A design document, giving the overall structure of your solution, showing the ***classes*** and ***methods*** as a diagram or table, with ***a brief (one sentence) description of the intention*** of each.

|  |  |
| --- | --- |
| **Class:** *accounts* | |
| **Intention:** The class to store account information including balance | |
| **Methods** | **Intentions** |
| *accounts(int number, long balance, String name)* | Constructor for the accounts class, set values to local attributes |
| *setBalance(double number)* | Call by other class in order to modify the balance |
| *getAccountNumber()* | Return the account number |
| *getAccountBalance()* | Return the account balance |
| *getAccountName()* | Return the account name |
| *toString()* | To String method |

|  |  |
| --- | --- |
| **Class:** *transfer* | |
| **Intention:** transfer class | |
| **Methods** | **Intentions** |
| *transfer(boolean loginStats, Map<String, accounts> balanceStorage, Map<String, double[]> acctLimit, String mode,Scanner sc)* | Constructor method to set the attributes |
| *transferProcess()* | transfer |
| *transferCheck(String input)* | Check if the transfer input(from account + to account + amount + name) is valid or not. |

|  |  |
| --- | --- |
| **Class:** *withdraw* | |
| **Intention:** withdraw class | |
| **Methods** | **Intentions** |
| *withdraw(boolean loginStats, Map<String, accounts> balanceStorage, Map<String, double[]> acctLimit, String mode,Scanner sc)* | Constructor method to set the attributes |
| *withdrawProcess()* | withdraw |
| *withdrawCheck(String input)* | Check if the withdraw input(account number + amount) is valid or not. |

|  |  |
| --- | --- |
| **Class:** *deposit* | |
| **Intention:** deposit class | |
| **Methods** | **Intentions** |
| *deposit(boolean loginStats, Map<String, accounts> balanceStorage, Map<String, double[]> acctLimit, String mode,Scanner sc)* | Constructor method to set the attributes |
| *depositProcess()* | Deposit |
| *depositCheck(String input)* | Check if the deposit input(account number + amount) is valid or not. |

|  |  |
| --- | --- |
| **Class:** *banking* | |
| **Intention:** The main system | |
| **Methods** | **Intentions** |
| *login(Scanner sc)* | Log in function |
| *modeCheck()* | Check if the current mode satisfied the requirement |
| *loginCheck()* | Check the constraints for login |
| *logout(Scanner sc)* | Log out function |
| *logoutCheck()* | Check the constraints for logout |
| *createacc(Scanner sc)* | Create account function. |
| *deleteacc(Scanner sc)* | Delete account function. |
| *deposit(Scanner sc)* | Deposit function. |
| *withdraw(Scanner sc)* | Withdraw function. |
| *transfer(Scanner sc)* | Transfer function. |
| *transactionCheck(String transaction)* | Check the transaction summary file for each line must be less than or equal to 61 characters |
| *mergeFile()* | Merge the temp transaction file to master transaction file |
| *readFile(String fileName)* | Read master account list and transaction summary file from the device |
| *updateMaster()* | Update the master account list file with new transactions |
| *reverseSort()* | Reverse sort the account number using bubble sort |
| *writeFile(String[] path)* | Write the updated file back to the device |
| *operation(ArrayList<String> accountList, ArrayList<String> transactionList, String[] path,Scanner sc)* | The operation function manages all the input command from the user and call each function based on the input |
| *main(String args[])* | The main function of the program. |

|  |  |
| --- | --- |
| **Class:** *transactionCheck* | |
| **Intention:** class to check transaction summary file | |
| **Methods** | **Intentions** |
| *transactionCheck(String transaction)* | Constructor method to set the attributes |
| *transactionCheckCons()* | Check the transaction summary file for each line must be less than or equal to 61 characters |
| *transactionCons2(String transaction)* | Check the transaction summary file for operational code |
| *transactionCons3(String transaction)* | Check the transaction summary file for space separation |
| *transactionCons4(String[] details)* | Check the transaction summary file for account number not starting with 0 |
| *transactionCons5(String[] details)* | Check the transaction summary file for amounts between three and eight digits |
| *transactionCons6(String[] details)* | Check the transaction summary file for account names between 3 and 30 characters with no special letters |
| *transactionCons7(String[] details)* | Check the transaction summary file for unused number fill of 0 |
| *transactionCons8(String[] details)* | Check the transaction summary file for unused string fill of \* |

|  |  |
| --- | --- |
| **Class:** *accountOperation* | |
| **Intention:** Class for delete account and create account | |
| **Methods** | **Intentions** |
| *accountOperation(boolean loginStats, Map<String, accounts> balanceStorage, Map<String, double[]> acctLimit, String mode,ArrayList<String> tempAccountList, Scanner sc)* | Constructor method to set the attributes |
| *createacc()* | Create account function. |
| *checkAcct(String newAcct)* | Check if the input string(account number + name) is valid or not. |
| *isInteger(String input)* | Check if a string only contains integers. |
| *isAlphanumeric(String input)* | Check if a string only contains letters, numbers and spaces. |
| *deleteacc()* | Delete account function. |