अटल बिहारी वाजपेयी
भारतीय सूचना प्रौद्योगिकी एवं प्रबंधन संस्थान, ग्वालियर
(राष्ट्रीय महत्व का संस्थान, शिक्षा मंत्रालय भारत सरकार)
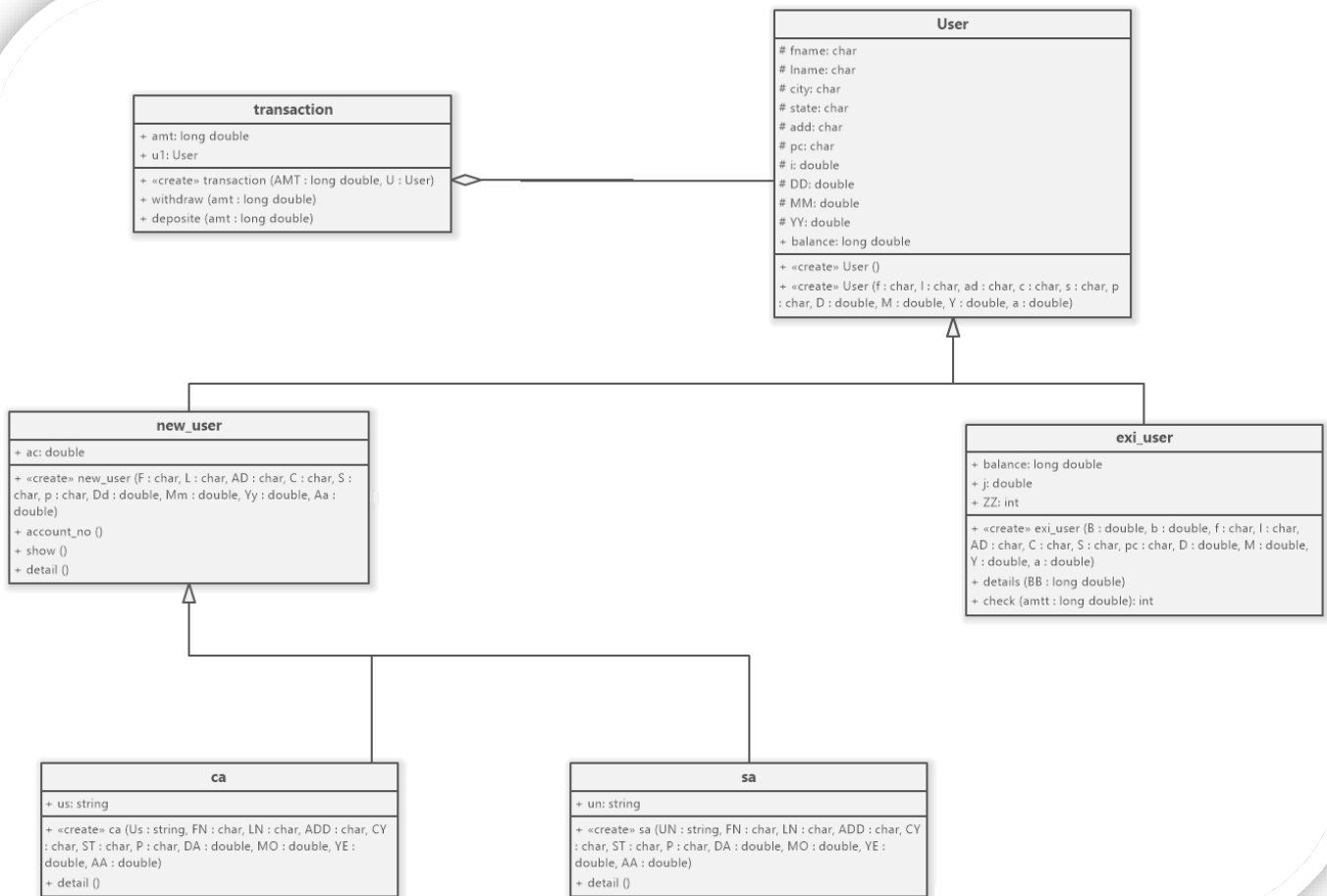
OOPS PROJECT

BANKING SYSTEM

❖ Subject : Object oriented modeling and design

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❖ This banking system project in C++ is a simple console application developed in C++. In this project, the user can access their bank account from this software in the bank. There is no necessity for a cashier in a bank to operate banking operations like depositing money, withdrawing money, etc. In this software user can create a new account in a bank, user can create a current account and saving account also as per its requirements, and also perform operations like depositing money, and withdrawing money. The whole data of the user are stored in a certain file named "data.txt", and the user's Username and password are stored in another file due to security purposes."accno.txt" file is also there to allocate new and unique account numbers to every user. Here we trying to make a simple bank application.

