

# O.O.P.S CASE STUDY -2

A.T.M



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CS21B058

PROGRAMMING METHODOLOGY

## OVERVIEW

- Here,there are no accounts Initially, The admin should create the accounts required by signing in
- The password of the admin is "admin123"
- The account numbers are generated serially starting from 10000 (5-digit account number)
- The user should set the ATM pin

## FEATURES

- Creating Bank Account (will be done by the Admin).
- Deposit Money including coins like 2 rupees,5 rupees etc..
- Withdraw Money.
- Update Existing details, for example Name-correction , Reset A.T.M PIN etc...
- View Existing Details of the User.
- Check Balance.
- Printing Receipt after transactions, if needed.
- The user can have savings / current account as they wish.
- For Multiple Users i created an **ARRAY OF USERS**

## CLASSES

- **1) CreateBankAccount**

→ It has the following fields

1) Account Number

2) A.T.M PIN

3) Age

4) User Name

5) Account Type

6) Address

7) Adhar Number

8) PanCard Number

9) Deposit cash

→ It has a constructor Defined with the parameters of above mentioned fields

→ Finally it has the Getters and setters ( for few )

- **2) AtmScreen**

→ It is the class that is implemented from the interface **CentralATM** , It has the body of the methods that are declared inside the interface CentralATM

- **3) bankScreen**

→ It is the class that is implemented from the interface **CentralATM** , It has the body of the methods that are declared inside the interface CentralATM

- **4) impInst**

→It is the class that is extended from the abstract class named AtmInstructions

→It has an Method named getInstr whose method body is declared here

- **5) withDrawInst**

→It is the class that is extended from the abstract class named AtmInstructions

→It has an Method named getInstr whose method body is declared here

## INTERFACES

- **CentralATM**

We know Interfaces will have only Abstract methods without the method body

Here centralATM interface has 2 methods :

a)DisplayHello

b)DisplayTq

And i defined the methodBody of these 2 methods in the respective classes of **AtmScreen** & **bankScreen**

## ABSTRACT CLASS

We know abstract classes can have abstract and non-abstract methods.

- **AtmInstructions**

→ It has 2 methods with one of them is abstract(

getInstruc ) and the other one is non-abstract method ( Instructions )whose method body is declared itself.

## MAIN METHOD

- This has the main part of the code,where it takes inputs and passes the Inputs to the constructors etc..
- The account created by the admin is done mostly inside the main Method

## CONCEPTS USED

- ENCAPSULATION
- INHERITANCE
- CLASSES
- INTERFACE
- ABSTRACT CLASS

## DEMO OF SOME IMPORTANT FUNCTIONALITIES

- The following screenshot contains demo of creating a bank account by the admin
- **ACCOUNT CREATION DEMO**

```
THE ATM IS UNDER CC T.V SURVEILLANCE
PLEASE DO NOT ENTER ATM WHEN ITS BEING USED BY OTHER PERSON
HELLO!!
WELCOME
DEAR ADMIN , ENTER HOW MANY BANK ACCOUNTS TO CREATE
1
1) ADMIN
2)EXISTING USER
ENTER '2' IF YOU HAVE A BANK ACCOUNT AND WANTED TO USE ATM
1
PLEASE ENTER YOUR PASSWORD
admin123
HELLO!!
WELCOME please create the bank account BY entering the following details
Enter Name of the user
TEJESWAR
The 5 digit Account Number is 10000
SET ATM PIN
1234
Please select the type of ACCOUNT
1)SAVINGS ACCOUNT
2)CURRENT ACCOUNT
1
Please enter Address of the user
I.I.T.TIRUPATI
Please enter PanCardNumber of the user
CDCPA7782W
Please enter AdharNumber of the user
297382782223
Please enter Age of the user
19
ACCOUNT SUCCESSFULLY CREATED
PLEASE DEPOSIT THE AMOUNT OF MINIMUM 10,000 AS YOURS IS SAVINGS ACCOUNT
20000

1) ADMIN
2)EXISTING USER
ENTER '2' IF YOU HAVE A BANK ACCOUNT AND WANTED TO USE ATM
```

- Now after the creation of Bank account by the admin, the user should enter the 2nd option(EXISTING USER) to carry on with the ATM
- The following screenshot shows the demo of User using A.T.M For Amount withDrawal
- **AMOUNT WITHDRAWAL DEMO**

```

1) ADMIN
2)EXISTING USER
ENTER '2' IF YOU HAVE A BANK ACCOUNT AND WANTED TO USE ATM
2
  Enter your ACCOUNT NUMBER
10000
ENTER YOUR ATM PIN
2111
INVALID ATM PIN
1attempt remaining
PLEASE RE-ENTER YOUR ATM PIN
1234
Please select Type of account
  1)SAVINGS ACCOUNT
  2)CURRENT ACCOUNT
1
1)WITHDRAW CASH
  2)DEPOSIT CASH
  3)BALANCE
  4)UPDATE DETAILS (INCLUDES RESET PIN)
  5)VIEW DETAILS
1
you can withdraw maximum amount of 10,000 At a time
ENTER AMOUNT
8500
CASH IS BEGING DISPENSED....
PLEASE COLLECT THE CASH
DO U WANT RECEIPT?
  1)YES
  2)NO
1
DATE : 30/9/2022
TIME : 10:00 A.M.
NAME : TEJESWAR
A/C NUMBER : 10000
AMOUNT WITHDRAWN : 8500
SAVINGS ACCOUNT
THANK YOU FOR BANKING WITH US!!

