Page No.
Date

Lab program I

Develope Java program to create class Bank that maintains 2 kinds of accounts for its customers, one called savings account and other current account. Savings account provides compound interest and withdrawal facilities but no cheque book facilities. The current account provides cheque book facilities but no interest. Current account holders should also maintain minimum balance and if balance falls below this level, service charge is imposed.
Create ~~Account~~ class Account that stores customer name, account number and type of account. From this derive classes cur_acct and sav_acct to make them more specific to their order to achieve following tasks:
(a) Accept deposit from customer & update balance
(b) Display balance
(c) Compute & deposit interest
(d) Permit withdrawal & update balance
Check for minimal balance, impose penalty if necessary & update the balance.

```
import java.util.Scanner;
class Account {
    String custName;
    String accNum;
    double deposit;
    double balance;
    double withdrawalAmt;

    void getdl() {
        Scanner sc = new Scanner (System.in);
        System.out.println ("Enter customer name");
```

```
custName = sc.nextLine();
System.out.println("Enter customer account number");
accNum = sc.nextLine();
System.out.println("Enter deposit amount");
deposit = sc.nextDouble();
balance = deposit;
System.out.println();
}
Void putd() {
    System.out.println("Customer name: " + custName);
    System.out.println("Account number: " + accNum);
    System.out.println();
}
}

class CurAcct extends Account {
    Void balanceCheck() {
        if (balance <= 1000) {
            System.out.println("You have less than
                minimum balance! 500 is
                deducted");
            balance -= 500;
        }
    }
    Void calcDisplayBalance() {
        System.out.println("Current account details");
        putd();
        System.out.println("Enter amount to be withdrawn");
        Scanner sc = new Scanner(System.in);
        withdrawalAmt = sc.nextDouble();
        balance -= withdrawalAmt;
        balanceCheck();
        System.out.println("Balance (after checking with minimal
        System.out.println();                balance): " + balance);
```

```
    }
}

class SavAcc extends Account {
    void interestCalc() {
        balance = balance + (0.07 * balance);
    }
    void calcDisplayBalance() {
        Scanner sc = new Scanner(System.in);
        System.out.println("Savings account details");
        putd();
        System.out.println("Enter amount to be withdrawn");
        withdrawalAmt = sc.nextDouble();
        balance -= withdrawalAmt;
        System.out.println("Balance before addition of
                                    interest: " + balance);
        interestCalc();
        System.out.println("Balance after addition of
                                    interest: " + balance);
        System.out.println();
    }
}

class Bank {
    public static void main(String args[]) {
        Scanner sc = new Scanner(System.in);
        String accType;
        System.out.println("Enter account type (savings
                                    account / current account)");
        accType = sc.nextLine();
        if (accType.equals("savings account")) {
            SavAcc sacc = new SavAcc();
            sacc.getd();
```

```
        sacc.calcDisplayBalance();
    }
    else if (accType.equals("Current account")) {
        CurAcc cacc = new CurAcc();
        cacc.getdl();
        cacc.calcDisplayBalance();
    }
    else {
        System.out.println("Enter a valid account type");
    }
}
}
```

Output:

```
Enter type of account (Savings account / Current account)
Savings account
Enter customer name
Sinchana
Enter customer account number
123AB43C
Enter deposit amount
25000

Savings account details:
Customer name: Sinchana
Account number: 123AB43C

Enter amount to be withdrawn
10000
Balance before addition of interest: 15000.0
Balance after addition of interest : 16050.0
```

10/11/24

```
import java.util.Scanner;
class Account {
	String custName;
	String accNum;
	double deposit;
	double balance;
	double withdrawalAmt;

	void getd() {
	Scanner sc = new Scanner(System.in);
	System.out.println("Enter the customer name");
	custName = sc.nextLine();
	System.out.println("Enter the customer account number");
	accNum = sc.nextLine();
	System.out.println("Enter the deposit amount");
	deposit = sc.nextDouble();
	balance=deposit;
	System.out.println();

	}
	void putd() {
	System.out.println("Customer name: "+custName);
	System.out.println("Account number: "+accNum);
	System.out.println();
	}
}

class CurAcct extends Account {
	void balanceCheck() {
		if (balance<=1000) {
			System.out.println("You have less than minimum balance! 500rs deducted");
```

```
                        balance-=500;
                }
        }
        void calcDisplayBalance() {
                System.out.println("Current account details");
                putd();
                System.out.println("Enter amount to be withdrawn");
                Scanner sc = new Scanner(System.in);
                withdrawalAmt = sc.nextDouble();
                balance-=withdrawalAmt;
                balanceCheck();
                System.out.println("Balance (after checking with minimum balance): "+balance);
                System.out.println();
        }
}

class SavAcct extends Account {
        void interestCalc() {
        balance=balance+(0.07*balance);
        }
        void calcDisplayBalance() {
        Scanner sc = new Scanner(System.in);
        System.out.println("Savings account details");
        putd();
        System.out.println("Enter amount to be withdrawn");
        withdrawalAmt = sc.nextDouble();
        balance-=withdrawalAmt;
        System.out.println("Balance before addition of compound interest: "+balance);
        interestCalc();
        System.out.println("Balance after compound interest addition: "+balance);
        System.out.println();
```

```
	}
}

class Bank {
	public static void main(String args[]) {
		Scanner sc = new Scanner(System.in);
		String accType;
		System.out.println("Enter the type of account (Savings account or Current account)");
		accType = sc.nextLine();
		if (accType.equals("Savings account")) {
			SavAcct sacc = new SavAcct();
			sacc.getd();
			sacc.calcDisplayBalance();
		}
		else if (accType.equals("Current account")) {
			CurAcct cacc = new CurAcct();
			cacc.getd();
			cacc.calcDisplayBalance();
		}
		else {
			System.out.println("Enter a valid account type");
		}
	}
}
```

```
D:\1BM23CS330>java Bank
Enter the type of account (Savings account or Current account)
Savings account
Enter the customer name
Sinchana Hemanth
Enter the customer account number
123AB43C
Enter the deposit amount
25000

Savings account details
Customer name: Sinchana Hemanth
Account number: 123AB43C

Enter amount to be withdrawn
10000
Balance before addition of compound interest: 15000.0
Balance after compound interest addition: 16050.0


D:\1BM23CS330>java Bank
Enter the type of account (Savings account or Current account)
Current account
Enter the customer name
Sinchana Hemanth
Enter the customer account number
567NMD0S
Enter the deposit amount
15000

Current account details
Customer name: Sinchana Hemanth
Account number: 567NMD0S

Enter amount to be withdrawn
14000
You have less than minimum balance! 500rs deducted
Balance (after checking with minimum balance): 500.0
```