

Create Classes: Car, Passenger, Fuel

Constructors for the classes defined in the class diagram:

- a) Car [Public class]: Can be only created by passing Registration number, carrying capacity, fuel and its mileage.
- b) Passenger: Can be only created by passing both name and age
- c) Fuel: Can be created only by providing its name and cost/litre.

Behavior to be implemented:

- 1. **Getters/Setters** for each attribute of each class.
- 2. **addPassenger:** This behavior accepts a Passenger object and adds it to passenger list of that car only if the capacity is not getting exceeded. If passenger is added then it returns the number of passengers that could be still accommodated in the car (remaining capacity), else returns -1.
- 3. **findEldestPassenger:** This behavior returns the name of the passenger in that car with maximum age (assuming no 2 passengers have same age).
- 4. **findCostEfficiency:** This behavior calculates the cost efficiency and returns the same.
Cost efficiency = Mileage / Cost Per Litre of fuel

Note: Data and business validations need not be handled

Class Diagram:

