Assignment - 11 - (OOP)

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**package** javaprogr;

**public** **interface** PaymentInterface {

**void** billPay(**double** price);

}

**package** javaprogr;

**public** **class** PayByBitcoin **implements** PaymentInterface {

@Override

**public** **void** billPay(**double** price) {

price = price - price \* 0.025;

System.*out*.println("Total amount to be paid by using Bitcoin is : " + (price/1530000) +" bitcoins");

}

}

// price of one bitcoin is around Rs.15,30,000

**package** javaprogr;

**public** **class** PayByCreditCard **implements** PaymentInterface {

@Override

**public** **void** billPay(**double** price) {

price = price + price \* 0.02;

System.*out*.println("Total Amount to be paid by using Credit Card is : Rs " + price);

}

}

// By using credit card we have to pay transaction charges for merchandise i.e. 2%

**package** javaprogr;

**public** **class** PayByPaypal **implements** PaymentInterface {

@Override

**public** **void** billPay(**double** price) {

price = price - price \* 0.03;

System.*out*.println("Total Amount to be paid by using PayPal is : Rs " + price);

}

}

// paypal gives us on an average of 3% discount

**package** javaprogr;

**public** **class** Payment {

**private** PaymentInterface pay;

**public** Payment(PaymentInterface pay) {

**this**.pay = pay;

}

**public** PaymentInterface getPayment() {

**return** pay;

}

**public** **void** payAmount(**double** price) {

pay.billPay(price);

}

}

**package** javaprogr;

**import** java.util.\*;

**public** **class** StrategyPattern {

**public** **static** **void** main(String[] args) {

Scanner sc = **new** Scanner(System.*in*);

System.*out*.println("Enter the total Amount to be paid : ");

**double** amount;

amount = sc.nextDouble();

PaymentInterface creditCP = **new** PayByCreditCard();

PaymentInterface bitcoinP = **new** PayByBitcoin();

PaymentInterface payPalP = **new** PayByPaypal();

Payment paymentStrategy = **new** Payment(creditCP);

paymentStrategy.payAmount(amount);

paymentStrategy = **new** Payment(bitcoinP);

paymentStrategy.payAmount(amount);

paymentStrategy = **new** Payment(payPalP);

paymentStrategy.payAmount(amount);

}

}

**Output :**

Enter the total Amount to be paid :

45000.50

Total Amount to be paid by using Credit Card is : Rs 45900.51

Total amount to be paid by using Bitcoin is : 0.028676789215686276 bitcoins

Total Amount to be paid by using PayPal is : Rs 43650.485