```java
package main;

import java.util.Scanner;

interface Payment {
    boolean pay(double amount);
}

interface Logger {
    default void log(String message) {
        System.out.println("[LOG] " + message);
    }
}

abstract class AbstractPayment implements Payment, Logger {
    protected boolean validateAmount(double amount) {
        if (amount <= 0) {
            log("Invalid payment amount: " + amount);
            return false;
        }
        return true;
    }
}

class CreditCardPayment extends AbstractPayment {
    public boolean pay(double amount) {
        log("Credit Card Payment Selected");
        if (!validateAmount(amount)) return false;
        log("Processing Credit Card payment of ₹" + amount);
        log("Credit Card payment successful");
        return true;
    }
}

class UpiPayment extends AbstractPayment {
    public boolean pay(double amount) {
        log("UPI Payment Selected");
        if (!validateAmount(amount)) return false;
        log("Processing UPI payment of ₹" + amount);
        log("UPI payment successful");
        return true;
    }
}

class NetBankingPayment extends AbstractPayment {
    public boolean pay(double amount) {
        log("Net Banking Payment Selected");
        if (!validateAmount(amount)) return false;
        log("Processing Net Banking payment of ₹" + amount);
        log("Net Banking payment successful");
```

```java
        return true;
    }
}

class PaymentGateway {
    private Payment paymentMode;

    public void setPaymentMode(Payment paymentMode) {
        this.paymentMode = paymentMode;
    }

    public void processPayment(double amount) {
        if (paymentMode == null) {
            System.out.println("No payment mode selected");
            return;
        }
        boolean status = paymentMode.pay(amount);
        if (!status) {
            System.out.println("Payment failed");
        } else {
            System.out.println("Payment completed successfully");
        }
    }
}

public class PaymentGatewaySimulator {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        PaymentGateway gateway = new PaymentGateway();

        System.out.println("1. Credit Card");
        System.out.println("2. UPI");
        System.out.println("3. Net Banking");
        System.out.print("Choose Payment Mode: ");

        int choice = sc.nextInt();

        switch (choice) {
            case 1 -> gateway.setPaymentMode(new CreditCardPayment());
            case 2 -> gateway.setPaymentMode(new UpiPayment());
            case 3 -> gateway.setPaymentMode(new NetBankingPayment());
            default -> {
                System.out.println("Invalid payment mode");
                return;
            }
        }

        System.out.print("Enter Amount: ₹");
        double amount = sc.nextDouble();
```
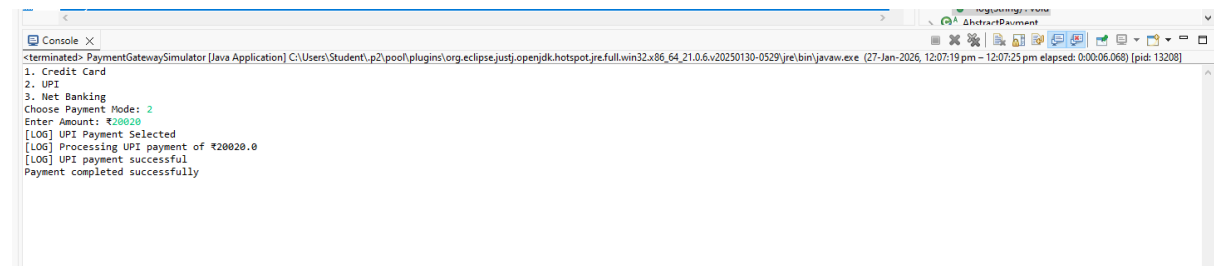
```
        gateway.processPayment(amount);
        sc.close();
    }
}
```

Output:

```
1. Credit Card
2. UPI
3. Net Banking
Choose Payment Mode: 2
Enter Amount: ₹20020
[LOG] UPI Payment Selected
[LOG] Processing UPI payment of ₹20020.0
[LOG] UPI payment successful
Payment completed successfully
```