Lab Program 5 :

5) 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. ....

```
import java.util.Scanner;
import java.lang.Math;

class Account{

    private String customer_name;
    private long account_num;
    private int account_type;
    boolean cheque;
    double balance;

    Account(String name, long accnum, int
                    type){
        customer_name=name;
        account_name=accnum;
        account_type=type;
        balance=500;
    }

    void displayDatc(){
        System.out.println("\n ----------
        DETAILS----------");
        System.out.println("\nName:"+customer
        name+"\nAccount number:"+account nu
```

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+"\nAccount type:" + account_type +
"\nBalance:" + balance);
    }
}

class savings extends Account {

    double interest_rate;
    double final_amt;
    double compound_interest;

    savings (String x, long y, int z){
        super(x, y, z);
        interest_rate = 0.03;
        cheque = false;
    }

    void calAndDepCompoundInt (int n, int t){
        final_amt = balance * Math.pow((1 +
        (double)(interest_rate/n)), n*t);
        compound_interest = final_amt - balance;
        System.out.println("The compound
        interest is as follows:" + compound_inte-
        -rest);
        balance = final_amt;
        System.out.println("The updated balance
        is as follows: " + final_amt);
    }

    void withdraw (double amt) {
        if (amt > balance){
            System.out.println("Your balance is: "
```

```
+balance+"\n Please enter amount lesser
than the balance amount");
}
else {
balance = balance - amt;
System.out.println("Updated balance is
as follows: " + balance);
}
}

void Deposit(double amt2){
balance += amt2;
System.out.println("Updated balance
is as follows: " + balance);
}

void balance(){
System.out.println("The balance is as
follows: " + balance);
}

}

class Current extends Account{

Current(String x, long y, int z){
super(x,y,z);
cheque = false;
}

void balance(){
System.out.println("The balance is as
follows: " + balance);
}
```

```
void withdraw(double amt){
  double min_balance = 300.0;

  if((balance-min) <min_balance){
    System.out.println("Your balance is: "+
    balance+" Minimum balance of: "+
    min_balance+" has to be maintained
    in the account.Rs.30 will be deducted");
    balance = balance - amt - 30.0;
    System.out.println("Updated balance is
    as follows: "+balance);
  }
  else{
    balance = balance-amt;
    System.out.println("Updated balance is
    as follows: "+balance);
  }

}

class Bank {

  public static void main(String args[]){

    String a;
    long b;
    int c;

    System.out.println("***** WELCOME *****");
    System.out.println("Enter the details");
    Scanner input = new Scanner(System.in);
    System.out.println("Enter the name of the
```

```
account holder: ");
a = input.nextLine();
System.out.println("Enter the account
number of the account holder: ");
b = input.nextLong();
System.out.println("Enter the account
type: \n Enter 1 for savings account or 2
for current savings \n");
c = input.nextInt();

if (c == 1) {
  Savings S1 = new Savings (a, b, c);
  S1.displayData();
  int num, i = 0;
  int n, t;
  double amount;
  double deposit_amt;

  while (i != 1) {

  System.out.println("\n Enter your choice:
  \n 1. Compute Compound Interest and
  deposit \n 2. Withdrawal \n 3. Balance \n
  4. Deposit \n 5. Exit");
  num = input.nextInt();

  switch (num) {
  case 1: System.out.println("Enter n
          (Number of times interest
          applied per time period \n");
          n = input.nextInt();
          System.out.println("Enter the
          time period t \n");
```

```
            t = input.nextInt();
            S1.calAndDepCompoundInt(n, t);
            break;

        case 2: System.out.println("Enter the amount
                to be withdrawn:\n");
                amount = input.nextDouble();
                S1.withdraw(amount);
                break;

        case 3: S1.balance();
                break;

        case 4: System.out.println("Enter the amount
                to be deposited:\n");
                deposit_amt = input.nextDouble();
                S1.Deposit(deposit_amt);
                break;

        case 5: i = 1;
                break;

        default: System.out.println("Please enter
                a valid input.\n");
    }
}

}

if (c==2) {
    Current c1 = new Current(a, b, c);
    int choice, j=0;
```

```
char option;
double amount2;
double deposit_amt2;

while (j!=1){

System.out.println("Enter your choice:
\n1.Cheque Facility \n2.Display Balance
\n3.Withdrawal \n4.Deposit \n5.Exit");
choice=input.nextInt();

switch(choice){

case 1: System.out.println("Do you
want cheque book facility?
\nEnter y(yes) or n(no)");
option=input.next().charAt(0);
if (option=='y'){
    c1.cheque=true;
    System.out.println("Cheque
    Book facility has been
    availed\n");
}
break;

case 2: c1.balance();
break;

case 3: System.out.println("Enter
the amount to be deposited
:\n");
deposit_amt2=input.next-
-Double()
```

```
c1.Deposit(deposit_amt2);
break;

case 5: j=1;

default: System.out.println("Please
          enter a valid input:\n");
    }
  }
 }
}
}
```