Lab program 5

import java.util.Scanner;

abstract class Account {

String cName, accType;

long accNo;

double bal;

final double minBal = 1000.0;

Account(String cName, long accNo, double bal, String accType) {

this.accNo = accNo;

this.cName = cName;

this.bal = bal;

this.accType = accType;

}

abstract void addBal(double amt);

abstract void dispBal();

abstract void withBal(double amt);

}

class Curr\_acct extends Account {

Curr\_acct(String cName, long accNo, double bal) {

super(cName, accNo, bal, "Current");

System.out.println("Name: "+cName+"\taccno: "+accNo+"\tbal: "+bal+"\ttype: "+accType);

}

void addBal(double amt){

this.bal += amt;

}

void dispBal(){

System.out.println("Your balance is: " + this.bal);

}

void checkBal() {

if (this.bal < minBal) {

System.out.println("Insufficient balance, penalty imposed");

this.bal -= this.bal \* 0.02;

}

}

void withBal(double amt){

this.bal -= amt;

checkBal();

}

}

class Sav\_acct extends Account {

Sav\_acct(String cName, long accNo, double bal) {

super(cName, accNo, bal, "Savings");

System.out.println("name: " + cName + "\taccno: " + accNo + "\tbal: " + bal + "\ttype: " + accType);

}

void addBal(double amt){

this.bal += amt;

addIntr(); }

void addIntr() {

this.bal += this.bal \* 0.07;

}

void dispBal(){

System.out.println("Your balance including interest: " + this.bal );

}

void withBal(double amt){

this.bal -= amt;

}

}

class Bank {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

Double amt;

System.out.println("Enter your details:");

System.out.print("Name:");

String x=sc.next();

System.out.println("Account Number:");

long y=sc.nextLong();

for(;;)

{

System.out.println("Type of account:1.Current account\n2.Savings account\n3.Exit");

int t=sc.nextInt();

if(t==1){

System.out.println("The current account provides cheque book facility but no interest.");

Curr\_acct c = new Curr\_acct(x, y, 1000);

for(;;)

{

System.out.println("1:Deposit\n2:Display Balance\n3:Withdraw\n4:Exit");

int ch = sc.nextInt();

switch (ch){

case 1:

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

amt = sc.nextDouble();

c.addBal(amt);

break;

case 2:

c.dispBal();

break;

case 3:

System.out.println("Enter the amount to be withdrawn:");

amt = sc.nextDouble();

c.withBal(amt);

break;

case 4:System.exit(0);

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

}

}

}

else if(t==2){

System.out.println("The savings account provides compound interest and withdrawal facilities but no cheque book facility.");

Sav\_acct s = new Sav\_acct(x, y, 1000);

for(;;) {

System.out.println("1:Deposit\n2:Display Balance\n3:Withdraw\n4:Exit");

int ch = sc.nextInt();

switch (ch) {

case 1:

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

amt = sc.nextDouble();

s.addBal(amt);

break;

case 2:

s.dispBal();

break;

case 3:

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

amt = sc.nextDouble() ;

s.withBal(amt);

break;

case 4:System.exit(0);

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

}

}

}

else if(t==3)

System.exit(0);

else

System.out.println("Invalid choice! Try again");

}

}

}

