Problem 1: Payment System

Description: Create an interface Payment to represent different payment methods.

Requirements:

1. Create an interface Payment with a method processPayment(double amount).
2. Implement this interface in classes CreditCardPayment, DebitCardPayment, and PayPalPayment.
3. Each class should provide its own implementation of the processPayment(double amount) method.
4. Implement a main method to create instances of each payment type and demonstrate processing a payment.

Problem 2: Media Player

Description: Create an interface MediaPlayer to represent different types of media players.

Requirements:

1. Create an interface MediaPlayer with methods play(), pause(), and stop().
2. Implement this interface in classes AudioPlayer and VideoPlayer.
3. Each class should provide its own implementation of the play(), pause(), and stop() methods.
4. Implement a main method to create instances of each player type and demonstrate playing, pausing, and stopping media.

Problem 3: Shape Drawing

Description: Create an interface Drawable to represent different drawable shapes.

Requirements:

1. Create an interface Drawable with a method draw().
2. Implement this interface in classes Circle, Rectangle, and Triangle.
3. Each class should provide its own implementation of the draw() method.
4. Implement a main method to create instances of each shape and demonstrate drawing them.

Problem 4: Vehicle Movements

Description: Create an interface Movable to represent different types of movable objects.

Requirements:

1. Create an interface Movable with methods moveForward() and moveBackward().
2. Implement this interface in classes Car, Bike, and Robot.

3. Each class should provide its own implementation of the moveForward() and moveBackward() methods.
4. Implement a main method to create instances of each movable object and demonstrate their movements.

Problem 5: Employee Roles

Description: Create an interface Workable to represent different types of employees and their work.

Requirements:

1. Create an interface Workable with a method work().
2. Implement this interface in classes Manager, Developer, and Intern.
3. Each class should provide its own implementation of the work() method.
4. Implement a main method to create instances of each employee type and demonstrate their work.

Problem 6: Printable Documents

Description: Create an interface Printable to represent different types of documents that can be printed.

Requirements:

1. Create an interface Printable with a method print().
2. Implement this interface in classes PDFDocument, WordDocument, and SpreadsheetDocument.
3. Each class should provide its own implementation of the print() method.
4. Implement a main method to create instances of each document type and demonstrate printing them.

Problem 7: Online Store

Description: Create an interface Shippable to represent different types of products that can be shipped.

Requirements:

1. Create an interface Shippable with methods calculateShippingCost() and ship().
2. Implement this interface in classes Electronics, Clothing, and Books.
3. Each class should provide its own implementation of the calculateShippingCost() and ship() methods.
4. Implement a main method to create instances of each product type and demonstrate calculating shipping costs and shipping them.