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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()** 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. Class instance:
    - For **Car**: model , days.
    - For **Bike**: brand, hour.
    - For **Truck**: type , week.

4. 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.
5. 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.
6. 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!