Lab-(5) - 9/1/2024

Lab Program 5

Source Code:

```
import java.util.Scanner;
import java.lang.Math;
class Account
{
    String customername;
    int accountnumber;
    float balance=0;
    void deposit(float amount)
    {
        balance=balance+amount;
    }
}
class Curr_Acct extends Account
{
    int penaltyimposed=0;
    void check_minimum_balance()
    {
        if(balance<300)
        {
            System.out.println("Your current account
            balance is less than Rs.300. A service charge
            of Rs.50 is imposed.");
            balance=balance-50;
            penaltyimposed=1;
        }
        else
        {
            penaltyimposed=0;
        }
    }
```

```
void withdrawal(float amount)
{
    if((balance-amount)>=0)
    {
        if(penaltyimposed==0)
        {
            balance=balance-amount;
            theAmount(balance);
        }
        else
        {
            System.out.println("The penalty
            is already imposed due to lack of
            minimum balance. Cannot withdraw");
        }
    }
    else
        System.out.println("Balance is too less
        to withdraw");
    }
}
class SavAcct extends Account
{
    double interestrate=0.06;
    double calculate_interest(int years)
    {
        return(Math.pow(1.06,years)*balance);
    }
    void withdrawal(float amount)
    {
        if(balance<amount)
        {
            System.out.println("Balance is too less to
            withdraw the required amount");
        }
```

```
        else
        {
            balance=balance-amount;
        }
    }
}
class Bank
{
    public static void main(String args[])
    {
        Scanner s= new Scanner(System.in);
        String customerName;
        Cur_Acct current= new Cur_Acct();
        Sav_Acct savings= new Sav_Acct();
        int choice;
        int accountType;
        System.out.println("Enter the customer name");
        current.customerName= savings.customerName
        = s.nextLine();
        System.out.println("Enter the account number");
        current.accountNumber= savings.accountNumber
        = s.nextInt();
        System.out.println("Deposit a minimum balance
        of Rs.500 for the current account");
        current.balance=500;
        while(true)
        {
            System.out.println("\nMENU----");
            System.out.println("Enter 1 to deposit
            money 2 to withdraw money 3 to
            calculate interest for savings account
            4 to display the details and balance
            and 5 to exit");
            System.out.println("Enter your choice");
```

```
while (s.nextInt());
if (choice == 1)
{
    Print amount
    System.out.println("Enter 1 to deposit in the
    current account and enter 2 to deposit in the
    savings account");
    accounttype = s.nextInt();
    if (accounttype == 1)
    {
        System.out.println("Enter the amount to
        deposit into the current account");
        amount = s.nextFloat();
        current.deposit(amount);
    }
    else if (accounttype == 2)
    {
        System.out.println("Enter the amount to
        deposit into the savings account");
        amount = s.nextFloat();
        savings.deposit(amount);
    }
    else
        System.out.println("Invalid number
        entered");
}
else if (choice == 2)
{
    Print amount
    System.out.println("Enter 1 to withdraw from
    the current account and enter 2 to withdraw from
    the savings account");
    accounttype = s.nextInt();
```

```
if (accounttype == 1)
{
    System.out.println("Enter the amount to
    withdraw from the current account");
    amount = s.nextFloat();
    current.withdrawal(amount);
}
else if (accounttype == 2)
{
    System.out.println("Enter the amount
    to withdraw from the saving account");
    amount = s.nextFloat();
    savings.withdrawal(amount);
}
else
    System.out.println("Invalid
    number entered.");
}
else if (choice == 3)
{
    int years;
    System.out.println("Enter the number of
    years to compound.");
    years = s.nextInt();
    System.out.println("The balance in your
    savings account at the end of " + years +
    " years after compounding annually at the rate
    of 6% is " + savings.calculate_interest(years));
}
else if (choice == 4)
{
    System.out.println("Account Details:");
    System.out.println("Customer name:"
    + current.customerName);
```

```
System.out.println("Account Number:"
+ current.accountNumber);
System.out.println("Savings Account balance:"
+ savings.balance);
System.out.println("Current Account balance"
+ current.balance);
}
else if(choice==5)
    break;
else
    System.out.println("Invalid number
    entered");
System.out.println("\n");
}
}
```

Output.

Enter the customer name:
Rosh
Enter the account number
12345678
Deposit minimum of Rs.500 in the current account
Enter 1 to deposit money 2 to withdraw money 3 to calculate interest for savings account 4 to display the details and balance or 5 to exit.
Enter your choice
1
Enter to deposit
Enter 1 to deposit in the current account and enter 2 to deposit in the savings account
1

Enter the amount to deposit into the current account
200

-----MENU-----
Enter 1 to
Enter your choice
1
Enter 1 to deposit in the current account and enter 2 to deposit in the savings account
2
Enter the amount to deposit into the savings account
500

-----MENU-----
Enter 1 to
Enter your choice 4
Account Details:
Customer Name: Ram
Account Number: 12345678
Savings Account Balance: 500.0
Current Account Balance: 500.0

-----MENU-----
Enter 1 to
Enter your choice
2

Enter 1 to withdraw from the current account and enter 2 to withdraw from the savings acct
1
Enter the amount to withdraw from the current acct
300
Your current acct balance is less than Rs 300 A service charge of Rs 50 is imposed

---------MENU----------
Enter 1 to
2 Enter your choice 2
Enter 1 to withdraw
2 to withdraw from the savings account
2
Enter the amount to withdraw from the savings account
300

---------MENU----------
Enter 1 to
Enter your choice
3
Enter the number of years to compound
3
The balance in your savings acct at the end of 3 years after compounding amounts at a rate of 6% is 238.2752

---------MENU----------
Enter 1 to
Enter your choice 5