

#### Model Layers

1. User
2. Transaction

#### User

1. Username (string) (no special character)
2. Pin (int) (4 digit number)
3. FirstName (string)
4. LastName (string)
5. Role (string)
  - a. Customer
  - b. Admin
6. AccountType (string) (saving, checking)
7. Balance (int)
8. Status (string) (active, inactive)
9. AccountNo (int)

#### Transaction

1. AccountNo (int)
2. Username (string)
3. HoldersName (string)
4. TransactionType (string)
5. TransactionAmount (int)
6. Date (string)
7. Balance (int)

#### Data Layer (data stored in JASON FORMAT)

1. ReadFile
2. isInFile - Verify helper - check using username
3. isInFile - check using account number
4. isInFile - check using username
5. getCustomer - get individual record
6. addToFile
7. saveToFile - save changes like delete, replace
8. Update - update file by deleting, replacing
9. DeleteFromFile
10. getAccountCount (we need it when assigning account number to new account)

#### Logic Layer

1. VerifyLogin
2. isValidName
3. isValidPin
4. Encryption
5. isActive
6. nameMatch
7. DisableAccount (when failed login attempt more than 3 times)
8. getUserSelection
9. getUserName
10. getUserPin
11. getAccountNo
12. CreateAccount
13. DeleteAccount
14. UpdateAccount
15. SearchAccount
16. PrintAccountDetail
17. ViewReports
18. CashWithdraw
19. CashTransfer
20. CashDeposit
21. CommitTransaction
22. DisplayBalance
23. PerDayTransaction
24. SubstractBalance
25. AddToBalance
26. PrintReceipt

#### View Layer

1. LoginScreen
2. AdminScreen
3. CustomerScreen

#### Login Screen

1. User Name:
2. Pin:

#### Admin Screen

1. Create New Account
2. Delete Existing Account
3. Update account information
4. Search for Account
5. Exit

#### Customer Screen

1. Withdraw Cash
2. Cash transfer
3. Deposit Cash
4. Display Balance
5. Exit

#### Progress Note:

1. Disable account after 3 failure in login
2. Get user info
3. Change user status to 'disabled'
4. Save user file changes
5. Create Admin Screen
6. Work on submenu
7. Account balance when left empty crashes. Sends exception "Please try later!"
8. User status field: when entered wrong character, displays the message but ends the Create Account process
9. If you error login three times takes you to admin menu. Why?
10. User login: I can still access admin menu using DISABLED account
11. Transaction file and user file not mirroring