import java.util.\*;

class Account

{

String customerName;

int accountNum;

double balance;

Account(String customerName,int accountNum,double balance)

{

this.customerName=customerName;

this.accountNum=accountNum;

this.balance=balance;

}

void deposit(double amount)

{

balance=balance+amount;

System.out.println("Balance after Deposit = "+balance);

}

void withdraw(double amount)

{

if(amount > balance)

System.out.println("Insufficient Balance in Account");

else

{

balance=balance-amount;

System.out.println("Balance after Withdraw = "+balance);

}

}

void getBalance()

{

System.out.println("Balance = "+balance);

}

}

class savingAccount extends Account

{

double interestRate;

savingAccount(String customerName, int accountNumber, double balance, double interestRate)

{

super(customerName, accountNumber, balance);

this.interestRate = interestRate;

}

void calcInterest()

{

double interest = (super.balance\*interestRate)/100;

System.out.println("Interest is "+interest);

}

}

class currentAccount extends Account

{

double MIN\_BALANCE = 500.0;

double SERVICE\_CHARGE = 50.0;

currentAccount(String customerName, int accountNumber, double balance)

{

super(customerName, accountNumber, balance);

}

void withdraw(double amount)

{

if(amount > balance)

System.out.println("Insufficient Balance in Account");

else if(balance-amount<MIN\_BALANCE)

{

System.out.println("Service charge will be imposed");

balance=balance-SERVICE\_CHARGE;

System.out.println("Balance after Service charge imposed = "+balance);

}

else

{

balance=balance-amount;

System.out.println("Balance after Withdraw = "+balance);

}

}

}

class Bank

{

public static void main(String args[])

{

Scanner s=new Scanner(System.in);

System.out.println("Enter the Name and Account Number And Balance, Interest Rate");

String customerName=s.nextLine();

int accountNum=s.nextInt();

double balance=s.nextDouble();

double interestRate=5;

savingAccount sa=new savingAccount(customerName,accountNum,balance,interestRate);

currentAccount ca=new currentAccount(customerName,accountNum,balance);

System.out.println("Which type of account do you have?\n 1.Saving Account\n 2.Current Account");

int type=s.nextInt();

while(true)

{

System.out.println("-----------Enter your choice----------\n1.Deposit\n2.withdraw\n3.Interest Calculation\n4.Account Details\n5.Exit");

int choice=s.nextInt();

int count=0;

switch(choice)

{

case 1:

{

System.out.println("Enter the amount : ");

double amount=s.nextDouble();

if(type==1)

sa.deposit(amount);

else

ca.deposit(amount);

break;

}

case 2:

{

System.out.println("Enter the amount : ");

double amount=s.nextDouble();

if(type==1)

sa.withdraw(amount);

else

ca.withdraw(amount);

break;

}

case 3:

{

if(type==1)

sa.calcInterest();

else

System.out.println("not possible for current account");

break;

}

case 4:

{

System.out.println("Customer Name "+customerName);

System.out.println("Account Number "+accountNum);

System.out.println("Account Type "+type);

if(type==1)

sa.getBalance();

else

ca.getBalance();

break;

}

default:System.out.println("Invalid choice");

count=1;

break;

}

if(count==1)

break;

}

}

}