```



- The following screenshot shows the Demo of resetting the A.T.M PIN.
- **A.T.M PIN RESETTING DEMO**

```
PLEASE RE-ENTER YOUR ATM PIN
1234
Please select Type of account
  1)SAVINGS ACCOUNT
  2)CURRENT ACCOUNT
1
1)WITHDRAW CASH
  2)DEPOSIT CASH
  3)BALANCE
  4)UPDATE DETAILS (INCLUDES RESET PIN)
  5)VIEW DETAILS
4
WHICH OF THE FOLLOWING DETAILS YOU WANT TO UPDATE?
  1)ADDRESS
  2)USERNAME
  3)CHANGE ATM PIN
3
PLEASE ENTER THE NEW PIN THAT TO BE SET
4321
YOUR ATM PIN IS SUCCESFULLY UPDATED!!!
1) ADMIN
2)EXISTING USER
ENTER '2' IF YOU HAVE A BANK ACCOUNT AND WANTED TO USE ATM
2
  Enter your ACCOUNT NUMBER
10000
ENTER YOUR ATM PIN
4321
PLEASE RE-ENTER YOUR ATM PIN
4321
Please select Type of account
  1)SAVINGS ACCOUNT
  2)CURRENT ACCOUNT
1
1)WITHDRAW CASH
  2)DEPOSIT CASH
  3)BALANCE
  4)UPDATE DETAILS (INCLUDES RESET PIN)
  5)VIEW DETAILS
```

We can observe from the above pic that the A.T.M PIN is

updated from 1234 to 4321 and the renewed ATM PIN is used for using the ATM

- **DEPOSIT MONEY DEMO**
- The following 2 screenshots contains the user depositing money in the form of coins,notes..and Checking the Updated balance

```
1) ADMIN
2)EXISTING USER
ENTER '2' IF YOU HAVE A BANK ACCOUNT AND WANTED TO USE ATM
2
  Enter your ACCOUNT NUMBER
10000
ENTER YOUR ATM PIN
4321
PLEASE RE-ENTER YOUR ATM PIN
4321
Please select Type of account
1)SAVINGS ACCOUNT
2)CURRENT ACCOUNT
1
1)WITHDRAW CASH
2)DEPOSIT CASH
3)BALANCE
4)UPDATE DETAILS (INCLUDES RESET PIN)
5)VIEW DETAILS
2
WE ARE ACCEPTING ONLY
2 rs.coin
5 rs.coin
100 rs. notes
500 rs. notes
2000 rs. notes
please enter the Number of 2 rs. coins
10
please enter the Number of 5 rs. coins
10
please enter the Number of 100 rs. notes
10
please enter the Number of 500 rs. notes
10
please enter the Number of 2000 rs. notes
10
YOUR cash is successfully deposited
THANK YOU FOR BANKING WITH US!!

1) ADMIN
2)EXISTING USER
```

(contd...)

```
ENTER '2' IF YOU HAVE A BANK ACCOUNT AND WANTED TO USE ATM
2
  Enter your ACCOUNT NUMBER
10000
ENTER YOUR ATM PIN
4321
PLEASE RE-ENTER YOUR ATM PIN
4321
Please select Type of account
1)SAVINGS ACCOUNT
2)CURRENT ACCOUNT
1
1)WITHDRAW CASH
2)DEPOSIT CASH
3)BALANCE
4)UPDATE DETAILS (INCLUDES RESET PIN)
5)VIEW DETAILS
3
YOUR ACCOUNT BALANCE IS 46070.0
1) ADMIN
2)EXISTING USER
ENTER '2' IF YOU HAVE A BANK ACCOUNT AND WANTED TO USE ATM
█
```

## ● MULTIPLE ACCOUNTS DEMO

```
THE ATM IS UNDER CC T.V SURVEILLANCE
PLEASE DO NOT ENTER ATM WHEN ITS BEING USED BY OTHER PERSON
HELLO!!
WELCOME
DEAR ADMIN , ENTER HOW MANY BANK ACCOUNTS TO CREATE
2
1) ADMIN
2)EXISTING USER
ENTER '2' IF YOU HAVE A BANK ACCOUNT AND WANTED TO USE ATM
1
PLEASE ENTER YOUR PASSWORD
admin123
HELLO!!
WELCOME please create the bank account BY entering the following details
Enter Name of the user
TEJA
The 5 digit Account Number is 10000
SET ATM PIN
1234
Please select the type of ACCOUNT
1)SAVINGS ACCOUNT
2)CURRENT ACCOUNT
1
Please enter Address of the user
IIT
Please enter PanCardNumber of the user
CDFGE8378S
Please enter AdharNumber of the user
9892894689299
Please enter Age of the user
18
ACCOUNT SUCCESSFULLY CREATED
PLEASE DEPOSIT THE AMOUNT OF MINIMUM 10,000 AS YOURS IS SAVINGS ACCOUNT
12000

HELLO!!
WELCOME please create the bank account BY entering the following details
Enter Name of the user
ROHIT
The 5 digit Account Number is 10001
SET ATM PIN
2222
Please select the type of ACCOUNT
1)SAVINGS ACCOUNT
2)CURRENT ACCOUNT
2
Please enter Address of the user
IITP
Please enter PanCardNumber of the user
JHDKT7681W
Please enter AdharNumber of the user
19271782098
Please enter Age of the user
19
ACCOUNT SUCCESSFULLY CREATED
PLEASE DEPOSIT SOME CASH
1000

1) ADMIN
2)EXISTING USER
ENTER '2' IF YOU HAVE A BANK ACCOUNT AND WANTED TO USE ATM
█
```

So for the multiple Accounts Creation the account number will be given serially,

While using the A.T.M the user should enter the correct account number and ATM pin for their account to Open.

**DONE BY-**

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