

Problem: Vehicle Management System

Objective:

Design a simple Vehicle management System in java demonstrating inheritance, encapsulation, method overriding, upcasting and downcasting

Requirements:

1. Encapsulation:

Create a base class Vehicle with private fields (brand, speed) and provide public getter and setter methods.

2. Inheritance:

Create two sub classes

Car (Additional Fields : fuelType)

Bike (Additional Fields : engineCC)

3. Method Overriding :

Override the showDetails() method in Car and Bike to provide specific details

4. Upcasting and Downcasting:

Perform upcasting by assigning a Car and bike object to Vehicle type

Use downcasting to access specific properties of Bike and Car