❖ For transactions of money, there is a dedicated machine at a bank that counts the amount of money that users enter into our software and perform a transaction.

❖ Here one base class is named User and its two derived classes are named exi_user(existing User) and new_user(New User).

❖ When a new user comes to the bank to create an account then asked the user which type of account do you want to create(savings or current) for that two derived class from class new_user named class sa and class ca.

❖ Class sa for creating a saving account and class ca for creating a current account.

❖ Here we put constraints for creating a saving account the user needs to deposit a minimum of 500 rupees and the same for the current account user but the minimum amount to be deposited is 5000.

❖ The class transaction came into the picture when the user wants to perform operations like depositing money and withdrawing money.

❖ Class Diagram :

transaction

+ amt: long double
+ u1: User

+ «create» transaction (AMT : long double, U : User)
+ withdraw (amt : long double)
+ deposite (amt : long double)

User

fname: char
lname: char
city: char
state: char
add: char
pc: char
i: double
DD: double
MM: double
YY: double
+ balance: long double

+ «create» User ()
+ «create» User (f : char, l : char, ad : char, c : char, s : char, p : char, D : double, M : double, Y : double, a : double)

new_user

+ ac: double

+ «create» new_user (F : char, L : char, AD : char, C : char, S : char, p : char, Dd : double, Mm : double, Yy : double, Aa : double)
+ account_no ()
+ show ()
+ detail ()

exi_user

+ balance: long double
+ j: double
+ ZZ: int

+ «create» exi_user (B : double, b : double, f : char, l : char, AD : char, C : char, S : char, pc : char, D : double, M : double, Y : double, a : double)
+ details (BB : long double)
+ check (amtt : long double): int

ca

+ us: string

+ «create» ca (Us : string, FN : char, LN : char, ADD : char, CY : char, ST : char, P : char, DA : double, MO : double, YE : double, AA : double)
+ detail ()

sa

+ un: string

+ «create» sa (UN : string, FN : char, LN : char, ADD : char, CY : char, ST : char, P : char, DA : double, MO : double, YE : double, AA : double)
+ detail ()

For New User

Creating an Account and making first transaction

1.   Savings Account

```
                    Welcome to Our Online Bank
------------------------------------------------------------------------------
------------------------------------------------------------------------------
                              Main Menu
------------------------------------------------------------------------------

1-For New User
2-For Existing User
Enter your Choice: 1
------------------------------------------------------------------------------
------------------------------------------------------------------------------
                 Which type of Account do you want to Create ?
------------------------------------------------------------------------------

Enter 1 for Saving Account
Enter 2 for Current Account
Enter your Choice: 1


------------------------------------------------------------------------------
                             Enter Details
------------------------------------------------------------------------------

Enter your Mobile No : 9116521400
Enter your First Name : harsh
Enter your Last Name : khandelwal
Enter your Birth Date :12 05 2001
Enter your Pancard no : hagbaj
Enter your Address : vidhyadhar_nagar
Enter your City Name : jaipur
Set a Password : 1234556
------------------------------------------------------------------------------
------------------------------------------------------------------------------
                             Account Details
------------------------------------------------------------------------------
Account Type: Saving
Account holder name : harsh khandelwal
Mobile No : 9116521400
Birth Date is : 12-5-2001
Pancard No : hagbaj
Address : vidhyadhar_nagar
City  :jaipur
State : rajasthan

Saving Data...

Your Account No is :  8

You Need to Deposit minimum Rs. 500 in order to Create Account.

Enter amount to be Deposit : 1000
$$$$$ Transaction Done! $$$$$
Updated Balance is : 1000
-----------------------------------------------------
```

For New User

2. For Existing User Saving Account

Retrieving the saved Data and reading it from the file using user_id and Password.

```
----------------------------------------------------------------
                  Welcome to Our Online Bank
----------------------------------------------------------------
----------------------------------------------------------------
                          Main Menu
----------------------------------------------------------------

1-For New User
2-For Existing User
Enter your Choice: 2
----------------------------------------------------------------
Enter your User Name: harsha
Enter Password : 1234556
```

- Withdrawing Money

```
-----Select Option-----

1-Account_Info
2-Withdraw Money
3-Deposit Money
4-Exit
Enter your choice : 2
------------------------------------------------
Enter Amount to be Withdraw : 200
$$$$$ Transaction Done! $$$$$
Updated Balance is : 800
------------------------------------------------

-----Select Option-----

1-Account_Info
2-Withdraw Money
3-Deposit Money
4-Exit
Enter your choice :
```

