Scenario 1: Online Shopping System

Question:

You are developing an **online shopping system**. Create a **business logic class** called `Product` with the following **instance variables**:

- **`productId`** (int) → Stores the unique product ID.
- **`productName`** (String) → Stores the name of the product.
- **`price`** (double) → Stores the price of the product.
- **`quantity`** (int) → Stores the available quantity of the product.

Include setter and getter methods for all fields.

Create an **executable logic class** called `ShoppingCart` that:

1. Creates at least two `Product` objects.
2. Updates the quantity using a setter method.
3. Prints product details using getter methods.

Scenario 2: Bank Account Management

Question:

You need to develop a **banking system** where customers have bank accounts.

Create a **business logic class** called `BankAccount` with the following **instance variables**:

- **`accountNumber`** (long) → Stores the unique bank account number.
- **`accountHolderName`** (String) → Stores the name of the account holder.
- **`balance`** (double) → Stores the current balance in the account.

Provide setter and getter methods for all fields.

Create an **executable logic class** called `BankApplication` that:

1. Creates a `BankAccount` object.
2. Uses setters to assign values to the account.
3. Retrieves and prints account details using getters.
4. Updates the balance using a setter.

Scenario 3: Employee Salary Calculation

Question:

A company wants a simple salary management system.

Create a **business logic class** called `Employee` with the following **instance variables**:

- **`employeeId`** (int) → Stores the unique ID of the employee.
- **`employeeName`** (String) → Stores the name of the employee.
- **`salary`** (double) → Stores the salary of the employee.

Include setter and getter methods.

Create an **executable logic class** called `PayrollSystem` that:

1. Creates an `Employee` object.
2. Sets the salary using a setter.
3. Prints the employee details.
4. Updates the salary with a setter and prints the updated salary.

Scenario 4: Library Book Management

Question:

A library system needs to manage books.

Create a **business logic class** called `Book` with the following **instance variables**:

- **`bookId`** (int) → Stores the unique ID of the book.
- **`title`** (String) → Stores the title of the book.
- **`author`** (String) → Stores the author of the book.
- **`price`** (double) → Stores the price of the book.

Include setter and getter methods.

Create an **executable logic class** called `Library` that:

1. Creates at least two `Book` objects.
2. Sets the details using setter methods.
3. Retrieves and prints the details using getter methods.

Scenario 5: Car Rental System

Question:

A car rental company needs to track cars available for rent.

Create a **business logic class** called `Car` with the following **instance variables**:

- **`carId`** (int) → Stores the unique ID of the car.
- **`brand`** (String) → Stores the brand of the car (e.g., Toyota, Ford).
- **`model`** (String) → Stores the model of the car.
- **`rentalPricePerDay`** (double) → Stores the rental price per day.

Include setter and getter methods.

Create an **executable logic class** called `CarRentalService` that:

1. Creates two `Car` objects.
2. Assigns values using setters.
3. Prints the details using getters.
