Assignment - BLC AND ELC IN JAVA

Scenario 1: Online Shopping System

```
package _21_02_25;
//Business Logic Class
public class Product {
   private int productId;
   private String productName;
   private double price;
   private int quantity;
   public Product(int productId, String productName, double price, int quantity) {
      this.productId = productId;
      this.productName = productName;
      this.price = price;
      this.quantity = quantity;
   }
   public int getProductId() {
      return productId;
   }
   public void setProductId(int productId) {
      this.productId = productId;
   }
   public String getProductName() {
      return productName;
   }
   public void setProductName(String productName) {
      this.productName = productName;
   }
   public double getPrice() {
      return price;
   }
   public void setPrice(double price) {
```

```
        this.price = price;
    }
    public int getQuantity() {
        return quantity;
    }
    public void setQuantity(int quantity) {
        this.quantity = quantity;
    }
    public void displayProduct() {
        System.out.println("Product ID: " + productId);
        System.out.println("Product Name: " + productName);
        System.out.println("Price: " + price);
        System.out.println("Quantity: " + quantity);
        System.out.println("-------------------------");
    }
}

//Executable Logic Class
public class ShoppingCart {
 public static void main(String[] args) {
    Product product1 = new Product(101, "Laptop", 75000.0, 10);
    Product product2 = new Product(102, "Smartphone", 25000.0, 20);

    product1.setQuantity(8);
    product2.setQuantity(18);
    System.out.println("Shopping Cart Items:");
    product1.displayProduct();
    product2.displayProduct();
 }
}
```

Scenario 2: Bank Account Management

```
package _21_02_25;
//Business Logic Class
public class BankAccount {
   private long accountNumber;
   private String accountHolderName;
   private double balance;
   public BankAccount(long accountNumber, String accountHolderName, double balance) {
      this.accountNumber = accountNumber;
      this.accountHolderName = accountHolderName;
      this.balance = balance;
   }
   public long getAccountNumber() {
      return accountNumber;
   }
   public void setAccountNumber(long accountNumber) {
      this.accountNumber = accountNumber;
   }
   public String getAccountHolderName() {
      return accountHolderName;
   }
   public void setAccountHolderName(String accountHolderName) {
      this.accountHolderName = accountHolderName;
   }
   public double getBalance() {
      return balance;
   }
   public void setBalance(double balance) {
      this.balance = balance;
   }
```

```
  public void displayAccount() {
    System.out.println("Account Number: " + accountNumber);
    System.out.println("Account Holder Name: " + accountHolderName);
    System.out.println("Balance: " + balance);
    System.out.println("-------------------------");
  }
}
//Executable Logic Class
public class BankApplication {
 public static void main(String[] args) {
   BankAccount account = new BankAccount(1234567890L, "John Doe", 5000.0);
   account.setAccountHolderName("BharathKiran");
   account.setBalance(7000.0);
   System.out.println("Bank Account Details:");
   account.displayAccount();
 }
}
```

Scenario 3: Employee Salary Calculation

```
package _21_02_25;
//Business Logic Class
public class Employee {
 private int employeeId;
 private String employeeName;
 private double salary;

 public Employee(int employeeId, String employeeName, double salary) {
   this.employeeId = employeeId;
   this.employeeName = employeeName;
   this.salary = salary;
 }
```

```
 public int getEmployeeId() {
    return employeeId;
 }
 public void setEmployeeId(int employeeId) {
    this.employeeId = employeeId;
 }
 public String getEmployeeName() {
    return employeeName;
 }
 public void setEmployeeName(String employeeName) {
    this.employeeName = employeeName;
 }
 public double getSalary() {
    return salary;
 }
 public void setSalary(double salary) {
    this.salary = salary;
 }
 public void displayEmployee() {
    System.out.println("Employee ID: " + employeeId);
    System.out.println("Employee Name: " + employeeName);
    System.out.println("Salary: " + salary);
    System.out.println("-------------------------");
 }
}
//Executable Logic Class
public class PayrollSystem {
 public static void main(String[] args) {
    Employee employee = new Employee(1001, "Kiran", 50000.0);

    employee.setSalary(55000.0);
```

```
    System.out.println("Employee Details:");
    employee.displayEmployee();
    employee.setSalary(60000.0);
    System.out.println("Updated Salary:");
    employee.displayEmployee();
  }
}
```

Scenario 4: Library Book Management

```
package _21_02_25;
//Business Logic Class
public class Book {
 private int bookId;
 private String title;
 private String author;
 private double price;
 public Book(int bookId, String title, String author, double price) {
    this.bookId = bookId;
    this.title = title;
    this.author = author;
    this.price = price;
  }
 public int getBookId() {
    return bookId;
  }
 public void setBookId(int bookId) {
    this.bookId = bookId;
  }
 public String getTitle() {
    return title;
  }
```

```
 public void setTitle(String title) {
    this.title = title;
 }
 public String getAuthor() {
    return author;
 }
 public void setAuthor(String author) {
    this.author = author;
 }
 public double getPrice() {
    return price;
 }
 public void setPrice(double price) {
    this.price = price;
 }
 public void displayBook() {
    System.out.println("Book ID: " + bookId);
    System.out.println("Title: " + title);
    System.out.println("Author: " + author);
    System.out.println("Price: " + price);
    System.out.println("-------------------------");
 }
}
//Executable Logic Class
public class Library {
 public static void main(String[] args) {
    Book book1 = new Book(1, "Wigns of Fire", "Abdul Kalam", 300.0);
    Book book2 = new Book(2, "1984", "George Orwell", 250.0);
    book1.setPrice(320.0);
    book2.setPrice(270.0);
```

```
    System.out.println("Library Books:");
    book1.displayBook();
    book2.displayBook();
  }
}
```

Scenario 5: Car Rental System

```
package _21_02_25;
//Business Logic Class
class Car {
 private int carId;
 private String brand;
 private String model;
 private double rentalPricePerDay;
 public Car(int carId, String brand, String model, double rentalPricePerDay) {
    this.carId = carId;
    this.brand = brand;
    this.model = model;
    this.rentalPricePerDay = rentalPricePerDay;
 }
 public int getCarId() {
    return carId;
 }
 public void setCarId(int carId) {
    this.carId = carId;
 }
 public String getBrand() {
    return brand;
 }
 public void setBrand(String brand) {
    this.brand = brand;
 }
```

```
 public String getModel() {
    return model;
 }
 public void setModel(String model) {
    this.model = model;
 }
 public double getRentalPricePerDay() {
    return rentalPricePerDay;
 }
 public void setRentalPricePerDay(double rentalPricePerDay) {
    this.rentalPricePerDay = rentalPricePerDay;
 }
 public void displayCar() {
    System.out.println("Car ID: " + carId);
    System.out.println("Brand: " + brand);
    System.out.println("Model: " + model);
    System.out.println("Rental Price Per Day: " + rentalPricePerDay);
    System.out.println("-------------------------");
 }
}
//Executable Logic Class
public class CarRentalService {
 public static void main(String[] args) {
    Car car1 = new Car(1, "Toyota", "Corolla", 2000.0);
    Car car2 = new Car(2, "Ford", "Mustang", 3500.0);
    car1.setRentalPricePerDay(2200.0);
    car2.setRentalPricePerDay(3700.0);
    System.out.println("Car Rental Service:");
    car1.displayCar();
    car2.displayCar();
 }}
```