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class BankAccount {

    //instance variables or Data fields
    private String name;
    private int acctNum;
    private double balance;
    private CreditCard myCard;

    //2 Constructors
    public BankAccount(String myName, int myAcctNum, double myBalance, int myCardNumber) {
        this.name = myName;
        this.acctNum = myAcctNum;
        this.balance = myBalance;
        this.myCard = new CreditCard(myCardNumber, 0.0);
    }

    //defalut constructor
    public BankAccount() {
        name = "";
        acctNum = 0000;
        balance = 0;
        myCard = new CreditCard(0000, 0.0);
    }

    //Accessor Methods
    public String getName() {
        return name;
    }

    public double getBalance() {
        return balance;
    }

    public int getBankAcctNum() {
        return this.acctNum;
    }

    public int getCreditCardNum() {
        return this.myCard.getNum();
    }

    public double getDeptOwed() {
        return this.myCard.getCardBalance();
    }
}

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//Mutator Methods
public void setName(String name) {
    this.name = name;
}
public void setAccountNumber(int accountNum) {
    acctNum = accountNum;
}
public void withdraw(double amount) {
    if(balance - amount < 0){
        System.out.print("Transaction denied.  Insufficient funds");
    } else {
        balance -= amount;
    }
}

public void deposit(double amount) {
    balance += amount;
}

public void chargeCard(double amt) {
    this.myCard.charge(amt);
}

public void remitCard(double amt) {
    this.myCard.repay(amt);
}

public String toString() {
    return "My name is: " + this.name + "\n My account number is: " + this.acctNum +
        "\n My Bank Account Balance is: " + this.balance + "\n My credit card information is: " + this.myCard;
}
}

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class CreditCard {
    private int cardNum;
    private double debtOwed;

    public CreditCard(int num, double balance) {
        cardNum = num;
        debtOwed = balance;
    }

    public CreditCard() {
        cardNum = 0000;
        debtOwed = 0.0;
    }

    public int getNum() {
        return cardNum;
    }

    public double getCardBalance() {
        return debtOwed;
    }

    public void charge(double amt) {
        debtOwed += amt;
    }

    public void repay(double amt) {
        debtOwed -= amt;
    }

    public String toString() {
        return "My credit card number is: " + this.cardNum +
            "\n My credit card balance is: " + this.debtOwed;
    }
}

public class BankAccountTest {
    public static void main(String[] args) {
        BankAccount tom = new BankAccount("Tom", 1111, 500.00, 2222);
        tom.chargeCard(200.00);
        System.out.println(tom);
    }
}
```


