PAGE :
DATE : 01/01/24

LAB-5

1) Develop a Java program to create a class Bank that maintains two kinds of account for its customers, one called savings account and the other current account. The Saving account provides Compound interest and withdrawal facilities but no cheque book facility. The current account provides cheque book facility but no interest. current account holders should also maintain a minimum balance and if the balance falls below this level a service charge is imposed.

→ Create a class, Account that Stores customer name, account number and type of account. From this derive the classes Cur-acct and Sav-acct to make them more specific to their requirements. Include the necessary methods in order to achieve the following task:

a) Accept deposit from customer and update the balance.
b) display the balance.
c) Compute and deposit interest
d) Permit withdrawal and update the balance

Check for the minimum balance, impose penalty if necessary and update the balance.

Solve:

```
import java.util.*;

class account{
    String customer_name;
    int acc_no;
    String type;
    double balance;

    account (String name, int no, String
        type, double balance)
    {
        customer_name = name;
        acc_no = no;
        This.type = type;
        This.balance = balance;
    }

void deposit (double amount)
{
    balance += amount;
}

void withdraw (double amount)
{
    if ((balance - amount) >0)
        balance -=amount;
    else
        System.out.println("Insufficient
                balance");
```

```
void display(){
    System.out.println("Name: " +
    customer_name + "\n" + "account
    number:" + acc_no + "\n" + "type"
    + type + "\n" + "Balance:" + balance);
  }

}

Class Sav_acc extends account{

    private static double rate = 2;
    Sav_acc(String name, int acc_no,
            double balance)
    {
      Super(name, acc_no, "Savings", balance)
    }

    Void interest()
    {
      balance += balance * (rate)/100
      System.out.println("balance:" +balance)
    }
}

Class curr_acc extends account{
    curr_acc(String name, int acc_no,
            double balance)
    {
      Super(name, acc_no, "current", balance)
    }
```

```
private double minbal = 850;
private double servicecharge = 100;

void checkmin(){
    if (balance < minbal)
    {
      System.out.println("Insufficient
    balance so service charges are
    Subtracted from your balance
      amount");
    balance -= servicecharges;
    System.out.println("Balance is:"
                        +balance);
    }
}
}

public class bank{

    public static void main(String
    args[])
{
    Scanner s = new Scanner(System.in);
    System.out.println("Enter the
                        name:");
    String name = s.next();
    System.out.println("Enter the type
        (current/Savings)");
    String type = s.next();
    System.out.println("Enter the
```

```
account Number");
int acc_no = S.nextInt();
System.out.println("Enter the initial
    balance:")
double balance = S.nextDouble();
int ch;
double amount1, amount2;
account acc = new account(name, acc_no,
Sav_acc sa = type, balance);
Curr_acc ca =
Sav_acc sa = new Sav_acc(name, acc_no
                balance);
Curr_acc ca = new Curr_acc(name,
                acc_no, balance);

while(true)
{
  if(acc.type.equals("Savings"))
  {
    System.out.println("\n Menu \n
    1. Deposit \n 2. withdraw 3. Enquiry
    4. Display");
    ch = S.nextInt();

    Switch(ch)
    {
      Case 1: System.out.println("Enter
        the amount:");
        amount1 = S.nextInt()
        Sa.deposit(amount1);
        break;
```

```
Case 2 : System.out.println("Enter
         the amount");
         amount2 = S.nextInt()
         Sa.withdraw(amount2);
         break;

Case 3 : Sa.interest()
         break;

Case 4 : Sa.display()
         break;
default : System.out.println
          ("Invalid input");
          System.exit(0);

    }
}

    else
    {
        System.out.println("\n menu\n
        1.Deposit 2.withdraw 3.Display");
        System.out.println("Enter the
                            choice");
        ch = S.nextInt();
        Switch(ch)
        {
            Case 1 : System.out.println("Enter
                     the amount");
                     amount1 = S.nextInt();
```

```
        ca.deposit(amount1);
        break;
    case 2: System.out.println("Enter
              the amount:")
        amount2 = s.nextInt();
        ca.withdraw(amount2);
        ca.checkmin();
        break;

    case 3: ca.display();
        break;

    default: System.out.println("Invalid
                 input");
             System.exit(0);

    }
  }
}
```

=> OUTPUT:

```
Enter the name: Shree
Enter the type (current / savings):
Enter the account number: 5556
Enter the initial balance: 2000
```

Menu
1. Deposit 2. withdraw 3 display
Enter the choice
1
Enter the amount : 4000

Menu
1. Deposit 2. withdraw 3. display
Enter the choice
2
Enter the amount : 200

Menu
1. Deposit 2. withdraw 3. display
Enter the choice
3

Name : Shree
account No : 5556
Type : current
balance : 5800.0