

UML Class Diagram - Fleet Management System

Abstract Classes:

Vehicle (abstract)

LandVehicle (abstract)

- Car
- Truck
- Bus

AirVehicle (abstract)

- Airplane

WaterVehicle

- CargoShip

Interfaces:

- FuelConsumable
- PassengerCarrier
- CargoCarrier

Relationships:

- Car implements FuelConsumable, PassengerCarrier, Maintainable
- Truck implements FuelConsumable, CargoCarrier, Maintainable
- Bus implements FuelConsumable, PassengerCarrier, CargoCarrier, Maintainable
- Airplane implements FuelConsumable, PassengerCarrier, CargoCarrier, Maintainable
- CargoShip implements FuelConsumable (if engine), CargoCarrier, Maintainable

Exceptions:

- InvalidOperationException
- InsufficientFuelException
- OverloadException

FleetManager:

- Uses Vehicle hierarchy for operations
- Handles add/remove, journey, refuel, maintenance, reports, save/load

