

MA104 - ASSIGNMENT 3 - JAVA PROJECT

ATM SYSTEM – GROUP PROJECT

DATE: 18TH JUNE 2022

TEAM - T16 - MnC IDD 2021-26

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PROBLEM STATEMENT:

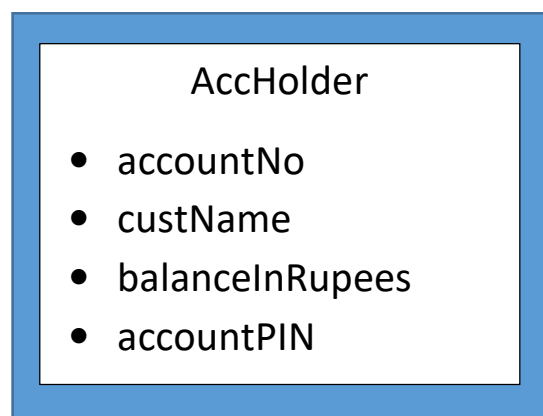
This project aims to implement a convenient Log-in system to handle:

- Withdraw Money
- Print account Details
- PIN Change
- Deposit Money

These operations are handled through the console.

Records are maintained as AccHolder class instances.

FLOW DIAGRAM FOR RECORD MAINTENANCE CLASS - AccHolder



Implements `java.io.Serializable`

ADDITIONAL FEATURES:

- All records are stored, and retrieved from files, using `FileInputStream`, `ObjectInputStream`, `FileOutputStream`, `ObjectOutputStream`, present in the `java.io.*` package.
- All records are stored in binary format, for fast writing and reading operations. Storing the records in their Object format, makes it unnecessary to parse strings, as data is already stored in binary, program-readable format.
- Balance is maintained in INR, as integer, to avoid floating point inaccuracies.

Additionally, three more classes, `RunFile`, `Database`, `UserInterface` have been defined.

- `RunFile` Class is the overall runfile for the project, that handles program flow.
- `Database` Class handles the storing, reading of data in files, using `ArrayList`, `HashMap` as intermediate storage structures.
- `UserInterface` Class handles Login, Withdraw, View Details, PIN change, Logout, Deposit operations during run-time, based on user input.

A total of 5 files, 4 `.java` files, for source code and 1 `.ser` file, for storing serialized java object records, have been uploaded, the package is built, all the `.java` files are compiled, and `atm_proj.RunFile` is run.

SCREENSHOTS:

 Windows PowerShell

```
Welcome to Global ATM !
Enter your AccountNo: 50000
Account Does not Exist !

Log-in attempt unsuccessful!
Do you wish to continue ? (Y/N)
y
Enter your AccountNo: 10001
Enter your PIN: 8484
Wrong PIN !

Log-in attempt unsuccessful!
Do you wish to continue ? (Y/N)
y
Enter your AccountNo: 10001
Enter your PIN: 2222
You Have Logged In!

1. Withdraw
2. View Details
3. PIN Change
4. Deposit
5. Logout
Enter Choice:
2
Customer Name : Ashton
Account No. : 10001
Balance INR : 15000
```

Customer Name : Ashton
Account No. : 10001
Balance INR : 15000

1. Withdraw
2. View Details
3. PIN Change
4. Deposit
5. Logout

Enter Choice:

4

Enter Amount to Deposit:

10000

Amount Deposited !

1. Withdraw
2. View Details
3. PIN Change
4. Deposit
5. Logout

Enter Choice:

2

Customer Name : Ashton
Account No. : 10001
Balance INR : 25000

```
1. Withdraw
2. View Details
3. PIN Change
4. Deposit
5. Logout
Enter Choice:
1
Enter Amount to Withdraw:
5000
Amount Withdrawn !
```

```
1. Withdraw
2. View Details
3. PIN Change
4. Deposit
5. Logout
Enter Choice:
2
Customer Name : Ashton
Account No.   : 10001
Balance INR   : 20000
```

```
1. Withdraw
2. View Details
3. PIN Change
4. Deposit
5. Logout
Enter Choice:
1
Enter Amount to Withdraw:
200000
Insufficient Balance !
```

 Windows PowerShell

```
1. Withdraw
2. View Details
3. PIN Change
4. Deposit
5. Logout
Enter Choice:
3
Enter new PIN (Only Last 4 digits will be taken):
992244
PIN changed !
```

```
1. Withdraw
2. View Details
3. PIN Change
4. Deposit
5. Logout
Enter Choice:
6
Logging out...!
Do you wish to continue ? (Y/N)
y
Enter your AccountNo: 10001
Enter your PIN: 2244
You Have Logged In!
```

```
1. Withdraw
2. View Details
3. PIN Change
4. Deposit
5. Logout
Enter Choice:
2
Customer Name : Ashton
Account No.   : 10001
Balance INR   : 20000
```

 Windows PowerShell

```
1. Withdraw
2. View Details
3. PIN Change
4. Deposit
5. Logout
Enter Choice:
3
Enter new PIN (Only Last 4 digits will be taken):
2222
PIN changed !

1. Withdraw
2. View Details
3. PIN Change
4. Deposit
5. Logout
Enter Choice:
9
Logging out...!
Do you wish to continue ? (Y/N)
n
Exiting...!
```

THANK YOU !