**EXERCISE 4:**

**ADAPTER PATTERN EXAMPLE**

// PaymentProcessor.java  
interface PaymentProcessor {  
 void processPayment(double amount);  
}  
// PayPal.java  
class PayPal {  
 public void sendPayment(double amount) {  
 System.*out*.println("Processing payment of $" + amount + " through PayPal.");  
 }  
}  
  
// Stripe.java  
class Stripe {  
 public void makePayment(double amount) {  
 System.*out*.println("Processing payment of $" + amount + " through Stripe.");  
 }  
}  
  
// Square.java  
class Square {  
 public void executePayment(double amount) {  
 System.*out*.println("Processing payment of $" + amount + " through Square.");  
 }  
}  
// PayPalAdapter.java  
class PayPalAdapter implements PaymentProcessor {  
 private PayPal payPal;  
  
 public PayPalAdapter(PayPal payPal) {  
 this.payPal = payPal;  
 }  
  
 @Override  
 public void processPayment(double amount) {  
 payPal.sendPayment(amount);  
 }  
}  
  
// StripeAdapter.java  
class StripeAdapter implements PaymentProcessor {  
 private Stripe stripe;  
  
 public StripeAdapter(Stripe stripe) {  
 this.stripe = stripe;  
 }  
  
 @Override  
 public void processPayment(double amount) {  
 stripe.makePayment(amount);  
 }  
}  
  
// SquareAdapter.java  
class SquareAdapter implements PaymentProcessor {  
 private Square square;  
  
 public SquareAdapter(Square square) {  
 this.square = square;  
 }  
  
 @Override  
 public void processPayment(double amount) {  
 square.executePayment(amount);  
 }  
}  
  
public class AdapterPatternExample {  
 public static void main(String[] args) {  
 PayPal payPal = new PayPal();  
 Stripe stripe = new Stripe();  
 Square square = new Square();  
  
 // Create adapters for each payment gateway  
 PaymentProcessor payPalAdapter = new PayPalAdapter(payPal);  
 PaymentProcessor stripeAdapter = new StripeAdapter(stripe);  
 PaymentProcessor squareAdapter = new SquareAdapter(square);  
  
 // Process payments using adapters  
 System.*out*.println("Processing payments through different gateways:");  
 payPalAdapter.processPayment(100.00);  
 stripeAdapter.processPayment(200.00);  
 squareAdapter.processPayment(300.00);  
 }  
}