Assume that a bank maintains two kinds of accounts for customers one called as savings account and the other as current account. Create a class Account that stores customer name, account number and type of account. From this derive the classes Curr-acct and Sav-acct to

make them more specific to their requirements. The savings account provides compound interest and withdrawal facilities. The current account does not provide interest. Current account holders should also maintain a minimum balance (Rs 5000) and if the balance falls below this level, a service charge (Rs 100) is imposed. Include the necessary methods in order to achieve the following tasks:

Accept deposit from customer and update the balance.

Display the balance.

Compute and deposit interest

Permit withdrawal and update the balance

Check for the minimum balance(only for Current account), impose

penalty if necessary and update the balance.

**import** java.util.Scanner;

**class** Account

{

**static** String *customerName*;

**static** **long** *accountNumber*;

**static** String *accountType*;

**static** **double** *balance*;

**public** **static** **void** customerDetails() {

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

System.***out***.print("Enter Customer Name: ");

*customerName* = sc.nextLine();

System.***out***.print("Enter Account Number: ");

*accountNumber* = sc.nextLong();

}

**public** **static** **void** deposit(**double** amount) {

*balance* += amount;

System.***out***.println("Deposition of Rs: " + amount + " is successful ");

}

**public** **static** **void** displaydetails() {

System.***out***.println("Customer Name: " +*customerName* );

System.***out***.println("Account Number: " +*accountNumber* );

}

**public** **static** **void** displayBalance() {

System.***out***.println("Your Account Balance Is Rs: " + *balance*);

}

}

**class** CurrAcct **extends** Account {

**double** minBalance = 5000;

**double** serviceCharge = 100;

**public** CurrAcct()

{

}

**public** CurrAcct(String accountType)

{

**this**.*accountType* = accountType;

}

**public** **void** withdraw(**double** amount) {

**if** (amount <= (*balance*-100)) {

*balance* -= amount;

System.***out***.println("Withdrawal of rupees " + amount + " is successful.");

**if** (*balance* < minBalance) {

*balance* -= serviceCharge;

System.***out***.println("Service charge of Rs " + serviceCharge + " has imposed. So your Updated Balance is Rs " + *balance*);

}

} **else** {

System.***out***.println("Insufficient balance. Withdrawal unsuccessful.");

}

}

}

**class** SavAcct **extends** Account {

**double** interestRate = 0.03;

**public** SavAcct() {

}

**public** SavAcct(String accountType) {

Account.*accountType* = accountType;

}

**public** **void** interest()

{

**double** interest = *balance* \* interestRate;

*balance* += interest;

System.***out***.println("Interest of Rs " + interest + " developed.");

}

**public** **void** withdraw(**double** amount)

{

**if** (amount <= *balance*)

{

*balance* -= amount;

System.***out***.println("Withdrawal of rupees " + amount + " is successful.");

} **else** {

System.***out***.println("Insufficient balance. Withdrawal unsuccessful.");

}

}

}

**class** Main {

**public** **static** **void** main(String[] args) {

**int** opt1, opt2, choice;

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

CurrAcct currentAccount = **new** CurrAcct("Current");

SavAcct savingsAccount = **new** SavAcct("Savings");

**do** {

System.***out***.println("Enter 1: to Open Current Account");

System.***out***.println("Enter 2: to Open Saving Account");

System.***out***.println("Enter 3: to Terminate");

choice = sc.nextInt();

**switch** (choice)

{

**case** 1:

**do** {

System.***out***.println("\nEnter 1: to Enter/Edit Customer Details");

System.***out***.println("Enter 2: to Deposit Money");

System.***out***.println("Enter 3: to Display Balance");

System.***out***.println("Enter 4: to Withdraw");

System.***out***.println("Enter 5: to Display Customer details");

System.***out***.println("Enter 6: to Go back to menu");

opt1 = sc.nextInt();

**switch** (opt1)

{

**case** 1:

Account.*customerDetails*();

**break**;

**case** 2:

System.***out***.println("Enter the Amount to Deposit to the Current Account: ");

**double** B = sc.nextDouble();

Account.*deposit*(B);

**break**;

**case** 3:

Account.*displayBalance*();

**break**;

**case** 4:

System.***out***.println("Enter the Amount to withdraw: ");

**double** E = sc.nextDouble();

currentAccount.withdraw(E);

**break**;

**case** 5:

currentAccount.*displaydetails*();

**break**;

}

} **while** (opt1 !=6 );

**break**;

**case** 2:

**do**

{

System.***out***.println("\nEnter 1: to Enter/Edit Customer Details");

System.***out***.println("Enter 2: to Deposit Money");

System.***out***.println("Enter 3: to Check Interest developed");

System.***out***.println("Enter 4: to Display Balance");

System.***out***.println("Enter 5: to Withdraw Money");

System.***out***.println("Enter 6: to Display Customer details");

System.***out***.println("Enter 7 : to Go back to menu");

opt2 = sc.nextInt();

**switch** (opt2)

{

**case** 1:

Account.*customerDetails*();

**break**;

**case** 2:

System.***out***.println("Enter the Amount to Deposit to the Saving Account: ");

**double** C = sc.nextDouble();

Account.*deposit*(C);

**break**;

**case** 3:

savingsAccount.interest();

**break**;

**case** 4:

Account.*displayBalance*();

**break**;

**case** 5:

System.***out***.println("Enter the Amount to withdraw: ");

**double** A = sc.nextDouble();

savingsAccount.withdraw(A);

**break**;

**case** 6:

savingsAccount.*displaydetails*();

**break**;

}

} **while** (opt2 != 7);

**break**;

**case** 3:

System.*exit*(0);

}

} **while** (choice != 3);

}

}