**Lab 6**

**Name : Abhinav Sanjay**

**USN : 1BM3CS009**

import java.util.Scanner;

import java.lang.Math;

class Bank{

int accountNo;

double balance;

Bank(int accountNo){

this.accountNo = accountNo;

this.balance = 0;

}

void deposit(double depAmount){

this.balance += depAmount;

}

void withdraw(double withAmount){

this.balance -= withAmount;

}

double interest(double rate, int time){

System.out.println("Interest is not applicable in current account");

return 0.0;

}

}

class SavingsAccount extends Bank{

SavingsAccount(int accountNo){

super(accountNo);

}

double interest(double rate, int time){

double interest = (balance \* Math.pow((1 + (rate / 100)), time)) - balance;

balance += interest;

return interest;

}

}

class CurrentAccount extends Bank{

static double withdrawLimit = 1000;

CurrentAccount(int accountNo){

super(accountNo);

}

public void withdraw(double withAmount) {

super.balance -= withAmount;

if (balance < withdrawLimit) {

System.out.println("Withdraw Limit Reached - Deducting Service Charge");

balance -= 100;

}

}

}

class Run {

public static void main(String[] args) {

System.out.println("Abhinav Sanjay 1BM23CS009");

double amount;

Scanner sc = new Scanner(System.in);}}}}

System.out.print("1. Open Savings Account\n2. Open Current Account\n\nEnter Choice:");

int choice = sc.nextInt();

Bank acc;

if(choice == 1) {

acc = new SavingsAccount(101);

}

else {

acc = new CurrentAccount(201);

}

System.out.println("1. Deposit\n2. Withdraw\n3. Show Balance\n4. Compute Interest\n5. Exit\n");

while(true){

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

choice = sc.nextInt();

switch(choice){

case 1: System.out.print("Enter deposit amount: ");

amount = sc.nextDouble();

acc.deposit(amount);

break;

case 2: System.out.print("Enter withdraw amount: ");

amount = sc.nextDouble();

acc.withdraw(amount);

break;

case 3: System.out.println("The balance is " + acc.balance);

break;

case 4: System.out.println("The interest is "+ acc.interest(5, 1));

break;

default:System.exit(0);

