

## Lab 5

Develop a java program that prints to create a class Bank that maintains two kinds of account for its customers one called savings account and the other current account. The savings account provides compound interest and withdrawal facilities but no cheque book facility. The current account provides cheque book facility but no interest. Current account holders should also maintain a min balance and if the balance falls below this level, a service charge is imposed. Create a class Account that stores customer name, account number and type of account. From this derive the classes CUR-acct and SAN-acct to make them more specific to their requirements. Include the necessary methods in order to achieve the following tasks:

- a) Accept deposit from customer and update the balance
- b) Display the balance
- c) Compute and deposit interest
- d) Permit withdrawal and update it

Check for the minimum balance, impose penalty if necessary and update the balance

```
import java.util.*;  
class account  
{ String customer-name;  
    int account-number;  
    String account-type;  
}  
class cur-acct extends account  
{ Scanner x = new Scanner(System.in);  
    double temp = 0.0;  
    double temp = 0.0;  
    double amount = 0.0;  
    double fine = 0.0;  
    double min-amount = 1000.0;  
    void getdetails()  
    { customer-name = x.nextLine();  
        account-number = x.nextLine();  
    }  
    void deposit()  
    { System.out.println("Enter the deposit amount:");  
        temp = x.nextDouble();  
        amount += temp;  
    }  
    void showbalance()  
    { if(amount >= min-amount)  
        { System.out.println("Balance is: " + amount);  
        }  
        else  
        { fine = (amount * 1.0 * 10) / 100;  
            amount -= fine;  
            System.out.println("The fine imposed: " + fine);  
            System.out.println("Balance is: " + amount);  
        }  
    }
```

{}

```
void withdrawal()
```

```
{ System.out.println("Enter the withdrawal amount");  
    temp = a.nextDouble();  
    amount -= temp;  
}
```

{

```
class sav acct extends account
```

```
{ Scanner x = new Scanner(System.in);
```

```
double temp = 0.0;
```

```
double amount = 0.0;
```

```
double interest = 0.0;
```

```
void getdetails()
```

```
{ customer_name = a.nextLine();
```

```
    account_name = a.nextLine();
```

{

```
void deposit()
```

```
{ System.out.println("Enter the deposit amount:");
```

```
    temp = a.nextDouble();
```

```
    amount += temp;
```

{

```
void show balance()
```

```
{ System.out.println("Balance is: " + amount);
```

{

```
void withdrawal()
```

```
{ System.out.println("Enter the withdrawal amount");
```

```
    temp = a.nextDouble();
```

```
    amount -= temp;
```

{

```
void interest()
```

```
{ interest = (amount * 1.0 * 3) / 100;
```

```
amount += interest;
```

```
System.out.println("Interest added: " + interest);
```

```
System.out.println("Balance is: " + amount);
```

```
}
```

```
public class Main
```

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

```
{ int opt = 0;
```

```
String type = null;
```

```
Scanner x = new Scanner(System.in);
```

```
System.out.println("Welcome to the bank service");
```

```
System.out.println("Enter the type of account  
(curr-acct/sav-acct)");
```

```
type = x.nextLine();
```

```
if (type.equals("curr-acct"))
```

```
{ curr-acct a = new curr-acct();
```

```
System.out.println("Press 1: Accept deposit and  
update the balance")
```

```
System.out.println("Press 2: Display the balance");
```

```
System.out.println("Press 3: Withdrawal and  
update the balance.");
```

```
System.out.println("Enter option: ");
```

```
opt = x.nextInt();
```

```
switch(opt)
```

```
{ case 1: a.deposit();
```

```
    a.showbalance();
```

```
    break;
```

```
case 2: a.showbalance();
```

```
    break;
```

```
case 3: a.withdrawal();
```

```
a.showbalance();  
break;  
}  
}  
}  
if(type.equals("sav-acct"))  
{sav-acct a = new sav-acct();  
System.out.println("Enter customer name,  
account number:");  
a.getdetails();  
while(true)  
{System.out.println("Press 1: Accept deposit and update  
System.out.println("Press 2: Display Balance");  
System.out.println("Press 3: Compute & Deposit interest");  
System.out.println("Press 4: Withdrawal & update balance");  
System.out.println("Enter option:");  
opt = a.nextInt();  
switch(opt)  
{case 1: a.deposit();  
a.showbalance();  
break;  
case 2: a.showbalance();  
break;  
case 3: a.interest();  
a.showbalance();  
break;  
case 4: a.withdrawal();  
a.showbalance();  
break;  
}}  
}
```