Lab - 05

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* Develop a java program to create a class Bank that maintains two kinds of accounts for its customers, one called savings account & other current account. The savings account provides compound interest & 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 & if balance falls below this level, a service charge is imposed.

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

ⓐ Accept deposite from customer & update balance.
ⓑ Display the balance.
ⓒ Compute & deposite interest
ⓓ Permit withdrawl & update balance
* Check for the minimum balance, impose penalty if necessary & update the balance.

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```
import java.util.*;
class account {
    String customer_name;
    int acc_no;
    String type;
    double balance;
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```
account (String name, int number,
String type, double balance) {
        customer_name = name;
        acc_no = number;
        this.type = type;
        this.balance = balance;
}
void deposite (double amount) {
      balance += amount;
}
void withdrawl(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 = 5;
   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);
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```
class curracc extends account {
    curr_acc (String name, int acc_no, double
balance) {
        super(name, acc_no, "current", balance);
    }
    private double minbal = 500;
    private double servicecharge = 50;
    void checkmin () {
        if (balance < minbal) {
            System.out.println ("Insufficient balan
-ce so service charges are substracted from
your balance. amount");
            balance -= servicecharge;
            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 intial
                balance:");
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```
double balance = s.nextDouble();
int ch;
double amount1, amount2;
account acc = new account(name, acc_no, type, balance);
savacc sa = new savacc(name, acc_no, balance);
curracc ca = new curracc(name, acc_no, balance);
while(true){
    if(acc.type.equals("Savings")){
System.out.println("\n Menu\n1. deposit 2. withdraw. 3. Compute interest 4. display");
        System.out.println("Enter the choice:");
        ch = s.nextInt();
        switch(ch){
            case 1: System.out.println("Enter the amount:");
                amount1 = s.nextInt();
                sa.deposite(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 \n1. deposite 2. with
-draw 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.deposite (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);
      }
    }
  }
}
```

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O/P:-

Enter the name : John
Enter the type(current / savings) : 1
Enter the account number : 1234
Enter the initial balance : 30,000
Menu
1. deposite 2. withdrawal 3. display
Enter the choice : 1
Enter the amount : 80,000
Enter the choice : 2
Enter the amount : 1000
Enter the choice : 3
~~End~~ Name : john
account_number : 1234
Type : current
Balance : 10000

Enter the name : John.B

Name :- John.B
account number : 7272
Type : Savings
Balance : 70000.

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