LAB PROGRAM 5

import java.util.\*;

class Account {

String customer\_name;

String account\_no;

double balance;

public Account(String customer\_name, String account\_no, double initialBalance) {

this.customer\_name = customer\_name;

this.account\_no= account\_no;

this.balance = initialBalance;

}

public void deposit(double amount) {

if (amount > 0)

{

balance = balance + amount;

System.out.println("Deposited: " + amount);

}

else {

System.out.println("Invalid Amount");

}

}

public void withdraw(double amount){

if(amount>0 && amount<=balance)

{

balance=balance-amount;

System.out.println("Amount withdrawn: " + amount);

}

else

{

System.out.println("Insufficient funds");

}

}

public void displayBalance() {

System.out.println("The account balance is: " + balance);

}

}

class SavAcc extends Account  
{

double interestrate;

public SavAcc(String customer\_name,String account\_no,double initialBalance,double interestrate)

{

super(customer\_name,account\_no,initialBalance);

this.interestrate=interestrate;

}  
public void depositinterest()  
{

double interest=balance\*interestrate/100;  
deposit(interest);  
System.out.println("Interest deposited" + interest);

}  
}  
class CurAcc extends Account  
{

double minimum\_balance;  
double service\_charges;  
public CurAcc(String customer\_name,String account\_no,double initialBalance, double minimum\_balance,double service\_charges)  
{

super(customer\_name,account\_no,initialBalance);  
this.minimum\_balance=minimum\_balance;  
this.service\_charges=service\_charges;

}  
public void withdraw(double amount)  
{

super.withdraw(amount);

if(amount>0 && amount<=balance)  
{

if (balance<minimum\_balance)  
{

imposeServiceCharge();  
}

}  
else  
{

System.out.println("Insufficient funds");

}

}

public void imposeServiceCharge()

{

balance=balance-service\_charges;

System.out.println("Imposed service charges");

}

}

public class Bank {

public static void main(String[] args) {

Scanner input=new Scanner(System.in);

System.out.println("Enter Account type\n 1.Savings\n2.Current");

int type = input.nextInt();

input.nextLine();

System.out.print("Enter name: ");

String name = input.nextLine();

System.out.print("Enter account no: ");

String accno = input.nextLine();

Account account=null;

if (type == 1) {

System.out.println("Enter initial balance: ");

double intilalBalance=input.nextDouble();

System.out.print("Enter interest rate: ");

double interestRate = input.nextDouble();

account = new SavAcc(name, accno,initialBalance, interestRate);

}

else {

System.out.println("Enter initial balance: ");

double initialBalance=input.nextDouble();

System.out.print("Enter minimum balance: ");

double minBal = input.nextDouble();

System.out.print("Enter service charge: ");

double serviceCharge = input.nextDouble();

account = new CurAcc(name, accno,initialBalance,minBal, serviceCharge);

}

do {

System.out.println("\nServices available:");

System.out.println("1. Deposit");

System.out.println("2. Withdraw");

System.out.println("3. Display Balance");

System.out.println("4. Credit Interest (for savings only)");

System.out.println("5. Exit");

System.out.print("Enter choice: ");

int choice = input.nextInt();

switch (choice) {

case 1:

System.out.print("Enter amount to deposit: ");

double amount = input.nextDouble();

account.deposit(amount);

break;

case 2:

System.out.print("Enter amount to withdraw: ");

double amount = input.nextDouble();

account.withdraw(amount);

break;

case 3:

account.displayBalance();

break;

case 4:

account.depositInterest();

break;

case 5:

System.out.println("Thank you!");

break;

default:

System.out.println("Invalid input");

break;

}

} while (choice != 5);

}

}