- Deposit Money

```
-----Select Option-----

1-Account_Info
2-Withdraw Money
3-Deposit Money
4-Exit
Enter your choice : 3
-------------------------------------------------------
Enter Amount to be Deposit : 1327
$$$$$ Transaction Done! $$$$$
Updated Balance is : 2127
-------------------------------------------------------

-----Select Option-----

1-Account_Info
2-Withdraw Money
3-Deposit Money
4-Exit
Enter your choice : █
```

- Withdrawing money from the savings account and the remaining balance in the account is less than 500

```
-----Select Option-----

1-Account_Info
2-Withdraw Money
3-Deposit Money
4-Exit
Enter your choice : 2
-------------------------------------------------------
Enter Amount to be Withdraw : 2000
Minimum Balance of 500 Rs. Required for Account!!
-------------------------------------------------------

-----Select Option-----

1-Account_Info
2-Withdraw Money
3-Deposit Money
4-Exit
Enter your choice : █
```

- Checking the Account Details

```
$$$ Access Granted! $$$

-----Select Option-----

1-Account_Info
2-Withdraw Money
3-Deposit Money
4-Exit
Enter your choice : 1
--------------------------------------------------------------------
                            Account Details
--------------------------------------------------------------------
Account Type : Saving
Account Holder Name : harsh khandelwal
Account No: 8
Birth Date is : 12-5-2001
Mobile No : 9116521400
Pancard No : hagbaj
Address : vidhyadhar_nagar
City  : jaipur
State : rajasthan
Your current Balance is : 2127
--------------------------------------------------------------------
```

3. Creating a Current Account

```
--------------------------------------------------------------------
                        Welcome to Our Online Bank
--------------------------------------------------------------------
--------------------------------------------------------------------
                            Main Menu
--------------------------------------------------------------------

1-For New User
2-For Existing User
Enter your Choice: 1
--------------------------------------------------------------------
--------------------------------------------------------------------
                Which type of Account do you want to Create ?
--------------------------------------------------------------------

Enter 1 for Saving Account
Enter 2 for Current Account
Enter your Choice: 2


--------------------------------------------------------------------
                            Enter Details
--------------------------------------------------------------------

Enter your Mobile No : 9116521234
Enter your First Name : darshan
Enter your Last Name : arkhade
Enter your Birth Date :12 09 2002
Enter your Pancard no : aksaad
Enter your Address : Nagpur_Maharashtra
Enter your City Name : Nagpur
Enter your State Name : Maharashtra
```

```
Set a New User Name : darshan
Set a password : 123456
```

```
--------------------------------------------------------------------

--------------------------------------------------------------------
                            Account Details
--------------------------------------------------------------------
Account Type: Current
Account holder name : darshan arkhade
Mobile No : 9116521234
Birth Date is : 12-9-2002
Pancard No : aksaad
Address : Nagpur_Maharashtra
City  :a
State : Maharashtra

Saving Data...

Your Account No is :  9

You Need Deposit a minimum Rs. 5000 in order to Creating Account.

Enter Amount you want to Deposit: 100000
$$$$$ Transaction Done! $$$$$
Updated Balance is : 100000
------------------------------------------------------

Do u want to make Another Transaction ?
Type Yes to continue with Transaction: no
```

4. For Existing User Current Account

Retrieving the saved Data and reading it from the file using user_id and Password.

```
--------------------------------------------------------------------
                        Welcome to Our Online Bank
--------------------------------------------------------------------
--------------------------------------------------------------------
                            Main Menu
--------------------------------------------------------------------

1-For New User
2-For Existing User
Enter your Choice: 2
--------------------------------------------------------------------
Enter your User Name: darshan
Enter Password : 123456
```

- Withdrawing money

```
$$$ Access Granted! $$$

-----Select Option-----

1-Account_Info
2-Withdraw Money
3-Deposit Money
4-Exit
Enter your choice : 2
----------------------------------------------------
Enter Amount to be Withdraw : 10000
$$$$$ Transaction Done! $$$$$
Updated Balance is : 90000
----------------------------------------------------
```

- Depositing Money

```
-----Select Option-----

1-Account_Info
2-Withdraw Money
3-Deposit Money
4-Exit
Enter your choice : 3
----------------------------------------------------
Enter Amount to be Deposit : 10000
$$$$$ Transaction Done! $$$$$
Updated Balance is : 100000
----------------------------------------------------
```

- Checking Current Account Information

```
-----Select Option-----

1-Account_Info
2-Withdraw Money
3-Deposit Money
4-Exit
Enter your choice : 1
----------------------------------------------------
                        Account Details
----------------------------------------------------
Account Type : Current
Account Holder Name : darshan arkhade
Account No: 9
Birth Date is : 12-9-2002
Mobile No : 9116521234
Pancard No : aksaad
Address : Nagpur_Maharashtra
City  : a
State : Maharashtra
Your current Balance is : 100000
----------------------------------------------------
```