**MODULE-1**

**DESIGN PATTERN AND PRINCIPLE**

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**Exercise 4: Implementing the Adapter Pattern**

**Main.java**

package adapter;

public class Main {

    public static void main(String[] args) {

        // Using PayPal via adapter

        PaymentProcessor paypal = new PayPalAdapter();

        paypal.processPayment(250.0);

        // Using Stripe via adapter

        PaymentProcessor stripe = new StripeAdapter();

        stripe.processPayment(450.0);

    }

}

**PaymentProcessor.java**

package adapter;

public interface PaymentProcessor {

    void processPayment(double amount);

}

**PayPalAdapter.java**

package adapter;

public class PayPalAdapter implements PaymentProcessor {

    private PayPalGateway payPalGateway;

    public PayPalAdapter() {

        this.payPalGateway = new PayPalGateway();

    }

    @Override

    public void processPayment(double amount) {

        payPalGateway.makeTransaction(amount);

    }

}

**PayPalGateway.java**

package adapter;

public class PayPalGateway {

    public void makeTransaction(double amountInUSD) {

        System.out.println("Processing payment of $" + amountInUSD + " via PayPal.");

    }

}

**StripeAdapter.java**

package adapter;

public class StripeAdapter implements PaymentProcessor {

    private StripeGateway stripeGateway;

    public StripeAdapter() {

        this.stripeGateway = new StripeGateway();

    }

    @Override

    public void processPayment(double amount) {

        stripeGateway.sendPayment(amount);

    }

}

**StripeGateway.java**

package adapter;

public class StripeGateway {

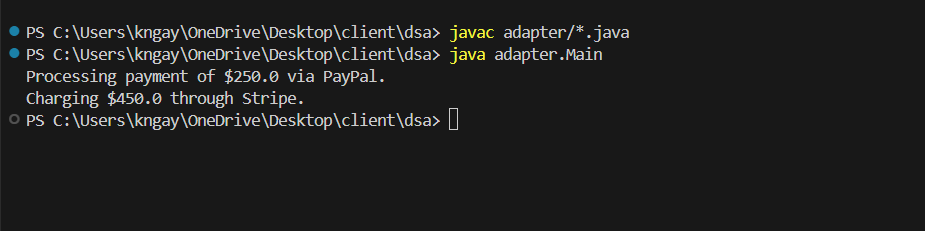
    public void sendPayment(double value) {

        System.out.println("Charging $" + value + " through Stripe.");

    }

}

**OUTPUT:**

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