Homework11

Java code snippet:

```java
// Adapter class
public class NewPaymentAdapter implements OldPayment {
    private NewPayment np;
    public NewPaymentAdapter (NewPayment np) {
        this.np = np;
    }
    public void processPayment(double amount) {
        np.charge(amount);
    }
    public void authorizeTransaction(String transactionId) {
        np.confirmAuthorization(transactionId);
    }
    public void refundPayment(String transactionId, double amount) {
        np.issueRefund(transactionId, amount);
    }
}

// Example usage
public class ECommercePlatform {
    public static void main(String[] args) {
        // Create an instance of the new payment gateway
        NewPayment paymentGateway = new NewPaymentGateway();

        // Create an adapter for the payment gateway
        OldPayment paymentAdapter = new NewPaymentAdapter (paymentGateway);

        // Use the adapter to interact with the payment gateway through the old interface
        paymentAdapter.processPayment(100.00);
        paymentAdapter.authorizeTransaction("12345");
        paymentAdapter.refundPayment("12345", 50.00);
    }
}
```

Class diagram: