

```
import java.util.Scanner;

public class Account
{
    private static long accountCounter=0;
    protected String customerName;
    protected String accountNumber;
    protected String accountType;
    protected double balance;

    public Account(){
    }

    public void getData(Scanner sc, String accountType, long accountCount)
    {
        System.out.print("Enter customer name:");
        customerName = sc.nextLine();

        accountNumber = (++accountCounter)+"-"+accountType+"-"+accountCount;
        System.out.print("Enter initial Balance:");
        balance = sc.nextDouble();
        display();
    }

    public void display()
    {
        System.out.println(
            "\nName:"+customerName+
            "\nAcc No:"+accountNumber+
            "\nBalance:"+balance);
    }

    public void withdrawal(double amount)
    {
        if(balance-amount>0)
        {
            balance -= amount;
            System.out.println("Withdrawn "+amount+
                ". Balance:"+balance);
        }
        else
        {
            System.out.println("Transaction failed.");
        }
    }

    public void deposit(double amount)
    {
        balance += amount;
        System.out.println("Deposited "+amount+
            ". Balance:"+balance);
    }

    public void getBalance(){
        System.out.println("Balance:"+balance);
    }

    public String getAccountNumber(){return accountNumber;}

    public void addInterest(){}
}

class SavingsAccount extends Account
{
    static public double interestRate=0.05;
    static long count=0;
    SavingsAccount(){

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    }

    public void getData(){
        Scanner sc = new Scanner(System.in);
        accountType = "S";
        super.getData(sc, accountType, ++count);
    }

    public void addInterest(){
        balance += balance*interestRate;
    }
}

class CurrentAccount extends Account
{
    static long minimumBalance = 5000;
    static long count=0;
    String chequeBook = "";
    CurrentAccount(){
    }

    public void getData(){
        Scanner sc = new Scanner(System.in);

        accountType = "C";
        super.getData(sc, accountType, ++count);
    }

    public void withdrawal(double amount){
        if (balance-amount < minimumBalance)
        {
            double serviceCharge = amount * 0.1;
            System.out.println("Transaction to go below minimum balance("+
                minimumBalance+"). Service charge of "+
                serviceCharge+" levied for the transaction");

            super.withdrawal(amount+serviceCharge);
            return;
        }
        super.withdrawal(amount);
    }

    public void addCheque(String s)
    {
        chequeBook = chequeBook+s+"\n";
    }
}
```

```
import java.util.Scanner;

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

        SavingsAccount[] sa = new SavingsAccount[10];
        CurrentAccount[] ca = new CurrentAccount[10];

        int sIndex=0, cIndex=0;

        System.out.println("1. Savings\n2. Current\n3. Deposit\n4. Withdraw\n5. Interest\n6. Display\n7. Cheque\n0. Exit");
        int choice;

        do
        {
            System.out.print("\nEnter choice:");
            choice = sc.nextInt();

            switch(choice)
            {
                case 1 :sa[sIndex]=new SavingsAccount();
                        sa[sIndex++].getData();
                        break;
                case 2 :ca[cIndex]=new CurrentAccount();
                        ca[cIndex++].getData();
                        break;
                case 3 :System.out.print("Enter Account number:");
                        String accno = sc.next().strip().toUpperCase();

                        if(accno.charAt(1)=='S')
                        {
                            for(int i=0;i<sIndex;i++)
                            {
                                if(sa[i].getAccountNumber().equals(
accno))
                                {
                                    System.out.print("Enter amount:");
                                    double amount = sc.nextDouble();
                                    sa[i].deposit(amount);
                                }
                            }
                        }
                        else if(accno.charAt(1)=='C')
                        {
                            for(int i=0;i<cIndex;i++)
                            {
                                if(ca[i].getAccountNumber().equals(
accno))
                                {
                                    System.out.print("Enter amount:");
                                    double amount = sc.nextDouble();
                                    ca[i].deposit(amount);
                                }
                            }
                        }
                        else
                        {
                            System.out.println("Invalid account no.");
                        }
                    }
            }
        }
    }
}
```

```

        break;
    case 4 :System.out.print("Enter Account number:");
        String accnumber = sc.next().strip().toUpperCase();

        if(accnumber.charAt(1)=='S')
        {
            for(int i=0;i<sIndex;i++)
            {
                if(sa[i].getAccountNumber().equals(
accnumber))
                {
                    System.out.print("Enter amo
unt:");
                    double amount = sc.nextDoub
le();
                    sa[i].withdrawal(amount);
                }
            }
        }
        else if(accnumber.charAt(1)=='C')
        {
            for(int i=0;i<cIndex;i++)
            {
                if(ca[i].getAccountNumber().equals(
accnumber))
                {
                    System.out.print("Enter amo
unt:");
                    double amount = sc.nextDoub
le();
                    ca[i].withdrawal(amount);
                }
            }
        }
        else
        {
            System.out.println("Invalid account no.");
        }
        break;
    case 5 :for(SavingsAccount s: sa)
        {
            if(s!=null)
            {
                s.addInterest();
            }
        }
        System.out.println("Added Interest");
        break;
    case 6:
        // Display Savings Accounts
        for (SavingsAccount a : sa) {
            if (a != null) { // Check if the account i
                a.display();
            }
        }
        // Display Current Accounts
        for (CurrentAccount b : ca) {
            if (b != null) { // Check if the account i
                b.display();
            }
        }
        break;
    case 7: System.out.print("Enter Account No:");
        String accNo = sc.next().strip().toUpperCase();
        if(accNo.charAt(1)=='C')

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        {
            System.out.print("Enter Cheque No:");
            String checkNumber = sc.next().strip().toUp
perCase();

            for(CurrentAccount c: ca)
            {
                if(c!=null && c.getAccountNumber().
equals(accNo))

                    c.addCheque(checkNumber);
            }
            System.out.println("Added Cheque");
        }
        else
        {
            System.out.println("Invalid Account");
        }
        break;
    case 0: break;
    default: System.out.println("Invalid Input");
}

        }
        sc.nextLine();
    }while(choice!=0);

    System.out.println("Exiting...");
    sc.close();
}

}
```

```
> javac *.java
```

```
> java Bank
```

1. Savings
2. Current
3. Deposit
4. Withdraw
5. Interest
6. Display
7. Cheque
0. Exit

```
Enter choice:1
```

```
Enter customer name:Sean
```

```
Enter initial Balance:5000
```

```
Name:Sean
```

```
Acc No:1S1
```

```
Balance:5000.0
```

```
Enter choice:2
```

```
Enter customer name:John
```

```
Enter initial Balance:5420.15
```

```
Name:John
```

```
Acc No:2C1
```

```
Balance:5420.15
```

```
Enter choice:3
```

```
Enter Account number:1s1
```

```
Enter amount:500
```

```
Deposited 500.0. Balance:5500.0
```

```
Enter choice:4
```

```
Enter Account number:2C1
```

```
Enter amount:500
```

```
Transaction to go below minimum balance(5000). Service charge of 50.0 levied for the transaction
```

Enter choice:4

Enter Account number:2C1

Enter amount:500

Transaction to go below minimum balance(5000). Service charge of 50.0 levied for the transaction  
Withdrawn 550.0. Balance:4870.15

Enter choice:4

Enter Account number:2C1

Enter amount:5000

Transaction to go below minimum balance(5000). Service charge of 500.0 levied for the transaction  
Transaction failed.

Enter choice:5

Added Interest

Enter choice:6

Name:Sean

Acc No:1S1

Balance:5775.0

Name:John

Acc No:2C1

Balance:4870.15

Enter choice:7

Enter Account No:2C1

Enter Cheque No:SQ12

Added Cheque

Enter choice:0

Exiting...