

OOPL Assignment 10

Strategy Design Pattern

Name : Atharva Kinikar

Div :- SE10

Batch :- F10

Roll No : 23241

Code :-

```
/*
Name :- Atharva Kinikar
Div :- SE10
Batch :- F10
Roll.No :- 23241
*/

import java.util.Scanner;

//===== INTERFACE PaymentProcessor
=====//
interface PaymentProcessor {

    void pay(int amount); // interface method pay
}

// ===== CLASS CreditCard
=====//
// implementing PaymentProcessor interface
class CreditCard implements PaymentProcessor {
    Scanner sc = new Scanner(System.in); // creating object
of scanner class
    String name, ExpDate; // declaration of name, ExpDate
    double CardNo; // declaration of CardNo

    // Constructor of CreditCard class
```

```

    CreditCard() {
        super();// calling parent class constructor
        System.out.println("-----
-----");
        System.out.print("\tCard holder Name :: ");//
printing on console
        this.name = sc.next();// taking Card holder Name as
input from user
        System.out.print("\tCard Number :: ");// printing on
console
        this.CardNo = sc.nextDouble();// taking Card Number
as input from user
        System.out.print("\tCard Expire Date :: ");//
printing on console
        this.ExpDate = sc.next();// taking Card Expire Date
as input from user
        System.out.println("-----
-----");
    }

    @Override
    public void pay(int amount) { // method for payment
        System.out.println("-----
-----");
        System.out.println("Paying through CreditCard
payment: Charging $" + amount);
        System.out.println("-----
-----");
    }
}

// ===== CLASS PayPal
=====//
// implementing PaymentProcessor interface
class PayPal implements PaymentProcessor {

    // Constructor of PayPal class

```

```

        PayPal() {
            super();// calling parent class constructor
            System.out.println("\nChecking Internet
Connection.....");
        }

        @Override
        public void pay(int amount) { // method for payment
            System.out.println("-----
-----");
            System.out.println("Paying through PayPal payment:
Charging $" + amount);
            System.out.println("-----
-----");
        }
    }

// ===== CLASS BitCoin
=====//
// implementing PaymentProcessor interface
class BitCoin implements PaymentProcessor {
    Scanner sc = new Scanner(System.in);// creating object
of scanner class
    String add;// declaration of add

    // Constructor of BitCoin class
    BitCoin() {
        super();// calling parent class constructor
        System.out.print("\nEnter Transaction 'Input
Address' :: ");// asking user of address
        add = sc.next();// taking 'INPUT ADDRESS' as input
from user

    }

    @Override
    public void pay(int amount) { // method for payment

```

```

        System.out.println("-----
        -----");
        System.out.println("Paying through BitCoin payment:
        Charging $" + amount);
        System.out.println("-----
        -----");
    }
}

// ===== CLASS Order
=====//

class Order {

    private final PaymentProcessor paymentProcessor;//
    declaration of paymentProcessor object
    private final int amount;// declaration of amount

    // Order Method
    public Order(int amount, PaymentProcessor
    paymentProcessor) {
        this.amount = amount;// storing value
        this.paymentProcessor = paymentProcessor;// storing
        value
    }

    // process Method
    public void process() {
        paymentProcessor.pay(amount);// calling pay method
    }
}

// ===== CLASS Main
=====//

public class App {
    // calling static void main method

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    public static void main(String[] args) {
        int c, amt = 0; // declaration of c, amt
        Order order; // reference of order assign to order
obj
        Scanner sc = new Scanner(System.in); // creating
object of scanner class
        while (true) { // while loop for menu driven
            System.out.println();
            // menu bar
            System.out.println("** SHOPING CART **");
            System.out.print("1.Credit Card \n2.PayPal
\n3.BitCoin \n4.Exit");
            System.out.print("\n\nEnter the Choice ::");
            c = sc.nextInt(); // taking input from user
            System.out.println("-----
-----");
            if (c == 1 || c == 2 || c == 3) { // check
whether 0<c<4
                System.out.print("\nEnter amount to be
Transfer :: ");
                amt = sc.nextInt(); // taking amt as input
from user
                System.out.println("-----
-----");
            }
            // switch case
            switch (c) {
                case 1: // for input c ==1
                    order = new Order(amt, new
CreditCard()); // creating obj of order class
                    order.process(); // calling process
method of order class
                    break;

                case 2: // for input c == 2
                    order = new Order(amt, new PayPal()); //
creating obj of order class

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        order.process();// calling process
method of order class
        break;

        case 3:// for input c == 3
            order = new Order(amt, new BitCoin());//
creating obj of order class
            order.process();// calling process
method of order class
            break;

        case 4:
            System.out.println("\nThank you For
Shopping !!!! ");// printing on console
            System.out.println("-----
-----");
            return;// stop execution of program

        default:
            System.out.println("Invalid Payment Mode
!!!");// default
            System.out.println("-----
-----");
    }
}
}
}
}

```

Output :-

**** SHOPING CART ****

- 1.Credit Card
- 2.PayPal
- 3.BitCoin
- 4.Exit

Enter the Choice ::1

Enter amount tobe Tranfer :: 2000

Card holder Name :: atharva

Card Number :: 123456789

Card Expire Date :: 12/25

Paying through CreditCard payment: Charging \$2000

**** SHOPING CART ****

Checking Internet Connection.....

Paying through PayPal payment: Charging \$5000

**** SHOPING CART ****

- 1.Credit Card
- 2.PayPal
- 3.BitCoin
- 4.Exit

Enter the Choice ::3

Enter amount tobe Tranfer :: 10000

Enter Transaction 'Input Address' :: 5342.9324.2671.1354

Paying through BitCoin payment: Charging \$10000

**** SHOPING CART ****

- 1.Credit Card
- 2.PayPal
- 3.BitCoin
- 4.Exit

Enter the Choice ::4

Thank you For Shopping !!!!
