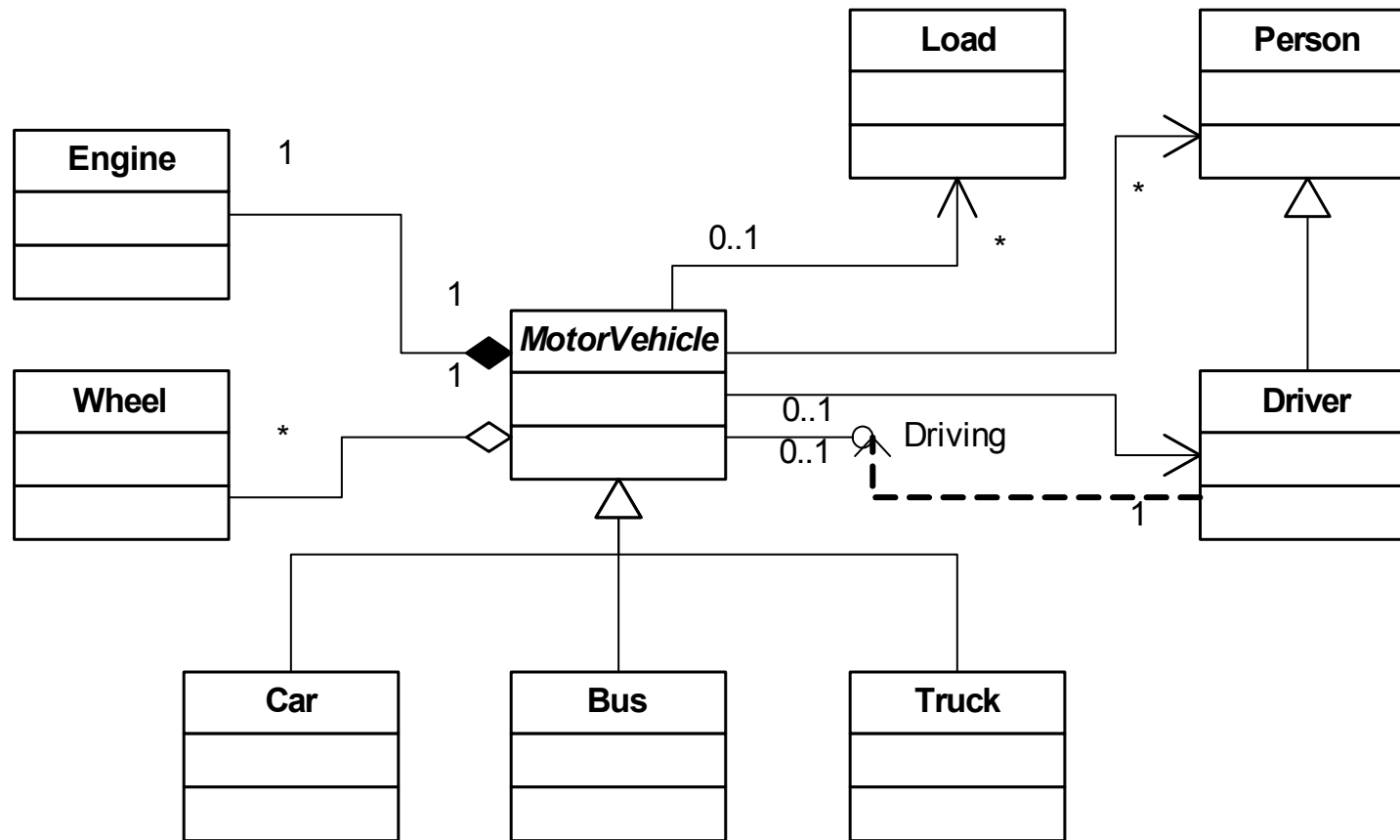
Is-a relationship



Association Aggregation, composition

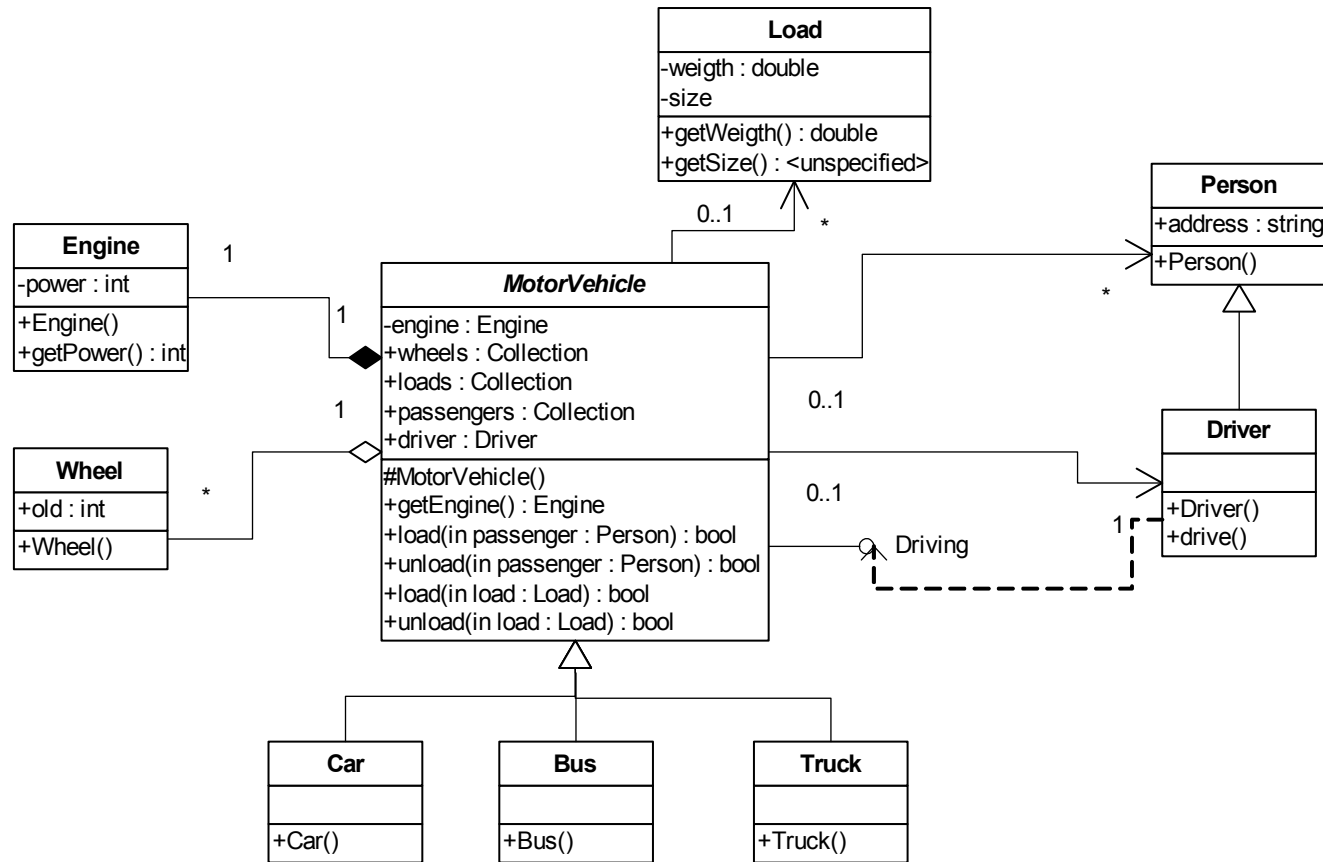


[Interfaces]



Attribute (global variables)

Operations (methods)



Public attributes operations

- All variables are private
- To access the value
 - getMethod
 - setMethod
- Input for operations

<i>MotorVehicle</i>
-engine : Engine -wheels : Collection -loads : Collection -passengers : Collection -driver : Driver
#MotorVehicle() +getEngine() : Engine +load(in passenger : Person) : bool +unload(in passenger : Person) : bool +load(in load : Load) : bool +unload(in load : Load) : bool +getWheels() : Collection +setWheels(in wheels : Collection) +getLoads() : Collection +setLoads(in loads : Collection) +getPassengers() : Collection +setPaasengers(in passenger : Collection) +getDriver() : Driver +setDriver(in driver : Driver)

[More information]

Grady Booch

- Object-Oriented Analysis and Design
 - with Applications