

## Exercise (Polymorphism)

Create a Java program for a Vehicle Rental System that leverages polymorphism to manage different types of vehicles (e.g., Cars, Bikes, Trucks). Define a common interface **Vehicle** with methods for calculating rental charges and displaying vehicle details. Implement subclasses for **Car**, **Bike**, and **Truck**, each with its own pricing strategy and details. Allow users to rent vehicles, calculate rental charges, and view vehicle information.

### Instructions:

1. Create an interface named **Vehicle** with the following methods:
  - **double calculateRentalCost(int days)** for calculating rental charges.
  - **void displayDetails()** for displaying vehicle details.
2. Implement three classes: **Car**, **Bike**, and **Truck**, all of which should implement the **Vehicle** interface. Each class should have appropriate instance variables, constructors, and implementations for the **calculateRentalCost** and **displayDetails** methods.
  - For **Car**, use a daily rate of \$50.
  - For **Bike**, use an hourly rate of \$10.
  - For **Truck**, use a weekly rate of \$500.
3. In the **main** method of the **VehicleRentalSystem** class:
  - Create an empty list to store rented vehicles: **List<Vehicle> rentedVehicles = new ArrayList<>();**
  - Implement a menu-driven interface that allows users to:
    - Rent a Car: Prompt the user for the car model and rental days.
    - Rent a Bike: Prompt the user for the bike brand and rental hours.
    - Rent a Truck: Prompt the user for the truck type and rental weeks.
    - View Rented Vehicles: Display details of all rented vehicles.

- Exit the program.
4. For each rental option (Car, Bike, Truck), create an instance of the corresponding class, add it to the **rentedVehicles** list, and display the rental details (model, brand, type, etc.) and the rental cost.
  5. Allow the user to continue renting vehicles until they choose to exit.

### Sample Output:

Vehicle Rental System

1. Rent a Car
2. Rent a Bike
3. Rent a Truck
4. View Rented Vehicles
5. Exit

Enter your choice: 1

Enter Car Model: Toyota Camry

Enter Rental Days: 5

Rental Details:

Car Model: Toyota Camry

Daily Rental Rate: \$50.0

Rental Cost: \$250.0

Enter your choice: 4

Rented Vehicles:

Car Model: Toyota Camry

Daily Rental Rate: \$50.0

Rental Cost: \$250.0

Bike Brand: Mountain Bike

Hourly Rental Rate: \$10.0

Rental Cost: \$30.0

Enter your choice: 5

Thank you for using the Vehicle Rental System!